

THE COTTON TEXTILE INDUSTRY OF MINAS GERAIS, BRAZIL:
BEGINNINGS AND EARLY DEVELOPMENT, 1868-1906

by

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ABSTRACT

This dissertation investigates for the first time the beginnings and early development of a cotton textile industry in a non-export area within an economy specializing in the production of primary goods for the international market: the Brazilian state of Minas Gerais. The general explanations offered in the secondary literature for the early stages of Brazilian industrialization - based on the experience of industrialization in export areas - are shown to be inadequate in accounting for the beginnings of industry in a region where handicraft production of cloth was still a flourishing activity and where most of the population was engaged in production for the internal market and for home consumption. Among other things, the cotton textile industry of Minas Gerais was protected from outside competition and did not require for its establishment and early development additional protection from tariffs on imports or from devaluation of the exchange rate. The investigation is centred on the period 1868 to 1906. A partnership formed in 1868 was the first successful attempt at establishing a cotton mill in Minas Gerais. From then until the mid 1890s investment flowed into the industrial production of cloth. By the mid nineties, however, the first signs that supply was increasing at a faster pace than demand manifested themselves in the market. Yet, as a result of decisions to invest taken in previous periods, new cotton mills entered the market. As no compensatory changes in demand took place, difficulties in relation to sales intensified. During the first years of the twentieth century, the general performance of the cotton textile industry of Minas Gerais, and especially that located in the central areas of the state around the new capital, Belo Horizonte, began to improve, revealing an increase in local demand. In 1905 and 1906, after a long period of stagnation,

new textile companies were once more constituted. A public convention leading to the creation of an organization of textile entrepreneurs in December, 1906, can be taken to demonstrate that the cotton textile industry of Minas Gerais was by then firmly established. On the eve of the First World War the cotton mills established in the period 1868-1906 were responsible for most of the productive capacity of the cotton textile industry in Minas Gerais.

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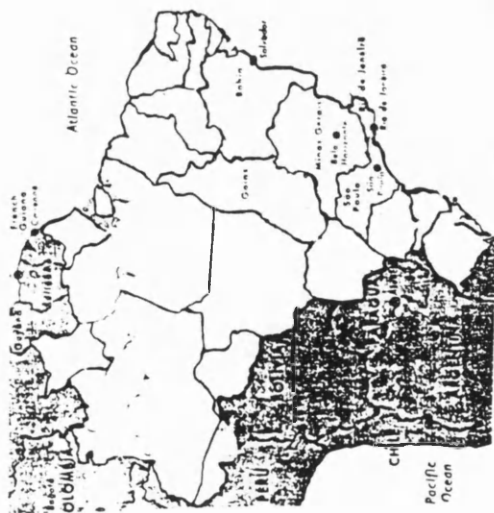
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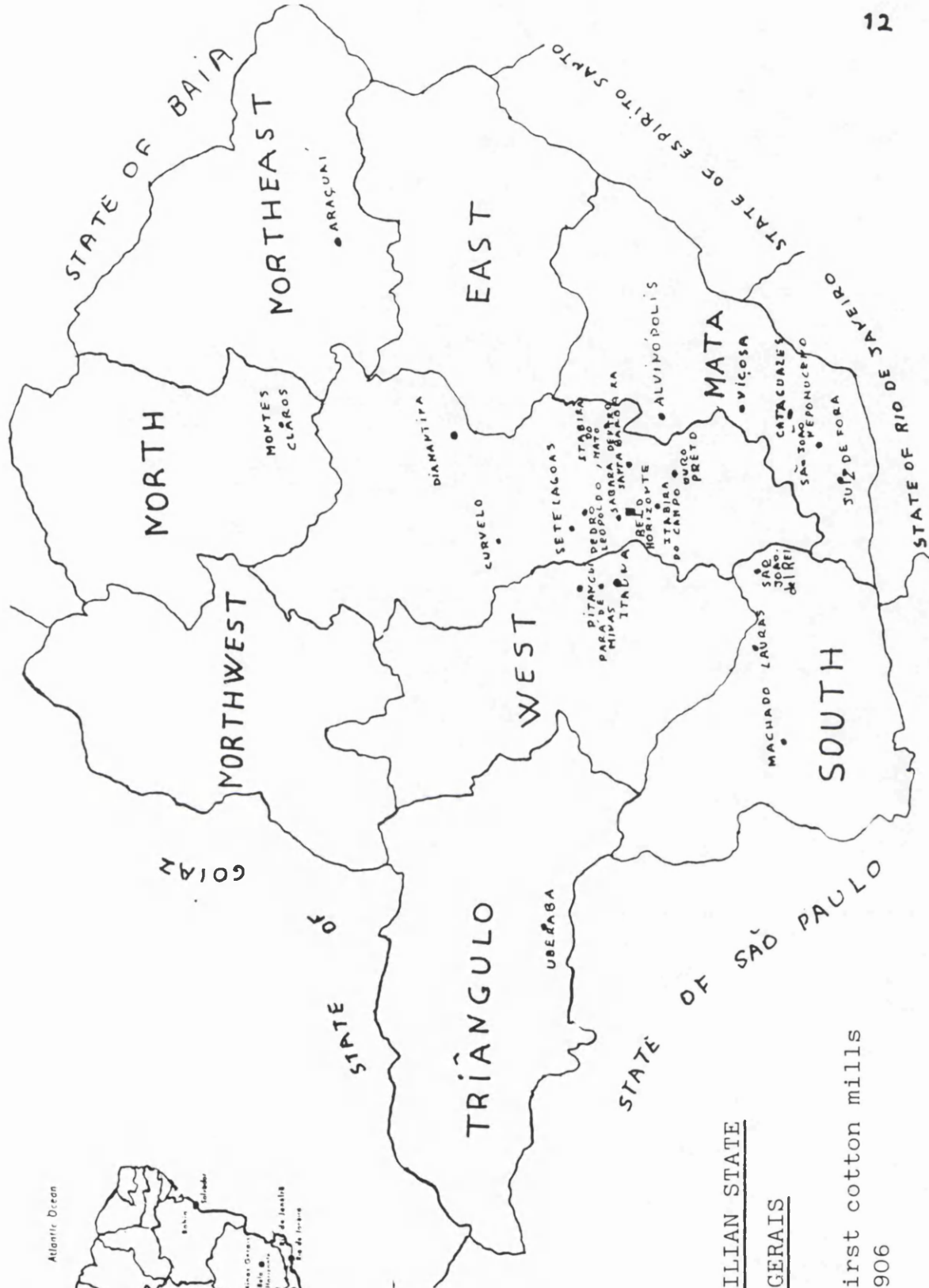
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ZONES OF THE BRAZILIAN STATE OF MINAS GERAIS

Location of the first cotton mills
1868-1906



INTRODUCTION

I.1 General approaches adopted to the study of the emergence of industry in Brazil.

The Brazilian economy before the First World War has been generally characterized as an economy specializing in the production of primary goods for the international market. Moreover, this economy has usually been treated not only as an economy exporting primary goods, but chiefly as a coffee export economy. It is within this context that the early industrialization of Brazil has been mostly investigated. The history of Brazilian industry has been written largely as a derivative of the history of coffee.

This relation between coffee and industry was reinforced by the fact that by the turn of the century it was in the coffee-growing areas of the country that industry had mostly advanced. In fact, on the eve of the First World War, industrialization in the states of Rio de Janeiro and São Paulo - especially concentrated in the cities of Rio de Janeiro and São Paulo - was far ahead of that experienced by any other state.¹ Therefore, it is natural that studies of industrial development before the war have tended to concentrate on those areas which were also great coffee producers. In the case of the city of Rio de Janeiro, not only was it the centre of a coffee-producing area, but most activities connected with the coffee export business were located there. Thus, studies in industrial development have tended to concentrate on areas where the economy was, to a large extent, dependent on coffee.

However, the industrialization which took place before the First World War was not restricted to coffee-growing areas. It reached areas which did not produce coffee, and indeed areas where production for export was relatively unimportant. Therefore some questions pose themselves: are the characteristics of early industrial growth in non-export

areas similar to those of coffee-growing areas? how far can generalizations based on the experience of Rio and São Paulo account for the industrial growth which took place in non-export areas? Little attention has been given to those matters. This is a regrettable omission. Answers to these questions will contribute to a better comprehension of the overall process of the early industrialization of Brazil. They can also help to clarify, by contrast, the industrialization which occurred in coffee-growing areas.

This dissertation has the purpose of making a contribution to the understanding of this "peripheral" industrialization in Brazil by studying the early development of the cotton textile industry in Minas Gerais.

I.2 Exports and early industrialization in Brazil: a brief review of the literature.

The classical interpretation of industrialization in Latin America is that of the so-called "ECLA school".² According to this view, the emergence of industry in Latin American countries only became feasible when specially adverse conditions in the world market created difficulties for their exports. Balance of payments problems stemming from these difficulties led frequently to exchange rate devaluation. The consequent increase in the internal price of imports encouraged the domestic production of import substitutes. Given that export crises were generally associated with falling income in those countries, counteracting government measures play an important role in the ECLA writings, guaranteeing the maintenance of an adequate demand for the emerging manufacturing sector.³

In contrast to that interpretation, the emergence of industry in economies specializing in the production of primary goods for export has been seen in much of the literature as a by-product of this export production. Domestic industry appeared to supply the demand arising from

the export sector. The necessary conditions for this industry to be established would have been created, either directly or indirectly, by the export sector: funds to be invested, transport infrastructure, and so on. Besides, it was the export sector which would have provided a solution to the problem of labour for industry by attracting immigrants. This line of interpretation was influenced by the so-called "staple" model of development.⁴ Despite individual differences - which are significant - this approach was adopted in the study of the origins of industry in Brazil by Dean, Leff, Suzigan, Mello, Silva and Cano among others.⁵

In Fishlow's study, which might be seen as a third approach, "the early surge of industrialization in Brazil was largely fortuitous and was reinforced at various intervals by exogenous forces."⁶ The first instance of significant Brazilian industrialization - placed by the author in the early 1890s - was not, according to him, promoted by the export sector. It resulted from the delayed effects of inflationary policies on the exchange rate which facilitated the import of equipment and machinery. As the rate of increase in internal prices was not immediately followed by a corresponding rate of devaluation of the exchange rate, imports of industrial machinery became relatively cheaper. It was the drastic devaluation of the exchange rate after 1893 that favoured import substitution.⁷

That distinction between a period favourable to investment in domestic productive capacity (the early nineties) and a period when domestic production expanded (the post-1893 years) was generalized by Versiani and Versiani. They point out that from the 1870s to the 1930s a series of periods of expanding demand for domestic industrial production, alternating with periods favourable to increases in productive capacity, can be recognized. In fact, the initial development of Brazilian industry could be characterized by a succession of phases of concentrated investment activity, and phases of expansion in production. Thus the "ECLA

approach" and the "staple approach" would both stem from an incomplete, partial view of the emergence of industry in Brazil. The beginning of industrialization could not be adequately explained either as a result of difficulties in the export sector, nor as an inevitable consequence of an expansion in exports. Rather, Brazilian industrial development began as the result of stimuli to domestic production in periods of difficulty in the export sector, associated with stimuli to industrial investment in periods favourable to exports. Contrary to Fishlow, Versiani and Versiani point out the importance of tariff protection in the emergence of Brazilian industry, a fact amply recognized by contemporary opinion.⁸

The absence of any direct and simple relationship between the performance of the export sector and the emergence and expansion of industry before the First World War was also emphasized by Versiani⁹ and Cardoso¹⁰. In Versiani, the existence and the expansion of an export sector were necessary conditions for the appearance of an industry in Brazil but they were not sufficient conditions. For domestic industry to develop it was necessary that the internal market was secured for local producers. The fluctuation in the exchange rate - largely explained by changes in coffee prices - associated with the tariff system was able to guarantee such protection and therefore to stimulate the emergence and expansion of industry in the pre-war period.

Cardoso, like Fishlow and Versiani, emphasizes the effects of fluctuations in the exchange rate on early industrial expansion in an export economy. However, in Cardoso's model the effects of the exchange rate on industrial investment are felt by means of a different mechanism. A reduction in export earnings, for instance, would have contradictory effects on investment. On the one hand it would encourage investment by increasing the profitability of the sector - due to a decrease in real wages. On the other hand it would discourage industrial investment by increasing interest rates - through its impact on real balances. As the effects

on profits were greater than those on the exchange rate, a devaluation of the exchange rate would be expected to favour industrial investment rather than to discourage it. However the data for the Brazilian case led the author to conclude that: "...the behaviour of exports was neither favourable nor unfavourable to industrialization."¹¹

In all the above interpretations of Brazilian industrial growth before the First World War this growth is related in one way or another to export activity. Industry appeared and developed either as a natural extension of the export sector, or the result of export crises or as a consequence of protection which was largely influenced by the performance of exports, through its impact on the exchange rate.

In relating those interpretations to the case of Minas Gerais some particular features of the Mineiro economy and its industry have to be taken into account. Firstly, recent developments in the economic history of Minas Gerais have emphasized the remarkable pace of growth of its economy in the nineteenth century; and it is generally agreed that this growth was not directly related to exports. Minas Gerais was essentially a non-export economy in which the coffee export sector was of the nature of an enclave. To that extent, changes in proceeds from exports would not affect directly or significantly the level of income in the province. As there are indications that Mineiro industry supplied mostly markets within the province, it follows that the demand for its production would not be directly dependent on the level of exports. Besides, as a non export economy, Minas Gerais did not benefit from improvements induced by the production of exports. Secondly, as there are reasons to believe that the Mineiro textile producers were to some extent protected from outside competition, due to costs of transport and distribution, they could remain - within limits - unaffected by changes in the relative price of imports (through, for instance, exchange rate variations).

It is not clear, therefore, whether the links between exports and industrialization would be the same in the case of Minas Gerais as implied in the general literature; this would have to be investigated.

I.3 The Mineiro economy of the nineteenth century as a non-export economy.

Prado Júnior was the first author to emphasize the peculiarities of the Mineiro economy in the nineteenth century as a vigorous plantation-type economy specializing in the production of crops and dairy products for the internal market.¹² This important point was later obscured by the wide influence of Furtado's general interpretation of Brazilian economic development. Furtado argued that the gold boom of the first half of the eighteenth century, centred in Minas Gerais, had not had any effect on the economic evolution that followed, other than increasing significantly the province's population. Once the gold rush was over - in the third quarter of the 18th century - Minas Gerais would have been transformed into a largely subsistence economy and entered a long period of decline.¹³

More recently, Furtado's views on this point have been contested. Gorender, for instance, echoing Prado Júnior, stressed that demand for food products and draught animals from the gold mining area induced the development of agricultural and cattle raising activities in Minas Gerais, as far back as the eighteenth century.¹⁴ With the decline of gold mining - and the consequent reduction of the urban population - these activities were adversely affected. However, the transfer of the Portuguese Crown and his Court to Rio de Janeiro in 1808, the further development of this city as the administrative centre of the country after independence, and the spread of coffee in the Paraíba river valley - all this created an expanding market for Mineiro agricultural production. As Gorender puts it:

"The depopulation of the urban centres (in Minas Gerais) was offset by the development of food crops, tobacco, sugar cane and later on coffee, by an impressive increase in cattle raising and pig farming, and by an extraordinary development in the household production of cloth for trade.(...) Minas Gerais acquired the features, unique in the whole country, of an economy of large farms worked by slaves and producing food for consumption in the internal market."¹⁵

Other recent works have also argued, contrary to Furtado's view, that the internal market associated with the gold boom had a lasting effect on the Mineiro economy, inducing the emergence of the diversified production of food and manufactured goods in the area. There is a growing consensus that Minas Gerais did not enter a period of stagnation with the decline of gold exports; rather, import constraints associated with the decline of mining stimulated diversification of productive activities in the area.¹⁶

This line of interpretation was defended in the studies of Martins and Martins Filho.¹⁷ They pointed out that Minas Gerais had, in the nineteenth century, the largest concentration of slaves of all the Brazilian provinces. Such a large slave population was not only the result of slaves surviving from the gold mines, and their descendants, but the result of the high net import of slaves during the nineteenth century. Slave imports could hardly be ascribed to a demand from the export sector of Minas Gerais: mining was in decline and coffee-growing was an activity restricted to a small area and isolated from other economic activities in the province. According to them the coffee area was "an export-plantation enclave"¹⁸ in Minas Gerais, which "had little, if any, impact on the economic structure of the Mineiro heartland."¹⁹ They concluded that the increase in slave stock revealed the expansion of food crop cultivation, cattle raising, and household manufacturing.

The Martins also argued that Mineiro production, generally carried out on large farms, but not on a large scale, was mostly absorbed by home-consumption; the tradable surplus

would have been a relatively small part of total output. The trade within the province was marginal, as "the regions of the province were not economically integrated and communications between them notoriously poor"²⁰, and exports from Minas Gerais to other provinces were quite small "in comparison with the provincial output ..."²¹ .

The Martins' view of the Mineiro economy has been contested. It has been argued, for instance, that the authors do not take into consideration the inter-relationship between the non-export sector in Minas and export activities elsewhere in the country.²² Whatever the criticisms which may be made of the Martins' interpretation of the nineteenth century economy of Minas Gerais, the central tenet of their work remains valid: they have brought relevant new evidence to show that Minas Gerais in the nineteenth century was a dynamic slave-based, non-export economy, with a coffee sector restricted to a narrow area in the south.

In this setting, the study of the emergence of cotton manufacture in Minas Gerais acquires an interesting dimension, as mentioned above. Contrary to the more frequently studied cases of Rio and São Paulo, demand for this newly developing industrial production cannot be directly related to export activities in the case of Minas Gerais.

I.4 Handicraft production of cotton textiles in Minas Gerais.

The early development of a cotton textile industry in Minas Gerais had another distinctive feature, in relation to the rest of the country: it began in an area where handicraft textile production had flourished for a long time.

The start of significant handicraft production of cloth in Minas has been associated with the process of diversification promoted by gold-mining in the eighteenth

century. Its expansion thereafter has been seen in recent literature as the result of an increase in this diversification, consequent on the decline in mining activities. However, very little is known, as yet, about the emergence and evolution of those activities in the colonial period. Evidence that a significant development in cotton manufacture was taking place is shown by the concern of the Portuguese authorities about the possibility that local production could bring losses to Portugal's trade. This concern resulted in legislation being passed in 1785 prohibiting the manufacture of any textile - except coarse cloth for dressing slaves and packing.²³

Additional evidence for the handicraft production of cloth in Minas Gerais in the nineteenth century comes from contemporary observers, data on textile exports from Minas Gerais, and data on employment provided by the Census of 1872. Based on such sources Martins provides a general description of the handicraft production of cloth in nineteenth century Minas Gerais.²⁴ Cloth was produced all over the province, and the level was comparatively high until the 1870s. Production was carried out not only on farms but also in urban areas and in the peasant sector. The participation of slaves in the textile labour force was very low in relation to the total slave population of Minas Gerais, as well as in relation to the total number of workers employed in the handicraft production of cloth.²⁵ Employment of slaves in textile work was more common on large farms than in villages. Cloth produced in Minas was mostly consumed locally, but it was also sent to Rio de Janeiro, from where it was distributed to the southern provinces and even to Buenos Aires. Mineiro cloth was also sold in São Paulo, Bahia and Goiás. However, by the eighties, the external markets were lost as handicraft production was unable to compete with the cloth by then being produced in cotton mills.²⁶

The fact that the decline of the handicraft cloth industry in Minas Gerais occurred at the same time as the first

cotton mills were being established in the province leads to questions about the connection between those two events. Was the decay of the handicraft production the result of competition with industrially produced textiles? Or was the establishment of the first cotton mills in Minas Gerais a natural development of the cottage industry?

There are indications that the latter question should be answered negatively. A recent study concludes that in Minas the transition from handicraft cloth production to production under the factory system was not successful. In support of such a conclusion it is argued, for instance, that the early development of textile mills in Minas was much less impressive than in other states; indeed, factory production of cloth in 1885 was inferior to that of the handicraft industry in 1827-1828.²⁷

Production of cloth in factories appeared, thus, as a new phenomenon, not as an evolution of pre-existing household production. It is the purpose of the present work to study the conditions under which this new sector emerged and developed.

I.5 Scope and working hypotheses of the dissertation.

It has been seen that the Mineiro economy in the nineteenth century presented some distinctive features. These features, reviewed below, support the basic assumption of this dissertation that the emergence and development of the Mineiro cotton industry presented also distinctive features.

a) The Mineiro cotton textile industry emerged in a non-export economy. Income and employment in Minas Gerais were basically dependent on the level of the local production of food crops, dairy products, manufactured goods and on cattle raising activities for the internal market. In so far as the markets supplied with Mineiro products were dependent on export activities, the economy of Minas Gerais would be

indirectly affected, to a certain degree, by the performance of the export sector. However there are reasons to believe that those indirect effects would be relatively weak, so that income in Minas Gerais tended to be more stable than in the export-dependent areas of the country.

First, it must be remembered that income elasticity for food products is generally low: changes in the demand for those goods tend to be less than proportional to income changes. Second, even without necessarily subscribing to the Martins' position that Minas in the nineteenth century was basically a subsistence economy, it should be recognized that a good part of the sizeable Mineiro population was engaged in production for home-consumption or for local trade. Their income level would be thus largely independent of export oscillations.

b) Production of the early cotton mills of Minas Gerais was mostly absorbed by markets within the state. Therefore, the demand for their products was relatively unaffected by changes in export proceeds.

c) Minas textile producers had a certain degree of protection from outside competition, due to high costs of transport and distribution. Those costs resulted from the geographical isolation of Minas Gerais - given its distance from the coast and a precarious system of transport - as well as from the dispersion of its population over a large territory. The Mineiro population was spread over a large number of small cities and villages and in rural areas. Such additional protection, over and above that given by customs duties and exchange devaluation, allowed Mineiro producers to charge higher prices than those in the coastal cities. It also cushioned the Mineiro cotton mills from the adverse effects of a decrease in the domestic price of imported cloth.

In fact, the extra margin of protection defined a top level of prices chargeable by Minas producers. To the extent that

the Mineiro mill owner fixed his price below that top level - say ten per cent below it - then an exchange rate appreciation causing a fall in that top price smaller than ten per cent would leave that producer entirely unaffected. It would take a larger decrease in the internal price of imports to force that producer to mark down his price.

On the other hand it is clear that changes in the internal prices of foreign textile machinery would affect Minas producers in the same way as they affected producers in other provinces. An appreciation of the exchange rate, making imported machinery cheaper, could be expected, everything else being constant, to encourage new investment.

It can be said, then, that Mineiro textile producers had a comparative advantage in supplying the provincial market, in relation to producers located in other provinces or abroad. It is reasonable to assume that the initial stimulus for the emergence of a cotton textile industry in Minas Gerais stemmed basically from that advantage.

d. Minas Gerais was the province with by far the largest population and, therefore, represented a significant proportion of the Brazilian consumer market. In 1872, 22% of the Brazilian population was in Minas Gerais.²⁸ The population of Bahia, then the second largest province in inhabitants, was 66% of that of Minas. The joint population of the Corte (city of Rio de Janeiro and close surroundings, later under the Republic from 1889, the Distrito Federal) and the province of Rio de Janeiro was only 52% of the Mineiro population. As for the province of São Paulo, Minas had two and a half times its population.

From 1872 to 1900, the population of Minas Gerais increased faster than that of Rio de Janeiro (state and city) and Bahia. Even though the population of São Paulo increased much faster in that period, in 1900 Minas still had the largest population of all states.²⁹

As a producer of textiles, however, Minas Gerais ranked fifth in 1905. The larger textile industries were to be found in the Distrito Federal, and the states of São Paulo, Rio de Janeiro and Bahia.³⁰

Within the above context, it is the purpose of this dissertation to describe the emergence and performance of the cotton textile industry in Minas Gerais in the period 1868-1906; to analyze, as far as possible, the rationale of those investing in the first mills; and to compare the Mineiro case with the general interpretations of the process of early industrialization in Brazil. (By industrialization is meant in this work the emergence and development of factory-system manufacture, with the use of machinery driven by non-human power)

The choice of the industrial sector and the period to be studied can be justified briefly. It was in the production of cotton goods that industrialization first started in Minas Gerais. The early Mineiro cotton textile industry was established and consolidated in the years 1868-1906. The first partnership to be successful in setting up a cotton mill in Minas Gerais was formed in 1868. From then until the mid 1890s, the industrial production of cloth in Minas Gerais became an attractive field for investment, and cotton mills were established in a number of different places. In the second half of the nineties, investment in cotton textile production was cut drastically. The industry entered a period of stagnation which was to last until the first years of the twentieth century. The first indications that the crisis was over appeared in 1903-1906. The expansion that took place from 1906 until the outbreak of the First World War represents the second phase in the development of the Mineiro cotton textile industry. This second phase is characterized by a diversification of the production of cotton goods through the establishment of mills specializing in knitted cotton textiles, mostly set up in the coffee growing areas of the state. Nevertheless at the beginning of the War, cotton mills established in the nineteenth

century were still responsible for most of the productive capacity of the industry.

I.6 Organization, sources and limitations of the study.

The results of the investigation are presented in seven chapters. The first four chapters examine the emergence of the cotton textile industry in Minas Gerais and cover the years 1868-1895. The following three chapters examine the performance of the sector from 1895 to 1906.

As the main objective of the work was to reconstitute the initial history of the cotton textile industry in Minas, the first task was to describe the emergence and the evolution of that industry in as much detail as possible. Thus, the adoption of a chronological presentation was clearly indicated. This approach has the advantage of shedding light upon some aspects of the behaviour of Mineiro entrepreneurs and managers which are better understood in relation to the short term cycle, making room for comparisons between them and their counterparts in Rio and São Paulo.

The period 1868-1895 was divided into four sub-periods, studied in the first four chapters: 1868-1879, 1880-1889, 1890-1891, and 1892-1895. Chapters 5 and 6 examine the performance of cotton mills in the periods 1896-1898 and 1899-1902, years when no new companies for industrial textile production were established in Minas. The seventh chapter examines the first signs of recovery in the sector, in 1903 and 1906.

Definition of sub-periods follows subdivisions that have been made - explicitly or not - in the literature. The use of similar subdivisions makes it easier to compare the Mineiro industrial evolution with the parallel process taking place in Rio and São Paulo. Such comparisons help to put to test the general interpretations of early Brazilian industrialization available in the literature, which are ,

as mentioned above, usually based on evidence derived from the cases of Rio de Janeiro and São Paulo.

The study is based primarily on information contained in documents relating to the constitution of partnerships and joint stock companies formed during the period, with the purpose of establishing cotton mills in Minas Gerais. Analysis of the performance and investment patterns of existing concerns were based mostly on records and documents of the textile companies: annual reports, annual accounts, proceedings of shareholders' meetings, and so forth. For identification of the first investors, secondary sources were largely used: books and other publications dealing with the history of specific cities, contemporary newspapers, genealogical studies, family histories and biographies.

This is the first attempt in the literature to study systematically the initial development of the industrial production of cloth in Minas Gerais. As is usually the case in pioneering work, some gaps are evident. A clearer picture of the evolution of the sector would require more research in public archives and, especially, private archives of old mills. This work was particularly hindered by lack of information on some aspects of the Mineiro economy in the period before the First World War, such as : evolution of the cotton market, development of the transport network, process of urbanization, development of the banking system, and so on. Scarcity of information on those areas prevented further investigation into certain relevant aspects of the development of the cotton industry, such as those related to recruitment of workers, supply of raw material, and sale and distribution of the final product.

1. The industrial development of different states before the First World War may be evaluated from data from two industrial surveys made before the Census of 1920. One was carried out by the Centro Industrial do Brasil in 1906 and the other one by the Diretoria Geral de Estatística do Ministério da Agricultura Indústria e Comércio in 1912. The results of the latter were published together with the results of the Industrial Census of 1920. See: Centro Industrial do Brasil (1909) and Ministério da Agricultura Indústria e Comércio, Diretoria Geral de Estatística (1927).
2. ECLA is the UN Economic Commission for Latin America, established in 1948 in Santiago, Chile. For the "ECLA school" ideas on Latin American industrialization, see: CEPAL (1951) and Furtado (1969).
3. for the ECLA approach as applied to Brazil, see: Furtado (1970), Tavares (1964).
4. For different approaches to the staple theory see: Watkins (1963) and Caves (1965).
5. Dean (1969), Leff (1969) and (1972), Suzigan (1984), Mello (1987), Silva (1976), Cano (1977).
6. Fishlow (1972, 312).
7. Fishlow (1972, 316-317).
8. Versiani and Versiani (1975).
9. Versiani (1980).
10. Cardoso (1981).
11. Cardoso (1981,97).
12. Prado Júnior (1957), firstly published in 1942.
13. Furtado (1970), chapters XIV and XV.
14. Gorender (1980), chapter XXI.
15. Gorender (1980,448-449).
16. See, for instance: Maxwell (1973,87-90). About the diversification of the Mineiro economy which followed the gold mining decline, see: Libby (1989,154).
17. Martins and Martins Filho (1983).
18. Martins and Martins Filho (1983,562).

19. Ibid. According to Lima (1978), the stimuli from Mineiro coffee production to industrial growth were largely transferred to the Paulista industry.

20. Martins and Martins Filho (1983,555).

21. Martins Filho and Martins (1983,558).

22. For comments and criticisms of the Martins' work, see: Slenes (1983); Dean (1983) and Engerman and Genovese (1983).

23. Alvará of January 5, 1785. For Mello (1983, 26-27) the "alvará" of 1785 interrupted a significant development of the textile production in Minas Gerais which had started in the second half of the eighteenth century.

24. Martins (1983).

25. A distribution of free and slave textile workers in Minas Gerais in 1873 by the different zones and counties of the province, based on data in the Census of 1872, is presented by the author. See: Martins (1983,92-94).

26. Martins (1983,84-85).

27. Libby (1989).

28. The first demographic census of the country was carried out in 1872. Some data from this census are reproduced in: Secretaria de Planejamento e Coordenação da Presidência da República, Fundação Instituto Brasileiro de Geografia e Estatística (1986,31-32).

29. Two other demographic censuses were carried out in the period under study: one in 1890 and another in 1900. Some data from these two censuses are reproduced in: Secretaria de Planejamento e Coordenação da Presidência da República, Fundação Instituto Brasileiro de Geografia e Estatística (1986,31-32).

30. See data in: Vasco (1905).

CHAPTER 1

THE BEGINNINGS OF A COTTON TEXTILE INDUSTRY IN MINAS GERAIS
IN THE 1870s.

Introduction.

In a challenge to the classical interpretation of CEPAL that the industrialization of the Latin American countries only became feasible when "two wars...and a great economic crisis in between had shown the countries of Latin America their possibilities, teaching them positively the way towards industrial activity",¹ economic historians have turned, in the last two decades, to the study of industrial investment in Brazil before the First World War. The importance of industrial growth in the nineties was emphasized by Fishlow,² as well as by Villela and Suzigan,³ and the new interpretation presented by Fishlow of the effects of the Encilhamento on the expansion of industry inspired a new debate⁴. A preoccupation with the origins of industrial capital led some economic historians to go further back in the past and identify the 1880s as the period of the birth of Brazilian industry.⁵ More recently, the industrial growth which took place in the seventies has been examined by Versiani⁶ and by Suzigan.⁷

This chapter investigates the emergence of a cotton textile industry in Minas Gerais in the seventies. By industry is meant the production of cloth in factories and through the use of machinery driven by non human force. Therefore, the production of cloth carried on outside factories will not be studied. However a brief review of attempts at establishing cotton mills before the seventies includes references to some factories which do not seem to have been intended for industrial machinery.

The main purpose of this chapter is to examine when and where the first investment in the cotton textile industry of Minas Gerais took place, who were the original investors, why they decided to invest in the industrial production of cloth, and where their funds came from. The results of such an investigation will provide a basis for verifying whether the early textile industrialization in Minas Gerais followed the general pattern and had the same stimuli as that which was taking place in the same period in the Brazilian economy as a whole, according to the analysis which has been offered in the literature.

The first section presents a review of the literature on the emergence and evolution of industry in Brazil before the 1880s. The following section describes the first unsuccessful attempts at establishing cotton mills in Minas Gerais and focuses mainly on the foundation of the Cana do Reino cotton mill and its failure. As this cotton mill was the first to be owned by a joint stock company, a brief summary of the legislation on joint stock companies passed in 1850 is presented. The establishment of the first cotton mills to succeed as industrial undertakings in Minas Gerais is investigated in the third section. The fourth section points out some of the peculiarities of industrial investment in Minas Gerais in the early seventies. An assessment of the performance of the newly established cotton mills in the last years of the decade is presented in the fifth section. The last section summarizes the main conclusions arrived at in the chapter.

1.1 The evolution of Brazilian industry before the 1880s: a brief review of the literature.

The sluggish development of manufacturing in Brazil during the colonial period has been mostly seen in the literature as the inevitable result of the economic policies applied by Portugal. These policies would not only have discouraged such development but, in some cases, even expressly

prohibited it.⁸

However, as the end of the colonial period was not followed by any noticeable expansion in the production of manufactured goods, other explanations had to be provided for the weak response from domestic producers to D. João VI's policy of freedom and incentive to industry.⁹ The failure of that policy to promote the emergence of industry in the country has been mostly explained in the literature as the result of a lack of tariff protection to domestic producers. Low tariff duties levied on British products in 1810, and extended to all other foreign products in the late twenties, would have discouraged investment in manufacturing.¹⁰ Even though the actual importance of low tariffs in holding back domestic manufacturing has been denied by some authors,¹¹ there has been a consensus that it was in the second half of the nineteenth century that the first significant expansion in manufacturing took place. For those who blame low tariffs for the sluggish development of the manufacturing sector in the first half of the nineteenth century, it was the end of the low tariff treaties in the 1840s that created the necessary conditions for an expansion of this sector. For those who minimize the importance of tariffs, it was a general improvement in the Brazilian economy in the second half of the century that brought about the necessary conditions for the development of domestic manufacturing.¹²

In fact, even though the Tariff law passed in 1844¹³ - known as the Alves Branco Tariff - had increased the duties levied on foreign products, it was unable to produce any immediate stimulus to domestic manufacturing. In the case of cotton textiles, there was a general discontent with the protection granted to domestic producers by the new Tariff. This discontent seems to explain the incentives granted to this industry by a new law in 1846.¹⁴ This law, among other benefits, exempted textile machinery from tariff duties and domestic cloth from export taxes and inter-provincial taxes. From 1846 to the late fifties many changes were

introduced in the Alves Branco Tariff.¹⁵ However, this new legislation did not please either the industrialists, who did not consider the protection given to domestic manufacturing adequate, or the farmers, who advocated major protection for agriculture.¹⁶

In 1857 a new Tariff law was passed, which appeared to answer the demand from farmers for lower tariff duties on food and agricultural implements.¹⁷ Besides a reduction in tariff duties, as demanded by farmers, this new law imposed a tariff duty of 5% on raw materials.¹⁸ New alterations in the tariff law were introduced in 1857 and 1858, which produced a gradual reduction in tariff duties on general consumer goods such as china, cloth of inferior quality, salt and others.¹⁹ In 1860 a new Tariff law was passed which gave continuity to a previous trend towards a general reduction in tariff duties on basic consumer goods.²⁰

Even though it is not possible to verify if the Alves Branco Tariff and the legislation passed thereafter were able to stimulate domestic manufacturing or if any stimulus was provided by other variables, there is reference in the literature to a spurt of industrial production in the early fifties. Luz, for instance, refers to "an unusual industrial activity"²¹ which, even though possibly favoured by the "slightly protective tariff of Alves Branco" was mainly a "reflex of the economic expansion of Brazil in the period"²².

Annual data on exports of industrial machinery to Brazil, recently compiled, have brought about more evidence on the expansion of domestic manufacturing before 1880.²³ These data show the first significant increase in 1870, when exports of industrial machinery to Brazil were 52.5% higher than in 1869. Those exports continued to increase until 1873. From then to 1879 they decreased. However, in spite of such a decrease, exports of industrial machinery to Brazil stayed relatively high during the second half of the eighties. Their average annual value in 1874-1879 was only

1.3% below their average in 1870-1873.

Increased exports of industrial machinery in 1870 show that changes had taken place towards the end of the preceding decade, which encouraged industrial investment. According to Luz, "the industry received a second boost at the end of the sixties"²⁴ as a result of the measures of economic policy applied during the Paraguayan war. The issue of paper money and higher tariff duties on imports, levied to finance war expenses, favoured economic expansion and gave better protection to domestic industry.²⁵

Versiani and Versiani also highlighted the years 1970-1975 as the second period of significant investment in the Brazilian cotton textile industry before the First World War.²⁶ Subsequent research made by Versiani and by Suzigan produced more evidence on the performance of industry in the last years of the Paraguayan war and in the immediate post war period. Their findings confirmed the pattern of evolution of Brazilian industry before the First World War identified in Versiani and Versiani: the alternation of periods favourable to industrial production (spurt of production) and periods favourable to industrial investment (spurt of investment). The economic policies applied during the war - monetary expansion and consequent devaluation of the exchange rate as well as higher tariffs on imports - increased the protection of domestic production. The restrictive monetary policies of the post war period and the consequent appreciation of the exchange rate encouraged new investment. On the other hand the maintenance of the tariffs after the war still provided some protection to the existing industry.

The second half of the 1870s has been seen in the literature as a period unfavourable to industrial investment. By the mid seventies the situation had altered. For the cotton textile industry, a decrease in the price of textiles abroad, not offset by increased tariff duties or compensatory changes in the exchange rate, reduced the

protection of the domestic producer.²⁷ Besides, this period was a period of great and general difficulties for the Brazilian economy. There was a banking crisis in 1874-1875 and a general depression in business from which the economy only started recovering at the end of 1879.²⁸ According to Suzigan, the prevailing conditions had the most adverse effects on domestic manufacturing except in the cotton-textile industry, where "investment continued, though still predominantly in small mills."²⁹

The description of the emergence and performance of the cotton textile industry in the 1870s, as well as an account of previous unsuccessful attempts at establishing cotton mills in the province, to be presented in the following sections, will verify whether the pattern observed in Minas Gerais followed the general pattern identified in the literature for the early development of Brazilian industry.

1.2 Unsuccessful attempts at establishing cotton mills in Minas Gerais before the seventies and the legislation on joint stock companies.

There has been in the literature a tendency to blame the legislation on joint stock companies for discouraging industrial investment before 1890. Therefore, a brief summary of the evolution of the legislation on joint stock companies before 1882 - when a new law making easier the creation of joint companies was passed - will be presented. Changes in the legislation concerning joint stock companies after 1882 will be examined in other chapters.

Until 1849, the constitution of joint stock companies depended upon government initiative and was implemented through specific legislation. This was the case, for instance, with the Banco do Brazil, created by D. João's charter of October 12, 1808. In 1849 the constitution of joint stock companies was, for the first time, regulated by law.³⁰ The organization of a joint stock company had to be

authorized by the Central Government.³¹ In order to obtain such authorization the company's promoter had to send a petition to the President of the province, with the company's contract and statutes. The President of the province would then address this petition to the relevant Minister with a report informing him of the legal aspects of the proposal.³² The President of the province was also required to inform whether "the subscribers' qualities and morality provide enough guarantee and if they have plenty of funds to assure the payment of the capital's instalments on the specified dates".³³ Based on this report, the Central Government would decide if authorization for the constitution of the company should be given. Once this authorization had been granted, no alterations in the statutes of the company could be made without prior approval by the government.³⁴

The Commercial Law of 1850 maintained the government's authorization as a necessary condition for the constitution of any joint stock company.³⁵ In 1860, a decree specified the criteria which should be used to decide whether an application for the constitution of a joint stock company should be approved.³⁶ Such criteria involved an examination of the very different aspects of the constitution of the company and implied personal and subjective appreciation by the civil servants in charge. This legislation was enforced until a new law was passed on November 2, 1882, which dispensed with government approval.

It would be reasonable to assume that pioneer investors in the production of cotton textiles in factories would have felt encouraged, knowing that this investment was to be made by a joint stock company, and would thus limit their risks by restricting their responsibility to their contribution to the capital. However the evidence presented in this section will show that the failure of attempts at establishing mills in Minas Gerais before the seventies can hardly be blamed on legislation.

Very few attempts at setting up factories for the production of cloth before the 1870s have been recorded.³⁷ The failure of such attempts - to be described in this section - in spite of the interest of the Central Government in promoting the development of the industrial production of cloth, reveals a local indifference to the introduction of innovations related to cloth production.

By the Royal Resolution of November 16, 1812, a master was to be sent to Minas Gerais, at the expense of the Central government, to teach the art of weaving to all those who had established looms or were planning to.³⁸ This master arrived in Vila Rica in 1813 but was sent to Comarca do Rio das Velhas because it was said that in this place "there are rich farmers with some establishments and in a better position to make good use of the industry of the ditto master."³⁹ However there is no evidence that these farmers had been particularly inclined to adopt the technology presented by the master. Another example of local indifference to modern technology in the production of cloth is given by the owner of the factory of Registro Velho, near Barbacena, one of the few factories reported to be in operation at the beginning of the nineteenth century. According to the owner of this cotton mill, his invitation to all those interested to come and see the weaving machines for cotton and linen which he had bought from Portugal did not raise any interest.⁴⁰ Also a company formed in Vila Rica in 1814 was unable to raise the necessary capital for setting up a factory.⁴¹

In 1837 the Companhia Industrial Mineira was formed with the purpose of establishing a cotton mill in Neves, district of Sabará, in the Central zone of the province. The construction of this mill began in 1838. In the following year it started working with twenty eight spindles for coarse yarn and six looms.⁴² The available description of this factory's machinery shows that it was not powered either by steam or hydraulic power. The second and last mention of this cotton mill is found in the annual speech of

the President of the province to the General Assembly in 1840.⁴³

The Cana do Reino cotton mill is the first relatively well documented example of an attempt at establishing a cotton mill in the province of Minas Gerais in the mid nineteenth century. Although different years have been given as the year of its foundation,⁴⁴ it was certainly established before 1847. In fact, in his speech to the Legislative Assembly of Minas Gerais, delivered on February 4, 1847, the President of the province, describing the state of the industry in Minas Gerais mentions only one cotton mill: the one established by the firm of Pigot and Cumberland in a place called Cana do Reino - or Cipó - in Conceição do Serro. According to him, this cotton mill - which had machines imported from England - deserved to receive protection from the provincial government as required by its directors.⁴⁵

The decision to establish this cotton mill may have been encouraged by changes in economic policy introduced by the Alves Branco Tariff. However, as this cotton mill had already been built in February 1847, the decision to invest in its establishment was certainly made before the law conceding a number of special benefits to the cotton textile industry was passed in August 1846.⁴⁶ For reasons as yet unknown, the firm Pigot Cumberland gave up business and a new company was organized in 1851 to take over the Cano do Reino cotton mill.

This new company was the first to be constituted in Minas Gerais for the industrial production of cotton cloth after legislative changes introduced in 1849 and 1850 withdrew the constitution of joint stock companies from dependence on government initiative. From then on, and until a new law was passed in 1882, the responsibility of the government was limited to authorizing the functioning of the company. The story of the Cana do Reino cotton mill illustrates the difficulties faced by a company in becoming constituted, and

for a cotton mill to operate in Minas Gerais before 1870.

Unable to raise the capital of 30 contos, the company applied for a loan from the Provincial Government.⁴⁷ Even though a loan of twenty contos - to be lent in instalments of five contos - had been authorized by law,⁴⁸ the Vice-President of the province announced on September 1852⁴⁹ that he had refused to pay the first five contos because the company did not comply with the legal formalities required by article 295 of the Commercial Code.⁵⁰ Notwithstanding his refusal, the company was able to raise ten contos from the Provincial Government.⁵¹ This loan was transformed into shares in 1862,⁵² and in 1875 those shares were granted by the government to a hospital in Curvelo.⁵³ According to the company's Board of Directors, in spite of their efforts, the hospital refused to accept the shares.⁵⁴

The Cana do Reino cotton did not succeed as an industrial undertaking and there is some evidence that it was not working any more by the second half of the sixties. In fact, on June 6, 1868, the President of the province informed the Municipal Chamber of Representatives of the town of Conceição do Serro about the complaints on the performance of the company by the shareholders. Considering such complaints, he required from the Chamber and the Municipal Judge, "circumstantial information on this establishment."⁵⁵ As no information had been received by August the following year, he took the opportunity to express his disbelief in any governmental protection of industries in the province. Addressing the Legislative Assembly on August 29, 1869, the President of the province complained about a total lack of news from that company which had received protection from the Provincial Government. He added that, if the results were not encouraging, the government should learn a lesson from it and in future protect "the only sources of prosperity which I find, for the time being, agriculture and mining."⁵⁶

"In a province, central and large as is Minas

Gerais, where distances cannot yet be diminished by better ways of communication and therefore where the transport cost is exorbitant, it is useless to look for any other source of wealth and prosperity besides those already mentioned (agriculture and mining) which are up to this date the only sources I find for public and private wealth."⁵⁷

A report from the company's President in this same year, dated September 21, gave the reasons why the Cana do Reino cotton mill had been prevented from achieving a satisfactory performance.⁵⁸ According to his report, the cotton mill, which then had two spinning machines - one with 240 spindles and the other with sixty - and one mechanical loom, was unable to operate regularly because there were no qualified workers and the company could not afford to contract experienced workers from Europe. Besides, as the company did not find subscribers for all of its capital, it had been forced to raise expensive loans.

In a report delivered to the Legislative Assembly on March 2, 1871 by the President of the province, the results of an investigation into the state of the Cana do Reino cotton mill carried out by a committee - appointed by the Municipal Chamber of Representatives of Conceição do Serro - were revealed. This committee informed the President of the province that: the cotton mill had not worked in the last five years; the machines, except the loom, were in a good condition; the company was in such a bad state that its shares were not worth anything. This report concluded that the factory could not be operated because, in fact, there were no workers able to operate the machines - a problem which should have been foreseen by the company. However, added the report, there was no problem in the supply of cotton in the area.⁵⁹

Finally on August 5, 1873, the President of the province authorized the Provincial Treasurer to appoint a tax collector to the town of Conceição do Serro to defend the rights of the provincial government - then the major

shareholder - in the process of liquidation of the company.⁶⁰ However, on August 14, 1874 the Provincial Treasurer informed that nothing was known in his department about the liquidation of that company.⁶¹ No further information on this company is available.

The evidence presented shows that the production of cloth in factories was still unable to attract enough capital to finance the establishment of cotton mills to successfully compete with the handicraft production of cloth.

1.3 The emergence of a cotton textile industry in the seventies.

The starting point of the industrialization of cotton textile production in Minas Gerais may be linked with the constitution of the partnership Mascarenhas & Irmãos in 1868 to establish the Cedro cotton mill in Tabuleiro Grande, district of Sete Lagoas. Cedro was, in fact, the first cotton mill founded in Minas Gerais driven by hydraulic power and able to succeed as an industrial undertaking.⁶² Two other cotton mills were established in the early seventies, the Brumado and the Machado cotton mills. In 1873 a partnership, Mascarenhas Irmãos & Barbosa, was formed to establish a cotton mill in the province. Another textile partnership created in the first half of the seventies was the "Santos & Companhia". The Companhia União Itabirana, formed as a joint stock company in 1875 with the purpose of setting up a cotton mill in Minas Gerais, was authorized to go into operation by the Central Government in 1876.

1.3.1 The constitution of the partnership Mascarenhas & Irmãos in 1868 and the establishment of the Cedro cotton mill.

The establishment of the Cedro cotton mill was the initiative of three brothers, Bernardo, Caetano and Antonio Candido Mascarenhas, sons of Antonio Gonçalves da Silva

Mascarenhas, a wealthy farmer in Tabuleiro Grande - today the town of Paraopeba - in the central area of the province. At the time the three brothers agreed to form a partnership and to set up a cotton mill in Tabuleiro Grande, Bernardo still lived with his father on the farm of São Sebastião. Antonio Candido lived on his own farm near Tabuleiro Grande, and Caetano lived in Curvelo, a town relatively close to Tabuleiro Grande⁶³. The partnership was legally constituted in 1868, with a capital of 150 contos and the purpose of establishing a cotton mill.⁶⁴ The farm where the factory was to be built was bought in July, 1870⁶⁵ and the machinery was ordered in September, 1870.⁶⁶ The machinery arrived in Rio de Janeiro in September of the following year.⁶⁷ From Rio de Janeiro the machines went by the railway, Estrada de Ferro D. Pedro II, to Entre Rios in the province of Rio de Janeiro. From Entre Rios to Juiz de Fora, in Minas Gerais, transportation was by the União e Indústria road. Finally, from Juiz de Fora to Tabuleiro Grande the machines were transported in ox carts over tracks which, for the most part, had been opened up to give passage to troops of mules.⁶⁸ In August, 1872 the factory started working with 18 looms and a turbine with 40 h.p.⁶⁹ The next year the cotton mill produced 224,844 metres which already corresponded to the maximum productive capacity of the machinery.⁷⁰

This brief summary of the constitution of the Mascarenhas & Irmãos partnership and the establishment of the Cedro cotton mill reveals some features which would characterize much of Mineiro textile investment in the nineteenth century. The undertaking was strictly a family business with a few partners. The cotton mill was to be established on a site close to where the partners lived. Besides, the need for a source of hydraulic energy led to the location of the mill in a rural area. This summary also shows that a period of about four years elapsed between the constitution of the partnership in 1868 and the date of inauguration of the cotton mill in 1872.⁷¹

The establishment of the Cedro cotton mill has been used to support the argument that the capital originally invested in the Brazilian cotton textile industry had been previously accumulated in the mercantile sector.

The role played by merchant importers in the early industrialization of the state of São Paulo was initially revealed by research carried out by Dean⁷². Later on Versiani and Versiani suggested that a similar pattern seemed to have occurred in the early cotton textile industry of the city of Rio de Janeiro and nearby areas.⁷³ In a more recent work, Versiani emphasized the importance of the role played by cloth merchants in the early industrialization of Brazilian textile production. After remarking that a detailed account of the sources of capital and entrepreneurship would require more information on the history of individual firms, Versiani states that "existing evidence strongly suggests ...that cloth merchants played a central role in the process".⁷⁴ In support of his point the author produces evidence on the participation of merchants in the textile industry of Bahia, São Paulo, Rio de Janeiro. In the case of Minas Gerais he concludes that "there is evidence of the preponderance of commercial capital in the foundation of the important group of mills owned by the Mascarenhas family."⁷⁵ This evidence refers to the activities carried out by Bernardo and Caetano Mascarenhas before the constitution of the partnership Mascarenhas & Irmãos.

Suzigan also refers to the foundation of the Cedro cotton mill as "the strongest evidence" to suggest that "mercantile capital was probably the most important source of capital for investment in the cotton-spinning and weaving industry."⁷⁶ According to Suzigan the funds for the establishment of this cotton mill would have been generated by the earlier activities carried out by two of their founders, Bernardo and Caetano Mascarenhas: fattening of cattle for sale and trade with salt.

Given the evidence which has been produced in the literature, no one can deny that cloth merchants had an important role as investors as well as entrepreneurs in the early cotton textile industry of Rio de Janeiro, São Paulo and Bahia. Considering the great importance of the cotton textile industry of these areas in relation to that of the country, as a whole, generalizations based on evidence from these regions are acceptable.⁷⁷ However, considering the features of the Mineiro economy in the nineteenth century, one would not expect any major role in the industrialization of its cotton textile production to have been played by merchants, or more specifically, by cloth merchants.

As was pointed out in the Introduction, the Mineiro economy in the nineteenth century was a non export economy with a diversified production of food, cattle products and manufactures for the national market and especially for local markets within the province. The handicraft production of cloth was then a flourishing activity. Production for export was either restricted to a narrow area in the south - as happened to the coffee production in the Mata zone - or had a relatively small impact on income and employment as was the case of mining. In such an economy, it would be reasonable to expect funds for the establishment of the first cotton mills to have been provided by local people engaged in the production of food, manufacturing, and cattle raising for the local market and, to a lesser extent, for national markets outside the province.

The conclusion of Suzigan in relation to the mercantile origin of the capital invested in the establishment of Cedro is based upon the fact that the original capital came from profits obtained by the two Mascarenhas brothers, Bernardo and Caetano, from the sale of a joint business they had in the trade of salt and in fattening and selling cattle.⁷⁸ However, if the available biographies on the Mascarenhas family can be used as a reliable source of information, part of the capital invested in the Cedro cotton mill could, as well, be seen as capital accumulated in farming activities

carried out by their father, Antonio Gonçalves Mascarenhas. In fact, according to family stories, the funds used by Bernardo and Caetano to start their early commercial business were drawn from a trust of 26 contos which they received from their father when they came of age.⁷⁹ Also, the two brothers were said to have had recourse to their father from time to time for loans.⁸⁰ Besides, there is some evidence that the profits produced by the liquidation of their merchant business had other applications.

Bernardo and Caetano Mascarenhas sold their merchant business in 1867 with net profits of 108 contos.⁸¹ The firm Mascarenhas & Irmãos was legally constituted in 1868. The first payment they made towards the firm's capital was in March, 1870. The second payment was made in November of the subsequent year and the last payment in December 1872.⁸² In spite of the profits obtained in the sale of their business, Bernardo and Caetano had problems in paying their share of 50 contos in the firm's capital. In fact, in a letter to Joaquim Pereira Lopes on August 3, 1870, Bernardo pressed him to pay his debts as: "I have, in partnership with two brothers, ordered a cotton manufacturing machine which, once set up, will cost more than we have".⁸³ Bernardo and Caetano also borrowed money, at interest, from their brother and third partner of the firm, Antonio Candido in order to pay their share.⁸⁴

Therefore the conclusion that the 108 contos of profits obtained in the salt business "was the source of the capital invested in the first successful cotton mill of Minas Gerais, the Fábrica do Cedro"⁸⁵ is not supported by the available evidence. Besides there is no evidence that one of the three partners, Antonio Candido, had any previous involvement with trade. At the time of the constitution of the partnership he was a farmer living on his farm, Fazenda do Rasgão, near the site where the Cedro cotton mill was to be established. Therefore, the evidence presented shows that the funds invested in the Cedro cotton mill had been previously accumulated in different activities: agriculture,

cattle raising, money lending, and also local trade.

The Cedro cotton mill was not only financed by a small group of very close relatives, but was also established in the area where they lived. According to Caetano, one of the three partners, the mill was initially planned to be built in Juiz de Fora in the south of the province near its border with the province of Rio de Janeiro. However the third partner, Antonio Candido, imposed as a condition for his participation that the mill was set up near the place where they lived.⁸⁶

1.3.2 Other cotton mills founded in the first half of the seventies: the Brumado and the Machado cotton mills.

In a report dated January 15, 1873, the President of the province mentions two cotton mills in operation in Minas Gerais: the Cedro cotton mill and the Machado cotton mill. Besides those mills, he adds: "there is a great number of small spinning machines for cotton and wool which make up the industries of the municipalities of Pitangui, Sete Lagoas, Sabará, Curvelo, Pará, Oliveira, Tamanduá and Dorcas de Indaiá".⁸⁷ In this statement the President of the province announces the beginning of the industrial production of cloth in a province where the home production of cloth was still an important economic activity.

Very little is known about the Machado cotton mill, the first mill established in the south of the province. According to Lucas, this cotton mill was opened on March 19, 1875, was driven by steam power and produced a daily average of 1,200 metres of cloth.⁸⁸ In a list of cotton mills existing in Brazil, published in 1885, a mill under the name of Industrial Machadense located in Santo Antonio do Machado is said to be idle.⁸⁹ In 1905 this cotton mill, mentioned as the property of Coronel Onofre Mendes, appears as one of the smallest mills of Minas Gerais with only thirty looms.⁹⁰ In 1912 the mill - then the property of a partnership Braga, Dias & Octavio Westin - was said to be

closed down.⁹¹ In 1915 the Centro Industrial Brasileiro announced that it had not received any data about this cotton mill and in 1917 this factory was said to be closed.⁹² Given the complete lack of information on the performance of this mill, the reasons for its failure as an industrial undertaking can only be speculated upon. It is possible that one of the reasons for its failure came from its location. A small cotton mill established in the south of the Southern zone and unable to use hydraulic power, it may not have been able to compete in costs with larger mills established in São Paulo.

Another cotton mill established in Minas Gerais in the early seventies was the Brumado cotton mill. This mill was set up in Pitanguy in the Western zone, close to its border with the Central zone in a region where there was a flourishing home production of cloth. According to an observation made by a traveller who visited the province in 1863, Pitanguy and the nearby counties were among the major centres of production of handicraft cloth in Minas Gerais.⁹³ In 1873 the President of the province referred to the non industrial production of cloth as an important activity in Pitanguy.

The establishment of Brumado seems to illustrate not only one of the few examples of a mill being entirely financed by mercantile capital in Minas Gerais, but also one of the very few cases of a one man undertaking in the early Mineiro industry. However, evidence on the establishment of this mill is still scarce. In fact, the only source of information on the establishment of this mill and on the previous activities of its founder is a short biography of Francisco José Andrade Botelho.⁹⁴ According to his biographer, Francisco José de Andrade Botelho, even though born Mineiro, had moved to the city of Rio de Janeiro where, together with two brothers, he established a merchant house under the name "Botelho, Irmão & Andrade"⁹⁵. As a trader Francisco José became quite well off and used to come to Pitanguy on business. He married a local lady in 1867, established himself in the city and built a cotton mill in

Brumado, in the surroundings of Pitangui.⁹⁶ In 1873 the cotton mill was already working and it was said to have 41 looms in 1886 and 49 looms in 1888.⁹⁷ After the death of Francisco Jose in 1888, his brother assumed management of the cotton mill. On April 2, 1889, the cotton mill was auctioned off to Luiz Augusto Vianna Barbosa for 166 contos. Later on - as will be seen in Chapter 4 - Luiz Augusto Vianna Barbosa and his sons formed a joint stock company to buy and enlarge this cotton mill.

1.3.3. New associations of capital in the mid seventies for investment in the Mineiro production of cotton textiles.

Two partnerships and one joint stock company were formed in the mid 1870s with the purpose of establishing cotton mills in Minas Gerais: Mascarenhas Irmãos & Barbosa, Santos & Companhia and the Companhia União Itabirana.

The constitution of Mascarenhas & Barbosa followed the success achieved by the Mascarenhas brothers, Bernardo Caetano and Antonio Candido, with the establishment of the Cedro cotton mill. According to the family's stories, Pacífico, another of the Mascarenhas brothers, approached the founders of Cedro in 1873 proposing to join their business together with two brothers, Victor and Francisco de Paula, and their brother-in-law, Luiz Augusto Vianna Barbosa. As this proposal was not accepted, Pacífico, Victor, Francisco de Paula, and Luiz Augusto decided to establish their own cotton mill.⁹⁸ They formed a partnership, Mascarenhas Irmãos & Barbosa in October 29, 1873 with a capital of 100 contos and the purpose of setting up a cotton mill on Luiz Augusto's Cachoeira farm.⁹⁹ This farm had a suitable waterfall to provide energy for the factory and was close to the town of Curvelo in the Central zone, further north than the place where the Cedro cotton mill had already been established.¹⁰⁰

Even though Bernardo Mascarenhas, one of the founders of the Cedro cotton mill, had not joined this new undertaking as a

partner, he played an important role in the establishment of the Cachoeira cotton mill. In charge of buying the machinery for the new factory, he went to England and the United States in 1874-1875. In the letters he wrote to his brothers to put them abreast of his dealings, he gave some interesting information on different aspects of textile investment in the seventies. As to the minimum size of the mill, for instance, he recommended the establishment of a factory with no less than 50 looms. According to him, "the most expensive and indispensable machines may produce yarn for 50 looms" and, therefore, "it would be a mistake to buy 30 or 40 looms, as the difference in the price is very small."¹⁰¹ He also informed his brothers of the costs of the investment. A fifty-loom cotton mill in England with all the necessary machinery would cost then 4,000 pounds sterling which, allowing for fluctuations of the exchange rate, would come to around 38 or 40 contos. According to him, textile machines were not found ready-made and had to be ordered. He also observed that machines were in general less expensive in England, even though some American machines had other advantages compared to the English ones.¹⁰²

The 100 contos' initial capital of the firm Mascarenhas & Barbosa very soon proved to be insufficient to establish the cotton mill. In 1876, before the cotton mill had started working regularly, the capital had already been raised to 200 contos. According to Bernardo Mascarenhas' estimates, the cost (fob) of the machinery corresponded approximately to one fifth of the total costs of investment.

The Cachoeira cotton mill started working on January 23, 1877¹⁰³, but it was only in 1879 that it was able to produce to full capacity.¹⁰⁴ As for its origins, the capital invested in this cotton mill had been accumulated in different local activities.

Like his brothers, founders of the Cedro cotton mill, the founders of Cachoeira also received from their father a trust of 26 contos when they came of age and also used to go



to him for loans.¹⁰⁵ The main activity of their father, Antonio Gonçalves Mascarenhas, was farming, since he bought his farm in 1836. Therefore, at least part of the funds invested in Cedro and Cachoeira had been accumulated in farming activities.¹⁰⁶

The funds invested by Victor, one of the founders of Cachoeira, may be said to have had a mercantile as well as an agricultural origin. In fact, married to the daughter of a local farmer, he had for some time a merchant house in Curvelo. However by the time the partnership Mascarenhas & Barbosa was formed he had become manager of his father's farm.¹⁰⁷ Pacifico, married to a wealthy farmer's daughter, was the local doctor of Curvelo where he lived and had his practice.¹⁰⁸ In the case of Luiz Augusto, the origin of the funds he invested is clear, as it was on his farm that the cotton mill was built.¹⁰⁹ No information is available about the activities carried out by the fourth partner, Francisco de Paula, before the constitution of the partnership.

Another family partnership, Santos & Companhia, was formed in the mid 1870s with the purpose of establishing a cotton mill in Diamantina in the north of the Central zone. This undertaking is said to have been promoted by the bishop of Diamantina, João Antonio dos Santos, in order to provide jobs in the area due to the high rate of unemployment brought about by the decline in diamond mining.¹¹⁰ The partnership was constituted by two of his brothers, his nephew and another partner.¹¹¹ No information is available about the activities of the partners prior to the constitution of the partnership.¹¹²

The mill set up by this partnership, the Biribiry cotton mill, is said to have been inaugurated on June 1, 1876 with 20 looms in operation.¹¹³ In 1883, it had forty looms, 1020 spindles and a daily production of cloth of 1,200 metres. It was then said to employ 120 workers.¹¹⁴ The number of workers probably included those employed in a foundry and a lapidary shop attached to the mill.

Santos & Companhia is not the only example of a partnership established in those early days which, although it had as its main purpose to found and operate a cotton mill, also dealt with other business. According to Vaz, the firm which owned the Cedro cotton mill, Mascarenhas & Irmãos, was in fact "an industrial, commercial, financial and agrarian conglomerate."¹¹⁵ The establishment of small foundries for supplying the most simple needs of the cotton mill also does not seem to have been unusual in the early factories founded in Minas Gerais. In the case of Santos & Companhia however, the establishment of a foundry and a diamond lapidary seems to have had the purpose of diversifying the risks attached to a pioneer undertaking in the area. There is evidence, for instance, that this foundry produced bells for churches.¹¹⁶ The foundries of iron and bronze attached to the Biribiry cotton mill are mentioned as being in operation in 1899.¹¹⁷

Finally it was in the mid seventies that the first joint stock company to be successful in establishing a cotton mill was constituted in Minas Gerais. It was the Companhia União Itabirana, authorized to function by decree number 6162 on March 24, 1876. The company's statutes had been signed by all shareholders on March 1, 1875.¹¹⁸ Its initial capital was 103 contos, divided into 1030 shares of 100 mil-réis.¹¹⁹ This undertaking was financed by local people from the town of Itabira.¹²⁰ As in the case of the Cachoeira cotton mill, this capital soon proved to be insufficient "not only because the original calculations were badly made, but because prices of food were high when construction was undertaken".¹²¹ As a consequence, the company was forced to raise a loan of sixty contos in order to be able to put the mill to work. The company's cotton mill was established with 28 looms¹²² and 1040 spindles.¹²³

So, in the seventies, six cotton mills were established in Minas Gerais: Cedro, Machado, Brumado, Cachoeira, Biribiry and União Itabirana. With the exception of Machado, those were the first cotton mills to be successfully established in Minas Gerais. In 1905 they accounted for 21.7% of the

total number of looms in the cotton textile industry of Minas Gerais.¹²⁴

1.4 Typical textile investment in Minas Gerais during the seventies: small, local and family undertakings concentrated in the Central zone of Minas Gerais.

Data in Table 1.1 summarizes some characteristics of early industrial investment in Minas Gerais.

As for its organization, the Mineiro cotton textile industry followed a pattern similar to that of other provinces in the period. Of the six cotton mills established in the seventies, one was a one-man enterprise, three were established by very few partners who were very close relatives and one was a joint-stock company. According to Stein, the preference for individual enterprises or small partnerships in the early Brazilian textile industry revealed "the restricted local investment market, general distrust of industrial enterprise and close government supervision of joint-stock companies"¹²⁵. It was only after the relaxation of legal restrictions on the constitution of joint stock companies in 1882 that joint stock companies became the predominant form of corporation for investment in the cotton textile industry.¹²⁶

It was with a partnership, Mascarenhas Irmãos, constituted in 1868 that funds started being directed to the establishment of a cotton industry in Minas Gerais.

It is easy to understand a preference for small family partnerships as the ideal form of corporation in the earliest stages of industrialization in Minas Gerais. On the one hand, the evidence presented shows that, given the size and cost of the first cotton mills established, the necessary funds could be easily provided by a few investors. The money received by each of the Mascarenhas brothers from their father, the day they were 18 years old, would have

Table 1.1

Initial investments in the establishment of cotton mills in Minas Gerais during the seventies.

Cotton mills	nature of the association	initial capital in contos	number of looms*	Location of mills in zones
	(1)	(2)	(3)	(4)
1-Cedro	family partnership	150	18	Central
2-Machado	na	na	na	Southern
3-Brumado	one founder	na	10	Western
4-Cachoeira	family partnership	100	50	Central
5-Biribiry	family partnership	na	20	Central
6-U.Itabirana	joint stock company	100	28	Central
Averages	-	116.7	25.2	-

* at the time of their inauguration.

na: not available.

Sources. Cedro and Cachoeira cotton mills: Mascarenhas (1972, 48,64,94,104). Machado cotton mill: Godoy (1873), Relatório, p.18. Brumado: Chaves (1883), Fala, p.40. Biribiry: Stein (1957,26) and Machado Filho (1980,194). União Itabirana: Companhia União Itabirana (1875), Estatutos, and Chaves (1883), Fala, p.42.

been enough for each of the partners of Mascarenhas & Barbosa to pay for their share of the partnership's initial capital. Or, to put in another way, two brothers, with the money they received, could afford to buy all the machinery necessary for establishing one fifty-loom integrated cotton mill. On the other hand as a pioneer undertaking, the industrial production of cloth could not be expected to attract savings from the population at large. Funds would have to be provided, either by the main promoter of the undertaking himself, or raised by him from those he could convince that the establishment of a cotton mill in Minas Gerais at that time was a sound investment. The decision of any potential investor to join such an undertaking would depend upon the degree of confidence he had in the main promoter. So, it is quite natural that the first associations for investment in the cotton textile industry were not only small partnerships but partnerships formed

among close relatives. The evidence given by one of the promoters of the Cedro cotton mill shows that even among close relatives it was not an easy task to obtain the support he and his brother needed to carry out their plans of establishing a cotton mill. According to Caetano, when he and his brother Bernardo first had the idea of setting up a cotton mill in 1865, they invited their brothers to join the undertaking "as they did not have the necessary capital", but none of them agreed to do so. It was with "some difficulty"¹²⁷ that, later on, they were able to persuade one of their brothers to participate in their partnership.

Why this association of relatives was not formed into a joint stock company is also easy to understand. If the constitution of a joint stock company had the advantage of limiting the risks of the individual investor to the value of his shares, on the other hand, it complicated the process of constitution as well as the management of the undertaking. In fact, in the seventies the constitution of any joint stock company and any later changes in its statutes still had to be authorized by the Central Government.¹²⁸ Besides, the requirements relating to the functioning of any joint stock company, described in its statutes and sanctioned by the government, necessarily imposed some restrictions on the process of decision making.

The cotton mills established in Minas in the seventies were, on average, significantly smaller than those established in the same period in the province of Rio de Janeiro. According to a list compiled in 1885, the average number of looms in the cotton mills set up in the Province of Rio de Janeiro in the seventies was then 155.6.¹²⁹ Data in table 1.1 shows that the average number of looms of the Mineiro cotton mills established in this period was, at the time of their inauguration, 25.2.

The relatively small size of the first cotton mills may be explained, at least in part, by the size of the market they were planning to supply. Even though Minas Gerais was by far

the most populated province in the seventies, its population was spread over a large territory and mostly scattered in rural areas. Therefore the costs of transport and distribution, even inside the province, were high. So, it is reasonable to assume that the first mills were established to supply the local market. On the other hand, had the first investors decided to establish large mills, they might not have found the necessary funds. The evidence presented in relation to the establishment of Cedro illustrates the difficulties faced by the promoters of this undertaking in convincing one of their brothers to join them. And Stein reports that the establishment of the Biribiry cotton mill became an undertaking of the Santos family because the bishop of Diamantina, "unable to obtain the support of local capitalists ... sold the idea of setting up a cotton mill to his brothers... to a nephew, and to another partner"¹³⁰

Data in table 1.1 show that the first cotton mills tended to be concentrated in the central areas of the state. Of the six mills established in the first half of the seventies, four were set up in the Central zone and one in the Western zone at the border with the Central zone. Considering that the first cotton mills were built close to the place where their founders lived, the question to be formulated is why the decision to build the first cotton mills of Minas Gerais came from people living in the Central zone of the province. A possible answer to this question is that the home production of cloth in this region had proved to be very successful.

In fact, the Brumado and Cedro cotton mills were built in an area where home production of cloth was still a very important economic activity. Gerber, who visited the province in 1862 observed that the handicraft production of cloth, although spread all over the province, was especially developed "in Bonfim, Pitangui, Desemboque, Piu-i, Tamanduá and other (villages) on that side".¹³¹ And data on the number of textile workers by village and county of Minas

Gerais, shown in the Demographic Census of 1872, reveal that this production was mostly developed in the central area of the province. This successful home production proved that the production of cloth even by non industrial methods was a profitable business in the area. There was already a market which could be supplied by cloth produced industrially and at lower cost. Unless cotton mills were established in the province to supply this market, it would certainly be overtaken by those mills which were being established in other provinces. However, local production of industrial cloth would have been protected from external competition by the cost of transport and distribution.

The ability to detect the opportunity for starting up industrial production to replace the handicraft production of cloth and the courage to carry out such a revolutionary undertaking would require people with capitalist mentality, innovator entrepreneurs. In Minas Gerais such innovators were the three Mascarenhas brothers, Bernardo, Caetano and Antonio Candido, founders of the Cedro Cotton mill in Tabuleiro Grande, and Francisco José de Andrade Botelho, founder of The Brumado cotton mill in Pitangui. Besides, it is worth pointing out that the Mascarenhas brothers had the advantage of previous knowledge of the cloth market in the area, as handicraft cloth was produced on their father's farm for home consumption as well as for local trade.¹³²

1.5 The evolution of the cotton textile industry of Minas Gerais in the second half of the seventies.

No partnerships of capital or joint stock companies were constituted in the second half of the seventies with the purpose of establishing new cotton mills in the province. However, there is some evidence that the productive capacity of the existing cotton mills was substantially enlarged in that period.

Data in table 1.2 show the number of looms in the cotton

mills founded in the seventies at the time they started operating, and in 1883. The number of looms in the Cedro

Table 1.2

Cotton mills established in the seventies and the expansion of their productive capacity from their inauguration to the years 1883 and 1905, measured by the number of looms

Cotton mills established in the seventies	n. of looms at the inauguration*		n. of looms in 1883		n. of looms in 1905	
	abs	index	abs.	index	abs.	index
	val.	numb.	val.	numb.	val.	numb.
	(1)	(2)	(3)	(4)	(5)	(6)
Cedro	18	100	40	222	88	444
Machado	na	-	na	-	30	-
Brumado	10	100	40	400	70	700
Cachoeira	50	100	60	-	150	300
Biribiry	20	100	40	200	80	400
U.Itabirana	na	100	28	-	80	-
Averages	24.5	100	41.6	170	83	339

Sources: Column (1): Cedro: Mascarenhas (1954,41); Brumado: Chaves (1883), Fala, p.44; Cachoeira: Vaz (1990,25); Biribiry: Machado (1980,194). Column (3): Chaves (1883), Fala, pp.40-44. Column (5): Vasco (1905).

cotton mill in 1883 was more than twice the number it had at the time of its inauguration. In the Brumado cotton mill the number of looms at work in 1883 was four times the number it had started working with, and in Biribiry the number of looms doubled from its inauguration to 1883. In Cachoeira, the largest cotton mill established in the seventies, the number of looms increased by 20% from the day it was inaugurated up to 1883. It is not possible to know exactly when investment took place in those factories. In the case of Cedro, the decision to enlarge its productive capacity was taken in 1878 when the new machines were ordered. By 1879 they were being set up.¹³³ And the new machines at Brumado were ordered in 1877.¹³⁴

In the seventies the management of most of the cotton mills was in fact in the hands of their founders who had a capitalist's foresight in relation to the development of their undertakings. In such circumstances one would expect the mill owners to be willing to sacrifice immediate profits in order to provide funds for good performance and expansion of their cotton mills. So, it is quite probable that the expansion verified had been financed by reinvestment of profits and additional funds provided by the owners themselves. Mascarenhas & Irmãos, which was constituted in 1868 with a capital of 150 contos, had in 1879 a capital of 270 contos. The initial capital of Mascarenhas & Barbosa, which was initially 100 contos, had increased to 382 contos in 1879.¹³⁵

Such an expansion of investment shows that the establishment of cotton mills proved to be a successful undertaking and that the expectations of the Mineiro entrepreneurs were highly optimistic. In fact, the infant industry of Minas Gerais does not seem to have shared the problems faced by the Brazilian economy in 1875-1878; which apparently had adverse effects on the textile industries of other provinces.¹³⁶ And this is not surprising if the features of the Mineiro economy in the nineteenth century are considered.

As an economy specializing in the production of food and handicraft products for the internal market - and especially for local markets - and with a relatively large sector of subsistence, the Mineiro economy was probably not so badly affected by the recession of the mid seventies as the economies of other provinces seem to have been. Besides, the decrease in protection of domestic cloth in the second half of the decade identified in the literature could not have had significant adverse effects on the performance of the Mineiro mills. The Mineiro producers had additional protection granted by transport and distribution costs. However, it is possible that a decrease in protection from

foreign competition may have reduced the prices charged by Mineiro cotton mills and therefore diminished profits.

Even though there is not much information about marketing of the cloth produced by the early Mineiro cotton mills, there is some evidence that this cloth was mostly sold in local markets. In fact, attempts by the Cedro cotton mill to reach the market of Rio de Janeiro ended in complete failure, bringing about net losses to the company in 1876,¹³⁷ and seemed to convince the management that the market to be supplied was that of the province.¹³⁸ In fact, in 1882 Mascarenhas & Irmãos informed the Municipal Chamber of Sete Lagoas that "almost the whole of production is sold in the province and a small quantity in the provinces of Rio, São Paulo and Goiás".

Data in table 1.2 show that the Mineiro cotton mills established in the seventies - with the exception of Machado - were successful undertakings. In 1905, these factories were responsible for a significant part of the production capacity of the sector.

1.6 Conclusions

a) The first Mineiro cotton mills were established in the immediate post Paraguayan War period. Therefore, their establishment coincided with a spurt of industrial investment which has been identified in Brazilian industry.

b) Given the peculiarities of the Mineiro economy, the establishment of the first cotton mills in Minas Gerais can not be explained in the same way as the general spurt of industrial investment in the Brazilian economy in the period. For industrial production to start in Minas, it did not require an increase in local demand for cloth. As proved by a flourishing handicraft production, there was already a market for cloth which would justify its industrial production. This market was protected from outside

competition by transport and distribution costs.

c) Changes in the economic policies introduced to finance the war may have encouraged industrial investment in Minas. An increase in overall protection from foreign competition, increasing the top prices which could be charged by the Mineiro mill-owners, may have made investment in the cloth industry look still more attractive to potential investors.

d) The emergence of a textile industry in Minas Gerais depended mainly upon the appearance, in the scenario of an economy specialising in the production of food and handicraft products, of capitalist entrepreneurs able to detect the possibilities of the industrial production of cloth and willing to take the risk of introducing such an innovation.

e) The peculiarities of the Mineiro economy determined the peculiarities of its early cotton textile industry. The first investors were local people committed to local activities, mainly those connected with farming and local trade. It was in those activities that the capital to be invested was accumulated. Therefore the Mineiro entrepreneur in the early stages of industrialization in Minas Gerais was quite distinct from those entrepreneurs from Rio de Janeiro or São Paulo. The initial size of the Mineiro cotton mills - compared to those established in other regions - revealed the size of the local market to be supplied by those mills.

1. Prebisch (1949,47).
2. Fishlow (1972,312-320).
3. Villela and Suzigan (1973,128-130).
4. See, for instance: Versiani and Versiani (1975,55-58).
5. The importance of the eighties as the period of accumulation of the industrial capital was emphasized in works produced in 1975 by Mello and Cano as Phd. dissertation and in 1976 by Silva. Those works were published later on. See: Mello (1987,122-126); Cano (1977,141) and Silva (1978,81).
6. Versiani (1980a,316-317). Versiani's article was originally published in 1979 by the Institute of Latin American Studies, University of London, Working Paper number 2. A version, under the title of "Industrialização e Economia de Exportação: a Experiência Brasileira antes de 1914" was published in 1980 in Revista Brasileira de Economia, vol.34(1): 3-40. A shorter version of this same article was published, this same year, in: Journal of Development Economics, 7(1980):307-329. References to the work of Versiani in this dissertation will usually quote the version published in the Journal of Development Economics, which will be referred to as Versiani (1980a). However any mention of the list of cotton mills in 1905 by date of foundation compiled by this author is based on the Portuguese version of his article and will be quoted as Versiani (1980b).
7. Suzigan (1984,69-70).
8. The "alvará" of D. Maria I on January 5,1785 prohibited the production of cloth in Brazil, except cloth for "use and dressing of slaves, for sacking and wrapping cloth and other similar uses." The text of this alvará is partially reproduced in: Carvalho (1916,9-10). The actual effects of this "alvará" are subject to a controversy. Some authors argue that it destroyed a flourishing local production of cloth, others minimize its importance, contending that there was not much to be destroyed. The recent discovery of an inventory of looms at work in Minas Gerais at the time the "alvará" was enforced, may bring new evidence as to the real importance of Mineiro cloth production during the colonial period. A reference to this inventory is found in: Libby (1989,150).
9. The "alvará" of April 1,1808 abrogated the "alvará" of January 5,1785. The "alvará" of April 28,1809 contained dispositions which had the explicit purpose of encouraging the creation of a domestic industry. A brief summary of the policy of D. João VI may be found in: Luz (1961,13-16).

10. The commercial treaty signed between Great Britain and Brazil on February 19, 1810, stipulated that imports from Great Britain would be subject to preferential tariff duties of 15%. The decree passed on September 28, 1828 extended this privilege to imports from all other countries.

11. See, for instance: Furtado (1970, 106-109).

12. For Furtado the expansion of exports in the second half of the nineteenth century and the introduction of free labour created the necessary conditions for industrialization to take place. Furtado (1970, chapters 19, 20, 26)

13. Decree number 376, August 12, 1844. Most of the products were allocated tariff duties of 30%. Higher tariff duties of 40% and 60% were levied upon a few raw materials produced in the country and some luxury goods. Some raw materials used by domestic industry were charged tariffs lower than 30%.

14. Decree number 386, August 8, 1846. About the contemporary reaction against the low protection granted to the domestic industry by the Alves Branco Tariff, see: Luz (1961, 18-19).

15. In 1847 factories considered "national factories" were exempted of any tariff duties on raw material. A factory was considered national by decision of the Central Government based on its size and its potential for development. See: decree number 526, July 28, 1847.

16. Luz (1961, 18-19).

17. Decree number 1914, March 28, 1857.

18. This law suspended the privileges granted to national factories. About the main alterations introduced by this law and their purpose, see: Ministério da Fazenda, Relatório da Fazenda, 1857, p.18, reproduced in Nunes and Silva (1929, VII-VIII).

19. Decrees 1967, August 26, 1857 and decree number 2,139 March 27, 1858.

20. Luz (1961, 24-25).

21. Luz (1961, 29).

22. Ibid.

23. Suzigan (1984, 321-327).

24. Luz (1961, 35).

25. Luz (1961, 34-35).

26. Versiani and Versiani (1975, 47).

27. See the estimated cotton textile import prices calculated by Versiani for the period 1870-1913. Versiani (1980a,320).
28. A description and analysis of the banking crisis of 1874-1875 and of the difficulties faced by the Brazilian economy after the crisis is found in: Calógeras (1960,159-169).
29. Suzigan (1984,70). The author does not give an explanation for such a distinct performance by the cotton-textile industry.
30. Decree number 575, January 10,1849.
31. Decree number 575 January 10,1849, article 1.
32. The relevant minister was the Minister of Agriculture, Commerce and Public Works. See the provisions of decree number 6162, March 24,1876, which authorized the company União Itabirana to operate.
33. Decree number 575, January 10,1849, articles 4-6.
34. Decree number 575, January 10,1849, articles 6 and 7.
35. Law number 556, June 25,1850, known as Código Comercial do Império do Brasil.
36. Decree number 2711, December 19,1860 which regulated law number 1083 of August 22,1860.
37. A brief description of some of these attempts may be found in: Iglésias (1958,106-109) and Vaz (1990,20-30).
38. A reference to this Royal Resolution and its provisions is found in the Royal Provision of May 11,1913, addressed to the Governor of the province of Minas Gerais.
39. Letter from D. Manuel de Portugal e Castro on January 24,1815 to Marquês de Aguiar, reproduced in Revista do Arquivo Público Mineiro, January/June,1904, pp. 548-549.
40. Saint Hilarie (1936,112) reproduced in Lacombe (1947,98).
41. Few references to the factories of Vila Rica and Registro Velho are found in the literature. The scarcity of the available information has led some authors to contradictory conclusions about their foundation and performance. See for instance: Lacombe (1947,98-101), and Vaz (1977,103). Other authors have omitted those factories in their historical accounts of the evolution of the textile industry of Minas Gerais as Iglésias (1958) and Suzigan (1984).
42. Veiga (1839), Fala.

43. Veiga (1840), Fala.

44. According to Suzigan (1984,348) it was founded in 1847. In Vaz (1977,104) the year of foundation of this cotton mill is given as 1850 and in Branner (1885,42) the year is 1852.

45. Silva (1847), Fala, pp.32-33.

46. Decree number 386, August 8,1846.

47. A brief history of this company may be found in two reports from the provincial government: Carvalho (1871), Relatório, pp. 88-89, and Belém (1874), Relatório, pp.61-62.

48. Law number 570, October 10,1851.

49. Vianna (1852), Relatório.

50. Law number 556, June 25,1850, known as Código Comercial do Império do Brasil. According to article 295 of this law, any joint stock company needed a prior authorization from the government in order to be established. Approval from the legislative body was also required for those companies which were to benefit from any privilege. For any joint stock company to act, it should be able to prove its legal existence by public deed or its statutes and the act of the government which authorized its constitution.

51. This information is found in: Belém (1874), Relatório.

52. The transformation of the company's debts into shares was determined by law. Law number 1145, October 3,1862, article 18.

53. The transfer of those shares to a hospital was determined by article 8 of law number 1375, November 14,1866.

54. As the hospital refused to accept those shares which had the face value of ten contos, the company's Board of Directors required permission from the government in 1871 to entrust those shares to the Provincial Treasury. See: Carvalho (1871), Relatório, pp.88-89.

55. Benevides (1869), Relatório, p.25.

56. Benevides (1869), Relatório, p.26.

57. Ibid.

58. A summary of this report, dated September 21,1869, is found in: Belem (1874), Relatório, p.61.

59. A summary of the conclusions reached by this committee appointed to investigate the situation of the Cana do Reino cotton mill is found in: Carvalho (1871), Relatório, p.89.

60. This information is found in: Belem (1874), Relatório, p.62.
61. Ibid.
62. The Cedro cotton mill is referred to as the first cotton mill in Minas Gerais operated by hydraulic power in a report of the Presidency of the province in 1883. See: Chaves (1883), Fala, p.40.
63. Tamm (1960,87-88).
64. About the constitution of this partnership see: Mascarenhas (1972,48-49).
65. Information about the purchase of the farm where the cotton mill was to be located is in: Vaz (1990,50).
66. The machinery was ordered from Author Danfort Paterson, New Jersey, U.S.A. through its representative in Rio de Janeiro, Guilherme Van Vlick Lidgerwood. See: Vaz (1990, 50). A transcript of the contract of purchase is found in: Mascarenhas (1972,52-54).
67. Mascarenhas (1972,59).
68. For a report on the transport of the machinery from Rio de Janeiro to Tabuleiro Grande, see: Mascarenhas (1954,37-41).
69. The exact day the cotton mill started working may be ascertained by an entry in the firm's diary, reproduced in: Mascarenhas (1972,65). Number of looms and power at the time of the mill's inauguration respectively in: Mascarenhas (1954,33) and Mascarenhas (1972,64).
70. Mascarenhas (1972,69,252).
71. Different years have been given in the literature as the year of foundation of the Cedro cotton mill: 1868 by Suzigan (1984,384), 1870 by Versiani (1980b,33) and 1872 by Vaz (1990,25).
72. Dean (1969,28,30,47 and chapter 4).
73. Versiani and Versiani (1975,44).
74. Versiani (1980a,311).
75. Versiani (1980a,312).
76. Suzigan (1984,115).
77. Data on the relative importance of the states of Rio de Janeiro, São Paulo, Bahia and the city of Rio de Janeiro as producers of cotton textiles is presented in the Introduction to this work.

78. Suzigan (1984,116).

79. According to Paulo Tamm, the biographer of the Mascarenhas family, Antonio Gonçalves da Silva Mascarenhas gave 26 contos to each of his sons on their 18th birthday. The same amount of money was given to each daughter the day she got married. Tamm (1960,86).

80. The evidence that Antonio Gonçalves Mascarenhas used to lend money to his sons is in his will reproduced in Tamm (1960, 118-121): "To each of my children I gave 26 contos and to all of them I lent 435... contos at 7% interest." Tamm (1960,119).

81. Mascarenhas (1954,30).

82. According to entries in Antonio Candido's blotter, reproduced in Vaz (1990,43-44).

83. Part of a letter from Bernardo Mascarenhas to Joaquim Pereira Lopes on August 3,1870, reproduced in Vaz (1990,43).

84. See entries in Antonio Candido Mascarenhas' blotter book, reproduced in: Vaz (1990, 43-44).

85. Suzigan (1984,116).

86. Information about the decision where to locate the cotton mill was given by one of the founders, Caetano Mascarenhas in a letter to a newspaper of Paraopeba. This letter was published in Gazeta do Paraopeba, March 25,1923. Part of this letter is reproduced in: Mascarenhas (1954, 32,33).

87. Belem (1874), Relatório, p.61.

88. Lucas (1970,114). Vaz (1990,25) also gives 1875 as the year of foundation of Machado cotton mill.

89. Branner (1885,42).

90. Vasco (1905).

91. Minas Gerais, Secretaria da Agricultura (1913).

92. Centro Industrial Brasileiro (1917), "Estatística Geral das Fábricas Brasileiras de Fiação e Tecidos de Algodão, em 1915" and Minas Gerais, Secretaria da Agricultura (1917), "Estatística das Fábricas de Tecidos Existentes em 1917".

93. A quotation from this traveller is found in: Martins (1983,83-84).

94. Guimarães (1950).

95. Guimarães (1950,7,8,18,19).

96. Guimarães (1950,9).
97. Guimarães (1950,24).
98. Mascarenhas (1954,59).
99. According to Mascarenhas (1972,94), this was the date when the firm was registered with the Notary Public of the town of Curvelo: Cartório de notas da Vila de Curvelo, Comarca de Paraopeba, book 16, pages 57-59.
100. Vaz (1990,71).
101. Letter from Bernardo Mascarenhas on April 13,1874 from Manchester, reproduced partially in Mascarenhas (1954,62-63).
102. Letter from Bernardo Mascarenhas to his brothers, written from America on December 18,1874, reproduced in: Mascarenhas (1954,64-66).
103. The date the cotton mill started operating is given by an entry in the books of the company which registers a diminution of cotton in the storehouse corresponding to that cotton which went for processing in the mill. See: Mascarenhas (1972,104).
104. Mascarenhas (1972,105).
105. A list of all those who owed Antonio Gonçalves da Silva Mascarenhas money at the time of his death was made by his son Antonio Candido. This list is reproduced in: Tamm (1960,123).
106. About the activities carried out by Antonio da Gonçalves da Silva Mascarenhas, see: Mascarenhas (1954,21-26), Tamm (1960,42-47,63-76,109-110) and Mascarenhas (1972,19-32).
107. Tamm (1960,100).
108. Tamm (1960,98,99).
109. Vaz (1990,71).
110. Stein (1957,26).
111. Ibid.
112. According to Stein (1957,26), in 1878 one of the partners, Antônio Felício dos Santos, joined the partnership which founded the Pau Grande cotton mill in Rio de Janeiro. However in Weid and Bastos (1986,37-39) Antônio Felício dos Santos, one of the three founders of the Pau Grande cotton mill, is given as a doctor without any previous connections with the textile industry but whose father and uncle had established in Minas Gerais the Biribiry cotton mill.

113. Machado Filho (1980,194).

114. Data on number of looms, quantity produced and number of workers in: Chaves (1883), Fala, p.42. Datum on number of spindles in: Stein (1957,42).

115. Vaz (1990,60). The author does not give any information about the other firm's business besides the production of cloth.

116. Machado Filho (1980,194).

117. Those foundries are mentioned in: Neves (1899).

118. Companhia União Itabirana (1875), Estatutos. These statutes of the company were published with decree number 6,162 which authorized the company to operate as a joint stock company. The signatures of the shareholders which followed the statutes were not reproduced.

119. Companhia União Itabirana (1875), Estatutos. According to the third article of the company's statutes, the company's capital would be of 100 contos divided into 1,000 shares, worth 100 mil-réis each. Besides those 1,000 shares, thirty redeemed shares would be given to the incorporator of the company, Domingos Martins Guerra.

120. Comissão Parlamentar de Inquérito, Relatório ao Corpo Legislativo, Rio de Janeiro, 1885, p.47 referred to by Stein (1957,216,note 12).

121. Quotation from: Comissão Parlamentar de Inquérito, Informações apresentadas ao Corpo Legislativo. Rio de Janeiro, 1883, p.298, reproduced in Stein (1957,29).

122. The number of 85 given by Stein (1957,43) as the number of looms established in this company's cotton mill in the seventies is certainly a mistake. The number of 28 looms is given by the President of the province as the number of looms in the Companhia União Itabirana's cotton mill in 1883. See: Chaves (1883), Fala, p.42. The same number of looms is given in Branner (1885,43).

123. Stein (1957,43).

124. Data for looms of all cotton mills existing in Minas Gerais in 1905 in: Vasco (1905).

125. Stein (1957,25).

126. Stein (1957,25-27).

127. Letter from Caetano Mascarenhas to a newspaper, Gazeta de Paraopeba, reproduced in this newspaper's issue of March 25, 1923 and partially reproduced in: Mascarenhas (1954,32-33).

128. Law number 1083, August 22, 1860 regulated by decree number 2711, December 19, 1860 maintained the need for governmental approval for the constitution of joint stock companies.

129. Average computed from data in: Branner (1885, 42).

130. Stein (1957, 26).

131. Quotation reproduced in Martins (1983, 84).

132. Tamm (1960, 77).

133. According to Bernardo Mascarenhas he was able to order the best textile machines available in the market, as a visit to the Universal Exposition of Paris in 1878 allowed him "to make a comparative study of the textile machines produced by a great number of manufacturers." Letter from Bernardo Mascarenhas to Candido de Figueiredo Murta in November 1879, reproduced partially in: Mascarenhas, (1954, 70).

134. Chaves (1883), Fala, p. 44.

135. Mascarenhas (1972, 94, 254).

136. An economic recession in the mid seventies has been mentioned in the literature. This recession has been seen as the result of a general depression in the industrialized countries which started in the first half of the seventies [Luz(1961, 39)], associated with the adverse effects of the deflationary policies of the post Paraguayan War period [Suzigan (1984, 70)]. A more detailed analysis of the origins of the difficulties faced by the Brazilian economy in the period may be found in: Calógeras (1960, 159-168). The adverse effects on Brazilian industry of a crisis which would have reached the country in 1875 are mentioned by Luz (1961, 36).

137. Vaz (1990, 58-59) and Mascarenhas (1972, 254).

138. New unsuccessful attempts would be made later on to promote sales in Rio de Janeiro as will be seen in other chapters.

CHAPTER 2

INDUSTRIALIZATION OF MINEIRO COTTON TEXTILE PRODUCTION
IN THE 1880s.

Introduction.

This chapter investigates the expansion of the cotton textile industry of Minas Gerais during the eighties. Its main purpose is to examine the evolution of textile investment which followed the establishment of the first cotton mills in the province during the previous decade.

With the purpose of placing the results of such an investigation within the larger context of the debate on the earlier stages of Brazilian industry, the first section presents a brief review of the literature on industrial growth in this decade. As two distinct patterns of industrial growth have been identified in the 1880s, one in the early years and the other in the second half, this chapter is divided into two parts. The first part examines the expansion of the cotton textile industry of Minas Gerais in 1880-1884, and the second part examines its expansion in 1885-1889.

The investment which took place in each period, either through the establishment of new cotton mills or the enlargement of the productive capacity of the old ones, is described in as much detail as the available evidence permits. Special attention is given to the identification of the investor in Minas Gerais, the origin of his resources and his motivation for investing in the industrial production of cotton goods.

2.1 The relevance of the 1880s in the emergence of industry in Brazil, a brief review of the literature.

The eighties have been identified by some authors as the period of the birth of Brazilian industry. This conclusion is usually based either on data from the Census of 1920 or on the experience of industrialization of specific states, mainly that of the state of São Paulo. However, as was seen in the previous chapter, more recent investigation has led some economic historians to cite earlier dates for the emergence of Brazilian industry. Their evidence supports the view that industrialization occurred in this decade not as a starting point but as the continuation of a process which had begun earlier.

Information on the number of industrial establishments in 1920, according to the year of foundation and capital employed, shows a significant increase of 138% in the number of these establishments founded between the periods 1875-1879 and 1880-1884, followed by an increase of 65% in the next period, 1885-1889. It also shows that the industrial establishments founded in 1880-1884 were responsible in 1920 for 11.1% of the capital employed in all industrial establishments. These establishments had a capital which was 151.6% greater than that of establishments founded in the previous period, 1874-1879.¹

Based on these data Simonsen identified a first spurt of industrial investment in the eighties which would have persisted at a similar pace up to 1895.² Normano, using the same data, concluded that: "1885-1914 was the period of the creation of Brazilian industry".³ For other authors, who dealt specifically with the case of São Paulo, industrialization in this state began in the eighties and more specifically in the second half of the eighties.⁴ However, even those authors who identify an earlier start to industrialization in the country have emphasized the industrial growth which occurred in this decade. For Suzigan, for instance, the eighties were part of a larger

period, 1880-1895, "one of the longest periods of expansion in manufacturing investment."⁵ According to him, the industrial expansion in the eighties and in the first half of the nineties was the result of an increase not only in the demand for manufactured goods but also in the supply of labour provided by "an export-led income growth, the construction of railways and the promotion of immigration"⁶. He identifies a spurt of investment in 1880-1883, when import prices were greatly reduced⁷, but admits that the restrictive monetary and fiscal policies of the late Empire may have prevented a greater expansion of industry in the years 1884-1887.⁸

For those authors who see the emergence of industry as the result of a capitalist expansion in the coffee sector, the genesis of industrial capital is placed in the eighties, when that sector was expanding at a high rate. According to Mello, for instance, the capital which was being accumulated in the coffee export sector from 1886-1894, "when conditions of accumulation were extremely favourable", started flowing into industry in 1889, because all of the profits from this sector could not be reinvested in it.⁹ So, even though the genesis of industrial capital took place in the second half of the eighties, industrial investment would only have started in the last year of the decade. According to this interpretation, the beginning of industrialization would have coincided with the period of Encilhamento.¹⁰

In fact, imports of industrial machinery in Brazil increased significantly in 1880-1883. An average annual rate of increase of 27.7% in these years contrasts sharply with that of (-) 5.0% in the years 1874-1879, and explains the identification of a spurt of industrial investment in the first years of the decade. In the following years, from 1884 to 1887, imports of industrial machinery remained at a relatively stable level. In 1888 they increased by 38.5% and remained at this level during the following year.¹¹

Industrial textile investment in the eighties has been seen

as following the general pattern of industrial expansion. Based on dates of the foundation of cotton mills and on data on cotton textile imports from Rio de Janeiro, Versiani identifies two spurts of investment in the decade: one spurt, in the years 1880-1884, and another one starting in 1889¹². The evolution of investment in the cotton textile industry in the eighties could then be divided into three periods: 1880-1884, 1884-1888 and 1889. In the first four years the rate of industrial expansion was relatively high; in the second period it slowed down; and in the last year of the decade investment started increasing faster again. The reasons for such a diversified pattern of evolution of investment in the eighties are not mentioned by the author even though the first years of the decade are seen by him as years of prosperity for the cotton textile industry. Such prosperity was due to increased protection provided by higher tariffs and a devaluation of the exchange rate. However, as higher tariffs and a devaluated exchange rate are not expected to stimulate investment but to discourage it, the author adds that it is possible that these adverse effects of tariffs and exchange rate had been offset by a decrease in the price abroad of imported machinery.¹³

The description of the evolution of industrial investment in the cotton textile industry during the eighties presented by Suzigan differs not only from that given by Versiani, but also from his own description of the general evolution of investment in the whole Brazilian industry. In spite of the significant increase in imports of industrial machinery in 1880-1883, and his identification of a general spurt of investment in these years, Suzigan concludes that "investments in the cotton-goods industry were moderate until the mid-1880s."¹⁴ However, the second half of the eighties was part of a larger period 1885-1895 when "the greatest advance in the development of the Brazilian cotton-goods industry occurred".¹⁵

So, it is clear that there is some consensus among economic historians about the importance of the eighties in the

process of establishment of an industry in Brazil. Even though recent data on Brazilian imports of industrial machinery do not justify the characterization of this period as the period of the emergence of Brazilian industry, they support the general appreciation of the eighties as a favourable time for industry.¹⁶

2.2 Expansion of the cotton textile industry of Minas Gerais in the early eighties: a spurt of investment or a moderate growth?

A significant expansion of investment in the cotton textile industry, either through the establishment of new cotton mills or through the expansion of old ones, indicates a spurt of investment in the Mineiro textile industry in the early eighties. A detailed description of such an expansion emphasizes some peculiarities of the Mineiro cotton textile economy and suggests that the explanation available in the literature does not satisfactorily account for this development.

2.2.1 Investment in new cotton mills.

Seven cotton mills were established in Minas Gerais in the years 1880-1884: Cedro, Marzagão, Tecidos do Caçu, Bom Jardim, São Sebastião, Viçosa, and Industrial Mineira.

The Cedro cotton mill of Montes Claros is mentioned by Iglésias¹⁷ as the only new cotton mill which received protection from the provincial government of Minas Gerais: a guarantee of 7% interest on a maximum capital of 250 contos for a period of no longer than twenty years, and the promise that no similar benefits would be given to any other cotton mill to be sited less than 250 kilometres from Montes Claros.¹⁸ However, in spite of the fact that the law promising these advantages to the first cotton mill to be established in the region of Montes Claros had in fact been passed in 1877, there is no evidence of any partnership

having been formed before the eighties in response to such legal incentives. It was only in 1880 that the provisions of this law seem to have encouraged investment in the city of Montes Claros. In fact a partnership, Rodrigues, Soares, Bittencourt, Velloso & Companhia was formed in 1880 with a capital of 150 contos.¹⁹ However there are indications that the partners were unable to raise this capital among themselves and were forced to borrow money at high interest rates.²⁰ The initial capital soon proved to be insufficient and by 1883 it had already been raised to 300 contos.²¹ The cotton mill began operation in 1882,²² and in 1883 it was said to have 1552 spindles, forty looms and to employ seventy three workers.²³

Even though law number 2815 of October 22, 1881 had authorized the government of the province to pay 7% interest on the capital of the firm which owned the cotton mill established in Montes Claros, there is no evidence that these payments were made.²⁴

The Marzagão cotton mill was established by the Companhia Industrial Sabarense. This company one of the few joint stock companies formed before a new law, eliminating the requirement of prior government authorization for the constitution of joint stock companies, and any changes in their statutes, was passed on November 4, 1882.²⁵ The statutes of the company were approved and signed by all shareholders on January 11, 1880,²⁶. However, the authorization for the company to start operating was only given by the Emperor on August 31, 1880, through decree number 7,813.

This company, constituted in Sabará with a capital of 150 contos, had as its main objective "the mechanical production of cloth by hydraulic engines",²⁷ in an establishment to be founded in the "vicinity of this city"²⁸. In 1883 the company's capital had been raised to 250 contos and its cotton mill, which had been established on the farm of Marzagão, was already at work with an hydraulic engine of 80

h.p., forty six looms, 1,800 spindles and employing between 80 and 100 workers.²⁹

No information is available concerning the foundation of the Caçu cotton mill. In 1883, the President of the Province complained about the total lack of firsthand information about this cotton mill³⁰. In 1885, it was said to be owned by the partnership Borges, Irmãos and Company, to have a capital of 150 contos, 28 looms, 578 spindles and to employ 60 workers.³¹ In the absence of any reference either to the date when the decision to invest in this cotton mill was taken, or to the period in which it was established, and considering that no mention of this cotton mill before 1883 has been found, one may assume that it was established sometime between 1880 and 1883.

The Bom Jardim cotton mill was set up in a place called Bom Jesus da Água Fria in the district of Itinga, county of Araçuaí.³² According to the report by the President of the Province, this cotton mill - which was inaugurated in July, 1881 - had, in 1883, 50 looms, a turbine of 50 h.p. and a daily production of 2,500 metres of cloth. It was owned by the partnership Pereira Murta & Company and its establishment cost about 300 contos.³³ No information is available about the date when the partnership was legally constituted.³⁴

An interesting example of a cotton mill established to replace the non-industrial production of cloth based on slave labour is the São Sebastião cotton mill. This mill was set up by Antonio Gonçalves da Silva Mascarenhas, father of the Mascarenhas brothers - founders of the cotton mills Cedro and Cachoeira in the 1870s - on his farm "São Sebastião" in the period 1882-1884. Before the establishment of this factory, cloth was already produced on the farm, "a cloth fit for use as clothing for slaves and as sacking for agricultural products" and produced on "twelve rough wooden looms worked by slave women"³⁵. Even though, according to some authors, the São Sebastião cotton mill had been set up

and had started production in 1882,³⁶ the President of the Province informed the Provincial Assembly of Minas Gerais in August, 1884, that its machinery was still being assembled. The cost of establishing this cotton mill, which had only thirty looms, was estimated at 200 contos and it was seen by the President of the Province as "an addition to an important agricultural establishment".³⁷

Another cotton mill established in the period 1880-1884 was the Viçosa cotton mill, owned by Mello & Reis, a company of limited liability, with sixteen partners. It had fifty looms and a turbine of 60 h.p and probably started working in September, 1884.³⁸

The decision to establish a cotton mill in Juiz de Fora was made on July 9, 1883 when Andrew Steele & Company, William Moreth and Henry Wittaker bought all the Companhia União e Indústria's properties in this county for 55 contos.³⁹ The cotton mill, which was set up in the old workshops of the Companhia União e Indústria, was called Industrial Mineira but was known by local people as "the Englishmen's Factory". It was mentioned by the President of the Province, in his address to the Provincial Legislative Assembly on August 1, 1884, as being already in operation with 73 looms, 3,600 spindles, a turbine of 100 h.p., and a capital of 240 contos.⁴⁰

The available information on the cotton mills established in 1880-1884 is summarized in table 2.1. Data in this table, compared with the information presented in table 1.2 in chapter 1, show that there was no significant difference in the size of the cotton mills founded in the years 1880-1884 and those established in the seventies. The six cotton mills which had been set up in the first half of the seventies with an average of 24.5 looms increased this average in 1883 to 41.6 looms. The new mills built in the early eighties had an average of 45 looms. Such a number of looms shows that the size of these cotton mills was close to the minimum size of a mill, given the available technology in 1874.⁴¹ The

Table 2.1

Cotton mills established in Minas Gerais in 1880-1884.
(Data for the years 1883 or 1884)

Name of the cotton mill	Owners	Capital	Looms	Spindles
Marzagão Cedro	Comp. Ind. Sabarense Rodrigues, Soares, Bitencourt Velloso & Company	250 300**	48 40	1,800 1,552
Caçu	Borges, Irmãos & Co	150	24	578
Bom Jardim	Pereira Murta & Co	na	50	na
S. Sebastião	Policena Moreira da Silva*	na	30	na
Viçosa	Melo & Reis Co	na	50	na
Ind. Mineira	Andrew Steele & Co. William Moreth & Henry Whittaker	240	73	3,600
Averages		235	45	1,883

* Antonio Gonçalves da Silva Mascarenhas, the founder of the São Sebastião cotton mill, died on January 12, 1884 (Tamm, 1940,117) and the ownership of the mill went to his wife Policena Moreira da Silva.

** The initial capital of 150 contos was already raised in 1883 to 300 contos.

Sources: (1) Chaves, Fala, 1883, pp. 40-44, Branner (1885,43), Chaves, Fala, 1884, pp.72-73.

size of the Mineiro cotton mill was then significantly smaller than that of cotton mills in other regions in the country. In fact, data on number of looms for ten cotton mills established in the city and province of Rio de Janeiro in 1885 show an average of 118 looms per mill⁴².

The location of the textile industry, which had been initially heavily concentrated in the Central zone, was expanded into new areas in the early eighties. The Bom Jardim cotton mill was established in the Northeastern zone, the Viçosa and Industrial Mineira in the Mata zone and Caçu in the Western zone. Most of these cotton mills were set up outside urban centres, usually on farms. The Marzagão and the São Sebastião, for instance, were named after the farms where they were established.

The establishment of the Industrial Mineira in the old workshop buildings of the Companhia União e Indústria, beside the station of the D. Pedro II railway in the county of Juiz de Fora, shows a deviation from the traditional pattern of location adopted by investors in Minas Gerais. This cotton mill was not only the first one to be established in a coffee-growing area⁴³ but also the first to be established away from the place where most of the investors lived. The choice of where to locate the new cotton mill seems to have been decided solely on the expected profitability of the capital invested.

In spite of the expansion of the textile industry to new areas, investment in new cotton mills was still concentrated in a relatively small area, from the middle of the Central zone to the southern of the Northern zone. Evidence as to who invested in the cotton textile industry of Minas Gerais and where the funds for investment had been accumulated will be investigated below.

2.2.2 Investors in the early eighties, origins of their capital and forms of association.

As happened in the seventies, most of the cotton mills established in the early eighties were founded by partnerships. The only one man undertaking in those years was the São Sebastião cotton mill founded by Antonio Gonçalves da Silva Mascarenhas, and the only cotton mill set up by a joint stock company was the Marzagão. As happened in the seventies, such a preference for partnerships may be explained mostly by legal restrictions on the constitution of joint stock companies, before the new law was passed on November 4, 1882.⁴⁴ However, as before, legal difficulties in forming a joint stock company do not seem to have hindered the expansion of the industry during the period. The example of the São Sebastião cotton mill has been used to support the argument that at least part of the capital invested in the early industrialization of Minas Gerais had been accumulated in coffee-growing activities. However, even

if Antonio Gonçalves da Silva Mascarenhas, the founder of São Sebastião, grew some coffee on his farm - which is what he seems to have done - this is not enough to support the conclusion that the capital he invested in the establishment of this mill had originated from his activity as a coffee grower.⁴⁵ It is quite well known that the land and weather in the Central zone, where the São Sebastião farm was located, was not quite suitable for the production of coffee for export on a large scale. In fact, this activity was mainly restricted to the southern areas of the Mata zone. However, even if coffee-growing is excluded as the main activity, it is not an easy task to identify in which of his many and diversified activities Antonio Gonçalves da Silva Mascarenhas was able to accumulate funds for his industrial investment. If family stories are to be believed, a significant part of these funds came from a prize he won in the lottery.⁴⁶

According to his biographers, having started as a coppersmith, Antonio Gonçalves Mascarenhas later became the manager of a farm and, shortly afterwards, he established a merchant house. As a merchant he was able to save to purchase his own farm.⁴⁷ Even though a description of the products he grew on his farm is not available, it is quite reasonable to assume that they were varied, some for home consumption, the rest for sale.⁴⁸ There is also evidence that cattle was raised on the farm.⁴⁹ However his activities were not restricted to farming. The cloth produced on his farm before the establishment of the São Sebastião cotton mill - and therefore by non industrial technology - was not only used by his family and slaves but was also sold in far away markets. According to Carvalho "thousands of 'varas' of cloth left São Sebastião each month carried on the backs of mules to be sold in Rio de Janeiro".⁵⁰ Tamm also refers to the sale in Diamantina of the cloth produced in São Sebastião. Besides farming and the non-industrial production of cloth on his farm, Antonio Gonçalves da Silva Mascarenhas also used to lend money at interest.⁵¹

Considering the variety of activities undertaken by Antonio Gonçalves da Silva Mascarenhas, it would not be correct to state that the capital he invested in the São Sebastião cotton mill had been accumulated in one specific activity, let alone in growing one specific crop.⁵²

The example of a partnership formed in order to build the Cedro cotton mill in Montes Claros exemplifies the sort of association quite common in the early stages of industrialization of the cotton textile sector in Minas Gerais: a small group of local people, connected by ties of kinship and friendship. Very brief biographies of the partners illustrate this kind of association and reveal the probable sources of funds of such an industrial investment.

The major partners in the firm were Manoel Rodrigues, Donato Rodrigues, Antonio Narciso Soares, Angelo de Quadros Bittencourt and Gregório Velloso.⁵³ Manoel Rodrigues and Donato Rodrigues were brothers. Both of them were farmers in Grão Mogol, a county in the western area of the Northeastern zone close to Montes Claros. Together, the Rodrigues brothers subscribed 53.3% of the firm's capital.⁵⁴ There is no evidence that the other partners were connected by ties of kinship, either among themselves or with the Rodrigues brothers. In fact, this partnership has been described as an association of friends rather than as a family concern.⁵⁵

Another partner, Antonio Narciso Soares, was born in the county of Bocaiúva, which was in the north of the Central zone and, also, very close to Montes Claros. He started his life as a miner and diamond trader in the county of Diamantina. Later on he moved to Montes Claros where he established himself as a local trader. Finally he bought a farm and farming became his main activity.⁵⁶ The other two partners lived in the county of Montes Claros. Angelo de Quadros Bittencourt was from Bahia but his farm was in Campo Grande, in the county of Montes Claros, where he seems to have achieved some prominence in local affairs. In fact, he was for some time a representative on the Municipal Council

and later on he was awarded the title of Barão de Gorutuíba.⁵⁷ Gregório José Velloso was born in Montes Claros and established himself initially as a local merchant until he was able to buy a farm and become a farmer.⁵⁸

The foundation of the Industrial Mineira cotton mill in Juiz de Fora followed a different pattern. Its establishment in Vila Santo Antonio do Paraibuna, county of Juiz de Fora, by partners with English names, has led some historians to conclude that foreign capital was invested in the cotton textile industry of Minas Gerais.⁵⁹ However, no evidence has yet been presented to support the assumption that the capital invested in this mill had been accumulated outside the country. In fact very little is known about the first investors in the Industrial Mineira cotton mill.

As was said before, the decision to buy the properties of the Companhia União e Indústria, which had gone into liquidation, in order to establish a cotton mill there was taken in 1883 by Andrew Steele & Company, William Moreth and Henry Whittaker. The partners of Andrew Steele & Company were Andrew Steele, John Steele, Pedro Bandeira Steele and Henry Miller. They were traders, and in spite of their foreign names, most of them lived in the city of Rio de Janeiro. One exception was William Moreth who lived in Petrópolis.⁶⁰ This cotton mill was not financed by funds accumulated in previous activities carried out in the province of Minas Gerais, and none of the partners had any family or business connections with the local people.

The first textile company to be formed in Minas Gerais as a joint stock company, according to the provisions of law number 3,150 of November 4, 1882, was Cedro e Cachoeira. This company was not founded to establish new cotton mills but to merge the two previous partnerships formed by members of the Mascarenhas family: Mascarenhas Irmãos, owner of the Cedro cotton mill, and Mascarenhas Barbosa, owner of the Cachoeira cotton mill. Besides the original partners, two other shareholders, who were both related to the Mascarenhas

family, joined the new company: Theóphilo Marques Ferreira and Antonio Joaquim Barbosa da Silva. Theóphilo Marques Ferreira was married to the daughter of the eldest sister of the Mascarenhas brothers, founders of the cotton mills of Cedro and Cachoeira,⁶¹ and Antonio Joaquim Barbosa was their nephew.⁶² Theóphilo Marques Ferreira was a merchant at the time of the constitution of the company and Antonio Joaquim Barbosa was a lawyer.⁶³

It is interesting to observe that none of the other first shareholders of the Companhia Cedro e Cachoeira is referred to as an industrialist in the documents of incorporation of the company even though most of them had been engaged in the industrial production of cloth since the early seventies. The professions of Antonio Candido, Bernardo and Caetano, the three Mascarenhas brothers who founded and owned the Cedro cotton mill, were given, respectively, as capitalist, trader and farmer. Nevertheless, Antonio Candido had a farm where he lived and Bernardo Mascarenhas had been involved for many years in industrial undertakings. The professions of the founders of the Cachoeira cotton mill, the Mascarenhas brothers Francisco, Pacífico and Victor and their brother-in-law, Luis Augusto Vianna Barbosa, were given, respectively, as merchant, doctor, capitalist and trader.⁶⁴

2.2.3 Investment in the expansion of the productive capacity of the old cotton mills of Cedro and Cachoeira.

The constitution of the Companhia Cedro e Cachoeira has been seen by some historians as having been formed for the purpose of making it easier for both partnerships to face growing competition in the market as a result of the increasing number of cotton mills founded in Minas Gerais.⁶⁵ The Meeting of Shareholders for the constitution of the Companhia Cedro e Cachoeira took place on April 2, 1883.⁶⁶

Even though the formation of this company did not have the purpose of establishing new cotton mills, it seems to have

brought additional funds for investment. The capital of the two partnerships, which amounted to 670 contos in 1882, was raised in the new company to 1,000 contos.⁶⁷ Considering that the Cedro and Cachoeira cotton mills were bought by the new company for 706 contos, it is possible to conclude that the constitution of the Companhia Cedro e Cachoeira implied a significant increase in the financial resources available to both mills.⁶⁸ A decision to use the additional resources to enlarge the productive capacity of both mills was taken as soon as the company was formed.

At the time of the constitution of the new company, the Cedro cotton mill had 40 looms and the Cachoeira had 60.⁶⁹ The machinery of both cotton mills was seen by the Board of Directors as insufficient and inadequate. Plans were immediately put into effect for "the enlargement and definitive organization of both mills" which, "with low expenses, would double their production"⁷⁰. New machines for both cotton mills were ordered from England in this same year. Two turbines of 60 h.p. each, two spinning machines with 2,000 spindles and fifty looms were ordered for Cachoeira. One turbine of 60 h.p., three spinning machines with 900 spindles and sixteen looms were ordered for Cedro.⁷¹ The machines arrived in the following year and were expected to start working in 1885.⁷²

2.2.4 A summary of the main characteristics observed in the evolution of textile investment in the Mineiro industry during the early eighties.

There is no doubt that investment in the cotton textile industry of Minas Gerais increased significantly from 1880-1884. In five years the number of cotton mills doubled. From six mills in the seventies, the number of cotton mills in the province rose to twelve in 1885. If the enlargement of the Cedro and Cachoeira cotton mills is taken into consideration, the expansion of investment in the early eighties was in fact quite substantial. So, the spurt of investment in the Brazilian cotton industry in 1880-1884,

noted by Versiani, in fact took place in Minas Gerais during these years. Therefore, Suzigan's description of the period as one of moderate growth in the cotton industry certainly does not apply to Minas Gerais.

The evidence provided in this chapter shows that the typical cotton mill of the early eighties was financed by local people and that most of them - except the Industrial Mineira - were established in non-coffee growing areas.⁷³ It also shows that, with the exception of the Industrial Mineira cotton mill, the funds invested in the cotton industry during this period had originated in the main activities carried out in the places where the cotton mills were established.

The main economic activities during the first half of the eighties in the non coffee-growing zones in the province were those of agriculture, cattle raising and mining as well as the manufacture of dairy products, household production of cloth and local trade. So one may conclude that it was in these activities that most of the resources invested in the textile sector had been accumulated.

The stimuli to such investment were given by local demand for cloth industrially produced and by the protection of Mineiro cotton mills from foreign competition, as well as from competition from cotton mills established in other provinces.

2.3 Expansion of the cotton textile industry of Minas Gerais in the second half of the eighties.

The cotton textile industry of Minas Gerais continued to expand in the second half of the eighties. New textile companies were incorporated, cotton mills were established, and the productive capacity of old mills was enlarged. The joint stock company became the most popular form of association of capital for industrial investment: new joint

stock companies were formed and old partnerships were transformed into joint stock companies.

2.3.1 Investment in new cotton mills.

Two joint stock companies, Companhia de Fiação e Tecidos União Lavrense and Companhia Cachoeira dos Macacos, and one partnership, Matta Machado, Moreira & Companhia were formed in 1886 in order to set up new cotton mills in Minas Gerais

The partnership Matta Machado, Moreira & Companhia was constituted in Diamantina on May 19, 1886 to build a cotton mill in this county.⁷⁴ The Santa Bárbara cotton mill was set up by this partnership in the hamlet of Santa Bárbara, district of Curumataí, county of Diamantina⁷⁵. No information is available about the construction of this cotton mill and the date it started working. Its buildings were said to have been built in order to accommodate 120 looms and the turbine installed was able to produce energy for 150 looms. However, by 1889, this cotton mill had only sixty looms.⁷⁶

The establishment of the Santa Bárbara cotton mill was another family undertaking in the early cotton textile industry of Minas Gerais. The mill was mostly financed by a group of close relatives who lived or were born in the region where the mill was set up and who had no previous experience as industrialists. It was initially planned by João da Matta Machado, a diamond trader who had a diamond-cutting workshop in Diamantina.⁷⁷ His plans - described in a letter he wrote to his son, João da Matta Machado Filho in 1884⁷⁸ - were to build a cotton mill in Diamantina, so that his family could work together in a common undertaking.⁷⁹ After his death his plans were fulfilled with the constitution of Matta Machado, Moreira & Companhia. All except one of the partners were either members of the Matta Machado family or related to the family by marriage.⁸⁰ Three of them were sons of João da Matta Machado and three others were his sons-in-law. The brief information which follows

about the partners of Matta Machado, Moreira & Company provides more evidence concerning the first investors in the cotton textile industry of Minas Gerais.

The three partners who could be identified as João da Matta Machado's sons were Alvaro da Matta Machado, Pedro da Matta Machado and Augusto da Matta Machado. At the time of the constitution of the partnership, Pedro da Matta Machado was a law student in São Paulo⁸¹ and Alvaro da Matta Machado was a member of the Provincial Assembly.⁸² The three sons-in-law of João da Matta Machado were Francisco Ferreira Corrêa Rabelo, Pedro José Vercianni and João Antonio Lopes de Figueiredo.⁸³ Francisco Ferreira Corrêa Rabelo, who was born in Curralinho, a small village in the county of Diamantina, carried out different activities during his lifetime. He worked as a lawyer, magistrate, and teacher and was also a politician.⁸⁴ Pedro José Vercianni was born in Diamantina and was the son of the local doctor. He was an engineer and lived in the city of Rio de Janeiro at the time of the constitution of the partnership.⁸⁵ João Antonio Lopes de Figueiredo was born in Rio Vermelho, a hamlet quite close to Diamantina. As a doctor he worked in Diamantina. He lived there until 1892 when he moved to Theóphilo Ottoni.⁸⁶

Antonio Moreira da Costa, Baron of Paraúna, and the only partner outside the Matta Machado family, was born in Diamantina and had been engaged all his life in the diamond business, where he probably met João da Matta Machado.⁸⁷ Later on, he joined his friend's sons in the constitution of Matta Machado, Moreira & Company.

The founders of Santa Bárbara were a small and local group of relatives and friends and the capital they invested in the mill originated from the different activities they carried out. However, from what is known of the investors, one can conclude that a significant part of the funds invested in Santa Bárbara had been previously accumulated in activities ancillary to diamond mining. On the one hand, one of the partners, Antonio Moreira da Costa, was directly

involved in diamond businesses. On the other hand it is quite reasonable to assume that part of the funds invested by João da Matta Machado's heirs had come from the diamond trade and diamond-cutting carried out by their father and father-in-law.

The Companhia União Lavrense, was constituted on February 24, 1886, in the county of Lavras in the Southern zone.⁸⁸ The company was set up with a capital of 200 contos and the purpose of "producing cotton, wool and other textiles".⁸⁹ One of the first two directors, Comendador José Duarte da Costa Negrão, was a trader who lived in the city of Rio de Janeiro at the time of the constitution of the company. The other director, Manoel Hermeto Corrêa da Costa, was a trader and lived in Lavras.⁹⁰ There is some evidence that most of the first shareholders lived in the city of Rio de Janeiro. In fact, ever since the constitution of the company, there had been pressure from certain shareholders to transfer the headquarters of the company from Lavras to the city of Rio de Janeiro.⁹¹ No information on the foundation of the União Lavrense cotton mill is available but in 1905 this cotton mill had an above average number of looms and spindles compared with the other cotton mills in operation in Minas Gerais.⁹²

The Meeting of Shareholders for the constitution of the Companhia Cachoeira dos Macacos took place on May 8, 1866 in the house of João da Matta Teixeira in the village of Inhaúma.⁹³ Its main promoter was João da Matta Teixeira's son, Américo Teixeira Guimarães, who is said to have brought a group of local farmers together in order to finance the establishment of a cotton mill, close to the waterfalls of Macacos in the district of Inhaúma in the county of Sete Lagoas.⁹⁴ This company was the first to be constituted as a joint stock company in Minas Gerais in order to set up a new cotton mill after the new law concerning joint stock companies had been passed. The company was founded with a capital of 150 contos which soon proved to be insufficient. The company's capital was raised three times before the mill

started operating in 1888. On November 15, 1886 the capital was raised to 200 contos. On December 18, 1887 it was increased to 270 contos and on July 15, 1888 to 300 contos.⁹⁵ João da Matta Teixeira subscribed 79% of the initial capital⁹⁶ and was elected one of the first directors of the company, a position he held until his death in 1923.⁹⁷ His son, Américo Teixeira Guimarães, who was elected General Manager on July 15, 1887⁹⁸, is considered to have been the actual founder of the company⁹⁹.

Despite having been organized as a joint stock company, the Companhia Cachoeira dos Macacos followed the general pattern of most of the partnerships previously formed in Minas Gerais. It was a family business, owned and administered by João da Matta Teixeira and his sons. It is possible to identify other inhabitants of Inhaúma as well as other relatives of João da Matta Teixeira among the first subscribers who attended the meeting for the constitution of the company. Jeronimo Francisco França, for instance, was a local farmer. Together with João da Matta Teixeira, he was elected to the first Board of Directors. It is also possible to verify the participation of the local vicar, Antonio Diniz da Costa, who was elected to the company's first Fiscal Board.¹⁰⁰ The occupation of João da Matta Teixeira is given as capitalist in the proceedings of the meeting for the constitution of the company. There is no evidence that either João da Matta Teixeira, his son, or any of the first shareholders had previously taken part in any industrial undertakings.

In 1887 another joint stock company was formed in Minas Gerais, the Companhia Paulo Moreirense. This company was incorporated on June 14, 1887, in the hamlet of Paulo Moreirense, district of Alvinópolis, in the north of the Mata zone and near to its border with the Central zone.¹⁰¹ Even though it is known that this company owned the Rio do Peixe cotton mill, it has not yet been possible to ascertain whether this mill was established by this company or whether it had been set up beforehand. In fact very little is known

about the constitution of this company and the foundation of the Rio do Peixe cotton mill. This cotton mill has been referred to by some authors as the Mascarenhas cotton mill; this name suggests that its foundation was another of the Mascarenhas family's undertakings.¹⁰² However, there is no evidence to support any association of the Mascarenhas family with the foundation of this cotton mill. The names of the shareholders who attended the general meetings in 1894 and 1895 do not indicate the significant participation of any specific family.¹⁰³ It was only later on, at the beginning of the twentieth century, that the participation of the Mascarenhas family in this enterprise became significant.

The foundation of the Tecelagem Bernardo Mascarenhas cotton mill in Juiz de Fora in 1888 is the first example of the establishment of a new cotton mill by an experienced textile entrepreneur. In 1888, a weaving mill, the Tecelagem Mascarenhas, was founded by Bernardo Mascarenhas in Juiz de Fora. Surprisingly, in spite of the relatively large amount of literature available on the Mascarenhas family and their textile undertakings in Minas Gerais, there is very little information on the establishment of this mill. A much greater emphasis is placed upon the role played by Bernardo Mascarenhas in the establishment of a power station in Juiz de Fora. According to Bernardo Mascarenhas' biographer, his decision to establish his own cotton mill in Juiz de Fora would have been made in October, 1886 when, on a trip to Juiz de Fora, he bought a plot of land on which he planned to build his mill.¹⁰⁴ In a letter to a friend he described the plant he intended to build as "a small weaving factory of 30 looms."¹⁰⁵ However this plan was temporarily put aside when he got involved with a project to provide the city of Juiz de Fora with electric illumination and energy for the local industry. Problems in the execution of this project made him decide: "to go back to my first plan, to build the little factory, and to return to my old trade which holds no secrets from me".¹⁰⁶ His factory was inaugurated on May 14, 1888.¹⁰⁷

Later, Bernardo Mascarenhas reverted to his previous project, the establishment of a power-station in Juiz de Fora. A joint stock company, the Companhia Mineira de Eletricidade, was formed in order to finance the undertaking. Electric lighting was installed in the Tecelagem Mascarenhas cotton mill on August 22, 1889,¹⁰⁸ and, nine years later, on August 24, 1898, this cotton mill started using electrical power.¹⁰⁹ At this point it should be pointed out that, in spite of the obvious importance of the introduction of electricity in the future development of its textile industry, Minas Gerais did not benefit from it in the period under study. Data available on energy used by 19 cotton mills in Minas Gerais in 1905 show that 18% of this energy was steam and 82% was hydraulic.¹¹⁰ It is also interesting to observe that the Companhia Mineira de Eletricidade was mainly financed by members of the Mascarenhas family who were also textile investors. In fact, shareholders who subscribed 41.8% of the Companhia Mineira de Eletricidade's initial capital can be identified as shareholders of the Companhia Cedro e Cachoeira in 1884/1885. The proportion was probably higher, as shareholders who subscribed another 13.3% of the shares can be identified as shareholders of the Companhia Cedro e Cachoeira in 1897.¹¹¹

Two more cotton mills are said to have been founded in 1888. Both of them were built in the Central zone: the Pedreira cotton mill, in Itabira do Matto Dentro and the São Roberto mill in Gouvea, in the county of Diamantina.¹¹² No information about the establishment of the cotton mill in Itabira is available. The São Roberto cotton mill was established by a partnership, Alves, Ribas, Ribeiro & Company, which was transformed into a joint stock company at the end of the nineties. This undertaking was promoted by Quintiliano Alves Ferreira, Baron of São Roberto, who was also engaged in other local businesses including the manufacture of hats and earthenware and diamond-cutting.¹¹³

Another cotton mill established in the second half of the

eighties was the São Vicente cotton mill. Very little is known about this mill before its acquisition by the Companhia Cedro and Cachoeira in 1891. According to Vaz it was founded in Pau Grosso, around 1888.¹¹⁴ However it is quite possible that it had been established earlier, as suggested by a reference in the annual report of the Companhia Cedro e Cachoeira for 1886 to "neighbours who have just installed the most refined machines yet known."¹¹⁵ Information on the state of this mill in 1891 may be found in a report by a committee which had investigated the advantages to the Companhia Cedro e Cachoeira of its purchase. According to this report, São Vicente had forty looms and spinning machinery which was able to feed fifty looms. The machinery was said to be very up to date and the buildings were well built. However, the cotton mill was not working and everything was in a very bad state of repair. The system of hydraulic energy was not able to provide more than 30 h.p. The purchase price suggested by this committee was between 130 and 160 contos¹¹⁶ but the price paid by the Companhia Cedro e Cachoeira was 180 contos.¹¹⁷

Another joint stock company was organized in the late eighties to set up a cotton mill in the Central zone in the city of Ouro Preto, the Companhia Industrial Ouro Preto. The only information as yet available on the constitution of this company refers to its initial capital of 200 contos.¹¹⁸ The constitution of this company seems to have been undertaken by capitalists from Rio de Janeiro as the headquarters of the company were in this city.¹¹⁹ On August 7, 1890 the issue of 200 contos in debentures - to finish the building the cotton mill in the city of Ouro Preto - proposed by the Board of Directors, was approved by a General Meeting of Shareholders.¹²⁰ On January 20, 1891 the Board of directors informed the shareholders that the cotton mill had not started working because the machines were still going through Customs.¹²¹

Data in table 2.2 summarize some of the information given in this section on cotton mills established in Minas Gerais as

a result of decisions to invest taken in the years 1885-1889.

Table 2.2

Cotton mills established in the second half of 1880s:
owners, initial capital and location (a summary of
information given in the text)

Cotton mills	mill owners	initial capital	Location county and zone
Cach.dos Macacos	Cia Cachoeira dos Macacos	150	Sete Lagoas Central
São Vicente	unknown	na	Sete Lagoas Central
Pedreira	na	na	Itabira do Mato Dentro Central
São Roberto	Alves,Ribas Ribeiro e Co	na	Diamantina Central
Santa Bárbara	Matta Machado Moreira & Co	200	Diamantina Central
Rio do Peixe	Cia Industrial Paulo Moreirense	na	Alvinópolis Mata
Tec.B. Mascarenhas	Bernardo Mas- carenhas	na	Juiz de Fora Mata
União Lavrense	Cia F.e T. U. Lavrense	200	Lavras South
F.de Ouro Preto	Cia Industrial	200	Ouro Preto Central

Sources: in the text.

2.3.2 The transformation of partnerships into joint stock companies: The Companhia de Fiação e Tecelagem Industrial Mineira and the Companhia de Fiação e Tecidos Santa Bárbara.

Two partnerships with cotton mills established in the state of Minas Gerais were transformed into joint stock companies in 1889: Matta Machado, Moreira & Companhia and Morrit & Companhia. The company Fiação e Tecelagem Industrial Mineira was incorporated in the city of Rio de Janeiro on March 12, with the purpose of acquiring and operating the Industrial Mineira cotton mill owned by Morrit & Companhia.¹²² The

company Fiação e Tecidos Santa Bárbara was incorporated in Rio de Janeiro on December 12.¹²³ According to its statutes, it was constituted by the conversion of the partnership Matta Machado, Moreira & Companhia into a joint stock company.¹²⁴

The conversion of a partnership into a joint stock company is merely a modification of the legal form of association among partners of the same undertaking and does not necessarily imply changes in capital or investors. So, the constitution of a joint stock company does not indicate by itself that additional resources were being invested in the cotton textile industry. In fact, even increases in capital, following the transformation into a joint stock company, may only reveal a revaluation of the assets and not an increase in funds for investment.

The initial capital of the Companhia de Fiação e Tecidos Santa Bárbara consisted of the assets of Matta Machado, Moreira and Company, which were estimated to be worth 500 contos. The capital was divided into 2,500 shares of 200 mil réis, which were distributed among eight shareholders who were the old associates of the dissolved partnership.¹²⁵

Data in Table 2.3 show that, as a joint stock company, the Companhia de Fiação e Tecidos Santa Bárbara preserved the same character of a family business as the previous partnership. The sons and sons-in-law of João da Matta Machado held 66% of the shares. Although João da Matta Machado's eldest son, João da Matta Machado has been considered by his biographer as the founder of the Santa Bárbara cotton mill,¹²⁶ his name does not appear as a shareholder at the time of the constitution of the company, but as one of its directors. So, even though João da Matta Machado may have had an important role in the establishment of the Santa Bárbara cotton mill as a promoter of the undertaking, there is no evidence that he provided any financial resources. João da Matta Machado has mostly

Table 2.3

Shareholders and directors of the Companhia Fiação e Tecelagem Santa Bárbara at the time of its constitution: ties of kinship and participation in the company's capital.

Shareholders and Directors	Shares per shareholder		Ties of kinship with João da Matta Machado
Pedro da Matta Machado	784	31.4%	son
Antonio Moreira da Costa	390	15.6%	none
João Antonio Lopes Figueiredo	312	12.5%	son-in-law
Francisco Corrêa Ferreira Rabello	312	12.5%	son-in-law
Pedro José Vercianni	234	9.4%	son-in-law
Augusto da Matta Machado	234	9.4%	son
José da Silva Machado	156	6.2%	unknown
Alvaro da Matta Machado	78	3.1%	son
Total	2,500	100.0	-
Directors			
João da Matta Machado	none	none	son
José Ferreira Chaves	none	none	unknown

Sources: columns (1) and (2): Companhia de Fiação e Tecidos Santa Bárbara (1889), Estatutos, chapter II, article 5. Column (3): "Pedro da Mata Machado: O Centenário de um idealista. A Vida." in Estado de Minas, February 28, 1965, third part, p.1, Mourão (1958), Machado A. (1980), Machado P. (1928), Anjos (1944), Rabelo (1982), Companhia de Fiação e Tecidos Santa Bárbara, Estatutos, Disposições Transitórias.

been known as an outstanding politician of his time. Starting his public life in the Municipal Chamber of Diamantina, he was elected to the Provincial Assembly and later on to the Federal Chamber of Representatives. He was also a minister in the João Dantas Ministry and during the Republic he was elected to the Federal Chamber of Deputies and took part in the Constituent Assembly.¹²⁷ Besides politics, he was also engaged in many other businesses; some of them connected with the cotton textile industry.¹²⁸ In 1891, for instance, he was elected to the Fiscal Board of the Companhia Fiação e Tecidos União Lavrense.¹²⁹ In this same year he was elected director of the Companhia

Industrial e Agrícola Sul-Mineira.¹³⁰ However, the fact that he had held such positions in textile companies does not necessarily mean that he had any say in the management of their cotton mills. His participation may only reveal that these companies wanted to have an influential politician on their boards.

In spite of the fact that most of the shareholders of the Companhia Santa Bárbara were from Diamantina and some of them still lived there, the headquarters of the company was located, according to the statutes, in Rio de Janeiro.¹³¹ None of the members, either of the first Board of Directors, or of the first Fiscal Board were, at the time of their appointments, shareholders of the company. The two directors lived in Rio de Janeiro.¹³²

The Companhia Fiação e Tecelagem Industrial Mineira was not a Mineiro company. It was constituted in the city of Rio de Janeiro and had its headquarters in Rio de Janeiro. There is no evidence of any participation by local people in this company as there is no evidence of any connection of the company's first shareholders with the city of Juiz de Fora either through business or ties of kinship. However, there is evidence that its shareholders were not only connected with the cotton textile industry of Rio de Janeiro, but more specifically with one company, the Companhia Fiação e Tecelagem Carioca. Besides, the constitution of this company and its purchase of the Industrial Mineira cotton mill should not be seen as the takeover of an old business by new investors, but as an enlargement of the old partnership through the introduction of new investors and a change in its legal form of association.

As was seen in the first part of this chapter, the properties of the Companhia União e Indústria - where the Industrial Mineira cotton mill was to be established - were bought by Andrew Steele & Company, William Moreth and Henry Whittaker in 1883. The partnership Andrew Steele and Company then consisted of Andrew Steele, John Steele, Pedro Bandeira

Steele and Henry Miller, all of them traders with businesses in the city of Rio de Janeiro.¹³³ In 1885 the Industrial Mineira cotton mill was mentioned as being owned by Steele, Morritt and Whittaker¹³⁴ and, at the time of its sale to the Companhia Fiação e Tecelagem Industrial Mineira, it was the property of Morritt & Company.¹³⁵ There is evidence that Henry Whittaker and the Steeles were involved in common undertakings in the cotton textile industry in Rio de Janeiro.

In 1884, a firm with fifteen partners, Bandeira Steele & Companhia was formed in Rio de Janeiro to set up a cotton mill in this city. At least two of these partners were members of the partnership which then owned and operated the Industrial Mineira cotton mill in Juiz de Fora: Pedro Bandeira Steele and Henry Whittaker.¹³⁶ Two years later Bandeira Steele and Company was transformed into a joint stock company with the name of Companhia de Fiação e Tecelagem Carioca, and Henry Whittaker was appointed as its manager. However there is some indication that in this same year Henry Whittaker left the company as a result of an internal disagreement and joined another textile company, the Companhia de Fiação e Tecelagem Pau Grande.¹³⁷ It is possible that the reasons which led Henry Whittaker to leave the Companhia Fiação e Tecelagem Carioca are the same as those which led him to withdraw from the partnership, Steele, Moreth & Whittaker sometime between 1885 and 1889. In fact, the name of Henry Whittaker does not appear on any of the available lists of shareholders in the nineties, either of the Companhia Fiação e Tecelagem Carioca or the Companhia de Fiação e Tecelagem Industrial Mineira.

No information is available about Andrew Steele & Company's participation in the ownership of Industrial Mineira between 1885 and 1889, which could explain the exclusion of its name from the firm which owned the cotton mill. Andrew Steele & Company is listed as one of the eleven shareholders of the new company, Companhia de Fiação e Tecelagem Industrial Mineira, on June 13, 1891 and three out of its four partners

in 1883 are listed as individual shareholders: Andrew Steele, Pedro Bandeira Steele and Henry Miller.¹³⁸ Moreover, Andrew Steele and Henry Miller were elected to the first Board of Directors of the company.¹³⁹

A close connection between the companies Fiação e Tecelagem Industrial Mineira and Fiação e Tecelagem Carioca is suggested also by a comparison of the lists of shareholders of both companies. Pedro Bandeira Steele, one of the founders of the Companhia Fiação e Tecelagem Carioca, for instance, was a shareholder of the Companhia Fiação e Tecelagem Industrial Mineira in 1890.¹⁴⁰ William T. Gepp, another of the first shareholders of the Companhia Fiação e Tecelagem Industrial Mineira, was listed among the shareholders of the Companhia de Fiação e Tecelagem Carioca in 1897.¹⁴¹

However, the transfer of ownership of a cotton mill from a partnership to a joint stock company does not necessarily imply an expansion of the productive capacity of the mill and therefore may not involve any investment. The Companhia de Fiação e Tecelagem Industrial Mineira was constituted with a capital of 600 contos divided into 1,550 shares of 200 mil réis, "fully paid to the vendors."¹⁴² This means that the registered capital of the partnership (240 contos) did not correspond to the real value of its assets at the beginning of 1889.¹⁴³ The significant increase in capital only reveals a revaluation of the assets of the partnership Morritt & Companhia. However, just after its constitution, the company was authorized by a Meeting of Shareholders to issue 600 contos of debentures which were used to fund the debts of the company as well as to finance the expansion of its cotton mill.¹⁴⁴

The transformation of the old partnerships into joint stock companies showed another development which took place in the eighties: the widespread adoption of the joint stock company as the form of association for investment in the cotton textile industry.

2.3.3 A brief summary of the main characteristics of the expansion of textile investment in Minas Gerais in the second half of the eighties.

The evidence presented shows that the spurt of investment in the early eighties was not interrupted in the second half of the decade. Investment in the establishment of nine more cotton mills was decided in the short period 1886-1889. These cotton mills were responsible in 1905 for 30.4% of the total number of looms in operation in Minas Gerais according to a list compiled by Vasco.¹⁴⁵

As for location, investment tended once more to be concentrated in the Central zone, and more specifically in two regions of the Central zone: in the north, in the county of Diamantina and in the centre, in the county of Sete Lagoas and nearby areas. A second cotton mill was established in the coffee-growing areas of the Mata zone, in Juiz de Fora, the Tecelagem Bernardo Mascarenhas. A new joint stock company - the União Lavrense - was formed to set up the second cotton mill in the Southern zone.

As far as investors are concerned, the second half of the eighties showed two important developments: the first undertakings by experienced industrialists and by capitalists from Rio de Janeiro. The Tecelagem Mascarenhas cotton mill was founded not by a group of local people without any previous experience in the trade but by one man, an experienced industrialist who did not live where the factory was established and whose savings were certainly accumulated mostly in the industrial production of cloth. In fact there is no evidence that Bernardo Mascarenhas had been engaged in activities other than those connected with industry. The evidence shown suggests that a significant part of the funds which financed the establishment of the cotton mills in Ouro Preto Lavras came from people living in the city of Rio de Janeiro. Although the Santa Bárbara was a typical family business, it was initially managed by people living in the city of Rio de Janeiro. Finally the

constitution of Industrial Mineira showed the participation in the cotton textile industry of a group of capitalists from Rio de Janeiro who were involved in trade and in the industrial production of cloth in that city.

As for organization, the number of joint stock companies formed to establish new cotton mills or to take over old partnerships increased significantly in the eighties, particularly in the second half of the decade. Moreover, old partnerships were transformed into joint stock companies, as will be seen in the following section.

The expansion of the cotton textile industry in Minas Gerais in the second half of the eighties was stimulated by the high returns on capital invested in the industry in the first years of the decade. The appreciation of the exchange rate in the period provided an additional stimulus for investment.

2.3.4 The increasing popularity of joint stock companies in the eighties.

Only one of the cotton mills established in the early eighties had been founded by a joint stock company. In the second half of the decade three out of the eight new cotton mills were established by joint stock companies. In addition, old partnerships were transformed into joint stock companies during the eighties. Mascarenhas Irmãos and Mascarenhas Irmãos & Barbosa which founded the Cedro and the Cachoeira cotton mills became a joint stock company in 1883. Also the partnerships which owned the Santa Bárbara and the Industrial Mineira cotton mills were transformed into joint stock companies in 1889.

Information in table 2.4 shows the increasing acceptance of the joint stock company as the ideal form of association of capital for investment in the cotton textile sector of Minas Gerais.

Table 2.4

Legal form of association of partners for the establishment and operation of cotton mills in Minas Gerais: 1868-1889.

Cotton mills by period of foundation	Legal form of association of the owners at the date of foundation (1)	in 1889 (2)	in 1905 (3)
1870-1879			
Cedro	partnership	joint stock	joint stock
Cachoeira	partnership	joint stock	joint stock
Gabirola	joint stock	joint stock	joint stock
Brumado	partnership	partnership	joint stock
Biribiry	partnership	na	joint stock
Machado	na	na	one owner.
1880-1884			
Marzagão	joint stock	joint stock	joint stock
São Sebastião	one owner	one owner	partnership
Ind. Mineira	partnership	joint stock	joint stock
Viçosa	partnership	na	joint stock
Cedro	partnership	partnership	partnership
Caçu	partnership	na	one owner
Bom Jardim	partnership	na	joint stock
1885-1889			
C.dos Macacos	joint stock	joint stock	joint stock
São Vicente	na	na	joint stock
Pedreira	na	na	partnership
São Roberto	partnership	partnership	joint stock
Santa Bárbara	partnership	joint stock	one owner
Rio do Peixe	joint stock	joint stock	one owner
T.Mascarenhas	one owner	one owner	one owner
U.Lavrense	joint stock	joint stock	joint stock
Ouro Preto	joint stock	na	partnership

na: information is not available.

Sources: Column (1): sources given in the text; column (3): Information from Vasco (1905). Column(2): sources of information on the ownership of Industrial Mineira and Santa Bárbara cotton mills in 1889 given in the text. Sources on the ownership of São Sebastião and Tecelagem Mascarenhas given respectively in: Tamm (1960) and N.L.Mascarenhas (1954). Other sources are mentioned in the text. Those cotton mills which were established by a joint stock company and owned by a joint stock company in 1905 were also assumed to be owned by a joint stock company in 1889.

The increased number of joint stock companies in the cotton textile industry of Minas Gerais was mostly the result of a change in the legislation which was passed at the end of

1882.¹⁴⁶ The most significant alteration introduced by the new law was the abolition of the need for government authorization for the constitution of a joint stock company and future changes in its statutes. Even though one may not say that the legislation on joint stock companies in force before this new law was passed had restricted the expansion of the textile industry in Minas, it had certainly discouraged the constitution of such companies. The legal procedure for obtaining official approval from the Central Government took a long time - this was the case in the constitution of the Companhia Industrial Sabarense. Besides, in order to get final approval from the government the applicant was in some cases forced to accept excessive interference by the government in different aspects of the constitution of the company. The list of alterations in the statutes of the Companhia Industrial Sabarense, which were required by the government as a condition for giving its approval, illustrates this point.¹⁴⁷

The general advantages of a joint stock company as a form of capital association are well known and justify its widespread adoption by industrial investors. In a joint stock company the risks incurred by the investor were smaller than those he would have taken in the usual partnership, as the responsibility of any shareholder was restricted to the value of his contribution. This smaller risk certainly encouraged small farmers, local traders, miners, engineers and doctors to invest some of their savings in the industrial production of cloth in Minas Gerais. The joint stock company also allowed for the participation of the small investor who did not have enough resources to join a partnership

2.3.5 The performance of existing cotton mills in the second half of the eighties: the case of the Companhia Cedro e Cachoeira's cotton mills.

Data on production and sales available for Cedro and Cachoeira cotton mills in 1884-1889 and displayed in tables

2.5 and 2.6, show that increased demand for their products did not follow upon the enlargement of their productive capacity.

The Cedro and Cachoeira cotton mills started the period with an increased capacity, as a result of the decision to enlarge both mills taken in 1883.¹⁴⁸ In 1885 the amount produced increased in both cotton mills.

Table 2.5

Performance of the Companhia Cedro e Cachoeira's cotton mills: evolution of production and sales.

Years	Cachoeira				Cedro			
	Production		Sales		Production		Sales	
	in 1,000 metres	ind numb.	in con- tos	ind numb	in 1,000 metres	ind numb	in con- tos	ind numb
1884	641	100	141	100	335	100	155	100
1885	694	108	169	120	369	110	195	126
1886	1,149	179	249	176	453	135	218	141
1887	1,379	215	292	207	651	194	318	205
1888	1,511	236	277	196	807	241	344	222
1889	1,466	229	252	178	694	188	224	145

Sources: Companhia Cedro e Cachoeira, Relatórios da Diretoria 1883-1889

This increase was followed by a great expansion of sales which encouraged new investment.¹⁴⁹ At the beginning of 1886, Bernardo Mascarenhas, who was one of the directors, proposed further enlargement of both factories.¹⁵⁰ However, during this same year the productive capacity of both cotton mills was significantly expanded as the new machinery, which had been ordered in 1883, became fully operational. The number of looms in operation increased - compared to those in 1883 - from 60 to 110 in Cachoeira and from 40 to 56 in Cedro, and the amount produced in both mills rose significantly compared to previous years: in Cachoeira by

65.6%, and in Cedro by 43.7%. Sales did not increase in the same proportion. However, as a result of the decision taken at the beginning of 1886, both cotton mills had their productive capacity enlarged in 1887. The Cachoeira cotton mill had 30 more looms and Cedro had 21 more looms¹⁵¹. Consequently, output was further expanded. The quantity produced by the Cachoeira cotton mill in 1888 was 136% higher than in 1884 and the quantity produced by the Cedro mill was 141% higher. The decrease in the level of production in both cotton mills in 1889 was not due to a deliberate policy of cutting down the amount of cloth produced but came about as the result of a number of problems faced by both factories in that year.¹⁵²

Data in Table 2.5 show the difficulties faced by the Companhia Cedro e Cachoeira in selling its products. The amount of cloth produced in both factories increased continuously from 1885 to 1888 and at a faster rate than the proceeds from sales. In 1888, although production at the Cachoeira cotton mill was 136% higher than in 1884, proceeds from sales were only 96.5% higher. In the Cedro cotton mill production increased by 141% in the same period, but proceeds from sales increased by only 122%. These data show that, after 1886, the market was not able to absorb the increased production of both factories at the price levels of 1884. In spite of lower prices, shown in table 2.6, stocks of cloth in the factory increased.

The increased stocks in 1886 were explained by the Board of Directors as the result of foreign competition brought about by a stronger mil réis. In order to face this competition, the directors recommended a reduction in prices as "the valuation of the exchange rate in the year ... has strongly affected our exports as the prices of (foreign) cloth have decreased by 10 to 12% and are being preferred as long as our company does not make any similar reductions..."¹⁵³

In the following year, the Board of Directors insisted on further reductions for "with the present exchange rate, the

prices of foreign products will decrease and, therefore, they will be preferred to those of our company.¹⁵⁴ Besides the reduction in prices, it was necessary to expand into new markets. In an attempt to enlarge the consumer market for the company's products, samples of cloth were sent to the city of Rio de Janeiro in 1886¹⁵⁵. However, the quotations received were so low that the project of selling in Rio was temporarily abandoned and a new decision was taken: the establishment of warehouses at different localities in Minas Gerais. Three warehouses were established in 1887: one in Calhau, another in Montes Claros and a third one in Pitangui.¹⁵⁶

Table 2.6

Performance of sales in Cachoeira cotton mill, 1884-1889.

Years	Sales in contos (1)	Stocks in contos (2)	Variation of stocks in contos (3)	Production value in contos (4)	Prices in réis (5)
1884	141	14	na	na	-
1885	169	7	(-) 7	162	\$234
1886	249	14	(+) 8	257	\$224
1887	292	15	(+) 0	293	\$212
1888	277	63	(+)48	326	\$216
1889	252	81	(+)18	271	\$185

Sources: Columns (1) and (2) : Companhia Cedro e Cahoeira, Relatórios da Diretoria, 1884-1889. Column (3): annual differences in stocks, given in column (2). Column (4): Column (1) + Column (2). Column (5): Column (4) divided by data on quantities produced given on Table 2.2.

The situation faced by the company seems to have deteriorated during the two last years of the decade. In 1888 the production of both cotton mills increased significantly compared to previous years, but proceeds from sales decreased and stocks increased. As shown in table 2.4, the value of cloth in stock in the Cachoeira cotton mill rose from 15 contos on the last day of 1887 to 63 contos on

December 31, 1888. In 1889, in spite of a decrease in the amount produced in Cachoeira, sales decreased and stocks reached their peak. On March 15, 1889 the Board of Directors had to admit to the shareholders that the company was still unable to pay part of the dividend of 1887 which was still owed to them¹⁵⁷.

From 1888 the level of the exchange rate ceased to be blamed for the problems with sales. The difficulties which persisted in 1888, in spite of "the remarkable reduction in prices, recently authorized by the company,"¹⁵⁸ were seen by the Board of Directors as the result of competition from local cotton mills. A reference is made in this report to "the introduction into the market of products from industrial establishments similar to ours, which have been founded in areas supplied by this company."¹⁵⁹ Besides local competition, the report indicated other reasons for the difficulties faced by the company: the general state of inertia in the trade, and sales on credit at 90 days.¹⁶⁰

The last year of the eighties was a particularly difficult one. For the first time since the constitution of the company in 1883, the amount produced by both cotton mills decreased. In spite of such a decrease, the cloth in stock increased. The value of cloth in stock in the Cachoeira cotton mill at the end of 1889 corresponded to 32.2% of the proceeds from sales during the year. According to the analysis presented by the Superintendent Director, the problems faced by the company were mainly due to "a sluggishness in trade" caused by a general crisis, inflation, the higher external value of the mil réis, and the development of the manufacturing industry in our zone."¹⁶¹ The attempt at expanding the consumer market through the establishment of warehouses was not successful as the sale of cloth from these warehouses was very limited. So, the only possible solution to the problem of insufficient demand for the company's products was, according to the Board of Directors, to force the sale of this product in the market of Rio de Janeiro, even if it

meant higher costs.¹⁶²

The remark made by the Board of Directors that the difficulties with sales in 1886 and 1887 were in part the result of the appreciation of the exchange rate does not contradict the argument of this dissertation that the industrial production of textiles in Minas Gerais was protected from foreign competition. In fact the evidence provided supports the assumption that the prices charged by the company were initially determined by the local price of foreign cloth. Such prices allowed the company to appropriate the difference between the local prices of foreign products and the costs of production of their own products, as profits. Given the large margin of protection of the Mineiro textile industry - due to high costs of transport and distribution - such profits were able to finance the expansion of the mills and attract new investors to the industry. However, in 1886 the external value of the mil-réis started appreciating. From 17.8 pence in January, it rose to 22.3 pence in December, staying relatively stable at this level in the following year. In so far as the company was operating at prices close to the top price imposed by the foreign product, such an appreciation required an immediate reduction of its price list. However, by the end of the decade, a new pressure towards lower prices was felt by the company. Such a pressure was the result of an increased supply of cloth produced by the new mills established in the province. As long as local competition brought the prices of Mineiro cloth well below the price of foreign cloth, changes in the local price of foreign cloth became unimportant for the Mineiro producers.

On the other hand, the recommendation of the Board of Directors that the price lists should be reduced shows that the company's management did not react promptly to the signals given by the market. Such a sluggish answer seems to be explained at least in part by the organisational transformation of the old partnership into a joint stock company. Once the partnerships were transformed into joint

stock companies, the freedom of the management was restricted by the powers given to the General Meeting of Shareholders. It was this meeting which elected the Board of Directors and approved the annual accounts. While the cotton mills of Cedro and Cachoeira were owned by small partnerships, their management was subject to the agreement of three and four partners respectively who, in spite of their possible disagreement, had joined the undertaking as capitalist entrepreneurs.

Once the company was constituted, the number of shareholders started increasing. From nine shareholders at the time of its constitution, the company had 17 shareholders in 1885 and 49 in 1889.¹⁶³ Even though the founders of the company held the majority of votes, no individual shareholder had a sufficient number of votes to allow him to control the company. Among the new shareholders were those who joined the company as rentiers rather than as capitalists. Their only expectation was an immediate return on their capital, a return higher than they would have got on traditional investments. A greater number of shareholders gave rise to the formation of alliances among them which could cause internal dissension and create difficulties for the management. A reduction in the price list meant a reduction in the margin of profits per unit produced and was not expected to please the shareholder. So it is quite possible that the management was reluctant to reduce prices without the formal approval of the shareholders.

2.4 Conclusions.

a) Even if the eighties are not seen as the decade of the birth of the Mineiro textile industry, they certainly were years of significant expansion of investment in this industry. Therefore the development of the Mineiro cotton textile industry followed the general direction of industrial growth identified in the period. However in the Mineiro case, such a development cannot be explained in the

same way as the growth of Brazilian industry - or more specifically, the growth of the cotton textile industry - has been explained in the literature. As a non export economy, Minas Gerais was not directly and significantly affected by improvements which were taking place in the export areas relating to transport or to supply of labour. Moreover changes in the level of protection granted to domestic producers did not affect the Mineiro producer with the same intensity as they affected the producer in other provinces.

b) The spurt of investment in the early eighties took place in a period of devaluation of the exchange rate and was probably stimulated primarily by the good performance of the cotton mills founded in the previous decade. However, investment in the second half of the decade had the additional stimulus of an increase in the external value of the mil-réis.

c) The appreciation of the exchange rate in the second half of the decade had an initial impact on the prices charged by Mineiro producers. A decrease in the prices of foreign cloth forced the Mineiro producers to reduce their prices. Further decreases in prices were brought about by an increased supply of Mineiro cloth - resulting from earlier investment. At the new prices the Mineiro industry became relatively unaffected by fluctuations in the exchange rate.

d) The cotton mills established in the eighties were relatively small and concentrated in the interior of the province in central areas of the Central zone, far away from outside competition. The size and location of most of the cotton mills established in the eighties supports the assumption that the early Mineiro textile industry was established to supply local markets.

e) Investment in new cotton mills during this decade was mostly financed by local people with resources accumulated in their different activities: farming, local trade,

diamond-mining, handicraft production of basic goods and the exercise of their professions like politicians, civil servants, doctors, and so on. This period also witnessed investment from people living in the city of Rio de Janeiro. Such investment from outsiders may reveal their wish to escape from the adverse effects of an appreciation of the exchange rate on the industry of Rio de Janeiro, and to take advantage of the additional protection granted to the Mineiro industry.

f)Following a change in legislation, the joint stock company became the prevailing form of association of capital, introducing a dichotomy in the ownership of the cotton mills which was to have an effect on the management of the companies: on the one side there were the founders of the company who behaved like capitalist entrepreneurs; on the other side were the shareholders who were mostly interested in receiving high and immediate dividends, whose payment they saw as a duty of the company.

1. Rates of increase calculated from: Ministério da Agricultura, Indústria e Comércio, Diretoria Geral de Estatística (1927, LXIX).
2. Simonsen (1973,16).
3. Normano (1968,100).
4. See, for instance: Mello (1987,chapter 2) and Silva (1978,81).
5. Suzigan (1984,70).
6. Ibid.
7. Suzigan (1984,110).
8. Suzigan (1984,70).
9. Mello (1987,123,143).
10. Mello (1987,143-145).
11. Rates computed from data in: Suzigan (1984,322-327).
12. Versiani (1980a, 310,311,317).
13. Versiani (1980a, 317 and footnote 13).
14. Suzigan (1984,110).The reasons why the cotton textile sector was not able to benefit from the conditions which would have favoured the expansion of other industrial investment in the first half of the decade are not presented by the author.
15. Suzigan (1984,121).
16. Annual data on imports of industrial machinery to Brazil for 1855-1939 were compiled by W. Suzigan, in 1984. See: Suzigan (1984,321-327): "Exports of industrial machinery to Brazil from the United Kingdom, the United States, Germany and France, 1855-1939."
17. Iglésias (1958,116).
18. Law number 2,389, October 13,1877.
19. The date of constitution of this partnership is in Vianna (1964,369).
20. Vianna (1964,369).
21. According to the report of the President of the Province in 1883, the capital of the partnership, although registered at the Tribunal do Comércio as 150 contos, had already been raised to 300 contos. See: Chaves (1883), Fala, p.42.
22. Ibid.

23. Chaves (1883), Fala, p.43.
24. According to Vianna (1964,369): "The government has never paid the promised interest."
25. Law number 3,150, November 4,1882.
26. Companhia Industrial Sabarense (1880), Estatutos.
27. Companhia Industrial Sabarense (1880), Estatutos, article 1.
28. Ibid., art.2.
29. Chaves, Fala,1883, p.42.
30. Chaves (1883), Fala, p.43. After mentioning that he could not give information on this cotton mill similar to that given on the others established in the province, the President of the Province reproduced a few data he had obtained from notes published in a newspaper in Uberaba. According to these notes, the cotton mill of Caçu, which was established between the counties of Uberaba and Monte Alegre, had excellent machines driven by hydraulic power, and used local cotton.
31. Branner (1885,43).
32. The location of this cotton mill is found in: Companhia de Fiação e Tecidos Itinga do Jequetinhonha (1905), Ata da Assembléa Extraordinária dos Acionistas.
33. Chaves (1883), Fala, p.42.
34. The identification of this cotton mill and its date of foundation by different authors illustrates the problems which may arise as the result of different names used to identify a mill and the place where it was located. In the list of cotton mills established in Minas Gerais before 1900, Vaz includes Bom Jesus de Agua Fria, established in 1881, and Itinga which would have been established before 1896. Versiani and Suzigan do not include either Bom Jesus or Itinga in their lists of cotton mills founded before 1905. However both of them include a Bom Jardim cotton mill which would have been established in Araçuaí, before 1884, according to Versiani and in 1884, according to Suzigan. See: Vaz (1990,25); Versiani (1980b,33) and Suzigan (1984,384).
35. Tamm (1960,77).
36. According to Mascarenhas (1972, 32-35), this cotton mill was set up in 1882 and started operating in this same year.
37. Chaves (1884), Fala, pp.73-74.

38. Information on this cotton mill in: Chaves, Fala, 1884, p.73. The fact that this cotton mill was also known as São Silvestre seems to have led Suzigan to identify two cotton mills as being established before 1905: the Viçosa and the São Silvestre. Suzigan (1984,348-349).

39. See: Escritura de venda dos edifícios das oficinas da Companhia União e Indústria, em liquidação em Juiz de Fora, suas dependências e terrenos que faz a mesma companhia a Andrew Steele & Company, William Moreth e Henry Wittaker, July 9, 1883 in the registry book number 353, sheet 91, Tabelião do Terceiro Ofício de Notas, Rio de Janeiro. The company União e Indústria, whose constitution was authorized by decree number 1,031 of August 7, 1852, had built a road connecting Petrópolis to Juiz de Fora which was opened in 1861. However, after the construction of a railway between Rio de Janeiro and Juiz de Fora, this company started declining and in 1883 was being liquidated. About the Companhia União e Indústria see: Bastos (1961).

40. Chaves (1884), Fala, pp. 72-73.

41. Information given by Bernardo Mascarenhas to his brothers and brother-in-law, the founders of the Cachoeira cotton mill, in a letter on April 13, 1874, reproduced in Mascarenhas (1954,62-63). A mention of this letter and Bernardo's advice in relation to the minimum number of looms which should be bought for that cotton mill was made in chapter 1.

42. Data on the number of looms for cotton mills established in the city and state of Rio de Janeiro in 1885 in: Branner, (1885,42-43).

43. About the importance of the Mata as a coffee growing zone, and specifically the importance of Juiz de Fora as a coffee growing county, see: Giroletti (1988,27-31).

44. See, for instance, Stein (1957,27). This new law on joint stock companies, law number 3,150, was regulated by decree number 8,821, December 30, 1882.

45. Suzigan (1984,115) identifies Antonio Gonçalves da Silva Mascarenhas as a coffee farmer. His conclusion is probably based on the account, by one biographer of the Mascarenhas family, Paulo Tamm, of the origins of the São Sebastião farm. According to Tamm(1960,68), once the land had been bought, Antonio Gonçalves da Silva Mascarenhas, "started growing a 'roça', bought lots of cattle, some slaves and organized a great and well cared for coffee plantation."

46. Tamm (1960,109-110).

47. Tamm (1960, 42-47,61-67).

48. According to Tamm (1960,69), São Sebastião was a self-sufficient farm."With the exception of salt, iron, and

kerosene, everything which was needed in São Sebastião in daily life was produced and made in São Sebastião."

49. See the inventory of all the properties of Antonio Gonçalves Mascarenhas in his will, reproduced in: Tamm (1960,122-123).

50. Carvalho (1916,26).

51. In his will Antonio Gonçalves Mascarenhas declared that he had lent 405 contos to his children at an interest rate of 4%. His will is reproduced in Tamm (1960, 118-121).

52. See the inventory of all properties left to his wife by Antonio Gonçalves da Silva Mascarenhas made by his son and reproduced in Tamm (1960,122-123): All the buildings in the farm of São Sebastião, including the cotton mill, 104 contos; land for cultivation, grassland and pastures, 75 contos; movable property, 24 contos; livestock and 101 slaves, 83 contos; money owed by different debtors, 137 contos.

53. Vianna (1964,369).

54. Ibid.

55. Anjos (1944,122).

56. Vianna (1964,484-485).

57. Vianna (1964,127).

58. Vianna (1964,484-485).

59. See, for instance: Giroletti (1988,92).

60. The information on the place of residence and profession of the first investors of Industrial Mineira cotton mill are in the contract made by the company União e Indústria for the sale of all its properties to Andrew Steele & Company, William Moreth and Henry Whittaker. See: Escritura de venda dos edifícios das oficinas da Companhia União e Indústria, em liquidação em Juiz de Fora, suas dependências e terrenos que faz a mesma companhia a Andrew Steele & Company, William Moreth e Henry Whittaker, July 9,1883, in the registry book 353, page 91, Tabelião do Terceiro Ofício de Notas, Rio de Janeiro.

61. Tamm (1960,271).

62. Tamm (1960,291).

63. Vaz (1990,93).

64. Ibid.

65. See: Vaz (1990,88).

66. Companhia Cedro e Cachoeira (1883), Relatório da Diretoria.

67. Capital of Mascarenhas Irmãos and Mascarenhas & Barbosa in 1882 and capital of Companhia Cedro e Cachoeira in 1883 in: Mascarenhas (1972,254).

68. The Cachoeira cotton mill was bought for 394 contos and Cedro cotton mill for 312 contos. See: Companhia Cedro e Cachoeira (1883), Relatório da Diretoria.

69. Companhia Cedro e Cachoeira (1883), Relatório da Diretoria, "Aumento das Fábricas".

70. Ibid.

71. Ibid.

72. Companhia Cedro e Cachoeira (1884), Relatório da Diretoria, "Fábrica do Cedro" and "Fábrica da Cachoeira".

73. The county of Juiz de Fora, where the Industrial Mineira cotton mill was established, was among the major producers of coffee in Minas Gerais in the nineteenth century. In 1848/1849, this county was the second largest producer of coffee in this province. Data from: Alvim S., "Projeção econômica e social da lavoura cafeeira em Minas Gerais" in Minas Gerais, Secretaria da Agricultura, Minas e o bicentenário do café no Brasil, Imprensa Oficial, 1929, pp.36-72, reproduced in Giroletti (1988,31).

74. This date is given by Machado Filho (1980,195) as the date of constitution of the Companhia Fiação e Tecidos Santa Bárbara. However, Companhia de Fiação e Tecidos Santa Bárbara was the name of a joint company constituted a few years later in order to replace the partnership Matta Machado, Moreira & Companhia.

75. Versiani (1980b,33) does not include the Santa Bárbara cotton mill in his list of the cotton mills existing in 1905. Suzigan (1984,349) includes Santa Bárbara, but does not give either the date of its foundation or any other data. Vaz (1990,25) in a list of the cotton mills established in Minas Gerais between 1872 and 1900 mentions two cotton mills with the name of Santa Bárbara: one which would have been founded in 1888 in Buenópolis with a capital of 400 contos and 78 looms, and another in Curumatahy with 75 looms for which he does not give the date of foundation. However no evidence was found on two cotton mills being established before 1900 with the name of Santa Bárbara. Identification of two cotton mills by this author was probably the result of different references given in relation to the location of the same cotton mill. The location of this cotton mill is found in: Minas Gerais, Secretaria da Agricultura (1897,187).

76. This information is given in the statutes of the company Fiação e Tecidos Santa Bárbara constituted in 1889 in order to replace the partnership Matta Machado, Moreira & Companhia in the ownership of the Santa Bárbara cotton mill. See: Companhia de Fiação e Tecidos Santa Bárbara (1889), Estatutos, chapter II, article 3.

77. João da Matta Machado is described by Machado (1928,5) as a diamond trader. According to Rabelo (1982) he also had a diamond-cutting workshop in Diamantina.

78. References to the contents of this letter are in: Companhia Santa Bárbara (1904), Relatório aos Senhores Acionistas e Credores.

79. Machado (1928, 23).

80. It was not possible to locate any documents relating to the constitution of the partnership Matta Machado, Moreira & Company. However, an examination of the documents of the constitution of the Companhia Fiação e Tecidos Santa Bárbara revealed that the shareholders of the new joint stock company were the partners of the old partnership.

81. Machado Filho (1980,215).

82. Machado Filho (1980,149).

83. Francisco Corrêa Ferreira Rabelo was married to Gabriela da Matta Machado, daughter of João da Matta Machado. See: Mourão (1980,40). Pedro José Vercianni married another daughter of João da Matta Machado, Maria Amélia da Matta Machado. See: Anjos (1944,119). And João Antonio Lopes Figueiredo was married to a third daughter, Virgínia da Matta Machado. See: "Dr. João Antonio" in O Mucury, Cidade de Theóphilo Ottoni, weekly periodical, November 9,1924, p.1.

84. A brief biography of Francisco Corrêa Ferreira Rabelo may be found in: Mourão (1980,39-41).

85. Anjos (1944,119).

86. All the available information on João Antonio Lopes Figueiredo was found in his obituary published in a weekly periodical in Theóphilo Ottoni. See: "Dr. João Antonio", in O Mucury, November 9, 1924, p.1.

87. Machado Filho (1980,194).

88. See the proceedings from the Meeting of Shareholders for the constitution of this company: Companhia União Lavrense (1886), Ata da assembléa geral dos subscritores para organização da companhia União Lavrense.

89. Companhia União Lavrense (1886), Estatutos.

90. The names and occupations of the first directors is given in the statutes of the company: Companhia União Lavrense (1886), Estatutos, chapter VIII, article 30.

91. In a General Extraordinary Meeting of Shareholders on January 26, 1891 an amendment to the statutes, changing the headquarters of the company to Rio de Janeiro, was approved. In spite of this approval the transfer did not take place until 1898. The proceedings of the General Extraordinary Meeting of Shareholders on January 26, 1891 in Lavras were reproduced in the proceedings of the General Extraordinary Meeting of Shareholders on July 5, 1898, when it was decided that the transfer of headquarters to Rio de Janeiro should take place. Companhia de Fiação e Tecidos União Lavrense (1898), Ata da Assembléa Geral Extraordinária.

92. Vasco (1905).

93. Companhia Cachoeira dos Macacos (1886), Ata da Assembléa de Constituição.

94. See: "Mineira tece seu êxito em 100 anos de muitas crises", Jornal do Brasil, Rio de Janeiro, May 29, 1986, p.18.

95. Data on capital are found in: Companhia Textil Cachoeira dos Macacos, Evolução da Cia. Textil Cachoeira dos Macacos, 1886-1967, mimeographed notes distributed by the company.

96. Ibid.

97. Ibid.

98. Ibid.

99. See for instance: " Mineira tece seu êxito em 100 anos de muitas crises", Jornal do Brasil, Rio de Janeiro, May 29, 1986, p.18.

100. See the proceedings of the Meeting of Shareholders for the constitution of the company: Companhia Cachoeira dos Macacos (1886), Ata da Assembléa de Instalação.

101. The date of constitution of this company is given in the statutes of the company Fabril Mascarenhas. See: Companhia Fabril Mascarenhas (1912), Estatutos, chapter 1, article 1. The change of the name of the company from Paulo Moreirense to Fabril Mascarenhas was approved at the General Extraordinary Meeting of Shareholders on April 25/26, 1912. See: Companhia Fabril Mascarenhas (1912), Ata da Assembléa Extraordinária.

102. Vaz (1977, 108-109) in his list of the cotton mills established in Minas Gerais between 1872 and 1900, includes the Policena Mascarenhas cotton mill in Alvinópolis which, according to him, would have been founded in 1888. Policena Mascarenhas was the name of the mother of the Mascarenhas

brothers, founders of the cotton mills of Cedro and Cachoeira. Versiani (1980b,33) refers to a Mascarenhas cotton mill founded in Alvinópolis in 1888.

103. Companhia Industrial Paulo Moreirense (1894), Ata da Assembléa Geral Ordinária and Companhia Industrial Paulo Moreirense (1895), Ata da reunião extraordinária do dia 28 de junho de 1895 convocada por alguns acionistas para se tomar conhecimento de uma proposta de transferência, arrendamento ou liquidação da companhia e continuação dos trabalhos da secção de ontem.

104. Mascarenhas (1954,82).

105. Letter from Bernardo Mascarenhas to Robert L. Keer (without date) reproduced, partially, in Mascarenhas (1954,123-124).

106. Ibid.

107. The date of inauguration of the factory is in Mascarenhas (1954,125). This date, the year and the month, is confirmed by Bernardo Mascarenhas himself in his application for the registration of his firm with the Board of Trade of Minas Gerais. See: Junta Comercial do Estado de Minas Gerais, roll 1/278, box 323601/323700.

108. Mascarenhas (1954,145).

109. Mascarenhas (1954,237).

110. Vasco (1905).

111. Such an identification was based on the lists of shareholders of the Companhia Mineira de Eletricidade at the time of its constitution, and the lists of the Companhia Cedro e Cachoeira's shareholders in 1884/1885 and in 1897. Those lists may be found respectively in: Vaz (1990,95): "Acionista da Cedro e Cachoeira em 1884 e 1885"; Giroletti (1988,89): "Companhia Mineira de Eletricidade, Relação dos primeiros acionistas" and Companhia Cedro e Cachoeira, Acionistas em 31 de Dezembro de 1897.

112. This year has been given as the year of foundation of these cotton mills by: Versiani (1980b,33), Suzigan (1984, 384) and Vaz (1990,25).

113. This information is given by Machado Filho (1980,195). According to this author this cotton mill was founded in 1877. However such date is probably a mistake, as this cotton mill is not listed by the President of the province among the cotton mills established in Minas Gerais in 1883-1884 and is not mentioned by Branner. See: Chaves (1883), Fala, Chaves (1884) Fala, and Branner (1885,42-43). Another reference about this cotton mill may be found in: Minas Gerais, Secretaria de Agricultura (1897,187). According to the information contained in this report, the cotton mill

was owned by a partnership, which was being transformed into a joint stock company.

114. Vaz (1990,102).

115. Companhia Cedro e Cachoeira (1887), Relatório da Diretoria, "Produção, venda, matéria prima."

116. Companhia Cedro e Cachoeira, Relatório da Comissão Encarregada do Estudo da Fábrica de São Vicente, April 22, 1891, partially reproduced in Vaz (1990,103).

117. Companhia Cedro e Cachoeira (1891), Relatório da Diretoria, "Fábrica de São Vicente".

118. At an Extraordinary Meeting of Shareholders on January 20,1891, an increase in the company's capital from 200 contos to 600 contos was approved. Proceedings from this meeting may be found in: Companhia Industrial de Ouro Preto (1891), Ata da Assembléa Extraordinária.

119. The Meeting of Shareholders in 1890 and 1891 took place in the office of the company's Board of Directors which was in the centre of the city of Rio de Janeiro, number 58, rua da Quitanda.

120. A reference to this Meeting of Shareholders and its decisions is found in: Companhia Industrial de Ouro Preto (1890), Ata da Assembléa Geral Extraordinária.

121. Companhia Industrial de Ouro Preto (1891), Ata da Assembléa Geral Extraordinária.

122. Wileman (1909,712).

123. The date of constitution of this company is given in: Wileman (1909,722). This is the date the company was registered at the Board of Trade of Rio de Janeiro. See: Secretaria da Junta Comercial da Capital Federal, Certificado de arquivamento da documentação da Companhia de Fiação Santa Bárbara, December 14,1889, in Diário Oficial da União, January 3,1890, p.13.

124. Companhia de Fiação e Tecidos Santa Bárbara (1889), Estatutos, chapter I, articles 1 and 2.

125. Companhia de Fiação e Tecidos Santa Bárbara (1889), Estatutos, chapter II, articles 3 and 5.

126. Machado (1928,22) refers to Santa Bárbara cotton mill as "the meritorious creation" of João da Matta Machado Filho's "great efforts".

127. . See: Machado,(1928) and Machado Filho (1980,149).

128. His biographer mentions his participation in businesses connected with the navigation of the river São Francisco. See: Machado (1928,26).

129. At an Extraordinary Meeting of Shareholders, the director of the Companhia Fiação e Tecidos União Lavrense, proposed a vote of praise for João da Matta Machado in recognition of his support for the company. See: Companhia de Fiação e Tecidos União Lavrense (1891), Ata da Assembléa Geral Extraordinária.

130. Companhia Industrial Agrícola Sul Mineira (1890), Ata da Assembléa Constitutiva. The connections between the companies Fiação e Tecidos União Lavrense and Industrial e Agrícola Sul Mineira will be seen in the next chapter.

131. Companhia de Fiação e Tecidos Santa Bárbara, Estatutos, chapter I, article 2. Later on the company's headquarters were transferred to Santa Bárbara, according to a decision taken at the General Extraordinary Meeting of Shareholders on July 15, 1892. See: Companhia de Fiação e Tecidos Santa Bárbara (1892), Ata da Assembléa Geral Extraordinária.

132. The names of the members of the Board of Directors and Fiscal Board, as well as the occupation and place of residence of the two directors are given in the statutes of the company. See: Companhia de Fiação e Tecidos Santa Bárbara (1889), Estatutos, "Disposições Transitórias".

133. See the deed of sale between the Companhia União e Indústria and Andrew Steele & Co, William Moreth and Henry Wittaker in: Cartório do 3 Ofício de Notas do Rio de Janeiro, Certidão de escritura de venda dos edifícios das oficinas da Companhia União e Indústria, em liquidação, em Juiz de Fora, suas dependências e terrenos que faz a mesma companhia a Andrew Steele & Companhia, William Moreth e Henry Wittaker, livro de notas number 353, p.91.

134. Branner (1885,42).

135. Companhia de Fiação e Tecelagem Industrial Mineira (1889), Relatório da Diretoria.

136. About the constitution of the partnership Bandeira Steele & Companhia, see: Weid and Bastos (1986,103). Out of the fifteen partners, eight were English - two of them lived in England - five were Brazilians, one was Portuguese and one was American.

137. Weid and Bastos (1986,60-63).

138. Companhia de Fiação e Tecelagem Industrial Mineira (1891), Ata da Assembléa Geral.

139. The first annual report of the company was signed by the directors: Andrew Steele, William T. Gepp and Henry Miller. See: Companhia de Fiação e Tecelagem Industrial Mineira (1889), Relatório da Diretoria.

140. His name was included among the shareholders who attended the General Meeting of Shareholders on July 5, 1890. See: Companhia de Fiação e Tecelagem Industrial Mineira (1890), Ata da Assembléa Geral.

141. Companhia de Fiação e Tecelagem Carioca (1897), Relatório da Diretoria, "Relação dos Acionistas em 31 de Dezembro de 1897".

142. Wileman (1909, 712).

143. It is interesting to observe that in a report from the provincial government in 1884 it was already mentioned that the capital invested in the Industrial Mineira cotton mill was well below the registered capital and that the real value of the factory was 600 contos, See: Chaves (1884), Fala, p.73.

144. See: Companhia de Fiação e Tecelagem Industrial Mineira (1889), Relatório da Diretoria, "Debêntures" and "Maquinismos".

145. Vasco (1905).

146. Law number 3,150, November 4, 1882.

147. See: "Modificações a que se refere o decreto number 7813 dessa data" in decree number 7813, August 31, 1880. Some of the alterations required seem to reveal a special concern to preserve the company from being controlled by a few shareholders. For this reason, article 12 of the statutes, which specified that each share would carry the right to one vote at General Meetings, received an additional amendment specifying that no shareholder could have more than ten votes.

148. The new machinery ordered in 1883, was said to be almost completely set up by the end of 1885. See: Companhia Cedro e Cachoeira (1885), Relatório da Diretoria, "Fábrica do Cedro" and "Fábrica da Cachoeira".

149. Data on quantity produced and sales for both cotton mills in: Companhia Cedro e Cachoeira (1885), Relatório da Diretoria, "Fábrica da Cachoeira" and "Fábrica do Cedro.

150. Companhia Cedro e Cachoeira (1885), Relatório da Diretoria, "Aumento possível das fábricas com pequeno dispêndio".

151. Companhia Cedro e Cachoeira (1887), Relatório da Diretoria, "Fábrica do Cedro" and "Fábrica da Cachoeira". In the case of the Cachoeira cotton mill it seems that the new machinery had started operating during the previous year.

152. The decrease in the levels of production of Cedro cotton mill in 1889 is explained in the annual report of the company as the result of a set of problems: lack of water, difficulties faced in the management of the company and

internal disorganization in the spinning section which was on many occasions unable to produce the necessary amount of yarn required by the weaving section. See: Companhia Cedro e Cachoeira (1889), in Relatório da Diretoria, "Trabalho e Produção na Fábrica do Cedro".

153. Companhia Cedro e Cachoeira (1886), Relatório da Diretoria, "Os quatro anos passados".

154. Companhia Cedro e Cachoeira (1887), in Relatório da Diretoria, "Os cinco anos passados".

155. Companhia Cedro e Cachoeira (1886), Relatório da Diretoria, "Resumo."

156. According to Vaz (1990,220) the location of these warehouses in cotton-growing areas had a double purpose: to enlarge the consumer market for the company's products and to ease the purchase of cotton.

157. Companhia Cedro e Cachoeira (1889), Relatório da Diretoria, "Conclusão".

158. Companhia Cedro e Cachoeira (1889), Relatório da Diretoria, "Conclusão".

159. Ibid.

160. Ibid.

161. Companhia Cedro e Cachoeira (1889), Relatório da Diretoria, "Conclusão".

162. Ibid.

163. Data on the evolution of the number of shareholders from 1883 to 1934 in: Vaz (1990,150).

CHAPTER 3

EXPANSION AND PERFORMANCE OF THE MINEIRO COTTON
TEXTILE INDUSTRY IN THE ENCILHAMENTO YEARS, 1890-1891.

Introduction

Encilhamento was originally the name given to a movement of intense speculation on the Brazilian stock market, which started in the last days of the Empire in the city of Rio de Janeiro, spread all over the country and started subsiding in the first half of 1891.¹ This speculative boom, seen by many contemporary writers as a disastrous and dishonest adventure, the source of innumerable misfortunes², was traditionally regarded in economic history literature as an accident on the stock market without any lasting consequences. However, recent interest in the early stages of Brazilian industry has led economic historians to study the industrial growth which occurred in the early nineties and to re-examine the possible effects of the Encilhamento on this growth.

This chapter investigates the performance and expansion of the Mineiro cotton textile industry in 1890-1891, a period which coincides with the Encilhamento. The first section presents a review of the literature on the effects of the Encilhamento on Brazilian industry. The following section investigates investment in new cotton mills in Minas Gerais in 1890, 1891. The third section examines the performance of one Mineiro textile company, the Companhia Cedro e Cachoeira, in the years 1890 and 1891. The access of Mineiro producers to additional sources of funding provided by the Encilhamento is investigated in the fourth section. The fifth section examines the changes in legislation on joint stock companies introduced in 1890 and their impact on industrial expansion. The conclusions are summarized in the

last section.

3.1 Encilhamento and Brazilian industry, a review of the literature.

The intense speculation in the stock market in the early nineties did not attract the special attention of economic historians until Stein's work on the Brazilian cotton textile industry was published in 1957.

Stein was the first scholar to challenge the appraisal of the Encilhamento made by contemporaries, and to point out some positive aspects of the fierce speculation in the stock market in the early nineties. For Stein this speculative boom revealed a change in the attitude of Brazilians to business, and may be seen as symbolizing "an attempt to break with the slow routine agricultural past epitomized by the conservative and now rejected Empire, and to substitute real American energy".³ From then on "democratic industry" started being seen as an alternative way "to modernize and revitalize Brazil".⁴

According to Stein, the origins of the speculative boom on the Brazilian stock market in the early nineties are to be found in the late days of the Empire, when government funds, allocated to agriculture, were diverted in part to commercial enterprises "many of them of a highly speculative character".⁵ Such a tendency towards speculation would have been further encouraged by laws passed in January 1890 which created banks of issue, allowed banks to engage in industrial activities, and eased the incorporation of joint stock companies. Such laws would have fostered speculation in the stock exchange, which remained very intense until March 1891 when it started subsiding.

Coincidental to such a speculative boom Stein identifies a spurt of investment in the cotton textile industry: new large cotton mills were founded and old ones were able to

increase their capital - partially financed by stock dividends. Even though a connection between industrial investment and speculation in the stock market is suggested in his analysis, the author explains this spurt of investment as the result of specific favourable conditions: monetary expansion, easier credit, and protection of domestic industry by falling exchange rates.⁶

Fishlow was the first author to mention explicitly the favourable effects of the Encilhamento on industrial investment.⁷ According to him, this speculative boom attracted additional funds to industry. In support of his argument he points to the significant increase in the capital of textile companies registered on the stock exchange of Rio de Janeiro between 1889 and 1892. Besides the Encilhamento, Fishlow mentions another stimulus to industrial investment in those years: a delayed devaluation of the exchange rate compared to the increase in domestic prices, which made imports of machines relatively cheaper.

Fishlow's arguments were refuted by Versiani and Versiani, who argued that the increase in capital of some of the textile companies of Rio de Janeiro was mostly financed by reinvestment of profits rather than by new issues of shares on the stock exchange.⁸ Besides they added that there was no indication of any cotton mill being founded in the years 1890-1892 through public subscription. However they conceded that, because of the speculative boom, established companies might have had easier access to additional funds through the issue of debentures. But even so "it is almost certain that this contribution was marginal compared to the reinvestment of profits"⁹. The authors concluded that "the Encilhamento seems to have had, in fact, a very limited impact on the increase in the productive capacity of the textile industry".¹⁰

More recent research has produced additional evidence on industrial growth in the years 1890 and 1891.

In Versiani's study of the Brazilian cotton textile industry before the First World War, 1890 and 1891 are seen as part of a longer period, 1889-1895, which he characterizes as "a time of unprecedented boom for internal producers."¹¹ and which coincides with a surge of investment. Such a boom is seen as the result of favourable prevailing conditions: "demand was booming, credit was easy and machinery exports were relatively cheap."¹² The speculative boom in the stock market is not mentioned by the author as favouring investment. Raising a point made earlier by Fishlow, he points out that the monetary expansion of the early nineties, specially in 1890, had a delayed effect on exchange rates. As domestic prices increased faster than the prices of imports, machinery became relatively cheaper and industrial investment was favoured.

Suzigan resumes the study of the effects of the Encilhamento on Brazilian industry. According to him, the evidence he produced on the evolution of industrial investment, settled the current controversy on the effects of the Encilhamento. This evidence made it clear that industrial investment increased substantially in the years of the Encilhamento, confirming the conclusions arrived at by Stein. The institutional reforms and monetary policies of the Encilhamento period, "despite the abuses which led to speculation in the exchange market" favoured investment in industry and "may indeed have facilitated industrial capital formation in a period of export boom".¹³

This brief review of literature shows that it is not easy to identify a controversy on the effects of Encilhamento on industrial investment as pointed out by Suzigan. Firstly because the term Encilhamento is not usually defined. It is used either to describe a specific episode of speculative activity in the stock market or a period of time during which this speculative movement took place. Therefore some authors who mention the effects of Encilhamento on industry are, in fact, referring to the industrial growth which occurred in a certain period of time during which the

Encilhamento - defined as a movement of great speculation in the stock market - took place. Besides, the length of the period called Encilhamento varies. For Simonsen for instance: "since 1885...they were already taking place, the prodromes of an Encilhamento, which were intensified after the abolition of slavery" and "only decreased in the first years of the decade."¹⁴ Levy's study on Encilhamento includes the years 1893 and 1894 even though the author considers that the intense movement of speculation was over by 1893.¹⁵ And for Suzigan the period of Encilhamento includes 1892, a year which is seen by Calógeras as the year when "the fantastic products from the speculative fever of the previous two years were going into liquidation".¹⁶

In fact the only controversial point in the literature is that related to the effects of the speculative boom in the stock market on industrial investment. As to the industrial expansion occurring alongside the Encilhamento, there has been a consensus. The first years of the nineties have been generally seen as years of expansion of industry. This expansion has been usually treated as the result - at least in part - of the expansionary monetary policies applied and changes in the law which eased the constitution of joint stock companies.

Data on exports of industrial machinery to Brazil, compiled by Suzigan in 1984, taken as an indicator of industrial investment, confirm this general appraisal of the early nineties as a period of industrial expansion. From an annual average of £562,440 in 1886-1889 these exports increased to £981,074 in 1890-1896, decreasing in the following period, 1897-1902, to £527,387.¹⁷ In 1891 they reached a peak which was only to be surpassed in 1907.

The investigation into the performance of the cotton textile industry in Minas Gerais in 1890 and 1891, to be made in this chapter, ascertains whether the Mineiro industry followed the general expansion which has been identified in those years.

3.2 Investment in new cotton mills in the years 1890 and 1891.

The speculative boom of the stock market certainly did not encourage investment in the cotton textile industry of Minas Gerais. No textile company was formed in 1890 and the only company incorporated while the speculative boom was still intense was the Companhia Industrial São Joanense. The other company founded in the early nineties, the Companhia de Tecidos Santanense, was in fact founded after the speculative boom was over.

Very little is known, as yet, about the constitution of the Companhia Industrial São Joanense. This company was formed in São João del Rei in the Southern zone of the state on the initiative of Antonio Moreira da Costa Rodrigues in February 1891.¹⁸ Its cotton mill was said to be driven initially by steam power.¹⁹ More evidence is available on the constitution of the other company, the Companhia de Tecidos Santanense.

The Meeting of Shareholders for the constitution of the Companhia de Tecidos Santanense was held on October 23, 1891. The documents required by law for its constitution were registered and filed at the General Registry of the judiciary district of Sete Lagoas on October 29 and its Statutes were published in the official newspaper of Minas Gerais on November 29.²⁰

The company was formed in a village, Santana do São João Acima - a few years later raised to the category of county with the name of Itaúna.²¹ Santana do São João Acima was in the Western zone, at its border with the Central zone. The construction of the cotton mill began in February 1892. The mill started operating on an experimental basis in July, 1895 and was formally inaugurated on September 7, 1895. These dates show the length of time that elapsed between the day the decision to invest was taken and the day the mill started producing. In the case of the Companhia Tecidos

Santanense it took almost four years.

Contrary to the conclusions of Stein and Suzigan concerning the size of the cotton mills founded in the Encilhamento period, the cotton mills set up by these two Mineiro companies were neither among the many mills founded in the period of Encilhamento "which later developed into Brazil's largest"²² nor any of "the largest manufacturing companies in Brazil for many years."²³ The number of looms of these two cotton mills in 1905 was below the average in the cotton mills of Minas Gerais, which was then 76.5 looms.²⁴

The Companhia de Tecidos Santanense's cotton mill, which was initially planned to have 100 looms, started operating with 32 looms - with 34 more looms already ordered - and spinning machines able to feed 66 looms.²⁵

The constitution of the Companhia de Tecidos Santanense followed the traditional pattern of textile investment in Minas Gerais. It was typically a family business. The company was incorporated by Manoel José de Souza Moreira, his sons, Manoel Gonçalves de Souza Moreira and Augusto Gonçalves de Souza Moreira, and his son-in-law, Antonio Pereira de Mattos.²⁶ The initial capital was 600 contos. The head of the family, Manoel José de Souza Moreira, was the major shareholder holding 20% of the company's shares. He, his two sons and his son-in-law held, together, 43.3% of the shares. Other relatives identified among the original shareholders held 24% of the shares.²⁷

As was common in textile companies previously founded in Minas Gerais, the Tecidos Santanense was not only an undertaking of a group of relatives but also a group of relatives living in the same village where the mill was planned to be built. Brief biographical notes on some shareholders illustrate this point and reveal the origins of the capital invested.²⁸

Manoel Jose de Souza Moreira, promoter and major shareholder

of the Companhia de Tecidos Santanense, was originally a farmer. He was married to one of the daughters of Manoel Gonçalves Cançado, a wealthy local farmer, from whom he and his wife inherited the Cachoeira farm. It was on this farm that the Companhia de Tecidos Santanense cotton mill, known by locals as Cachoeira's cotton mill, was set up.²⁹ Manoel Jose de Souza Moreira was not only a farmer. He was also a local trader, with a large merchant house established in the village of Santana do Sao Joao Acima under the name "Moreira & Filhos". His eldest son, Manoel Gonçalves de Souza Moreira, the second largest shareholder of the company, was mainly a local trader. In partnership with his father in the firm "Moreira & Filhos", he worked in their merchant house for many years, starting as a clerk and ending up as manager.³⁰ Antonio Pereira de Mattos, son of Portuguese immigrants was born in Campos, in the province of Rio de Janeiro. As a travelling salesman for large merchant houses established in Rio de Janeiro, he did business with the firm "Moreira & Filhos" before his marriage to one of Manoel Jose de Souza Moreira's daughters.³¹ The fourth promoter of the company, Augusto Gonçalves de Souza Moreira, was a doctor as well as a prominent politician. At the time of the constitution of the company he was a member of the Constituent Assembly of the state of Minas Gerais.³² The local vicar, Antonio Maximiano de Campos was also among the original shareholders of the company. It seems to have been normal practice to invite local priests to join companies. The purpose was probably to emphasize the respectability of the undertaking.

As for the origins of the capital invested and location of the factory, the establishment of the Cachoeira cotton mill in Santana do São João Acima followed the same pattern as the mills set up earlier. With the exception of Antonio Pereira de Mattos who was an outsider, capital was accumulated in different local activities such as farming and trade as well as in the shareholders' practice of different professions. The mill was set up on a farm, the Cachoeira farm, near the village of Santana do Sao Joao

Acima where most of the promoters of the undertaking and probably the majority of shareholders lived. The Cachoeira farm was chosen as the site on which to build the mill because of its waterfall which could provide the necessary energy to drive the machinery. Although Santana do São João Acima was a small village, it was close to the relatively larger towns of Pará de Minas, Bonfim and Pitangui, and on a route which connected Rio de Janeiro to Goiás and Mato Grosso. The village of Santana do São João Acima was in the Western zone at the border with the Central Zone, close to the area where most of the cotton mills previously established had been built.

From what has been said it is clear that there is no evidence that the speculative boom in the stock market had encouraged investment in new cotton mills in Minas Gerais. No companies were formed by public subscription. The evidence presented concerning the creation of the Companhia de Tecidos Santanense showed that the constitution of this company followed the traditional pattern of constitution of Mineiro textile companies.

Whether the constitution of these two Mineiro companies in 1890 and 1891 was motivated by the higher protection for the domestic producer granted by the concerted effects of higher tariffs which came into effect in the late eighties, and a devaluation of the exchange rate in the early nineties, is a matter of speculation. On the one hand - as was seen in the last chapter - the increased local competition of the late eighties had already brought the price of Mineiro cotton textiles below the local price of foreign cloth. Therefore the Mineiro producer was not in a position to benefit from increased protection. On the other hand one may assume that the greater protection of domestic production could still bring about more optimistic expectations of the future development of the undertaking.

The assumption that the decision to establish two new cotton mills in Minas Gerais taken in 1891 had been encouraged by

a delayed devaluation of the exchange rate which would have made the price of machinery relatively cheaper than domestic products cannot be verified. Such a verification would require data on the evolution of prices in Minas Gerais which are not available. Considering the features of the Mineiro economy as that of an economy with a relatively large subsistence sector and a great part of its production being sold locally, and considering also the small development of the banking system in Brazil, one may assume that the effects of monetary expansion in the period on local prices had not been so strong and immediate as those observed in other areas of the country, as for instance in the city of Rio de Janeiro. As for Mineiro cloth, for instance, its price was decreasing at the end of the previous decade - as was seen in the previous chapter. Notwithstanding such a decrease in price, satisfactory profits were still assured to the Mineiro producer by the protection of his markets from outside competition by transport and distribution costs.

The study of the performance of Companhia Cedro e Cachoeira's cotton mills in these years, presented in the next section, brings evidence on the conditions faced by the Mineiro producer of textiles in this period.

Whether the Encilhamento made it easier for existing companies to gain access to additional funds for investment, either through the issue of debentures, as suggested by Versiani and Versiani, or even through a change in the attitude of the shareholders in relation to reinvestment of profits, is also a matter to be examined.

3.3 Performance of old textile companies in Minas Gerais in 1890 and 1891: the case of the Companhia Cedro e Cachoeira's cotton mills.

A decrease in the price of Mineiro cloth in the late eighties was seen in the last chapter as the result of local

competition brought about by the increase in investment during this decade which was not followed by a corresponding increase in demand. There is no reason why one should expect a sudden improvement in the situation faced by the Mineiro companies in the late eighties to take place in 1890 and 1891. On the one hand the supply of cloth was to continue to increase as a consequence of investment made in the second half of the 1880s. On the other hand, given the characteristics of the Mineiro economy, one would not expect a significant increase in demand to take place as a result either of an improvement in the performance of the export sector, increased protection or even monetary expansion. The Mineiro economy was relatively isolated from the export sector and protected from foreign competition. Therefore it would be reasonable to assume that the local competition of the late eighties had persisted in Minas Gerais in the years 1890 and 1891.

In fact, Theóphilo Marques Ferreira, General Superintendent of the Companhia Cedro e Cachoeira, commenting upon the results for 1891, explained the low profits achieved by the company that year as the result of higher costs of production and large reductions in prices made in order to reduce the existing stocks of cloth. Higher costs of production and lower sales prices were seen by this Superintendent as "caused by the crisis which had started in 1887".³³ Such remarks suggest that the difficulties faced by the company in the late years of the eighties - described and discussed in the last chapter - persisted in 1890 and 1891.

In addition to the general conditions of supply and demand of cotton cloth in Minas Gerais which were forcing prices and profits down, a severe drought in 1890 created more difficulties for the cotton mills of Cedro and Cachoeira. Depending heavily on hydraulic power to drive their machinery, and without a water system capable of ensuring a constant flow of water, the work in the cotton mills of Cedro and Cachoeira was quite vulnerable to changes in

weather which implied long periods without rain. The solution found by the company to mitigate the consequences of frequent and severe droughts in the area was to keep an alternative source of energy, steam power. However, when, as the result of a drought, the water in the sluices sank below certain levels, the available steam engines proved insufficient to keep the mills working at full capacity. According to the General Superintendent of the company, the steam engines could only sustain the work of the weaving department.³⁴ So, the Cachoeira and Cedro cotton mills had an average loss of four hours of work a day during the four months of the dry season in 1890. The quantity of cloth produced by the Cedro cotton mill decreased by 6.2% compared to the previous year, the level of production in 1890 being the lowest since 1887. In the Cachoeira cotton mill the quantity produced remained nearly at the same level as the previous year, when, as was seen in the previous chapter, the production of cloth had been relatively small.³⁵ Notwithstanding the relatively low levels of production, proceeds from sales increased in 1890. Compared to 1889, proceeds from sales in 1890 were 26% higher at Cachoeira's and 56% higher at Cedro's.³⁶

Data on quantity produced and sold by the Cachoeira cotton mill in 1884-1891 are displayed in Table 3.1. They show that in 1886 and 1887 the increase in the amount of cloth produced was followed by increased sales. The increase in stocks was very small in 1886 and in 1887 stocks were reduced. However the increase in production in 1888 and 1889 was not followed by a similar increase in sales and the stocks of cloth increased significantly. In 1890 the situation was reversed. In spite of a small increase in the quantity produced, the amount sold increased significantly and stocks were greatly reduced.

Such an increase in sales may reveal a temporary improvement in local demand for Cachoeira's products. However part of such an increase was the result of the company's deliberate

Table 3.1

Cachoeira cotton mill: 1885-1890.
Annual data on production, sales, and changes in stocks.

Years	production		sales		annual variations in stocks in metres
	in	index	in	index	
	metres	numbers 1886=100	metres	numbers 1886=100	
1885	693,955	60	755,464	68	(-) 61,509
1886	1,149,017	100	1,113,080	100	(+) 35,937
1887	1,378,855	120	1,378,891	124	(-) 36
1888	1,511,168	132	1,284,597	115	(+) 226,571
1889	1,465,783	128	1,363,562	123	(+) 102,221
1890	1,480,940	129	1,741,869	156	(-) 260,929
1891	1,635,080	142	na	-	-

na = not available.

Source: Companhia Cedro e Cachoeira (1884-1891), Relatórios da Diretoria. Data on quantity sold obtained by dividing annual proceeds from sales by the estimated average annual prices displayed in table 3.2.

policy of expanding sales by reducing prices and extending its markets to new areas. As stated by the company's Superintendent in his report for the year 1890: "the advertising, carried out with the purpose of making the company's products known in wider markets, cost no small pecuniary sacrifices, but presented satisfactory results."³⁷

In fact, the annual average price estimated for the period 1885-1890, and displayed in table 3.2, shows that this price, after remaining relatively stable in the years 1885-1887, was significantly reduced in 1889 and 1890. Data in table 3.2 also show that labour costs by metre also decreased continuously from 1885 to 1890. In 1891 however they increased. Taking into account that nominal wages are usually irreducible, the decrease in labour costs by metre shown in table 3.2 resulted either from increased productivity per worker and/or an increase in the employment of cheaper labour, as for instance, that of women and children. The increase in labour costs per metre in 1891 was

Table 3.2

Sales, prices and labour costs.
Cachoeira cotton mill: 1885-1890.

Years	Proceeds from sales		Prices per metre		Labour costs per metre	
	in 1,000 contos		in réis	index numbers 1885=100	in réis	index numbers 1886=100
1885	169	68	234	104	na	-
1886	249	100	224	100	36	100
1887	292	117	212	95	34	95
1888	277	111	216	99	32	89
1889	252	101	185	83	31	86
1890	319	128	183	82	30	83
1891	329	132	na	-	35	97

na: not available

Sources: (1) Price per metre calculated by dividing the value of the production of each year by the quantity produced in that year. The value of the production in each year was obtained by adjusting the value of sales of each year by annual changes in stocks.

2) Labour costs per metre obtained by dividing the annual cost of labour by the number of metres of cloth produced in the year. Data on labour costs include payments to the managing staff. All data from: Companhia Cedro e Cachoeira (1884-1891), Relatórios da Diretoria.

mostly the result of a general rise of 20% in wages which was decided "considering the high price of basic food nowadays."³⁸

Profits achieved in 1890 and 1891 were lower than those realized in 1886 and 1887 and the dividend distributed the lowest since 1886.³⁹ Notwithstanding the relatively low profits the Companhia Cedro e Cachoeira was able to make a significant investment, the purchase of the São Vicente cotton mill.⁴⁰ The acquisition of this mill was financed by an increase of 400 contos in the company's capital. Such an increase in capital had been financed partially by dividends and partially by the subscription of new shares. The São Vicente cotton mill was bought for 180 contos and in this same year 64 looms were ordered to add to the existing 40.

Such an expansion of the mill was decided "in spite of the enormous burden which will come (from this order) because of the exchange rate".⁴¹

3.4 New evidence for an old argument: Encilhamento and increasing funds for textile companies already in operation.

In spite of what was said in relation to the expansion of industrial investment through the establishment of new cotton mills, there is some evidence to suggest that the cotton textile industry of Minas Gerais may not have been completely immune to the effects of the Encilhamento. In fact it is possible that the general movement of speculation in the stock market had raised the expectations of the Mineiro shareholder as to the future value of his shares. Such optimistic expectations may have made it easier for some companies to raise additional finance from their shareholders. The evidence to be presented in this section corroborates the point raised by Versiani and Versiani⁴² that credit expansion, as well as the intense speculation in the stock market, may have favoured the acquisition of additional resources by established companies in the early nineties.

In fact there is evidence that two companies, Cachoeira dos Macacos and Cedro e Cachoeira raised additional funds in 1890 and 1891 through reinvestment of profits and the issue of new shares. Two other companies, Industrial Ouro Preto and União Lavrense, raised loans through the issue of debentures in the same period. Besides, there is evidence that the Company União Lavrense was also involved in a speculative venture which does not seem to have been unusual in the Encilhamento.

The Companhia Cachoeira dos Macacos, which had been formed in 1886, increased its capital from 150 contos to 450 contos on March 15, 1890. This increase in capital was financed in part by dividends not distributed and in part by the sale of

new shares.⁴³ The Companhia Cedro e Cachoeira's capital was increased from 1,000 to 1,400 contos in 1890. As in the Cachoeira dos Macacos case, such an increase was financed by dividends not distributed and by the sale of new shares. According to the Board of Directors, the purpose of such an increase was to provide the company with funds for payment of a loan by debentures which had been raised in 1889, and "to make the company able to pay dividends twice a year and to enlarge its transactions."⁴⁴

In the case of the Companhia Cedro e Cachoeira, there is some evidence to suggest that there was an attempt at opening up the company's capital to public subscription in 1890. A proposal for an increase of capital presented to the General Meeting of Shareholders on October 20, 1890 included the following provision: "The company will make contacts with one bank in Rio de Janeiro where payment of dividends will be made so as to make its shares known. Once this has been done the company will establish an office in this bank."⁴⁵ The establishment of a company office in the city of Rio de Janeiro "for transfer of the company's shares with the purpose of opening to them larger room in the commerce"⁴⁶ was approved by the shareholders.

It is not known whether the company established an office in Rio de Janeiro. However it is known that the company remained strictly a family undertaking of the Mascarenhas family even though the issue of the new shares in 1890 had increased the number of shareholders from 49 to 64. According to Vaz there is no evidence of shares being sold in Rio de Janeiro but some local farmers and traders who did not belong to the family joined the company then.⁴⁷

The Industrial de Ouro Preto was another company able to attract new financial resources in the Encilhamento. On September 3, 1890, the directors of the company informed the shareholders that, according to the authorization given by the Extraordinary Meeting of Shareholders on August, 7, the company had raised a loan with the bank Industrial e

Mercantil of Rio de Janeiro through the issue of 200 contos in debentures, under the following conditions: type 90%, annual interest, 7 1/2%, and 1% annual amortization.⁴⁸ The purpose of such loan was to acquire funds for finishing the building of the company's cotton mill in the city of Ouro Preto. A few months later, the company announced that a contract for providing electric light to the city of Ouro Preto, worth 160 contos, had been signed with the government, and proposed an increase in the capital, from 200 contos to 600 contos, through the issue of 2,000 shares to be subscribed by the shareholders. Each shareholder would have the right to subscribe two new shares for each share he had, receiving as bonus, a credit of 40% of their value. Out of the additional funds provided, 200 contos would be applied to the payment of the loan in debentures so that payment of interest could be converted into payment of dividends.⁴⁹

The Companhia Fiação e Tecidos União Lavrense shows the only known example of a company with a cotton mill operating in Minas Gerais which was involved in a dubious venture in the stock market, a venture which seems to have been common in the Encilhamento.

An Extraordinary Meeting of Shareholders on August 7, 1890 approved a loan of 160 contos which had already been raised by the company's Board of Directors through an issue of debentures on May 20, 1890⁵⁰. On January 26, 1891 this Board proposed to the shareholders an increase of the company's capital from 200 contos to 400 contos.⁵¹ The terms of such a proposal suggest that the shareholders were not willing to invest any more of their personal savings in the company. In fact, the proposal was that each of the old shares would be divided into two new shares. In this way each shareholder would have to pay the company an amount corresponding to 50% of the value of all his shares. Therefore the subscription of the additional capital became compulsory. The proposal was approved in spite of a strong reaction from a few shareholders who considered it "outrageous and contrary to

the citizen's rights of ownership, decreed by law".⁵² In spite of the approval given by shareholders to such a proposal, the capital was not raised to 400 contos.⁵³ At the beginning of the next year the company was in such a bad financial situation that the shareholders decided that the company should go into liquidation. A few months later, they reviewed their decision and elected as new directors, Juvenal Damasceno and Duarte da Costa Negrao who "with their own funds and funds raised with friends, were able to give some life to the company, which started operating regularly".⁵⁴ However, on July 26, 1891, these directors proposed to the Board of Directors of the Companhia Industrial e Agrícola Sul-Mineira the surrender of all the company's assets.⁵⁵ In return, the Companhia Industrial e Agrícola Sul-Mineira would take over all the debts of the Companhia Fiação e Tecidos União Lavrense concerning the issue of 160 contos in debentures and would pay 250 contos in cash and 200 contos in shares. An Extraordinary Meeting of Shareholders of the Companhia Industrial e Agrícola Sul-Mineira which took place on the same day the proposal was presented, authorized the company to make the acquisition as proposed.⁵⁶ In August 1891, the Companhia de Fiação e Tecidos União Lavrense's cotton mill was put into operation under the management and ownership of the Companhia Industrial e Agrícola Sul-Mineira. One year later, the temporary President of the company, João Baptista Ferreira e Costa admitted that the cotton mill was the company's only source of income and urged the shareholders, who were in arrears, to make the payments of the capital they had subscribed so that the company could settle its debts with the Companhia Fiação e Tecidos União Lavrense as agreed.⁵⁷ However the company was unable to meet its obligations, and on September 22 in this same year, the shareholders of the Companhia Fiação e Tecidos União Lavrense decided to repossess the cotton mill.⁵⁸

Such transactions between two companies could be seen as an unsuccessful attempt by one company to take over another company's business. However, as shown below, they seem to

have been an artifice for obtaining from the stock market - under false pretences and taking advantages of the prevailing speculative boom - funds for a company facing serious financial difficulties.

The company Industrial e Agrícola Sul-Mineira, incorporated by José Antunes Rodrigues de Oliveira Catramby, was constituted in the city of Rio de Janeiro on December 24, 1890, with a capital of 1,000 contos.⁵⁹ According to its statutes, the purposes of the company were to explore concessions granted by the Federal Government for the establishment of a sugar and alcohol factory in the city of Lavras - with a 6% interest guarantee over the capital of 750 contos, for 25 years - and for promoting the settlement of immigrants in two different places in the state of Minas Gerais. Another purpose of the company defined in its statutes was to establish a pottery. These concessions were granted to Juvenal Damasceno and to Augusto Cesar who had, as their partner, Francisco Martins de Andrade.⁶⁰ According to the statutes, the company would not only compensate those three for the value of their contracts but would also give 2% of the net profits to Juvenal Damasceno and Augusto Cesar. The amount to be paid as compensation would be decided by mutual agreement between the company and the concessionaires. As to the payment to be made to Francisco Martins de Andrade, "for the expenses he incurred in obtaining the contract." it was decided it would be done in a lump sum of 5 contos.⁶¹ The first Board of Directors, as determined by the statutes, was constituted by: João da Matta Machado, José Antunes Rodrigues de Oliveira Catramby e Francisco Martins de Andrade.

All those mentioned above either as incorporators, concessionaires or directors of the company Industrial e Agrícola Sul-Mineira, at the time of its constitution - with the exception of Francisco Martins de Andrade - were then shareholders of the company Fiação e Tecidos União Lavrense. Moreover, at the time when the Board of Directors of the company Fiação e Tecidos União Lavrense presented to

the Company Industrial e Agrícola Sul-Mineira its proposal of surrendering all the company's assets, one of its directors was Juvenal Damasceno. Juvenal Damasceno was not only one of the concessionaires mentioned above, but was also a member of the Companhia Agrícola e Industrial Sul-Mineira's Fiscal Board.⁶²

Such account of the transactions between the companies União Lavrense and Industrial e Agrícola Sul-Mineira suggest that the constitution of the latter was an excuse for obtaining on the stock market of Rio de Janeiro, additional funds for solving the financial problems of an established company.

From what has been said, it is clear the cotton textile industry of Minas Gerais did not go through the years of Encilhamento absolutely unaffected by the speculative boom in the stock market. However it is interesting to observe that the only examples of companies resorting to the issue of debentures in the period of Encilhamento were companies which were financed at least in part by investors living in the city of Rio de Janeiro.⁶³

3.5 Legislation on joint stock companies and industrial expansion in the nineties.

The argument that a new law passed in January 1890 had eased the constitution of joint stock companies and contributed to higher speculation in the stock exchange and to increasing industrial investment has had widespread acceptance. Stein was one of the first authors to mention the new law as one of the causes of the Encilhamento. This legislation, according to him, would have eased restrictions on the chartering of corporations, giving, in consequence, further encouragement to a movement of speculation which was already under way.⁶⁴ Such an opinion has been largely accepted by economic historians. Most of the studies of the period mention these changes in the legislation as a factor

in stimulating industrial investment and speculation in the stock market.⁶⁵ However, a study of the legislation on joint stock companies passed in the first years of the Republic shows that there is no reason why one should ascribe such effect to the new legislation of 1890.

Decree number 164, January 17, 1890, the first decree on joint stock companies passed in the Republic, which was said to reform law number 3150, November 4, 1882, did not introduce any substantial modification in the process of incorporating a joint stock company. In fact, this decree has been seen by some legal experts as a copy of law number 8,821, November 4, 1882 "with insignificant alterations and a worse style."⁶⁶

In fact, a comparative study of law number 3,150 November 4, 1882 and decree number 164, January 17, 1890 showed that out of the 43 articles of the new decree, only 5 implied alterations in the legislation in force. These alterations were minor ones and did not involve any changes which could have made easier the process of constitution of a joint stock company. All the other articles were either an exact copy of the articles in the previous law, or a copy in a slightly different style. Also, the other decrees on joint stock companies, passed in 1890 and 1891, did not introduce any substantial alterations to the requirements for the constitution of stock companies. And the decree number 1894, passed in July, 1891 was in force until 1940, when it was annulled by decree-law number 2627, September 26, 1940.

Also, the conclusion found in the literature on Encilhamento that the prevailing economic conditions would have induced textile firms to transform themselves into joint stock companies in order to get "a greater mobility"⁶⁷ for their bonds does not apply to the textile industry of Minas Gerais. Such transformations were common after the law on joint stock companies had been passed in 1882 and also happened after 1892. However there is no evidence of any such transformations taking place in the years 1890 and

1891.

3.6. Conclusions.

a) The performance of the Mineiro cotton textile industry in 1890 and 1891 did not follow the general pattern of expansion of Brazilian industry - or of the cotton textile industry in particular - as described in the literature. Neither the speculative boom in the stock market nor the general favourable conditions for industrial investment identified in the period, encouraged a significant expansion of the Mineiro industry.

b) Such a different pattern reveals the special features of the Mineiro economy in the period. As the Mineiro industry was mostly concentrated in non export areas and supplied markets in the interior of the state, the demand for its products was not immediately and significantly affected either by an improvement in the performance of the export sector or by changes in the relative prices of imported textiles.

c) The evidence presented for the cotton mills of Cedro and Cachoeira suggests that prices of Mineiro cloth decreased in 1890 and 1891, while labour costs increased in 1891. Such a decrease in prices was the result of an excessive increase in supply in relation to local demand. Under such circumstances the argument that a devaluation of the exchange rate delayed in relation to an increase in domestic prices would have favoured industrial investment, would have to be reviewed in the case of Minas Gerais.

d) No conversion of partnerships into joint stock companies took place in this period stimulated by changes in legislation. Concerning this point it was shown that, contrary to what has been generally argued, the new law on joint stock companies passed in 1890 did not introduce any changes which eased the formation of such companies.

e) The speculative boom of the period made it easier for some companies already established to raise additional funds, corroborating a point raised in the debate on the effects of the Encilhamento on industrial investment.

1. According to Levy (1980,191), the word Encilhamento, as a name for the movement of speculation in the stock market of Rio de Janeiro, was first used in: Jornal do Comércio, Retrospecto Comercial, Rio de Janeiro, 1890. The best source of information on the beginnings and on the development of this speculative boom in the early nineties is the daily issue of the Jornal do Comércio during the period. A description of the crash in the stock market may be found in: Levy (1980,216-218).

2. The knavish, grotesque and adventurous aspects of this intense speculation in the stock market are revealed by novels of the period. See, for instance Visconde de Taunay (1971). His novel was originally published in loose sheets by a newspaper of Rio de Janeiro, Gazeta de Notícias.

3. Stein (1957,87-88).

4. Ibid.

5. Stein (1957,86).

6. Stein (1957,88).

7. Fishlow (1972).

8. Versiani and Versiani (1975).

9. Versiani and Versiani (1975,56).

10. Versiani and Versiani (1975,58).

11. Versiani (1980a,318).

12. Ibid.

13. Suzigan (1984,39).

14. Simonsen (1973,16).

15. Levy (1980,218).

16. Calógeras (1960,240).

17. Averages computed from: Suzigan (1984,323-325).

18. A brief reference to the constitution of this company is found in Viegas (1942). The statutes of this company were published in Minas Gerais, February 25,1891.

19. Senna (1907,442).

20. These references are found in: Dornas Filho (1951,243-244,249).

21. Santana do São João Acima was a district of the county of Pará de Minas. By law number 319, September 16,1901, it became an independent county.

22. Stein (1957,88).
23. Suzigan (1984,38).
24. Average calculated from data in: Vasco (1905).
25. This information is found in an article published in a local newspaper Centro de Minas, on September 15,1895, reproduced in Dornas Filho (1951,145-150).
26. The identification of ties of kinship among the promoters and original shareholders is based on short biographies presented in: Souza (1986).
27. A list with the names of the shareholders who attended the meeting for constitution of the company, and the capital subscribed by each of them may be found in: Souza (1986,124-126).
28. These notes are based in Souza (1986).
29. Souza (1986,102,196)
30. About the participation of the family Souza Moreira in local trade through the establishment of a merchant house, see: Souza (1986,95,196).
31. A brief biography of Antonio Pereira de Mattos is presented in: Souza (1986, 171-173).
32. See: Souza (1986, 101-102).
33. Companhia Cedro e Cachoeira (1891), in Relatório da Diretoria, "Considerações Gerais."
34. Ibid.
35. Companhia Cedro e Cachoeira (1890), Relatório da Diretoria, "Fábrica do Cedro" and "Fábrica da Cachoeira."
36. Rates of increase calculated from data on proceeds from sales in: Companhia Cedro e Cachoeira (1889) Relatório da Diretoria, "Fábrica do Cedro" and "Fábrica da Cachoeira", Companhia Cedro e Cachoeira (1890), Relatório da Diretoria, "Fábrica do Cedro" and "Fábrica da Cachoeira". However it must be pointed out that data on sales provided by the company for each mill do not reflect exactly the value of sales during the year. The figure for Cachoeira's sales, for instance, included the cloth sent to the company's warehouses in Juazeiro and Araçuaí as well as the cloth sent to be sold in Rio de Janeiro.
37. Companhia Cedro e Cachoeira (1890), Relatório da Diretoria, "Considerações Gerais".
38. Companhia Cedro e Cachoeira (1891), Relatório da Diretoria, "Considerações Gerais".

39. Mascarenhas (1972,254-255).

40. About the purchase of this cotton mill see: Vaz (1990,102-109).

41. Companhia Cedro e Cachoeira (1891), Relatório da Diretoria, "Fábrica de São Vicente".

42. Versiani and Versiani (1975,56).

43. Companhia Cachoeira dos Macacos, Evolução da Companhia Cachoeira dos Macacos, 1886-1967, (mimeographed notes distributed by the company)

44. Companhia Cedro e Cachoeira (1890), Relatório da Diretoria, "Considerações Gerais".

45. This provision is reproduced in: Vaz (1990,270).

46. Companhia Cedro e Cachoeira (1890), Relatório da Diretoria, "Considerações Gerais."

47. Vaz (1990,270-271).

48. Information on this issue of debentures are found in a proposal presented by the Companhia Industrial de Ouro Preto to an Extraordinary Meeting of Shareholders on September 3,1890. This proposal is reproduced in the proceedings of that meeting. See: Companhia Industrial Ouro Preto (1890), Acta da Assembléa Geral Extraordinária.

49. Companhia Industrial de Ouro Preto (1891), Acta da Assembléa Geral Extraordinária.

50. The date of this issue of debentures is given in: Companhia Fiação e Tecidos União Lavrense (1897), Relatório da Diretoria. The amount and value of the debentures issued are given in: Companhia de Fiação e Tecidos União Lavrense (1892), Relatório da Diretoria, "Debêntures".

51. Companhia de Fiação e Tecidos União Lavrense (1891), Ata da Assembléa Geral.

52. Ibid.

53. In the annual accounts of the company for 1892, the capital was shown to be still 200 contos. See: Companhia de Fiação e Tecidos União Lavrense (1892), Balanço em 31 de Dezembro.

54. Companhia de Fiação e Tecidos União Lavrense (1892), Relatório da Diretoria. In this report the temporary President of the company, João Baptista Ferreira Costa presents a very brief summary of the problems faced by the company in 1891 and in 1892.

55. The proposal made by the Board of Directors of the company Fiação e Tecidos União Lavrense to the Board of Directors of the company Industrial e Agrícola Sul-Mineira in: Companhia Fiação e Tecidos União Lavrense (1891), Ata da Assembléa Geral Extraordinária.

56. A reference to the authorization given by the Extraordinary Meeting of Shareholders on June 26, 1891 is found in: Companhia Industrial e Agrícola Sul-Mineira (1891), Relatório da Diretoria, "Bens móveis e imóveis".

57. Companhia Industrial Agrícola Sul-Mineira (1891), Relatório da Diretoria, "Fábrica de Tecidos em Lavras."

58. A reference to the decision of the Extraordinary Meeting of Shareholders on September 22, 1892 is found in: Companhia de Fiação e Tecidos União Lavrense (1892), Relatório da Diretoria.

59. Companhia Industrial e Agrícola Sul-Mineira (1890), Ata da Assembléa Geral Constitutiva.

60. Companhia Industrial e Agrícola Sul-Mineira (1890), Estatutos.

61. Amendment to the Statutes, proposed and approved in the Meeting for the Constitution of the company: Companhia Industrial e Agrícola Sul-Mineira (1890), Ata da Assembléa Geral Constitutiva.

62. The members of the Fiscal Board were nominated in the Statutes, chapter IV, article 20. See: Companhia Industrial e Agrícola Sul-Mineira (1890), Estatutos.

63. About the participation of investors living in the city of Rio de Janeiro in the constitution of these two companies, see Chapter 2.

64. Stein (1957, 86).

65. According to Franco (1983, 120), law number 164, January 17, 1890, establishing that a joint stock company could be legally constituted having at least 10% of its capital paid, meant that "in a moment of euphoria in the stock exchange it would not be difficult to constitute a new company." And for Suzigan (1984, 124) "a more liberal legislation on the formation of joint stock companies" associated to expansionary monetary policies "paved the way for a speculative boom." Mello (1987, 100-101) mentions the change in the law on joint stock companies as one of the devices which helped "the transfer of coffee capital to industrial capital".

66. Russell (1923, 309).

67. Levy (1980, 232).

CHAPTER 4

EXPANSION AND PERFORMANCE OF THE MINEIRO COTTON TEXTILE
INDUSTRY IN THE POST ENCILHAMENTO PERIOD, 1892-1895.

Introduction.

If the boom of speculation in the stock market of Rio de Janeiro attracted the attention of economic historians to the industrial growth in the early nineties, no other event has produced a corresponding interest in a study of the industry's performance in the immediate post Encilhamento years. On the contrary, the emphasis given in recent literature on the effects of the Encilhamento on the industry has hampered, rather than helped, a better understanding of the industrial development which took place in Brazil during the first half of the decade. Investigations into this period have tended to focus on the effects of the Encilhamento on a few companies and on their performance thereafter. So, the great speculation in the stock market, instead of being taken as an additional variable to explain investment in a limited number of cotton mills in a period of less than two years, has become, in certain studies, the only variable to explain the expansion of the whole industry during the first half of the nineties.

This chapter investigates the performance and development of the Mineiro cotton textile industry in 1892-1895. It is divided into five sections. In the first section, data on exports of industrial machinery to Brazil in the years 1892-1895, compared to other periods, are presented in order to illustrate the general development of industrial investment in the country during that period. The presentation of this information is followed by a brief review of the literature on the industrial development in those years. The second section examines the investment in the cotton textile

industry of Minas Gerais. It investigates the joint stock companies which had been incorporated in the period 1892-1895 in order to establish new cotton mills in the state or to enlarge old ones. All the available information on the establishment of the cotton mill planned by each of those companies is also presented. As most of the companies formed in the period had the purpose of establishing weaving mills - rather than integrated cotton mills - a brief study of the establishment of weaving mills in Minas Gerais is included in this section. The following section discusses the possible connection between the decision to transfer the state's capital to Belo Horizonte and the apparent tendency of investment in the cotton textile industry of Minas Gerais to be concentrated in the central areas of the state. The fourth section investigates the performance of some cotton mills in Minas Gerais during the period 1892-1895. The performance of each cotton mill is described and the explanation for such a performance, as provided by the entrepreneurs, is reproduced and discussed. The main conclusions of the chapter are presented in the fifth and last section.

4.1 Data on exports of industrial machinery to Brazil as indicators of investment and a brief review of the literature.

Data on exports of industrial machinery to Brazil mark out the first half of the nineties as a period distinct from the eighties as far as industrial growth is concerned.¹ If the annual export of industrial machinery to Brazil is taken as an indicator of the evolution of industrial investment, it is clear that the period 1890-1895 was a period of significant expansion of such investment. The annual average of these exports to Brazil was, from 1890-1895, 118% higher than the average in the eighties. After the exceptionally high rate of increase in 1890 and 1891, such exports remained at relatively high and stable levels until 1896.² It was only from 1896 onward that those exports started

decreasing significantly. Even in the period 1892-1895, when the Encilhamento was over, exports of industrial machinery to Brazil remained at levels which had only been surpassed in 1891 and which were not surpassed again until 1905. So, Brazilian industry was still an attractive field of investment in the immediate post Encilhamento period. In fact, the years 1892-1895 have usually been treated in literature as a period favourable to industrial growth in Brazil; even though the industrial growth which in fact took place in this period has not yet been properly investigated.

The industrial evolution in Brazil in the years 1892-1895 has been seen by some authors, including Simonsen³ and Suzigan,⁴ as part of a longer period of increasing industrial investment starting in the early eighties and lasting until 1895. In Simonsen and Suzigan the importance of the Encilhamento in the industrial expansion which took place in the first years of the nineties is emphasized, but the high level of investment which was sustained in the years which followed the Encilhamento is not examined. It is in the studies of the textile industry that more precise references to the industrial evolution, which took place in the immediate post Encilhamento, are to be found.

For Stein, who was the first author to challenge the traditional appraisal of the Encilhamento and to emphasize its benefits on industry, the nineties is a very important period in the expansion of the cotton textile industry in Brazil. The importance of the decade was not only to be felt in the economic policies introduced by the Republican government which "accelerated the process of capital formation."⁵ It also consisted in the creation of a spirit of association among industrialists in the immediate post Encilhamento which enabled them, as a group, to defend the interests of the industry.⁶ Such a spirit of association, which had originated in the crisis faced by the cotton textile industry in 1892, "enabled the cotton industry in the nineties to obtain the protection judged necessary to assure its future development"⁷

The references by Stein to a crisis in the cotton textile industry in 1892 are based on information about a campaign led by a group of industrialists - mainly from the textile industry of Rio de Janeiro - during this year in order to obtain government assistance for their companies. The origins of this crisis are associated with a sharp devaluation of the exchange rate and a restriction of credit which increased the costs of investments planned in the Encilhamento's speculative boom, making it hard for some companies to meet their obligations in 1892.⁸

In Fishlow, as in Stein, the importance of the development which took place in the cotton textile industry during the nineties is emphasized. However the reasons underlying such an emphasis are different. For Fishlow it was in this decade, and in the industry of cotton textiles, that the process of industrialization by import substitution started.⁹ According to him, it is possible to distinguish three sub-periods in the development of the cotton textile industry in the nineties. The expansion of industrial investment in the first years was mainly stimulated by a lagged devaluation of the exchange rate in relation to the increase in internal prices. A relatively cheaper foreign currency favoured the import of industrial machinery as well as foreign cloth. By 1893 the devaluation of the exchange rate intensified and favoured industrial growth through import substitution. However, it was in the years 1895-1899 that industrialization by substitution of imports showed a "significant upward impulse"¹⁰. So, in Fishlow's analysis, the period 1892-1895 is a period of transition from years specially favourable to industrial investment in the cotton textile industry to years when the growth of domestic production, and not investment, was favoured.

According to Versiani, the years 1892-1895 are part of a larger period, 1889-1895, when a spurt of investment took place in the cotton textile industry. Within this period, the years 1892-1894 are seen as specially prosperous for the industry; as is shown by the dividends paid by some

companies.¹¹ And in Suzigan's study of the cotton textile industry, the years 1892-1895 are also part of a longer period 1885-1895, when "the greatest advance in the development of Brazilian cotton-goods occurred."¹²

From what has been said, it is clear that there is no consensus among economic historians on the nature of industrial growth which took place in the cotton textile industry in the years 1892-1895, even though there is general acceptance that those years were favourable to industrial growth. However, with the exception of data on exports of industrial machinery to Brazil, very little evidence has been presented to support any definite conclusion about the general performance of the cotton textile industry in Brazil in the years 1892-1895.

The investigation carried out in this chapter produces evidence on the expansion of industrial investment in the cotton textile industry of Minas Gerais in the years 1892-1895.

4.2 The constitution of joint stock textile companies in 1892-1895 and investment in the cotton textile industry of Minas Gerais.

The post Encilhamento period seems to have looked a more attractive time for investment in the Mineiro textile industry than the previous one. In fact, five joint stock companies formed during the period established new cotton mills in Minas Gerais and a sixth bought an old mill in order to enlarge it. However, if the dates of creation of these companies are considered, it becomes clear that it was in one specific year, 1893, that most decisions to invest were taken. In fact, only one company was constituted in 1892 and the textile companies formed in 1894 were not successful in establishing new cotton mills. Besides, there is no evidence of any textile company being incorporated in 1895. If a significant number of joint stock companies was

organized in 1893, one might expect investment expenditure to be relatively high during the succeeding years until the new cotton mills were ready to start working. However, in spite of the high level of investment in the following years - which was partially reflected in the data of exports of industrial machinery to Brazil - it is quite clear that in 1894 and 1895 the cotton textile industry in Minas Gerais was not attracting new investment.

The following account of the creation of joint stock companies in 1892-1895 continues the chronological description and analysis of the establishment of the cotton textile industry in Minas Gerais; an account which started in the previous chapters and will continue in the following ones.

4.2.1 The constitution of the company Industrial Itabira do Campo in 1892.

The Companhia Industrial Itabira do Campo was the only textile company incorporated in Minas Gerais in 1892. It was constituted on November 20, 1892 in Itabira do Campo with a capital of 360 contos¹³. An account of the early years of this company, provided in its annual reports, illustrates, once more, the length of time required by one company to establish its factory as well as the sort of problems it faced during this initial period.

In the year following the constitution of the company the land where the mill was to be built was bought, the buildings were constructed and the machinery was ordered.¹⁴ Meanwhile the Board of Directors decided to establish a weaving mill instead of an integrated cotton mill because:

"...after many studies this Board considers that it would be more advantageous for the company to transform the factory - which was planned to be a spinning and weaving mill - into a weaving mill, and to import all the yarn instead of producing it and dyeing it here...If there is still time to alter the order already made, and if 100 to 150

looms and some accessory machines are installed only for weaving, it is believed that the company will have more profits in less time."¹⁵

The General Meeting of Shareholders of the Companhia Industrial Itabira do Campo approved the Board of Directors' proposal in February 1894.¹⁶ However such a change of plan was not carried out because the manufacturer of the machinery did not agree with an alteration to the previous order. According to the Board of Directors' observation in April 1895, this decision by the manufacturer benefitted the company "as Congress has just levied a very heavy tax on imports of yarn"¹⁷.

The machinery, ordered in 1893, arrived in Rio de Janeiro in August, 1894. By April 1895, part of the machinery still remained in the custom-house at Rio de Janeiro waiting to be dispatched to Itabira do Campo by the Estrada de Ferro Central do Brasil railway. The Board of Directors blamed this railway for the delay in setting up the cotton mill.¹⁸ This board also mentioned the bad conditions in which the transportation of machinery and other equipment was carried out. As pointed out in the company's annual report for 1894: "the machinery arrived in such a bad state due to the rain that we have had to employ workers not only to clean it but also to fix many broken pieces."¹⁹ And, in 1896, reference is made to the improvised repairs which had to be carried out on the piping system because four pipes were lost at sea.²⁰

The adverse effects of a devaluation of the exchange rate on the initial investment were also mentioned in the company's report. In fact, the external value of the mil-réis, in pounds sterling, decreased by 28% from the month the company was constituted to the time the machines arrived in Rio de Janeiro.²¹ Such a devaluation increased the costs of the machinery in local currency. According to the Board of Directors, these costs, including the payment to the machinery manufacturers, freight, warehouse charges and taxes, amounted to more than 200 contos and therefore

accounted for more than half of the company's initial capital.²² According to the company's report, the initial capital of 360 contos was enough to establish the cotton mill but it did not leave sufficient funds to start operating it regularly. By 1895 the company's capital had been used up and a loan of 30 contos had to be raised among the company's directors and members of the Fiscal Board.²³

The figures above may give an idea of the share of the cost of machinery imports in the total cost of establishing a cotton mill in Minas Gerais in the early nineties. In fact, out of a total of 390 contos necessary to establish the Itabira mill, 200 contos, corresponding to 51.3% of investment costs, were spent on the import of machines. If the cost of transporting these machines from Rio de Janeiro to Itabira do Campo and the costs of assembling them in the factory are added to its price in Rio, this percentage would be still higher. However part of these expenses was paid in mil-réis. Therefore, one has to bear in mind that a large part of the finance needed to establish a cotton mill was not directly and immediately affected by changes in the exchange rate.

Even though the Companhia Industrial Itabira do Campo's cotton mill started working in January 1896, it was only in the last three months of the year that it was able to be fully operational.²⁴ In fact, the cotton mill, which was said to have sufficient capacity to produce a monthly average of 57,500 metres of cloth, produced only an average of 26,095 metres in the first seven months of 1896.²⁵

This example shows that, if the decision to invest in a new cotton mill is to be explained by prevailing economic conditions, the date of the constitution of the company, and not the date of inauguration of the cotton mill, should be used as the date when such a decision to invest was taken. In fact it was in November of 1892, when the company Industrial Itabira do Campo was constituted, that the decision to invest in a new cotton mill was made. However

the investment expenses resulting from such a decision lasted for a period of almost four years.

The first reports of the Companhia Industrial Itabira do Campo reveal one investment expense which is usually overlooked; the cost of the procurement and training of the labour force. In fact until a cotton mill had a labour force able to operate the machines, the investment was not over. The expenses of recruitment and training of workers had to be taken into account when assessing the cost of a new cotton mill. The annual report of 1895 mentions that workers for the cotton mill were being recruited locally and were being trained by the cotton mill's manager because it would not have been convenient for the company to hire experienced workers.²⁶ According to the Board of Directors, recruitment of local people would provide "well known and more modest workers".²⁷ However such recruitment involved time and expense. The low levels of production in the first months of 1896, when the cotton mill started working, were blamed on "a complete lack of experienced workers".²⁸

Finally it is interesting to observe that the establishment of the Itabira cotton mill was decided upon in a year which has been considered by some authors as a year of crisis in the textile industry; a year when some textile companies were facing difficulties in paying for the machines they had ordered in the period of Encilhamento and when many others were going into liquidation.²⁹ In so far as the Encilhamento did not have a significant effect on textile investment in Minas Gerais, one would not expect a crisis to have taken place in this state as a lagged effect of previous investments induced by the boom in the stock market. The creation of new companies the following year shows that, contrary to what happened in Rio de Janeiro, the cotton textile industry of Minas Gerais seems to have become a more attractive field of investment when the period of Encilhamento was over and the devaluation of the exchange rate had intensified. However, as the initial purpose of most of these companies was to establish weaving mills, and

not integrated cotton mills, the following section examines the possible reasons underlying this temporary preference of the Mineiro investor for weaving mills.

4.2.2 The weaving mill and the integrated cotton mill in the early stages of cotton textile industrialization in Minas Gerais.

Among the textile companies incorporated in the period 1892-1895, three of them had the explicit purpose of establishing weaving mills: the Companhia Progresso Fabril formed in Viçosa on May 14, 1893; the Companhia Tecelagem e Refinação constituted in Sete Lagoas on December 16, 1893 and the Companhia Tecidos Mineiros, incorporated in São João Nepomuceno on January 30, 1894.³⁰ These companies were the first joint stock companies to be created in Minas Gerais with the objective, defined in their statutes, of dealing exclusively with the weaving stage of cloth production.³¹ The initial purpose of the Companhia Tecelagem e Refinação was not only to establish a weaving mill but also to set up a sugar factory. The possibility that the mill would become integrated was already anticipated in Tecidos Mineiros' statutes. A change in the statutes of the Companhia Tecelagem e Refinação, approved by a General Meeting of Shareholders on November 11, 1894, also included the possibility that the company would establish a spinning mill.³²

The fact that, from May 1893 to February 1894, three companies were formed to set up weaving mills in Minas Gerais, and another company, which had been formed earlier with the purpose of establishing an integrated cotton mill, had decided in the same period to establish a weaving mill, suggests that some changes took place in that period which made investment in weaving mills suddenly and temporarily more attractive than that in integrated cotton mills. In fact until then the integrated cotton mill had always been by far the predominant type of cotton mill in Minas Gerais. The evidence presented on Companhia Industrial Itabira do

Campos suggests that these changes were associated with alterations in tariffs on yarn. In fact tariffs on yarn, although relatively lower compared with the tariffs on cloth, have been seen in the literature as one of the main stimuli for the establishment of weaving mills in Brazil in the nineteenth century.³³ Contemporaries seem to have agreed with this explanation.

Francisco Belisário Soares de Souza, Minister of Finance for the period 1885-1888, had already blamed the establishment of weaving mills in the country on tariffs on imports.³⁴ According to this Minister - who was in charge of reviewing the tariffs on imports, and presenting a new Tariff Law - the relatively low import duties on crude, white and dyed yarn, established by previous Tariff Laws, had the purpose of making it easier for some mills to obtain the particular types of yarn necessary for the production of special cloth. However, the Minister observed that such a protection was no longer necessary. It only had the effect of "encouraging the establishment of a large number of weaving mills",³⁵ weaving mills which, "with low production costs, are able to distract a considerable amount from the import revenue, under which shadow they live"³⁶. But such tariff duties could not be raised "in order neither to interfere with interests already established...nor to disrupt establishments where a very large amount of capital is invested and hundreds of workers are employed"³⁷. So, the new Tariff Law maintained the tariff duties on crude and white yarn, and the ones created for dyed yarn were only slightly higher than the previous ones.³⁸

In Minas Gerais, increased protection of domestic production of cloth compared to the production of yarn had not been able to stimulate the establishment of weaving mills. The Mineiro production of cloth and the Mineiro production of yarn were protected from outside competition by costs of transport and distribution. The Mineiro production of cloth consisted basically of crude and white cloth, most of the dyed cloth being still imported. However change in tariffs

in the early nineties, widening the difference between the protection given to domestic cloth and domestic yarn, seems to have stimulated the Mineiro entrepreneurs to invest in weaving mills rather than in integrated mills. The legislation on tariffs on cloth and yarn in the early nineties is examined below.

The Tariff Law in force in 1891-1896 was the one regulated by decree number 836 passed on October 11, 1890. According to this law, the tariff duty on crude and white yarn was 200 mil-réis per kilo while on dyed yarn it was 240 mil-réis per kilo. This Tariff had brought about an increase of 25% in tariff duties on crude and white yarn and an increase of 20% in those of dyed yarn. However, according to a decree which had been passed in October, 1890, these duties had to be paid in gold.³⁹ Difficulties in obtaining gold coins and the constant increase in tariff duties in mil-réis, due to the devaluation of the exchange rate, raised so many protests that enforcement of the decree was suspended on October 10, 1891.⁴⁰ The Budget Law for 1892 abolished payment in gold but introduced a general 50% surtax on tariff payments with the exception of liquor and "cotton and cotton goods, wool and products manufactured from wool, silk and silk products, linen and linen cloth", which were subject to a 60% surtax.⁴¹ The Budget Law for 1893⁴² introduced new amendments but the 60% surtax on cotton goods was maintained. However, tariff duties on all products needed by the factories were reduced by 30%. Even though such a reduction of 30% had been suspended by order of the Minister of Finance,⁴³ it may have induced entrepreneurs - who were not probably made immediately aware of the internal decisions of the Ministry - to invest in weaving mills in order to take advantage of the additional protection granted to domestic cloth. Increased import duties on cloth and decreased import duties on yarn and dyeing substances in 1893 widened the difference between the internal prices of foreign cloth and costs of imports of the raw materials necessary for its internal production. The Budget Law for 1894 abolished the reduction of 30% in the tariff duty to be paid on any product needed

for manufacture by the factories.⁴⁴ The new tariff duties on yarn determined by the Budget Law for 1896⁴⁵ - 300 réis for crude and white yarn and 400 réis for dyed yarn - seem to have discouraged new investment in weaving mills in Minas Gerais and to have encouraged the transformation of the existing ones into integrated cotton mills. None of the weaving mills established before the First World War survived as a weaving mill.⁴⁶

A study of the constitution of the companies set up in Minas Gerais from May 1893 to February 1894 to establish weaving mills in Minas Gerais may shed more light on the reasons for such a decision.

4.2.3 The joint stock companies constituted in 1893 and 1894 to establish weaving mills in Minas Gerais.

The initial capital of the companies Progresso Fabril, Tecelagem e Refinação and Companhia Tecidos Mineiros S. João Nepomuceno was, at the time of their constitution, relatively small.⁴⁷ The Companhia Progresso Fabril, constituted in Viçosa on May 14, 1893, had a capital of 150 contos and the Companhia Tecelagem Refinação, formed in Sete Lagoas on December 16, 1893 had an initial capital of only 100 contos. The initial capital of the Companhia Tecidos Mineiros São João Nepomuceno, incorporated on January 30, 1894, was 130 contos.⁴⁸

However, at least in the case of the Companhia Tecelagem e Refinação, the initial capital of 100 contos proved to be well below the amount required to fulfil the company's objectives. As pointed out by Stein, the estimates of capital requirements for establishing a cotton mill in the early stages of industrialization were very often incorrect and fell below the actual capital needed.⁴⁹ In the case of cotton mills in Minas Gerais, additional funds were usually obtained by an increase in the company's capital through the issue of new shares.

In fact, just after its constitution on December 16, 1893, the Companhia Tecelagem e Refinação spent 80 contos on the purchase of the Melancias farm and used up almost all of its initial capital⁵⁰. An Extraordinary Meeting of Shareholders was summoned and, on January 23, 1894, a proposal by the Board of Directors, that the company's capital should be raised to 200 contos, was approved.⁵¹ This increase soon proved not to be enough and another Extraordinary Meeting of the Shareholders, which took place on November 10, that year, approved an increase in the capital to 400 contos. So, in less than one year after the company was constituted, its capital had been quadrupled. This same meeting also agreed that the purpose of establishing a sugar factory should be dismissed from the statutes and the name of the company should be changed to Industrial Melancias.⁵²

The constitution of the Companhia Tecelagem e Refinação presents two interesting features which deserve to be commented upon as they show the first signs of a change in the traditional pattern of constitution of textile joint stock companies in Minas Gerais. One of these changes was related to the subscription of the company's capital and the other is related to the origin of this capital.

This company relied on a relatively greater number of small shareholders in contrast to the usual pattern of the previous companies in which almost all the funds were provided by a few shareholders.

Data in table 4.1 show the distribution of the initial capital of the company Tecelagem e Refinação among its fifty shareholders. They illustrate the importance of the small investor in financing the undertaking. Of the fifty shareholders, 68% of them had five or less shares. With an average contribution of 344 mil-réis each, these shareholders subscribed 24.9% of the company's capital.⁵³ If the eight shareholders with less than fifteen shares and more than five are added, it is possible to see that 84% of the shareholders, with an average contribution of 981 mil-

réis each, subscribed 41.2% of the capital. Notwithstanding the significant participation of the small investor, the process of decision making was still controlled by a few shareholders. The seven major shareholders, who subscribed 53.8% of the capital, had a right to 50.8% of the total number of votes.⁵⁴ In the companies constituted before, the contribution of the small investor had usually been very restricted. He either did not participate at all or his participation was marginal. The control of the process of decision making was then associated with the control of ownership. Although the Companhia Cachoeira dos Macacos, for instance, had a large number of shareholders⁵⁵, 79% of its initial capital was subscribed by only one shareholder, João da Matta Teixeira.⁵⁶ In this new undertaking, João da Matta Teixeira - like the other two major shareholders - held

Table 4.1

Companhia Tecelagem e Refinação: distribution of shares and votes among the first subscribers of its capital.

n.of shares per shareholder	number of shareholders per number of shares		total number of shares		total number of votes	
	abs. numb.	%	abs. numb.	%	abs. numb.	%
1 - 5	34	68 %	117	23.4%	117	24.3%
6 -10	5	10 %	50	10.0%	50	10.6%
11-15	3	6 %	39	7.8%	39	8.3%
16-20	0	0 %	0	0	0	0
21-25	1	2 %	25	5.0%	25	5.3%
26-30	4	8 %	119	23.8%	119	25.3%
31-35	0	0	0	0	0	0
36-40	0	0	0	0	0	0
41-45	0	0	0	0	0	0
46-50	3	6 %	150	30.0%	120	25.5%
Total	50	100	500	100	470	100

Source: Companhia Tecelagem e Refinação (1893), Relação dos Acionistas.

only 50 shares each, which corresponded to 10% of the

initial capital. The incorporation of the Companhia Tecelagem e Refinação also shows the constitution of a company by a group of investors who were already associated with a textile undertaking in Minas Gerais. In fact, it is possible to identify among the fifty subscribers of the initial capital, ten shareholders - holding 44% of the shares - who were listed as subscribers of the Companhia Cachoeira dos Macacos' initial capital.⁵⁷ The subscription of the new shares, issued in 1894, reinforced the participation of the group from Cachoeira dos Macacos. In fact, 65.5% of these new shares were subscribed by the first shareholders of the Companhia Cachoeira dos Macacos.⁵⁸ However, even though the constitution of the company Tecelagem and Refinação may be seen as a joint undertaking by the shareholders of the Cachoeira do Macacos company, no significant amount of capital in this new company was subscribed by one particular shareholder.

The formation of the Companhia Tecelagem e Refinação was not the adventurous undertaking of a small group of local people without any experience in industry, as most textile partnerships and companies constituted in the eighties and seventies had been. Some of its shareholders had previous experience in the textile industry, not only as investors but also as managers. Among the three major shareholders of the company at the time of its constitution, two were directors of the Companhia Cachoeira dos Macacos: Jeronymo Francisco França and João da Matta Teixeira.⁵⁹ The third, Theóphilo Marques Ferreira, had not only been one of the eight subscribers of the Companhia Cedro e Cachoeira's capital at the time of its creation in 1883, but was also General Manager of the company from 1887-1893, its Director in 1888-1889 and Manager of one of its cotton mills, the Cedro cotton mill, from 1887-1893.⁶⁰

The incorporation of the Companhia Progresso Fabril followed the traditional pattern of investors. The initial capital of 150 contos was subscribed by eight shareholders. The promoter and major subscriber of the initial capital of the

company was Carlos Vaz de Mello who held 18.7% of the shares.⁶¹ Carlos Vaz de Mello was a politician from Viçosa and, by the time the company was being set up, he was a member of the Constitutional Republican Party's executive committee. The first two directors elected, José Tinoco and Augusto Ferreira Brant, subscribed respectively 16% and 12% of the company's initial capital. José Tinoco, whose profession is given as farmer and capitalist, lived in Viçosa. Augusto Ferreira Brant, a local trader, lived in the nearby city of Ponte Nova. Of the remaining five shareholders one could be identified as a close relative of Carlos Vaz de Mello.⁶² There is no indication that any of the shareholders of this company had invested in earlier industrial enterprises.

The third joint stock company to be constituted in Minas Gerais for the specific purpose of establishing a weaving mill, the Companhia de Tecidos Mineiros São João Nepomuceno, had its initial capital of 130 contos subscribed by 24 shareholders. The major shareholder was Daniel de Moraes Sarmento Junior who held 125 shares, corresponding to 19.2% of the company's capital. Nineteen shareholders subscribed equal lots of twenty five shares, and the remaining fifty shares were divided into two blocks of 25 shares, each block subscribed by two shareholders.⁶³ The list of shareholders shows the participation of three family groups: the Moraes Sarmento, the Pereira Brandão and the Furtado family. No other information is available either about the shareholders or the establishment of the factory.

Joint stock companies set up to establish weaving mills were not the only companies to be created in Minas Gerais in the post "Encilhamento" period. The following section studies the constitution of two other companies. One was formed in order to buy an old cotton mill which had been built in the seventies and another one was established by the Governor of the State of Minas Gerais and his relatives.

4.2.4 The constitution of the Companhia Pitanguense, another undertaking by experienced industrialists.

As was seen in chapter 2, changes in the legal requirements for the constitution of joint stock companies introduced by a law passed on November 1882,⁶⁴ encouraged the transformation of many old partnerships into joint stock companies. Old partnerships with cotton mills already in operation became joint stock companies which were in some cases formed by their previous partners. In this case the constitution of a new company should not be seen as representing necessarily a decision to invest. In certain cases it only meant the transfer of ownership of a cotton mill from a partnership to a joint stock company. This, however, was not the case of the Companhia Industrial Pitanguense.

The Companhia Industrial Pitanguense, which was formed in Pitangui on December 25, 1893⁶⁵ with a capital of 400 contos⁶⁶ subscribed by sixteen shareholders,⁶⁷ intended, according to its statutes, not only to buy the Brumado cotton mill but also to enlarge and to improve it.⁶⁸ As was seen in previous chapters, the Brumado cotton mill, after the death of its founder and only owner Francisco José de Andrade Botelho in 1888,⁶⁹ had been put up to auction and was bought by Luiz Augusto Vianna Barbosa on April 2, 1889 for 266 contos.⁷⁰ In 1893 it became the property of the Companhia Industrial Pitanguense. Therefore, the whole of the company's initial capital of 400 contos did not account for a new investment. Part of this capital corresponded to the value of a mill which already existed.

Like the Companhia Tecelagem and Refinação, the Companhia Industrial Pitanguense was an undertaking by experienced industrialists. However, contrary to that company, the subscription of its capital conformed to the traditional pattern, with the majority of the shares in the hands of very few shareholders from the same family.

Data in table 4.2 show the subscription of this company's capital per shareholder as well as the professions of these shareholders. It is clear from the data in this table that the contribution of the small investor to the company's capital was marginal. As shown in table 4.2, six shareholders with ninety shares or more subscribed 90% of the capital. Among those six shareholders, two held between them 57% of all shares. Besides this high concentration of shares into a few hands, this company was clearly an association of family groups. The study of individual shareholders will clarify the relations among them and will give some indication about the possible origins of their resources.

Table 4.2

Shareholders of the Companhia Industrial Pitanguense at the time of its constitution: their professions and their contributions to the company's capital.

Shareholders	Number of shares %		Profession
Luiz Augusto Barbosa	726	36.3%	industrialist
Francisco Bahia da Rocha	414	20.7%	na
Sérgio Mascarenhas Barbosa	237	11.9%	industrialist
Antonio Mascarenhas Barbosa	235	11.8%	na
Diogo G. de C. Vasconcellos	100	5.0%	farmer
Americo Bahia da Rocha	90	4.5%	local trader
Jose Gonçalves de Sousa	50	2.5%	magistrate
Francisco d'Assis Freitas	50	2.5%	farmer
Antonio Mourão Lopes Cançado	25	1.3%	local trader
José T. B. de Vasconcellos	20	1.0%	na
Teodoro T. B. de Vasconcellos	20	1.0%	local trader
Dr. F. Bahia da Rocha	10	0.5%	industrialist
Americo Epiphanyo Pereira	9	0.5%	clergyman
Vicente Ferreira Guimarães	5	0.3%	clergyman
Pacífico Antonio d'Assumpção	5	0.3%	na
João Martinho de Almeida	2	0.1%	clergyman
Raymundo P. Mascarenhas Barbosa	2	0.1%	na
Total	2,000	100	-

Sources: Companhia Industrial Pitanguense (1894), Lista Nominativa dos Srs Subscritores, and Companhia Industrial Pitanguense (1894), Estatutos.

The major shareholder, Luiz Augusto Vianna Barbosa, originally a farmer, was closely related to the Mascarenhas brothers by marriage, and by joint undertakings. He was married to one of the sisters of the brothers Victor Mascarenhas, Pacífico Gonçalves da Silva Mascarenhas and Francisco de Paula Mascarenhas, with whom he had associated in 1873 in founding the firm Mascarenhas Irmãos & Barbosa in order to set up the Cachoeira cotton mill.⁷¹ When the Companhia Cedro e Cachoeira, which consolidated the partnerships Mascarenhas Irmãos and Mascarenhas & Barbosa, was constituted in 1883, Luiz Augusto Vianna Barbosa had 658 shares with a nominal value of 136 contos - corresponding to 12.7% of the new company's capital.⁷² In 1887 he sold all his shares in this company.⁷³ It is not reasonable to assume that the sale of his shares had been made in order to acquire funds for the purchase of the Brumado cotton mill, as this mill was at that time not for sale. However, it is clear that, considering the activities he had been engaged in during his lifetime, at least part of the resources he invested in the acquisition of the Brumado cotton mill and its enlargement had been previously accumulated in the cotton textile industry. Luiz Augusto Vianna Barbosa, together with his sons, Sérgio Mascarenhas Barbosa and Antonio Mascarenhas Barbosa, and his grandson, Raymundo Mascarenhas Barbosa, held 60% of the shares.⁷⁴

The second largest individual shareholder was Francisco Bahia da Rocha who subscribed 20.7% of the initial capital. No information about the activities carried out by Francisco Bahia da Rocha are available. His connection with the Mascarenhas family, and therefore with Luiz Augusto Vianna Barbosa, was established by the marriage of two of his sons to nieces of the Mascarenhas brothers, founders of the Companhia Cedro e Cachoeira. Those two sons were also listed as shareholders in the Companhia Industrial Pitanguense at the time of its constitution. One of them, who was also called Francisco Bahia da Rocha, was a minor shareholder in the Companhia Cedro e Cachoeira in 1897⁷⁵, and from 1894-1899 the manager of one of its factories, the São Vicente

cotton mill.⁷⁶

Another family group which may be identified among the first shareholders of the Companhia Industrial Pitanguense was the Vasconcellos group. Ties of kinship among the three Vasconcellos listed as shareholders could not be identified. It is probable that they were related to the Mascarenhas and to the Bahia da Rocha families, as the major Vasconcellos shareholder, Diogo Gabriel de C. Vasconcellos, who subscribed 5% of the company's capital had some connections with the Mascarenhas company, the Companhia Cedro e Cachoeira, as will be seen below.

Table 4.3

Family groups in the constitution of the Companhia Industrial Pitanguense.

Family groups	Shareholders	Ties of kinship within each family and in relation to the major shareholder	Number of shares	%
1)Barbosa family	Luiz Augusto V.	-	726	36.3%
	Sérgio M.	son	237	11.9%
	Antonio M.	son	235	11.8%
	Raymundo P.	grandson	2	0.1%
Total	-		1,200	60.0%
2)Bahia da Rocha family	Francisco	-	414	20.7%
	Américo	son	90	4.5%
	Francisco	son	10	0.5%
Total	-	-	514	25.7%
3)Vasconcellos family	Diogo Gabriel de C.	-	100	5.0%
	José T.B.	n.a.	20	1.0%
	Teodoro T. B.	n.a.	20	1.0%
Total	-	-	140	7.0%
Total participation of the three families			1,854	92.7%

(*) Percentage in relation to the total number of shares

Sources: Table 4.2 and Tamm (1960).

Data in table 4.3 show the participation of these three family groups in the constitution of the Companhia Industrial Pitanguense. It is quite possible that some of the shareholders, who could not be identified as members of any of the family groups, were in fact close relatives of the Mascarenhas, Barbosas or Vasconcellos in spite of their different surnames.

Data in table 4.2 allow the identification of the professions of twelve out of the seventeen subscribers of the Companhia Industrial Pitanguense's initial capital: three were identified as industrialists, three as local traders, three as clergymen, two as farmers and one as a magistrate.

However it should be pointed out that the profession given for each shareholder does not necessarily indicate all the activities and sources of income of this shareholder. It is reasonable to assume that, in some cases, the same shareholder would carry out different activities and consequently the funds he invested in the textile industry would have been of diverse origins. Diogo Gabriel de Castro Vasconcellos, for instance, whose profession is given as farmer was also a member of the Companhia Cedro e Cachoeira's Fiscal Board at the time of the company's constitution.⁷⁷ So it is quite possible that, by that time, he was also a shareholder in the Companhia Cedro e Cachoeira.⁷⁸

The constitution of the Companhia Industrial Pitanguense, and that of the Companhia Tecelagem and Refinação in 1893, are the first examples of textile companies constituted in Minas Gerais by people with great experience as investors as well as managers in the textile sector.

The constitution of these two companies shows that, even though the family character still persisted, changes were taking place in the process of financing new textile investment. The control of a company by a small family group

was kept, but a larger proportion of the capital was, in some cases, being subscribed by small investors outside the family. Also new family branches, from a family previously associated with an older company, started forming their own companies. The creation of the Companhia Tecelagem and Refinação and the Companhia Industrial Pitanguense also shows that the textile industry of Minas Gerais in the early nineties was already attracting capital generated in this same industry. The textile industry of Minas was then a good business. It was able to pay good profits and it was expected to continue to do so. In the context of such changes there was still room for companies constituted according to the old rules, as shown by the incorporation of the Companhia Industrial São Domingos in 1894.

4.2.5 The constitution of the Companhia Industrial Sao Domingos, an undertaking by the Moreira Pennas.

The constitution of the Companhia Industrial São Domingos followed the traditional pattern of incorporation of the textile companies in Minas Gerais as a family enterprise with most of its capital in the hands of a few shareholders. However it was not merely an enterprise of local people engaged in local activities and newcomers in the industrial sector.

The company Industrial São Domingos was legally formed on February 5, 1894 in the small town of Santa Bárbara.⁷⁹ Even though it had been incorporated in February 1894, the decision to organise a company to set up a new cotton mill had been taken in the previous year. In fact, the General Meeting of Shareholders called for the constitution of this company, approved "all the acts performed up to this date by the citizen Domingos Moreira Teixeira Penna, President Director of the company, in relation to the purchase of machinery, the commencement of building work, etc."⁸⁰ Besides, the statutes of this company had been signed on July 15, 1893.⁸¹

The Companhia Industrial São Domingos was constituted with a capital of 150 contos⁸² subscribed by seven shareholders⁸³, the minimum number of partners required by law for the formation of a joint stock company.⁸⁴ Of the seven shareholders, four were from the same family, the Moreira Pennas. Together they held 73.3% of the shares. One of the two major shareholders, Affonso Augusto Moreira Penna was at the time Governor of the state of Minas Gerais. He and Visconde de Caranday, another shareholder of the Company Industrial São Domingos, had both been involved previously in the textile industry of Minas Gerais as shareholders of the Companhia Industrial Sabarense.⁸⁵ Affonso Augusto Moreira Penna was also a shareholder in the Companhia Industrial Paulo Moreirense in January 1894.⁸⁶ Domingos Moreira Teixeira Penna, who had the same number of shares as Affonso Augusto Moreira Penna, was a farmer and lived in Santa Barbara.⁸⁷ José Moreira Teixeira Penna was also a farmer in the nearby city of Itabira do Matto Dentro.⁸⁸

Even though construction work had started in 1893, the cotton mill was not ready to operate until March 1895. As was so often the case, the initial capital was not enough to finance the complete establishment of the cotton mill as it had been planned. The wrong estimate of capital requirements was blamed on an unexpected increase in expenses due to: "the continuous devaluation of the exchange rate, the large amount of money which has to be paid to the custom-house for taxes and storage, the excessive freight charges in the capital as well as in the state of Minas Gerais, and an increase in workers' wages".⁸⁹ A proposal to increase the company's capital by 100 contos was approved by the Extraordinary Meeting of Shareholders on March 10, 1895.⁹⁰ Among those who subscribed the new shares issued by the company were seven new shareholders.⁹¹ The participation of Affonso Augusto Moreira Penna decreased after this new issue and Domingos Moreira Teixeira Penna, who acquired 200 of the new 500 shares, became the major shareholder.

Although a typical small family enterprise, the constitution

of this company reveals the significant participation of shareholders not engaged in local activities in Santa Bárbara, and with previous experience as industrial investors.

4.2.6 The Companhia Fabril Cachoeira Grande and the participation of local experienced textile industrialists.

The Companhia Fabril Cachoeira Grande was constituted on September 23, 1893.⁹² The story of the foundation of this company, as told by one of the descendants of its main promoter, Antonio Alves Ferreira da Silva, is another example of a textile undertaking in Minas Gerais in 1893 which involved the participation of a group from the Cachoeira dos Macacos company.

In the eighties, Antônio Ferreira Alves da Silva had three farms in the central area of the Central zone of Minas Gerais. Afraid of the adverse effects that the abolition of slavery could have on the value of his properties, he sold his farms. Later on, after he had met Bernardo Mascarenhas and had visited his factory in Juiz de Fora, Antônio Alves Ferreira da Silva decided to invest part of his savings in the establishment of a cotton mill. He bought a farm, Fazenda das Três Moças, where there was a waterfall which could produce the energy required to power the machines. This farm was then owned by five partners: Antonino Pinto Mascarenhas, Antônio Diniz Mascarenhas, Júlio Cesar Teixeira Guimarães, João Martins Maia and Manoel Martins Porto. Antonino Pinto Mascarenhas and Antônio Diniz Mascarenhas were close relatives of the founders of the Companhia Cedro e Cachoeira and Antônio was then a shareholder of this company.⁹³

Once the farm was bought, Antônio Ferreira Alves da Silva, who did not have any experience in the textile business, invited the founders of the Companhia Cachoeira dos Macacos: João da Matta Teixeira, Américo Teixeira Guimarães and Herculino França to join his undertaking. The company Fabril

Cachoeira Grande was constituted on September 23, 1893 with a capital of 500 contos. One of its first directors, Américo Teixeira Guimarães, was then manager of the Companhia Cachoeira dos Macacos. The cotton mill was inaugurated on August 5, 1896 with 120 looms and 27 spinning machines.

The constitution of the Companhia Fabril Cachoeira Grande shows the association of a family group from an established textile company with a farmer who was the prime mover of the new undertaking but who did not have any previous experience in the cotton textile industry. The constitution of this company is also another example of the participation of a group from the Companhia Cachoeira dos Macacos in the establishment of a new cotton mill in Minas Gerais.

4.2.7 Unsuccessful attempts at establishing other cotton mills in Minas Gerais in 1894.

Two more joint stock companies were constituted in 1894 to establish new cotton mills in Minas Gerais: the Companhia Industrial do Mello and the Sociedade Anônima Fábrica de Tecidos do Pequery. The Companhia Industrial do Mello was constituted in Santo Antônio da Lagoa, a district of Curvelo, on April 18⁹⁴ with a capital of 300 contos.⁹⁵ The Sociedade Anônima São Pedro do Pequeri, also with a capital of 300 contos,⁹⁶ was constituted on November 24⁹⁷, in São Pedro do Pequeri, a district of Mar de Hespanha. These two companies were not successful and went into liquidation without establishing any cotton mills in the state.

Even though the Companhia Industrial do Mello had been unable to succeed as an industrial undertaking, its constitution presents some interesting aspects. The participation of the small investor was significant and there was no major concentration of shares held by any individual shareholder. However, a group of shareholders, who were already associated with another textile company, held a relatively high percentage of the shares.

In fact, the capital of 300 contos, divided up into 1,500 shares, was subscribed by 159 shareholders. The average subscription per shareholder was 9.4 shares corresponding to 1.88 contos which was the lowest average reached by any textile company previously formed.⁹⁸ No individual shareholder had more than 6% of the shares and 101 shareholders with five or less shares subscribed 18.6% of the capital.

However in spite of a more egalitarian distribution of the company's ownership than was usual in the cotton textile industry of Minas Gerais, it is possible to identify among the shareholders the significant participation of a family group already associated with a textile company, the Mascarenhas from the Companhia Cedro e Cachoeira. The Mascarenhas brothers: Victor, Pacífico and Francisco de Paula, founders of the Cachoeira cotton mill inaugurated in 1875, and another of their brothers, Caetano, one of the partners of the firm established in 1868 to set up the Cedro cotton mill, are listed as shareholders. In fact it is possible to identify among the subscribers of the Companhia Industrial do Mello's capital, five of the nine founders of the Companhia Cedro e Cachoeira in 1883. Together they held 15% of the shares.⁹⁹ A few other shareholders of the Companhia Cedro e Cachoeira were also among the subscribers of the Companhia Industrial do Mello's capital.¹⁰⁰ However, none of them appears either as incorporator of the new company or as a member of its Board of Directors and Fiscal Board.

The participation of the Mascarenhas family from the company Cedro e Cachoeira in this undertaking, as well as in the constitution of the Companhia Industrial Pitanguense in the previous year, and the participation of the Companhia Cachoeira dos Macacos's shareholders in the constitution of the Companhia Tecelagem e Refinação show that the cotton textile industry of Minas Gerais in 1893 and 1894 was still seen by experienced industrialists as an attractive field for investment.

In 1895, the incorporation of another textile company, the Companhia Manufatureira Santa Rosa, was being widely advertised in the newspapers. This company, which was supposed to be incorporated with a capital of 500 contos, had plans to set up a cotton mill in a place called Cachoeira de Santa Rosa in the parish of Capela Nova do Betim in Sabará.¹⁰¹ However there is no evidence that this company had ever been incorporated.

4.2.8 A brief review of the main characteristics of the textile joint stock companies constituted in the years 1892-1895 in Minas Gerais.

Data in tables 4.4 and 4.5 summarise some of the main characteristics and purposes of the joint stock companies formed in the period 1892-1895 in the cotton textile

Table 4.4

Textile joint stock companies constituted in Minas Gerais in the post Encilhamento period, 1892-1895.

Companies	Date of constitution	Nature of the mill to be set up	Planned location by zone	Participation of previous textile investors
Itabira do Campo	20/11/92	integrated	Central	na
Progresso Fabril	14/05/93	weaving	Mata	no
F Cachoeira Grand	23/09/93	integrated	Central	yes
Tecel. e Refinação	16/12/93	weaving	Central	yes
Pitanguense	25/12/93	integrated	Western	yes
Tecidos Mineiros	30/01/94	weaving	Mata	no
São Domingos	05/02/94	integrated	Central	yes
Indust. do Mello*	15/04/94	integrated	Central	yes
Tecidos do Pequery*	04/11/94	na	Mata	na

na: information not available.

* the company was constituted but did not succeed in establishing a mill.

Note: The table summarizes information given in the chapter.

industry of Minas Gerais. There is no evidence of any decision to invest in the establishment of new cotton mills in Minas Gerais in this period being taken either by an individual investor alone or by a few investors joined in a partnership not formed as a joint stock company.

Data in table 4.4 show that decisions to invest were concentrated in a short period: from November 1892 to November 1894. They show also that three out of the nine companies constituted in this period had the explicit objective of establishing weaving mills and that there was a tendency at that time to concentrate investment in the Central zone. Information in this table indicates that investors with previous experience in the cotton textile industry participated in five out of the nine companies then formed.

Data on the subscription of capital in five joint stock companies constituted in the period, and displayed in table 4.5, show that two of them resembled quite closely the old partnerships of the seventies and eighties. The low number of shareholders; equal or quite near to the minimum number of shareholders required by law for the constitution of a joint stock company - as well as a relatively even subscription of the capital - suggests that the Companhia Progresso Fabril and the Companhia Industrial São Domingos were in fact associations of a few relatives and/or friends. Their choice of a joint stock company as the legal vehicle for their association is explained by the advantages given by the law to this form of association. In the constitution of the Companhia Progresso Fabril, for instance, the individual contribution of capital was quite similar to that of the old partnerships. If the two minor investors are excluded, the participation of each of the shareholders varied from 12.% to 18.7%. In these two companies, as well as in the Companhia Tecidos Mineiros, the control of the enterprise was more evenly distributed among the shareholders than in the other two: Companhia Tecelagem e Refinação and Companhia Industrial Pitanguense. The

constitution of the Companhia Tecidos Mineiros resembles a magnified partnership of the seventies.

The constitution of the Companhia Industrial Pitanguense illustrates the example of a one man undertaking which was transformed into a joint stock company. Data in table 4.5 show that two shareholders in this company subscribed most of the company's initial capital. However, as has already been said, one of these two shareholders, who was the previous owner of the cotton mill, together with his sons and one grandchild, retained control of the enterprise with 60% of the shares.

Table 4.5

Textile joint stock companies constituted in Minas Gerais in 1892/1894: their initial capital and its subscription.

Joint stock companies	Initial Capital (in contos)	Number of share holders	Average sub- scription per share- holder (in contos)	Groups of shareholders with majority in each company		
				number of share holders	capital of sub- scribed	%
				abs.	%	%
Progr. Fabril	150	8	18.8	3	37.5%	50.7%
T. e Refinação	100	50	2.0	7	14.0%	53.8%
Pitanguense	400	17	23.6	2	11.8%	57.0%
T. Mineiros	130	24	5.0	10	41.7%	53.8%
São Domingos	150	7	21.4	2	28.6%	53.3%

Sources. Companhia Progresso Fabril (1893), Ata da sessão da assembléa geral dos acionistas da Companhia progresso Fabril para a constituição da mesma companhia; Companhia Refinação e Tecelagem (1893) Relação dos acionistas da Companhia Tecelagem e Refinação de Sete Lagoas; Companhia Industrial Pitanguense (1894), Lista nominativa dos srs. subscritores; Companhia Tecidos Mineiros (1894) Relação dos acionistas da Companhia "Tecidos Mineiros" S. João Nepomuceno; Companhia Industrial São Domingos (1894), Lista dos acionistas.

In the case of the Companhia Tecelagem e Refinação, no

individual shareholder had a significantly larger amount of the shares. As shown in table 4.4, seven shareholders, corresponding to 11.8% of the total number of shareholders, held a majority of the shares. The remaining 46.2% of the capital was subscribed by 43 shareholders.

Those two companies, Tecelagem e Refinação and Industrial Pitanguense, which incorporated more radical changes in their constitution as joint stock companies, were companies formed by experienced textile industrialists. The Companhia Tecelagem and Refinação had the participation of a significant number of shareholders from the Companhia Cachoeira dos Macacos, and the Industrial Pitanguense may be seen as the development of a new family branch of the Companhia Cedro e Cachoeira.

Data in table 4.4 show that the decisions taken by the companies constituted in 1892-1894 concerning the location for their cotton mills reinforced a tendency to concentrate the cotton textile industry of Minas Gerais in the central areas of the Central zone and away from the coffee-growing areas. In fact four out of the five cotton mills to be established by those companies were to be located in this region: the Melancia cotton mill (Companhia Tecelagem e Refinação, later on Companhia Industrial Melancias) in Sete Lagoas; Itabira cotton mill (Companhia Industrial Itabira do Campo) in Itabira do Campo; Cachoeira Grande cotton mill (Companhia Fabril Cachoeira Grande) in Pedro Leopoldo; São Domingos cotton mill (Companhia Industrial São Domingos) in Santa Barbara do Mato Dentro. In addition, the Brumado cotton mill, which was acquired and which was intended to be enlarged by the Companhia Industrial Pitanguense, was located in Pitangui in the West zone near the borders of this zone with the central areas of the Central zone. Also the Companhia Industrial do Mello - although not successful in its plans -intended to build a cotton mill in Santo Antônio da Lagoa, a district of Sete Lagoas. The only company constituted in those years for the purpose of setting up a cotton mill far from the central area of the

Central zone was the Companhia Progresso Fabril. This company's cotton mill, Santa Maria, was to be established in the northern area of the Mata zone.

The next section explores the possibility that the decisions to invest, which were taken by the textile companies constituted in 1893 and 1894, were influenced by the government's plans to transfer the state capital to Belo Horizonte. It also raises the hypothesis that textile entrepreneurs of the region had been able to exercise some pressure on the government as to the final choice of location of the new capital.

4.3 Investment in the cotton textile industry of Minas Gerais in the early nineties and plans to transfer the state capital to Belo Horizonte.

The benefits to be obtained by any cotton mill established relatively close to a place chosen as the site of the new capital of the state are obvious. The most immediate and visible advantage would be an enlargement of the consumer market for their products. In fact, the construction of a new city would necessarily imply considerable expenditure on labour and building materials locally produced which would raise the income of the nearby regions and, consequently, the demand for cloth.

The law establishing the site where the new capital was to be built was passed in December 1893¹⁰². However, Belo Horizonte had been considered as a possible choice since 1891, when it had been determined by law that the state capital should be transferred either to Belo Horizonte, Paraúna, Barbacena, Várzea do Marçal or to Juiz de Fora.¹⁰³ Considering the advantages which would be gained by their cotton mills if the choice was Belo Horizonte, it is reasonable to assume that the textile entrepreneurs, whose cotton mills would most directly benefit from the choice of Belo Horizonte, would have tried to influence the final

decision as to the new capital's location.

In fact it is possible to verify that, among those members of the state's parliament who strove hardest to have Belo Horizonte chosen as the site of the new capital, there were some who had a financial interest in the textile industry in the area which would benefit from such a choice. Augusto Gonçalves de Souza Moreira, Frederico Augusto Alvares da Silva, Viriato Mascarenhas and Afonso Augusto Moreira Penna were four members of parliament who would benefit from such a decision.

Augusto Gonçalves de Souza Moreira was one of the promoters and founders of the Companhia de Tecidos Santanense which was formed in 1891 to set up a cotton mill in the village of Santana do São João Acima. This village - which was later called Itaúna - was relatively close to Belo Horizonte and a cotton mill built in this village would certainly benefit from the transfer of the capital to Belo Horizonte. By the time the Companhia Tecidos Santanense was being incorporated, the location of the new capital was being discussed in the Constituent Assembly. When a proposal from the government, that the capital should be transferred to a central point in the Rio das Velhas valley was submitted to the State Parliament, Augusto de Souza Moreira presented an amendment which specified that this point should be Belo Horizonte.¹⁰⁴ It is at least worth noting that the Companhia de Tecidos Santanense was legally constituted almost at the same time that the law establishing Belo Horizonte as one of the five sites where the new capital might be built was passed.¹⁰⁵ Augusto Gonçalves de Souza Moreira, who had been nominated as one of the company's directors in the statutes of the company, continued in parliament to defend the choice of Belo Horizonte as the site for the new capital.

In December, 1892, a committee was nominated by the first elected Governor of the state of Minas Gerais, Affonso Augusto Moreira Penna, to study the five places referred by law as possible locations of the new capital and to inform

parliament which of them was the most appropriate. This committee presented its final report in July, 1893, and recommended Várzea do Marçal as the best choice. A proposal transferring the capital to this place entered Congress and was approved at the first reading. When the proposal was entered for a second reading a group of ministers of the state parliament, among them Augusto Gonçalves de Souza Moreira and Viriato Mascarenhas, presented an amendment proposing that Belo Horizonte - and not Várzea do Marçal - should be the site of the new capital. Their proposal was rejected initially, but was finally approved on December 13, 1893.

Viriato Mascarenhas was also connected with the textile industry established in the area. He was a nephew of the Mascarenhas brothers, founders of the cotton mills of Cedro and Cachoeira in the seventies, and he was also a shareholder in the Mascarenhas' company, the Companhia Cedro e Cachoeira.¹⁰⁶

Frederico Augusto Alvares da Silva, another minister of the state parliament who had recommended Belo Horizonte as the best place to transfer the capital, was closely connected to the textile industry of Minas Gerais through ties of kinship created by his marriage as well as through his own personal involvement. He was the son-in-law of Theóphilo Marques Ferreira¹⁰⁷ who - as already mentioned in this work - was an outstanding textile industrialist at this time, with interests in different companies with cotton mills in the central areas of the state. Frederico Augusto Alvares da Silva was in 1893 a shareholder of the Companhia Industrial Sabarense¹⁰⁸. This company's cotton mill was very close to Belo Horizonte.

Finally, Affonso Augusto Moreira Penna, Governor of the state of Minas Gerais when the transfer of the capital was under discussion in the State Parliament, and one of those responsible for passing the law determining the transfer of the capital to Belo Horizonte, had private interests in the

textile industry in the area. He was the founder, and one of the two major shareholders, of the Companhia Industrial São Domingos. It is interesting to observe that, even though the decision to form this company had been taken in July, 1893, it was only legally constituted on February 5, 1894, which was less than two months after the law establishing Belo Horizonte as the new capital had been passed. This company's cotton mill, which was to be established in Santa Bárbara do Mato Dentro, would certainly profit from an expansion of the market created by the new capital.

A study of the performance of the Companhia Cedro e Cachoeira cotton mills in the period 1892-1895, in the next section, will reveal evidence of some of the effects of the construction of the new city on the performance of those mills.

4.4 The performance of the cotton mills of Minas Gerais in the years 1892-1895: the case of the Companhia Cedro e Cachoeira's cotton mills and a few others.

This section studies mainly the performance of the Companhia Cedro e Cachoeira's cotton mills. As this company's cotton mills were located in the centre of the Central zone and were therefore relatively close to Belo Horizonte, it is quite possible that their performance indicates the general performance of other cotton mills established in the area. However, they may not reflect the general performance of the textile industry of the state. Brief references to the performance of some other cotton mills in the post Encilhamento period are made at the end of the section.

4.4.1 The performance of the Companhia Cedro Cachoeira and its cotton mills in the years 1892-1895.

If the performance of a company is to be judged only by the dividends distributed, the years 1892-1895 should be seen as a period specially favourable for the Companhia Cedro e

Cachoeira's business, as shown by data presented in table 4.6. The dividend of 22.5% in 1892¹⁰⁹ was higher than those distributed in the Encilhamento period, and those of 1893 and 1894, respectively 31.7%¹¹⁰ and 27.2%¹¹¹, were the highest ever distributed by the company. Even the relatively low dividend of 13.5%,¹¹² distributed in 1895, was never surpassed in succeeding years. However, as has already been emphasized in this work, dividends distributed should not be used as a yardstick to measure the prosperity of a company without further analysis of the company's performance.

The years 1892, 1893 and 1894 were in fact seen by the company's management as thriving years. According to a remark made by the General Superintendent¹¹³ on March 15, 1893, this was the most prosperous period for the company.¹¹⁴ And the years 1892, 1893 and 1894 were later referred to by the company's Board of Directors as "exceptional years when everything was sold at high prices, the expenses were still low and the company declared incredible profits"¹¹⁵ In 1895, however, conditions faced by the company changed: "In 1895 and 1896, expenses increased, sales became very difficult, the price of cloth decreased, and the collection of debts owed to the company became almost impossible..."¹¹⁶ Such an observation shows that 1895 was seen by the management as a turning point from a period of prosperity to a period of great difficulties.

Data on profits in table 4.6 corroborate such an appraisal of the company's performance. Profits, after having increased substantially in 1892, remained relatively stable in the years 1893 and 1894 and then decreased significantly in 1895. The percentage of profits distributed as dividends in the period 1892-1895 was surprisingly high. In 1895 they reached 100%. However, all those dividends were not in fact paid in cash to the shareholders, as will be seen below.

The profits and dividends distributed in 1892 led to a very optimistic view of the future of the company. In March, 1893, the Board of Directors, in an address to the

Table 4.6

Companhia Cedro e Cachoeira, 1890-1895: capital,
annual profits and dividends distributed in 1890-1895.

Years	Capital in contos (1)	Profits in contos (2)	as % of capital (3)	Dividends in contos (4)	% on capital (5)	as % of profits (6)
1890	1,100	211	19.2%	190	17.3%	90%
1891	1,500	255	17.0%	199	13.3%	78%
1892	1,500	510	34.0%	450	22.5%	88%
1893	1,500	481	32.1%	476	31.7%	98%
1894	2,000	563	28.2%	544	27.2%	96%
1895	2,000	270	13.5%	270	13.5%	100%

* Excluding the payments made to the cotton mill managers as a percentage of profits.

** The amount of dividends shown in the Account of Profit and Loss was 450 contos. However, according to the company's Balance, only 300 contos were distributed as dividends.

Sources: Data on capital are from the annual General Balances, and data on profits and dividends from the Accounts of Profit and Loss. Companhia Cedro e Cachoeira (1890-1895), Balanço Geral no dia 31 de dezembro, and Demonstração da Conta de Lucros em 31 de dezembro.

shareholders, stated that: "to judge by the profits of 1892 we can anticipate that this year there will be a stupendous dividend which will cause a sensation".¹¹⁷ The dividend of the second semester of 1893, and that of the first semester of 1894, were used to finance an increase of 500 contos in the company's capital.¹¹⁸ A close examination of the company's annual accounts and reports from its Board of Directors suggests that such an increase in capital did not correspond to any increase in the productive capacity of the cotton mills. This increase in capital seems to have been a strategy used by the management of the company to avoid the distribution of profits as dividends and to increase the company's circulating capital. The fact that the shareholders agreed to forfeit part of their dividend in exchange for new shares indicates that they were then quite optimistic about the company's performance. In fact this

strategy of raising capital in order to avoid an immediate distribution of dividends did not always work as the shareholders were usually reluctant to sacrifice their present dividends. They would rather receive their dividends and lend them to the company at high interest.¹¹⁹ In fact, the General Meeting of Shareholders on March 25, 1895 decided that the dividend for the second semester of 1894 should be paid out of a loan of 600 contos which the company was authorized to raise. The only part of this loan that the company was able to raise was the portion to cover the dividend, which was raised with the shareholders themselves. The remaining part of the planned loan did not materialise and the dividend thus distributed became a new debt for the company.¹²⁰

The above information illustrates the policy adopted by the company of distributing almost all the profits as dividends without making provision either for the future needs of the company or for proper maintenance of its cotton mills. Such a policy was the result of pressure from the shareholders for high dividends. As evidence presented in other chapters shows, this policy was neither restricted to this company nor to that period. The wide adoption of such a practice shows that the typical textile investor of Minas Gerais in the early stages of industrialization acted more as a rentier than as a capitalist.

In fact, in spite of the high profits and high dividends distributed in 1892-1895, the reports for Cedro and Cachoeira cotton mills in 1895 emphasize the bad state of the system of water supply in the Cedro cotton mill as well as the bad state of repair of the Cachoeira cotton mill.¹²¹

The outstanding profits of the post Encilhamento period seem to have resulted, to a great extent, from the exceptionally good conditions prevalent on the demand side. The estimated average price for one metre of cloth produced by the Cachoeira cotton mill, calculated for the period 1886-1895 and presented in Table 4.7, shows that from 1890 the price

of cloth started increasing. Such a rise in price accelerated in 1892. In 1893 and 1894 the price continued to increase but at a slower rate. In 1895 it fell. Increased prices in the years 1892-1894 were followed by increased profits. In 1895 profits were significantly reduced.

One may distinguish general and local causes for such an improvement in demand. As far as general causes are concerned, one might have expected the good performance

Table 4.7

Cachoeira cotton mill, 1886-1895: average prices and production costs with labour and raw materials by metre.

Years	costs with cotton			costs with labour			average prices estimates		
	mil. réis.	ind. numb.	annual var.	abs. val.	ind. numb.	annual var.	abs. val.	ind. numb.	annual var.
1886	77	100	-	36	100	-	224	100	-
1887	55	71	- 29%	34	94	- 5.6%	212	94	- 6%
1888	80	104	+ 46%	29	81	- 14.0%	215	90	+ 1%
1889	74	96	- 8%	31	86	+ 6.9%	185	83	- 14%
1890	65	84	- 12%	30	83	- 3.2%	183	82	- 1%
1891	82	106	+ 26%	35	97	+ 16.7%	206	92	+ 13%
1892	90	117	+ 10%	42	117	+ 20.6%	304	136	+ 48%
1893	104	135	+ 16%	51	142	+ 21.4%	355	158	+ 17%
1894	108	140	+ 4%	68	189	+ 33.3%	372	166	+ 5%
1895	na	-	-	na	-	-	335	158	-10%

Notes: The average annual price per metre for 1885-1894 was calculated by dividing the value of the production in each year by the quantity produced in this year. The value of the production in each year was obtained by adding to the value of sales in each year the variation in stocks. The price for 1895 was estimated by deducting 10% from the average price in 1894 considering the information contained in the report for 1895 that prices were reduced by 10% that year.

Sources: Companhia Cedro e Cachoeira (1886-1895), Relatórios da Diretoria, "Fábrica da Cachoeira".

of the export sector in the period to have increased the total aggregate demand and therefore to have favoured domestic producers. In fact a great expansion in exports, which had started in the late eighties, was still taking

place in 1892-1895. The annual average proceeds from exports in pounds sterling in 1892-1895 was 15% higher than in 1889-1891.¹²² It was only in the second half of the nineties that this trend was reversed. Even though the central areas of the state of Minas Gerais did not specialize in exports, they were certainly favourably affected by the good performance of the export sector. In so far as exports increased the aggregate demand, one would expect that demand for the local products of Minas Gerais by other states would have increased, even if the impact was less intense than that felt in the export areas. In a similar way the demand for Mineiro cloth may be expected to have been favoured - directly and specially indirectly - by the monetary expansion which took place in the early nineties.

Another factor which may explain in part the increase in prices during the period is the devaluation of the exchange rate observed in the years 1892-1895. In spite of increasing exports, a trend towards a devaluation of the exchange rate - which had started in 1890 - continued in the years 1892-1895. The average annual external value of the mil-réis in the period 1892-1893 was 51.6% lower than it was in 1890, and 26.8% lower than it was in 1891.¹²³ Even though the cotton textile industry of Minas Gerais was already protected from foreign competition by transport and distribution costs, a devaluation of the exchange rate in a period of rising demand allowed local producers to increase the price of their products and to enlarge their profit margins.

Besides those general favourable economic conditions, the central areas of the state benefitted from an increase in income associated directly and indirectly with the work of construction in Belo Horizonte. Increased government expenditure raised the region's income and consequently the demand for locally produced cotton textiles. However benefits from an improvement in demand were partially counteracted - at least in the central areas of the state - by increased costs of production.

Data in table 4.7 show that from 1891-1894, labour costs per metre produced at Cachoeira's cotton mill increased at a continuously faster rate, while the rate of increase in the cost of raw material, although upwards, was subject to large fluctuations. Any explanation of the fluctuations in cotton prices would require an investigation of the cotton market which would be beyond the scope of this work. The possible causes for the increased labour costs will be examined below.

After an almost constant decrease in labour costs from 1886 to 1890 at Cachoeira's cotton mill, those costs started increasing in 1890. In 1894 they were 89% higher than those in 1886. However it was in 1894 that such an increase was most significant. From 1893 to 1894, labour costs per metre increased by 33.3%. Such an increase reveals increases in the cost of living as well as increased demand for labour associated directly or indirectly with the construction of Belo Horizonte.¹²⁴ Increased prices in the early nineties were not restricted to Minas Gerais. There is some evidence that internal prices increased significantly in the country as a whole during this period.¹²⁵ However, in the Northern and especially in the Central zone of Minas Gerais, this rise in prices seems to have intensified as a result of local phenomena. In fact, in the case of the Companhia Cedro e Cachoeira, an increase in the production costs of their cotton mills in 1894 resulted in part from a local shortage of workers, and in part from an increase in the price of food due to a serious drought in the region. It is also possible to assume that increased labour costs per metre in this period revealed a decrease in the average productivity of the textile worker. In fact, competition in the labour market was prone to provoke a turnover of the textile labour force which had an adverse effect on a worker's productivity. There is some evidence to corroborate such points.

The report of 1891 refers to a general increase in wages of more than 20% which the company had been forced to grant, as

a result of the increased price of food.¹²⁶ This rise in wages does not seem to have offset the increase in food prices and, in 1892, the company decided to establish a small shop in each factory, which would sell basic goods at lower prices. The establishment of such shops would allow an increase in the real wages of workers without any additional cost for the company. The reasons presented by the Board of Directors for the creation of these shops reveal their concern about the competition in the labour market.

"It is not necessary to explain the advantages of the measures taken, which have become absolutely necessary, considering the present condition of the labour force. Everyone is aware of the fact that, without long and good experience which requires time and dedication, the worker's production is small and imperfect. Everyone is aware that in order to keep a worker in the job it is necessary... to provide him with a low cost of living so as to make him happy..."¹²⁷

The report for 1892 attributes the difficulties the company had in finishing the work of repair and enlargement of the São Vicente cotton mill on the "high cost of living, the lack of workers and the difficulties of transport".¹²⁸ The decision to establish shops in the factories shows the special concern of the management not only to keep wages down but also to prevent the workers leaving the cotton mills. In fact, there is evidence that competition in the labour market had provoked a decrease in the worker's productivity. A decrease in the amount produced by the Cedro cotton mill in 1893 is explained as a result of "the difficulty the company had getting workers, and their instability in the job."¹²⁹ It was in 1894, the year when a serious drought in Minas Gerais pushed local prices of food further up, that the decision to establish shops in each factory was finally put into effect "considering the exorbitant price of food."¹³⁰

The relatively low levels of production in 1895¹³¹ in the Cedro cotton mill were blamed on the difficulty of keeping workers. A reference to the quantity of cloth produced by

this mill in 1895 is followed by the observation that "production would have been much greater if there had not been a shortage of workers."¹³² This shortage is mostly blamed on an increased demand for labour in the area:

"In fact the departure of workers greatly increased as a result of the establishment of new cotton mills, the construction of Belo Horizonte, the work on the Railway, as well as the higher cost of living. And as it was not possible to replace them immediately and as they were replaced by others without the necessary experience, there were substantial delays in the work and the mill had to operate for some periods with about thirty idle looms."¹³³

A reduction in the quantity produced by São Vicente in 1895 is also blamed on "a loss of workers from July to September, who went to work on the construction of the railway and in Belo Horizonte, because they had been tempted by higher wages."¹³⁴

The adverse effects of any severe drought in the region on the production costs of the mills established in the area were not restricted to the effect on wages due to the increased price of food. As the cotton mills used hydraulic power, any sensible decrease in the supply of water was apt to bring about serious operational problems. The cotton mills of Minas Gerais located in the Northern zone and in the central and northern areas of the Central Zone were frequently exposed to more or less severe dry seasons. Therefore those cotton mills were expected to have been able to use steam power occasionally. However those mills were not prepared to work their machines efficiently over a long period of time using only steam power. So, a very dry season was certain to cause a reduction in the amount produced by cotton mills in the area. Moreover, the use of steam power was relatively more expensive and therefore led to higher production costs.

A decrease of 17% in the quantity of cloth produced by the Cachoeira cotton mill in 1894 was in part explained by the

fact that the factory had to stop working a few times "not only for repairs to the drains but also because of the exceptional drought which reduced the supply of water"¹³⁵ And the São Vicente cotton mill, which had started working regularly in June, was forced to use mostly steam power¹³⁶. An extract from a report on the performance of this mill in 1895 illustrates the increased costs associated with the use of steam power:

"Firewood (its acquisition) is getting harder each day, not only because of its scarcity but also because of the shortage of workers to prepare it and the difficulties experienced in transporting it. It is necessary to keep four ox carts in constant use and many oxen in reserve as the poor pasture and gravelled surfaces of the roads have a detrimental effect on the health of the oxen. We are already having to hire carts at high prices."¹³⁷

In spite of all the problems mentioned in the company's reports, it is possible to conclude that the period 1892-1895, and especially 1892-1894, was a prosperous one for the company. Profits were high and no problems in relation to sales are mentioned in these reports. However the policy adopted by the company of distributing all profits as dividends was certain to have adverse effects on the performance of the company in future years. The performance of the company in 1895 suggests that some changes were taking place during this year which were adversely affecting the performance of the cotton mills: prices were reduced and profits decreased.

4.5 The performance of other cotton mills in the years 1892-1895.

Even though very little is as yet known about the performance in the post Encilhamento period of other cotton mills established in the central areas of the state, the little evidence that is available on the Companhia Industrial Sabarense suggests that the performance of other

cotton mills in the area was similar to that of the Companhia Cedro e Cachoeira.

In 1893, the Companhia Industrial Sabarense's Board of Directors was forced to resort to increasing capital by 70 contos in order to raise money to purchase raw materials. The new capital was promptly subscribed by shareholders.¹³⁸ In 1895 a new increase in the company's capital also seems to have received a similarly favourable response from the shareholders.¹³⁹ Great reductions in the price of its products were advertised in 1895¹⁴⁰ and the dividend of 20% distributed that year could not be paid in cash except to those shareholders who had less than five shares. In fact, according to a proposal from the Board of Directors, approved by a General Meeting of Shareholders, it was decided that the shareholders with five or more shares would receive their dividends not in cash but in obligations from the company at an interest rate of 8% a year to be redeemed whenever the company had the financial resources to do so.¹⁴¹

The willingness of the shareholders to purchase the new shares suggests that, at least from their point of view, the company was doing quite well in the period and was certainly paying satisfactory dividends. On the other hand, the fact that the company had to increase its capital in order to secure funds to cover the current expenses of production seems to imply that a sensible policy for the distribution of dividends was not being followed. The agreement reached with shareholders concerning the payment of the 1895 dividend shows once more that the distribution of profits as dividends was seen as an urgent priority by the Mineiro shareholder. As happened at Cedro e Cachoeira, the Companhia Industrial Sabarense also reduced its prices in 1895.

The conditions faced by the Santa Bárbara cotton mill were certainly different from those faced by the Companhia Cedro e Cachoeira's cotton mills. Santa Bárbara, located in the

northern area of the Central zone, was too far away from the place where the new capital was being built to be directly affected by its construction. Although more recent than the Cedro and Cachoeira cotton mills, the Santa Bárbara cotton mill seems to have been unable to establish itself as a prosperous undertaking. A brief summary of its history suggests that the problems faced by this mill were the result of mismanagement.

Inaugurated on May 22, 1888 the Santa Bárbara cotton mill was said to have "entered an evident period of decay "¹⁴² after 1891. In 1892 the headquarters of the company which, at the time of its creation had been established in Rio de Janeiro, were transferred to Diamantina, and a new director who lived in this city was elected.¹⁴³ This transfer seems to have been an attempt to improve the management of the cotton mill as the company had been facing financial problems from the start. The initial capital of the partnership which established the cotton mill was insufficient and a loan had to be raised with the Banco dos Estados Unidos do Brasil.¹⁴⁴ By the time this partnership was transformed into a joint stock company in 1889 the cotton mill was already mortgaged. Later on this debt was transferred to the Banco Hipotecário do Brasil, and in 1896 it amounted to 346 contos at an interest rate of 6% a year. In a report ordered by the Banco Hipotecário do Brasil, it was estimated that this cotton mill should have been able to produce net profits of 107 to 147 contos.¹⁴⁵ Such profits would correspond respectively to 21.4% and 29.4% of the company's capital. According to the accounts, the net profits had been well below those estimates: 71 contos in 1894, and 95 contos in 1895, which corresponded respectively to 14.2% and 19.4% of the capital. The reasons for the low profits in 1894 were given as the drought of 1894 which, by diminishing the supply of water, not only jeopardized the work of the factory, but also increased the costs of production by raising the prices of food and raw materials.

The available evidence suggests that the problems faced by

this company were those of a small family firm inadequately managed. In fact, even though the profits of 14.2% may be considered low if compared to the profits of 28.2% presented by the Companhia Cedro e Cachoeira in this same year, they were, at least in part, the result of an exceptionally adverse, but temporary, situation brought about by the drought of 1894. In 1895, the profits corresponded to 19.4% of the capital, which was a much higher percentage than that of the Companhia Cedro Cachoeira which was 13.5%. If the profits had been, since the inauguration of the mill, close to the average of the profits presented in those two years, the company would have been able to pay its debts in a few years. However the debts were not paid and most of the profits were distributed as dividends with no regard for the needs of the company. The company was founded with insufficient capital to operate its cotton mill, which was established in an area where it had to face competition from well established cotton mills. The main promoter of the company, as well as its first directors, lived in the city of Rio de Janeiro. This fact created additional problems for the management of the mill. In addition, given the insufficiency of initial capital, the company had been forced since its inception to raise loans from banks.

In 1892 the headquarters of the company were transferred to the cotton mill of Santa Bárbara and the management of the cotton mill was handed over to one of the shareholders who lived in Diamantina. The company did not pay its debts to the Banco Hipotecário do Brasil and on December 4, 1903 a distress was levied on its properties. Finally the company was taken over by the Banco Hipotecário do Brasil¹⁴⁶.

The performance of the Companhia de Fiação e Tecelagem Industrial Mineira in 1892-1895 contrasts in certain aspects with the performance of some of the companies with cotton mills established in the Central zone. In fact, as was seen in chapter 2, this company had differed since its constitution from the typical textile companies formed in Minas Gerais in the last decades of the nineteenth century.

The company Fiação e Tecelagem Industrial Mineira was formed by capitalists who lived in Rio de Janeiro where they were involved in commerce as well as in the industrial production of cloth. Besides, the company's cotton mill was the first one to be established in the coffee-growing areas of the Mata zone. Although established in the south of the state and therefore quite close to the border with the state of Rio de Janeiro, the purpose of this mill was to sell its products in Minas Gerais. However, given its location, the conditions faced by this cotton mill in the period are not expected to have been the same as those faced either by those companies with cotton mills in areas surrounding Belo Horizonte or those located in the northern areas of the Central zone. Subject to different climatic conditions and supplying a market which was directly connected to the export sector, the performance of this factory should rather reflect those general economic conditions prevailing in most areas of the country than those faced specifically by the mills established in the Central zone of the state.

In fact, an analysis of the annual reports as well as the accounts of the company for the period suggests not only that the company did quite well in the years 1892-1895 but also that it was under sound and experienced management. The company's debts, from an issue of debentures in previous years, were paid on time and satisfactory dividends were distributed without any additional loans being raised. Data on profits and dividends paid in 1892-1895 displayed in table 4.8, compared to those for the Companhia Cedro e Cachoeira presented in table 4.6, show that even though the profits of the Industrial Mineira as a percentage of its capital were well below those of Cedro e Cachoeira, its policy of dividends was a more judicious one. The percentage of profits distributed as dividends -consistently below those of the Companhia Cedro e Cachoeira - left the company with resources to invest in the cotton mill.

On January 22, 1895, the properties of the company were

estimated to be worth 1,893 contos¹⁴⁷ and the capital was

Table 4.8

**Companhia de Fiação e Tecelagem Industrial Mineira:
capital, profits and dividends, 1891-1895.**

Years	Capital in contos	Profits in contos	% of the capital	Dividends in contos	% of the capital	% of profits
1891	600	82	13.7%	60	10%	73%
1892	600	264	44.0%	72	12%	27%
1893	600	419	69.8%	72	12%	17%
1894	na	na	na	na	na	na
1895	1,200	199	16.6%	132	11%	66%

na=not available.

Sources: Companhia Fiação e Tecelagem Industrial Mineira (1891,1892,1893,1895), Demonstração da Conta de Lucros e Perdas em 30 de Junho e 31 de Dezembro.

raised from 600 to 1,200 contos. Accordingly, 3,000 shares were issued, half of them to be allocated to the shareholders and the other half, if not purchased by shareholders, were to be sold on the open market.¹⁴⁸ Even though, with this subscription, the number of shareholders had increased from 14 in 1892 to 43 in 1895, the sale of the new shares still remained restricted to relatives of the original shareholders.¹⁴⁹

The evidence shown is limited to the performance of some of the textile companies in Minas Gerais in 1892-1895 and therefore it does not support a definitive and final appraisal of the performance of all cotton mills at work in Minas Gerais. However, it strongly suggests that the economic conditions faced by these cotton mills favoured good performance, in spite of certain problems experienced by some mills in relation to higher costs of production. It also suggests that by 1895 some companies started having problems with sales. Besides, the evidence presented suggests that the policy for distributing most of the

profits in periods of prosperity without a due regard for the maintenance of the mills and the future needs of the company, was a widespread practice.

4.6 Conclusions

a) The post Encilhamento period in Minas Gerais favoured investment in new cotton mills as well as the performance of established cotton mills.

b) A better performance of the established cotton mills in the period was due to an improvement in demand associated with the expansion of income in the state derived from: i) increased demand for Mineiro products - other than cloth - outside the state due to the concerted effects of better performance of exports, monetary expansion and devaluation of the exchange rate; ii) the construction of Belo Horizonte. This conclusion evinces that even though the cotton textile industry was mostly established in a non export area and supplied local markets, the demand for its products was indirectly affected by the performance of the export sector.

c) As the years of Encilhamento - contrary to what seems to have happened in other areas as, for instance, in the state of Rio de Janeiro - had not stimulated a significant increase in the productive capacity of the Mineiro industry, an improvement in demand benefitted the established cotton mills.

d) A better performance of existing cotton mills and optimistic expectations concerning the transfer of the capital stimulated investment in the central areas of the state.

e) Investment in this period revealed important developments: a significant share of investment was financed with funds accumulated within the cotton textile industry of Minas

Gerais: new companies were formed by experienced industrialists: and a new company was incorporated by a traditional industrialist who left an old family business to set up a business for himself and his descendants,

f) Temporary changes in tariff duties on yarn stimulated investment in weaving mills. However those mills were transformed later on into integrated cotton mills.

g) The effects of the transfer of the capital to Belo Horizonte not only stimulated investment in the area but had effects on demand for labour, increasing competition in the labour market and pushing wages up.

h) Evidence presented on the general performance of some cotton mills and on their profits reinforces the conclusion that the post Encilhamento period was favourable to the Mineiro cotton textile industry. It also shows a policy of distribution of dividends which was certain to cause problems in less prosperous years to come. This policy reveals the overwhelming presence in certain companies of the shareholder who behaved as a rentier rather than as a capitalist.

1. Data on exports of industrial machinery to Brazil in: Suzigan (1984,321-327).

2. From 1889 to 1890, exports of industrial machinery to Brazil increased by 29.7%, and from 1890 to 1891 they increased by 69.7%. In the following year they decreased by 32.8% and remained relatively stable until 1895, It was only in 1896 that these exports started decreasing. In 1896 they were only 11.5% lower than in 1895 but in the following years they were significantly reduced. In 1902 exports of industrial machinery to Brazil started increasing again. Data on annual exports of industrial machinery to Brazil in Suzigan (1984, 321-327).

3. Simonsen (1973,16).

4. Suzigan (1984,70-72).

5. Stein (1957,96).

6. A more complete study of this movement among industrialists for financial help from the government in 1892 is found in: Luz (1961,101-108).

7. Stein (1957,96-97).

8. Stein (1957,94).

9. Fishlow (1972,312-318).

10. Fishlow (1972,313).

11. Versiani (1980a,317-318).

12. Suzigan (1984,121).

13. Companhia Industrial Itabira do Campo (1893), Relatório da Diretoria.

14. Ibid.

15. Ibid.

16. This proposal was approved at the General Meeting of Shareholders on February 20, 1894. See: Companhia Industrial Itabira do Campo (1894), Ata da Assembléa Geral Ordinária, February 20.

17. Companhia Industrial Itabira do Campo (1894), Relatório da Diretoria.

18. Ibid.

19. Ibid.

19. Ibid.

20. Companhia Industrial Itabira do Campo (1895), Relatório da Diretoria.

21. According to the average monthly quotation of the pound sterling in mil-réis in: Secretaria de Planejamento e Coordenação da Presidência da República, Fundação Instituto Brasileiro de Geografia e Estatística (1986,545-550).

22. Companhia Industrial Itabira do Campo (1894), Relatório da Diretoria.

23. A reference to this loan is found in the report from the Fiscal Board: Companhia Industrial Itabira do Campo (1895), Parecer do Conselho Fiscal.

24. Companhia Industrial Itabira do Campo (1896), Relatório da Diretoria.

25. Ibid.

26. Companhia Industrial Itabira do Campo (1895), Relatório da Diretoria.

27. Ibid.

28. Companhia Industrial Itabira do Campo (1896), Relatório da Diretoria.

29. Stein (1957,90).

30. Dates of the constitution of these companies respectively in: Companhia Progresso Fabril (1893), Ata da sessão da Assembléa Geral dos Acionistas para a constituição da mesma companhia; Companhia Tecelagem e Refinação (1893), Ata da Assembléa Geral dos Acionistas para a constituição da Companhia de Tecelagem e Refinação; Companhia Tecidos Mineiros (1894), Ata da Instalação da Assembléa Geral dos Acionistas.

31. Companhia Tecelagem e Refinação (1893), Estatutos, chapter I, art.3. Companhia Progresso Fabril (1893), Estatutos, art. 2, and Companhia Tecidos Mineiros (1894), Estatutos, chapter I, art. 2.

32. See proposal of amendment to article 3 of the statutes presented to and approved by the Extraordinary General Meeting of Shareholders on November 10,1894. Companhia Tecelagem e Refinação (1894), Ata da sessão da Assembléa Geral Extraordinária.

33. See for instance: Stein (1957,39-40).

34. The comments of the Minister of Finance, Francisco Belisário Soares de Souza, on the subject of tariff duties on yarn are reproduced in: Nunes e Silva (1929,XVI-XX).

35. These comments from Francisco Belisário Soares de Souza, are reproduced in Nunes e Silva (1929, XVIII).

36. Ibid.

37. Ibid.

38. This law was regulated by decree number 9746 April 22, 1887. According to the previous Tariff Law - regulated by decree number 8360 passed on December 31, 1881 - the tariff duty on white, crude and dyed yarn was 100 mil-réis per kilo. With the new Tariff of 1887, tariff duties on one kilo of white and crude yarn went up to 160 mil-réis and those on dyed yarn went up to 200 mil-réis. In the case of crude and white yarn there was no increase in duties to be paid but only the incorporation in the tariff of a 60% surtax previously charged. In the case of dyed yarn tariff duties increased by 25%. In fact, law number 3313 passed on October 16, 1886 which authorized the government to revise the Tariff, also authorized it to consolidate in the tariff duties the 60% tax.

39. Decree number 804, October 4, 1890.

40. A brief account of the opposition of importers to this decree may be seen in: Board of Trade Journal XI, 60 (July, 1891), p. 35 and XI, 61 (August, 1891), p. 667. See also: Versiani (1981, 20-21).

41. Law number 25, December 30, 1891.

42. Decree number 126-A, November 21, 1892.

43. A mention of a circular from the Minister of Finance on December 26, 1892 ordering the suspension of this provision of the law is found in: Board of Trade Journal, v. XIV, n.79 (February, 1893), p.184.

44. Law number 191-A, September 30, 1893.

45. Law number 359, December 30, 1895.

46. No data on the number of spindles are given for four cotton mills in the list of cotton mills in Minas Gerais in 1915 compiled by the Centro Industrial Brasileiro (1917, 175-178)). Besides the Itinga cotton mill and the Machado cotton mill, which were said to be closed down, no data on number of spindles were given for the Manoel Ignácio Peixoto cotton mill and for the Costa & Company cotton mill. These two cotton mills were not weaving mills. The Costa & Cia cotton mill was in fact an integrated cotton mill which started working on June 7, 1915 with forty looms and 1,552 spindles. See: Vianna (1964, 284). Also the Manoel Ignácio Peixoto & Filhos cotton mill was an integrated cotton mill. In fact, the statutes of the original company, which was constituted on February 2, 1905 with the purpose of establishing this cotton mill, made it clear that the mill which was to be set up was to be an integrated cotton mill.

See: Companhia Fiação e Tecelagem de Cataguazes (1895), Estatutos. As for the mills established by the companies formed in 1893 and 1894, the Companhia Industrial Melancias (previously called Tecelagem e Refinação) and the Tecidos Mineiros cotton mill were already integrated cotton mills in 1905. See: Vasco (1905). In the Companhia Progresso Fabril's cotton mill such a transformation seems to have come later, as no data for spindles are given for this mill in 1905. In 1912 this cotton mill was said to have been closed but, in 1915, it was listed as an integrated cotton mill. See: Minas Gerais, Secretaria da Agricultura (1913), "Fábricas existentes em 1912", and Centro Industrial do Brasil (1917,175-178).

47. The average capital of the cotton mills established in 1880-1884 was 235 contos. See table 2.1 in chapter 2.

48. Dates of constitution of these companies are given in the proceedings of their general meetings of constitution. Data on capital are given in their statutes. See: Companhia Progresso Fabril (1893), Ata da sessão da Assembléa Geral dos Acionistas para a constituição da mesma; Companhia Tecelagem e Refinação (1893), Ata da Assembléa Geral dos Acionistas para a constituição da companhia; Companhia Tecidos Mineiros (1894), Ata da Instalação da Assembléa Geral dos Acionistas. Data on capital in: Companhia Progresso Fabril (1893), Estatutos, art.5; Companhia Tecelagem e Refinação (1893), Estatutos, chapter II, art.9; Companhia Tecidos Mineiros, Estatutos, chapter II, art.7.

49. Stein (1957,28).

50. The purchase of this farm was communicated to the shareholders at an Extraordinary Meeting on January 23,1894 in which a proposal to raise the capital to 200 contos was presented by the company's Board of Directors. Companhia Tecelagem e Refinação (1894), Ata da sessão da Assembléa Geral Extraordinária.

51. Ibid.

52. Companhia Tecelagem e Refinação (1894), Ata da sessão da Assembléa Extraordinária.

53. The average subscription of capital was computed from data in: Companhia Tecelagem e Refinação (1893), Relação dos Acionistas.

54. According to the company's statutes, each share gave the right to one vote but no shareholder could have more than 40 votes. Companhia Tecelagem e Refinação (1893), Estatutos, chapter VI, art.37.

55. A complete list of the first subscribers of the initial capital of this company is not available. However, 26 shareholders signed the proceedings of the meeting of shareholders for the constitution of the company. Companhia

Cachoeira dos Macacos (1886), Ata da Assembléa de Instalação.

56. Companhia Textil Cachoeira dos Macacos, Evolução da Cia. Textil Cachoeira dos Macacos: 1886-1967, (mimeographed notes distributed by the company)

57. This identification was made by comparing the list of the first shareholders of the Companhia Tecelagem e Refinação which was published in Minas Gerais, December 30, 1893, p.8, and the names of the shareholders who attended the Meeting of Constitution of the Companhia Cachoeira dos Macacos. The proceedings of this meeting are reproduced in Jornal Nacional da ABBT, (no date and no page). The participation of the Companhia Cachoeira dos Macacos' shareholders in the constitution of the Companhia Tecelagem e Refinação was probably greater, as only shareholders representing two thirds of the capital subscribed were present at the Meeting of Constitution of the Companhia Cachoeira dos Macacos. Besides it was verified that many of the shareholders of the Companhia Tecelagem e Refinação who have not been identified as Companhia Cachoeira dos Macacos' shareholders, were close relatives of those who were shareholders of this company.

58. The identification of the shareholders of the Companhia Tecelagem e Refinação who were also shareholders of the Companhia Cachoeira dos Macacos was made by comparing the list of the shareholders who attended the Meeting of Constitution of the Companhia Cachoeira dos Macacos with the list of shareholders who subscribed shares of the third issue of the Companhia Tecelagem e Refinação. Those lists are found in: Companhia Cachoeira dos Macacos (1886), Ata da Assembléa de Instalação, and Companhia de Tecelagem e Refinação (1894), Acionistas da 3a emissão.

59. Companhia Textil Cachoeira dos Macacos, "Dirigentes" in Evolução da Cia Textil Cachoeira dos Macacos 1886-1967, (mimeographed notes distributed by the company).

60. Mascarenhas (1972, 246-247) and Vaz (1990, 377).

61. The number of shares held by each of the original shareholders is given in: Companhia Progresso Fabril (1893), Ata da Assembléa Geral dos acionistas da Companhia Progresso Fabril para a constituição da mesma companhia.

62. Profession and place of residence given in "Diretores da Companhia" enclosed in the statutes of the company. See: Companhia Progresso Fabril (1893), Estatutos.

63. Companhia Tecidos Mineiros (1894), Relação dos Acionistas.

64. Law n. 3150, November 4, 1882.

65. Companhia Industrial Pitanguense (1893), Ata da Assembléa Geral Institutiva.

66. Companhia Industrial Pitanguense (1893), Estatutos, chapter II, art.4.

67. Companhia Industrial Pitanguense (1894), Lista Nominativa dos Srs. Subscritores.

68. Companhia Industrial Pitanguense (1893), Estatutos, chapter I, art.3.

69. Guimarães (1950,42).

70. Guimarães (1950,25).

71. Mascarenhas (1972,94) and Tamm (1960,233). See also Chapter 1.

72. The list of the original shareholders of the Companhia Cedro e Cachoeira is in: Vaz (1990, 93). In this list the profession of Luiz Augusto Vianna Barbosa is given as trader. More information about the constitution of the Companhia Cedro e Cachoeira is presented in Chapter 2.

73. Vaz (1990,150).

74. The identification of Sérgio and Antonio Barbosa Mascarenhas as sons of Luiz Augusto Vianna Barbosa is based on: Tamm (1960,291).

75. In 1897 he had only 16 shares out of a total of 10,000 shares. Companhia Cedro e Cachoeira (1897), Acionistas em 31 de dezembro de 1897.

76. Vaz (1990,374).

77. According to Vaz (1990,373), Diogo Gabriel de C. Vasconcellos was a member of the Companhia Cedro e Cachoeira's fiscal board from 1893-1895.

78. Even though not listed as a shareholder of the Companhia Cedro e Cachoeira in 1885, Diogo Gabriel de Castro Vasconcellos appears as a shareholder in 1897. See: Vaz (1990,95), "Acionistas da Cia Cedro e Cachoeira em 1884 e 1885"; and Companhia Cedro e Cachoeira (1897), Acionistas em 31 de dezembro de 1897.

79. Companhia Industrial São Domingos (1894), Ata da Assembléa de Instalação.

80. Ibid.

81. Companhia Industrial São Domingos (1893), Estatutos.

82. Companhia Industrial São Domingos (1893), Estatutos, chapter I, art.2.

83. Companhia Industrial São Domingos (1894), Lista dos Acionistas.

84. Decree number 434, July 4, 1891, chapter I, art.1.

85. Affonso Augusto Moreira Penna and Visconde de Caranday each subscribed forty shares out of the 700 new ones issued by the Companhia Industrial Sabarense, on May 17, 1893. A list of the subscribers of the new shares is in: Companhia Industrial Sabarense (1893), Ata da Reunião da Diretoria.

86. Companhia Industrial Paulo Moreirense (1894), Ata da Assembléa Geral dos Acionistas, January 16. At this General Meeting of Shareholders Affonso Augusto Moreira Penna was represented by the priest Lucindo de Sousa Coutinho.

87. Companhia Industrial São Domingos (1894), Lista dos Acionistas, "Nomes e domicílios dos administradores."

88. Ibid.

89. Companhia Industrial São Domingos (1894), Parecer do Conselho Fiscal.

90. Companhia Industrial São Domingos (1895), Ata da Assembléa Geral Extraordinária, March 30.

91. Companhia Industrial São Domingos (1895), Lista dos subscritores de ações emitidas para elevação de capital.

92. All the information on the constitution of the Companhia Fabril Cachoeira Grande contained in this work is based on an oral report of Elísio Ferreira Alves, a grandchild of the company's founder, Antônio Alves Ferreira da Silva. This report was given to Leonardo Bahia da Rocha.

93. Antônio Diniz Mascarenhas, usually referred to as captain, was a son of Francisca - one of the sisters of the Mascarenhas brothers - and José Soares Diniz. Antonino Pinto Mascarenhas was the grandchild of the second Mascarenhas brother. Tamm (1960, 247,301). Antônio Diniz Mascarenhas is listed among the shareholders of the Companhia Cedro e Cachoeira in 1884, 1885 and in 1897. See: Vaz (1990, 95) and Companhia Cedro e Cachoeira (1897), Acionistas em 31 de dezembro de 1897.

94. Companhia Industrial do Mello (1894), Ata da Assembléa de Instalação.

95. Companhia Industrial do Mello (1894), Estatutos, chapter II, art.5.

96. Sociedade Anônima Fábrica de Tecidos do Pequery (1894), Estatutos, chapter I, art.4.

97. Sociedade Anônima Fábrica de Tecidos do Pequery (1894), Ata da Assembléa de Instalação.

98. Companhia Industrial do Mello (1894), Relação Nominal dos Acionistas.

99. This identification was made by comparing the list of shareholders of the Companhia Industrial do Mello (see note 101) and the list of the shareholders of the Companhia Cedro e Cachoeira in Vaz (1990,93).

100. Lists of shareholders of the Companhia Cedro e Cachoeira prior to the constitution of the Companhia Industrial do Mello are available for the years 1883, 1884 and 1885 in: Vaz (1990,93-95).

101. See, for instance, the large advertisement published by the company in: Minas Gerais, January 30, 1895, p.8.

102. Additional Law number 3, December 17, 1893.

103. Additional Law number 1, October 28, 1891, article 1.

104. Souza (1986,109-110).

105. This law was passed on October 28, 1891 and the company was constituted on October 23, 1891. However the statutes of the company were signed on September 26, 1891. See: Dornas Filho (1951,226,242).

106. Viriato Mascarenhas was also married to a niece of the Mascarenhas brothers, founders of the Companhia Cedro e Cachoeira. Viriato Mascarenhas does not appear as a shareholder of the Companhia Cedro e Cachoeira in 1884 and 1885. There is a reference to his participation in a General Meeting of Shareholders of the company in 1889. He is listed in 1897 as a very small shareholder with only 28 shares out of a total of 10,000. See: Tamm(1960,247,301), Vaz (1990,95,219) and Companhia Cedro e Cachoeira (1897), Acionistas em 31 de Dezembro de 1897.

107. Frederico Augusto Alvares da Silva married two daughters of Theóphilo Marques Ferreira, who was married to a niece of the Mascarenhas brothers. Tamm (1960,271).

108. Companhia Industrial Sabarense (1893), Ata da Reunião da Diretoria. It was not possible to find out if he was himself a shareholder of the Companhia Cedro e Cachoeira by the time the transfer of the capital was being discussed in the State Parliament. In 1897 he is listed as a minor shareholder of this company with 50 shares. Companhia Cedro e Cachoeira (1897), Acionistas em 31 de dezembro de 1897.

109. The Profit and Loss account registers 450 contos of dividends but the Annual Balance registers only 300 contos of profits. Companhia Cedro e Cachoeira (1892), Balanço Geral em 31 de dezembro de 1892, and Demonstração da Conta de Lucros e Perdas em 31 de dezembro de 1892. In Mascarenhas

(1972, 254) the dividends of 1892 are given as 300 contos.

110. The dividends distributed in 1893, as registered in the Profit and Loss account, were 476:250\$000. The Annual Balance of the company, however, registers only the dividends paid in the "second and last semester": 320:250\$000. Companhia Cedro e Cachoeira (1893), Demonstração da Conta Lucros e Perdas em 31 de Dezembro de 1893, and Balanço Geral em 31 de Dezembro de 1893.

111. Companhia Cedro e Cachoeira (1894), Demonstração da Conta de Lucros e Perdas em 31 de dezembro de 1894. The capital was then 2,000 contos. The Annual Balance only registers the dividends of the second semester. Companhia Cedro e Cachoeira (1894), Balanço Geral em 31 de dezembro de 1894.

112. Companhia Cedro e Cachoeira (1895), Balanço Geral em 31 de dezembro de 1895, and Demonstração da Conta de Lucros e Perdas em 31 de dezembro de 1895.

113. The company's general superintendent was then Theóphilo Marques Ferreira. He was also manager of the Cedro cotton mill from 1887. Vaz (1990,377).

114. Companhia Cedro e Cachoeira (1892), Relatório da Diretoria, "Considerações Gerais".

115. Companhia Cedro e Cachoeira (1897), Relatório da Diretoria, 1897, "Escritório Central" .

116. Ibid.

117. Ibid.

118. According to information contained in the annual report for 1895, the instalments for the increase of the capital in 1894 were paid with the dividends of the second semester of 1893 and first semester of 1894. However, a difference between the dividends distributed in 1892 registered in the Profit and Loss account and those registered in the Annual Balance suggests that part of the dividend of that year was not paid to the shareholders, but was also used to finance the increase in the company's capital. If this was in fact so, the increase in the company's capital was financed by the shareholders.

119. A similar interpretation of the behaviour of the Companhia Cedro e Cachoeira's shareholder concerning the distribution of dividends is found in: Vaz (1990,268).

120. Companhia Cedro e Cachoeira (1895), Relatório da Diretoria, "Empréstimo".

121. Companhia Cedro e Cachoeira (1895), Relatório da Diretoria, "Fábrica do Cedro", "Fábrica da Cachoeira" and "Escritório Central".

122. Annual averages of the exchange rate in the exchange market of Rio de Janeiro, from: Conselho Nacional de Estatística, Instituto Brasileiro de Geografia e Estatística (1939/1940,1354).
123. Data on average annual exchange rates from: Instituto Brasileiro de Geografia e Estatística (1939/1940,1353-1354).
124. There are not, as yet, reliable indices of the cost of living in Brazil for the nineteenth century. Besides, given the characteristics of the Mineira economy at that period, changes in food prices were mostly explained by local factors. About the general indices of cost of living for the nineteenth century presented in the literature, and their inadequacies, see: Versiani, introductory text to "Índice de Preços" in: Secretaria do Planejamento e Coordenação da Presidência da República, Fundação Instituto Brasileiro de Geografia e Estatística (1987,134-135).
125. See: Lobo(1971).
126. Companhia Cedro e Cachoeira (1891), Relatório da Diretoria, "Considerações Gerais".
127. Companhia Cedro e Cachoeira (1892), "Considerações Gerais" in Relatório da Diretoria.
128. Companhia Cedro e Cachoeira (1892), Relatório da Diretoria, "Fábrica de São Vicente".
129. Companhia Cedro e Cachoeira (1893), Relatório da Diretoria, "Fábrica do Cedro".
130. Companhia Cedro e Cachoeira (1894), Relatório da Diretoria.
131. In fact the quantity produced in 1895 in Cedro's cotton mill was 4.5% higher than in 1894. Data on the quantities produced in those years are found respectively in: Companhia Cedro e Cachoeira (1894), Relatório da Diretoria, "Fábrica do Cedro", and Companhia Cedro e Cachoeira (1895), Relatório da Diretoria, "Fábrica do Cedro".
132. Companhia Cedro e Cachoeira (1895), Relatório da Diretoria, "Fábrica do Cedro".
133. Ibid.
134. Companhia Cedro e Cachoeira (1895), Relatório da Diretoria,1895, "Fábrica de São Vicente".
135. Companhia Cedro e Cachoeira (1894), Relatório da Diretoria, "Fábrica da Cachoeira".
136. Companhia Cedro e Cachoeira (1894), Relatório da Diretoria, "Fábrica de São Vicente".

137. Companhia Cedro e Cachoeira (1895), Relatório da Diretoria, "Fábrica de São Vicente".

138. According to the company's Board of Directors, the number of new shares requested by the shareholders was greater than the number of shares issued. Companhia Industrial Sabarense (1893), Ata da reunião da diretoria.

139. A reference to this increase in capital is in an advertisement published by the company in the state's official newspaper. In this advertisement the company informed the shareholders that for each three shares each shareholder would have the right to subscribe one of the new 1,500 shares issued which corresponded to an increase in the capital of 150 contos. This advertisement was published in Minas Gerais, October 15, 1895, p.8.

140. Advertisement published in Minas Gerais, November 13, 1895, p.8.

141. Companhia Industrial Sabarense (1896), Ata da Assembléa Geral Ordinária.

142. Companhia Santa Bárbara (1894), Relatório aos Snrs. Acionistas e Credores.

143. See the proceedings from an Extraordinary Meeting of Shareholders on July 4, 1892. Companhia Fiação e Tecidos Santa Bárbara (1892), Ata da sessão da Assembléa Geral Extraordinária.

144. A reference to this loan is found in an advertisement for an issue of debentures made by this company in 1896. Companhia Fiação e Tecidos Santa Bárbara (1896), Manifesto de Emissão de Debêntures.

145. A reference to some of the conclusions of this report are found in: Companhia de Fiação e Tecidos Santa Bárbara (1896), Manifesto de Emissão de Debêntures, "Garantia de Emissão" and "Renda líquida".

146. A reference to a mandamus issued by the judge of Diamantina at the request of the Banco Hipotecário do Brasil on December 4, 1903, is in; Companhia Santa Bárbara (1904), Relatório aos Snrs. Acionistas e Credores. In the list of cotton mills in the state of Minas Gerais in 1905 the Banco Hipotecário do Brasil appears as the owner of the Santa Bárbara cotton mill. See: Vasco (1905).

147. The report of the arbitrators is reproduced in the proceedings of the Extraordinary Meeting of Shareholders which took place on February 4, 1895. Companhia Fiação e Tecelagem Industrial Mineira (1895), Ata da Assembléa Geral Extraordinária.

148. Ibid.

149. Companhia Fiação e Tecelagem Industrial Mineira (1892), Lista dos acionistas em 31 de dezembro de 1892, and Companhia Fiação e Tecelagem Industrial Mineira (1895), Lista dos acionistas que subscreveram o aumento de capital de 600:000\$ para 1,200:000\$, sendo este aumento dividido em 3,000 ações do valor nominal de 200\$ cada.

CHAPTER 5

THE PERFORMANCE OF THE COTTON TEXTILE INDUSTRY OF MINAS
GERAIS IN 1896-1898.

Introduction

The study of Brazilian industry in 1896-1898 has been particularly neglected. As an intermediate period between events which have attracted the attention of economic historians - the Encilhamento and the deflationary economic policies of Joaquim Murinho - this period has not as yet aroused much interest. Moreover, economic historians, investigating the earlier stages of industrialization in Brazil, have always shown more interest in periods of fast expansion in investment, and there is no evidence to suggest that the productive capacity of Brazilian industry expanded significantly during those years.

This chapter examines the evolution of the cotton textile industry in Minas Gerais during the period 1896-1898 in sequence to the chronological study of the establishment and early development of this industry started in previous chapters. However, an initial remark has to be made. Study of the Mineiro textile industry in this period suffers from a lack of information on the general performance of the Brazilian and Mineiro economies in those years. The scarcity of complementary evidence hinders a more complete understanding of all the difficulties faced by the Mineiro cotton textile industry in the period

As mentioned before, the cotton textile industry of Minas Gerais, after its expansion in the eighties, did not appear as a specially attractive field for investment during the Encilhamento years. However, after the Encilhamento was over, and for a short period of time, a relatively

significant number of companies was formed to establish new cotton mills in the state. At the end of the post Encilhamento period, 1892-1895, investment came to a halt. The last company to be formed in that period - and one to be successful in establishing a cotton mill in Minas Gerais - was constituted in February, 1894. Such a stagnation in investment persisted in the years 1896-1898. In fact, there is no evidence of any decision to establish new cotton mills in the state being taken in this period. The reasons why the industrial production of cloth ceased to attract new investment will be investigated through an examination of the evidence available on the performance of some cotton textile companies in the period. The assumption which justifies such an approach is that investment was curtailed mostly because the expected returns from such investment were drastically reduced as a result of the poor performance of the cotton mills then in operation.

The evidence presented in the last chapter shows that by 1895 there were clear signs that the conditions faced by the textile industry of Minas Gerais had started deteriorating. Prices and profits decreased and some companies were having problems in paying dividends. Notwithstanding such unfavourable conditions, the productive capacity of the industry was still being expanded as a result of decisions to invest taken in previous years. Therefore, unless there was an increase in demand for textiles in the years 1896-1898 to counteract such an expansion in productive capacity, the difficulties, which had started in 1895, could be expected to persist and even to intensify in the years following.

This chapter is divided into six sections. The first section presents a brief review of the literature on the development of Brazilian industry in 1896-1898. The following three sections examine the performance of some cotton mills in Minas Gerais, year by year, during the period 1896-1898. These cotton mills were not chosen by any criterium other than the availability of information on their performance.

Thus, the number of cotton mills investigated varies from one year to another and the conclusions arrived at in each section cannot be applied to all cotton mills of all zones of the state. However, the evidence presented certainly reveals some relevant general aspects of the overall performance of the cotton textile industry of Minas Gerais in the years 1896-1898. References to the performance of some cotton mills in Rio de Janeiro are made to provide grounds for comparing the performance of the cotton textile sector of Minas Gerais with that of another state. The fifth section examines the evolution of investment during the period. A summary of the conclusions is presented in the last section.

5.1 A brief review of the literature on the evolution of Brazilian industry in the years 1896-1898.

In spite of the lack of attention paid to the study of industrial growth in this period, the years 1896-1898 have been mentioned by some authors as part of a longer period of the creation of Brazilian industry, and by others as a period of significant expansion of industrial production.

For Normano the years 1896-1898 are part of a period of slower growth within a longer period, 1885-1914, which, as mentioned before, he characterizes as the period of the creation of Brazilian industry.¹ His conclusions are based upon information on the capital of industrial establishments existing in 1920,² as well as their dates of foundation. In Simonsen, who considers only the dates of foundation of these industrial establishments surveyed in 1920, the years 1896-1898 are seen as following a spurt of industrial growth which had taken place in 1885-1895.³

However, the data used by Normano and Simonsen for describing the path of industrial evolution in Brazil before the First World War are not adequate for such purposes. First of all because a high percentage of the establishments

surveyed by the Industrial Census of 1920 can hardly be considered as industrial.⁴ Moreover, data on capital cannot be used as a reliable indicator of the real value of the productive capacity of any factory at any time. Even if they were reliable indicators, there is no reason why one should assume that the capital of a firm at any point in time should be the same as that at the time of its foundation.

However, data on exports of industrial machinery to Brazil, recently compiled by Suzigan⁵, corroborate in general the conclusions of Normano and Simonsen concerning to a slower evolution of the industrial sector in 1896, 1897 and 1898, compared either with 1885-1895 or with 1904-1914. In fact, these exports, which reached a peak in 1891 only to be surpassed in 1907, decreased almost continuously until 1901. In spite of a decrease of 32.8% in 1892, exports of industrial machinery to Brazil remained relatively high in 1892-1895. It was in 1896 that a trend towards diminishing exports started. The annual average in 1896-1898 was 31.6% below that in 1892-1895. In the following period 1899-1901, these exports of industrial machinery to Brazil decreased further.⁶

For Villela and Suzigan - who identify a spurt of industrial growth in the nineties - the expansion of industrial production would have intensified in 1896-1898.⁷ The industrial growth in the nineties is explained by these authors as the result of increased protection granted to the domestic product by a devaluated exchange rate and higher tariffs, as well as by favourable internal conditions: expansion of the internal market due to immigration and development of the transport and energy sectors. According to them, one result of such propitious conditions "seems to have been the substitution of imports in the sphere of the traditional industries."⁸ In their analysis the growth of industrial production in 1896-1898 is emphasized.⁹ This emphasis is based on data on Brazilian imports which show an increased consumption of raw materials for industrial use between the periods 1891-1895 and 1896-1899 and a decrease

in imports of industrial consumer goods.¹⁰ Based on data on imports of industrial machinery from Great Britain - which do not show any increase between 1885-1889 and 1895-1899 - they conclude that the increased industrial production of the years 1896-1899 was mostly the result of the better use of existing productive capacity rather than investment.¹¹

Fishlow also highlights the growth of industrial production in the years 1896-1898.¹² It was in these years, and in the production of cotton textiles, that "the first instance of Brazilian industrialization through import substitution"¹³ took place. His conclusion is based on data on implicit domestic production of cotton for the period 1880-1913 which show the first significant increase in 1895-1899. According to Fishlow, the explanation for this increase "is obvious - the substantial reduction in imports"¹⁴ And he adds: "it is possible that such import substitution represented almost the complete basis for the growth of domestic manufacture."¹⁵

In Fishlow's analysis the role played by the exchange rate in fostering industrialization in the nineties is stressed. The devaluation of the exchange rate which followed the "Encilhamento" contributed towards the substitution of imports in the textile sector. On the one hand, it increased the protection of domestic production. On the other hand, as it was unable to offset the decrease in coffee prices so as to raise the exporters' income, it induced investment outside the coffee sector. In such conditions, the prospects for investment in import-substituting enterprises became more attractive. Besides, as there was internal inflation, the process of substitution of imports may have benefitted from a reduction in costs due to a decrease in real wages.¹⁶

Fishlow's analysis of industrial evolution in the cotton textile sector in the years 1896-1898 differs - in spite of some common points - from that presented for the industry as a whole by Villela and Suzigan. In both analyses the growth of industrial production which took place in the years 1896-

1898 is emphasized and seen as a growth induced by import substitution. However, for Villela and Suzigan, such growth was mainly the result of the better use of productive capacity, while in Fishlow, the increase in production in these years is seen as the result of new investment in import substituting activities.

Since the works of Villela and Suzigan, as well as the work of Fishlow, both published in the early seventies, the years 1896-1898 have not been further investigated as a distinct period in the process of industrialization in Brazil. However, in more recent studies, the year 1896 has still been seen as an upturn year, signalling a change from a period of a high rate of industrial investment to a period of slackened investment.¹⁷

The general explanations for the industrial evolution provided by Fishlow and by Villela and Suzigan are not expected to account for the performance of the cotton textile industry of Minas Gerais in 1896-1898. Most of the cotton mills in Minas Gerais were located in non-coffee areas and, therefore, a decrease in coffee prices cannot be expected to have diverted investment from coffee to industry in those areas. Besides, as the industrial cotton textile production of Minas Gerais was then relatively well protected from foreign competition, a devaluation of the exchange rate and consequent increase in the internal prices of imports are not expected to have had significant and immediate effect on local demand for Mineiro cloth. Moreover there is no evidence that the areas where the cotton textile industry was mostly developed had benefitted from the favourable internal conditions mentioned by Villela and Suzigan.

5.2 1896: a turning point from prosperity to stagnation or the beginning of a period of increasing industrial production?

This section investigates the performance of four cotton mills in Minas Gerais during 1896: the Marzagão cotton mill, owned by the Companhia Industrial Sabarense, and the Companhia Cedro e Cachoeira's cotton mills: Cedro, Cachoeira and São Vicente.

The annual report of the Companhia Industrial Sabarense describes the difficulties faced by the company in 1896 and emphasizes the poor performance of sales during this year: "the stocks of cloth are great...; the sales are not enough to cover the expenses of the company" and "the majority of customers - even though reliable customers - are in arrears."¹⁸ This report also explains the origins of such difficulties.

According to the company's Board of Directors, the cotton textile industry was in 1896 over extended in relation to the existing demand for cloth. The excessive productive capacity in the industry was not due to any unexpected retraction of demand but resulted from a great expansion of investment in previous years. Such an expansion of investment would have been encouraged by the relatively high returns paid on capital invested in the textile industry.

" The dividend of 30% paid by our company and by other companies attracted the attention of those who had capital. In consequence of the expectation of such satisfactory profits, not only were many cotton mills founded in different states, but in those cotton mills already established...the number of looms was doubled and even tripled. As a result, production increased. However, as consumption did not increase in the same proportion - as consumption does not increase at the producer's convenience - the companies found themselves forced to keep in their stocks the excess of production..."¹⁹

Giving the reasons for the poor results obtained in 1896,

the Board of Directors analyses some of the alternatives open to the company. To attempt an immediate expansion of sales was not seen by the Board as a wise policy to follow. It would mean bringing new customers to the company and that could be risky in a period when even the best customers were unable to make their payments on time: "It is not convenient to sell cloth to questionable customers, as it is better to have it in stock than transformed into unpayable debts."²⁰ To close down the cotton mill temporarily, while the cloth in stock was being disposed of, was seen by the Board of Directors as quite harmful to the interests of the company:

"...closing down the factory - and therefore stopping the profits of the company - brings about a deterioration of the machines and makes it more difficult to collect payment for debts."²¹

Considering that proceeds from sales were unable to provide the company with the necessary financial resources to cover current costs of production, and considering also that neither a reduction in the level of production through a suspension of work in the factory, nor any attempt at enlarging the number of consumers, were seen as advisable policies, the Board of Directors asked the shareholders for authorization to raise a loan. The purpose of such a loan was to finance the purchase of raw material and the payment of wages so that the mill could be kept in full operation.

This report is quite illustrative in different aspects. Firstly, because it presents the explanation offered by some mill-owners for the problems their cotton mill were experiencing in 1896. Such problems were diagnosed as the result of excessive productive capacity in relation to existing demand. Even though the report refers to the industry in general, it is reasonable to assume that the Board of Directors' observation was based mainly upon the evidence provided by local industry. Secondly, the creation of this excessive productive capacity is seen as the result of an expansion of investment in previous years which had been induced by the high dividends paid in the past by the

textile companies. Finally, this report shows the course of action recommended by the company's Board of Directors in a situation recognized as one of excessive productive capacity in relation to the existing demand. It was a period when proceeds from sales were unable even to cover the current costs of production and, moreover, stocks of unsold cloth were increasing. This recommendation was to keep the factory in operation by all means, even if current costs of production had to be financed by loans and a great part of the cloth produced was not expected to find immediate buyers.

There is plenty of evidence - which will be presented in this chapter and in the next one - that the policy of keeping cotton mills operating at full capacity, whatever the conditions of demand, was a policy widely adopted in Minas Gerais in the second half of the nineteenth and first years of the twentieth century. The rationale of such an apparently unreasonable policy has to be discussed if the performance of the Mineiro industry in those years is to be understood.

In fact, the maintenance of high levels of production even under the most adverse conditions of demand seems to result from some special features of the Mineiro textile industry in the period: a high share of fixed costs in the total costs of production of a Mineiro cotton mill and the attitude of the typical Mineiro investor as that of a rentier, rather than that of a capitalist entrepreneur..

If most of the costs of production of a mill were fixed costs, and if the price of cloth was given for an individual company, it is reasonable to conclude that, as long as proceeds from sales were able to cover at least the variable costs of production, the best quantity to be produced was that which could be produced by the mill at its full capacity. Any reduction in production would imply a higher average cost per metre and consequently a lower margin of profits. The fact that part of the cloth produced could not

find immediate buyers did not make this decision irrational as long as entrepreneurs expected to be able to sell the cloth in stock in the near future. The cloth produced and not sold was an asset of the company. Its value was estimated according to the average sale price and its value minus its costs of production was registered as profit in the company's accounts.

However, as long as the whole amount produced was not sold, part of the profits registered in the company's accounts at the end of the year corresponded not to net profits obtained through sales, but to cloth in stock. Therefore these profits could not be distributed - at least not all of them - as dividends to be paid immediately in cash. If shareholders insisted on the distribution of such profits, a conflict between the rentier shareholder and the entrepreneur shareholder would arise in the General Meeting of Shareholders responsible for approving the company's annual accounts. As has already been seen in this work, the rentier shareholder seems to have played a major role in many Mineiro textile companies. Even in times of prosperity this shareholder had pressed for a distribution of all profits as dividends, making it difficult for some companies to follow a sound financial policy and even to make adequate provision for depreciation and obsolescence. Therefore it is reasonable to expect that most of the shareholders would not be willing to give up their dividends when the company was facing difficulties. The rentier shareholder would press for a distribution of the profits while the capitalist shareholder would defend a policy of distribution of dividends which would benefit the company's interests. The evidence to be presented in this chapter will show that such a conflict was solved by a compromise between management and shareholders. The profits registered in the company's accounts were distributed as dividends but most of them were paid in cloth and not in cash. Or, in some cases, part of the dividends would be converted into loans from shareholders to the company. If most of the costs of production were fixed costs and if shareholders were willing

to receive their dividends in cloth, the rationale of keeping the mills working at full capacity, even under unfavourable conditions, becomes clear.

It is reasonable to assume that the share of variable costs in the total costs of production in a Mineiro cotton mill in the last years of the nineteenth century was very low. In fact a significant part of the costs of labour, energy, and even raw materials were then fixed costs.

Due to its location in rural areas, the typical cotton mill of the nineties in Minas Gerais had to provide a variety of services to its workers. The supply of services such as accommodation, sanitary facilities, education and religious assistance implied fixed costs for the company. Moreover, any reduction in production which involved either a dismissal of workers or a cut in daily wages could involve a loss of experienced workers and this could be quite detrimental for the company once the demand for textiles increased. Therefore it is quite possible that labour costs were seen mostly as fixed costs by the management. Besides, the energy to power the machinery was produced by the companies. Whatever the level of production, the water supply system, the turbines, and all the equipment necessary for the production of steam power to be used in the dry seasons had to be properly maintained. Moreover, the procedures adopted by the mill owners to provide their factories with a supply of cotton sufficient to prevent any possible shortage of raw material involved the conversion of some costs of raw materials into fixed costs.

In fact there is some evidence that the early Mineiro mills used to keep large stocks of cotton in order to avoid the adverse consequences of a sudden shortage. According to Giroletti, the cotton mills in the Northern and Central zones used to keep stocks of cotton high enough to feed their machines for one year or more.²² Vaz refers to a decision of the Meeting of the Board of Directors of the Companhia Cedro and Cachoeira in 1897 to suspend the

purchase of local cotton "as the company had stocks for four or five months".²³ However, the cotton, if kept in stock for a long time, risked turning yellow and impairing the production of cloth of good quality. Therefore any interruption or reduction of work in a cotton mill could, under certain circumstances, cause loss of the raw material in stock. Besides the cost of maintenance of large stocks, other procedures used by companies to provide their mills with cotton resulted in the conversion of some costs of raw material into fixed costs. The Companhia Cedro e Cachoeira, for instance, used to cultivate part of the cotton consumed in its mills as well as financing local cotton growers. And, when an agreement with local producers could not be reached to the company's satisfaction, cotton was bought in the northern regions of the country, usually in large amounts.²⁴ Similar procedures were quite probably adopted by other mills in Minas Gerais.

As for labour, it seems that the costs associated with the dismissal of workers had increased in the second half of the nineties. In fact, there is evidence that competition in the labour market - at least for those cotton mills established relatively close to the place where the new capital, Belo Horizonte, was being built - had intensified in the period. Difficulties in recruiting and keeping its workers in 1896 are emphasized in the report on the Cedro cotton mill, one of the three factories of the Companhia Cedro e Cachoeira. A significant decrease in the amount of cloth produced during this year by this cotton mill was blamed on the "inconstancy of our workers" due to the "fallacious promises from new cotton mills",²⁵ which forced the factory to work under-staffed and to employ inexperienced workers. This problem was said to have been solved by the end of the year as "now, our workers are convinced that no other factory can offer more advantageous conditions than ours".²⁶

The report of the Companhia Cedro e Cachoeira also shows that the Companhia Industrial Sabarense was not the only Mineiro textile company to experience sales problems in

1896. Difficulties met by the company in selling its products that year were explained to the shareholders as the result of an unexpected change in consumers' preferences. According to the Board of Directors, heavy grey cloth was much more in demand than the light and plain white cloth which was being mostly produced in the company's cotton mills.²⁷ Such change in demand, according to the managers of the company, could not be met by a corresponding change in supply in the short term. The spinning department of the Cachoeira cotton mill, for instance, would be unable to produce the quantity of yarn necessary for the production of heavy cloth. The spinning machines were very old, in a very bad state of repair, and required a relatively large number of workers to operate them. The report for this mill mentions that some looms had been kept sporadically out of action in 1896 because there was not enough yarn to feed them.²⁸ Such comments illustrate the adverse effects of the policy followed by the company in previous and more prosperous periods already mentioned in this work. Pressure from shareholders for distribution of most of the profits as dividends left the company without the necessary funds to provide adequate maintenance of its machines.

It is not possible to verify whether the explanation from the Board of Directors for the high stocks of unsold cloth at Cachoeira was correct. If it was correct and the problems with sales resulted from a sudden preference of consumers for heavier cloth, one would have expected the São Vicente cotton mill to have turned to the production of this kind of cloth as this mill was not handicapped by old and deteriorating machinery. In contrast to Cachoeira, São Vicente was a very new cotton mill with machinery "of a superior quality and very well kept"²⁹ and production "able to compete with that of any other cotton mill"³⁰. However, in spite of the difficulties that the company was having in selling the white and plain cloth produced by São Vicente, no measures were taken to substitute the production of heavy grey cloth for the light white cloth.

In fact, the investment made by the Companhia Cedro e Cachoeira in the purchase and enlargement of the São Vicente cotton mill proved to have been a mistake. This decision was made in the very early nineties, a period of easy sales.³¹ However, when this mill started working regularly, the company was already experiencing difficulties in selling all the cloth produced in its two other mills.³² In the late nineties São Vicente became an extra burden for the company, as it was not possible to find buyers for its products. The situation of São Vicente became so difficult that a General Meeting of Shareholders authorized the Board of Directors either to sell the cotton mill or to transfer its machines to the other two factories.³³ However none of these measures could be carried out because, according to the Board of Directors, no buyer for the cotton mill was found and the company could not incur the expenses required in transferring its machines to another cotton mill.³⁴

In order to increase the sales of the São Vicente and Cachoeira mills three new warehouses were established at different places in the state. However, by the end of the year, the establishment of warehouses was not seen as an ideal solution for expanding sales as it involved many expenses which could be avoided through direct sales.³⁵

As another attempt at enlarging sales in a competitive market, the company decided to diversify and improve the quality of its products. In order to achieve such objectives, the Board of Directors proposed a general overhaul of the Cachoeira mill's machinery and the establishment of a dye-house.³⁶

The poor performance of sales in 1896 reduced the circulating capital of the company below the level required by the current costs of production. The solution proposed by the Board of Directors this time was neither the raising of a loan in order to finance such expenses - as debts with interest rates were already a great burden for the company³⁷ - nor an increase in the company's capital, but a cut in

dividends. Announcing the profits of the company in 1896, the Board urged shareholders not to decide on a distribution of all the profits as dividends and reminded them that "the dividend of 1895 is not yet paid, let alone the dividend of 1894".³⁸ The shareholders agreed to give up part of their dividends but not all of them.³⁹ Part of the dividends of this year became new debts for the company. In fact, at the end of 1897 the company still owed its shareholders some of the dividends distributed in 1896.⁴⁰

The evidence presented shows, once more, that neither profits - as registered in the accounts - nor dividends may be used as a reliable indicator of the performance of the old companies of Minas Gerais. In fact, in spite of all their difficulties in sales, the Companhia Cedro e Cachoeira, as well as the Companhia Industrial Sabarense, presented profits at the end of the year.

The profits of the Companhia Industrial Sabarense in 1896 corresponded to 14.6% of the company's capital. The company's Board of Directors proposed that 8% of those profits were distributed as dividends.⁴¹ Profits of 14.6% of the capital and the payment of a dividend of 8% might suggest that the company was doing reasonably well. However, an appraisal of the company's performance based only on such data would be misleading and would contradict the previous information about the difficulties faced by the company that year as the result of its poor performance on sales.

In fact the proposal of the Board of Directors was that a dividend of 8% was paid in cloth, except for those who were entitled to 100 mil réis or less, who would be paid in cash.⁴² This proposal was supported by the Fiscal Board⁴³ and approved by the General Meeting of Shareholders on June 20, 1897.⁴⁴

From what was said, it is clear that 1896 was not a favourable year for the companies Cedro e Cachoeira and Industrial Sabarense. The basic problem faced by both

companies was that of insufficient demand for their products. However difficulties in selling all their products had not started that year as the result of a sudden change in demand. These difficulties had begun beforehand as was seen in Chapter 4.⁴⁵ The adverse consequences of the policies then followed by these companies of keeping their cotton mills working at full capacity, and distributing almost all of their profits as dividends, were now being felt.

5.3 The performance of the cotton textile industry of Minas Gerais in 1897 and some references to the performance of this industry in Rio de Janeiro.

There is no indication that the adverse condition faced by the cotton textile industry of Minas Gerais in 1896 - as suggested by the performance of the cotton mills owned by the Companhia Industrial Sabarense and Companhia Cedro e Cachoeira - had improved in 1897. In fact no changes in demand took place during this year to relieve the industry from the burden of unsalable stocks. There is also evidence that the industry of Minas Gerais was not the only one to face problems this year. Information available on the performance of some cotton mills in Rio de Janeiro during 1897 suggests that this year was specially difficult for the industry of this state. It even suggests that the conditions faced by the cotton textile industry of Rio de Janeiro were worse than those faced by that of Minas Gerais.

The Companhia Fabril São Joaquim, for instance, had its cotton mill closed down from June 6, 1896 to May 18, 1897. The machinery was said to be in a very good state when the factory started working again which, according to the Board of Directors "justifies and explains the expenditure made on its maintenance".⁴⁶ Even though it had been reopened in May, the mill only started working regularly and at full capacity in October, due to the time required for recruiting and training workers. The example of São Joaquim illustrates the

costs involved in closing down a mill temporarily. However one would expect that, being located in the city of Niterói, and quite close to the city of Rio de Janeiro where there was a great concentration of cotton mills, these costs - at least those concerning to the recruitment and training of new workers - were lower than those which would be faced by a Mineiro mill under the same circumstances.

Another company which was forced to suspend work in its cotton mill during 1897 was the Companhia de Fiação e Tecidos Andorinhas. This company's cotton mill was closed down from July to October.⁴⁷ The fact that those cotton mills had to be shut down temporarily suggests that proceeds from sales were not enough even to cover their variable costs of production. However one has to bear in mind that the share of variable costs in total costs of production were quite probably higher in Rio de Janeiro than in Minas Gerais.

No clear explanation for the problems faced by the cotton mills of Rio de Janeiro in 1897 was given by the entrepreneurs. There are vague references to a crisis in business and some of them refer to great competition in the market, increased prices of raw materials and decreasing prices of cloth. The report of the Companhia São Pedro de Alcântara, for instance, refers to a "crisis in our market which continues to intensify and which is bringing about serious difficulties to the cotton mills ..."⁴⁸ The report of the Companhia Fiação e Tecelagem Carioca presented in March 1898 mentions "the difficulties of the last year which were common to all industries of our kind".⁴⁹

Specific complaints about the high prices of cotton wool not followed by corresponding increases in the price of cloth, are found in the reports of the Companhia de Fiação e Tecidos Mageense⁵⁰ and Companhia Fábrica de Tecidos São Pedro de Alcântara⁵¹ In the latter is mentioned the unsuccessful attempts made by the Board of Directors "to make the price of cloth follow the rise in the price of

cotton wool" a desideratum which could not be attained because of the competition in the market.⁵²

It is reasonable to expect that a sudden increase in the price of cotton would affect more adversely the cotton mills established in the state and in the city of Rio de Janeiro than those in Minas Gerais. As the state of Rio de Janeiro has never been a great producer of cotton, its mills have to rely on cotton from the Northeast. Contrary to what happened in Minas Gerais, most of the costs of raw material in the cotton mills in Rio de Janeiro were variable costs. Therefore, an increase of 26% in the average annual price of the cotton exported in 1897⁵³ may illustrate one of the difficulties faced by the mills of Rio de Janeiro this year, and explain, at least in part, the decision taken by some companies to close down their mills temporarily.

It is quite reasonable to assume also that the adverse conditions of demand faced by the textile industry of Rio de Janeiro were, at least in part, the result of a crisis in the coffee export sector which had started in the second half of the nineties. However any definite conclusions about the difficulties faced by the textile industry of Rio de Janeiro would require additional investigation which goes beyond the scope of this work. The evidence presented so far does not corroborate the conclusion found in the literature that the cotton textile industry had increased production in the period 1896-1898, encouraged by higher protection and relatively lower costs of production.

Contrary to what happened in Rio de Janeiro, there is no evidence of any cotton mill in Minas Gerais being closed down for a long period of time or even suspending work temporarily during 1897. However, information available on the performance of some cotton mills shows that the unfavourable conditions of the previous year had intensified in 1897. This is illustrated by the fact that many textile companies of Minas Gerais did not distribute dividends under any form that year. If the distribution of high dividends

alone should not be taken as a signal of prosperity of a company, the failure to distribute any dividend at all certainly suggests an exceptionally unsatisfactory performance. As has been pointed out before, the typical Mineiro shareholder of the nineteenth century pressed for the distribution of profits as dividends whatever the financial conditions of the company. So, it is reasonable to assume that only very poor results at the end of the year would convince a Meeting of Shareholders to agree that a dividend could not be distributed under any form.

The Companhia de Fiação e Tecidos União Lavrense, for instance, ended the year 1897 with losses and therefore could not be expected to distribute any dividends.⁵⁴ In the Companhia Cedro e Cachoeira, in spite of the 317 contos shown as profit at the end of the year,⁵⁵ the Board of Directors strongly advised that all these profits should not be distributed as dividends.⁵⁶ On the contrary, it recommended that they should be used to reinforce the company's circulating capital, which was considered to be "absolutely insufficient".⁵⁷ The company's Fiscal Board gave its support to the recommendation of the directors, arguing that the company should not be burdened with more debts, when the dividends distributed in 1896 had not yet been fully paid.⁵⁸ The Companhia Industrial Mineira distributed a dividend as low as 3%.⁵⁹

Such unsatisfactory results were explained to the shareholders as the inevitable outcome of the prevailing crisis. In the report of the Companhia de Fiação e Tecidos Lavrense, this crisis was described as exceptional:

"...reaching all the branches of the administration, paralysing all movements towards progress, destabilizing the whole economic system and not sparing any industry."⁶⁰

In such an exceptional crisis "all the efforts to overcome it are insufficient"⁶¹ and therefore "the results of last year did not fulfil our wishes."⁶² The report of the

Companhia Cedro e Cachoeira refers to "the general state of uneasiness in commerce"⁶³, to the "difficult times"⁶⁴; "the dismay and shortage of money in the trade"⁶⁵ and "the bad financial situation of the country"⁶⁶, a situation in which the country has never been before "even in the worst times of the monarchy."⁶⁷

The entrepreneurs blamed this crisis for all problems faced by the textile companies of Minas Gerais in 1897. As stated in the annual report of the Companhia de Fiação e Tecidos União Lavrense:

"(the crisis) did not spare the progressive state of Minas Gerais, where the problem in disposing of its production is felt as the result of a lack of the means of exchange".⁶⁸

The general shortage of money not only jeopardized sales, but also brought additional difficulties to companies by restricting access to alternative sources of finance. Increasing pressure from the creditors of the Companhia Indústria do Biribiry to make the company pay its debts was seen by the management as a result of the financial crisis in the country. Also the probable difficulties to be faced in obtaining a loan at low interest rates "given the squeamish state of the country's finances"⁶⁹ were mentioned by the company's Director.

As long as the poor performance of the textile companies was seen as the result of a general and exceptional crisis over which the entrepreneurs did not have any control, there was not much that could be done to solve the difficulties. There was no alternative use for the investment already made. As seen in the previous section, the attempt by the Companhia Cedro e Cachoeira to sell the São Vicente cotton mill was unsuccessful as no buyers for the factory were found. In such circumstances and considering the high fixed costs of production in a Mineiro cotton mill and the possibility of paying dividends in cloth, the best policy to be followed by any individual firm was to keep producing at the lowest

possible cost, and to try not only to keep its share in the market but also to enlarge it and, if necessary, to resort to additional sources of financing to keep its factory working. That was, for instance, the policy adopted by the Companhia Cedro e Cachoeira in 1897.

The amount of cloth produced by the Cedro cotton mill - one of the three cotton mills then owned by the companhia Cedro e Cachoeira - was, in 1897, 22.2% higher than that produced in the year before.⁷⁰ However, in this same year, the value of the stock of unsold cloth kept by this factory increased by 57.2%.⁷¹ Notwithstanding the obvious difficulties experienced in selling the cloth, the amount produced in 1897 was considered unsatisfactory as it was below the maximum quantity which could be produced with the available machinery.⁷²

In so far as there was no improvement in demand, and the policy of keeping the cotton mills working at full capacity was adopted by most companies, the problems faced by the industry would tend to aggravate as an increased supply would force prices further down.

The crisis was not only blamed for the smaller amount of cloth sold in the market, but also for the increasing difficulties in obtaining payment for the cloth sold. Arrears in payments and payment "in kind" were common in 1897, as shown by this passage in the report of Cedro cotton mill's performance in this year:

"As a local business was received as payment by the company, a shop was established in the same building. This arrangement has been giving excellent results. This shop provides groceries to the workers, helps the factory to make its payments and has been a great help in the sale of business' shares and many different items which we have been forced to accept as payment."⁷³

Such difficulties in obtaining payments in cash and on time led to special care in canvassing new customers. In 1897,

the new sales representatives employed by the Companhia Industrial Sabarense - as part of a policy of enlarging the market for the products of the Marzagão cotton mill - were given "strict orders to sell only to those generally known as guaranteed customers, because it is better to have the cloth in stock than with doubtful customers"⁷⁴

A crucial need to enlarge the market for their products seems to have induced some companies in Minas Gerais to diversify their production by starting, or in some cases increasing, the production of coloured textiles.

In fact, coloured cloth was already being produced in Minas Gerais by a few cotton mills before 1897. These cotton mills either imported dyed yarn or dyed the cloth themselves. The Cedro cotton mill was said to produce coloured cloth in 1883,⁷⁵ and the report for 1884 mentions a significant increase in the production of dyed cloth by this cotton mill.⁷⁶ Even though a dye house is mentioned in the report for 1885 it is quite possible that part of the dyed cloth had been produced with foreign dyed yarn. In fact in this year, the cost of foreign yarn in this cotton mill was responsible for 7% of the total cost of raw materials.⁷⁷ The Companhia Industrial Mineira also had a dye house established in its cotton mill as early as 1889.⁷⁸ A dye house had been established in the Companhia Fiação e Tecidos União Lavrense's cotton mill that year. According to the company's Board of Directors, the establishment of this dye house would allow a cut in expenditure on imports which, "given the exchange rate fluctuations, had become a burden on the price of cloth"⁷⁹ The Companhia Cedro e Cachoeira also decided to establish a dye house in the Cachoeira cotton mill. This dye house was expected "to help sales, as production will be more diversified."⁸⁰ Finally there is some indication that the production of dyed cloth had significantly increased that year in the Companhia de Fiação e Tecelagem Industrial Mineira.⁸¹

The main purpose of different factories - which already

produced coloured textiles - in establishing their own dye houses was to reduce the costs of production of dyed cloth by producing internally the coloured yarn instead of importing it. This decision to substitute imports was certainly induced by the significant devaluation of the exchange rate which took place in 1897⁸² as well as by increased tariffs on foreign dyed yarns.⁸³

In spite of the emphasis given to the effects of the prevailing general crisis - through its pernicious effects on the demand for their products - as the major cause for the bad performance of their cotton mills, some companies refer to other problems which, in one way or another, contributed to the poor results presented at the end of the year.

The Companhia Cedro e Cachoeira's Board of Directors, for instance, called the attention of the shareholders to the bad state of repair of the machinery in the cotton mills of Cedro and Cachoeira. According to this Board, with such machinery it would be impossible for the products of these two cotton mills to compete successfully in the market.⁸⁴ The losses presented in the annual balance of the Companhia Fiação e Tecidos União Lavrense at the end of 1897 were explained to the shareholders as resulting in part from problems with the supply of raw material. Not only had the prices of cotton risen during the year, pushing costs upwards, but its supply had been so inadequate that, quite often, the cotton mill had to stop working because there was no cotton available.⁸⁵ And the Companhia de Fiação e Tecelagem Industrial Mineira blamed the increased costs of production during 1897 on municipal and state taxes, the devaluation of the exchange rate and a rise in the freight charges of the Estrada de Ferro Central do Brasil.⁸⁶ A rise in the freight charges, which was followed by the imposition of other taxes by the railway, "increased significantly the cost of all our raw materials, and laid an extra burden on the export of products from our factory, which were already heavily taxed."⁸⁷ Such complaints from a company which had

its cotton mill in the south of the state, in a city relatively close to the border of Minas Gerais and Rio de Janeiro, on the doorstep of a railway station of the Estrada de Ferro Central do Brasil, connecting it directly to the city of Rio de Janeiro, are quite illustrative.⁸⁸ They picture the higher costs which would be involved in transporting cloth from other states to the interior of Minas Gerais to sell to a population spread in rural areas and small villages. They show also that, for the same reasons, most of the Mineiro producers would be unable to compete in the markets of other states.

The evidence presented suggests that no changes took place in 1897 which would increase the demand for textiles and bring about general relief to the Mineiro industry. The basic problem of the industry in this year was still the same as in previous years: it was over extended in relation to existing demand. As long as companies pursued the policy of having their cotton mills producing at full capacity, stocks increased and prices continued to fall. There is no evidence that conditions on the demand side had deteriorated significantly in 1897. This does not mean that the continuous reference by entrepreneurs to a current crisis should be ignored, even though the word crisis was used by entrepreneurs to describe any unfavourable conditions for business. In spite of the fact that most of the Mineiro cotton mills were established in non coffee areas and sold their products to local markets, these cotton mills were not immune to difficulties experienced in coffee-growing areas during the period. Those difficulties would affect the demand for other Mineiro products outside the state and consequently the local demand for Mineiro cloth.

5.4 1898, a year of greater difficulties for the cotton textile industry of Minas Gerais.

According to the Companhia de Fiação e Tecidos União Lavrense's Board of Directors, a crisis persisted in 1898,

"a terrible crisis which reaches all the branches of the commerce, the industry and the agriculture of our country" a crisis which "seems to wish to sink all the undertakings".⁸⁹ For the Board of Directors of the Companhia Cedro e Cachoeira, the industry of Minas Gerais suffered the effects of two crises in 1898. A new crisis - this one restricted to the state - had been imposed upon a general crisis already prevailing in the country. Addressing the shareholders, the Board describes this latest crisis and explains its origins. Its statement corroborates the point made above as to the vulnerability of the Mineiro economy and the Mineiro cotton textile industry to problems experienced by other states and their adverse effects on outside demand for products from Minas Gerais.

"As you know, with the low exports of cattle and the poor agricultural production, the crisis which we have been going through has been intensified in this zone causing a paralysis in trade and making it very difficult - given the complete shortage of money - to receive payment even from our best and most reliable customers."⁹⁰

In contrast to the observations contained in the reports of these two companies, the directors of the Companhia de Fiação e Tecelagem Industrial Mineira congratulated the shareholders on "the excellent financial position of the company"⁹¹ at the end of the year. And, contrary to the situation described by the Companhia Cedro e Cachoeira, this excellent financial situation was seen as the result of an expansion of sales such that "the great stock at the end of 1896 has already disappeared."⁹²

However such an expansion of sales by the Companhia de Fiação e Tecelagem Industrial Mineira does not contradict the observation made by the directors of the Companhia Cedro e Cachoeira as to an intensification of the difficulties with sales in the state of Minas Gerais. On the contrary, it confirms that the consumer market for cloth in Minas Gerais did not improve in 1898. In fact, the report from the Companhia de Fiação e Tecelagem Industrial Mineira announces

that the increased sales in 1898 were not due to any improvement in demand for cloth in Minas Gerais, but to the success achieved by the company in searching for new markets outside the state. However, sales outside the state were seen as a temporary solution, "while the interior's prosperity of yore does not come back"⁹³, because they involved higher costs due to the "excessive freight charges"⁹⁴ demanded by the Estrada de Ferro Central do Brasil, as well as the export taxes levied by the government of the state of Minas Gerais. Even though there is no mention in this report as to the destination of such exports, there is evidence that products from the Industrial Mineira cotton mill were being sold in Rio de Janeiro.⁹⁵ This cotton mill was, of all the cotton mills established in Minas Gerais, the best located in relation to the markets of Rio de Janeiro.

The success of the Companhia de Fiação e Tecelagem Industrial Mineira in exporting its products suggests that an improvement had taken place in 1898 in some markets outside Minas Gerais and specially in Rio de Janeiro. In fact, as was seen before, even though conditions prevailing in the city and state of Rio de Janeiro in 1896 and 1897 had been unfavourable to local producers, forcing some of them to suspend work in their cotton mills temporarily, there is evidence that the performance of some Rio de Janeiro cotton mills improved in 1898.

The Companhia Fabril São Joaquim, which had been forced to close down its cotton mill from June 1896 to May 1897 reported to its shareholders that in 1898 "the financial situation of the company had improved noticeably."⁹⁶ And the Companhia Fiação e Tecelagem Carioca, which also had one of its factories closed down for six months in 1897, announced a dividend of 10% in 1898 and informed its shareholders that the results obtained by the company during this year were quite satisfactory.⁹⁷ The report from the Companhia de Fiação e Tecidos Aliança was not so optimistic, as proceeds from sales that year had decreased. This

decrease was explained by the Board of Directors as the result of a "terrible drought " in the northern states which "reduced significantly our transactions with these states" and to an abrupt rise in the external value of the mil réis, which:

"not only forced a reduction in prices but also interfered with business, because customers expected greater reductions as they thought such a rise in the exchange rate would continue"⁹⁸

However, if the Companhia Fiação e Tecelagem Industrial Mineira was able to improve its financial situation in 1899 by exporting part of its products to Rio de Janeiro, a similar solution was certainly not open to most of the cotton mills in Minas Gerais at this time. In fact, for most of the Mineiro cotton mills, access to the markets of Rio de Janeiro would involve additional costs which would reduce their competitiveness.

Although adverse conditions on the demand side had persisted in 1898, the policy of maintaining high levels of production was still followed by most companies in Minas Gerais. However, by this time, it was already being realized by some entrepreneurs that, given the situation of the market, the maintenance of high levels of production might not be the wisest policy to apply.

The amount produced by each of the Companhia Cedro e Cachoeira's cotton mills increased in 1898. In Cedro the quantity produced was 6.6% higher than in 1897 and in Cachoeira 1,4%. In São Vicente the quantity produced increased by 13.5%.⁹⁹ However, this time the increase verified in São Vicente was not praised by the Board of Directors. At the end of the year the adverse effects of pursuing an indiscriminate policy of increasing the level of production started becoming visible. Referring to the effects of the unsatisfactory performance of the São Vicente cotton mill in 1898 on the total profits of the company, the Board of Directors concluded that, in spite of the increase

in production , "with that cotton mill closed down, the company would have had better profits"¹⁰⁰ The following comments from the Board of Directors show the reasons why, for the first time in the history of the company, an increase in production was not seen with satisfaction by the managers:

" ...having this cotton mill produced more, it gave us, in consequence, more expenses with capital invested in cotton, in cloth, in stocks, etc. This increased production also brought about higher expenses with depositors, discounts to customers, and advertisement. However, the profits (of this cotton mill) barely cover its expenses in the company's office."¹⁰¹

Another cotton mill to increase the amount produced in 1898 was the Companhia Industrial Sabarense's Marzagão cotton mill.¹⁰² In order to promote the sale of this increased output, as well as the sale of the cloth in stock, a reduction of 10% was made in price. The promotion of immediate sales became urgent as the company needed financial resources to pay its debts, which consisted mainly "of payment in cash and at interest of cheques which had been given to the shareholders as payment of the dividends of 1895".¹⁰³ The fact that the company had not yet, in 1898, been able to pay the dividends distributed in 1895 shows the difficulties faced by this cotton mill in previous years. It also corroborates once more some points which have been made in this work. Dividends cannot be taken as yardstick of prosperity of the early Mineiro mills and, given the policy of distribution of dividends adopted by most of the Mineiro companies, the payment of dividends tended to become an extra burden in times of adversity.

The increase in the quantity produced by the Companhia Fiação e Tecidos União Lavrense's cotton mill in 1898 was also quite significant. In fact, the amount of cloth produced was 116% higher than the amount produced in the previous year, and in the year before.¹⁰⁴ No evidence is available which could clarify the sources of such an

increase, as there is no mention whatsoever in the annual report of 1897 of any expansion in productive capacity taking place in the company's cotton mill in this year. The value of the machinery installed in the mill, registered in the accounts of the company at the end of each six months, is exactly the same in the years 1897 and 1898.¹⁰⁵ However this spectacular increase in the amount produced - as happened in the Companhia Cedro e Cachoeira - was not greeted with any enthusiasm by the Board of Directors. On the contrary, the report for 1898 was specially pessimistic. The total profits of this year were seen by the Board of Directors as "diminutive"¹⁰⁶ and the payments received as "insignificant",¹⁰⁷ and still unable to relieve the company of its debts.¹⁰⁸

Considering the evidence presented on the performance of some cotton mills in 1898, one would not have expected the textile companies of Minas Gerais to have been able to pay satisfactory dividends to their shareholders that year. However this is a hypothesis which cannot always be verified. Even when dividends were registered in the accounts as dividends distributed, it is not possible to know if they were paid, when they were paid and how they were paid, unless additional information is provided. In the case of the Companhia Industrial Sabarense, it was proposed by the Board of Directors that 60 contos, out of the profits of 74 contos made in 1898, be distributed as dividends. Such a proposal would imply the payment of dividends of 10%, which could indicate a satisfactory return on the capital invested. However as explained in the company's report for 1898:

"...the profits of 73:524\$076 represent debts (towards the company) and cloth. As it is not possible at once to settle these debts and to sell this cloth, this Board thinks that a dividend of 10% should be distributed in cloth, paying in cash the shareholders who have five or less shares, as has been done in previous years."¹⁰⁹

The evidence presented shows that by 1896-1898 the times of

prosperity of the cotton textile industry of Minas Gerais were over. The supply of cloth was excessive in relation to the demand. Prices decreased and stocks of unsold cloth increased. The policy adopted by individual companies of keeping high levels of production depressed prices further. Such difficulties seem to reveal the joint effects of problems on the demand side as well as on the supply side. Over-optimistic expectations based on the dividends distributed by the Mineiro companies - which did not always reveal the real performance of these companies - led to excessive investment in the early nineties. On the demand side the Mineiro economy suffered, through its exports to other states, some adverse effects of the crisis taking place in the coffee export sector. A decrease in real income in the coffee export areas in this period¹¹⁰ reduced the demand for Mineiro products and, indirectly, affected the local demand for Mineiro cloth.

5.5 Investment in the cotton textile industry of Minas Gerais during the period 1896-1898.

There is no evidence of any joint stock company being incorporated in 1896-1898 with the purpose of establishing a new cotton mill in Minas Gerais. However, this does not imply necessarily that there was no investment in the Mineiro cotton industry in those years. Expansion in the productive capacity of the sector may have taken place, either through the establishment of new cotton mills by companies or partnerships incorporated in previous periods, or through the enlargement of the productive capacity of old cotton mills. However, taking into account the performance of the industry in the period, it seems quite improbable that significant investment had taken place inside old cotton mills. On the contrary, it is quite possible that most of the companies already established were unable even to maintain properly the productive capacity of their cotton mills in 1896-1898.

As for investment in new cotton mills, although no information is available on the construction and inauguration of the mills set up by the companies constituted in the post "Encilhamento" period, it is quite possible that investment expenditure was still being made by some of these companies in 1896-1898. A survey conducted by the government of the state in 1895-1897¹¹¹ also mentions two cotton mills which were then being established by limited partnerships of capital: the Rio Manso cotton mill in Rio Manso, district of Diamantina, and the Bonfim do Riachão cotton mill in Coração de Jesus, near Montes Claros. This survey also refers to other cotton mills which were then being planned: the Jequitahy and the Inhahy cotton mills in the district of Montes Claros, and another one in São João Evangelista, in Peçanha. However, if these cotton mills were in fact established, they did not survive. In fact none of them is mentioned by any other survey carried out since.

In the annual reports of the Companhia Cedro e Cachoeira, there are repeated complaints about the bad state of repair of the machinery as well as of the system of water supply in the Cedro and Cachoeira cotton mills. In 1896, the bad condition of the gutter pipes and sluice at Cedro's were specially emphasized. However any general overhaul of the cotton mill "which is very old and therefore in need of much repair and rebuilding"¹¹² had to be postponed as it would be "very expensive".¹¹³ In this same year the state of the machines in Cachoeira - mainly those of the spinning department - was seen as responsible for the decrease in the amount produced by this cotton mill.¹¹⁴ The report for the Cedro cotton mill in 1897 mentioned once again that repairs to the machinery and to the water supply system were urgently needed and the replacement of some machines required. Referring to the gutter pipes which, even though quite damaged, were still working, the report added that expenditure on repairs should be postponed "until better times".¹¹⁵ And the observation, reproduced below, found in the report of the Cachoeira cotton mill for 1897, is quite illustrative. It shows not only that this mill had been

losing its productive capacity as a result of the company's inability to finance the maintenance and replacement of its machinery properly, but also a great concern with the reduction of costs:

"...the cotton mill suffers very much from the lack of new machines to replace some old ones which are in a very bad state of repair, mainly in the spinning department. However, in spite of your authorization ...and the repeated complaints from the honourable manager, such improvement could still not take place. Firstly, because of our financial circumstances, it is advisable to postpone for some time any tying up of capital. Secondly, any overhaul of the machinery has to be made by a very competent person so that it may be done with economy, the big parts of each machine being retained whenever possible. And it is not easy to find a person like that."¹¹⁶

It was only in 1898 that modest repairs to the machinery and to the system of water supply started. In the Cedro cotton mill, where the water conduits were considered to constitute not only "a serious danger to the factory ... because of their precarious state",¹¹⁷ but also a source of extra expenditure, as they involved a waste of water in the dry season, work was restricted to the replacement of the old wooden pipes with iron ones. Repair of the sluice "which becomes more damaged each year"¹¹⁸ was postponed to 1900 so that "many expenses are not accumulated in one year"¹¹⁹. Also the report for the Cachoeira cotton mill in 1898 mentions the old and damaged machines and the measures taken by the company during the year towards a general overhaul of the mill, an overhaul planned with the utmost economy. For the weaving department, whose looms were said to be of "an old system", only those parts which were absolutely necessary were ordered, so that with minimum expenditure the machines would still be able to work for a long time. In fact, very few new machines were ordered. Among these were some machines necessary for the production of dyed cloth.

Its concern with the expenditure involved in maintenance and repairs led the company to establish a small foundry at the

Cedro cotton mill with the purpose not only of transforming and selling scrap iron, but also of producing locally simple and heavy machines which would otherwise have to be imported.¹²⁰

It is quite probable that similar problems to those faced by the Companhia Cedro e Cachoeira in maintaining the productive capacity of its two cotton mills, Cedro and Cachoeira, had also been felt by other companies. The annual report of the Companhia Industrial Sabarense for 1898 mentions the great need for an overhaul of the machinery of the Marzagão cotton mill "which being old and damaged, has required great expenditure with repairs and foundry works".¹²¹

5.6 Conclusions

a) 1896-1898 may be characterised as a period of expansion of production in the cotton textile industry of Minas Gerais following the period of expansion of investment in the first half of the decade.

b) Such increase in production resulted from the concerted effects of previous investment and the widely adopted policy of keeping the cotton mills operating at their full capacity.

c) As happened in previous periods, the Mineiro producer was still protected from outside competition by transport and distribution costs. Therefore any increased protection granted to the domestic producer by a devaluation of the exchange rate did not increase the local demand for Mineiro cloth. Besides, given the competition in the local market, Mineiro producers could not benefit from this increased protection by raising their prices and margins of profits.

d) Transport costs restricted the market for most Mineiro cloth to the local market within the state, except for some

mills established close to the borders with other states.

e) As local demand for textiles did not follow the increase in supply, prices fell and stocks of unsaleable cloth increased in the mills depressing the prices further.

f) Notwithstanding the unfavourable conditions of demand, producers kept production at levels higher than those which could be absorbed by the local market. The adoption of such a policy was the result of the low variable costs of production of the Mineiro mills and the pressure of shareholders for dividends - even if such dividends were to be paid in cloth.

1. Normano (1968,100). Normano characterizes the period 1885-1914 as "the period of creation of Brazilian industry". However, taking into account that only 11% of the total capital of all the industrial establishments surveyed in 1920 corresponded to establishments founded from 1895-1904, while 55% of this capital was in establishments founded after 1904, the author concludes: "we may consider Brazilian industry as the result of a fifteen year development, 1905-1919".
2. Ministério da Agricultura, Indústria e Comércio, Diretoria Geral de Estatística (1927,LXIX), "Estabelecimentos industriais segundo a época da fundação das empresas".
3. Simonsen (1973,16).
4. 51.2% of the establishments surveyed employed 4 or less workers and 49.4% of the establishments did not have any motor. Percentages calculated from data in: Ministério da Agricultura, Indústria e Comércio, Diretoria Geral de Estatística (1927,60,72).
5. Suzigan (1984,321-327).
6. Averages and percentages calculated from data in: Suzigan (1984,321-327).
7. Villela and Suzigan (1973,128).
8. Ibid.
9. The authors refer to an intensification of industrial growth which would have taken place in 1896-1899. Later on in their work, they mention that the industrial spurt of the nineties was interrupted at the end of 1898. Villela and Suzigan (1973,128,130).
10. Data on Brazilian imports used by the authors were compiled from: Jornal do Comércio, Retrospecto Comercial, various issues. See: Villela and Suzigan (1973,129).
11. Villela and Suzigan (1973,129-130).
12. Fishlow (1972).
13. Fishlow (1972,312).
14. Fishlow (1972,313-314).
15. Fishlow (1972,314).
16. Fishlow (1972,316-318).
17. See, for instance: Versiani (1980a), and Suzigan (1984).

18. Companhia Industrial Sabarense (1896), Relatório da Diretoria.

19. Ibid.

20. Ibid.

21. Ibid.

22. Giroletti (1987,22-23).

23. Quotation from the proceedings of the Meeting of the Board of Directors of the Companhia Cedro e Cachoeira on September 1,1897, reproduced in: Vaz (1990,205).

24. On December 12,1898 the Board of Directors decided to suspend financing local producers and to send a reliable agent to buy 4,000 cotton bales in the north of the country. See: Vaz (1990,205).

25. Companhia Cedro e Cachoeira (1896), Relatório da Diretoria, "Fábrica do Cedro".

26. Ibid.

27. Unsold light white cloth was said to have been piling up in Cachoeira cotton mill, as well as in São Vicente. Companhia Cedro e Cachoeira (1896), Relatório da Diretoria, "Fábrica do Cedro" and "Fábrica de São Vicente" .

28. Companhia Cedro e Cachoeira (1896), Relatório da Diretoria, "Fábrica da Cachoeira".

29. Companhia Cedro e Cachoeira (1896), Relatório da Diretoria, "Fábrica São Vicente".

30. Ibid.

31. About the purchase of this cotton mill by the Companhia Cedro e Cachoeira, see Chapter 3.

32. This mill started working regularly on June 9,1894. See: Companhia Cedro e Cachoeira (1894), Relatório da Diretoria, "Fábrica de São Vicente".

33. A mention of such a decision taken by the shareholders is found in: Companhia Cedro e Cachoeira (1896), Relatório da Diretoria, "Escritório Central".

34. Ibid.

35. The annual report for this year mentions the establishment of new warehouses in Calháu, Montes Claros and Dorés do Indaiá. See: Companhia Cedro e Cachoeira (1896), Relatório da Diretoria, "Escritório Central". However a warehouse had already been established in Montes Claros in 1887 according to information in: Companhia Cedro e

Cachoeira (1887), Relatório da Diretoria, "Os cinco anos passados".

36. Companhia Cedro e Cachoeira (1896), in Relatório da Diretoria, "Escritório Central".

37. Companhia Cedro e Cachoeira (1896), Relatório da Diretoria, "Escritório Central".

38. Ibid.

39. An examination of the annual balances of 1896 and 1897 shows that the Board of Directors was able to convince the shareholders that a substantial part of the profits of this year should not be paid as dividends. In 1897 a Special Reserve Fund was created with funds which corresponded to 50% of the profits obtained in 1896. See: Companhia Cedro e Cachoeira (1896), Balanço Geral em 31 de dezembro, and Companhia Cedro e Cachoeira (1897), Balanço Geral em 31 de dezembro.

40. According to the annual balance for 1897, the company owed 82:971\$056 of the dividends distributed in 1896. These dividends corresponded to 34.9% of the profits obtained in 1896. See: Companhia Cedro e Cachoeira (1896), Demonstração da Conta de Lucros e Perdas em 31 de dezembro, and Companhia Cedro e Cachoeira (1897), Balanço Geral em 31 de dezembro.

41. Data on profits and capital in: Companhia Industrial Sabarense (1896), Balanço Geral em 31 de dezembro.

42. Companhia Industrial Sabarense (1896), Relatório da Diretoria.

43. Companhia Industrial Sabarense (1896), Parecer da Comissão Fiscal.

44. Companhia Industrial Sabarense (1897), Ata da Assembléa Geral.

45. References to the problems of sales experienced by those two companies in the post Encilhamento period 1892-1895 may be found in: Companhia Cedro e Cachoeira (1895), Relatório da Diretoria, and Companhia Industrial Sabarense (1893), Ata da Assembléa Geral Extraordinária. See also the advertisement published by this company in: Minas Gerais, November 13, 1895, p.8.

46. Companhia Fabril São Joaquim (1897), Relatório da Diretoria.

47. Companhia de Fiação e Tecidos Andorinhas (1897), Relatório da Diretoria, "Produção".

48. Companhia Fábrica de Tecidos São Pedro de Alcântara (1897), Relatório da Diretoria.

49. Companhia de Fiação e Tecelagem Carioca (1897), Relatório da Diretoria.

50. Companhia de Fiação e Tecidos Mageense (1897), Relatório da Diretoria.

51. Companhia Fábrica de Tecidos São Pedro de Alcântara (1897), Relatório da Diretoria.

52. Ibid.

53. Rate of increase of the annual average price of the cotton exported between 1896 and 1897, calculated from data on exports of cotton in: Secretaria de Planejamento e Coordenação da Presidência da República, Fundação Instituto Brasileiro de Geografia e Estatística (1987,308).

54. Companhia de Fiação e Tecidos União Lavrense (1897), Demonstração da Conta de Lucros e Perdas em 31 de dezembro.

55. Companhia Cedro e Cachoeira (1897), Demonstração da Conta de Lucros e Perdas em 31 de dezembro.

56. Companhia Cedro e Cachoeira (1897), Relatório da Diretoria, "Escritório Central".

57. Ibid.

58. Companhia Cedro e Cachoeira (1897), Parecer do Conselho Fiscal.

59. Companhia Fiação e Tecelagem Industrial Mineira (1897), Balanco em 31 de Dezembro.

60. Companhia Fiação e Tecidos União Lavrense (1897), Relatório da Diretoria.

61. Ibid.

62. Ibid.

63. Companhia Cedro e Cachoeira (1897), Relatório da Diretoria, "Escritório Central".

64. Ibid.

65. Ibid.

66. Ibid.

67. Ibid.

68. Companhia Fiação e Tecidos União Lavrense (1897), Relatório da Diretoria, "Tecidos".

69. This statement is found in the proceedings of the General Meeting of Shareholders held on November 11, 1897.

See: Companhia Indústria do Biribiry (1897), Ata da Assembléa Geral.

70. Companhia Cedro e Cachoeira (1896), Relatório da Diretoria, "Fábrica do Cedro", and Companhia Cedro e Cachoeira (1897), Relatório da Diretoria, "Fábrica do Cedro".

71. Companhia Cedro e Cachoeira (1896), Balanço Geral em 31 de dezembro, and Companhia Cedro e Cachoeira (1897), Balanço Geral em 31 de dezembro. Data on stocks, as given in the company's accounts, cannot be used to measure annual changes in the quantity of cloth kept in stock. The value of stocks, each year, was usually computed by taking into consideration the average sale price in the year. As there is evidence that the company had been reducing prices in recent years, the data on the value of stocks certainly underestimate the real changes which were in fact taking place.

72. The Cedro cotton mill produced 567,431 metres of cloth in 1897. Its machinery was said to be able to produce at least 600,000 metres. See: Companhia Cedro e Cachoeira (1897), Relatório da Diretoria, "Fábrica do Cedro".

73. Companhia Cedro e Cachoeira (1897), Relatório da Diretoria, "Fábrica do Cedro".

74. Companhia Industrial Sabarense (1897), Relatório da Diretoria.

75. Companhia Cedro e Cachoeira (1883), Relatório da Diretoria, "Produção, Matéria Prima, etc., Cedro".

76. Companhia Cedro e Cachoeira (1884), Relatório da Diretoria, "Fábrica do Cedro, Produção, Matéria Prima e etc.".

77. Ibid.

78. The evidence that there was a dye house at work in the Companhia Industrial Mineira's cotton mill is found in the company's payroll for March, 1889. This payroll registers three workers employed in the cotton mill's dye house. Companhia Industrial Mineira (1889), Folha de Pagamento, Março.

79. Companhia Fiação e Tecidos União Lavrense (1897), Relatório da Diretoria, "Casa da Tinturaria".

80. Companhia Cedro e Cachoeira (1897), Relatório da Diretoria, "Fábrica da Cachoeira".

81. Such evidence is provided by the fact that the number of workers employed in this company's dye house doubled between 1895 and 1897. See: Companhia de Fiação e Tecelagem Industrial Mineira (1895), Folha de Pagamento, Março, and Companhia Industrial Mineira (1897), Folha de Pagamento, Março. No pay rolls for 1896 are available.

82. The average annual value of the mil réis in pounds sterling in the exchange market of Rio de Janeiro decreased by 14.8% in 1897 compared to the previous year. See: Conselho Nacional de Estatística, Instituto Brasileiro de Geografia e Estatística (1939/1940,1354).

83. Tariffs on foreign yarn were increased by law number 359, December 30,1895. About the evolution of tariff duties on white, crude and dyed yarn in the last decades of the nineteenth century, see Chapter 4.

84. Companhia Cedro e Cachoeira (1897), Relatório da Diretoria, "Fábrica do Cedro" and "Fábrica da Cachoeira".

85. Companhia Fiação e Tecidos União Lavrense (1897), Relatório da Diretoria.

86. Companhia de Fiação e Tecelagem Industrial Mineira (1897), Relatório da Diretoria.

87. Ibid.

88. The railway station of Rio Novo, later on called Mariano Procópio, was opened in 1876. See: Bastos (1961,79).

89. Companhia Fiação e Tecelagem União Lavrense (1898), Relatório da Diretoria.

90. Companhia Cedro e Cachoeira (1898), Relatório da Diretoria,1898, "Liquidações".

91. Companhia de Fiação e Tecelagem Industrial Mineira (1898), Relatório da Diretoria.

92. Ibid.

93. Ibid.

94. Ibid.

95. The annual accounts in the following years register the value of stocks kept in Rio de Janeiro. See for instance: Companhia de Fiação e Tecelagem Industrial Mineira (1902), Manufaturas, matéria prima etc. em ser, em 31 de dezembro.

96. Companhia Fabril São Joaquim (1899), Relatório da Diretoria.

97. Companhia de Fiação e Tecelagem Carioca (1898), Relatório da Diretoria, "Observações Gerais".

98. Companhia de Fiação e Tecidos Aliança (1898), Relatório da Diretoria, "Situação". In fact, the average exchange rate in 1898 was lower than in 1897. However, the external value of the mil-réis increased significantly in the last quarter of the year. Annual averages of the mil réis in pence in the foreign exchange market of Rio de Janeiro in: Instituto Brasileiro de Geografia e Estatística (1939/1940,1354).

Monthly averages in: Secretaria de Planejamento e Coordenação da Presidência da República, Fundação Instituto Brasileiro de Geografia e Estatística (1986,547).

99. Companhia Cedro e Cachoeira (1898), Relatório da Diretoria, "Fábrica do Cedro", "Fábrica da Cachoeira" and "Fábrica de São Vicente".

100. Companhia Cedro e Cachoeira (1898), Relatório da Diretoria, "Fábrica São Vicente".

101. Ibid.

102. This cotton mill was said to have increased its production by 102,000 metres in 1898. Companhia Industrial Sabarense (1898), Relatório da Diretoria, "Lucros e estado financeiro da companhia". The significance of such an increase cannot be evaluated as no data for the amount produced in 1897 is available.

103. Ibid.

104. Although there is no data about the exact amount of cloth produced in 1896, the report for 1897 mentions that the amount produced this year, which was 208,497 metres, differed very little from the amount produced in 1896. See: Companhia Fiação e Tecidos União Lavrense (1897), Relatório da Diretoria, "Tecidos".

105. Companhia Fiação e Tecelagem União Lavrense (1897), Balanço Geral em 30 de junho, and Balanço Geral em 31 de dezembro; Companhia Fiação e Tecelagem União Lavrense (1898), Balanço Geral em 30 de junho, and Balanço Geral em 31 de dezembro.

106. Companhia Fiação Tecidos União Lavrense (1898), Relatório da Diretoria.

107. Ibid.

108. Ibid.

109. Ibid.

110. See: Suzigan (1984,72).

111. Partial results of this survey were reproduced in: Minas Gerais, Secretaria da Agricultura (1897,186-189).

112. Companhia Cedro e Cachoeira (1896), Relatório da Diretoria, "Fábrica do Cedro".

113. Ibid.

114. Companhia Cedro e Cachoeira (1896), Relatório da Diretoria, "Fábrica da Cachoeira".

115. Companhia Cedro e Cachoeira (1897), Relatório da Diretoria, "Fábrica do Cedro".

116. Companhia Cedro e Cachoeira (1897), Relatório da Diretoria, "Fábrica da Cachoeira".

117. Companhia Cedro e Cachoeira (1898), Relatório da Diretoria, "Fábrica do Cedro".

118. *ibid.*

119. *Ibid.*

120. Companhia Cedro e Cachoeira (1898), Relatório da Diretoria, "Fábrica do Cedro".

121. Companhia Industrial Sabarense (1898), Relatório da Diretoria, "Estabelecimento e maquinismos".

CHAPTER 6

THE PERFORMANCE OF THE COTTON TEXTILE INDUSTRY OF MINAS
GERAIS UNDER THE RECESSIONARY ECONOMIC POLICY OF
CAMPOS SALES

Introduction.

The Campos Sales period has usually been considered in the literature as an unfavourable period for Brazilian industry, an inevitable result of the deflationary economic measures applied. However, no major investigation into the industrial evolution of those years has as yet been attempted. The limited attention given to this period, as to the previous one, reflects the fact that the study of early Brazilian industrialization has focused mainly on the first stage of the process - why and when initial investment in the industrial sector took place. In this context, the study of the industry in years of relatively low investment does not appear as particularly interesting.

This chapter investigates the performance of the cotton textile industry of Minas Gerais in the years 1898-1902. Its purpose is not only to contribute to a better understanding of the effects of Campos Sales' economic policy on the development of Brazilian industry, but mainly to proceed with an investigation into early textile industrialization in Minas Gerais. As there is no evidence of any textile company being formed in 1899-1902 to invest in the Mineiro cotton textile industry, this chapter confines itself to examining the performance during this period of some companies with cotton mills established in the state.

Previous chapters have revealed plenty of evidence on the difficulties faced by the cotton textile sector of Minas Gerais since the mid nineties. The cotton mills started

having problems selling their products in 1895. Prices fell, stocks of unsold cloth increased and difficulties in obtaining payment on time and in cash increased. Meanwhile factories set up by companies formed in the early nineties went into production during the years 1896-1898 and the productive capacity of the cotton textile industry of Minas Gerais increased during this period. Notwithstanding such problems, cotton mills tried to maximize the quantity produced. Pressure from shareholders for dividends continued, leading some companies to pay dividends in kind or in obligations. By the end of the period 1896-1898 the financial situation of most of the textile companies had deteriorated.

Considering that no significant improvement in the general economic conditions - which could have brought about an increase in demand for cotton goods produced in Minas Gerais - took place in the years 1899-1902, it is reasonable to expect that the same difficulties persisted during this period. It would even be reasonable to assume that these difficulties intensified during these years as the textile companies of Minas Gerais entered the period in a weak financial position. Besides, it has been generally argued in the literature that the economic measures applied during the Campos Sales government had adverse effects on Brazilian industry.

The first section of this chapter presents a summary of the new economic policy introduced by the Campos Sales government and a brief review of the different assessments available in the literature of the development of the industry as a whole, and of the cotton textile industry in particular, in the years 1899-1902. The purpose of such an introduction is to provide a background for analyzing the adequacy of the general assumptions, which have been made about the adverse effects of Campos Sales' economic policy on industrial growth, and to verify their application to the specific case of the cotton textile industry of Minas Gerais. Evidence on the performance of certain cotton mills

established in Rio de Janeiro, presented in the second section, enables the performance of the Mineiro textile industry to be compared with that of another region characterized as an export economy. A brief description of the banking crisis of 1900 is presented in this section, because of its general adverse effects on Brazilian industry. The third section describes the performance of some cotton mills of Minas Gerais during 1899-1902 and reproduces the explanations provided by the textile entrepreneurs for such a performance. The following section investigates the changes which took place in the productive capacity of some Mineiro cotton mills and the reasons underlying them. The main conclusions arrived at in this chapter are summarized in the last section.

The documentation which is used in this chapter mainly concerns the performance of the following cotton mills: a) five mills located in the Central zone of the state which were relatively close to the newly built city of Belo Horizonte: São Vicente, Cedro and Cachoeira mills, owned by the Companhia Cedro e Cachoeira; the Marzagão mill, owned by the Cia Industrial Sabarense; and the Itabira mill owned by the Companhia Industrial Itabira do Campo; b) one mill in the Western zone - near the borders of the Central zone - and, also, relatively close to the city of Belo Horizonte: the Cachoeira mill owned by the Companhia de Tecidos Santanense; c) one cotton mill in the Southern zone: the cotton mill owned by the Companhia de Fiação e Tecidos União Lavrense located; d) the cotton mill of the Companhia de Fiação e Tecelagem Industrial Mineira in the Mata zone and close to its border with the state of Rio de Janeiro.

The selection of the cotton mills to be studied was determined by the fact that these are the ones about which consistent and reliable information on their performance during the years 1899-1902 is available. However, their performance may be a good indicator of the performance of the cotton textile sector of Minas Gerais during this period. They were relatively large cotton mills and were

located in different areas of the state. Their productive capacities in 1905, measured by the number of looms, was above average for cotton mills in the state - with the exception of the Companhia de Fiação e Tecidos Santanense's cotton mill. Together they were responsible for 37.3% of the productive capacity of the cotton textile industry of Minas Gerais in 1905.¹ Besides, being located in different zones, the performance of these cotton mills may indicate peculiar problems arising in different areas of the state. A greater emphasis is given to the Companhia Cedro e Cachoeira's cotton mills because, as the reports of this company are available in their original form, they present a more detailed description of the performance of each mill, as well as a more detailed evaluation of the performance of the company in each year. Information provided in published reports from other companies gives additional evidence.

6.1 The economic policy of Campos Sales and the performance of industry in Brazil: a review of the literature.

6.1.1 A brief summary of Campos Sales' economic policy.

The immediate purpose of the economic policy applied during the Campos Sales period was to raise the external value of the mil-réis and to obtain budgetary surpluses which would enable the Central Government to fully accomplish all the clauses stipulated in the agreement between the previous government of Prudente de Moraes and the international bankers, N.M. Rothschild & Sons.²

In fact, the previous government had been forced in 1898 to ask for a large funding loan because it did not have funds to pay its debts in foreign exchange. On June 15, 1898, an agreement was signed between the Brazilian government and N.M. Rothschilds & Sons by which a £10 million credit was granted to Brazil.³ According to the terms of this contract, the Brazilian government would suspend for three years the payment in cash of interest on its foreign exchange debts,

and for thirteen years, the payment of the amortization of these debts. However, in order to assure the viability of the plan, the Brazilian government pledged itself to withdraw from circulation an amount of Brazilian currency corresponding - at a rate of 18 pence a mil-réis - to its drawings on the loan. The inclusion of such a clause reflects, in fact, a general agreement by both parties as to the main source of the indebtedness of the government: an unstable and devaluated exchange rate which had come about as a result of an excessive amount of paper money⁴.

Complementary steps were taken by the government of Campos Sales to obtain budgetary surpluses which could allow it to withdraw paper money from circulation according to the terms of the Funding Loan. Two major measures were introduced to increase the government's revenue: the number of products subject to payment of the internal consumption tax was extended and tariffs on imports increased. Considering the attention given in the literature to the role played by tariffs in the process of industrialization in Brazil, a brief description of the modifications introduced by the government of Campos Sales to tariffs will follow. In addition, considering the lack of attention paid by economic historians to the effects of the introduction of an additional internal tax on specific products, a short account of the changes introduced in the legislation on consumption taxes is also presented below.

Two Tariff laws were in force during the years 1899-1902: in 1899, the Tariff which had been decreed by Prudente de Moraes⁵ and, from March, 1900, the new Tariff of the government of Campos Sales.⁶ The first of these two Tariffs, passed in December, 1897, was seen by contemporaries as being responsible for a general reduction in import duties of 25%⁷ and, by foreign observers, as a Tariff which was unable to provide domestic mills with effective protection.⁸ The new Tariff of Campos Sales did not introduce any substantial alteration to the previous one and these two Tariffs have been considered as the least protective Tariffs of the

Republic.⁹ However, even though Campos Sales had declared himself on different occasions to be against any official protection of domestic industry,¹⁰ his economic policy could not dispense with an increase in public revenue to allow him to comply with the stipulations of the Funding Loan. As a decrease in the external value of the mil-réis raised government expenditure, it was important not only to increase government income but to defend it from a devaluation of the exchange rate. So, the solution found was to increase the collection of taxes on imports by changing the system of payment rather than by changing the tariffs themselves. From January, 1899, a 10% fraction of the tariff duties - a fraction raised a few months later to 15% - had to be paid at the par value of the mil-réis - 27 mil-réis a pound sterling - according to the current exchange rate.¹¹ With this new legislation, the amount of import duties to be paid for any product became an inverse function of the current exchange rate. As long as the external value of the mil-réis in the market was lower than its par value, the introduction of this form of payment implied, necessarily, an increase in the import duties to be paid.

The consumption tax was first introduced by the Republican government in 1891 through law number 25 passed on December 30, 1891. This law authorized the government to tax the consumption of tobacco and tobacco products which had either been produced in the country or imported. Prior to 1898, only three more groups of products had become subject to this tax: alcoholic beverages, matches and salt.¹² However, the law passed on December 30, 1898 extended the number of products on which this tax was to be levied. These products now included footwear, candles, vinegar, playing cards, conserves and chemical products. In November of the following year, two new groups of products were added to the list: textiles and walking sticks.¹³

It is reasonable to assume that the economic measures introduced by Campos Sales affected the national industry as a whole. In fact, a reduction in government expenditure - in

order to produce budgetary surpluses - if not offset by changes in the other components of aggregate demand, might have reduced the demand for consumer goods. Besides, if the change introduced by law in the method of calculating the tariff implied an increase in the total value of tariffs to be paid in mil-réis, such a change could be expected to have had contradictory effects on the national industry. On the one hand, higher tariffs would imply higher costs of production due to an increase in the internal price of imports of machinery and raw materials. On the other hand, it could also imply an increase in the protection of domestic industry from foreign competition. The levy of consumption taxes might also be expected to have brought about additional difficulties for some industries.

6.1.2 General industrial growth and the industrial growth of the cotton textile industry under Campos Sales; a review of the literature.

Economic historians have assumed that the economic policy of Campos Sales had an adverse effect on industry rather than investigated such effects. Simonsen, for instance, refers to the period 1894-1904 as one in which the country had to endure political, economic, and financial crises "suffering also the consequences of the deflationary policy implemented during the Campos Sales presidency."¹⁴ According to Graham, the deflationary policies imposed by the British community as part of the conditions of the Funding Loan of 1898 were "partially responsible for the ensuing recession and consequent difficulties for Brazilian infant industries."¹⁵

Villela and Suzigan followed the same line. Based on data on Brazilian imports from Great Britain¹⁶, which show a decrease in imports of consumer goods in the nineties, compared to imports of raw materials, coal and machinery, they concluded that: "although there is no empirical evidence, it is probable that a spurt of industrial growth took place in the first decade of the Republic."¹⁷ However they added: "this spurt...was certainly interrupted by

restrictive policies after 1898"¹⁸, which had as one of their objectives: "to fight artificial industry."¹⁹

For Mello "the extreme difficulties faced by industry between 1899-1902"²⁰, would have been caused by a substantial decrease in the demand for wage goods, a result of the crisis in the coffee sector, a cut in public expenditure, and an increase in the number of products subject to consumption taxes. In spite of these "extreme difficulties", the industry would have been able to survive because a tendency towards a great reduction in its profitability was offset by a drop in monetary wages, an increase in the external value of the mil-réis and higher tariffs on imports.²¹.

In 1984, Suzigan revised his earlier assessment of industrial growth during the nineties and the first years of the twentieth century. The deflationary policies, implemented since the second semester of 1898, were no longer seen as interrupting a spurt of investment. On the contrary, they were seen as policies which intensified a crisis in the manufacturing sector, which had started in 1896 as a result of problems in the export sector. According to him, "the policy of deflation implemented from the end of 1898 onwards caused one of the most severe depressions in the history of the Brazilian economy".²² So, as a consequence of the crisis in the coffee export sector and the deflationary policies applied by the government, investment was radically cut in the industry from 1896-1901. The exceptions were the textile and flour milling sectors, which "made significant additions to their productive capacity."²³ The adverse effects of the deflationary policies on industrial investment were explained by the author as the result of rising interest rates - determined by a reduction of the real stock of money - which discouraged investment.²⁴

No mention whatsoever is made by Stein of the industrial evolution which took place between 1893 and 1899 in his

chronological description of the emergence and development of the cotton textile industry in Brazil from 1850 to 1950. After 1892 when, according to him, the initial period of growth of Brazilian cotton manufacture ended,²⁵ Stein's analysis jumps to the first decades of the twentieth century, a period which he calls the "golden years"²⁶ of the industry. Versiani, whose purpose is to explain when and why investment was made in the textile sector, disregards periods of stagnant investment.²⁷ And in the case study on cotton textile industrialization presented by Suzigan,²⁸ the years 1899-1902 are not studied as a distinct period but as part of a longer period, 1896-1906, which is seen as a period of slack investment.²⁹

6.2 An overall view of the performance of the cotton textile industry in Rio de Janeiro in 1899-1902, based on evidence available for some companies.

6.2.1 1899

1899 was seen by some textile entrepreneurs in the state and in the city of Rio de Janeiro, as a year favourable to the performance of their cotton mills even though general economic conditions were not, according to them, specially propitious for business. In his report for the year, the President Director of the Companhia Fiação e Tecidos Mageense, after informing the shareholders that products from the company's cotton mill were being well received in the market, added: "we hope to enter a clear route to prosperity, even though the commercial situation has been very upsetting."³⁰ A similar optimistic tone is found in the annual reports of some other companies.

According to the Board of Directors of the Companhia de Fiação e Tecidos Corcovado, expansion of the productive capacity of their cotton mill could not be postponed "considering the time of prosperity for national products."³¹ He also informed the shareholders that steps

were being taken in order to achieve "a greater development in our production"³², and that the expenditure involved in such an expansion was being financed by the company's own resources.

In the Companhia de Fiação e Tecidos Aliança the year of 1899 was seen as the beginning of "a new era of prosperity",³³ in spite of the adverse conditions faced by businesses in general, which were mentioned in the report. The demand for the company's products was said to have increased substantially during the year. However, even though the amount produced had increased compared to the previous year - through an increase in the number of workers and even, at the end of the year, through an increase in the

Table 6.1

Companhia de Fiação e Tecidos Aliança: number of workers and value of production, sales and stocks in 1898 and 1899.

Years	Employment		Production		Sales		Stocks*	
	numb.	ind.	in	ind.	in	ind.	in	ind.
	of	numb.	1,000	numb.	con	numb.	con	numb.
	workers		metres		tos		tos	
1898	1,452	100	9,971	100	5,434	100	1,132	100
1899	1,510	104	11,560	116	7,526	139	672	59

* at the last day of the previous year.

Sources. Number of workers, quantities produced and sales in: Companhia Fiação e Tecidos Aliança (1898), Relatório da Diretoria, "Trabalho e Produção" and Companhia de Fiação e Tecidos Aliança (1899), Relatório da Diretoria, "Vendas". Data on stocks at the end of the years 1898 and 1899 in: Companhia de Fiação e Tecidos Aliança (1898), Balanço Geral em 31 de dezembro, and Companhia de Fiação e Tecidos Aliança (1899), Balanço Geral em 30 de dezembro.

working day of one hour and a half - "it was not possible to satisfy the majority of orders from our customers, because we did not have enough production."³⁴ Data in Table 6.1 illustrate the increase in output of the two cotton mills

owned by the company and indicate the improvement which took place in demand for the company's products. In fact these data show that the company was not only able to sell all of its increased production in 1899, but it was also able to sell a significant part of the stocks of cloth which had been accumulated previously.

Such a sudden increase in demand was not explained by the textile entrepreneurs of Rio de Janeiro. However it was certainly due, at least in part, to the changes introduced by the Campos Sales economic policy in the calculation of the import duties to be paid in mil-réis.³⁵ These changes implied an average increase of 31% in the value of tariffs to be paid in 1899, compared to those of the previous year.³⁶ Such an increase probably offset the small increase in the external value of the mil réis of 5% observed in 1899 and raised the competitiveness of domestic cloth.

6.2.2 1900

The turn of the century seems to have brought about a sharp veer in the performance of the cotton mills in Rio de Janeiro, altering drastically the entrepreneurs' expectations. According to the Board of Directors of the Companhia e Fiação e Tecidos Aliança, it would have been impossible, at the beginning of 1900, when the company's cotton mill was unable to satisfy the demand for its products, to have predicted that "so many and varied causes would bring about such atrophy in all the businesses in this country from the extreme south to the north."³⁷ Among these causes, two are mentioned in the report: the banking crisis from September onwards and the sharp appreciation of the exchange rate during the year.

The national banking crisis of 1900 started with the crisis of the Banco da Republica do Brasil, spread all over the country and caused a general and severe squeeze on credit which brought about the most adverse effects on business.³⁸

Even though the problems of the Banco da República do Brasil existed before the Campos Sales government, the new economic policy introduced by this administration and the government's conduct in relation to the difficulties faced by this bank were certainly responsible, at least in part, for its liquidation under official intervention.³⁹ In fact, the law passed on July 20, 1899 prohibited the special issue of Treasury notes which had been used in the past to relieve the problems of the bank. The difficulties faced by the Banco da República do Brasil in paying its debts intensified in the second half of the year and led to a suspension of payments on September 12. Given the important role played by this bank - the largest commercial bank in the country - in the national banking structure, the suspension of its payments had an adverse effect on other establishments and a general banking crisis spread all over the country. On September 20, a law was passed authorizing intervention by the government and the reorganization of the bank. As banks went into liquidation, their creditors had to accept the unfavourable conditions of payment stipulated by law in the process of liquidation.⁴⁰

Besides the problems directly related to the banking crisis, the industry of Rio de Janeiro still had to face the adverse effects on business of an appreciation of the exchange rate. According to the directors of the Companhia de Fiação e Tecidos Aliança, the rise in the exchange rate that year had an instantaneous effect on the price of their products as "the customers asked immediately for a reduction in prices, which had to be made".⁴¹ Another cause of the difficulties faced by the company in 1900, as pointed out in the company's report, was a general decrease in aggregate demand:

"Besides the causes referred to, we had - and still have - a devaluation of almost all the products from this country, which, in our opinion is the worst of all as it brings about a shortage of money and, consequently, a decline in consumption."⁴²

Such a reduction in demand for cloth was that much more serious because it followed a year of optimism which had meant - for some companies - steps taken to increase the quantity of cloth produced in their cotton mills. Measures taken in the previous year could not in certain cases be reversed. The Companhia de Fiação e Tecidos Aliança, for instance, could suspend the extra hours in its cotton mills, as it in fact did,⁴³ but the decision to enlarge the spinning section of the Companhia de Fiação e Tecidos Mageense was not reversible.⁴⁴

Data in table 6.2 show the monthly average of the quantity of cloth produced per quarter in 1900 by the two cotton mills of the Companhia de Fiação e Tecidos Aliança, as well as the fluctuation of the exchange rate in this year. According to the report of the company, the measures taken in the previous year to increase the amount produced in both factories had just started bringing about results when, due to a decrease in sales, the number of daily working hours was reduced to ten.⁴⁵ In spite of such a reduction in the number of daily hours worked, the quantity produced in 1900 was still 4.3% higher than it was in 1899, but proceeds from sales were 12% lower. However, data on the average quantity of cloth produced per month in the first quarter of 1900 show that the increase in production in 1900 was mainly due to the high levels of production reached by both factories in the half of the year. In the first quarter the monthly average production was 17% higher than it was in 1899.⁴⁶ In the second quarter it was 13% higher than that of the previous year but by the third quarter of 1900 it was only 1% above the average of the year before. Finally, in the last quarter of 1900, the average production per month was 14% below the average of the previous year. In December production was 43% lower than it had been in January.⁴⁷

Data on the exchange rate and amount of cloth produced by the Companhia Fiação e Tecidos Aliança's cotton mills in 1901, shown in table 6.2, suggest the possible immediate effects of a rise in the external value of the mil-réis on

the level of production of an individual firm in the city of Rio de Janeiro. An increase of 12.2% in the external value of the mil réis between the first and second quarter was followed by a reduction in production of 4.1%. In the third quarter the average monthly production decreased by 10.2%, while the mil-réis rose by 22.6%. In the last quarter of the year the amount produced declined by 14.6% in spite of a slight devaluation of the exchange rate. Such a decline reveals the adverse effects of the banking crisis on the industry of Rio de Janeiro.

Table 6.2

Production of cloth by the Companhia de Fiação e Tecidos
Aliança's cotton mills and exchange rates in 1901

Months			Monthly average production per quarter			Monthly average exchange rate per quarter		
			in 1,000 metres	ind. numb. per quarter	variat. per quarter	pence per mil réis	ind. numb. per quarter	variat. per quarter
jan.	feb.	mar.	1,131	100	-	7.9	100	-
abr.	may.	jun.	1,085	96	(-) 4%	8.9	112	(+) 12%
jul.	aug.	sept.	974	86	(-) 10%	10.9	138	(+) 23%
oct.	nov.	dec.	831	74	(-) 15%	10.1	129	(-) 7%

Sources. Data on monthly production from: Companhia de Fiação e Tecidos Aliança (1900), Relatório da Diretoria, "Produção". Monthly data on average exchange rates in: Secretaria de Planejamento e Coordenação da Presidência da República, Fundação Brasileira de Geografia e Estatística (1986, 545-550), "Cotações mensais da libra esterlina em relação à moeda nacional, 1870-1930."

The description of the effects of the banking crisis on the performance of a cotton mill in the annual report of the Companhia Fábrica de Tecidos S. Pedro de Alcantara is quite illustrative:

"The company's business continued satisfactorily in the first half of the year, but the Board of Directors cannot say the same for the second, when, having reached the more acute stage of the

crisis which dominates commerce, this crisis was intensified with the suspension of payments by some banks of this city, bringing about a general contraction and consequent suspension of payments by very respected houses which were not only unable to meet their commitments but were also forced to decrease their purchases due to the need for their capital on deposit at such banks".⁴⁸

Another complaint made by this company was that cloth of an inferior quality was appearing in the market and being sold at very low prices, "damaging those factories which produce cloth of a better quality."⁴⁹ The company was so badly hurt by the unfavourable conditions prevailing since the banking crisis of September, that the Meeting of Shareholders, which took place on April 15, 1901 approved a proposal from the Board of Directors to close the cotton mill for some time.⁵⁰

6.2.3 1901.

Reports by different cotton textile companies on the performance of their cotton mills during 1901 show that the first semester of this year was still a very difficult period for the textile industry established in the city of Rio de Janeiro and surrounding areas. The Board of Directors of the Companhia de Fiação e Tecidos Aliança pointed out the reasons for the unsatisfactory results achieved by the company's cotton mill in the first six months: 1) the persistence of the adverse effects of the banking crisis which were still creating difficulties in commerce; 2) the very low prices reached by all the products in the country; 3) the uncertainty in relation to the movement of the exchange rate.

According to the Board of Directors, the high level of the exchange rate in the market during the first months of the year forced the company to cut the price of its products. Prices were raised again in August, following a devaluation of the exchange rate. Fluctuations of the exchange rate in the first half of the year created great embarrassment to business as the price list of the cotton mill was expected

to vary accordingly. If any significant appreciation of the exchange rate was not followed by an immediate decrease in prices, as expected by consumers, it provoked an immediate retraction of demand. A decrease in the external value of the mil réis followed by a relative stabilization of the exchange rate improved conditions in the second semester even though the low price of agricultural products prevented an adequate expansion of sales.⁵¹

The different measures taken by individual companies to overcome the difficulties faced that year suggest that the typical shareholder in Rio de Janeiro had a different mentality from that in Minas Gerais. The job of conducting the company's business was in fact left to the managers who could react more promptly to market signals.

The company América Fabril, which had been adversely affected by the banking crisis, and by the decrease in prices due to the appreciation of the exchange rate in a period when its productive capacity was being expanded, was still unable "to begin to make the capital invested in our cotton mills earn a profit again"⁵² In August, the Board of Directors, considering the low value of the company's shares in the stock exchange, proposed to an Extraordinary Meeting of Shareholders to reduce the company's capital from 8,000 contos to 2,000.⁵³ The Companhia Fábrica de Tecidos São Pedro de Alcântara's solution to the difficulties concerning the sale of its products was to close the factory from May to August. According to the company's Board of Directors, such a measure "although exceptional, relieved the company of labour and other expenses until the amount of cloth in stock was reduced."⁵⁴

6.2.4 1902.

There is some evidence that the economic conditions prevailing in 1902 were more favourable to the performance of the cotton textile industry of Rio de Janeiro than they had been in previous years. According to the annual report

of the Companhia Fiação e Tecidos Mageense, which managed to expand the productive capacity of its spinning section during that year, the company did not have any problems with sales. The only problem mentioned was an increase in the price of cotton during the last six months.⁵⁵ The company Fábrica de Tecidos São Pedro de Alcântara appears also to have been able to improve its financial situation during that year, in spite of its complaints about "so many and so heavy taxes"⁵⁶, and even though, according to its Board of Directors, the profits of the company "would never be like those of yore."⁵⁷ In order to avoid an increase of unsaleable stock, the company adopted the policy of only producing to order. In the Companhia de Fiação e Tecidos Aliança's two cotton mills the quantity produced increased substantially and, in spite of "a commercial crisis which persists all over the country as a result of the low prices of all of its products - with the exception of those of cotton-wool",⁵⁸ the results were said to have been satisfactory that year.

6.2.5 A brief summary of the performance of the cotton textile industry of Rio de Janeiro in the Campos Sales period.

The evidence presented suggests that the cotton textile industry of Rio de Janeiro improved its performance in the first year of the government of Campos Sales in response to an increase in demand which was due, at least in part, to increased protection of the domestic production of cloth by the new legislation. The banking crisis and consequent squeeze on credit, as well as the appreciation of the exchange rate which took place in this year, brought about serious difficulties for industry in 1900. The persistence of some of the adverse effects of the banking crisis and uncertainty about the exchange rate in 1901 hampered a recovery in that year. By 1902, however, conditions seemed to have become more favourable to the textile industry. It is possible that such an improvement was the result of a more stable exchange rate during the year.

The examination of the performance of the cotton textile industry of Minas Gerais, year by year, in the Campos Sales period, which is made in the next section, brings to light a different pattern of performance and reveals some peculiarities of the Mineiro industry.

6.3 Performance of the cotton textile industry of Minas Gerais in the years 1899-1902, as suggested by the performance of individual cotton mills.

As will be shown in this section, the performance of the cotton textile industry of Minas Gerais, contrary to what happened in Rio de Janeiro, did not improve during 1899. First of all, high levels of production were maintained. As no improvement in demand took place, stocks of unsold cloth increased. In addition, the shareholders, disregarding the financial problems faced by the company, deriving from low proceeds from sales, continued to press for the distribution, as dividends, of the profits registered in the company's accounts.

6.3.1 The performance of some textile companies of Minas Gerais in 1899.

6.3.1.1 The Cedro e Cachoeira

A general comment on the performance of the Companhia Cedro e Cachoeira's three cotton mills in 1899 appears to illustrate the performance of most of the cotton mills in the state of Minas Gerais during this year. In his final evaluation of the results obtained in 1899, Aristides José Mascarenhas, the company's Managing-Director, informed the shareholders:

"If...as far as production and profits are concerned, the results presented by the company may be considered satisfactory, the same cannot be said about its financial results."⁵⁹

This statement is quite revealing as it shows a dichotomy in the general evaluation of the performance of a cotton mill: an appraisal of the company's performance based on production and profits and another one based on financial results. Such an evaluation discloses, once more, the opposition which existed in many early Mineiro textile companies between the rentier shareholder and the capitalist shareholder as to their evaluation of the company's performance. On the one hand there was the rentier shareholder who was only interested in receiving an immediate high return for the capital he had invested in the company. On the other hand there was the capitalist shareholder who was interested in the total return to be obtained from his investment, and therefore was mostly concerned about the overall financial performance of the company and its future development.

The rentier shareholder assessed the performance of the company mostly by the profits shown at the end of each year in the annual accounts. It was out of those profits that dividends would be paid to him. He joined the undertaking of his friends or relatives expecting to have not only quick returns on the capital invested but higher returns than he would have obtained in other more traditional forms of investment. As the profits registered in the company's accounts were calculated by subtracting from the value of production - and not proceeds from sales - all the expenses incurred by the company during the year, they would vary according to the quantity produced, prices and costs remaining constant. Therefore, everything else being constant, an increase in production meant higher profits and pleased the rentier shareholder. A decrease in the amount produced, on the contrary, would decrease such profits and would not be well received by this shareholder. The entrepreneur shareholder also seemed to agree that, in general, high levels of production should be maintained. The reasons underlying such an agreement were different. For the entrepreneur shareholder the rationale of such a decision - as has already been discussed in the last chapter - was in

the high costs involved in closing down the mill or even reducing significantly the quantity produced.⁶⁰ As has been examined in the previous chapter, the wide adoption of this policy of keeping the cotton mills operating at full capacity in Minas Gerais, whatever the conditions of demand, was to a great extent explained by the high share of fixed costs in the total costs of production of a Mineiro mill, as well as by the pressure from shareholders for dividends even if they had to be paid in cloth. One of the most outstanding costs involved in closing down, even temporarily, a mill, or reducing its production, was the loss of experienced workers. As the Mineiro cotton mills were usually located in rural areas, it is quite probable that the recruitment and training of its workers was more difficult and more expensive than for a cotton mill located, for instance, in the city of Rio de Janeiro. Besides, the share of fixed costs in the total costs of production were certainly lower in the city of Rio de Janeiro and its surroundings than it was in Minas Gerais, which explains in part the different measures taken in Minas and in Rio de Janeiro in periods of difficult sales. Moreover, the typical shareholder of the textile companies in Rio de Janeiro seems to have been the capitalist shareholder rather than the rentier shareholder.

In fact, in Minas Gerais, an increase in the quantity produced was always emphasized in the company's annual report as evidence of good performance. A decrease in production was usually explained to shareholders as the result of unexpected problems. However, good performance, from the point of view of production and profits, did not necessarily reveal good financial results as shown by the statement of the Managing Director of the Companhia Cedro e Cachoeira in the company's report for 1899. Financial results would depend heavily on the performance of sales. If proceeds from sales were low, the company would not be able to present good results whatever the level of production and profits registered in the accounts.

Data and information in the annual report and accounts of

the Companhia Cedro e Cachoeira for 1899 justify the statement made by the company's Managing Director as to the unsatisfactory financial performance of the company. In fact, the Companhia Cedro e Cachoeira's accounts on December 31, 1899, showed 360 contos⁶¹ of profits which corresponded to 18% of the capital. These profits were not only 20% higher than those of the previous year,⁶² but were also the highest presented by the company since 1895.⁶³ However, side by side with such profits, the accounts for that year showed a significant increase in the debts owed to the company, as well as in the level of stocks. The amounts owed to the company, revealed in its current accounts, showed an increase of 57% compared to the previous year. The value of stocks increased by 25.5%, and corresponded, at the end of

Table 6.3

Companhia Cedro e Cachoeira: production, profits and stocks in the year 1899 compared with the annual averages for the previous period 1896-1898.

Years	Production		Profits		Stocks *	
	in metres	index numb.	in contos	index numb.	in contos	index numb.
1896-1898**	2,676,608	100	285	100	634	100
1899	3,208,178	120	360	126	833	131

Sources: data on quantity produced from annual reports for each of the three Companhia Cedro e Cachoeira cotton mills: Companhia Cedro e Cachoeira (1896-1899), Relatório da Diretoria; data for stocks from the annual accounts of the company: Companhia Cedro e Cachoeira (1896-1899), Balanço Geral 31 de dezembro; data for profits in the accounts of Profit and Loss at the last day of each year: Companhia Cedro e Cachoeira (1896-1899), Demonstração da Conta de Lucros e Perdas.

* these figures are those contained in the annual balances of the company and they include most probably all stocks kept by the company.

** data for these years reveal the annual averages.

the year, to 41.6% of the company's capital.⁶⁴ Therefore, a large proportion of the profits corresponded in fact to increased stocks and new debts towards the company, and could not be distributed as dividends to be paid in cash. However any decision about dividends had to be approved by the General Meeting of Shareholders. The reasons why the company was not in a position to pay dividends, in spite of the profits registered in the accounts, had to be given to the shareholders.

According to the explanation provided by the company's Managing Director, the basic problem faced by the company throughout 1899 was that of insufficient demand for its products. Such a demand brought about increased stocks and a circulating capital insufficient for financing current production. Data in table 6.3 show an increase of 20% in the amount produced in 1899 compared to the average annual production of the previous period. Such an increase was followed by an increase of 31% in the value of stocks. Even though these data cannot be used to measure the increase in the quantity of cloth in stock - as they also include raw materials, and no data on the market prices used in the evaluation of the stock is available - they suggest that a significant part of the production was not sold.

In the case of the Cedro cotton mill, it was observed that the decrease in demand for its products in 1899 was mostly the result of a decrease in demand for dyed cloth. According to the annual report for this cotton mill: "less than three years ago, the dyed cloth of this mill was insufficient to satisfy demand while there was a great stock of white cloth"⁶⁵ The previous pattern of demand - as identified by the management - had even induced the company to establish a dye-house in the Cachoeira cotton mill, which had gone into operation at the beginning of November.⁶⁶ According to the Board of Directors' report, by the time the dye-house was ready to operate, the demand for dyed cloth had already decreased and the sale of white cloth had become much easier. However, the decision to establish a dye-house at

Cachoeira's could not be reversed and stocks of unsold dyed cloth started piling up.

Another piece of evidence that the main problems faced by the company were related to inadequate demand for their products is given by the Managing Director's account of the difficulties faced by the company in obtaining payment for the cloth sold. So, not only did stocks increase, but collecting payments owed to the company became more difficult. A discount of 10% for payments in cash on the spot introduced by the management in 1899 did not bring about good results but, on the contrary, "paralysed sales".⁶⁷ The decision to press for immediate payment in cash was not seen by the Managing Director as a sensible measure to be taken, as it could scare away good customers and even force some of them to go into liquidation. The settlement of debts through liquidations did not suit the company's best interests as "we all know that such liquidations are not producing more than 30%".⁶⁸ Besides, those settlements usually involved payments in kind, and payments in "animals, cattle, ironware, business funds, sole leather, tobacco"⁶⁹ did not bring any immediate relief to the financial problems of the company because they could not be sold easily. On the contrary, such payments tend to become - at least in the short run - an extra source of expenditure.

The problems faced by the company in disposing of its products in 1899, and particularly in disposing of the products of São Vicente, show that the over-optimistic expectations at the beginning of the decade about the growth of demand for cloth did not come true. In fact, the company's decision, taken in the early nineties, to buy and enlarge the São Vicente cotton mill continued to prove to have been an unwise decision. The specific reports on this cotton mill show that the capital invested in its purchase in 1891 and the expenditure brought about by repairs and enlargement of its productive capacity in the following years, were unable to give any compensatory return to the shareholders during the nineties, and this cotton mill

became an extra burden for the company in 1899-1901.

The analysis of the performance of the São Vicente cotton mill in 1896-1898, made in the previous chapter, concluded that the most plausible explanation for its constant poor results in that period was a glut in the market which left no room for the products of a new factory. However, in 1899, it was argued by one of the directors that the main problem of São Vicente was its high production costs which reduced the competitiveness of its products in the market. Such high costs were the result of frequent and severe droughts in the region which forced the cotton mill to use a very expensive source of energy during many months in a year - steam power. Based on such a diagnosis, it was proposed to the shareholders that the factory should be transferred to Jequitibá where "there was a waterfall which could be used for providing electricity".⁷⁰ Although this proposal was approved by the Extraordinary Meeting of Shareholders on April 6, 1899, it was not enforced. Instead, the Board of Directors appointed as a new manager for the cotton mill, Caetano Mascarenhas, one of the founders of the Cedro cotton mill and a man with a lot of experience. The purpose of such an appointment was "a last attempt to see if the cotton mill was able to progress."⁷¹

The decrease in sales of dyed cloth observed in the Cedro cotton mill might suggest a change in demand induced by a change in income: a greater demand for less expensive products.

Problems with sales in 1899 were not confined to the Companhia Cedro e Cachoeira. Other textile companies in Minas Gerais experienced similar problems. In spite of the satisfactory profits presented in their annual accounts in 1889, some companies were unable to distribute dividends in cash, due to a relatively poor sales performance.

In the case of the Companhia Cedro e Cachoeira, the explanation provided for the poor financial results of 1899

was basically the same as the one given in the previous year⁷², namely, a general crisis in the country which was more intense in the state of Minas Gerais. In the statement, reproduced below, this crisis is described by the Managing Director of the company:

" I refer to the dreadful and each day more intense crisis, the great scarcity of money coming to our state and specially to our commercial zone. (This crisis is) a result of a lack of exports and low prices of coffee and cattle and, moreover, of the insufficient production of cereals and cotton which is causing large imports of sugar, rice, beans and so on, worth many thousands of contos. (Such imports have been) intensifying the already difficult situation of commerce in general and bringing about, in particular, a great reduction in our sales and a greater reduction in payments."⁷³

As long as the problems faced were seen as the inevitable result of a general crisis, which was more intense in the consumer markets supplied by the company, there was no way the administration could be blamed for the poor results achieved. All the difficulties arose from an unexpected change in the demand for cloth. Only in the production of dyed cloth was there a mention of the fact that the company's product was unable to compete in the market. In fact, the decrease in sales of dyed cloth produced by Cedro was seen as the result of "great and terrible competition" for which the mill was not prepared. The spinning section was said to be too old and, consequently, unable to produce a yarn suitable for the production of dyed cloth to compete with that produced by cotton mills using imported yarn.⁷⁴

Most of the other companies also blamed prevailing economic conditions for the poor performance of their cotton mills: "the commercial crisis which has shaken all the country"⁷⁵ and "the multiple difficulties faced by the cotton textile industry which are well known to the shareholders."⁷⁶

6.3.1.2 Other companies: Companhia Industrial Itabira do Campo, Companhia de Tecidos Santanense, Companhia Industrial Sabarense, Companhia de Fiação e Tecidos União Lavrense and Companhia de Fiação e Tecelagem Industrial Mineira.

In the Companhia Industrial Itabira do Campo's cotton mill, which started the year with its productive capacity increased by 17 looms - corresponding to a significant increase of 27% in the weaving section⁷⁷ - the amount of cloth produced decreased slightly in 1899⁷⁸. Such a decrease in the quantity of cloth was not the result of any deliberate policy of restricting the supply of cloth in view of poor demand, but was, according to the Board of Directors, the result of an epidemic of smallpox in the area "which scared the workers and forced the cotton mill to operate with very few looms during the latter part of the year."⁷⁹ Even though the decrease in the quantity produced had been less than 1%, costs decreased by 8.4%, sales increased by 2,2%⁸⁰ and the net profits of the company, shown on the Profit and Loss account at the end of the year, corresponded to 14.8% of the company's capital.⁸¹ However, according to the Board of Directors, the company was not able to distribute any dividends in cash because of the amount of unsold cloth in stock. So, a proposal that dividends of 15% were paid in cloth according to the price list of the company and with a 5% discount was presented to the General Ordinary Meeting of Shareholders on March 4, 1900. Such a proposal brought about strong opposition from some shareholders, and was finally approved with an odd amendment: the amount of cloth to be distributed as dividend would be decided by the Board of Directors, who would be in charge of selling it and paying the shareholders in cash in six months time, after the cloth had been sold.⁸²

The Companhia de Tecidos Santanense was another company which faced problems regarding the distribution of dividends in 1899. The Treasurer-Director, Manoel Gonçalves de Souza Moreira, after considering the financial situation of the

company, strongly advised the shareholders that dividends should not be distributed. He also emphasized that the traditional practice of paying dividends, whatever the results attained, should stop. Referring to the dividends paid by the company in 1898 when the machines had to stop working because the company could not afford to buy raw material, he remarked:

"in such circumstances, was it fair, was it reasonable to distribute 48 contos of dividend to be paid in 28 months at an interest rate of six per cent?"⁸³

Such a warning however, was unnecessary as the profits were extremely low and, if distributed, would not have been able even to pay a dividend as low as 3%.⁸⁴ So, the proposal that the company did not distribute dividends was approved by the General Meeting of Shareholders which took place on March 27, 1900,⁸⁵ in spite of a recommendation to the contrary from the Fiscal Board. This Board advocated a distribution of all the profits registered in the Profit and Loss account which would correspond to a dividend of 2.8%.⁸⁶

The Companhia Industrial Sabarense's Board of Directors proposed that a dividend of 10% be distributed in 1899. However, the Board stipulated that such a dividend should be paid in cloth as the profits of the company that year consisted of cloth in stock, raw material and debts.⁸⁷ Similar problems were faced by the Companhia of Fiação e Tecidos União Lavrense in 1899. Addressing the shareholders, the Board of Directors referred to "the sacrifice of your capital for such a long time without interest."⁸⁸

Finally, as in the previous year of 1898, the Companhia Fiação e Tecidos Industrial Mineira had a performance different from other companies, and was able to present reasonable results at the end of the year. However this company was not a Mineiro company.⁸⁹ As was already seen, it was constituted in the city of Rio de Janeiro, and was financed and managed by people living in Rio de Janeiro.

Moreover, its cotton mill, one of the very few mills established in the coffee-growing area of Minas Gerais, had very easy access to the market of the city and state of Rio de Janeiro. Therefore, it is quite probable that its performance would tend to follow more closely the performance of the cotton textile industry established in the city and state of Rio de Janeiro, which seems to have been favoured with an improvement in demand that year. In fact, contrary to the statement made by the Managing Director of Cedro e Cachoeira, the Board of Directors of Companhia Fiação e Tecidos Industrial Mineira, in its annual report for 1899, declared to the shareholders that the condition of the company was satisfactory, "from a financial point of view, as well as from a manufacturing point of view."⁹⁰ And, in fact, the company paid a dividend of 5% in the first half of the year and 6% in the second half.⁹¹ Such results were possible because this company was able to sell a large part of its production outside the state: "during the year the depression in local trade persisted, forcing the company to export its production."⁹² The better performance of this company compared to other companies in Minas Gerais reveals the improvement which took place in the market of Rio de Janeiro that year.

It is clear from the evidence presented that problems in relation to the disposal of production in 1899 persisted in the cotton textile industry of Minas Gerais. These problems were not restricted to one cotton mill located in one specific zone but were common to cotton mills located in different zones. As suggested by the Managing Director of the Companhia Cedro e Cachoeira, the difficulties faced by the Mineiro textile industry were intensified that year by the poor performance of exports of Mineiro products to other states. The only cotton mill which seems to have been able to present more favourable results this year, the Companhia Fiação e Tecelagem Industrial Mineira, was exporting part of its production to Rio de Janeiro.

However, in spite of all the problems faced by the cotton

textile industry of Minas Gerais in disposing of the cloth produced, and in spite of the fact that such problems were seen by the entrepreneurs as the result of insufficient demand, there is no mention in any report of any decision to cut down production. In fact, notwithstanding the obvious difficulties faced by the company Industrial Sabarense in selling the production of the Marzagão cotton mill, hours of work in the spinning section were extended to nine o'clock at night. Extended working hours had the purpose of providing the necessary amount of yarn for all ninety-seven looms and avoiding to buy it as "prices asked by domestic and foreign cotton mills are excessive."⁹³

6.3.2 The performance of the cotton textile industry of Minas Gerais and the national banking crisis of 1900.

As happened in the cotton textile industry of Rio de Janeiro, the adverse effects of the banking crisis of 1900 are also mentioned in the annual reports of some Mineiro textile companies. A quite dramatic description of such effects may be found, for instance, in the company Fiação e Tecidos União Lavrense's annual report for 1900:

"...the horrific economic crisis which we are going through and which has reduced the income of all classes, has made the means of exchange difficult and has, quite directly, affected our company, which has its sales in the interior which suffers intensely from a general decline of prices of all goods and an absolute lack of credit for smaller transactions. (Such lack of credit) results not only from a shortage of money but also from a lack of confidence which, although it existed before, increased with the crisis of the national banks."⁹⁴

Also, the Companhia Cedro e Cachoeira's Board of Directors started its general appreciation of the company's performance in 1900 by making a direct reference to the pernicious effects of "the banking crisis of Rio de Janeiro"⁹⁵ which restricted credit and brought about an additional problem for the company at a time when it was facing "the enormous difficulties already caused by a

general uneasiness in trade."⁹⁶ The poor results of the Companhia Industrial Sabarense in 1900 were also explained to the shareholders as the natural outcome of a commercial and financial crisis "which has been harassing all sorts of businesses"⁹⁷, as well as the result of an excessive supply of cloth in relation to the demand for it, which had brought about a general decrease in prices.⁹⁸ And the Companhia Fiação e Tecelagem Industrial Mineira's Board of Directors announced quite dramatically to the shareholders, on April 4, 1901: "It is with much sorrow that we have to report that our company was affected by the lugubrious effects of last year's crisis."⁹⁹ In fact, as a creditor of the Banco da República and of the Banco Hipotecário e Rural, the company was forced to accept the disadvantageous conditions of payment laid down by the government in the process of official intervention in the national banking system. As part of the payment of the company's deposits at this bank, the company received drafts bearing an interest rate of 3% to be redeemed at their face value.¹⁰⁰

Reference to the difficulties with sale faced by their cotton mills in 1900, found in the annual reports of different companies, suggests that the banking crisis of 1900 brought about additional problems, as restriction in credit made sales still more difficult.

In the Companhia Cedro e Cachoeira's annual report there is an explicit reference to the poor results achieved by the company's warehouse in Pirapora " where the company has 500 contos but has not received anything since August", as the very low proceeds from sales were used to buy cotton which could not be sent to the cotton mills because of lack of transportation.¹⁰¹ Moreover, information contained in the individual report for each of the company's cotton mills makes clear that the problems of insufficient demand for their products persisted.

In the case of the Cedro cotton mill, considering the large stock of dyed cloth at the beginning of the year, it was

decided that the mill should specialize in the production of white and coarse dyed cloth. It was also decided that a discount of 15% should be made on the price of the dyed cloth in stock.¹⁰² The amount of cloth produced by this cotton mill increased by 25% in 1900.¹⁰³ So, once more there is evidence of a cotton mill reacting to falling demand by increasing -instead of reducing - the quantity produced. Such a significant increase in the total amount of cloth produced was unable to prevent a fall in profits, as shown in the company's Profit and Loss account.¹⁰⁴ The decrease in profits of the Cedro cotton mill in 1900, in spite of an increase of 25% in the quantity produced, was explained by the lower margin of profit obtained in the production of white cloth and also by a rise in the price of cotton during the year.¹⁰⁵ This explanation however suggests that the company was not able to adopt a sales policy which reacted promptly to signs given by the market. The difference between the sale price and the cost of production was greater for dyed cloth than it was for white. However, the company was not being able to sell the dyed cloth at the price which had been fixed.

In Cachoeira, the establishment of a dye-house in the previous year proved to have been a great mistake. The sale of dyed cloth produced by this mill became so difficult that the dyer was dismissed and this section was handed over to an apprentice.¹⁰⁶ However, as the dye-house had only recently been established, the stock of unsold dyed cloth was relatively small. The price of white cloth produced by this cotton mill increased by 5% and therefore profits did not decrease. It is not possible to verify if such an increase in prices reflected an improvement in demand. It might reflect an increase in demand for white cloth at the expense of a decrease in demand for the more expensive dyed cloth or it might only reveal a misjudgment of market conditions by the management. As no data on sales and stocks of cloth are available, it is not possible to know if the market was able to absorb the cloth sold at increased prices. The total amount of cloth produced by Cachoeira as

well as by São Vicente cotton mill remained at the same level as previous years.¹⁰⁷

Evidence on the performance of other cotton mills in Minas Gerais in 1900 makes it clear that the difficulties faced by the Companhia Cedro e Cachoeira's cotton mills were not confined to them alone but were difficulties which, in different degrees, seem to have been shared by all the cotton textile industry of Minas Gerais.

Data available for the Companhia Fiação e Tecidos União Lavrense's cotton mill in 1899 and 1900 show that the amount of cloth sold by this company in 1900 was 16% less than the amount sold in 1899 and corresponded to a monthly average of 28,439.4 meters.¹⁰⁸ According to the company's Board of Directors, even though the cotton mill was able to produce a monthly average of 50,000 metres, the monthly sales average had to be at least 40,000 metres, otherwise, "we will not have profits which remunerate our capital".¹⁰⁹ As a result of the poor proceeds from sales that year, the company was unable to make the payments of amortization and interest relating to a previous issue of debentures.

The description of the performance of the Companhia Industrial Sabarense's cotton mill, Marzagão, in 1900 illustrates the special difficulties faced that year by the older cotton mills of Minas Gerais. The general economic situation is described not only as one of temporary commercial and financial crisis, but also as one of over-production. An explicit reference in this company's annual report is made to: "a great supply of textile products, which, being greater than the demand, brings about a devaluation of the textiles".¹¹⁰ In such conditions the situation of the older cotton mills became specially difficult as their machinery was in many cases obsolete and in badly need of repair and, given the policy of distribution of dividends adopted, funds were not available to replace or repair it. Emphasizing the need for a general improvement in the machinery, "especially of the spinning

machines which, besides being worn out, are old-fashioned,"¹¹¹ the Board of Directors called the attention of the shareholders to the fact that only a complete overhaul of the machinery would make it possible for the Marzagão cotton mill to improve the quality of its product and to compete successfully in the market.

In fact, the Companhia Industrial Sabarense was unable to sell all the production of Marzagão in 1900 and stocks, which had accumulated in previous years, increased. At the end of the year, the stock value of 150 contos corresponded to 25% of the company's capital.¹¹² The shareholders were told that the financial situation of the company was not a prosperous one and, therefore, the company could not distribute a dividend. This decision was fully supported by the Fiscal Board which argued that, considering that the results presented by the company in 1900 were insignificant and considering also that a reduction in prices would have to be made "in order to help sales"¹¹³, it would not be sensible to create additional difficulties for the company in the future by distributing a dividend.

The Companhia Industrial Itabira do Campo, which distributed relatively high dividends in 1900, was not in a position to pay them all in cash. The company's Board of Directors proposed, on March 10, 1901, that a dividend of 10% be credited to the shareholders, and a payment in cash be made only to the small shareholders. Such a proposal, followed by a recommendation from the Fiscal Board that a dividend of 8% should be paid, produced a strong reaction from shareholders. The General Meeting of Shareholders finally agreed that a dividend of 12% should be credited to them to be paid during the year at the discretion of the Board of Directors.¹¹⁴

6.3.3 The performance of the cotton textile industry of Minas Gerais during the second half of the Campos Sales government.

The remark made by Calógeras that the end of the banking crisis of 1900 signalled the recommencement of a period of open economic development in Brazil, certainly does not apply to the cotton textile industry of Minas Gerais¹¹⁵. The evidence available indicates that the conditions faced by this industry deteriorated in 1901 and 1902. Contrary to what happened in the cotton textile industry of Rio de Janeiro, the unsatisfactory performance of the cotton mills was not blamed by the Mineiro entrepreneurs on the level of the exchange rate and its frequent fluctuations.

The Treasurer-Director and General Manager of the Companhia de Tecidos Santanense, referring to a remark he had made the year before about the impossibility of knowing how intense the crisis would become and how long it would last, commented on the economic situation of 1901: "I could never have imagined that it (the crisis) could be so intense and so persistent."¹¹⁶ So, in spite of a return to normality in the banking sector, some entrepreneurs in Minas Gerais were still blaming a general crisis for the poor results of their companies in 1901 and 1902.

The fact that the conditions faced by some cotton mills did not improve in 1901 and 1902 may be seen by the measures adopted by some companies during those years: reduction in prices and costs which in some companies even implied reductions in nominal wages.

In the Companhia de Tecidos Santanense, the price list of the Cachoeira cotton mill was reduced twice in 1901 in order to promote sales because, according to the Treasurer-Director and manager of the cotton mill, Manoel Gonçalves de Souza Moreira, given "the state of decay of commercial life, consumption has been greatly reduced".¹¹⁷ Also, in 1901, the Companhia Industrial Sabarense advertised great reductions

in prices. In one of the advertisements, the company, after issuing the new price list, added: "we can give a guarantee that no other cotton mill can offer more advantageous conditions than ours"¹¹⁸. And in the report on the performance of the Cedro cotton mill in 1901, a reference is made to the discounts of 10, 12, 13 and 15%, which were being given to customers.¹¹⁹ Also the relatively low profits of the Companhia Industrial Itabira do Campo in 1901 were explained by the Board of Directors as the result of a general reduction of 10% in prices, which was decided "in response to the financial state of our market, and the competition from other cotton mills".¹²⁰

Even the Companhia de Fiação e Tecelagem Industrial Mineira had problems in disposing of all the output of its factory as shown by the increase of 64.6% in the value of cloth in stock at its cotton mill in Mariano Procópio and in the company's warehouse in Rio de Janeiro between December 31, 1900 and June 28, 1901.¹²¹ Such a significant increase in stocks suggests that this mill was having difficulty in selling its products in Rio de Janeiro, a market to which it had diverted a large part of its production since sales in Minas Gerais had become more difficult in the late nineties. A comment made by the Board of Directors shows that the difficulties faced in the market of Minas Gerais had not yet been overcome in 1901. According to the Board, the decision taken by the company in July, 1898 to suspend all credit sales to inland markets was quite a wise decision as, since then, only 57.5% of old debts had been paid.¹²²

There is no evidence to suggest any significant improvement in demand for Mineiro cloth in the following year. Analysis of the financial situation of the Cedro e Cachoeira company, as well as a description of the performance of each of its cotton mills during 1902 reveal, on the contrary, that insufficient demand for its products since the early nineties - which had tended to worsen in recent years - persisted. This insufficient demand was not seen by the company's Board of Directors as a problem confined to their

cotton mills, but as a problem experienced by the whole cotton textile industry of Minas Gerais. Insufficient demand generated fierce competition amongst companies, which forced profits downwards by decreasing prices and increasing sale costs:

"Due to the fierce competition of similar products it has not been easy to dispose of the products of our cotton mills, and we have been forced to increase our expenditure with commercial travellers, discounts and deposits."¹²³

The effects of such competition on prices were emphasized: "There are some cotton mills which have been offering our customers discounts of 25%"¹²⁴ Losses incurred as a result of deterioration of unsaleable cloth in depositories kept by the company in the villages of Pirapora, Calhau and Abadia are also mentioned.¹²⁵

However, data on stocks of cloth kept in the depositories of the Companhia de Fiação e Tecelagem Industrial Mineira in Rio de Janeiro and Mariano Procópio, show that sales were easier for this company in 1902 than they had been in the previous year. From a value of 199 contos in June 28, 1901, such stocks decreased to 61 contos on the last day of 1902.¹²⁶ But, as has already been mentioned in this work, this company, given its easy access to the markets of the state and city of Rio de Janeiro, was selling a significant part of its production there. Therefore, an improvement in its sales in fact reveals an improvement in those markets, considered in this work as partly due to a more stable exchange rate.

The persisting difficulties with sales met by most of the Mineiro companies brought about in 1901 an increased concern with costs. Such a concern suggests that, because of the constant reduction in prices in the last few years and increased stocks of unsaleable cloth, proceeds from sales had decreased to such a point that it was becoming difficult for some companies to maintain the current levels of

production. In fact, according to the annual report of the Companhia Cedro e Cachoeira, the decrease in the price of cotton in 1901 did not offset the reduction which had been made in the price of cloth.¹²⁷

The annual report of the Companhia Industrial Sabarense for 1901 mentions a small reduction in the wages paid to the bookkeeper and to the manager¹²⁸. In the annual report of the Companhia Cedro e Cachoeira there is a reference to a decrease in the fees paid to the directors and in the remuneration of the managers, as well as to a general decrease in wages.¹²⁹ That there has been a reduction in nominal wages - which are usually assumed to be irreducible - in some cotton mills illustrates the great difficulties then faced by the textile industry in Minas.

Considering that problems with sales persisted in the industry, one would hardly have expected high dividends to have been paid in cash in 1901 and 1902.

The Companhia Industrial Sabarense did not distribute a dividend in 1901. Out of the 44 contos of profit obtained in that year - which corresponded to 7.5% of the capital - 30 contos were considered as doubtful debts, and 5% were deducted for depreciation of the machinery. The remaining profits, according to the Board of Directors, were not to be distributed as dividends but were to be considered in the accounts as depreciation of the cloth in stock as "a new reduction in the price of cloth has been made which will come into force on January, 1."¹³⁰

The annual balance of the Companhia de Tecidos Santanense shows 60 contos as dividends distributed in 1901.¹³¹ However, according to the Board of Directors, these dividends could not be paid immediately in cash but would be paid "in cloth or in cash by December, 31, this year."¹³²

However it should not be expected that all cotton mills in Minas Gerais felt in the same way the adverse conditions of

the period. Cotton mills relatively younger and with easier access to their consumer markets might have been able to overcome the difficulties more easily than others. This may have been the case, for instance, with the Itabira do Campo which started operating in the late nineties and was located quite close to Belo Horizonte. Even though a relatively low rate of profit was achieved in 1901, the Board of Directors recommended a dividend of 9% to be paid in 1902 according to the available resources of the company.¹³³ However it is not possible to find out if such resources became available, and if the dividend was in fact paid in 1902. This company, in spite of all the problems being faced by the textile industry of Minas Gerais in relation to the demand for its products in that period, had increased its production significantly in the last few years. In fact, from 1899 to 1901, the quantity of cloth produced by the company's cotton mill increased by 53.7%.¹³⁴

The dividend of 10%, shown in the annual accounts of the Companhia de Tecidos Santanense for 1901,¹³⁵ cannot be seen as a signal of prosperity as there is no indication that this dividend was paid. In fact the proposal presented by the company's Board of Directors to the shareholders at the General Meeting of March 22, 1902 was that a dividend of 10% be paid immediately in cloth or, by the last day of the year, in cash.¹³⁶

The results of the Companhia Cedro e Cachoeira in 1901, were the worst ever presented. The profits in this year corresponded to 4% of the capital and were the lowest reached by the company since its foundation.¹³⁷ Notwithstanding the low profits and a very pessimistic appraisal of the financial performance of the company in 1901, there is a reference to the "small dividend" distributed that year.¹³⁸ The following year 1902 does not seem to have brought about any better financial results. As stated in the annual report for this year: "the Board of Directors can not yet present a remunerative profit for your capital invested in this company".¹³⁹ However, in spite of

such a pessimistic remark and the clear intention of the Board of Directors not to distribute dividends, there is some evidence that the 200 contos shown as profits in the annual accounts were distributed, probably as a result of pressure from shareholders.¹⁴⁰ In fact, a note published in the official newspaper of the state of Minas Gerais in April 1903, notified the shareholders that a dividend of 10% was being paid by the company.¹⁴¹ However no information is available about the way in which this dividend was paid. Considering the performance of the company that year, and in previous years, as described in the annual reports, it is quite possible that this dividend was not paid in cash.

As in previous years, the Companhia de Fiação Tecelagem Industrial Mineira, although still unable to produce spectacular results, seems to have been able to provide a reasonable rate of return for its shareholders' capital, by paying a 10% dividend in the first semester and 6% in the second.¹⁴² However as has already been pointed out, this company was not expected to follow the general pattern of the cotton industry of Minas Gerais. Selling part of its production in the city and state of Rio de Janeiro, it benefitted from improvements taking place in those markets in 1902.

The poor performance of the companies in 1901 and in 1902 was presented to the shareholders as the unavoidable consequence of unfavourable general conditions and great competition in the market. According to one of the directors of the Companhia de Tecidos Santanense, and manager of the company's cotton mill, a reduction in sales in 1901 was due to "the state of decay in commercial life".¹⁴³ The President Director of the Companhia Industrial Sabarense refers, in his annual report for 1902, to "a lasting crisis which seriously affects our country and paralyses all businesses".¹⁴⁴ And the reports of the Companhia Cedro e Cahoeira for the years 1901 and 1902 specifically blame the intense competition in the market for the problems faced by the company.¹⁴⁵

6.3.4 A brief summary of the performance of the Mineiro cotton textile industry in the Campos Sales period and how it differs from that of Rio de Janeiro.

The evidence presented shows that the excessive production of the Mineiro cotton textile industry in relation to the demand for its products - a problem already faced since the mid nineties - not only persisted in 1899-1902 but intensified during this period. In spite of constant reductions in prices, stocks of unsaleable cloth kept piling up in the mills and difficulties in obtaining payments in cash and on time increased. Notwithstanding such difficulties, the policy of having the cotton mills operating at full capacity was maintained, reinforcing local competition. As the value of the cloth produced and not sold was computed as credit in the calculation of profits, part of the profits registered in the accounts at the end of the year did not correspond to net proceeds from sales. Pressure from shareholders for profits to be distributed as dividends led to the payment of such dividends in cloth and/or in obligations to be paid in the future.

For the Mineiro entrepreneurs the insufficient demand for their products was the result of a general crisis in the country. The statement by the Managing Director of the Companhia Cedro e Cachoeira revealed how, according to him, the effects of such a crisis were transmitted to Minas Gerais - and consequently to the cotton textile industry - through a decrease in Mineiro exports of food and cattle to other states. The adverse effects of the banking crisis of 1900 on the demand for their products are also mentioned by the Mineiro entrepreneurs. However no mention of difficulties brought about by an increased external competition resulting from the appreciation of the exchange rate was found in the reports.

In fact, the evidence presented illustrates a contrast in the effects of a rise in the external value of the mil-réis, on the demand for the domestic cloth in Rio de Janeiro and

in Minas Gerais.

As was seen in a previous section in this chapter, some textile entrepreneurs in Rio de Janeiro blamed the appreciation of the exchange rate during 1900 and 1901 for the lowering of the sale price of their products. In 1900, the external value of the mil-réis increased significantly and almost continuously. From January to July it increased by 61% and its monthly average in the second half of the year was 25% higher than in the first six months.¹⁴⁶ In the first months of the following year the external value of the mil-réis continued to increase at a significant rate, reaching a peak in April, when it arrived at its highest level since March, 1893, only to be surpassed in October, 1904. The effects of such rises in the external value of the mil réis on the demand for domestic cloth in Rio de Janeiro were immediate and preceded any actual change in the internal price of foreign cloth. A mere uncertainty about the subsequent course of the exchange rate was able to paralyse sales of cloth in Rio de Janeiro.¹⁴⁷ However the appreciation of the exchange rate in the Campos Sales period was not seen as a negative factor by the Mineiro industrialist. While the textile entrepreneurs of Rio de Janeiro bitterly complained of the effects of the fluctuations of the exchange rate on demand for their products, the Mineiro entrepreneurs continued to blame a general crisis for all their problems with sales.

As far as costs of production are concerned, one would not expect the appreciation of the exchange rate in the years 1899-1902 to have brought a significant relief to the Mineiro cotton mills. The main imports of raw materials were those connected with the production of dyed cloth: dyeing chemicals, and in some cases, the yarn to be dyed. However there is some evidence that the cloth produced in Minas Gerais in the years 1889-1902 was predominantly white.¹⁴⁸ Besides, there is some evidence that there was a change in demand for cloth in the years 1899-1901 which induced some cotton mills to substitute the production of white cloth for

dyed cloth. In such circumstances the appreciation of the exchange rate in 1899-1902, could not be expected to have a significant effect on production costs.

The evidence presented also shows how the Mineiro economy, in spite of its peculiarities as an economy largely devoted to production for local markets, was not isolated from the rest of the country. The demand for Mineiro cloth was affected by a reduction in income brought about by a decrease in Mineiro exports to other states.

Even though it is quite reasonable to assume that the imposition of consumption taxes on textiles had brought additional problems to the cotton textile sector of Rio de Janeiro and Minas Gerais, no specific complaints about these taxes were found in the documentation of the companies examined in this work. However this does not imply that there was no reaction against this new tax. This reaction quite probably took the form of pressure exerted by the textile entrepreneurs upon influential members of the government. In a convention of industrialists, local traders and farmers which took place in Belo Horizonte in 1903, a diagnosis of the main problems faced by the cotton textile industry of the state of Minas Gerais emphasized the burden of taxes to which it was subjected to.¹⁴⁹

6.4 Evolution of the cotton mills' productive capacity in 1899-1902.

As mentioned before, the Campos Sales period has been seen in the literature as a period of stagnation in Brazilian industry, a necessary result of the recessionary economic policy applied. Such appraisal has more recently been partially corroborated by data on exports of industrial machinery to Brazil which show a decrease in the annual average of such exports of 31.6% between the periods 1892-1895 and 1896-1898, followed by a decrease of 19.3% in the next period, 1899-1902.¹⁵⁰

Investment in the cotton textile industry of Minas Gerais followed the trend indicated by exports of industrial machinery to Brazil. As for investment in new cotton mills, this was drastically reduced since the cotton mills set up by the companies constituted in the first half of the nineties became ready to go into operation. The few companies formed after 1894 were unable to establish new cotton mills and no company was constituted with such an objective in 1899-1902. Moreover, the performance of the Mineiro cotton mills in the years 1899-1902 suggests that there was neither motivation nor resources available for the enlargement of the productive capacity of the existing mills. Any plans in this direction would certainly have faced fierce opposition from shareholders in most of the Mineiro companies as this would mean diverting profits from dividends to reinvestment.

The evidence to be presented in this section shows that in fact reinvestment of profits seems to have been restricted in Minas Gerais in 1899-1902. If, on the one hand, there are examples of minor investment in some mills, as for instance the establishment of dye-houses and enlargement of the spinning machinery, on the other hand there is evidence that some companies were unable to provide an adequate maintenance of the productive capacity of their mills. However, significant investments took place in the cotton mills of two textile companies, the Companhia Industrial Itabira do Campo and the companhia de Fiação e Tecelagem Industrial Mineira.

The number of looms operating in each of the Companhia Cedro e Cachoeira's cotton mills during the period 1883-1902 are displayed in table 6.4. These data make it clear that the company's productive capacity in 1899-1902 resulted from large investment made before 1894. In fact, they reveal two spurts of investment before 1894: one in the eighties, which started just after the constitution of the company and lasted until 1888, and another in the early nineties, with the purchase, repair and enlargement of the São Vicente

cotton mill. In the first period, the number of looms in operation increased by 111% and in the second, by 67%. From 1896 to 1902 no new looms were added to any of the cotton mills.

Table 6.4

Development of the productive capacity of the Companhia Cedro e Cachoeira's cotton mills, measured by number of looms.

Years	Fábrica do Cedro	Fábrica da Cachoeira	Fábrica de São Vicente	Companhia Cedro e Cachoeira
1883	40	66	(1)	106
1885	56	110	(1)	166
1886	77	140	(1)	217
1888	84	140	(2)	224
1894	84*	140*	85	309
1895	84*	140*	90	314*
1902	84*	140*	90*	314*

(1) the São Vicente cotton mill had not yet been built.

(2) The São Vicente cotton mill had probably been founded but it had not yet been bought by the companhia Cedro e Cachoeira.

* Number of looms of the previous year shown in the table, as there is no evidence that new looms were bought between these two years. These numbers may be over evaluating the productive capacity of the cotton mills as some machines may have been idle in between these years. Sources: reports on each mill contained in the annual reports of the company: Companhia Cedro e Cachoeira (1883-1902), Relatórios da Diretoria.

The installation of dyeing facilities at the Cachoeira cotton mill in November 1899 could suggest a significant investment in that year. However, the decision to establish this dye-house, as well as most of the expenditure associated with it, were made in the previous period 1896-1898. In fact, in the annual report presented to the General Meeting of Shareholders on April 5, 1899, the Board of Directors announced that the dye-house was ready but had not started working because some machinery and plumbing, already

ordered, had not yet arrived.¹⁵¹

If there is no evidence of any significant investment in the cotton mills owned by the Companhia Cedro e Cachoeira in 1899-1902, the question remains as to whether, taking into account all the adverse conditions faced by these cotton mills in the period, the company was able to provide adequate maintenance of their machines.

São Vicente was a relatively new cotton mill and, therefore, one would not expect its machines to require great expenditure on repair and maintenance. In fact, before it started operating regularly in 1894, this cotton mill had not only been completely restored, but it had also been enlarged with new buildings and new machinery.¹⁵² It was in the Cedro cotton mill, the oldest cotton mill in operation in Minas Gerais, that major problems in the maintenance of productive capacity were to be expected. Part of its machinery dated from the early seventies and there is no evidence of any general repair work or restoration of buildings and machinery taking place before 1899. Older

Table 6.5

Production of cloth per loom by Cedro, Cachoeira and São Vicente's cotton mills in 1888-1902.

Periods	Cedro	Cachoeira	São Vicente
1888-1892	8,577	10,963	-
1893-1898	6,601	10,276	8,455
1899-1902	7,277	10,988	13,077

Observations: Data on average production per loom calculated by dividing the average annual amount of cloth produced in each period by the number of looms. For Cachoeira cotton mill, where the number of looms increased from 85 to 90 in the period 1893-1898, the average of 87.5 looms was used for calculating the average productivity per loom in the years 1893-1898. Source: data on quantity of cloth produced and number of looms in: Companhia Cedro e Cachoeira (1888-1902), Relatórios da Diretoria.

machines are expected to achieve lower levels of productivity, compared to more up to date ones, even if well kept. Such a difference in productivity is certainly increased if old machines are not regularly repaired and properly maintained. Data in table 6.5 reveal a significant difference in productivity between the Cedro and Cachoeira cotton mills. With an old and small dye-house and a spinning machinery unable to produce a good yarn, the Cedro cotton mill was said to have been unfit to cope with competition in the market for dyed cloth in 1899¹⁵³. The inferior quality of its cloth was blamed for the low profits achieved in 1900¹⁵⁴. The relatively lower levels of production of the Cedro mill, as well as the inferior quality of its products were blamed on its old machines which were said to be in a bad state of repair. The great reduction in the amount of cloth produced in this mill in 1901¹⁵⁵ was ascribed to two factors: the bad state of the machinery and an inadequate power system. The collapse of the sluice and an insufficient number of steam machines forced the mill to stop working for two months during this year. Besides, the carding machines were said to be in such a bad state that they could not supply the looms with a yarn of good quality and in sufficient quantity.¹⁵⁶ This problem was partially solved in the following year with the purchase of a new spinning machine with 260 spindles and one new carding machine.¹⁵⁷

Data in table 6.6 suggest that the Cedro cotton mill lost some of its productive capacity after 1892.

Considering that the Companhia Cedro and Cachoeira adopted the policy of keeping its mills working at full capacity, data on the annual average quantity of cloth produced may be used as an indicator of the evolution of the productive capacity of its mills. These data suggest that while the Cachoeira cotton mills was apparently able to maintain its productive capacity from 1888 to 1902, the same did not apply to Cedro.

Table 6.6

Production of cloth by the Companhia Cedro e Cachoeira's cotton mills, the Cedro and the Cachoeira in 1888-1902: annual averages, in 1,000 meters, by periods.

Years	Fábrica do Cedro in 1,000 metres	ind. numb.	Fábrica da Cachoeira in 1,000 metres	ind. numb.
1888-1892	720	100	1,535	100
1893-1898	554	77	1,439	94
1899-1902	611	85	1,538	100

Source: data on annual amount of cloth produced were taken from the annual reports of the Board of Directors, presented to the General Meetings of Shareholders: Companhia Cedro e Cachoeira (1888-1902), Relatório da Diretoria, "Fábrica do Cedro" and "Fábrica da Cachoeira".

In the case of the Cachoeira mill, the higher levels of production reached in 1899-1902 were due, at least in part, to a general overhaul of the cotton mill carried out in 1898.¹⁵⁸ The decrease in the average annual production of 23% in the Cedro mill in 1893-1898 was followed by an increase of only 10,2% from 1899-1902, so that in the latter period, the average annual production was 15.2% lower than in 1888-1892. So, while the Cachoeira cotton mill was able to present levels of production in 1899-1902 similar to those of 1888-1892, the Cedro cotton mill was unable to keep up the same level of production, which may suggest that this mill suffered a net disinvestment during the period 1888-1902.

Finally, it is important to observe that the constant problems faced by these two cotton mills in their system of water provision for the turbines, forcing them to stop working for some periods - problems which were mentioned in the previous section - reveal that the company was not making the expenditure required to ensure a more regular supply of energy for its mills.

The initial plans by the Companhia de Fiação e Tecidos

Santanense to expand the productive capacity of its cotton mill could not be carried out in the years 1899-1902. The company's cotton mill, which started working in 1895 with 66 looms - 34 looms, in fact, in operation, and 32 more already ordered - expected to have its weaving section expanded to 100 looms by the end of 1896¹⁵⁹, but was unable to do so. In January 1900, the cotton mill still had 66 looms working¹⁶⁰ and in 1904, 65.¹⁶¹ However, this does not mean that the company had not made any investment. In fact, in his report for 1899, the President Director of the company, Manoel Gonçalves de Souza Moreira, remarked that the spinning department was unable to provide all the necessary yarn for the looms and stressed the need to increase the production of yarn, so that foreign yarn had not to be imported to keep all the looms working¹⁶². In 1901, the company bought some new machinery, which included 2 spinning machines.¹⁶³

However, it is clear that the long term maintenance of productive capacity in a period of low profits would be specially hard for older cotton mills. So, it was to be expected that a cotton mill like Marzagão¹⁶⁴, which was established in the early eighties, would have more problems in maintaining its productive capacity in the second half of the nineties and the first years of the twentieth century, than a more recently established one such as the Companhia de Tecidos Santanense's mill.

In fact the Marzagão cotton mill entered the period 1899-1902 with its machinery in great need of a severe overhaul. According to the President Director of the company, Carlindo dos Santos Pinto, in a report dated February 10, 1889, the machinery was too old and needed constant repair and replacement of parts. However this upkeep was said to be very expensive for the company.¹⁶⁵ A similar complaint is found in the report of the Board of Directors for the following year.¹⁶⁶ And in a report dated January 21, 1901 the Board of Directors notified the shareholders that a major overhaul of the machinery, especially that of the spinning machinery, which was worn out and old fashioned, had to be

carried out so that the production of Marzagão could compete in the market.¹⁶⁷ A proposal for a reform of the statutes presented on April 17, 1901, contained a provision which authorised the Board of Directors to raise a loan of 50 contos through the issue of debentures "in order to improve the factory, repair its machinery, introduce any improvement and to develop any other industry which may be advantageous to the company."¹⁶⁸ Finally, in 1901, the Board of Directors decided to import some machinery from Europe, with the purpose of expanding the weaving section and improving the cloth produced in Marzagão.¹⁶⁹ And, in the report for the year 1902, the Board announced that new machinery of an "improved system" had been bought and a dye-house had been set up. The Board also announced that such investment had been financed with existing funds, and it had not been necessary to make use of the authorization for the issue of debentures given by the new statutes.¹⁷⁰ However, an examination of the annual accounts of the company for that period does not reveal how such expenditure, which amounted to 42 contos, had been financed, and suggests that funds had been raised through private loans not registered in the books of the company.¹⁷¹ In fact, given the low profits presented by the company - which, as seen in the previous section, corresponded mostly to unsold cloth - the annual provision for depreciation, corresponding to 2% of the profits would have been unable to finance this purchase.¹⁷²

One cotton mill which had its productive capacity increased in the period 1899-1902 was the Companhia Industrial Itabira do Campo's mill. This cotton mill had started operating regularly with 64 looms in the last quarter of 1896.¹⁷³ In 1899, it had eighty looms in operation - sixteen of them bought in 1898¹⁷⁴. The Board of Directors proposed that 11% of the net profits achieved that year should be used in "improvements urgently needed by the cotton mill"¹⁷⁵, including the purchase of twenty more looms, and that a dividend of 10% be first distributed in cash to the small shareholders. This proposal raised strong opposition from shareholders. The discussions which then took place reveal

very clearly the different mentality of the shareholders from that of the company's managers. On the one side were the shareholders who behaved like typical rentiers. Their objections to the Board of Directors' proposal, as well as the counter-proposals they presented, dealt only with the amount of dividend to be distributed and the form of payment of such dividend. On the other side was the manager of the company who insisted, as an entrepreneur, on the need for additional funds to be invested in the cotton mill. Even though there is no information to indicate if such a proposal was, or was not, approved by the shareholders, there is some evidence that new machines were ordered. In 1903 the cotton mill had 96 looms and in 1904 it had 100.¹⁷⁶ Besides, data in table 6.7 show a significant increase in the average amount of cloth by loom in 1903, which suggests that the investment which took place between 1901 and 1903 increased the cotton mill's productivity.

Table 6.7

Companhia Industrial Itabira do Campo's cotton mill:
evolution of the productive capacity and
production in 1898-1903.

Years	Production		Number of looms		Production per loom	
	in metres numbers	index numbers	absol. values	index numbers	in metres	index
1898	629,876	100	64	100	9,842	100
1899	624,550	99	80	125	7,807	79
1900	804,815	128	80	125	10,060	102
1901	960,182	152	na	na	na	na
1902	na	na	na	na	na	na
1903	1,189,610	189	96	150	12,392	126
1904	1,385,387	220	100	156	13,854	141

na=not available.

Sources: Companhia Industrial Itabira do Campo (1899), Relatório da Diretoria, "Machanismos"; Companhia Industrial Itabira do Campo (1901), Relatório da Diretoria, and José Sanz, Neves and Lima (1908).

The performance of the Companhia Industrial Itabira do Campo's cotton mill in 1899-1902, described in the previous section, makes it clear that this mill was experiencing difficulties in the sale of its products in those years. Such difficulties were reflected in the distribution of the dividend which could not all be paid in cash. The fact that the managers had been able in such circumstances to reinvest part of the profits, in spite of a strong reaction from the shareholders, shows that - contrary to what happened in other companies - they were in fact able to control the process of decision making in their company. The reasons underlying the managers' decision to expand the productive capacity of the company's mill in a period when sales were not providing sufficient funds for a satisfactory remuneration of the capital invested may be speculated on. It is possible that their optimistic expectations of future development of demand for their products were based on assumptions about the expansion of the consumer market in the city of Belo Horizonte. In fact, such expectations were quite justified as the inauguration of this city as the state capital would necessarily produce a substantial increase in the demand for cloth in the years to come. The Companhia Industrial Itabira do Campo, with a new cotton mill established quite close to this city, would certainly have comparative advantages in supplying this new market. The aim of cornering a larger share of this new market and the opportunity to buy cheaper machinery due to the appreciation of the exchange rate¹⁷⁷ could explain the decision by the managers of this company to expand the productive capacity of their cotton mill.

Finally, data on employment, available for the Companhia Fiação e Tecelagem Industrial Mineira and shown in table 6.8 may be used to indicate the expansion of the productive capacity of the company's cotton mill, if it is assumed that no technological changes significantly affecting the worker's productivity had been introduced during the period, and that the company applied the policy of maintaining its mill working at full capacity.

Under such assumptions, those data suggest that the productive capacity of this cotton mill increased significantly from the time it was bought by the Companhia de Fiação e Tecelagem Industrial Mineira in 1889 until 1902. The increase in the number of workers employed in 1891-1894

Table 6.8

Number of workers employed, by department, at the Companhia de Fiação e Tecelagem Industrial Mineira's cotton mill, available for some years, in the period 1889-1902.

Years*	Pre Spinning and spinning departments		Pre Weaving and weaving departments		Finishing and others		Total	
1889	52	100	98	100	44	100	144	100
1891	49	94	114	116	29	66	192	133
1892	51	98	114	116	44	100	209	145
1893	48	92	109	111	42	95	199	138
1894	52	100	117	119	27	61	196	136
1901	60	115	144	147	35	80	239	166
1902	63	121	174	178	33	75	270	188

* data for 1889 and 1891 are data for employment in March, all the others are for November.

Source: Companhia de Fiação e Tecelagem Industrial Mineira, Folhas de Pagamento.

reveals the investment which followed the constitution of the company Fiação e Tecelagem Industrial Mineira in 1889.¹⁷⁸ In fact, by 1902 the number of workers employed was 80% higher than in 1889. The increase in the labour force in 1901 and 1902 followed an increase in productive capacity which took place in those years. The annual report for the year 1900 mentions the "acquisition of different modern machines and accessories, including 10 looms"¹⁷⁹, and the report of 1902 mentions the purchase of 8 new looms.¹⁸⁰

The expansion of the productive capacity of this cotton mill shows once more that the Companhia Fiação e Tecelagem Industrial Mineira had a performance different from most of

the other textile companies of Minas Gerais. Conditions in the Rio de Janeiro market, even though not auspicious, were better than those in the markets of the interior of Minas Gerais and allowed the company to achieve better results. Besides, the examination of the performance of this company suggests that its shareholders had a more capitalist mentality than the typical Mineiro shareholder and did not obstruct the sound management of the company with demands for immediate dividends. Therefore the company could more easily take advantage of the appreciation of the exchange rate by ordering new machines.

In fact it is quite possible that the relatively modest expansion of the productive capacity which took place in some cotton mills in Minas Gerais had been encouraged by the appreciation of the exchange rate which occurred in the period. In 1900 the external value of the mil-réis increased significantly and almost continuously. From January to July it increased by 61% and its monthly average in the second half of this year was 25% higher than it was in the first six months. In the beginning of 1901 it continued to increase, reaching a peak in April, which was only to be surpassed in October 1904 and which had not been reached since March 1893.¹⁸¹ If, on the one hand, the Mineiro producer of cloth - protected from foreign competition by transport and distribution costs - was not adversely affected by an appreciation of the exchange rate, on the other hand, he could benefit from the effects of such appreciation on the price of machines.

The evidence presented shows quite clearly that no major expansion of productive capacity took place in the cotton mills of Minas Gerais in the years 1899-1901 and no companies were formed in this period to establish new cotton mills in the state. However one cannot explain such stagnation as the necessary result of the deflationary monetary policies of Campos Sales.

The recession in the industrial cotton textile industry of

Minas Gerais did not begin with a change in economic policy introduced in the period, but had coexisted with the more liberal economic policies applied previously. A crisis in the textile industry of Minas Gerais had started in the mid nineties when it became clear that supply was increasing at a faster rate than demand. Consequently prices fell and companies started having problems in paying dividends in cash. The prospect of receiving either very low dividends, no dividends at all, or dividends paid in cloth or in obligations - as had been happening for some time to those who had invested in the Minas Gerais textile industry - was not an attractive prospect for potential investors.

Even though it is possible to argue that, even in the absence of the deflationary economic policy of Campos Sales, the Mineiro industry would have suffered the effects of excessive investment in previous periods, one cannot deny that such a policy had intensified these difficulties. The adverse effects of such a policy were certainly felt in Minas Gerais through a decrease in demand for Mineiro products and a consequent decrease in local income.

6.5 Conclusions

a) 1899-1902 was a period of recession in the cotton textile industry of Minas Gerais. No new cotton mill was established in those years, and no textile company was formed in the period to set up new cotton mills. Furthermore, no significant increase in the productive capacity of the industry as a whole took place in the period.

b) This recession was not caused by Campos Sales' economic policy as the new economic policy was applied when the Mineiro textile industry was already facing a recession which had started in the mid nineties. However it intensified the difficulties faced by the Mineiro industry in so far as it decreased the demand for Mineiro exports in other states and consequently reduced the local demand for

cloth.

d) Contrary to what happened in Rio de Janeiro, the Mineiro textile industry was not adversely affected by the appreciation of the exchange rate which took place in the period. The cotton textile industry of Minas Gerais was still protected from external competition.

e) A contrast between the policies adopted in the management of cotton mills in Rio de Janeiro and Minas Gerais under similar unfavourable conditions of demand reveals some peculiarities of the Mineiro industry: a higher share of variable costs in the total costs of production and the overwhelming presence of the rentier shareholder.

1. According to the data presented by Vasco (1905), there were thirty cotton mills in Minas Gerais on July 31, 1905, with a total of 2,295 looms, and an average of 76.5 looms per mill. The cotton mills investigated in this chapter had, together, 855 looms. The only one to have a number of looms inferior to the average was the Companhia de Tecidos Santanense cotton mill (the Cachoeira mill) which had then sixty-six looms.

2. A good source for the study of the negotiations which ended up with the signing of the contract of the Funding Loan of 1898 is given by reports from two Brazilian politicians who played a significant role in the negotiation of this loan: Campos Sales, who had already been elected President at the time of the loan's negotiation, and Bernardino de Campos, who was then Prudente de Moraes's Minister of Finance. See: Campos Sales (1983) and Campos (1909, 3-12).

3. A transcription of the contract of this funding loan may be found in: Veiga Filho (1899).

4. In an address to the nation on the inauguration of his government, President Prudente de Moraes had enumerated among the principles which would guide his economic policy: an appreciation of the exchange rate through a reduction in the amount of paper money in circulation. See: Prudente de Moraes (1894), Mensagem do Sr. Presidente da República à Nação Brasileira em 15 de novembro, p.107. In fact, attempts at reducing the amount of inconvertible currency in circulation were made by his government without major success in bringing about an appreciation of the exchange rate. See: decree number 1976, February 25, 1895; decree number 1987, March 14, 1895; Brasil, Prudente de Moraes (1895), Mensagem Presidencial ao Congresso Nacional; Calógeras (1960, 291).

5. The Tariff in force until March, 1900 was the one passed on December 17, 1897 by decree number 2,743.

6. Decree number 3,167, March 19, 1900.

7. Luz (1961, 115).

8. About the comments of foreign observers on the protection afforded by the new Tariff to Brazilian industry see: Versiani (1981, 25-26).

9. See, for instance: "Brazil" in Board of Trade Journal, vol. XXVIII, number 70, March 1, 1900, p.483.

10. See, for instance, his statement on the subject in his speech to the National Parliament on May 3, 1899. Campos Sales (1899), Mensagem Presidencial ao Congresso Nacional.

11. Law number 559, December 31, 1898 and Law number 581, July 20, 1899.

12. The consumption taxes on these products were introduced by different Budget Laws. The one on alcoholic beverages by law number 350, December 30, 1895, and the one on matches and salt by law number 489, December 15, 1897.

13. Law number 641, November 14, 1899.

14. Simonsen (1973, 16).

15. Graham (1968, 321).

16. Data in Graham (1968, 330-332): "Exports from Great Britain to Brazil, 1850-1909".

17. Villela and Suzigan (1973, 83).

18. Ibid.

19. Villela and Suzigan (1973, 130).

20. Mello (1987, 150). Mello's work, published for the first time in 1982, was written in 1975.

21. Mello (1987, 150-151).

22. Suzigan (1984, 72).

23. Ibid. No explanation for the particular performance of the cotton textile and the milling industries is offered by the author.

24. Suzigan (1984, 81).

25. Stein (1957, 98).

26. Stein (1957, 98-113).

27. Versiani (1980a).

28. Suzigan (1984, 103-132).

29. Suzigan (1984, 125).

30. Companhia Fiação e Tecidos Mageense (1899), Relatório da Diretoria, 1899.

31. The company expected to have 620 looms at work by the end of the first semester of 1900. See: Companhia de Fiação e Tecidos Corcovado (1899), Relatório da Diretoria, "Maquinismos".

32. Ibid.

33. Companhia de Fiação e Tecidos Aliança (1899), Relatório da Diretoria, "Situação".

34. Ibid. About the increase in the number of daily working hours, see: Companhia de Fiação e Tecidos Aliança (1899), Relatório da Diretoria, "Trabalho e Produção".

35. Such changes were described in section 6.1.1.

36. In fact if the average external value of the mil réis was 7,838 pence in 1899, and if the proportion of the tariff duties to be paid in gold that year is taken as an arithmetic average of the proportions to be paid in the first and second half of 1899, a product which paid 100 mil réis as tariff duties in 1898 would pay in 1899: $12,5 \times 27/7.838 + 87.5 = 131$. Average value of the mil réis in 1898 from: Conselho Nacional de Estatística, Instituto Brasileiro de Geografia e Estatística (1939/1940,1354).

37. Companhia de Fiação e Tecidos Aliança (1900), Relatório da Diretoria, "Situação".

38. A description of the banking crisis of 1900 may be found in: Calógeras (1960,340-350) and Fritsch (1983,14-15).

39. A description of the problems faced by the Banco da República do Brasil since its foundation in 1892 - as a result of the fusion of the two banks, Banco do Brasil and Banco da República dos Estados Unidos do Brasil - until 1900, when it was taken over by the government, may be found in: Andrada (1923,316-360).

40. References to the special legislation on the measures to be taken by banks going into liquidation are found in: Calógeras (1960,348-350).

41. Companhia de Fiação e Tecidos Aliança (1900), Relatório da Diretoria, "Situação".

42. Ibid.

43. Companhia de Fiação e Tecidos Aliança (1900), Relatório da Diretoria, "Produção".

44. In 1900 this cotton mill set up five new spinning machines and other machines necessary for an increase in the production of yarn. See: Companhia Fiação e Tecidos Mageense (1900), Relatório da Diretoria.

45. Companhia Fiação e Tecidos Aliança (1900), Relatório da Diretoria, "Produção."

46. In 1899 the two Companhia de Fiação e Tecidos Aliança's cotton mills produced 11,560,292.5 metres of cloth. Companhia Fiação e Tecidos Aliança (1899), Relatório da Diretoria, "Trabalho e Produção".

47. Data of the monthly production in 1900 of the two cotton mills owned by the Companhia Fiação e Tecidos Aliança are given in: Companhia de Fiação e Tecidos Aliança (1900), Relatório da Diretoria, "Produção".

48. Companhia Fábrica de Tecidos São Pedro de Alcântara (1900), Relatório da Diretoria.

49. Ibid.

50. Companhia Fábrica de Tecidos São Pedro de Alcântara (1901), Ata da Assembléa Geral.

51. Companhia de Fiação e Tecidos Aliança (1901), Relatório da Diretoria, "Situação" and "Vendas".

52. This information refers to the period July, 1901 to June 1902. See: Companhia América Fabril (1901/1902), Relatório da Diretoria. More information about the general performance of this company in the period may be found in: Weid and Bastos (1986).

53. Companhia de Fiação e Tecidos Aliança (1901), Ata da Assembléa Geral Extraordinária.

54. Companhia Fábrica de Tecidos São Pedro de Alcântara (1901), Relatório da Diretoria.

55. Companhia de Fiação e Tecidos Mageense (1902), Relatório da Diretoria.

56. Companhia Fábrica de Tecidos São Pedro de Alcântara (1902), Relatório da Diretoria.

57. Ibid.

58. Companhia de Fiação e Tecidos Aliança (1902), Relatório da Diretoria, "Situação".

59. Companhia Cedro e Cachoeira (1899), Relatório da Diretoria, "Escritório Central".

60. As seen in the last chapter, a great part of the labour costs, energy costs and even costs of raw materials were fixed costs in the Mineiro cotton mill.

61. Companhia Cedro e Cachoeira (1899), Demonstração da Conta Lucros e Perdas em 30 de dezembro.

62. Companhia Cedro e Cachoeira (1898), Demonstração da Conta Lucros e Perdas em 30 de dezembro.

63. See the values of profits registered in the Profit and Loss account of the company in 1895, 1896, 1897 and 1898.

64. Companhia Cedro e Cachoeira (1899), Balanço Geral em 30 de dezembro.

65. Companhia Cedro e Cachoeira (1899), Relatório da Diretoria, "Fábrica do Cedro".

66. Companhia Cedro e Cachoeira (1899), Relatório da Diretoria, "Fábrica da Cachoeira".

67. Companhia Cedro e Cachoeira (1899), Relatório da Diretoria, "Escritório Central".

68. Ibid.

69. Companhia Cedro e Cachoeira (1899), Relatório da Diretoria, "Fábrica do Cedro". In this report on Cedro's cotton mill there is a reference to the increased stocks of such goods in the cotton mill's warehouse, "goods difficult to sell."

70. A reference to the decision of this meeting of shareholders as well as a transcription of the proposal presented by Aristides José Mascarenhas are found in Vaz (1990,109).

71. Companhia Cedro e Cachoeira (1899), Relatório da Diretoria, "Fábrica São Vicente".

72. See Chapter 5.

73. Companhia Cedro e Cachoeira (1899), Relatório da Diretoria.

74. Companhia Cedro e Cachoeira (1899), Relatório da Diretoria, "Fábrica do Cedro". There is evidence that this cotton mill used to import yarn. See a mention of such imports in: Companhia Cedro e Cachoeira (1891), Relatório da Diretoria, "Fábrica do Cedro".

75. Companhia Fiação e Tecidos União Lavrense (1899), Relatório da Diretoria.

76. Companhia Industrial Sabarense (1899), Relatório da Diretoria.

77. At the end of the previous year, 17 looms had been ordered by the company to be added to the 63 looms, already in operation. See: Companhia Industrial Itabira do Campo (1899), Relatório da Diretoria.

78. Ibid. Production decreased from 629,876 metres in 1898 to 624,550 metres in 1899 in spite of an increase of 27% in the number of the looms.

79. Ibid.

80. Data on cost and quantity produced are in Companhia Industrial Itabira do Campo (1899), Relatório da Diretoria.

81. Data on profits in: Companhia Industrial Itabira do Campo (1899), Demonstração da Conta de Lucros e Perdas em 30 de dezembro. Data on capital in: Companhia Industrial Itabira do Campo (1899), Balanço Geral em 30 de dezembro.

82. Companhia Industrial Itabira do Campo (1900), Ata da Assembléa Geral.

83. Companhia de Tecidos Santanense (1899), Relatório da Diretoria.

84. The low profits presented by the company in its annual balance of December 31, 1899, were also the result of changes introduced in the company's accounting by the new manager. See: Companhia de Tecidos Santanense (1899), Relatório da Diretoria. The company's accounts presented a profit of 13:594\$68 which corresponded to 2.3% of the capital. See: Companhia de Tecidos Santanense (1899), Resumo do activo e passivo, extraído do "Diário" às páginas 45 e 46, onde fora procedido o Balanço Geral em 31 de dezembro.

85. Companhia de Tecidos Santanense (1900), Ata da Assembléa Geral.

86. Companhia de Tecidos Santanense (1900), Parecer do Conselho Fiscal.

87. Companhia Industrial Sabarense (1899), Relatório da Diretoria.

88. Companhia de Fiação e Tecidos União Lavrense (1899), Relatório da Diretoria.

89. About the constitution of this company and the connections of its shareholders with commerce and textile production in Rio de Janeiro, see Chapter 2.

90. Companhia de Fiação e Tecelagem Industrial Mineira (1899), Relatório da Diretoria.

91. Companhia de Fiação e Tecelagem Industrial Mineira (1899), Demonstração da Conta de Lucros e Perdas em 30 de junho, and Demonstração da Conta de Lucros e Perdas em 30 de dezembro.

92. Companhia de Fiação e Tecelagem Industrial Mineira (1899), Relatório da Diretoria.

93. Companhia Industrial Sabarense (1899), Relatório da Diretoria.

94. Companhia Fiação e Tecidos União Lavrense (1900), Relatório da Diretoria, "Dívida Flutuante".

95. Companhia Cedro e Cachoeira (1900), Relatório da Diretoria, "Escritório Central".

96. Ibid.

97. Companhia Industrial Sabarense (1900), Relatório da Diretoria.

98. Ibid.

99. Companhia de Fiação e Tecelagem Industrial Mineira (1900), Relatório da Diretoria.

100. Ibid.

101. Companhia Cedro e Cachoeira (1900), Relatório da Diretoria, "Escritório Central".

102. Companhia Cedro e Cachoeira (1900), in Relatório da Diretoria, "Fábrica do Cedro".

103. In 1899 this cotton mill had produced 575,031 metres of cloth, a quantity slightly lower than that produced in 1898. Such a decrease in the amount of cloth produced was the result of a drought which forced the mill to be operated by steam power. See: Companhia Cedro e Cachoeira (1899), Relatório da Diretoria, "Fábrica do Cedro". In 1900 this cotton mill produced 719,309 meters. See: Companhia Cedro e Cachoeira (1900), Relatório da Diretoria, "Fábrica do Cedro".

104. The Cedro cotton mill presented profits of 260 contos in 1899. In 1900 these profits decreased to 150 contos. See: Companhia Cedro e Cachoeira (1899), Demonstração da Conta Lucros e Perdas em 31 de dezembro, and Companhia Cedro e Cachoeira (1900), Demonstração da Conta Lucros e Perdas em 31 de dezembro.

105. Companhia Cedro e Cachoeira (1900), Relatório da Diretoria, "Fábrica do Cedro".

106. Companhia Cedro e Cachoeira (1900), Relatório da Diretoria, "Fábrica da Cachoeira".

107. Data on the amount produced by both cotton mills in 1899 and 1900, in: Companhia Cedro e Cachoeira (1899), Relatório da Diretoria, "Fábrica da Cachoeira" and "Fábrica de São Vicente" and Companhia Cedro e Cachoeira (1900), Relatório da Diretoria, "Fábrica da Cachoeira" and "Fábrica de São Vicente".

108. In 1898, the company's cotton mill produced 456,841 meters and sold 406,683.6 meters. Data on: Companhia Fiação e Tecidos União Lavrense (1898), Relatório da Diretoria. In 1900 the company's cotton mill sold 341,273.15 meters. See: Companhia Fiação e Tecidos União Lavrense (1900), Relatório da Diretoria. Data for the quantity produced in 1900 are not available.

109. Ibid.

110. See: Companhia Industrial Sabarense (1900), Relatório da Diretoria.

111. Companhia Industrial Sabarense (1900), Relatório da Diretoria.

112. Company's capital from: Companhia Industrial Sabarense (1900), Resumo do Balancete organizado em 31 de dezembro. Value of stocks in: Companhia Industrial Sabarense (1900), Relatório da Diretoria.

113. Companhia Industrial Sabarense (1900), Relatório da Diretoria, and Companhia Industrial Sabarense (1900), Parecer do Conselho Fiscal.

114. Such information was obtained from the proceedings of the General Meeting of Shareholders which took place on March 10, 1901, when the report for 1900 was presented by the Board of Directors. See: Companhia Industrial Itabira do Campo (1901), Ata da Assembléa Geral.

115. Calógeras (1960, 350).

116. Companhia de Fiação e Tecidos Santanense (1901), Relatório da Diretoria.

117. Ibid.

118. Minas Gerais, June 8, 1901, p.4.

119. Companhia Cedro e Cachoeira (1901), Relatório da Diretoria, "Fábrica do Cedro".

120. Companhia Industrial Itabira do Campo (1901), Relatório da Diretoria.

121. Companhia de Fiação e Tecelagem Industrial Mineira (1900), Manufaturas, matéria prima, etc, em 31 de dezembro, and Companhia de Fiação e Tecelagem Industrial Mineira (1901), Manufaturas, matéria prima etc, em ser em 28 de junho.

122. Companhia Fiação e Tecelagem Industrial Mineira (1902), Ata da Assembléa Geral.

123. Companhia Cedro e Cachoeira (1902), Relatório da Diretoria, "Escritório Central".

124. Ibid.

125. Ibid.

126. Companhia de Fiação e Tecelagem Industrial Mineira (1891), Manufaturas, Matéria Prima, etc., em ser em 28 de junho, and Companhia de Fiação e Tecelagem Industrial Mineira (1902), Manufaturas, Matéria Prima, etc. em ser em 31 de dezembro.

127. Companhia Cedro e Cachoeira (1901), Relatório da Diretoria, "Escritório Central".

128. Such reductions in the book keeper's and the manager's wages caused a minor reduction in costs: 2:400\$ a year. See:

Companhia Industrial Sabarense (1901), Relatório da Diretoria.

129. Companhia Cedro e Cachoeira (1901), Relatório da Diretoria, "Escritório Central". Even though the Companhia Cedro e Cachoeira's annual reports were supposed to contain information for each calendar year, as they were presented to the General Meeting of Shareholders, which took place in March, and as the majority of them are undated, it may be that some of them may have information concerning not only the calendar year they were supposed to cover, but also the first months of the following year. In fact it is not clear in the report from the Board of Directors for 1901, whether this general reduction in wages was carried out in 1901 or at the beginning of 1902.

130. Companhia Industrial Sabarense (1901), Relatório da Diretoria, "Estado Financeiro".

131. Companhia de Tecidos Santanense (1901), Demonstração da Conta de Lucros e Perdas em 31 de dezembro and Balanço Geral em 31 de dezembro.

132. Companhia de Tecidos Santanense (1901), Relatório da Diretoria, 1901, "Dividendos".

133. Companhia Industrial Itabira do Campo (1901), Relatório da Diretoria.

134. For data on quantity produced in 1899 and 1901 see: Companhia Industrial Itabira do Campo (1899), Relatório da Diretoria and Companhia Industrial Itabira do Campo (1901), Relatório da Diretoria.

135. Companhia de Tecidos Santanense (1901), Demonstração da Conta de Lucros e Perdas em 31 de dezembro, and Companhia de Tecidos Santanense (1901), Balanço Geral em 31 de dezembro.

136. Companhia de Tecidos Santanense (1901), Relatório da Diretoria.

137. Companhia Cedro e Cachoeira (1902), Demonstração da Conta de Lucros e Perdas em 31 de dezembro, and Companhia Cedro e Cachoeira (1883-1902), Balanço Geral em 31 de dezembro.

138. Companhia Cedro e Cachoeira, Relatório da Diretoria, "Escritório Central". According to Vaz (1990,269), table n. 28, "Cia Cedro e Cachoeira: percentual do dividendo distribuído sobre o lucro líquido, 1894-1926", the company distributed 80 contos of dividends in 1901, which corresponded to the total amount of profits obtained by the company that year. Vaz does not indicate the sources he used for the data displayed in that table. It is important to note that the profits registered in the annual balances of the company did not indicate the dividends distributed. The dividends to be distributed out of the profits had to be

approved by the General Meeting of Shareholders which was held a couple of months after the accounts were closed.

139. Companhia Cedro e Cachoeira (1902), Relatório da Diretoria, "Escritório Central".

140. Companhia Cedro e Cachoeira (1902), Balanço Geral em 31 de dezembro.

141. Minas Gerais, July 13/14, 1903, p.8.

142. Companhia de Fiação e Tecelagem Industrial Mineira (1902), Relatório da Diretoria.

143. Companhia de Tecidos Santanense (1901), Relatório da Diretoria.

144. Companhia Industrial Sabarense (1902), Relatório da Diretoria.

145. Companhia Cedro e Cachoeira (1901), Relatório da Diretoria, "Escritório Central" and Companhia Cedro e Cachoeira (1902), Relatório da Diretoria, "Escritório Central".

146. Average monthly quotations of mil-réis in relation to sterling for 1900 and 1901 in: Brasil, Secretaria de Planejamento e Coordenação da Presidência da República, Fundação Instituto Brasileiro de Geografia e Estatística (1987,548).

147. In fact, a trend towards the devaluation of the exchange rate which started in the late eighties, was reverted in the turn of the century and in 1899 the external value of the mil-réis began increasing. The average annual value of a pound sterling in mil-réis during the Campos Sales period was 18.6% lower than it had been in the Prudente de Moraes years. Data on exchange rates refer to the annual average exchange rate on the exchange market of Rio de Janeiro. Source: Conselho Nacional de Estatística, Instituto Brasileiro de Geografia e Estatística (1939/40,1354).

148. In 1904, for instance, 89.3% of the cloth produced by the Companhia de Tecidos Santanense's cotton mill was white. See: Companhia Industrial de Tecidos Santanense (1904), Quadro Demonstrativo da Produção.

149. See the report presented by Francisco Mascarenhas at this convention. Congresso Agrícola, Industrial e Comercial, de Minas Gerais em 1903, Respostas aos quesitos propostos ao Sr. Francisco Mascarenhas pela Comissão Fundamental do Congresso Agrícola, Industrial e Comercial".

150. Annual averages by period and rates of expansion of exports of industrial machinery to Brazil computed from data in: Suzigan (1984,323-327).

151. Companhia Cedro e Cachoeira (1898), Relatório da Diretoria, "Fábrica da Cachoeira".

152. About the purchase of the São Vicente cotton mill and the investment made on repairs and on its enlargement, see: Vaz (1990,102-109).

153. It is not possible to know exactly when the Cedro cotton mill started producing dyed cloth. The list of machines ordered by the Companhia Cedro e Cachoeira for this cotton mill in 1883 includes 16 looms for dyed cloth. See: Companhia Cedro e Cachoeira (1883), Relatório da Diretoria, "Aumento das Fábricas".

154. Companhia Cedro e Cachoeira (1900), Relatório da Diretoria, "Fábrica do Cedro".

155. From 1900 to 1901 the quantity of cloth produced at Cedro's decreased by 31%. Data for quantity produced in these years are found in: Companhia Cedro e Cachoeira (1900), Relatório da Diretoria, and Companhia Cedro e Cachoeira (1901), Relatório da Diretoria.

156. Companhia Cedro e Cachoeira (1901), Relatório da Diretoria, "Fábrica do Cedro".

157. Companhia Cedro e Cachoeira (1903), Relatório da Diretoria, "Fábrica do Cedro".

158. This reform, which included the substitution of some machines, started in 1898 and finished in the following year. See: Companhia Cedro e Cachoeira (1898), Relatório da Diretoria, "Fábrica da Cachoeira" and Companhia Cedro e Cachoeira (1900), Relatório da Diretoria, "Fábrica da Cachoeira".

159. Data in: Centro de Minas, September 15, 1895, reproduced in Dornas Filho (1951,151).

160. Companhia de Tecidos Santanense (1899), Relatório da Diretoria.

161. Companhia de Tecidos Santanense (1904), Relatório da Diretoria, "Machanismos".

162. Companhia de Tecidos Santanense (1899), Relatório da Diretoria.

163. Of the total costs involved in the acquisition of two spinning machines and one "estragadeira", 67.7% corresponded to the payment for the machines and their transport from England to Rio de Janeiro; 26.5% to customs and freight charges for the railway journey from Rio de Janeiro to the cotton mill's nearest station; 5.4% to transport costs from the railway station to the mill and 0.4% to costs of wood necessary to set up the machinery. Data in: Companhia de Tecidos Santanense (1901), Relatório da Diretoria, "Maquinismo".

164. As was pointed out in a previous chapter, no specific information is available on the establishment of the Marzagão cotton mill. However it is known that this cotton mill was set up in the period 1880-1883. See chapter 2, section 2.2.

165. Companhia Industrial Sabarense (1898), Relatório da Diretoria, "Lucros e Estado Financeiro da Companhia".

166. In the annual report for the year 1899 there is reference to payments being made to the company Morro Velho for forging some parts of the Marzagão cotton mill in their workshops. See: Companhia Industrial Sabarense (1899), Relatório da Diretoria.

167. Companhia Industrial Sabarense (1900), Relatório da Diretoria.

168. Companhia Industrial Sabarense (1901), Projeto de Reforma dos Estatutos. These statutes were approved with minor amendments by the Extraordinary Meeting of Shareholders on May 19, 1901. See: Companhia Industrial Sabarense (1901), Ata da Assembléa Geral Extraordinária.

169. Companhia Industrial Sabarense (1901), Relatório da Diretoria, "Maquinismos".

170. Companhia Industrial Sabarense (1902), Relatório da Diretoria.

171. See the annual accounts of the company for the years 1901 and 1902 in Companhia Industrial Sabarense (1901), Resumo do Balanço em 31 de dezembro, and Companhia Industrial Sabarense (1902), Resumo do Balanço em 31 de dezembro.

172. For the amounts registered annually as provision for depreciation of the machinery, see the general accounts of the company on the last day of 1899, 1900 and 1901. Companhia Industrial Sabarense (1899), Balanço Geral em 31 de dezembro. Companhia Industrial Sabarense (1900), Resumo do Balancete em 31 de dezembro, and Companhia Industrial Sabarense (1901), Resumo do Balanço em 31 de dezembro.

173. According to the Board of Directors, the cotton mill should have been able - given its productive capacity - to produce at that time between 55,000 and 60,000 metres a month and, therefore, an average of 690,000 metres a year, which would correspond to an average annual production per loom of 10,781 metres. Such an expected physical productivity by loom was 1% less than the average annual production per loom attained by the Cachoeira cotton mill in 1888-1902 as shown in table 6.6. Considering that none of the 140 looms of the Cachoeira cotton mill working during the period 1888-1902 had been bought before 1887 - as shown in table 6.5 - it is possible to conclude that the Companhia Industrial Itabira do Campo had not benefited from any

special technological improvements by having been established much later than the Cachoeira cotton mill.

174. Companhia Industrial Itabira do Campo (1899), Relatório da Diretoria.

175. Reference to this proposal from the Board of Directors is to be found in the discussion which took place at the General Meeting of Shareholders on March 10, 1901, which was recorded in the proceedings of this meeting. See: Companhia Industrial Itabira do Campo (1901), Ata da Assembléa Geral.

176. Sanz, Neves and Lima (1908).

177. The average annual external value of the mil-réis in the foreign exchange market of Rio de Janeiro increased by 18.6% between the periods 1896-1898 and 1899-1902. Data from: Conselho Nacional de Estatística, Instituto Brasileiro de Geografia e Estatística (1939/1940, 1353-1354).

178. See chapter 2 about the constitution of this company which was incorporated in 1889 with the purpose of acquiring and enlarging the cotton mill owned by the firm Morrit & Company.

179. Companhia de Fiação e Tecelagem Industrial Mineira (1900), Relatório da Diretoria, "Terrenos, Aguas, Edifícios, Dependências e Maquinismos".

180. Companhia de Fiação e Tecelagem Industrial Mineira (1902), Relatório da Diretoria, "Terrenos, Aguas, Dependências e Maquinismos".

181. Data on exchange rates from: Secretaria de Planejamento e Coordenação da Presidência da República, Fundação Instituto Brasileiro de Geografia e Estatística (1987, 545-550), "Cotações mensais da libra esterlina em relação à moeda nacional".

CHAPTER 7

STAGNATION AND RESUMPTION OF INVESTMENT: 1903-1906

Introduction.

The economic policy applied during the years of the Rodrigues Alves presidency has been assumed by some economic historians to have been more favourable to the industrial sector than that of the government of Campos Sales. This assumption rests mainly on the fact that, from 1903-1906, there was a substantial increase in government expenditure associated with sanitary and reconstruction works in the city of Rio de Janeiro.¹ As such expenditure was financed mostly by foreign loans, it did not imply any major deviation from the restrictive monetary policy implemented by Campos Sales.² However, an increase in public investment increased the aggregate demand and, in this way, favoured the industrial sector.

According to such an interpretation, the Rodrigues Alves period would be an interesting example of a period favourable to industrial growth, in spite of the restrictive and deflationary monetary policy applied. However, the assumption about the favourable impact of increased public expenditure on Brazilian industry has neither been clearly explained nor corroborated by major investigations.

For Simonsen a recovery of Brazilian industry began in the second half of the Rodrigues Alves period, after the long period of stagnation which had started in 1894: "from 1905 onwards, our industry developed rapidly - such a development intensified between 1910 and 1914 and accelerated during the years 1915-1919 as a result of the European war."³ For Villela and Suzigan, such a turning point took place earlier, in 1903. The Rodrigues Alves period is seen as the

early stage of a longer period 1903-1913 which they describe as "the period of economic reconstruction",⁴ The increase in investment, which started in 1903, intensified during the years 1905-1913, especially during the period 1909-1913.⁵ More recently, a change in the trend of industrial investment has been pinpointed as having happened in 1902. Based on data on exports of industrial machinery to Brazil, Suzigan characterizes the period 1902-1913 as "a new phase of investment expansion"⁶, the result of "tariff protection and real exchange rate appreciation in a period of general economic growth."⁷

The development of the cotton textile industry in 1903-1906 has not been specifically investigated. Those years are seen by Stein as part of a golden period in the history of the Brazilian cotton industry which lasted for the first three decades of this century.⁸ In Versiani, they are placed in a longer period 1896-1906, coming between two periods of increased investment: 1889-1895 and 1907-1914. However, the years preceding 1907 are mentioned by the author as "years of good results for the existing mills", which followed "the general setback of the late nineties".⁹ For Suzigan - who recognizes a trend towards increasing industrial investment during the years 1902-1913 - data on exports of textile machinery to Brazil do not justify the identification of a similar trend in the cotton textile industry beginning in 1902. Even though the trend towards declining exports of textile machinery to Brazil had been reversed in 1902, "the average for 1902-1906 shows no substantial recovery"¹⁰. So, the cotton textile industry did not take part in the early stage of recovery of industrial investment which started in 1902: "from the second half of the 1890s until 1906, investment in the cotton-goods industry slackened" and "only a handful of cotton mills were established"¹¹ Such a slackness of investment is explained as a result of "the general economic recession characteristic of the period".¹²

This chapter studies the performance of the Mineiro cotton

textile industry from 1903-1906. Its main purpose is to investigate further the chronological evolution of this industry. The evidence produced on the performance of one industry which was not expected to have been directly affected by an increase in public expenditure contributes to a better understanding of the process of Brazilian industrialization during this period.

The chapter is divided into six sections. The first section presents a general description of the performance of the cotton textile sector of Rio de Janeiro in 1903-1906, based on the evidence available from some textile companies with cotton mills established in this state. The purpose of such a section is to establish grounds for a comparison between the evolution of the cotton textile industry in Minas Gerais and that in Rio de Janeiro and to reveal some of their differences. The following section examines the performance of some textile companies in Minas Gerais in the same period. The third section investigates the new textile companies incorporated, with special regard for changes introduced in their organization. The convention of Belo Horizonte, the first public meeting of the Mineiro textile entrepreneurs, and the leadership of the Mineiro industry by some family groups is examined in the fourth section. The effects on industry of the appreciation of the exchange rate during the period are discussed in the fifth section. The last section presents a summary of the conclusions of the chapter.

7.1 Expansion of public expenditure under the Rodrigues Alves presidency, and the performance of the cotton textile industry in Rio de Janeiro.

Everything else being constant, one might have expected that an expansion in public expenditure, involving a substantial rise in the total amount of wages paid would have increased the demand for cloth produced in Rio de Janeiro. If the local textile industry was already working at full capacity,

such an increase in demand should have forced up the prices and enlarged the margins of profits of local producers. However the evidence does not support those assumptions.

In fact, pessimistic comments from textile entrepreneurs in those years suggest that, if there was an increase in demand for domestic cloth in the period, the cotton mills of Rio de Janeiro were not able to take full advantage of it.

In 1903 and 1904, costs of production of cotton textile in Rio de Janeiro increased due to the higher prices of cotton wool. Such a rise in the price of cotton started in 1903 and was intensified in the first half of 1904. By the second half of this year it started decreasing. However, given the prevailing conditions on the demand side, these higher costs of production could not be passed to the consumers.

In fact, the demand for domestic cloth in Rio de Janeiro in 1903 was seen by some entrepreneurs as quite unsatisfactory. The annual report of the Companhia de Fiação e Tecidos Aliança for 1903 mentions "the contraction of the intermediary trade which has been unable to enlarge its transactions"¹³ and the Companhia Fabril São Joaquim complains about the inactivity of businesses during this year, which did not permit the price of cloth to be increased to compensate for the higher costs of raw materials¹⁴. Also, the lower profits of the Companhia Progresso Industrial do Brazil in 1903 were explained, in part, as the result of a "hesitant market".¹⁵ An explicit reference to the "enormous competition which existed and still exists among products similar to ours,"¹⁶ is found in the 1903 annual report of the Companhia Fábrica de Tecidos São Pedro de Alcântara.

The situation did not seem to have improved in 1904, in spite of the lower prices of cotton wool prevailing in the second half of the year. According to the Board of Directors of the Companhia de Fiação e Tecelagem Carioca, their company could not benefit from such a fall in prices of raw

material, "because the prices of our products had to be reduced as a result of the competition we faced in the market".¹⁷ In fact, an earlier attempt by the Companhia de Fiação e Tecidos Aliança to increase its price list in the first six months of 1904, to compensate for the increased cost of cotton, was not successful because this increase in price brought about a decrease in orders.¹⁸ The lower profits achieved by the Companhia de Fiação e Tecidos Mageense in 1904 were explained by the Board of Directors as the result of an intensification of a price crisis. In the first six months prices were unable to rise in proportion to the increase in the cost of cotton. In the second half of the year, the decrease in the price of cotton was followed by a decrease in the price of cloth, which reached "a level which has not been seen for many years, recouping very little of the capital and effort invested."¹⁹

The appreciation of the exchange rate in 1905 created additional problems for the cotton textile industry in Rio de Janeiro. A sharp increase in the external value of the mil-réis not only brought about immediate pressure for a cut in prices, but in fact increased the amount of foreign cloth being offered in the market. As a consequence, stocks started piling up in the mills and profits decreased.

The Centro Industrial do Brasil, an institution which represented the industrialists, recognized that a serious crisis was taking place in the cotton textile industry of Rio de Janeiro in 1905. Private meetings of cotton mill owners were organized by the Centro so that they could "come to an agreement as to the means to overcome the crisis which is being faced by all factories."²⁰ This crisis was seen as a result of the sharp appreciation of the exchange rate and consequent reduction in sales. Increased stocks were forcing prices down still further. In order to reduce the stocks of unsaleable cloth in the factories, it was agreed that the cotton mills should immediately reduce their production by stopping work one day a week.

Complaints about the adverse effects of the appreciation of the exchange rate on the performance of their cotton mills may be found in almost all available annual reports for 1905.

1905 was seen by the Companhia de Fiação e Tecidos Mageense's Board of Directors as a "distressing year for the national industry," as "the abrupt rise in the exchange rate bewildered the market completely, the prices of cloth being reduced promptly and out of all proportion."²¹ For the Board of Directors of the Companhia Progresso Industrial do Brazil, foreign competition brought about by the unexpected appreciation of the exchange rate in 1905 created such an unbearable situation that "if it lasts too long, it could ruin the prosperous national industry".²² According to the annual report of the Companhia de Fiação e Tecelagem Carioca, problems similar to those faced by their cotton mills were experienced by the entire cotton textile industry in Rio de Janeiro as a result of the unexpected rise in the exchange rate:

"Almost all cotton mills saw their stocks increase to such a point that they had to decrease the quantity produced by suspending work on certain days of the week during the second half of the year."²³

An increase from 15% to 50% in the proportion of import duties on textiles to be paid at the par value of the mil-réis, introduced at the end of 1905,²⁴ was well received by textile entrepreneurs in Rio. Such a rise in import duties was seen, by some of them, as the first move towards a new protectionist policy of the domestic industry, as the comments made by the Companhia Progresso Industrial do Brazil's Board of Directors, in February, 1906, suggest:

"The ingenious protectionist policy which has, as its major apostles, the honourable Presidents of the states of Minas Gerais and Rio de Janeiro, and, as its most strenuous advocate the honest and 'unarmed' congressman from Minas, Dr. João Alves, seems to be victorious and, thanks to it, cheerful

and hopeful new horizons open for our industry."²⁵

No specific problems are referred to in the annual reports of textile companies of Rio de Janeiro in 1906, suggesting that conditions may have improved during this year. A more optimistic outlook and a relatively higher external value of the mil-réis induced some companies to expand their productive capacity, even though some of them had to resort to loans.

An Extraordinary Meeting of Shareholders on July 27, 1906 authorized the Board of Directors of the Companhia Fiação e Tecidos Mageense to buy the Andorinhas cotton mill with funds to be obtained through the issue of a loan.²⁶ The annual report of the Companhia Fábrica de Tecidos S. Pedro de Alcântara refers to a general increase in productive capacity which was taking place in most of the cotton mills.²⁷

The evidence presented shows that, if there was an increase in demand for cotton textiles in Rio de Janeiro as a result of an expansion in public expenditure, such an increase was counteracted by the higher competitiveness of foreign cloth brought about by the appreciation of the exchange rate. This conclusion is corroborated by data on local prices of foreign cotton textiles calculated by Versiani.²⁸ These data show the significant reduction of 22.5% in such prices between 1896-1900 and 1901-1906. Contrary to what has been suggested in the literature, Rodrigues Alves' economic policy was unable to stimulate the local cotton textile industry. Competition among local producers increased. This increased competition forced prices downwards and consequently profits decreased. This situation seems to have worsened in 1905 when a sharp appreciation of the exchange rate increased significantly the competitiveness of the foreign product in the market of Rio de Janeiro. An increase in import duties in 1906 brought about some relief to domestic producers.

The next section studies the performance of the cotton textile industry in Minas Gerais during the same period. Considering that the industry of this state was relatively well protected from foreign competition, the appreciation of the exchange rate is not expected to have had adverse effects on its cotton textile industry as it had on the industry in Rio.

7.2 The performance of the cotton textile industry of Minas Gerais in 1903-1906.

As shown in the previous chapters, there had been a tendency for Mineiro cotton mills to be concentrated in the central areas of the state. According to the traditional division of this state into zones - which has been adopted so far in this work - this area would correspond to the central area of the Central zone and bordering areas of the Western zone. It has been seen also in this work that there was another minor concentration of cotton mills in the county of Diamantina in the northern area of the Central zone. No similar concentration has been found in any other zone prior to 1903. Therefore, up to then, the cotton textile industry of Minas Gerais had been mainly established outside the coffee-growing areas. However, at the end of the period 1903-1906 some companies were formed to set up new cotton mills in the coffee-growing areas of the Mata zone.

The study of the performance of the cotton textile sector of Minas Gerais in this section is based on data and information available for some individual cotton mills. The selection of the cotton mills to be studied was determined by the availability of information on their performance during the particular period under investigation. The emphasis given to the study of the cotton mills owned by the Companhia Cedro e Cachoeira in this period, as in previous periods, was mainly determined by the availability of the original annual reports which provide detailed information about the performance of each of these

three mills. Such emphasis is justified since this company's cotton mills were responsible for a significant production of textiles in the state during this period.²⁹

This section is divided into four parts. The first part analyzes the performance of those cotton mills established in the northern areas of the state and established in the counties of Diamantina, Araçuaí and Montes Claros. In the second part, the performance of the cotton mills which were concentrated in the central areas of the state is investigated: firstly the Companhia Cedro e Cachoeira's cotton mills, and secondly, some other cotton mills in the area, for which evidence is available. The third part studies the evolution of the cotton textile industry in the coffee-growing areas of the Mata zone. A brief summary of the conclusions is presented at the end of the section.

It would be reasonable to assume that, at this time, the location of a cotton mill determined, at least in principle, the general borders of the market to be reached by its product. Therefore, the economic changes faced by a cotton mill would reflect changes taking place in those markets. So, one may expect that the cotton mills established in the same area would have faced a similar situation even though their performance may have differed according to their individual characteristics.

7.2.1 The performance of the cotton mills in the northern areas of the state.

Data in Table 7.1 give a picture of the cotton textile industry established in the northern areas of the state of Minas Gerais in 1905. The cotton mills which had been set up in these areas were mainly concentrated in the county of Diamantina in the northern region of the Central zone. In fact, out of the six mills listed, four of them - Biribiry, Perpétua, São Roberto and Santa Bárbara - were in this county. No cotton mills had been established in the Northwestern zone and only one, the Cedro cotton mill in the

county of Montes Claros, was set up in the Northern zone. The Itinga cotton mill was the only mill in the Northeastern zone.

Table 7.1

Cotton mills in the northern area of the state of Minas Gerais in 1905: location, productive capacity and number of workers.

Counties	Cotton mills	Spindles	Looms	Workers
Araçuaí	Itinga*	na	60	na
Montes Claros	Cedro	na	60	na
Diamantina	Biribiry	na	80	na
Diamantina	São Roberto	1,868	56	103
Diamantina	Santa Bárbara	1,741	72	150
Diamantina	Perpétua*	na	18	na
Totals		3,609	346	253
Averages			57.7	-
Averages for the state		2,388.5	76.5	163.1

* there is evidence that these cotton mills were not at work in 1905. See the text.

na=not available.

Observations:1) The northern area includes: the Northern, Northeastern and Northwestern zones as well as the northern part of the Central zone. No cotton mills were established in the North-western zone. Itinga cotton mill was in the Northeastern zone and Montes Claros in the Northern zone. All the others were in the north of the Central zone.2) The average number of spindles and workers are over-evaluated as data for spindles and workers are not available for many small cotton mills.

Source: Vasco (1905).

There is some evidence that two of the six cotton mills listed in table 7.1, the mills of Perpétua and Itinga, were not able to stand the adverse conditions faced by the Mineiro industry since the second half of the nineties, and were closed down, at least temporarily, during the period 1903-1906. The cotton mill of Perpétua was not listed by Cunha Vasco in 1905³⁰ and it was said to have been closed in 1912.³¹ This cotton mill had been mentioned in 1897 as a weaving mill with 18 looms "producing white cloth with yarn

bought from other cotton mills, and coloured cloth with foreign yarn".³² In 1901 it was referred to as being in operation.³³ As for the Itinga cotton mill, then owned by the Companhia de Fiação e Tecidos Itinga do Jequetinhonha, it was certainly facing extreme difficulties during the period. In fact, an Extraordinary Meeting of Shareholders on January 2, 1905 decided that the company should go into liquidation and that its cotton mill should be sold.³⁴ According to the Board of Directors, the liquidation of the company revealed the reluctance of the shareholders to provide the financial resources necessary to sustain the company during the current economic crisis. Its difficulties could have been overcome if resources had been provided because the cotton mill was established in a very promising location where wages were "miserably insignificant"³⁵ and the raw material was produced locally. However it is not possible to verify whether or not the diagnosis presented by the Board of Directors as to the problems faced by the company was correct. The scant evidence available on this cotton mill, and on the economic development of the region where it was located, does not support major speculation about the reasons for its failure.

Very little information is available about the performance of the other cotton mills established in the northern areas of the state. There is some indication that the Cedro cotton mill of Montes Claros, which had started operating in 1882, was closed down during the period 1898-1902. On February 17, 1902 this mill was leased to a new firm and in 1909 it was put up for sale.³⁶ The Companhia Fiação e Tecidos Santa Bárbara, which owned the Santa Bárbara cotton mill, had its mill mortgaged to the Banco Hipotecário do Brasil and because it was unable to make its repayments, it went into liquidation in 1903. On December 7, 1903, as a result of a court order, the mill was put up for sale in Rio de Janeiro.³⁷ In 1905 the Banco Hipotecário do Brasil appears as the owner of the Santa Bárbara cotton mill.³⁸ No information is available about the performance of the Biribiry and São Roberto cotton mills in the period 1903-

1906.

Data in Table 7.1 show that all the cotton mills located in the northern area of the state were, in 1905, relatively small. In fact, the number of looms in each of those cotton mills, excluding the São Roberto cotton mill, fell below the average of 76.5 looms presented by all Mineiro cotton mills in 1905.³⁹

Even though very little information is available concerning the methods of marketing adopted by the individual cotton mills in Minas Gerais, it is quite reasonable to assume that those in the northern areas of the state sold most of their production locally and in the south of the state of Bahia. Considering their size and location, they could hardly have been expected to have competed in farther markets supplied by the cotton mills established in the central areas of the state. However, there is evidence that the larger cotton mills established in the central areas competed in the northern markets. This evidence will be revealed in the next section.

The information presented suggests that the cotton textile industry established in the northern areas of the state was in decline in the early years of this century. It is quite possible that such a decline revealed, at least in part, a general decrease in the economic activities of the area associated with a reduction in diamond-mining in the last decade of the nineteenth century. In fact, even though there is no reliable data for the production of diamonds in the nineteenth century, there is some indication that production in the nineties was quite inferior to that of previous periods.⁴⁰ A reduction in the export of diamonds may have enlarged the subsistence sector and stimulated the expansion of handicraft production of cloth for home consumption in the area. It also certainly affected nearby areas which provided food to the mining centres.⁴¹ Even though the handicraft production of cloth existed before the decline in diamond-mining,⁴² it is quite reasonable to assume that the

decline in diamond exports fostered its expansion. This assumption is corroborated by a reference of Carvalho to some villages of the region where the cottage industry of cloth was still flourishing in 1916.⁴³

7.2.2 The industrial cotton textile sector of Minas in the central area of the state.

The cotton mills established in the central areas of the state of Minas Gerais in 1905 are listed in Table 7.2. Data

Table 7.2

Cotton mills in the central area of the state of Minas Gerais in 1905: location, productive capacity and number of workers.

Counties	Cotton mills	Spindles	Looms	Workers
Curvelo	Cachoeira	4,762	150	285
Curvelo	São Sebastião	1,200	43	100
Sete Lagoas	Cedro	2,761	88	300
Sete Lagoas	Melancias	960	49	75
Sete Lagoas	São Vicente	2,316	110	226
Sete Lagoas	Cachoeira dos Macacos	3,800	132	224
Santa Luzia	Cachoeira	3,520	120	240
Sabará	Marzagão	3,000	110	180
Itabira	Gabiroba	na	80	na
Itabira	Pedreira	800	29	46
Alvinópolis	Rio do Peixe	1,884	55	85
Santa Bárbara	São Domingos	na	50	na
Itabirito	Itabira	2,512	105	120
Ouro Preto	São José do Tombadouro	1,640	52	60
Pitangui	Brumado	2,300	70	113
Itaúna	Cachoeira	1,920	66	98
Totals		28,613	1,309	1,867
Averages		2,201	81.8	143.6
Average for the state*		2,388.5	76.5	163.1

* These averages are over estimated as data on spindles and workers are not available for eleven of the thirty cotton mills listed. Most of these eleven cotton mills were very small factories.

As for the division by zones, most of these cotton mills were located in the middle of the Central zone. The only two exceptions are the ones in Pitangui and Itaúna in the Western zone at its borders with the Central zone.

Source: Cunha Vasco (1905).

on the number of looms, spindles and workers give an indication of their productive capacity. It is clear from the data presented that the textile industry of Minas Gerais was, by then, much more concentrated in this area than it was in the north. There were sixteen cotton mills in this area, and all of them were operating during the period 1903-1906. In 1905 they had three times more looms than the cotton mills in the northern areas. Besides, the average size of the cotton mill in the central area was greater than the average size of all the cotton mills established in the state.

Even though this concentration of the industrial textile industry in the central area of the state had preceded the foundation of Belo Horizonte, it is quite reasonable to assume that the construction of the new capital and its development had favoured their performance.

7.2.2.1 The performance of cotton mills established in the central areas of the state: the case of the Companhia Cedro e Cachoeira's cotton mills.

As was seen in previous chapters, the Companhia Cedro e Cachoeira's cotton mills had started facing problems with sale in the mid nineties. As a consequence, prices fell and profits were reduced. Notwithstanding such a decrease in profits, constant pressure from shareholders for high dividends made it impossible for the management to pursue a sound financial policy. All the profits produced were usually distributed as dividends even if a significant part of these profits corresponded to cloth produced but not sold. Dividends were sometimes either paid in kind or transformed into debts. As a result, no adequate reserves for maintenance and replacement of machinery were made, in spite of constant complaints from the cotton mill managers about the bad state of their machines and the system of water supply. No significant investment was made in the cotton mills during 1896-1902. Despite the unsatisfactory demand for their products, the company kept the factories

working at full capacity. Therefore, one could not expect any great improvement in the company's performance from 1903-1906, unless a general improvement in the economic conditions faced by the company had taken place during that period.

There are plenty of references to fierce competition in the market in the company's annual reports for the years 1903-1906. Commenting upon the profits achieved in 1903, the Board of Directors observed that such profits could have been much greater "if we had not been forced to follow other similar establishments which sell their products with excessive discounts, and very often not only discounts but also sales on credit"⁴⁴. The huge discounts which had to be offered to customers in 1905 were considered "an abuse, a calamity"⁴⁵ and led the Board of Directors to comment that the conditions which the company had been forced to accept to sell its products were so disadvantageous that it seemed "the mills worked more for the customers than for their owners".⁴⁶ In 1906 difficulties with sales persisted and the Board of Directors mentioned "the absurd discounts of 20%, 25%, and even 30%"⁴⁷ which the company was forced to offer its customers "in order to follow other cotton mills and not have our cloth stocked."⁴⁸

The above comments suggest a new interpretation by the entrepreneurs as to the reasons for the lower prices of their products. In previous years falling cloth prices were mainly blamed on sluggish demand which had been brought about by a general crisis in the country, and in the state of Minas Gerais. In 1903-1906, low prices are seen as the result of "an extraordinary supply of the product".⁴⁹ However, contrary to what happened in previous years, no reference is made to problems of disposing of the cloth produced or to difficulties in obtaining payment for the cloth sold. An examination of the company's annual reports suggests that there was, in fact, an improvement in demand for textile products in the period. At a certain price level, which the entrepreneurs considered too low, the

company could dispose of its products and be paid.

As cloth prices in the market were not seen as satisfactory, two lines of action were open. Either the company faced the competition and tried to improve its situation by decreasing its costs and enlarging its share of the market, or an agreement on prices had to be reached among producers so as to guarantee a minimum price. If there was a price war in the market the companies which would be most hurt would be those with cotton mills producing at higher costs. In such a situation, the older cotton mills would be handicapped. Among the older cotton mills at work in Minas Gerais at this time were two of the Companhia Cedro e Cachoeira's cotton mills: the Cedro and the Cachoeira.

In 1903 the Companhia Cedro e Cachoeira was already leading a movement towards a general agreement among mill owners. After complaining about the excessive discounts which the company had to give in order to follow other companies, the Board of Directors added: "in order to forestall such a calamity we have tried on several occasions to establish an agreement among the factories of our state which, unfortunately, not all of them observed."⁵⁰ In the report for 1905, the Board of Directors insisted that such an agreement on prices had become "urgent and necessary"⁵¹ However, it was only on December 21, 1906 at a convention in Belo Horizonte, that an agreement was reached by some textile entrepreneurs as to the conditions of sale to be offered to their consumers.⁵²

As an agreement among local producers was only to be reached in December 1906, the option left to the Companhia Cedro e Cachoeira was to increase the competitiveness of its product by decreasing its costs and improving its quality.

In April 1904, the company's Board of Directors asked the shareholders for authorization to carry out a general overhaul in Cachoeira cotton mill. Such a measure was said to be urgently required because "most of its machines for

spinning and weaving are old and, for this reason, are producing a cloth of inferior quality for which there is little demand"⁵³ In 1904 it was decided that the Cedro cotton mill should have electric light. Electric light would allow all the machines to work even on rainy days "when the factory gets so dark that the looms in the middle of the mill have to stop."⁵⁴ It would also allow for an extension of the working day. The extension of the working day was seen as an imperative because, once the old looms had been repaired, they would require a greater quantity of yarn, which the available machinery could only provide if extra hours of work were introduced.⁵⁵ Electric light was installed on September 7, 1905.⁵⁶ On the one hand, the introduction of night work in Cedro's meant higher wages as the hourly rate at night was 20% more expensive.⁵⁷ On the other hand, more hours of work allowed better use of the productive capacity of the cotton mills. The work of repair in the Cachoeira cotton mill carried out in the period, and the extension of working hours, did allow an increase in the quantity produced by those mills, as shown in Table 7.3.

The Cedro cotton mill presented the most significant increase in production during the period, followed by São Vicente. The Cachoeira cotton mill increased its production at a lower rate between 1899-1902 and 1903-1905. In 1906 the amount of cloth produced in this cotton mill decreased in relation to the amount produced in previous years. Such a decrease was explained as the result of the cotton mill having to be closed down for fourteen and a half days so that repairs to the system of water supply could be made.⁵⁸

The significant increase in the production level of the Cedro cotton mill at this time was mainly due to investment made in the energy system. In 1903, a steam engine of 100 h.p. and accessories were ordered to provide the cotton mill with an alternative source of energy to keep all the machinery working at full capacity for the whole year.⁵⁹ Also, substituting new looms for the old ones enabled the Cachoeira cotton mill, according to the Board of Directors,

to face competition.⁶⁰ In 1904 this cotton mill had 89 new looms operating, and 11 were expected to arrive later.⁶¹ In 1905 this factory had not only the 100 new looms in operation but many other new machines were also being set up in other sections.⁶²

Table 7.3

Production in the Companhia Cedro e Cachoeira's cotton mills in 1899-1906.
Annual averages by periods.

Years	Cedro		Cachoeira		São Vicente	
	metres	index numb.	metres	index numb.	metres	index numb.
1899-1902	611,269	100	1,516,084	100	1,176,885	100
1903-1905	808,200	132	1,671,721	110	1,362,130	116
1906	934,982	153	1,501,000	99	1,435,197	122

Source: Companhia Cedro e Cachoeira (1899-1905), Relatórios da Diretoria.

Special attention was also paid to the need to improve the quality of the product in order to compete with other cotton mills. In fact, the substitution of new and up to date looms for the old ones in Cachoeira's, which had started in the previous period, was part of a general plan to improve the quality of the cloth produced to such a point that "we do not have any competition from other cotton mills"⁶³ Along this line, plans of diversifying production were made and, in 1906, the establishment of a printery in Cedro's cotton mill was approved by the General Meeting of Shareholders.⁶⁴

There is evidence that a significant part of the production of Cedro and Cachoeira cotton mills was sold in the northern areas of the state. In fact, since the late eighties, the company had adopted the policy of establishing warehouses at different places in the north.⁶⁵ A storehouse was established in Montes Claros as early as 1887⁶⁶, and there are references to warehouses in Joazeiro and Araçuaí in

1890⁶⁷. By 1895 a warehouse, which had just been established in Pirapora, was expected to increase the sales of the company in the "great zone of São Francisco"⁶⁸. Storehouses in Diamantina and Montes Claros are mentioned as being in operation in 1900. In 1903 the company kept warehouses in Curvelo, Pirapora and Montes Claros⁶⁹.

In spite of all the complaints from the Board of Directors about the unsatisfactory sales resulting from an excessive supply of cloth in the market, the evidence available suggests that the performance of the company improved during this period. The company was able to afford some investment in the cotton mills and to pay reasonable dividends without having to raise any loans.

In 1903 the company distributed a dividend of 10% - which corresponded to the profits of the year.⁷⁰ As shown in the account of Profit and Loss, no deductions were made for the depreciation of machinery. According to the Board of Directors, such dividends should be considered quite satisfactory as this was the dividend which was being paid by most of the great textile companies of Rio de Janeiro⁷¹. However, added the Board, the distribution of these dividends had left the company without funds either for reinvestment or for reducing its debts.⁷²

At the General Meeting of Shareholders on March 23, 1905 the Board of Directors was successful in convincing the shareholders that dividends should be reduced in order to provide the company with additional resources⁷³. A proposal was made that 4% of the annual profits should from then on be kept by the company in order to increase its capital by 500 contos and the shareholders should receive the corresponding shares.⁷⁴ As a result, 80 contos out of the 200 contos of profits presented in the annual accounts for 1904 were not distributed. However the decision concerning an increase in capital was later nullified by a General Meeting of Shareholders which decided it did not comply with the Statutes. So, in the next year these 80 contos were

distributed as dividends.⁷⁵ At a General Meeting on March 28, 1906, the Board of Directors told the shareholders that, even though profits in 1905 had been 160 contos, which corresponded to a rate of 8% on the company's capital, only a dividend of 4% would be paid, considering the great need of the company for additional funds. In order to justify such a decision, which needed to be approved by the shareholders, the Board of Directors cited the state of competition in the market and the debts of the company. The directors severely criticized the policy, traditionally followed, of giving away as dividends all the profits made, regardless of the financial state of the company:

"From 1883 to 1904, the Company paid 4,740:801\$000 réis of dividends and paid 942:590\$980 réis of interest; these figures seem to show that the previous administrations raised loans at interest in order to pay dividends, which was a serious mistake." ⁷⁶

It is not possible to know if the Board of Directors was able to convince the shareholders about the distribution of profits for 1905 but, in the following year, all the 200 contos' profits were paid as dividends.⁷⁷

The evidence presented suggests that in spite of falling prices there was an improvement in demand in the period 1903-1906 which allowed the company to expand its sales. However it is also possible that a change in the company's policy may have accounted in part for such an increase in sales. In fact, it seems that it took some time for the managers - who had been used to operate with a high profit margin - to realize that lower prices could bring benefits to the company. In fact the lower prices of the period, followed by increasing proceeds from sales - without payment into arrears or in kind - allowed the company to finance investment inside its cotton mills and pay dividends.

The performance of the Companhia Cedro e Cachoeira's cotton mills cannot be expected to typify the performance of the whole of the cotton textile sector of Minas Gerais in the

years 1903-1906. However, it would be reasonable to assume that some cotton mills faced similar problems to those experienced by São Vicente, Cedro e Cachoeira, namely those mills which, by their location, may be expected to have been supplying markets subject to the same general economic conditions as those supplied by the companhia Cedro e Cachoeira.

7.2.2.2 The performance of cotton mills around Belo Horizonte: the Companhia Industrial Itabira do Campo's and the Companhia de Tecidos Santanense's cotton mills.

The performance of the Companhia Industrial Itabira do Campo improved significantly during the period 1903-1906.⁷⁸ As was seen before, the company had faced difficulties in disposing of its products during the first years following the installation of its cotton mill. The Itabira cotton mill, which had started working regularly in January 1896, was established quite close to the site where the new capital was being built. Like the other cotton mills established by the companies constituted in the post Encilhamento period, this cotton mill was a late arrival in a market already supplied by older mills. Therefore initial difficulties in entering the market could be expected. As part of the profits obtained by the company in the early years corresponded to the value of cloth produced but not sold, dividends in cash could not be promptly paid. Notwithstanding such difficulties, the company kept expanding the productive capacity of its cotton mill. At the end of 1898 the number of looms increased from 64 to 80 and in 1901 the Board of Directors announced its decision to buy twenty more looms to be financed by the net profits obtained in 1900, even though the dividend of 12% in that year could not be paid immediately in cash.

The rationale of a policy of enlarging the productive capacity of a cotton mill when stocks of unsold cloth were increasing relied on the presumption that, if the company reduced the prices below those which prevailed in the

market, it would be able to increase the amount sold in such a way that proceeds from sales would rise and the company's profits would be maximized. In order to be able to increase sales, and thereby total profits, it was necessary to expand the productive capacity of the mill.

As a result of such a policy, the Itabira cotton mill entered the period of 1903-1906 with 50% more looms than it had in 1898. Data in column 1 of table 7.4 show the evolution of this mill's productive capacity, measured by the number of its looms, during the period 1899-1906. From 1903-1906 the number of looms was 25% higher than in the years 1899-1901.

The measures taken by the company to increase its cotton mill production were not restricted to an expansion of its productive capacity but also involved a better use of this capacity. In 1904 the daily number of working hours, which had been ten in 1903, was increased to twelve and a half.⁷⁹ This policy of increasing production was an answer, according to the Board of Directors, to "a constantly increasing demand for our products" which "continue to have a general acceptance."⁸⁰ However, in spite of the measures taken in 1904, the increase in production did not fulfil the managers' expectations due to the lack of water during the dry season that year. The plan to expand production required new investment. A new steam power engine was ordered in 1904 "in order to help the hydraulic engine during the dry season."⁸¹

The policy of enlarging the productive capacity of the Itabira cotton mill was successful. As shown by data in table 7.4, the quantity produced in 1903 was 90% greater than the amount produced in 1899 and production kept increasing in the following years, 1904-1906. The annual average production in 1903-1906 was 81% higher than in 1899-1901. Data in table 7.4 show a significant increase in the quantity produced by loom during the period 1899-1906. Such an increase reveals not only an extension of the

working day but also the employment of a more experienced labour force. It remains to be seen if this increased production was being sold in such a way that it increased the company's profits.

Table 7.4

Companhia Industrial Itabira do Campo: annual data on looms and production, 1899-1906.

Years	Looms	Production in metres	ind numb	Average production metres per loom	ind. numb.
	(1)	(2)	(3)	(4)	(5)
1899	80	624,550	100	7,807	100
1900	80	804,415	129	10,055	129
1901	80	960,182	154	12,002	154
1902	80	na	-	-	-
1903	96	1,189,610	190	12,392	159
1904	100	1,385,387	222	13,854	177
1905	105	1,530,046	245	14,572	187
1906	105	1,650,870	264	15,723	201

na= not available

Sources. Data for 1899 in: Companhia Industrial Itabira do Campo (1899), Relatório da Diretoria, "Maquinismos" and "Produção". Data for 1900 and 1901 in: Companhia Industrial Itabira do Campo (1901), Relatório da Diretoria. Data for 1903 and 1904 in: Companhia Industrial Itabira do Campo (1904), Relatório da Diretoria. Data for quantity produced in 1905 and 1906 in: Sanz, Neves and Lima (1908). Data for number of looms in 1905 in: Cunha Vasco (1905).

The increased production in the period 1903-1906, contrary to what had happened in previous years, was able to be absorbed by the market. In fact, data on stocks shown in the annual accounts do not reveal any significant increase in the period. Moreover, general comments about the demand for the cotton mill's product suggest that the company was able to sell the increased production. Almost all cloth produced in 1905 was said to have been sold⁸² and in February, 1906, the Board of Directors announced its intention of enlarging the productive capacity of the cotton mill and doubling its output, considering the increasing demand for its

products.⁸³

Table 7.5

Companhia Industrial Itabira do Campo: production and sales, 1899-1906.

years	production		sales prices estimates		proceeds from sales	
	(in metres)		(in réis)		(in contos)	
	in metres	index numb.	in réis	index numb.	in metres	index numb.
	(1)	(2)	(3)	(4)	(5)	(6)
1899	624,550	100	415	100	259	100
1904	1,385,387	222	320	77	443	171
1905	1,530,046	245	284	68	434	168
1906	1,650,870	264	261	63	431	166

Sources: the same sources used for table 7.4

Estimated sale prices displayed in columns 3 and 4 in table 7.5 were calculated by assuming that the whole amount produced in one year was sold in that same year. Therefore the price for 1899 is obviously underestimated as, in this year, a large proportion of the cloth produced was not sold. Notwithstanding such an underestimation, the data show an extraordinary decrease in prices between 1899 and the years 1904, 1905 and 1906. However, in spite of falling prices, proceeds from sales increased between 1899 and the years 1903-1906. This increase in proceeds from sales was not offset by increased costs. As shown by data in table 7.6, net profits in 1904, 1905 and 1906 were also significantly higher than those of 1899.

The evidence presented shows that the policy adopted by the company of expanding its production succeeded in bringing about increased profits. However it does not confirm the interpretation of the entrepreneurs that there was in the years 1903-1906 a constant increase in demand for the

Table 7.6

Companhia Industrial Itabira do Campo: net profits and dividends in 1899, 1904, 1905 and 1906.

Years	net profits		dividends distributed		
	in contos	index numb.	in contos	as % of net profits	as % of capital
1899	53	100	54	102%	14.7%
1904	93	175	54	58%	15.0%
1905	106	200	54	51%	15.0%
1906	95	179	na	-	-

na= not available.

Sources: same as those of table 7.4.

company's products. It only shows that by increasing the quantity sold at lower prices, the company was able to increase sales and profits. Even if no changes in demand for cotton textile had taken place, these results could have been obtained as long as a decrease in prices had produced a proportionally higher increase in the quantities demanded, and the increase in sale proceeds had not been offset by increased costs. If this was so, why didn't other companies such as Cedro e Cachoeira follow a similar policy to that of Industrial Itabira do Campo? A possible answer to that question, at least in the case of the Company Cedro e Cachoeira, lies in the policy adopted by this company in relation to the distribution of dividends.

As has been seen in previous chapters, gross profits shown in the accounts of the Companhia Cedro e Cachoeira at the end of each year were usually distributed as dividends. This left the company without enough resources to maintain adequately the productive capacity of its cotton mills, let alone to enlarge them significantly. In this case the unit costs of production were relatively higher and at a certain sale price the margin of profits was certainly lower than that of the Itabira do Campo. Why shareholders of Companhia Industrial Itabira do Campo accepted a lower percentage of

the profits being distributed as dividends cannot be answered at this stage because no evidence is available, as yet, on the shareholders of this company.

Another company to follow the policy of increasing the quantity produced in order to face competition in the market was the Companhia de Tecidos Santanense. Even though the productive capacity of its cotton mill had remained the same since its installation in 1895 until 1905, the amount produced increased significantly. Data available for the years 1899, 1901, 1904 and 1905 and displayed in table 7.7 show that the amount produced increased by 73% between 1899 and 1904. Such an increase in the amount produced was followed by a significant increase in gross profits, as registered in the company's accounts. In 1905, however, profits decreased. This decrease was explained by the Board of Directors as the result of greater discounts made in prices.⁸⁴

Even though there is no data available for sales, it seems that, contrary to what happened in previous periods, the company did not have any problem selling its products during most of the period 1903-1906. In fact it was only in 1906 that stocks of cloth increased substantially.⁸⁵

Unlike the Companhia Industrial Itabira do Campo, the Companhia de Tecidos Santanense had not expanded its productive capacity in previous periods. The Cachoeira cotton mill started the period with the same productive capacity as it had in the first years following its installation.⁸⁶ In March, 1905, the Board of Directors complained that the spinning and carding sections were unable to provide the weaving section with a yarn of good quality and in sufficient quantity to allow regular work for all its looms, and they expressed their determination to improve and enlarge the cotton mill's machinery.⁸⁷ In this same year 20 looms, as well as the necessary machines to feed them, were ordered. Such purchases represented an increase of 23.3% in the cotton mill's productive capacity.

According to the Board of Directors, the costs of such an

Table 7.7

Companhia de Tecidos Santanense: total production, profits and dividends, 1899-1905.

Years	total production of 66 looms		gross profits		dividends	
	in metres (1)	index numb. (2)	in contos (3)	index numb. (4)	in contos (5)	% of profits (6)
1899	465,183	100	14	100	na	-
1901	585,315	126	79	564	60	76%
1904	803,200	173	100	714	48	48%
1905	763,220	164	72	514	48	67%

na= not available

Sources: Companhia de Tecidos Santanense (1899), Relatório da Diretoria; Companhia de Tecidos Santanense (1901), Relatório da Diretoria; Companhia de Tecidos Santanense (1904), Relatório da Diretoria and Companhia de Tecidos Santanense (1905), Relatório da Diretoria.

investment were relatively low, considering the high levels of the exchange rate.⁸⁸ In 1907 the new looms and the auxiliary machinery were installed and started operating regularly.⁸⁹ This expansion of the productive capacity was financed from internal funds. As shown in table 7.7, columns 5 and 6, the company did not follow the policy of distributing all of its profits as dividends.

The evidence available on the performance of the cotton mills established in the central areas of the state does not allow any definite conclusion about the overall performance of the whole Mineiro textile industry in the years 1903-1906. However it suggests that there was some improvement in demand in the consumer markets supplied by the cotton mills in the central areas of the state.

7.2.3 The cotton textile industry in the Mata zone and in the Southern zone. The performance of the Companhia de Fiação e Tecelagem Industrial Mineira's cotton mill.

Table 7.8 lists the cotton mills at work in the Mata and Southern zones of Minas Gerais in 1905 and gives some indication of their productive capacities. The cotton mills in this area can be divided into two distinct groups, according to their size. The first group includes the largest cotton mills: Industrial Mineira, Mascarenhas, Tecidos Mineiros and União Lavrense. The second group includes the relatively smaller cotton mills of Santa Maria, São Silvestre, São Joanense and Machado. The cotton mills included in the first group had, in 1905, an average number of looms which was significantly above the average in the state, while the average number of looms in the cotton mills in the second group was below this average.

Three out of the four larger cotton mills were established in the south of the Mata zone in the counties of Juiz de Fora and São João Nepomuceno. The fourth was set up in the

Table 7.8

Cotton mills in the Mata and Southern zones of the state of Minas Gerais in 1905: location, productive capacity and number of workers

Counties	Cotton mills	spindles	looms	workers
Viçosa	Santa Maria	na	50	na
Viçosa	São Silvestre	na	70	na
Juiz de Fora	Industr. Mineira	3,484	130	346
Juiz de Fora	Mascarenhas	na	96	na
S. João Nepomuceno	Tecidos Mineiros	1,450	84	237
Lavras	União Lavrense	3,458	96	140
São João del Rei	São Joanense	na	50	na
S. Antônio do Machado	Machado	na	50	na
total		8,392	626	723
average		-	78.3	-
average for all cotton mills in the state		-	76.5	-

Source: Cunha Vasco (1905).

Southern zone. It is clear from data in table 7.8 that, by this time, the cotton textile industry of the southern areas of Minas Gerais was concentrated in the south of the Mata zone, near to the border of this zone with the state of Rio de Janeiro. Considering the proximity of São João Nepomuceno and Juiz de Fora with the nearby state of Rio de Janeiro and considering also the fact that Juiz de Fora was by this time connected by the Central railway to Rio de Janeiro, it is reasonable to assume that the Industrial Mineira, Tecidos Mineiros and Mascarenhas cotton mills would have shared some of the problems faced by the textile sector of Rio de Janeiro described in a previous section.

As stated in previous chapters, the Companhia de Fiação e Tecelagem Industrial Mineira had turned to the consumer markets of Rio de Janeiro in the late nineties when the demand for its products in Minas Gerais became unsatisfactory. Therefore it experienced some of the problems faced by the cotton mills established in that state during the years 1903-1906, especially those caused by an appreciation of the exchange rate. In fact, in a report for the year 1905, the continuous fall in prices was blamed on local competition and on the appreciation of the exchange rate. According to the company's Board of Directors, the increase in the external value of the mil-réis not only brought about a general suspension of business but also decreased the demand for textiles as it reduced the farmers' income in mil-réis. As stated by the Board, this appreciation of the exchange rate reduced "the resources of those who work in the agricultural sector, who are our main consumers."⁹⁰ In its report for the year 1906 the Board of Directors still mentioned the low price of cotton textiles: "the prices of manufactured products continued to be low, due to internal competition"⁹¹ and added that, given the prevailing conditions on the demand side, it was not possible to pass on to consumers the increase in costs resulting from higher prices of cotton. As a consequence, the company paid a relatively low dividend of 8%.⁹² However, in spite of the adverse conditions affecting the demand for

Table 7.9

Companhia de Fiação e Tecelagem Industrial Mineira:
workers employed and dividends distributed, 1899-1906

Years	Number of workers	Dividends	
		in contos	as % of capital
1898	231*	84	7.0%
1899	na	132	11.0%
1902	270	132	11.0%
1903	330	144	12.0%
1904	340	na	-
1905	346	114	9.5%
1906	371	96	8.0%

na= not available

* number of workers in november, 1897.

Observation: Data on number of workers are data for the month of november with the exception of 1905 which data is for March. Sources: Number of workers from: Companhia de Fiação e Tecelagem Industrial Mineira (1898, 1902, 1903, 1904, 1905, 1906), Folhas de Pagamento. Dividends: Companhia Fiação e Tecelagem Industrial Mineira (1898, 1899, 1902, 1903, 1905, 1906), Balanço em 30 de junho and Balanço em 31 de dezembro.

cotton textile products in Rio de Janeiro and Minas Gerais, there is evidence that the company also increased the productive capacity of its cotton mill in 1903-1906. Data in table 7.9 show that the annual average of workers employed increased by 36.2% from 1901-1902 to 1903-1906.⁹³ However such a policy does not seem to have succeeded in increasing the company's profits, as shown by the relatively lower dividends paid in 1905 and 1906, also displayed in table 7.9.

7.2.4. The performance of the cotton textile industry of Minas Gerais in the years 1903-1906, a brief summary of the main conclusions.

The cotton textile industry of Minas Gerais was by 1903-1906 heavily concentrated in the central area of the state, even though smaller concentrations could be observed in the

northern area of the state in the county of Diamantina, and in the southern area of the Mata zone near its border with the state of Rio de Janeiro.

For those cotton mills established in the Northern area of the state, the difficulties faced in previous years seem to have persisted and even intensified in 1903-1906. Established to satisfy a demand which was, at least in part, created - directly or indirectly - by diamond mining, the productive capacity of the cotton mills in the area became excessive in relation to the existing demand, once the diamond exports decreased.

The performance of some cotton mills established in the central areas of the state improved in 1903-1906. In spite of stern competition and consequent lower prices of cotton textiles in their markets, they were able to expand their sales. Proceeds from sales increased and some companies were able to reinvest part of their profits. The factories which had been established in the middle nineties seem to have had the advantage of being able to produce at lower costs. Owners of older mills started trying to reach an agreement among producers as to the conditions of sales to be offered to customers. The improvement in local demand for cotton textiles in the central area reveals the development taking place in the centre of the state as a result of investments related - direct or indirectly - to the expansion of the new capital, Belo Horizonte. It may also reveal changes taking place in other areas as the market for cotton textiles produced in the central areas was not restricted to Belo Horizonte and its surroundings. However the lack of evidence on the general economic evolution of the state of Minas Gerais does not allow further speculation.

Finally, the cotton mills in the south of the state, which had been established in a coffee-growing area, shared the problems of the cotton textile industry of Rio de Janeiro, brought about by a continuing appreciation of the exchange rate and increasing foreign competition.

Notwithstanding the improvement observed in the performance of the cotton textile industry in some regions, such an improvement was not enough to attract significant investment to the Mineiro industry. No textile companies or partnerships were formed in the years 1903 and 1904 to establish new cotton mills in the state of Minas Gerais. However, the constitution of a few companies in 1905 and 1906 suggests that, by the end of the period, the cotton textile industry of Minas Gerais was being seen once more as an attractive field for investment. Moreover, the process of formation of these companies suggests that some changes were taking place in the way these investments were financed. The next section examines the formation of those new companies.

7.3 The first signs of a change in the trend of investment: the incorporation of new textile companies.

The Companhia Fiação e Tecelagem de Cataguazes was constituted on February 26, 1905, in Cataguazes, a town located in the southern area of the Mata zone and relatively close to the borders of the states of Minas Gerais and Rio de Janeiro. This was the first company to be incorporated after a long period of stagnation of investment in the cotton textile industry of Minas Gerais. In fact, the last textile company constituted in Minas Gerais to establish a new cotton mill had been the Companhia Industrial São Domingos formed in the town of Santa Bárbara in February, 1894. Following the constitution of the Companhia Fiação e Tecelagem Cataguazes, another company was constituted in August, 1905: the Companhia Fiação e Tecidos Sarmento, incorporated in São João Nepomuceno, a town near Cataguazes. And, in the following year, two more textile companies were formed: the Companhia Industrial Paraense and the Companhia Industrial Belo Horizonte. The former company was founded in Cidade do Pará, in the Western zone near its border with the Central zone, and the latter was incorporated in the city of Belo Horizonte. All these companies were formed to build new cotton mills in Minas Gerais, except the Companhia Tecidos

Sarmento. The objective of the incorporation of this company was to take over a previous partnership and therefore it did not imply, at that time, any decision to invest.

The constitution of these companies reveals some changes in the previous pattern of textile investment in Minas Gerais. The decisions to establish new cotton mills in Belo Horizonte, near Belo Horizonte and in the south of the Mata zone herald a new pattern of location of the Mineiro textile industry which would tend to be reinforced in the years to follow. Moreover, some of these companies introduced a system of financing investment which diverged from that widely adopted in the earlier stages, which relied on financial funds provided by small groups of friends and relatives. Finally the constitution of some of these companies shows that in fact a class of textile industrialists was being formed in Minas Gerais. Textile investment was becoming an undertaking of textile industrialists rather than the undertaking of local people without previous experience in industry.

7.3.1 The incorporation of the Companhia Fiação e Tecelagem de Cataguazes.

The Companhia Fiação e Tecelagem de Cataguazes was incorporated on February 26, 1905⁹⁴, with a capital of 200 contos divided into 2,000 shares, worth 100 mil-réis each, and distributed among 339 shareholders.⁹⁵ There is no previous evidence of any textile company being constituted in Minas Gerais with such a large number of shareholders. There is also no evidence of any textile company in the state with a similar number of shareholders in 1905. In spite of such a large number of subscribers, the initial capital of 200 contos was quite small compared to the capital of the majority of companies operating cotton mills in Minas Gerais in 1905. In fact, data on the capital of twenty textile companies in 1905 show an average per company of 598.3 contos.⁹⁶ With such a small capital and large number of shareholders, the average capital subscribed per

shareholder, 0.6 contos, was the lowest ever presented by any textile company formed in Minas Gerais. The Companhia Cedro e Cachoeira, for instance, had, in 1900, 138 shareholders subscribing a capital of 2,000 contos and, consequently, an average subscription of 14.5 contos per shareholder.⁹⁷ And the Companhia de Fiação e Tecelagem Industrial Mineira had, in this same year, its capital of 1,200 contos subscribed by 56 shareholders, an average of 21.4 contos per shareholder.⁹⁸

The Companhia de Fiação e Tecelagem de Cataguazes was promoted by: Joaquim Gomes de Araújo Porto, João Duarte Ferreira, Maurício E. Murgel and Norberto Custódio Ferreira. Joaquim Gomes de Araújo Porto was a farmer from Itamarati, judiciary district of Cataguazes, and Maurício Eugênio Murgel was a local trader living in Cataguazes.⁹⁹ No more information is available as to their social and economic background and no information at all is available on the other two promoters. There is no indication that any of the company's promoters had any previous experience in the textile industry.

Contrary to what was usually the case with textile companies previously constituted in Minas Gerais, the list of the 339 first subscribers of the Companhia de Fiação e Tecelagem de Cataguazes does not reveal a predominant family group in the ownership of the company.

An interesting feature of this company is the participation of the municipal government as one of its two major shareholders. This is in fact the first example of direct investment made by the government in the cotton textile sector of Minas Gerais.

Together with the Municipal Chamber of Representatives of Cataguazes, the promoters of the company were also the major subscribers of the initial capital. João Duarte Ferreira had 150 shares and, with the Municipal Chamber of Representatives, was one of the two major shareholders.

Norberto Custódio Ferreira had 100 shares and Joaquim Gomes de Araújo Porto had 80. Maurício E. Murgel subscribed 51 shares through the partnership Murgel & Irmão.¹⁰⁰ However, this time, the major shareholders did not provide the largest part of the funds necessary to finance the undertaking. The evidence shown in previous chapters has revealed that in the earlier companies the majority of the shares was usually held by a few investors even when the number of shareholders increased in due course. Such was the case of the Companhia Cedro e Cachoeira. At the time of its constitution in 1883, its shares were quite evenly distributed among its nine shareholders.¹⁰¹ In spite of an increase in the number of shareholders from nine in 1883 to 138 in 1900, the concentration of its ownership into a few hands was preserved. In fact, in 1900, eight out of the 138 shareholders held 52.5% of the company's shares.¹⁰² Data in Table 7.10 illustrate the peculiarities of the subscription of the capital of the Companhia de Fiação e Tecelagem de Cataguazes which contrasts with that of most of the companies established before.

a) The major shareholders - the promoters of the undertaking and the Municipal Chamber of Representatives - did not have the majority of the shares. They were responsible for only 26.6% of the company's initial capital .

b) The small investor - contrary to what happened in older companies - played a significant role in financing the undertaking. In fact 56.3% of all the shareholders had 4 or less shares and subscribed 18.5% of the initial capital. Shareholders with less than 20 shares each were responsible for the subscription of 63% of the capital.

c) In spite of the relatively large number of shareholders who had subscribed the majority of the shares, the process of decision making could still be controlled by a small group of investors. According to the statutes of the company, a minimum of five shares was required for a

Table 7.10

Companhia de Fiação e Tecelagem de Cataguazes:
subscription of capital per shareholder at the time
of its constitution.

number of of shares per shareholder	number of shareholders per number of shares absol. % numb.	number of votes per group of shareholders absol. % numb.	capital subscribed per group of shareholders in per- contos centages
(1)	(2) (3)	(4) (5)	(6) (7)
1 - 4	191 56.3 %	0 0.0 %	37,000 18.5 %
5 - 9	91 26.8 %	91 28.2 %	46,400 23.2 %
10 - 14	42 12.4 %	84 26.0 %	42,500 21.3 %
15 - 19	3 0.9 %	9 2.8 %	4,500 2.3 %
20 - 24	3 0.9 %	12 3.7 %	6,000 3.0 %
25 - 29	3 0.9 %	15 4.6 %	7,500 3.8 %
30 - 34	1 0.3 %	6 1.9 %	3,000 1.5 %
51	1 0.3 %	10 3.1 %	5,100 2.6 %
80	1 0.3 %	16 5.5 %	8,000 4.0 %
100	1 0.3 %	20 6.2 %	10,000 5.0 %
150	2 0.6 %	60 18.6 %	30,000 15.0 %
Total	339 100.0	323 100.0	200,000 100.0

Source: Companhia de Fiação e Tecelagem de Cataguazes (1905), Lista dos Acionistas. Column 4: data obtained by multiplying the number of shareholders, given in column (2) by the number of votes they had the right to, according to the number of shares they had (column 1) and as determined by the statutes of the company. Column (6): data obtained by adding the individual subscription of each shareholder (number of shares by the nominal value of 100 mil réis of each share), calculated from the list of shareholders and presented according to the classes by number of shareholders given in column (1).

shareholder to be allowed to vote. Each five shares gave the right to one vote up to a maximum of forty votes.¹⁰³ In this way, 56.3% of the shareholders, corresponding to 191 of them who had less than five shares, did not have any right to vote. In spite of providing 18.5% of the initial capital of the company, these shareholders were completely excluded from the process of decision making. Even though the 133 shareholders holding less than fifteen shares and more than five could together account for the majority of votes at a

General Meeting, they could hardly be expected to vote as an organized group. In this way the company, although financed mainly by the small investor, could be easily controlled by the six major individual shareholders - 1.8% of the total number of shareholders - who subscribed only 28.5% of the capital. And considering the high degree of diffuseness in shareholding, it would even be quite possible for one or two of the major shareholders to control the company. So, the entrepreneurs of Minas Gerais were finally realizing that the control of a company did not require its ownership.

7.3.2 Companhia Fiação e Tecidos Sarmento: the transformation of a partnership into a joint stock company.

The incorporation of the Companhia Fiação e Tecidos Sarmento on September 9, 1905, in São João do Nepomuceno¹⁰⁴, a town very close to Cataguazes in the Mata zone, cannot be seen as the result of new perspectives concerning investment in the cotton textile industry of Minas Gerais. Its constitution consisted only in a change of the legal form of association of a company already constituted, which did not involve any real alteration in any other respect. This company became the owner of the Tecidos Mineiros cotton mill which had been established in the middle nineties by the Companhia de Fiação e Tecidos Mineiros.

As was seen in Chapter 4, the Companhia de Tecidos Mineiros was constituted in 1894 with a capital of 130 contos in order to set up a cotton mill.¹⁰⁵ The initial capital of the company was evenly subscribed by its 22 shareholders with one exception, Daniel de Moraes Sarmento Junior, who held 125 shares while the others had equal lots of 25 shares.¹⁰⁶ Later on this company was dissolved and its assets were bought by the brothers Moraes Sarmento who formed a partnership, Sarmento Irmão & Comp. Even though no information is available on the formation of this partnership there is evidence that in June, 1905 its capital was 400 contos.¹⁰⁷ Such an increase in capital suggests that investment was made in the Tecidos Mineiros cotton mill

after its establishment in the middle nineties. On September 9, 1905, after the recruitment of a few more shareholders to satisfy legal requirements,¹⁰⁸ this partnership was transformed into a joint stock company, Companhia Fiação e Tecidos Sarmento, which remained strictly a family business. In fact, the participation of shareholders outside the family Moraes Sarmento in the new company was insignificant. Daniel de Moraes Sarmento, Francisco Daniel de Moraes Sarmento and Emygdio Moraes Sarmento held 99.5% of the shares.¹⁰⁹ The transformation of the partnership into a joint stock company allowed the brothers Moraes Sarmento to take advantage of the benefits given by law,¹¹⁰ without introducing any real modification in relation to the ownership and management of the company.

7.3.3 The constitution of two textile companies in August, 1906 for the purpose of establishing new cotton mills in Minas Gerais: Companhia Industrial Paraense, and Companhia Industrial Belo Horizonte.

Two new textile companies were incorporated in Minas Gerais in August, 1906 for the purpose of setting up new cotton mills in the state: the Companhia Industrial Paraense and the Companhia Industrial Belo Horizonte. The incorporation of the Companhia Industrial Belo Horizonte - the first textile company to be constituted to establish a cotton mill in Belo Horizonte - signalled the beginning of a new evolution in the industrial development of the state. As for location, the new state capital was to become an attractive proposition for industrial investment. In addition, it is interesting to note that the initiative for those two undertakings was taken by experienced textile industrialists.

The Companhia Industrial Paraense, was constituted on August 19, 1906, in the town, Cidade do Pará, (later it was to be called Para de Minas) in the Western zone, near its border with the Central zone and relatively close to Belo Horizonte.¹¹¹ The official promoters of the company were:

Américo Teixeira Guimarães, Father José Pereira Coelho, Torquato Alves de Almeida, and Antônio Benedicto Valladares Ribeiro,¹¹² However it becomes quite clear, from an examination of the documents relating to the constitution of the company, that the initiative for such an undertaking came mostly from Américo Teixeira Guimarães, an industrialist who lived in the town of Sete Lagoas. The importance of the role played by Américo Teixeira Guimarães in the constitution of this company may be evaluated from a motion of gratitude and support passed by 100 shareholders and approved by the first General Meeting. In this motion the shareholders thanked him "for putting himself at the disposal of the Municipal Chamber and the people of this county and, through his great prestige and influence, for endowing this town with such an important improvement..."¹¹³ At this meeting, Américo Teixeira Guimarães was also elected manager of the company.

Américo Teixeira Guimarães had already been involved in different industrial textile undertakings. He has been considered as the founder of the Companhia Cachoeira dos Macacos in 1886 although he was not one of the official promoters of this company.¹¹⁴ He was also responsible for the establishment of this company's cotton mill during the years 1886-1888.¹¹⁵ Together with a group of shareholders from the Companhia Cachoeira dos Macacos, he also took part in the constitution of the Companhia de Tecelagem e Refinação in 1893.¹¹⁶

Américo Teixeira Guimarães was not the only shareholder of the Companhia Industrial Paraense to have been previously involved in the cotton textile industry of Minas Gerais. In fact the list of initial subscribers of the Industrial Paraense's capital shows the participation of a significant group of shareholders from the Cachoeira dos Macacos and Industrial Melancias companies.

In fact, of the fourteen major shareholders - out of a total of 118 - who, together, were responsible for the

subscription of 46% of the capital, five could be identified as having subscribed the initial capital of the Companhia Cachoeira dos Macacos in 1886. They were: João da Matta Teixeira, his son Américo Teixeira Guimarães, the vicar Antônio Diniz Costa, Antônio Alves Ferreira da Silva, and João Alves Ferreira da Silva.¹¹⁷ João da Matta Teixeira had also been one of the official promoters of the Companhia Cachoeira dos Macacos and a member of its first Board of Directors. The vicar Antônio Diniz Costa was also a member of this company's first Fiscal Board.¹¹⁸ At the time of the constitution of the Companhia Industrial Paraense, Antônio Alves Ferreira da Silva and João da Matta Teixeira were directors of the Companhia Cachoeira dos

Table 7.11

Residence and profession of some of the first investors at the Companhia Industrial Paraense.

Shareholders	Number of shares %	County of residence	profession
	over total		
Manoel José Simões	4.6%	Pará	trader
Manoel Ferreira Guimarães Filho	4.6%	Pará	trader
Pedro Teixeira de Menezes	4.6%	Pará	trader
João da Matta Teixeira	4.0%	S.Lagoas	industrial
José Gonçalves Moreira	3.4%	Pará	trader
Américo Teixeira Guimarães	3.1%	S.Lagoas	industrial
Antônio Diniz Costa	2.9%	S.Lagoas	cleric
Antônio Alves Ferreira da Silva	2.9%	na	industrial
Júlio José de Mello Sobrinho	2.9%	Pará	farmer
José Pereira Coelho	2.3%	na	cleric
João Alves Ferreira da Silva	2.3%	Pará	trader
João Ferreira de Oliveira Penna	1.8%	Pará	civ.servant
Cyrino Pereira da Rocha	1.4%	na	industrial
Bernardino Alves Ferreira e Mello	1.4%	Pará	farmer
Total	42.1%	-	-

Sources: 1) documentation related to the constitution of the Companhia Industrial Paraense, filed under number 2661 at the Junta Comercial do Estado de Minas Gerais; 2) Companhia Cachoeira dos Macacos (1886), Ata da Assembléa de Instalação.

Macacos and Américo Teixeira Guimarães was its manager.¹¹⁹ João da Matta Teixeira and Américo Teixeira Guimarães were also among the subscribers of the initial capital of the company Tecelagem e Refinação (later on called Industrial Melancias) constituted in 1893.¹²⁰

However, in spite of the significant participation of outsiders with previous involvement in industrial undertakings, it is clear from data on table 7.11, that a significant number of investors were local people engaged in non-industrial businesses.

The Companhia Industrial Belo Horizonte was the last textile company to be constituted during the period 1903-1906. The constitution of this company, which was promoted by very experienced textile industrialists, was directly stimulated by the municipal government of Belo Horizonte.

In fact, the creation of this company may be seen as the result of a deliberate policy on the part of the municipal government to promote the industrialization of the capital. Before its constitution a contract was signed by the representative of the local government of the city of Belo Horizonte and the incorporators of the company.¹²¹ According to this contract, signed on July 30, 1906, the local government granted to Ignácio de Magalhães, Américo Teixeira Guimarães and Manoel Gonçalves de Souza Moreira a plot of land in the urban area of Belo Horizonte where they, or the company they organized, were to establish an integrated cotton mill. The contract stated that this cotton mill should have a capital of more than 200 contos and should be equipped with the best and most up-to-date machinery. All the projects relating to the factory were to be previously approved by the government. Work on the factory should start in one year and it should become operational in three years. The government exempted the undertaking from all local taxes and pledged to provide the company with free electricity for a period of 10 years. Another clause however restricted the amount of energy to be supplied. It stipulated that motive

power should only be furnished during the day and up to a limit of 300 h.p. After 10 years of free motive power, the company would be charged a price which would be an average of the minimum and the maximum price charged in the state, but which would not exceed 300 mil-réis a month. The factory would also be allowed to get all the water it needed from the river Arrudas which ran near the plot of land where the cotton mill was to be built.

The company Industrial Belo Horizonte was formed on August 28, 1906 with a capital of 600 contos.¹²² The promoters of the company, Américo Teixeira Guimarães, Ignácio Magalhães and Manoel Gonçalves de Souza Moreira were also elected directors at the first General Meeting of Shareholders. Besides Américo Teixeira Guimarães, whose previous experience in the textile industry has just been examined in connection with the constitution of the Companhia Industrial Paraense, the other two promoters of the Companhia Industrial Belo Horizonte had also been previously involved in the industrial production of cloth in Minas Gerais.

Ignácio de Magalhães was connected by marriage ties to the Mascarenhas family¹²³ who owned the Companhia Cedro e Cachoeira. He had also family connections with the Guimarães of Companhia Cachoeira dos Macacos.¹²⁴ In 1900 he was one of the seven major shareholders of the Companhia Cedro e Cachoeira.¹²⁵ Manoel Gonçalves de Souza Moreira, as seen in chapter 3, had also played an important role in the foundation and management of the Companhia de Tecidos Santanense. He was one of the promoters of that company as well as one of the two major subscribers of its initial capital.¹²⁶ He was also one of the directors of the company from its foundation until 1904.¹²⁷

It is also possible to identify, among the first shareholders of the Companhia Industrial Belo Horizonte, names traditionally connected with the textile industry of Minas Gerais. However, these shareholders were not connected to just one family but to different families which were

already associated, as family groups, to other textile companies. In fact, this undertaking was promoted by three textile industrialists from three families which, at the time, dominated a large sector of the cotton textile industry of Minas Gerais: the Mascarenhas, the Guimarães and the Souzas.

The evidence presented shows that changes were taking place in Minas Gerais at the end of the period 1903-1906 which once more made the establishment of new cotton mills an attractive investment. These changes reflected in part an improvement in the performance of the cotton textile industry of Minas Gerais established in the central and southern areas of the state. The fact that investment was being made by experienced industrialists shows that the lower textile prices were still able to produce good profits.

The improvement in the performance of the cotton textile industry of Minas Gerais and the resumption of investment took place at a time when the exchange rate was appreciating. In spite of a few references made by Mineiros entrepreneurs to the adverse effects of the appreciation of the exchange rate on their businesses, the evidence revealed in this chapter shows that such an increase in the external value of the mil-réis did not hinder the performance of the cotton mills in Minas Gerais, except those in the coffee growing areas near the border of Rio de Janeiro. On the other hand, the evidence presented on the performance of the cotton textile industry in Rio de Janeiro shows that the appreciation of the exchange rate had serious adverse effects on the local cotton textile industry in the years 1905 and 1906. Considering the importance given in the literature to the effects of fluctuations on the exchange rate in the early industrial growth in Brazil, and considering the new evidence provided in this chapter, the different effects of the appreciation of the exchange rate on Minas and Rio will be discussed in the section 7.5

Notwithstanding the fact that capital invested in the cotton textile industry was being remunerated at reasonable rates in spite of lower prices of cotton textiles, a cartelization of the industry was attempted at the end of 1906 as will be seen in the next section.

7.4 The Convention of Belo Horizonte and the leadership of the cotton textile business in Minas Gerais by family groups.

On December 20, 1906, representatives of some cotton mills established in Minas Gerais met in Belo Horizonte in order to discuss the problems being faced by their cotton mills and to decide on measures to be taken.¹²⁸ The calling of this meeting seems to have been the result of the efforts carried out by the Board of Directors of the Companhia Cedro e Cachoeira, which, as shown in this chapter, had for a long time been insisting on the need for an agreement among local producers. The attendance at this meeting was quite impressive. Seventeen cotton mills were represented at the meetings which took place in Belo Horizonte on December 20, 1906 and December 21, 1906. They were the three cotton mills owned by the Companhia Cedro e Cachoeira: Cedro, Cachoeira and São Vicente; the cotton mills owned by the companies Industrial Sabarense, Cachoeira dos Macacos, Fabril Cachoeira Grande, Industrial Pitanguense, Tecidos Santanense, Industrial Itabira do Campo, Industrial Melancias, Industrial Sanjoanense; the cotton mills of Gouvea, Santa Bárbara, Montes Claros, Ouro Preto, Alvinópolis, and the Pedreira cotton mill of Itabira.¹²⁹ Considering that the São Sebastião cotton mill was represented by the delegate from the Companhia Cedro e Cachoeira,¹³⁰ and considering also that a representative from Biribiry's cotton mill also signed the convention,¹³¹ there were nineteen cotton mills represented at the convention of Belo Horizonte. These cotton mills were responsible for 65.2% of the productive capacity of the cotton textile industry of Minas Gerais in 1905, as measured

by the number of looms in each cotton mill.¹³² No cotton mill established in the Mata zone was represented at the convention of and, from the Southern zone, the Sãojoanense cotton mill was the only one to send a representative. On the contrary, all the cotton mills located in the other areas were represented, except some small ones: the Itinga, Perpétua, S. Domingos and Cassu.

The final decisions taken by this convention of Mineiro textile entrepreneurs are substantiated in the main provisions of the agreement signed by the representatives who attended the meeting. This agreement sets out the conditions to be followed in relation to the purchase of cotton and sale of cloth.¹³³ As for the conditions of sale it was agreed that: a) payment should be made in cash or within a period of no longer than 90 days; b) discounts in prices for customers who kept current accounts with a company could only be given according to the discounts specified in a table and which varied with the value of the sale. Such conditions were, of course, restricted to sales in the state. An agreement was also reached at this meeting as to the minimum price to be paid for the cotton produced locally. It was agreed that this price should not be less than the price paid for imported cotton.¹³⁴

The importance of the Convention of Belo Horizonte is not in the agreement reached, because it was not obeyed. Its importance lies in the fact that for the first time the textile industrialists of Minas Gerais had a public meeting in order to discuss the problems faced by their cotton mills and to find a joint solution. In fact, the most important result of such a Convention was not an agreement on prices but the creation of an association of the textile industrialists of Minas Gerais, the Centro de Fiação e Tecelagem de Minas Gerais.

The names of those responsible for conducting the meetings at the Convention of Belo Horizonte reveal who the leaders were in the cotton textile industry of Minas Gerais at the

beginning of this century.¹³⁵ Caetano Mascarenhas, appointed chairman, was not only one of the major shareholders of the Companhia Cedro e Cachoeira¹³⁶ but also the General Managing Director of this company as well as Manager of one of its cotton mills, the São Vicente.¹³⁷ Pedro Barcellos, the Manager of the Companhia Industrial Itabira do Campo's cotton mill, was invited to act as secretary¹³⁸ and, at Theóphilo Marques Ferreira's suggestion, a committee was appointed to present a proposal for discussion. Theóphilo Marques Ferreira, Américo Teixeira Guimarães, Frederico Augusto Alvares da Silva, and José Gonçalves formed this committee.

Theóphilo Marques Ferreira, who was one of the nine shareholders to subscribe the initial capital of the Companhia Cedro e Cachoeira in 1883,¹³⁹ had held different positions in this company until 1893.¹⁴⁰ He had also taken part in other industrial undertakings in the state¹⁴¹. He was, at the time of the convention, Manager of the Santa Bárbara cotton mill in Diamantina which was then owned by the Banco Hipotecário do Brasil.¹⁴² Américo Teixeira Guimarães was Manager of the Cachoeira dos Macacos and Industrial Paraense companies and was also one of the directors of the Companhia Industrial Belo Horizonte. Frederico Augusto Alvares da Silva was the Manager of the Rio do Peixe cotton mill,¹⁴³ and José Gonçalves was the President-Director of the companhia de Tecidos Santanense.¹⁴⁴ Caetano Mascarenhas, Américo Teixeira Guimarães and José Gonçalves were appointed directors of the Centro de Fiação e Tecelagem at a second meeting, which took place on the following day,¹⁴⁵

The names given above show the active participation in the convention of Belo Horizonte and in the establishment of a syndicate of textile industrialists in Minas Gerais of three family groups: the Mascarenhas, the Teixeira Guimarães, and the Gonçalves de Souza.

Caetano Mascarenhas represented the Cedro e Cachoeira, a

company which, in 1906, owned the cotton mills of Cedro, Cachoeira and São Vicente. This company was founded in 1883 through the fusion and transformation into a joint stock company of two previous partnerships constituted originally by six Mascarenhas brothers and one of their brothers-in-law.¹⁴⁶ During the period 1903-1907, 47% of the company's shares was held by the founders of the company, their brothers, sisters and their descendants.¹⁴⁷ The remaining shares were in the hands of shareholders closely connected with the Mascarenhas' mainly by marriage ties.¹⁴⁸ However, as already mentioned in this work, members of the Mascarenhas family and other shareholders of the Cedro e Cachoeira company and who were closely related to the family, took part in other industrial textile undertakings in the state. They established new cotton mills, acquired and expanded old ones or invested, as minor shareholders, in other companies which were not controlled by the Mascarenhas. In 1906, members of the Mascarenhas family were involved either as major shareholders and or as managers in the following cotton mills: Cedro in Paraopeba, Cachoeira in Curvelo, São Vicente in Sete Lagoas, Brumado in Pitanguí, Rio do Peixe in Alvinópolis, Mascarenhas in Juiz de Fora, Biribiry in Diamantina and Sanjoanense in São João del Rei.

Américo Teixeira Guimarães represented the Companhia Cachoeira dos Macacos and the Companhia Industrial Melancias, two companies which were controlled by his family. The Cachoeira dos Macacos cotton mill was, in 1905, the second largest cotton mill in Minas Gerais.¹⁴⁹ Jose Gonçalves was the representative of the Companhia de Tecidos Santanense, which was controlled by Manoel Jose de Souza Moreira and his family.¹⁵⁰

7.5. The appreciation of the exchange rate in the years 1903-1906 and its effects on the cotton textile industry of Rio de Janeiro and Minas Gerais.

Contrary to what happened in the previous period, 1899-1902,

the high levels of the exchange rate in 1903 and 1904 were not blamed by the textile entrepreneurs of Rio de Janeiro for the problems faced by their cotton mills. Their main complaint in 1903 and 1904 was about fierce local competition which, according to them, kept the prices too low in the market. It was only in 1905 that those entrepreneurs started complaining once more about increased foreign competition in the market which had been brought about by the appreciation of the exchange rate. However, as shown in table 7.12, the external value of the mil-réis remained high during the years 1903 and 1904. In fact, the average value of the mil-réis was 3.7% higher in 1903-1904 than it had been in 1901-1902. This reaction from entrepreneurs suggests that, once the exchange rate had been stabilised for a certain period of time, as it had been from 1901 to 1904, domestic producers were able to adjust to the new situation. Following the increase in the external value of the mil-réis, internal prices of domestic cloth were

Table 7.12

Exchange rates and evolution of the tariff duties to be paid in mil-réis: 1901-1906.

Years	Exchange Rates annual averages			Tariff Duties		
	pence/ mil-réis	index numb.	annual changes	in mil-réis	index numb.	annual changes
1901	11.38	100	-	1.3431t	100	-
1902	11.97	105.2	+ 5.2%	1.3139t	97.8	- 2.2%
1903	12	105.4	+ 0.2%	1.3125t	97.7	- 0.1%
1904	12.2	107.4	+ 1.7%	1.3033t	97.0	- 0.7%
1905	15.89	139.6	+30.2%	1.1748t	87.5	- 23.3%
1906	16.19	142.3	+ 1.9%	1.3338t	99.3	+ 13.5%

Sources: Conselho Nacional de Estatística, Instituto Brasileiro de Geografia e Estatística (1939/1940, 1353-1354), "Curso do Câmbio na Praça do Rio de Janeiro". Multipliers of the tariff t, calculated according to the legislation in the period: Law number 741 of December 26, 1900 and Law number 1,451 of December 30, 1905. The multiplier for 1905 was calculated for those products which were subject to the payment of 50% of the tariff duties in gold.

reduced. In order to increase total profits, individual companies tried to increase their sales. The cotton mills were kept working at full capacity and, whenever possible, their productive capacity was increased. The evidence presented in this chapter suggests that, at the new level of internal prices, the cotton mills of Rio de Janeiro provided acceptable returns for the capital invested. Therefore one may conclude that the exchange rates and tariffs prevailing in the years 1903 and 1904 were able to protect the domestic production of cloth in Rio de Janeiro. It was the sudden rise of the external value of the mil-réis in 1905 which created serious difficulties in the cotton textile sector of Rio de Janeiro. The mil-réis quoted at 13.78 pence in January and at 13.77 pence in the following month, had its value increased to 14.58 pence in March. In April it reached 16.42 pence. From April to July it remained relatively stable, but in July it was quoted at 17.53 pence which was the highest level it had reached since June 1891.¹⁵¹ In the last six months of 1905 it decreased slightly. Such a sharp and unexpected appreciation of the exchange rate in 1905 increased significantly the competitiveness of foreign products and forced local producers to further reduce their prices.

At this point it should be pointed out that the appreciation of the exchange rate had a twofold impact on the internal price of imports. It not only reduced the cost of the imports in mil-réis in proportion to the appreciation of the exchange rate, but it also reduced the tariffs to be paid on such imports, as a percentage of the tariff duties was paid in gold. Data in Table 7.12 show that the average annual external value of the mil-réis increased by 39.6% between 1901 and 1905, while the value of tariff duties decreased by 12.5% in the same period. Besides this, the rise of the exchange rate had another adverse effect on local production. As mentioned in the annual report of the Companhia Fiação e Tecelagem Industrial Mineira, it reduced the exporters' income in mil-réis and therefore the demand for cloth. Such a consequence, however, was not immediately

visible, and the decreasing internal prices of competitive imports was seen by industrial entrepreneurs as the only reason for all the problems faced by their factories in 1905.

The adverse effects of such a reduction in the protection of domestic producers of cloth in Rio de Janeiro intensified a general movement towards a more effective protection of the domestic industry. This movement was led by the Centro Industrial do Brasil.¹⁵² The pressure from industrialists for increased protection of domestic industry was successful.¹⁵³ The Budget Law for 1906¹⁵⁴ increased the percentage of tariff duties to be paid in gold to 50% for a group of products. This group included almost all the non-durable consumer goods being domestically produced in significant quantities and a few others; the production of which the government intended to encourage. For all other goods, the percentage to be paid in gold was increased to 35%. The fact that a great part of the raw materials used by the domestic industry was included in the second group, and therefore subject to lower duties, shows the protectionist character of the new law.¹⁵⁵ The inclusion of cotton textiles, among those products subject to a higher percentage, gave immediate relief to the cotton mills established in Rio de Janeiro.

Contrary to what happened in Rio de Janeiro, the evidence presented on the Mineiro cotton textile industry suggests that neither the sharp appreciation of the exchange rate in 1905 nor the increase in tariff duties had major adverse effects upon the performance of most of the cotton mills in Minas Gerais. In fact these two events were not even mentioned in the annual reports of most of the companies for the years 1905 and 1906. It was the fierce competition among the internal producers which was the great problem faced by the industry, according to the diagnosis of the Mineiro textile entrepreneurs. This does not mean that the increase in the external value of the mil-réis did not have any effect on the cotton textile industry of Minas Gerais. It

certainly explains, at least in part, the expansion of the productive capacity of some cotton mills which took place in the period, and certainly it was an incentive for the formation of new textile companies in 1905 and 1906. However, fluctuations in the exchange rate did not disturb the market of most of the cotton mills in Minas Gerais as this market was then relatively protected from foreign competition.

7.6 Conclusions.

a) There was some improvement in the performance of the cotton textile industry in Minas Gerais during 1903-1906. Such an improvement however was mainly restricted to the cotton mills located in the central areas of the state. Those mills established in the northern and coffee-growing areas presented a more unsatisfactory performance.

b) The better performance of the cotton mills in the central areas was associated with an increase in local incomes resulting from the economic expansion in the area. Such an expansion resulted both directly and indirectly from the development of Belo Horizonte. The problems faced by the cotton mills in the northern areas of Minas reflected, at least in part, a decay in the economic activities of the region resulting from a reduction in diamond exports. The cotton mills in the coffee-growing areas faced the problems related to a fall in coffee prices associated with a valuation of the exchange rate.

c) The performance of the cotton textile industry in Rio de Janeiro and in Minas Gerais reveals a contrast as to the susceptibility of both industries to the effects of fluctuation of the exchange rate. Fluctuation of the exchange rate disturbed the market in Rio and an appreciation of the mil-réis forced an immediate reduction in prices of domestic cloth. Similar effects were not felt by the Mineiro producer who was still protected from

external competition.

d) The appreciation of the exchange rate, associated to more optimistic expectations, based on better results achieved by domestic industry and in some cases to incentives granted by local government, encouraged the resumption of investment in the second half of the period.

f) The companies formed in 1905 and 1906 show that some changes were being introduced in their organization. Contrary to those constituted before, the new companies were promoted by experienced textile industrialists and the role played by the small shareholder in financing new investment increased.

g) By the end of the period 1903-1906 a large part of the Mineiro cotton textile industry was in the hands of a few family groups.

h) The Convention of Belo Horizonte and the creation of an organization of textile entrepreneurs in December 1906 demonstrate that the Mineiro cotton textile industry was by then firmly established.

1. See for instance: Villela and Suzigan (1973,130) and Mello (1987,151).
2. For a brief and general description of the economic policy of Rodrigues Alves, see: Villela and Suzigan (1973,39-40) and Fritsch (1983,17-19).
3. Simonsen (1973,16-17).
4. Villela and Suzigan (1973,39).
5. Villela and Suzigan (1973,130-131).
6. Suzigan (1984,72).
7. Suzigan (1984,73).
8. Stein (1957,98).
9. Versiani (1980a,318).
10. Suzigan (1984,125).
11. Suzigan (1984,125).
12. Ibid. The author does not explain why the recovery of investment in the cotton textile industry took place four years later.
13. Companhia de Fiação e Tecidos Aliança (1903), Relatório da Diretoria.
14. Companhia Fabril São Joaquim (1903/1904), Relatório da Diretoria.
15. Companhia Progresso Industrial do Brasil (1903), Parecer do Conselho Fiscal.
16. Companhia Fábrica de Tecidos São Pedro de Alcântara (1903), Relatório da Diretoria, "Produção, Produtos".
17. Companhia de Fiação e Tecelagem Carioca (1904), Relatório da Diretoria, "Observações".
18. Companhia de Fiação e Tecidos Aliança (1904), Relatório da Diretoria.
19. Companhia de Fiação e Tecidos Mageense (1904), Relatório da Diretoria.
20. References to these meetings and their purposes are found in: Centro Industrial do Brasil, Ata da Reunião da Diretoria, May 25,1905, in Livro das atas das sessões da Diretoria e Comissões Especiais.
21. Companhia de Fiação e Tecidos Mageense (1905), Relatório da Diretoria.

22. Companhia Progresso Industrial do Brazil (1905), Relatório da Diretoria, "Produção".

23. Companhia de Fiação e Tecelagem Carioca (1905), Relatório da Diretoria, "Observações".

24. Law number 1,451, December 30, 1905, article 2.

25. Companhia Progresso Industrial do Brazil (1905), Relatório da Diretoria, "Produção".

26. A reference to permission for the purchase of the Andorinhas cotton mill given by the Extraordinary Meeting of Shareholders on July 27, 1906 to the Companhia Fiação e Tecidos Mageense's Board of Directors as well as a reference to the approval given by the Extraordinary Meeting of Shareholders on August 3, 1906 that a loan be raised to pay for such purchase, are in: Companhia Fiação e Tecidos Mageense (1906), Relatório da Diretoria, "Assembléas".

27. Companhia Fábrica de Tecidos São Pedro de Alcântara (1906), Relatório da Diretoria, "Fábrica".

28. Versiani (1980a, 320).

29. Data on annual production of 18 cotton mills out of the 30 listed by Cunha Vasco show that the Companhia Cedro e Cachoeira's cotton mills were responsible for 22% of the total amount of cloth produced in Minas Gerais in 1905. See: Vasco (1905).

30. Vasco (1905).

31. Minas Gerais, Secretaria da Agricultura (1913), "Fábricas existentes em 1912."

32. Minas Gerais, Secretaria da Agricultura (1897, 187).

33. Diário de Minas, January 1, 1901, p.2.

34. Companhia de Fiação e Tecidos Itinga do Jequetinhonha (1905), Ata da Assembléa Extraordinária.

35. Ibid.

36. Vianna (1964, 369).

37. Companhia de Fiação e Tecidos Santa Bárbara (1904), Relatório aos Snrs. Acionistas e Credores.

38. Vasco (1905).

39. Averages calculated from Vasco (1905). Data on looms available for all thirty cotton mills listed and data on number of workers available for nineteen cotton mills.

40. For a brief description of the development of diamond production in Minas Gerais, see: Giroletti (1987,53-55).

41. A description of the main economic activities in the northern areas of the province of Minas Gerais at the beginning of the nineteenth century, based on reports from travellers, may be found in: Giroletti (1987,45-49).

42. The results of the Census of 1872 presented by Martins (1983,92-94) show that there was a relatively large number of workers employed in the handicraft production of cloth in the Northeastern zone.

43. Carvalho (1916,22).

44. Ibid.

45. Companhia Cedro e Cachoeira (1905), Relatório da Diretoria, "Escritório Central".

46. Ibid.

47. Companhia Cedro e Cachoeira (1906), Relatório da Diretoria, "Escritório Central".

48. Ibid.

49. Companhia Cedro e Cachoeira (1903), Relatório da Diretoria, "Escritório Central".

50. Ibid.

51. Companhia Cedro e Cachoeira (1905), Relatório da Diretoria, "Escritório Central".

52. Details of this agreement will be discussed later.

53. Companhia Cedro e Cachoeira (1903), Relatório da Diretoria, "Fábrica da Cachoeira".

54. Companhia Cedro e Cachoeira (1904), Relatório da Diretoria, "Fábrica do Cedro".

55. Ibid.

56. Companhia Cedro e Cachoeira (1905), Relatório da Diretoria, "Fábrica do Cedro." Another advantage of the introduction of electric light in the cotton mill was that of making uniform the daily number of hours worked all through the year.

57. Ibid.

58. Companhia Cedro e Cachoeira (1906), Relatório da Diretoria, "Fábrica da Cachoeira".

59. This steam power machine ordered in 1903 started working on September 30, 1904. See: Companhia Cedro Cachoeira (1903), Relatório da Diretoria, "Fábrica do Cedro" and Companhia Cedro e Cachoeira (1904), Relatório da Diretoria, "Fábrica do Cedro".

60. The report on Cachoeira cotton mill's performance in 1903 mentions "the monthly arrival at the factory in lots of 10 of excellent and up to date looms." See: Companhia Cedro e Cachoeira (1903), Relatório da Diretoria, "Fábrica da Cachoeira".

61. Companhia Cedro e Cachoeira (1904), Relatório da Diretoria, "Fábrica da Cachoeira".

62. Companhia Cedro e Cachoeira (1905), Relatório da Diretoria, "Fábrica da Cachoeira".

63. Companhia Cedro e Cachoeira (1903), Relatório da Diretoria, "Fábrica da Cachoeira".

64. A reference to such a decision taken by the Extraordinary Meeting of Shareholders on November 26, 1906 is found in: Companhia Cedro e Cachoeira (1906), Relatório da Diretoria, "Fábrica do Cedro".

65. For the policy of sales adopted by this company since its constitution in 1883 and until the first years of this century see: Vaz (1990, 216-220).

66. Companhia Cedro e Cachoeira (1887), Relatório da Diretoria, "Escritório Central".

67. Companhia Cedro e Cachoeira (1890), Relatório da Diretoria, "Escritório Central".

68. Companhia Cedro e Cachoeira (1895), Relatório da Diretoria, "Escritório Central".

69. Companhia Cedro e Cachoeira (1903), Balanço Geral em 31 de dezembro.

70. Profits of 200 contos are shown on the annual balance account of the company for 1903. That all these profits were paid as dividends is confirmed in the annual report for 1903. See: Companhia Cedro e Cachoeira (1903), Balanço Geral em 31 de dezembro, and Companhia Cedro e Cachoeira (1903), Relatório da Diretoria, "Escritório Central".

71. Ibid.

72. In spite of this observation, and in spite of the fact that investment costs are not revealed in the accounts of the company, repair work and replacement of machines were carried out in the following year as was seen above.

73. It was strongly emphasized in the annual report of the company for 1904 that the payment of high dividends, as had been done in the past, was the main cause of the problems faced by the company. See: Companhia Cedro e Cachoeira (1904), Relatório da Diretoria, "Escritório Central".

74. A reference to the decision taken by this meeting, as well as a transcription of such a decision is found in Vaz (1973, 605-607).

75. Companhia Cedro e Cachoeira (1905), Relatório da Diretoria, "Escritório Central".

76. Ibid.

77. Companhia Cedro e Cachoeira (1906), Balanço Geral em 31 de dezembro.

78. About the constitution of this company and the establishment of its cotton mill, see Chapter 4. The performance of the company during the periods 1896-1898 and 1899-1902 is analyzed in Chapter 5 and Chapter 6.

79. Companhia Industrial Itabira do Campo (1904), Relatório da Diretoria.

80. Ibid.

81. Ibid.

82. Companhia Industrial Itabira do Campo (1905), Relatório da Diretoria.

83. Ibid.

84. Companhia de Tecidos Santanense (1905), Relatório da Diretoria, "Lucros".

85. See: Companhia de Tecidos Santanense (1904), Balanço em 31 de dezembro; Companhia de Tecidos Santanense (1905), Resumo do Balanço em 31 de dezembro, and Companhia de Tecidos Santanense (1906), Resumo do Balanço em 31 de dezembro.

86. It is clearly stated in the report for the year 1904 that the company had not bought any more looms since the cotton mill's foundation. See: Companhia de Tecidos Santanense (1904), Relatório da Diretoria, "Maquinismos".

87. Ibid.

88. Companhia de Tecidos Santanense (1905), Relatório da Diretoria, "Maquinismos".

89. Companhia de Tecidos Santanense (1906), Relatório da Diretoria, "Maquinismos".

90. Companhia de Fiação e Tecelagem Industrial Mineira (1905), Relatório da Diretoria, "Observações Gerais".

91. Companhia de Fiação e Tecelagem Industrial Mineira (1906), Relatório da Diretoria, "Observações Gerais".

92. For dividends paid in 1906, see: Companhia de Fiação e Tecelagem Industrial Mineira (1906), Balanço em 30 de junho and Balanço em 31 de dezembro. In 1905, in spite of the low prices prevailing in the market, the company was able to distribute dividends of 10%. See: Companhia de Fiação e Tecelagem Industrial Mineira (1905), Relatório da Diretoria, "Dividendos". So, the dividends of 8% paid in 1906 may be considered relatively low if compared with dividends paid in previous years. In 1902 the company paid dividends of 11.5% a year, and in 1903, dividends of 12%. See: Companhia de Fiação e Tecelagem Industrial Mineira (1902), Relatório da Diretoria, "Dividendos", and Companhia de Fiação e Tecelagem Industrial Mineira (1903), Relatório da Diretoria, "Dividendos".

93. Companhia de Fiação e Tecelagem Industrial Mineira (1901-1906), Folhas de Pagamento.

94. Companhia de Fiação e Tecelagem de Cataguazes (1905), Ata da Instalação.

95. Companhia Fiação e Tecelagem de Cataguazes (1905), Estatutos.

96. Average calculated from data in: Vasco (1905).

97. Data for capital, number of shares and number of shareholders in: Companhia Cedro e Cachoeira (1900), Acionistas em 31 de dezembro.

98. Data for capital and number of shareholders in: Companhia de Fiação e Tecelagem Industrial Mineira (1900), Balanço em 31 de dezembro, and Acionistas em 31 de dezembro.

99. The names of the promoters are in: Companhia de Fiação e Tecelagem de Cataguazes (1905), Estatutos. The place of residence and profession of two of them - who were elected members of the first Board of Directors - are written in hand in the same document, below the statute of the company.

100. Distribution of shares per shareholder at the time of constitution of the company in: Companhia Fiação e Tecelagem de Cataguazes (1905), Lista dos Acionistas.

101. Vaz (1990,93).

102. Such a degree of concentration was calculated from data on a list of shareholders on December 31,1900. Companhia Cedro e Cachoeira (1900), Acionistas em 31 de dezembro.

103. Companhia Fiação e Tecelagem de Cataguazes (1905), Estatutos, chapter III, art.22.

104. Companhia Fiação e Tecidos Sarmento (1905), Ata da Assembléa de Instalação.

105. Companhia Tecidos Mineiros (1894), Ata da Instalação da Assembléa Geral.

106. Companhia Tecidos Mineiros São João Nepomuceno (1894), Relação dos Acionistas.

107. No information was found either in relation to the dissolution of the Companhia Tecidos Mineiros São João Nepomuceno, or in relation to the constitution of the partnership Sarmento Irmão & Comp. However in the list of cotton mills existing in Brazil on July 31, 1905 compiled by Vasco (1905), the owners of the cotton mill, Fábrica de Tecidos Mineiros, appear as Sarmento Irmão & C. According to data on this list, capital and reserves of this company were 406:655\$510.

108. A minimum of seven partners was required by law for the constitution of a joint stock company. Decree number 8821, December 30, 1882, chapter I, article 1.

109. In fact the company was constituted with 9 shareholders, two more than the minimum required by law. The names of the shareholders and the number of shares held by each of them are found in: Companhia Fiação e Tecidos Sarmento (1905), Lista de Acionistas. Out of 2,000 shares, 5 of the nine shareholders had one share each.

110. In a joint stock company the responsibility of each partner was restricted to the value of the capital they subscribed. Law number 3150, November 4, 1882, article 2, paragraph 2.

111. Companhia Industrial Paraense (1906), Ata de Instalação.

112. The name of the promoters of the company are given in: Coletoria Federal da Cidade do Pará (1906), Certidão de Depósito.

113. Companhia Industrial Paraense (1906), Ata de Instalação.

114. About the participation of Américo Teixeira Guimarães in the foundation of the Companhia Cachoeira dos Macacos, see Chapter 2.

115. See: "Mineira tece seu êxito em 100 anos de muitas crises" in Jornal do Brasil, May 29, 1986, p.18.

116. Companhia Tecelagem e Refinação (1893), Relação dos Acionistas. About the constitution of the Companhia Tecelagem e Refinação, see Chapter 4.

117. This identification was made by comparing the names in the lists of shareholders of the Companhia Industrial Paraense at the time of its constitution with the names of those who attended the first meeting of shareholders of the Companhia Cachoeira dos Macacos. Companhia Industrial Paraense (1906), Lista nominativa dos subscritores de ações and Companhia Cachoeira dos Macacos (1886), Ata da Assembléa de Instalação.

118. Ibid.

119. Companhia Textil Cachoeira dos Macacos, Evolução da Cia Têxtil Cachoeira dos Macacos, 1886-1967, (mimeographed notes distributed by the company).

120. Companhia Tecelagem e Refinação (1893), Relação dos Acionistas.

121. This contract may be found in: Cartório do Primeiro Ofício de Notas in Belo Horizonte, book 42, pages 22-26.

122. The documentation related to the constitution of this company was not located. All references to its incorporation are found in: Souza (1986,197).

123. Ignácio Magalhães was married to one of Antonino Mascarenhas' daughters, Bárbara. Antonino was a brother of the Mascarenhas, founders of the Companhia Cedro e Cachoeira. However, there is no evidence that Antonino had any involvement with the company. His name is not in the list of the company's shareholders in 1900, and there is no mention of him holding any administrative post at the company. He was a farmer. See: Tamm (1960, 87,247) and Companhia Cedro e Cachoeira (1900), Acionistas em 31 de dezembro.

124. One of his daughters married Christiano F. Guimarães, son of Américo Teixeira Guimarães. See: Tamm (1960,247).

125. Companhia Cedro e Cachoeira (1900), Acionistas em 31 de dezembro.

126. Souza (1986,124).

127. Souza (1986,196).

128. References to this convention in this chapter are based on information contained in two sources: 1) notes published in Minas Gerais, December 21,1906, p.2, and December 25/26, 1906, p.2 which present a brief summary of the meetings of the cotton mills' representatives which took place on December 20 and December 21, 1906 in Belo Horizonte; 2) the text of the convention signed by these cotton mills' representatives which is reproduced in: Vaz (1973,605-607).

129. Minas Gerais, December 21, 1906, p.2 and December 25/26,1906 p.2. A reference to the main decisions taken at

this meeting is found in: "Fábricas de Tecidos", in Minas Gerais, December 25/25,1906, p.2.

130. About the commercial transactions between the Companhia Cedro e Cachoeira and the owners of São Sebastião, see: Vaz (1990, 218-219).

131. According to Vaz (1990,214), the convention of Belo Horizonte was signed by 12 cotton mill representatives. However according to the text of the agreement signed - reproduced by this same author in a previous work, Vaz (1973,605-607) - representatives of 18 cotton mills signed the convention.

132. Number of looms per cotton mill on July 31,1905 in: Vasco (1905).

133. The agreement signed by the cotton mill representatives is reproduced in: Vaz (1973,605-607).

134. Even though changes in cotton prices had a great impact on the performance of any cotton mill, the study of the cotton market goes beyond the scope of this work. A very illustrative study of the different policies adopted by the company Cedro Cachoeira in order to assure the raw material for its cotton mills is found in: Vaz (1990, 203-210).

135. Minas Gerais, December 21,1906, p.2.

136. Caetano Mascarenhas was, on December 31,1900, the second greatest shareholder of the company. Companhia Cedro e Cachoeira (1900), Acionistas em 31 de dezembro.

137. Vaz (1990,372-373).

138. As to the position of Pedro Barcellos in the Companhia Industrial Itabira do Campo, at the time, see: Companhia Industrial Itabira do Campo (1906), Relatório da Diretoria.

139. At the time of the constitution of the company, Theóphilo Marques Ferreira purchased 353 of the 5,000 shares issued.

140. Theóphilo Marques Ferreira was the general superintendent of the company and manager of the Cedro cotton mill from 1887 to 1893, and the company's director in 1888-1889. Mascarenhas (1972,245-247).

141. He was one of the shareholders of the Companhia Industrial do Mello, a textile company incorporated in 1894 and which, as seen before, was not successful in its objective of establishing a cotton mill. See: Companhia Industrial do Mello (1894), Relação Nominal dos Acionistas.

142. Senna (1907), "A Indústria da Tecelagem de Algodão em Minas Gerais".

143. Ibid.

144. Ibid.

145. "Fábrica de Tecidos" in Minas Gerais, December 24/25, 1906, p.2.

146. The constitution of these two partnerships and their fusion into a joint stock company was studied in chapters 1 and 2.

147. Data from: Vaz(1990,274).

148. A study of the composition of the ownership of the company Cedro e Cachoeira and an analysis of the measures taken in order to keep the company as a family enterprise are found in: Vaz (1990, 264-276).

149. See: Vasco (1905).

150. The constitution of this company was studied in chapter 4.

151. Secretaria de Planejamento e Coordenação da Presidência da República, Fundação Instituto Brasileiro de Geografia e Estatística (1986,546-548).

152. About this movement for a general increase on tariffs see: Luz (1961,121-143).

153. The work done by the Centro Industrial do Brasil in order to have the proposed law increasing the percentage of tariff duties to be paid in gold approved by the House of Representatives may be seen in the proceedings of meetings of its Board of Directors. See: Centro Industrial do Brasil, Ata da reunião da diretoria on August 8 1905 and December 12, 1905, in Livro das actas das sessões da diretoria e comissões especiais.

154. Law number 1,452, December 30, 1905.

155. The protectionist purposes of Law number 1,452 of December 30, 1905, are discussed in: Versiani (1981, 31-36).

CONCLUSIONS

This dissertation has investigated the establishment and performance of the cotton textile industry in Minas Gerais in the last decades of the nineteenth century and the first years of the twentieth century. The investigation has brought to light the history of the early textile industry of Minas Gerais and has provided a better understanding of the peculiarities of the Mineiro economy as a non export economy within a country specializing in the production of primary goods for the world market. Thus, it has also contributed to a better comprehension of early Brazilian industrialization by extending the scope of study to areas where most of the economic activities were not directly connected with exports. The major findings of this dissertation are summarized below.

In broad outline the early development of the cotton textile industry of Minas Gerais was shown to have followed a path similar to that of Brazilian industry - or, more particularly, that of the Brazilian cotton textile industry - as described in the literature. The industrialization of the cotton textile production in Minas Gerais, which began in the seventies, intensified in the eighties and advanced in the first half of the nineties. In the mid nineties the Mineiro industry entered a long period of recession. By the first years of the twentieth century the performance of the Mineiro industry began improving, and in 1905 and 1906 investment started once more flowing into the industrial production of cloth. However, when shorter periods were considered, the differences in the pattern of expansion of the Mineiro textile industry vis-à-vis the pattern described for the Brazilian cotton textile industry as a whole were revealed. Such differences unearthed some peculiarities in the Mineiro economy compared to the coffee-export areas in the country.

The beginning of the Mineiro textile industry may be placed

in the last years of the sixties when three brothers, who were sons of a local farmer and lived in the interior of the province of Minas Gerais, decided to establish a partnership with the purpose of setting up a cotton mill in the province. Their factory, which began operating in 1872, was the first cotton mill to be successful as an industrial enterprise in Minas Gerais. This pioneer undertaking was followed by others, and six cotton mills were established in the 1870s - four of them becoming operational in the first half of the decade. Thus, the beginning of the Mineiro industry coincided with a spurt of industrial investment which has been identified in the literature in the immediate post Paraguayan War years. In the second half of the seventies two other mills were inaugurated and older ones expanded their productive capacity through reinvestment of profits. During the eighties however, the path of expansion in the Mineiro industry differed from that of the Brazilian cotton textile industry as a whole as has been recently described in the literature. The expansion of the Mineiro industry was not moderate in the first years of that decade and a spurt of investment in those years was not followed by slack investment in 1885-1888. In fact, investment flowed into the Mineiro cotton textile industry during the whole decade.

After the foundation of six cotton mills in the seventies, seven cotton mills were set up in 1880-1884, and nine others were established in the province as a result of decisions to invest taken in the second half of the eighties. The expansion of the Mineiro industry in the years of Encilhamento, 1890 and 1891, and in the immediate post Encilhamento period, 1892-1894, also shows some contrast with the expansion of the Brazilian cotton textile industry as a whole. The increased amount of speculation in the stock market which characterized the Encilhamento years did not foster the formation of textile companies in Minas Gerais. One company was formed in 1890 and another one in 1891 when the movement of speculation had already started to decrease. Also the crisis in the Brazilian cotton textile industry in

the post Encilhamento period, identified by some authors, certainly did not take place in Minas Gerais. Nine joint stock companies were formed in the years 1892-1894: six of them were successful in establishing new cotton mills, one was formed in order to buy an old cotton mill, and two were dissolved before setting up their mills. From 1895 to 1904 the Mineiro industry followed the general trend of decreasing investment presented by the Brazilian cotton textile industry, as well as by the whole industry in the country. In Minas Gerais no textile company was formed in this period and reinvestment was limited. It was only in 1905 and in 1906 that the Mineiro cotton textile industry became again an attractive field for investment.

These differences in the evolution of investment in the Mineiro textile industry vis-à-vis the Brazilian cotton textile industry have revealed certain characteristics of the Mineiro economy. They have showed that the available interpretations of the early Brazilian industrialization, cannot always account for the industrialization which took place in all the other areas of the country.

It did not require increased protection from foreign competition, followed by an increase in income, for industrial production of cloth to start in Minas Gerais. A flourishing handicraft production of cloth in Minas Gerais was proof enough that there was a sufficient demand for cloth to justify its local production. The artisanal producer of cloth in the sixties and seventies was still protected from external competition. He was protected by the geographical location of Minas Gerais which was far from the coast; a deficient system of transport both in the province and to other provinces; a population which was largely spread in rural areas and in many small villages, and by the local cultivation of cotton. What was basically required for the emergence of an industry of cloth in Minas Gerais was the appearance of innovative entrepreneurs daring to invest capital in a pioneer undertaking. The successful establishment of cotton mills in other provinces had already

shown by the late sixties and early seventies that the industrial production of cloth in Brazil could be a profitable business. Thus, the establishment of the first cotton mills in Minas Gerais may be explained by the appearance of a few innovative entrepreneurs rather than as a by-product of the Paraguayan War, as has been stated in the literature. Their success showed other Mineiros that the industrial production of cloth in Minas Gerais might be a feasible and profitable business. This interpretation does not deny that protection of domestic producers and cheaper machines - due to an appreciation of the external value of the mil-réis - had fostered the first industrial investment in Minas in the seventies. They certainly were additional stimuli to the investors.

The good results achieved by the first cotton mills reassured the potential investor that the industrial production of cloth was a good business and new investment flowed to industry during the eighties and early nineties. By the mid nineties, however, the first signs that the supply was increasing at a faster pace than demand manifested themselves in the market and some companies began facing difficulties in the sale of their products. Prices were reduced, stocks of unsold cloth increased and companies were unable to pay dividends in cash and on time. Yet, as a result of decisions to invest, which had been taken in previous periods, new cotton mills entered the market. So the expansion of the textile industry from the early seventies to the mid nineties was a more continuous and smoother process than it was in other provinces and states. Such a different evolution of the Mineiro industry reveals that the production of industrial cloth in Minas Gerais - contrary to other regions in the country - was relatively well protected from the effects of changes in demand brought about by changes in the performance of exports, as well as from changes in the level of protection granted by tariffs and the exchange rate. However, the Mineiro industry was not immune to such changes.

In fact, even if the Mineiro economy is characterized mostly as a non-export economy and the coffee-growing regions of Minas are seen as an enclave, Minas Gerais was not isolated from the rest of the country. Mineiro products were sold in the export areas and taxes on exports of coffee were an important source of revenue for the government of Minas Gerais. Therefore, changes taking place in the export sector affected Mineiros' income and their demand for cloth. However, as most of the cotton mills were established in non coffee-growing areas and a large part of the Mineiro population was engaged in supplying goods for local markets, the effects of such changes on the demand for Mineiro cloth were softened. Moreover, it cannot be denied that the protection afforded to national producers benefitted the Mineiro producer, too, in the early stages of industrialization. The top prices which could be charged by the first Mineiro producers were determined by the local prices of similar foreign cloth. Thus, higher prices of foreign cloth benefitted the Mineiro producer in so far as they allowed him to increase his price and consequently his margin of profit. However, the expansion of investment in the eighties and the consequent increase in supply forced the price of Mineiro cloth to drop well below the local price of foreign cloth. From then on changes in the degree of protection of the domestic producer became irrelevant for the textile entrepreneurs of Minas Gerais. Local competition was their great concern.

The over-optimistic expectations of the entrepreneurs, based on the high returns on capital already produced by the cotton textile industry, encouraged an excessive expansion of investment and this was the main source of the difficulties faced by the industry in 1895-1898. These difficulties were aggravated in the following years by the adverse effects of the deflationary policies introduced by Campos Sales on the demand for Mineiro exports to other states. An improvement in the performance of the existing cotton mills and the resumption of investment in 1905 and 1906 reveal an increase in demand for cloth associated

directly and indirectly with the development of the new capital, Belo Horizonte.

The study of investment in new cotton mills as well as the analysis of the yearly performance of some cotton mills have revealed certain features of the Mineiro textile industry :

a) Early textile investment in Minas Gerais was mainly a local affair. The first entrepreneurs were mostly local people who were able to detect the opportunities for the industrial production of cloth in Minas Gerais. Funds for investment were raised locally among relatives and business associates of the original entrepreneurs. By the late eighties and early nineties capital, which had been accumulated in the textile industry, was being reinvested in the establishment of other cotton mills. The new undertakings in 1905 and 1906 were mostly promoted by experienced textile industrialists. Such developments reinforced and enlarged the involvement of some family groups in the ownership and management of the Mineiro textile industry.

b) The legal difficulties in the constitution of joint stock companies before 1882 do not seem to have hindered the expansion of investment in the textile industry. After 1882 the joint stock company became the dominant form of association of capital for investment in the cotton textile industry. However, most of these joint stock companies still remained as a typical family business, financed and controlled by members of the same family. It was only in the first years of the twentieth century that joint stock companies started being used by Mineiro entrepreneurs as a form of attracting funds for their undertakings from a larger population outside the circle of their relatives and close friends.

c) The typical investor in the textile industry of Minas Gerais had the mentality of a rentier rather than the attitude of a capitalist. His pressure for high and

immediate dividends created difficulties for the capitalist entrepreneurs in the management of the companies.

The evidence produced in this dissertation shows quite clearly that many generalizations proposed in the literature about the early development of Brazilian industry are not applicable in the case of the Mineiro cotton textile industry. Most of the inadequacies of these generalizations result from the fact that they were made from the evidence provided by the cotton textile industry established in coffee-growing areas.

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