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A Tale of Three Textile Cities

Gender Wage Gaps in western India, 1920s – 1940s

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Abstract

This study has set out to examine the gender wage differences in three cities in the western region of India's textile industry in the first half of the twentieth century. The increasing demand for cheap labour and higher margins of profits has affected the conditions of work, labour relations and gender identity of the workforce. Unlike most textile producing countries, India has a different labour force structure where the majority of workers are male adults. Using the official reports from the Labour Government of Bombay Presidency, the nominal wages of male and female textile workers are analysed and compared across the three major textile centres of the region. It is argued that the intensification of gender structures depended on a multitude of reinforcing factors. These include cultural aspects and traditions of the country as well as other factors, such as type of occupation and location of production. The different growth rates and development between the three cities considered, has caused differences in the wage rates in the textile mills.

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Introduction

Research on wages have been studied for many decades by labour economists and historians around the world. Yet, it was only after the late 1950s that a more specific field of study in labour wages started to develop. Becker's seminal work, the "Economics of Discrimination", introduced a new perspective in the analysis on the economic effects of wage discrimination.¹ Still, research on work and labour market discrepancies have been biased by focusing on male workers and jobs. It was not until the 1970s that studies on women's labour came to be a topic among academics.² Since then, research on wage differences between men and women have produced various debates and it is subject to attention in economic history, as well as in the international scenario, since political leaders have begun paying closer attention to women as the drivers of economic growth.³

Industrialization was a key factor for enabling the rise of economies in the past and until today.⁴ Nonetheless, given the distinct patterns of economic growth the world has experienced since the industrial revolution, many countries were negatively affected by it and fell behind in the global competition for development. These differences lead to a substantial gap in income and costs of living between countries.⁵

Providing that the different economic growths enabled advantages for western European countries, over the past 250 years, Asia has been one of the main stages and part of the strategy of industries to shift their production to low-wage developing countries.⁶ Scholars argue that the "race to the bottom" theory has urged countries and governments to continuously restrict labour costs and benefits in exchange for receiving higher rate of returns in trade and capital flows, allowing for bigger profit margins.⁷ Given the *race to the bottom* phenomena, the workforce of developing countries is especially vulnerable to the effects on restrictions of wages and labour rights.⁸

This phenomenon happened in numerous sectors of the industry, but the textile industry was a major milestone. India has a strong historical tradition in the textile industry and it is an important

¹ Becker, G. S. (2010). The economics of discrimination.

² Bradley, H. (2016). Gender and Work. p 73.

³ Boserup, E. (1970). Woman's Role in Economic Development.

⁴ Jeremy, D. J. (2004). The international diffusion of cotton manufacturing technology, 1750-1990s, p 87.

⁵ Acemoglu, D. (2012). Introduction to economic growth. p 545.

⁶ Nederveen Meerkerk, E. van, L. Heerma van Voss and E. Hiemstra-Kuperus. (2010). Covering the World: some conclusions to the project, p 782.

⁷ Rudra. (2008). Globalization and the Race to the Bottom in Developing Countries, p 2.

⁸ Ibid., p 3.

part of its rich cultural heritage. Textile was the first organized industry to be established in the country and the driving force of its industrialization. The first successful modern textile mill was built in Bombay in the 1850s, yet the expansion of this industry only increased in the 1870s.⁹ Nowadays, the Indian textile industry is one of the leading industries in the world as well as the largest net foreign exchange earner for the country.¹⁰

The search for cheap labour has presented implications for the conditions of work, labour relations and gender identity of the textile workforce. Especially before the rise of mechanization, this was a sector where women were largely represented and seen as suitable for females due to its classification as light work and cheap labour supply.¹¹

It is interesting to note that while Britain, USA and Japan had a workforce predominantly of female workers at the initial stages of the textile industry development, India had a significant lower female labour force. Since the expansion of the textile industry until independence, men represented the majority of the workforce in textile production.¹² Given the fact that over 75% of the workforce was employed in the agricultural sector at the beginning of the century, and only 10% was working in industries,¹³ a substantial part of the textile workforce came from rural regions. For that reason, migration to the textile centres at the beginning of the twentieth century was the product of a labour surplus in agriculture. And consequently played an important role in the development of the Indian textile industry.¹⁴

The activities performed by women in India were more susceptible to mechanization. Hence the functions initially performed by women were more likely to be lost and replaced by men operating machines and, consequently, with superior wages. Ultimately, men would move to higher paid activities in the industries, while women would remain in lower paid activities and had a higher risk of losing position in case of an economic crisis.¹⁵

Based on the observations above, this thesis will investigate the gender wage differences and the sexual division of labour in the textile industry through the first half of the twentieth century and answer the main question: **How did the gender wage gap develop from 1923 to 1944 in three major textile cities in western India?** The study will also answer a number of sub-questions

⁹ Kar, M. (2015). *The Textile and Clothing Industry of India: An Economic Analysis*. p 1-2.

¹⁰ Ibid. p 1-2.

¹¹ Hunter and Macnaughtan. (2010). *Gender and the global textile industry*, p 703-704.

¹² Ibid, p 705.

¹³ Gupta, B. (2011). *Wages, unions, and labour productivity: evidence from Indian cotton mills*, p 78.

¹⁴ Roy, T. (2010). *The long globalization and textile producers in India*, p 261.

¹⁵ Hunter and Macnaughtan. (2010). p 711-713.

which will ultimately support the response of the main question in a more comprehensively. These are: how the position of women in colonial India influenced their role in the textile industry, how the industry developed in colonial India, what are the differences between the three researched cities and, finally, how these differences affected the wages and the sexual division of labour in the factories.

Although there is an increasing literature work on the role of women in industrialisation and as part of economic development, the connection between these factors with the gender wage gap is still not widely compared, especially in non-western countries. Moreover, the research on textile wages during the colonial rule in India is often based on approximations and general averages.¹⁶ This research will add valuable new insight into the subject of the gender wage gap as it will thoroughly compare three cases in which we can assess how the wages of men and women have changed in the industry over time. Furthermore, this study builds on previous wage researches in India, by combining detailed data of textile mills and using three factors for comparison: changes over time, occupations and location. By doing so, we can gain valuable insights in larger scale structural issues like gender inequality, industrialization and economic development in colonial India.

An essential part of this research is the collection and analysis of primary sources, that will allow the comparisons over time, place and type of activity.¹⁷ These sources include official wages reports, census and enquiries by the Labour Committee of the textile mill industry that were published by the Labour Office Government of Bombay, containing information of the Bombay Presidency.

This study intends to do an in-depth comparative research on the wage gap of male and female textile workers. Three factors will be analysed in the process: time period (from 1923 to 1944), three cities in western India and job occupations. It was not possible to cover the entire first half of the century up until the independence, as availability of data is very restricted.¹⁸ This work will be focused in Bombay, Ahmedabad and Sholapur. These cities have many similarities between them, building an excellent case for comparison. They are all cities from the Bombay Presidency

¹⁶ See Allen (2007) and Mukherjee (1959).

¹⁷ The primary sources collected and the construction of the wage database are a part of the project “*Race to the Bottom? Family labour, household livelihood and consumption in the relocation of global cotton manufacturing*” from Prof. dr. Elise van Nederveen Meerkerk at Utrecht University, which I work as a student assistant.

¹⁸ In one of the reports of the Labour Government of India (“Wage Census Report Bombay (including Sind) 1911 – 1916”) there is some information on wages from 1911 and 1916. However, that information is very limited and would not be useful for the type of comparison we aim to do with this case study.

– therefore, under British rule –, and are historically known as major textile centres in the Presidency. This study is done by using samples from cotton mill production between 1923 to 1937. As for the year of 1944, the data used is from wool production, as information for the cotton industry was not accessible for this period. There was no report available from the interval between the years of 1937 to 1944. All departments within the textile production are incorporated in this study, from the carding room, spinning, spooling and warping, slashing and weaving.

The thesis will be divided into three chapters, organized as follows. The first chapter will investigate the gender wage gap and position of women as a recurrent issue through history, and present the context on the development of the textile industry in India. The second chapter will present the analysis of the data from 1923 to 1944 from the three cities. Finally, the third chapter will cover the explanatory factors that supports the previous analysis. Lastly, the concluding remarks are presented.

Chapter 1: The gender issue in industrial development

Before starting the analysis on the sources and wage differences in India, it is essential to understand the issues that arise from structural gender inequalities and what this represents in the context of industrial development in the country. In this chapter, I will cover the background of the study and research on gendered labour issues and the growth of the textile industry in India. In addition, I will present an outline on the position of women in colonial India, illustrating their place in society and economy. This will enable a better ground for analysis of the information and results we find in the next chapter.

The gender wage gap is defined as the “gap” between men’s and women’s earnings that indicates the difference between the average earnings in the workforce.¹⁹ This gap alone is not an indicator of the overall labour inequalities among men and women, but it demonstrates part of the differences among the genders. Many years ago, this debate was targeted on discussing the actual veracity of the wage gap. Today, the historical debate is focused on understanding the causes and roots of these variations, and not questioning its existence. Most scholars recognize the significant differences in the payment for men and women throughout the centuries. Various studies for the pre-industrial period show that women’s wages were in general of one to two-thirds of men’s wages.²⁰

This distinction between men and women’s wages is relatively new and have limited sources. Data of women were rarely shown in any official records or statistics during the eighteenth and nineteenth centuries, except in terms other than widow or spinster. More recent studies raised the importance of understanding this information as women’s work has appeared to be of great importance for the economic growth of the nations.²¹

In the industrialized western countries, and also Japan, the biggest proportion of the labour workforce in textile industries (mostly cotton mills) was of female workers. Moreover, female workers were also focused on proto-industrial activities and they were actually the part of the labour force that accounted the most in the new high-productivity industry.²² Curiously, India does not follow this pattern of women’s employment.

¹⁹ Gender pay gap in Europe: facts and figures. European Parliament News. 2020. Accessed 20 May, 2020. <<https://www.europarl.europa.eu/news/en/headlines/society/20200227STO73519/gender-pay-gap-in-europe-facts-and-figures-infographic>>

²⁰ Van Nederveen Meerkerk. (2010). Market Wage or Discrimination?, p 165.

²¹ Berg, M. (1993). What Difference Did Women’s Work Make to the Industrial Revolution?, p 22-23.

²² Ibid, p 26

In initial studies, the reasons for different wages among men and women would often be based in the neo-classical economic theory, where the wage rates are related only based on the supply and demand of the labour market. Therefore, the wages rates are equivalent to the product of the supply side in relation to the demand side. Another common explanation for the wage gap was the given responsibility of household and caring for the children as solely a woman's role and the biological factor of lesser body strength.²³

Gender historians allege that wage differentials are due to wage discrimination against women. Although the economic theory of free market was in place, in reality, women's remuneration was actually based on the social constructed notion of their capabilities at the workplace and not their productivity. As a result, men were usually qualified as "skilled" labour due to the training and experience process they were offered, whereas for women, the skills set was assumed as natural instead of an actual qualified labour training and experience process. Furthermore, as a historical path and concept, women were not the breadwinner of the household, making their work outside the family considered as supplementary and, consequently, a full competitive wage unnecessary. Ultimately, these factors summed up to a culture of underpayment of women, entirely on the basis of their alleged "subordinate" gender, having a structured system of women's work being undervalued compared with the work men performed.²⁴

There are conflicting views on the effects of industrialization and gender. Boserup (1970) claims that industrialization has affected negatively the gap in gender equality. This view is similar to Acemoglu's (2012) explanation on distinct effects of economic growth, mentioned earlier. On the other hand, Goldin (1995) illustrates that women's participation follows a U-shaped form. The female workforce declines at the first phase of development in the country, but then it improves at a later stage, followed by a decrease on the gender wage gap.

It is challenging to analyse the gender wage gap in a historical perspective, especially in India's case, since systematic evidence is limited and scarce. As many scholars also have pointed out, women's work has unfortunately been almost invisible in the past centuries.²⁵ All these aspects formed the base for a significant influence on women's and men's work, and consequently, on the remuneration they received.

²³ Van Nederveen Meerkerk. (2010), p 165-166.

²⁴ Ibid. p 166.

²⁵ Bradley, H. (2016). p 73

1.1 The development of textile industry in colonial India

Although the focus of this study is on the gender wage gap of textile workers, it is essential to present a brief summary of how this sector initially developed in India. This will provide further understanding of the labour market and wages at later dates.

The period of colonial British administration in India, also known as British Raj, lasted from 1858 to 1947.²⁶ Since the middle of the eighteenth century, Indian textiles were the most important commodity traded between Britain and India. During the colonial rule, agriculture and labour intensive industry and services were the main sources of work for the population.²⁷ The development of the industry in India during its colonial time was not that different from other countries in Europe that battle surplus labour in their proto-industries in the eighteenth century, nor East Asia in early twentieth.²⁸

The cotton textile industry was in steady decline from 1820 to 1860s, especially if compared to the previous dominance of Indian textiles in worldwide trades. The weakening of the textile industry was mainly due to a decreasing export market and the imports of yarn and cloth of mills from England, which took over the manual work done in India.²⁹ At the beginning of the twentieth century, this situation started to change. The relevance of the textile industry is seen also by its employment share of the population in the different sectors of the economy. Agriculture and allied occupations were the main share of work from 1901 to 1931, representing around 70%. On the other hand, regulated factories – such as textile mills -, represented a much smaller share of employment, in 1901 being 0.4% and in 1931, increasing to 1.2%.³⁰

The industrialization process in the colonial time can be separated into two main aspects: modern or largescale industry and traditional industry. The former englobes the industries that use machinery, have a regulation in place and modern practices of management, for example, cotton mills and jute industry. In the latter, these aspects are not significant to production, such as handloom textiles, leather manufacturing, pottery, among others. Nonetheless, both had extensive use of labour. In the colonial period, the largest sector of factory employment was the textile industry, mostly using mills for cotton and jute spinning and weaving, and also some firms in wool and silk.³¹

²⁶ Roy, T. (2002). *Economic History and Modern India: Redefining the Link*, p 109.

²⁷ *Ibid*, p 110-111.

²⁸ *Ibid*, p 120

²⁹ *Ibid*, p 112.

³⁰ *Ibid*, Table 1, p 113.

³¹ *Ibid*, p 117.

There was a significant rise in the share of industry in the national income, from 11,1% between 1900 to 1910, to 16,4% in 1940 to 1946. And within the modern industry, between 2 to 3% of the country's workers were employed in the industrial labour force in 1900 and over 10% in 1947, having a direct result in the share of the national income in modern industry, from 10 to 40% in the same period. ³²

Another important part of the industrial development of India during the colonial period was the open economy – which many scholars claim to have been greater in the colonial period than the eighteenth century and the decades after independence -, and the international investments. Yet, the rates of investments was surprisingly low, ranging from 2 to 4% of the national income and only half percent of that was invested in machinery. The extensive use of machinery was not seen as beneficial in the industry, either for domestic or international market in view of the high costs of capital and the lack of skilled labour. Machines were used mostly in industries where there was the processing of raw materials and the labour was imported. ³³ This mechanism indicates that the case for India was based on using labour more productively, instead of replacing with machinery. ³⁴

With the progressive intensification of market trades over the twentieth century, previous institutional forms were abolished and new forms of rationalized (as meaning, more efficient) labour were adopted in the factories. This led to a decline in labour usage, having deeper effects on functions that women operated in. ³⁵

There was also little space for private investments because of the slow development of the financial institutions in the country. Alongside, there was a feeling of uncertainty in the market, which only came to expand in the interwar period. ³⁶ Even though the interwar period of 1920 and 1930s was economically challenging for India, Britain and their commercial relations, it showed a growth in the market for the large scale industry, due to the limited tariff protection.

Until after World War I, the primary source of growth in the large scale industries was based on the input of capital and labour, which in turn, also increased productivity, whereas for the traditional industry, it was the contrary, declining in around 60%. Over the period of 1900 to 1947, there was a growth of almost 70% in real GDP. ³⁷

³² Ibid, p. 117

³³ Ibid, p 121

³⁴ Ibid, p 119-120

³⁵ Ibid, p 119

³⁶ Ibid, p 121.

³⁷ Ibid, p 125.

Table 1: Sources of Growth in Real GDP, 1900–1947 (percentage per year)

	Agriculture	Non-agricultural*
Growth	0,44	1,69
Labour	0,33	0,31
Capital	0,08	0,90
Productivity	0,03	0,57
Productivity/growth (%)	7	34

Source: Roy, p 125

* Includes: modern industry, traditional industry and services.

Two products resulting of the more open trade and commercialization during the colonial period can be observed: the handicraft manual textile type of works was devastated by the free market competition, due to its low productivity levels; but at the same time, it became an increasing point of domestic trade. Therefore, the traditional industry proved to be incompatible with the conditions of the free market, giving that there was a high division of labour.³⁸

The economic underachieving levels of India was identified with its low position of mechanized industry. During the colonial period, economic growth was seen as a result of labour intensive methods, mainly in the textile industries, and investments of low risks, implying that the country had a surplus of unskilled labourers in activities that present high risks.³⁹

Despite the textile industries represent a large part of India's industrialization, the benefits of modern industry were not replicated in other sectors. Even though there was a relative great development of the industrial sector in the country, the first half of the twentieth century was still predominantly agricultural. These unmatching growth levels have caused greater inequalities in the labour market in the country.

1.2 Women's Position in Colonial India and as part of the Textile Sector

In this section, we will examine the role of women in Indian society and as part of the economic development of the textile industry. This examination will provide a solid ground for understanding the sexual division of labour in the upcoming sections.

The discussion on women as part of the labour force in India raised a lot of debates between scholars at the beginning of the twentieth century.⁴⁰ There was little material and interest to start studying the role of Indian women outside the household. One of the very first records of women's

³⁸ Ibid. p 126.

³⁹ Ibid. p 122, 124-125.

⁴⁰ Banerjee. (2010). Debates on domesticity and the position of women in late colonial India. p 459-460.

work in the industrial sector in India was written by Janet Harvey Kelman in 1818, narrating the introduction of British women into factories in Bengal to show the “factory ways of work”.

For Sen (2008), the study of Indian labour historiography completely overlooked the study of gender and women. The main assumption was that the low levels of women’s employment in the industrial sector have made them irrelevant to the labour class movement. Her critique is that the gender issue was not given proper consideration into the debate of growth and development of the industrial working class.⁴¹

In the initial phase of industrialization on textile mills at the beginning of the twentieth century, a large proportion of women and children were employed in the factories, accounting for about a fourth of the total textile factory labour. And these were mostly concentrated on the west, particularly in Bombay and Ahmedabad.⁴² Women constituted a high proportion of the workforce in the cotton textile industry between 1919 and 1939, reaching 22,9% in 1926. From 1929 onwards there was a steady decline in their number, reaching 14,9% in 1939.⁴³

Boserup (1970) in her influential work of female roles’ in economic development, says that in 1927 Indian women occupied 17% of the labour force in the factories, and of those, only 6% were in the textile factories.⁴⁴ Morris (1965) goes in the same line and states that women were up to 25% of the workforce in textile factories at their peak, but declined over time to 11% in 1947.⁴⁵

The table below shows that, at the beginning of the century, women formed about one third of the workforce of the Indian economy. However, by the 1950s, this number retracted greatly, especially in the industrial sector.

Table 2: Distribution of Women Workers, 1911 to 1951

Year	Agriculture	Industry	Service	Total	Female workers as % of total female force	Female workers as % of total labour
1911	30,898	6,137	4,767	41,802	33,73%	34,44%
1921	30,279	5,409	4,407	40,095	33,73%	34,02%
1931	27,177	5,147	5,276	37,600	27,63%	31,17%
1951	31,062	4,554	4,923	40,539	23,30%	28,98%

Source: Savara, 1986, p 1.

⁴¹ Sen, S. (2008). Gender and Class: Women in Indian Industry, 1890–1990. p 75.

⁴² Ratnam, C.S & Jain, H. (2002). Women in Trade Union in India, p 280.

⁴³ Kumar, P.(1983). Family and Factory, p 81.

⁴⁴ Boserup, E. (1970). Women’s role in economic development, p 112.

⁴⁵ Morris, D. (1965). The emergence of an industrial labor force in India, p 217-218.

The decrease in women's employment is due to cultural factors mainly. Most women had to combine their work at the textile mills together with the household functions. And this was much harder to maintain if they had to migrate to urban areas, go through a long commute or a full-time occupation.⁴⁶

Since women's work was defined as supplementary, Kumar (1983) suggests that the intention behind the decline on female workers was to reinforce that the primary role of women in India, that was to "reproduce labour power". Which is why from the 1920s, there was a continuous decline in the number of women employed in paid occupations.⁴⁷

Another important point on the perception of value and position of Indian women in society was the influence of British ideals. It was emphasized the role of British imperialists who built their colonial institutions by claiming a superior moral status, and the process of domesticity under the different caste, class, gender, race and ethnicity.⁴⁸ In the nineteenth century, with the rise of liberal ideologies, part of the Indian society started attacking the conditions of women and common practices and customs, such as polygamy, and self-immolation (known as *sati*), claiming the superiority of the British identity. As a response to the new ideals and the gendered/religious structure of the Indian society, it became ever more difficult for women to secure paid employment as competition grew within a section of society.⁴⁹ Consequently, the issue of women in colonized India became one of the most burning questions in the late nineteenth century. However, not on what they wanted, but on how they should be modernized to fit the new liberal ideals.

A growing interest from Britain on the regulation of factory conditions in India grew after reformists and philanthropists came to see the reality in which women and children were in. Yet, this interest was contradictory. The main concern when making the legislation was on the women's capacity of work, not the conditions they were exposed to, such as hours of work, periods of rest, prohibition of night work and handle of machinery.⁵⁰

The development of political and societal institutions in India was deeply rooted in the emerging results of the political and economic situation at the time, which the domesticity of

⁴⁶ Roy. (2002), p 127.

⁴⁷ Kumar. (183). p 90.

⁴⁸ Banerjee. (2010). p 466-467.

⁴⁹ Ibid, p 460, "In Maharashtra, a series of reform efforts were initiated throughout the nineteenth century—widow-burning was abolished (1829), widow remarriage legalized (1856), and intercourse with wives below twelve years of age prohibited (1891)".

⁵⁰ Sen. (2008). p 76-78. "These laws were for workers who were 'special' because they were women. And they were special in three ways: first, they also had to perform their reproductive roles as wives and mothers; second, their physical weakness limited the kind of work suitable for them; and third, they were unable to uphold their own interests and thus needed the 'protection' of the state.", p 78.

women became connected and incorporated by gender, caste and social class.⁵¹ As Banerjee (2010) claims, much of the British rule in colonial India had the consequence of emphasizing the core of family roles between man, woman and children.⁵² For the author, the discussion on the societal and political roles of the society in India was influenced by the colonial oppression at the time, which constructed a hierarchical division on class and gender as well as between the urban middle class and the popular masses. These new ideals on domesticity and women's position were shaped alongside the liberal western philosophy and ideology that puts women in a subordinated condition, forming a social and cultural identity between women across India.

The crisis that emerged together with the new liberal colonial ideals, generated threats and worries in the more conservative part of the Indian society since the position of women and their moral behaviour were put at stake when traditional values of family and household care started to lose priority.

The newly developed awareness of women's conditions made a stronger will to organize together and claim for equality, mainly in Maharashtra, covering Bombay and Sholapur. Nonetheless, this movement was not against a domestic life, but instead to a patriarchal dominance.⁵³

This section illustrates the patriarchal culture in colonial India. On the one side, there was the initiative of "adapting" Indian women into the western culture. On the other side, there was an increasing societal demand for women to assume the role of responsible for the household and children.

In this chapter, it was argued that the gender wage gap has been embedded in society since the pre industrial period and it remains largely an unexplained inequality. In the case of India, the patriarchal system deepens these inequalities. These factors had a direct influence in the way women were seen in the Indian society and how they participated in the economic growth and the development of the textile industry in the country.

⁵¹ Banerjee. (2010). p 456.

⁵² Ibid, p 459 "The colonial scene in urban India emphasized the relationship among man, woman, and child as a unit and stressed the role of the family as a haven from the oppression of an outside world dominated by foreign rule".

⁵³ Ibid, p 461-462.

Chapter 2: Analysis of the primary sources and Results

In this chapter, the wage data will be analysed. I begin by examining the primary sources collected for this study, their limitations and definition of the scope for the study. Also, I will cover the methodology used to work properly with the data collected and the restrictions they present. Then, I provide an analysis of the wages of male and female workers, taking into consideration the different occupations, cities and years covered by this study.

2.1 Scope of sample

As mentioned in the introduction, all the information regarding wage rates and other specific details of the workers was taken from official reports, enquiries and census. For cotton goods, the reports are from the Labour Office Government of Bombay Presidency, and for wool, from the Labour Investigation Committee Government of India. These reports were obtained from the archives at the British Library in London.⁵⁴ The data presented here is referent to six books: Report on an Enquiry Into Conditions of Labour in the Woollen Industry in India; Report on an Enquiry into the Wages and Hours of Labour in the Cotton Mill Industry, years 1925 and 1926; Report of the Textile Labour Inquiry Committee 1937-1938 (Volume I – Interim Report), General Wage Census (Part 1 – Third Report) and Wages and Unemployment in the Bombay Cotton Textile Industry (Report of the Departmental Enquiry).

These reports incorporate various aspects and divisions of the textile industry, including the reasoning for the assessment, the work legislation such as wage rates, bonus, allowances, conditions of work, recruitment of labour, number of mills, among others. For the purpose of this study, I have focused mainly on the information on wage rates and the number of workers. The wages are shown on a daily basis and they are nominal wages (I have not taken into account inflation to correspond to present day values).

These documents have data from the whole Bombay Presidency, which incorporates many cities, however, I will work only with the three cities already mentioned, mainly for two reasons: those are the cities with the highest number of mills and employees during the first half of the twentieth century in Bombay Presidency. Consequently, the other cities and districts correspond

⁵⁴ As already mentioned, the data and sources are a part of the project “*Race to the Bottom?*” from Prof. dr. Elise van Nederveen Meerkerk, which I work as a student assistant.

to a very low percentage of the total workforce and production of the Presidency. Therefore, they are representative of the major centres of textile production in the western region of British India.

The analysis was made using information on adult workers only, even though some of the books have information on wages for children and big lads. Still, the total number of children working and the available information is very restricted.⁵⁵

In total, I have registered 2,212 different inputs containing the year, location, type of textile, occupation, wage, type of payment (time or piece), gender and number of workers. There is information of approximately 180 different job occupations performed in the various processes of the textile industry.

2.2 Methodology

As this case study has multiple variables and a large amount of information, I have combined different methods to analyse the data, mainly using causal narrative and pattern matching.⁵⁶ Firstly, with all the information collected, we are able to begin a narrative that explores what might have caused the differences in wages between men and women throughout the years. Secondly, using pattern matching we can verify if the case study follows the predictions of a theory. And finally, a considerable part of the analysis is the comparison between the three cities. Even though all cities are from the western region of India, we can notice differences and similarities between them in the textile industry.

In the figure below, we see the location of the three cities under the scope.

⁵⁵ In the six reports assessed, there was a total of 25,102 children working.

⁵⁶ Lange, M. (2012). *Comparative Historical Methods*, p 43; 53.

Figure 1: Map of Western India, Bombay Presidency



Source: Haynes, D. (2012). Small town capitalism in western India, p 22.

To calculate the average wages of male and female workers, we can use two different approaches. The first is a simple division of female earnings by male earnings, as it is largely used in the current literature. However, this formula does not take into account the number of workers in each occupation, which can show misleading interpretations of the average wages sometimes. As we know there is a gender division of work, often we find a much higher number of women performing an activity than men, or *vice versa*, and the number of workers helps to make a more authentic calculation. In a tentative to bring more accurate results, I have calculated the weighted wage averages when the data is available – and when not, it will be the simple calculation of female wage divided by male wage. The weighted average is represented as below:

wa = weighted average

F = female wage

Nf = number of female workers

M = male wage

Nm = number of male workers

$$wa = \frac{F * Nf + M * Nm}{Nf + Nm}$$

In addition, to obtain the actual gap between males and females workers, another step is necessary. To achieve the proportion of the difference between the wages I simply dividing the average female wage by the average male wage.

The data in the reports are not standardized nor maintain a frequency over the reporting period. This required making two assumptions in order to work with the information. The first was the equalization of hours of work per day. Most of the literature on gender wage gap considers the basis for calculation on an hourly basis because it gives better indication on the gap as it controls the factor of hours worked.⁵⁷ However, in the official reports, most of the wages were presented by the daily average and, sometimes the monthly average, but no specific information for the hours of work per day.⁵⁸ The second assumption was the number of workers. The report of 1926 was the only book where information on the number of workers was missing for some of the occupations performed. For this reason, I used the single imputation mean substitution technique⁵⁹ where the average of the number of workers that is available it is also applicable and representative to the number of workers that was missing. For the purpose of ensuring a data as accurate as possible, I have also calculated the wage of 1926 using normal average. Since these calculations do not differ much, I have used the results from the mean substitution technique.

⁵⁷ See Arulampalam, Wiji, Alison L. Booth, and Mark L. Bryan. (2007) Is There a Glass Ceiling over Europe?; Doris Weichselbaumer and Rudolf Winter-Ebmer. (2005). A Meta-Analysis of the International Gender Wage Gap; Leythinne, D. & Ronkowski, P. (2018). A decomposition of the unadjusted gender pay gap using structure of earnings survey data.

⁵⁸ The "Report on an Enquiry into the Wages and Hours of Labour in the Cotton Mill Industry of 1925" had the average days of work per month, but no specification of hours worked per day. Some reports indicates the range of work hours per day within the main groups of occupations.

⁵⁹ See Musil, C. M., Warner, C. B., Yobas, P. K., & Jones, S. L. (2002) "Mean substitution involves substituting the overall sample mean of a variable for each missing observation of that particular variable", p 818.

Finally, the information available from the year of 1934 is actually part of the report of 1937, where the Labour Committee did general comparisons on the wage increase/decrease from 1934 to 1937, from some specific occupations. Therefore, this data will be used only in the general results section.

As for the currency used, the Indian rupee during the colonial period was divided into smaller fractions, namely anna and pies.⁶⁰ The wages in the reports are presented with these three fractions. In order to make the wage calculations easier to work with, I have converted the total wage value (initially rupees-anna-pies) into rupees only. I have chosen to work with the daily averages instead of transforming into an hourly average, as I do not have clear information on the number of hours worked in each occupation and year.

2.3 Analysis of wages

2.3.1 General results

Based on the data collected, and applying the methodology mentioned above, in this section I will first present an overview of the main results through the period of 1923 to 1944. This will provide a leading perspective into the bigger picture of the wages and the gender gap in the textile industry. In the following section, I will present the average wages and gap based on the occupations that are performed by both males and females workers. With these data, we can respond: Does the gender wage gap occurs randomly in all occupations or are there specific occupations that might cause this gap. If so, what are the most divergent ones? Do we see a pattern over the years? Are there differences between the three cities?

In the table and graph below, we show the average wages for male and female workers in each year, as well as the wage gap, from all cities and occupations.

⁶⁰ Habib, I. (2006). *Indian Economy 1858-1914*, note 1.2: Units of Currency, Weights and Measures used under British Rule. p 18 “The rupee was equal to 16 annas, which were originally fractional silver coins. Each anna was equal to 12 pies, each pie being a very small copper coin but tending to be a mere money of account. The actual copper used was the ‘pice’ (paise), equal to a quarter anna; but this was not used in official accounts. The English sterling money, to which the rupee was ultimately pegged, was based on the pound, equal to 20 shillings, each shilling being equal to 12 pence.”

Graph 1: Average wages (male and female) and gender wage gap, all occupations and cities, 1923-1944

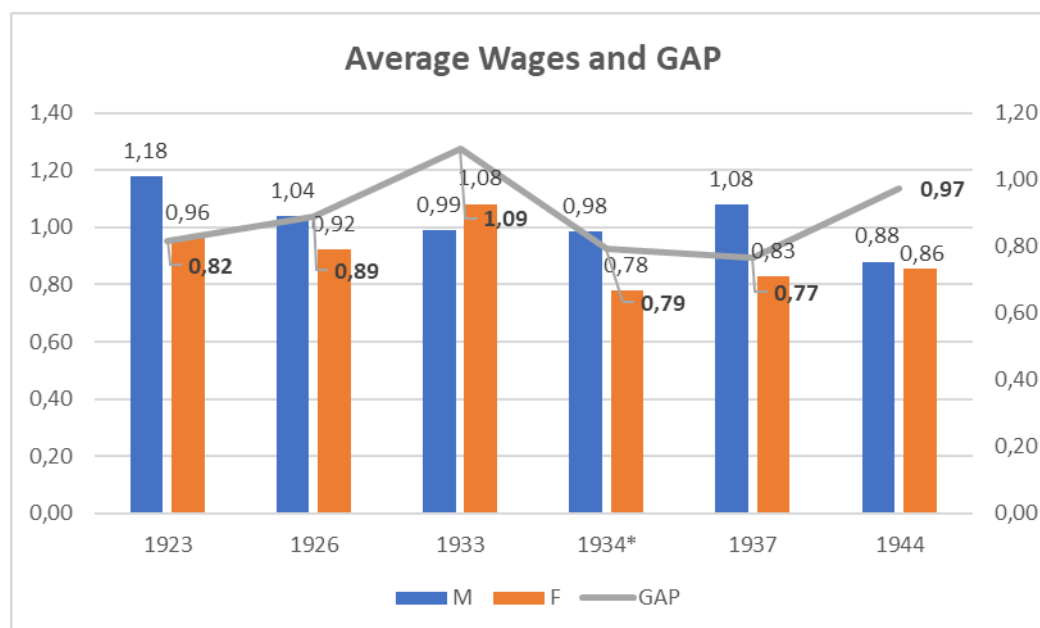


Table 3: Average gender wage gap from 1923 to 1944 (all cities and occupations)

YEAR	AVERAGE WAGES (in rupees)		GAP
	MALE	FEMALE	
1923 (a)	1,18	0,96	0,82
1926 (b)	1,04	0,92	0,89
1933 (c)	0,99	1,08	1,09
1934 (d)	0,98	0,78	0,79
1937 (e)	1,08	0,83	0,77
1944 (f)	0,88	0,86	0,97

Source: (a) Report on an Enquiry into the Wages and Hours of Labour in the Cotton Mill Industry, 1925; (b) Report on an Enquiry into the Wages and Hours of Labour in the Cotton Mill Industry, 1926; (c) Wages and Unemployment in the Bombay Cotton Textile Industry (Report of the Departmental Enquiry) & General Wage Census (Part 1 – Third Report); (d) Report of the Textile Labour Inquiry Committee 1937-1938 (Volume I – Interim Report); (e) Report of the Textile Labour Inquiry Committee 1937-1938 (Volume I – Interim Report); (f) Report on an Enquiry Into Conditions of Labour in the Woollen Industry in India.

We observe from the graph and table that, in general, the wages for male workers are higher than female workers throughout all years, taking into account all cities and occupations. The exception is the year of 1933. In this year, the numbers show that the proportion of female workers with an average wage somewhat higher than 1 rupee is to some degree higher than male workers. This happened due to the much greater proportion of male workers earning a little less than 1 rupee. This difference is actually minimum given that female workers represented only 16% of the total workforce in that year. The year of 1944 is also interesting since the average wages and, therefore, the wage gap among female and male workers is very small. This shows that the wool industry, in general, did not have such a difference in wages among men and women labourers when compared to cotton textiles.

All in all, even though there is a clear wage difference for male and female workers, the gender wage gap does not represent a colossal difference in most years.

The wage gap fluctuates randomly over the years, which indicates that all cities and the majority of occupations present the same general trend. We will investigate in further details the differences between male and female average wages and the gap over the years in the next section.

It is essential to monitor the number of female and male workers through the years and occupations since this factor can take a substantial weight in the average earnings and gender wage gap. From the period of this case study, it was reported 126,669 female workers and 567,060 male workers working in all the occupations reported.

Table 4: Number of employees in the textile industry

YEAR	Male	Female	% male	% female
1923	160,672	41,464	79,49%	20,51%
1926	14,176	7,768	64,60%	35,40%
1933	235,412	44,906	83,98%	16,02%
1934	0	0	0	0
1937	154,743	32,273	82,74%	17,26%
1944	2,057	258	88,86%	11,14%
TOTAL	567,060	126,669		

*There is no available information of the number of workers for 1934.

This data shows what the literature of Sen (2008), Kumar (1983) and other scholars of Indian textile workforce already stated. The number of male workers in the textile industry in India is much higher than female workers, going in the opposite direction of countries like Japan, Britain and USA.

2.3.2 Specific results

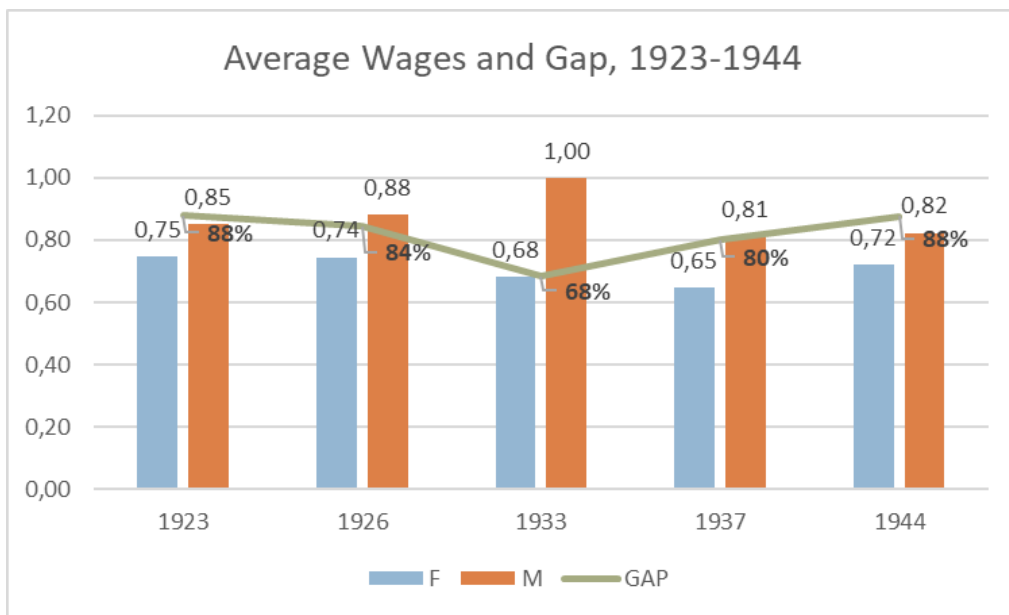
With the above overview on the textile industry, covering all occupations and cities, we can start looking more closely into specific occupations in each year, to better understand the market segregation between the genders. In total there are 12 occupations that men and women perform. These are: cheese winders, colour winders, grey winders, grey and colour winders, pirn winders, drum winders, reelers, doffers, gaiters, tarwallas or followers, side siders (single and double) and drawing tenters. Not all these occupations are frequent in all years and cities, but they are representative of the period of this study.⁶¹

This means that just over 6% of all occupations performed in the whole textile industry, were done by both men and women. It shows that female workers occupied a marginal share of the textile workforce in colonial India, but they were in high demand for the low-paid occupations.

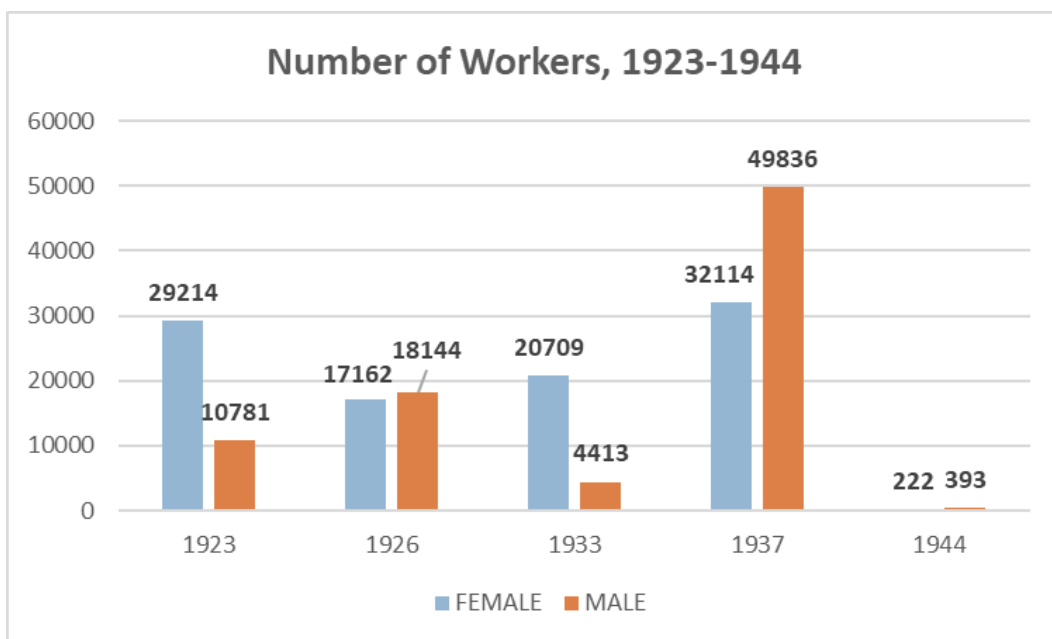
In the graphs below, we have the average wages of male and female workers and the wage gap in the specific occupations mentioned above, and the graph with the number of workers for these occupations.

⁶¹ For yearly detailed information on the selected occupations performed by men and women in all cities, see appendix.

Graph 2: Average wages and gap in the textile industry in specific occupations, all cities



Graph 3: Number of employees in the textile industry in specific occupations

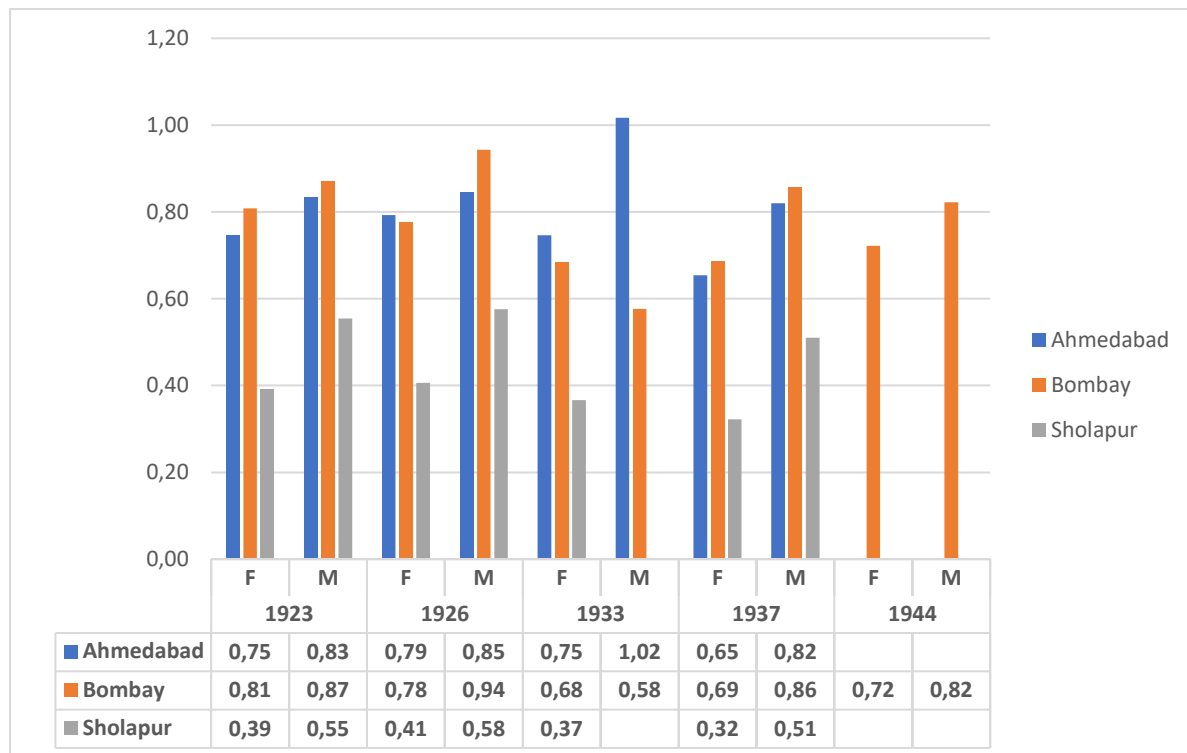


The first graph shows the trend we have seen above: average male wages are higher than female wages. This means that female workers earn less even in the limited group of occupations they are inserted. The second graph shows evidence that the female workers were in high demand to perform the specific occupations mentioned above. Even though men represented the larger constitution of labourers in the whole textile industry, women were much more in demand to perform functions of certain occupations. Furthermore, within these occupations, they were paid less. Hence, the graphs presented so far illustrates the preference

for male workers in the textile factories but also the high demand for female labourers in the low paid functions.

Another important point to observe is the differences in wages between the three cities of the western region. In the graph below, we can observe the average wages of male and female labourers for the specific occupations in each year and city.

Graph 4: Average wages (male and female), in each city, by year.



In all years analysed, Sholapur presents average wages 45% lower than those in Bombay and Ahmedabad. Furthermore, the wage gap between male and female workers in that city is also more pronounced. In Bombay and Ahmedabad, the gender wage gap is generally smaller, as female labourers earnings vary from 75 to 93% of the average male earning. Whereas in Sholapur, this gap increases. Female workers earn between 60 to 70% of male workers.

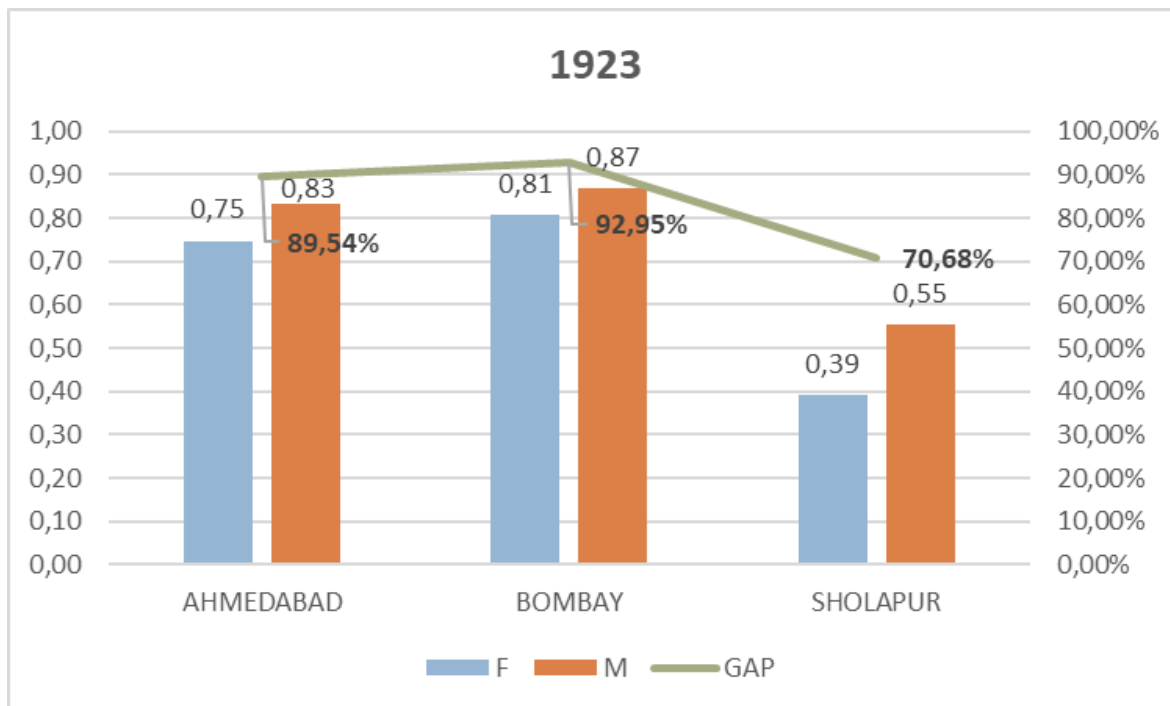
Graph 4 shows an important feature of the comparison in this study. Female workers in Ahmedabad and Bombay actually earned more than male workers in Sholapur, in all years of the study. Male workers in Sholapur were receiving only about 70% of the average female worker in the other two cities. Although gender is an essential aspect and it is observed in all

years and in most occupations, by taking a broader general view, the location plays an important factor for wage differences.

The outlier here is in 1933 for Bombay. Female labourers earn 0,1 rupee more than male. This is explained by the larger number of female workers (over 12,000) and only 172 male workers.

Looking closely into each city and year we can present more comprehensive results of the different earning proportions on the specific occupations. Although all information collected is important, I will not individually present and analyse all results. I will display the results where the differences in average wages and, therefore, wage gap are higher.

Graph 5: Average wages in 1923 for specific occupations in Bombay, Ahmedabad and Sholapur



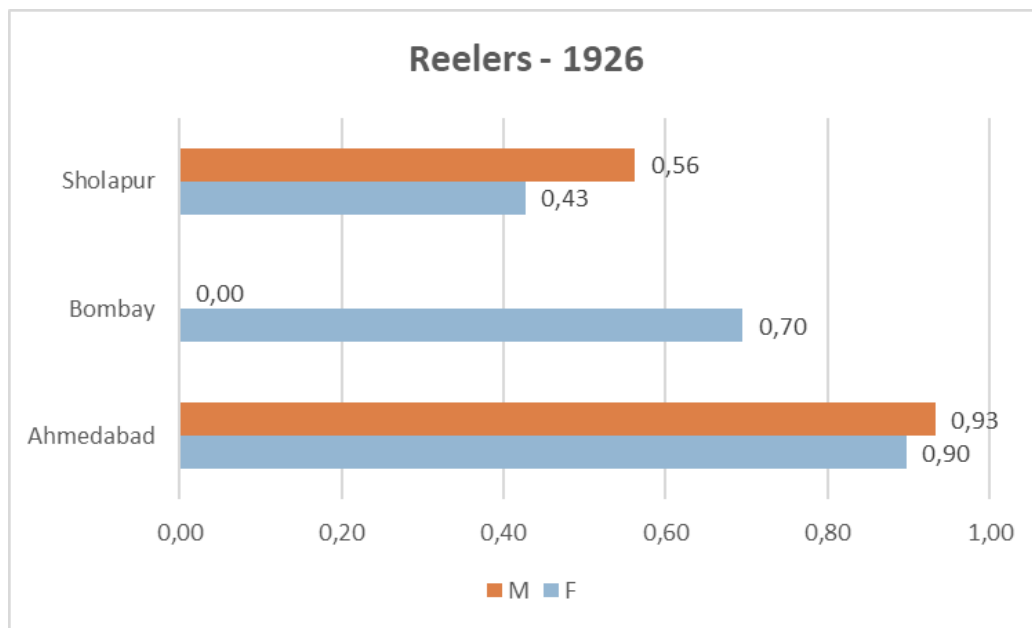
The table above shows that in 1923 the average wages in all cities follow the general trend of higher earnings for male workers. In Ahmedabad, the average wages of male and females are lower if compared to Bombay and, therefore, the gap is higher. In Sholapur, this difference is more substantial: female workers receive 0,16 rupee less than the average male wage, or 70% of the average male wage. Again, the wages of male labourers in Sholapur represent a bigger difference between female labourers in Bombay and Ahmedabad than with female labourers in Sholapur.

Going in more details at the 1923 data, we observe that in Ahmedabad one of the biggest gap is among workers of cheese and drum winders. While female cheese workers received 0,79 rupee on average, men earned 0,99 rupee a day. Women working as drum winders received 0,27 rupee less than male workers. In the case of Bombay, it was the female workers of colour winders and coolies who earned less than their male counterparts. As for colour winders, women were paid 0,37 rupee less than the average male and female coolies, 0,31 rupee. For Sholapur, only three occupations were comparable between male and female workers: pirn winders, reelers and tarwallas. In all of these, women receive less than the average but the wage gap for reelers is outstanding. That is explained because there are over 2,000 women working in this activity, while only 1 man is registered performing this work in Sholapur in 1923.

Moving to the next reporting data of 1926, the general trend on the different cities maintains. All cities show a wage gap between male and female workers, but for Sholapur the gender wage gap is more pronounced. In general, female workers received only 71% of what is paid to male workers.

For the year of 1926 in Ahmedabad we found that the “winders” occupations – colour, grey and pirn -, follow the previous trend. Women receive between 0,11 to 0,13 rupee less than their male counterparts. In Bombay, colour and pirn winders are the activities with the highest wage gap among workers, with female workers earning only 74% and 81% respectively of the average male wage. Finally, in Sholapur, there were no registers for men performing winding activities. However, the occupation with the highest wage gap was reelers, with women earning 77% of males wage.

Graph 6: Average wages in 1926 for reelers in Bombay, Ahmedabad and Sholapur

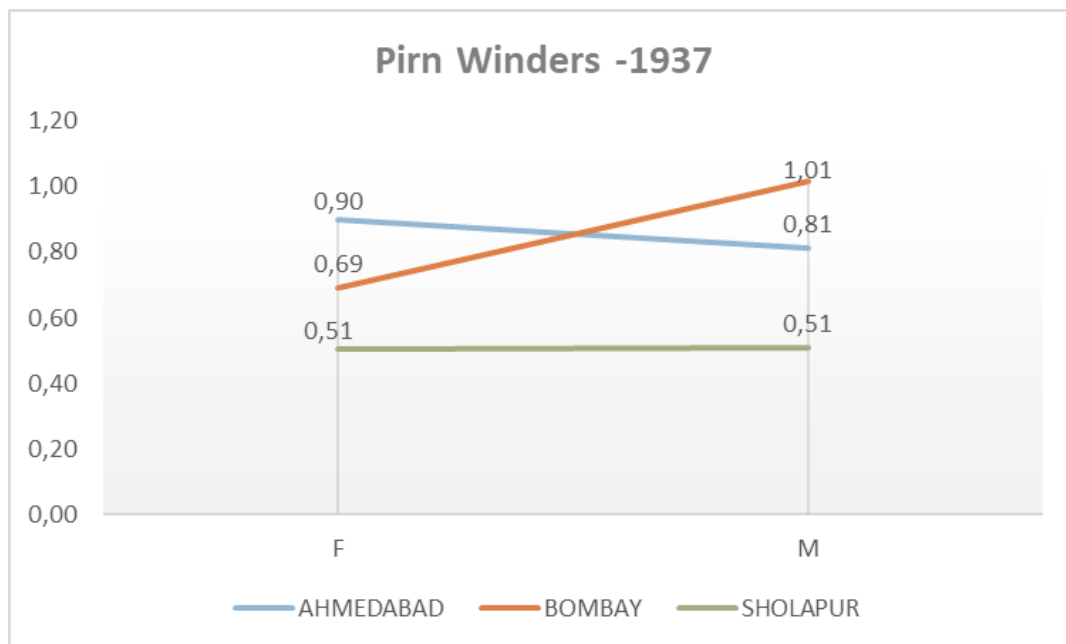


Once more the location factor weights more. It is observed that male reelers in Sholapur are paid 30% less than the average female reelers in Bombay and Ahmedabad.

When looking at the figures of 1933, the city of Sholapur was a challenge since there were few occupations to compare female and male wages. For Ahmedabad and Bombay, we notice a difference in the reporting standard. The mills were divided by wards (from A to H) and the suburban area of the cities was also included in the report. In Ahmedabad, male grey winders earned between 5 to 10% more than the average of workers and male reelers, around 30% more. In Bombay, this difference was much smaller for grey winders: men earned virtually the same wage as female grey winders, as for reelers, in Bombay female actually earned around 20% more than the average for all reelers.

In the report of 1937, the wage gap when compared between the cities remains in the same line as the previous years, with Sholapur having the biggest gap between male and female workers.

Graph 7: Average wages in 1937 for pirn winders in Bombay, Ahmedabad and Sholapur



In Ahmedabad, we notice that among the “winding” occupations, it maintains the tendency of higher wages for men. Female colour winders earn 92% of the average male wage and grey winders receive 82%. In the case of pirn winders, male workers were earning less than female labourers, by 10%. In Bombay, the situation repeats. Colour and grey female winders are paid 86% of the daily wage of male workers, and for pirn winders, this number drops to 68%. For Sholapur, the wage of pirn winders remains the same male and female workers.

A different situation is detected for the year of 1944. In this year, the registers are for occupations and wages in the wool industry for Bombay city only. Even though this is a different textile from the previous years, some of the activities done are the same for cotton and wool. Interestingly, precisely in those occupations, the wages of women are higher than the average. Female reelers and winders in the wool industry earn 1,37% and 12,86% respectively more than the average wages of all workers in those occupations. On the other hand, folders and menders are the occupations where male workers earn between 25 to 30% more than female workers. Nonetheless, looking at all occupations performed, there is still a wage gap between male and female workers. Women are paid about 88% of the male earnings.

The results of this chapter show four important points. First, women formed a very small percentage of the workforce in the Indian textile industry in the first half of the twentieth century. Second, the market was immensely segregated and women participated in less than

10% of the activities in the industry. Third, the occupations such as winders (grey, colour, cheese, pirn and drum) and reelers are the ones with the highest wage gap between male and female workers. This illustrates that women were inserted in the unskilled, low-paid occupations. Furthermore, they were still paid below the average male workers. And lastly, besides the evident gender factor, the location has an important influence on the wages. In Sholapur, the average wages were 45% less than the wages in Bombay and Ahmedabad. Moreover, male workers in Sholapur were paid less than female workers in the two other cities. Some other activities like doffers, siders (single or double) and tarwallas show an important gap on earnings, however, because these were not widely comparable over all periods, it is not possible to develop a more substantial conclusion.

In the next chapter, we will examine the possible reasons for the differences between the cities and why winders and reelers are the lowest paid occupations in the textile factories.

Chapter 3: Two regimes in three cities

In this chapter, I will investigate the causes for the different wage gap among the three cities and the reasoning behind the segregation in occupations for male and female labour. For the latter, we will investigate how the division of labour in Indian society had an effect on the occupations performed by men and women in the textile industry. In the former, how each city develops as a centre of textile industry. As observed in the previous chapter, the gender wage gap is recurrent throughout the entire period studied. But location and occupation have a strong influence on the determination of the gap.

From the previous chapter, we can observe that the three western cities had some general trends and patterns. As a whole, the average earnings of male workers were higher than female workers – even in occupations that were predominantly female, like winding and reeling. However, Sholapur stands out due to the substantial wage gap between men and women, also if compared to the average wages in Bombay and Ahmedabad. Moreover, male workers in Sholapur earn less than female workers in Bombay and Ahmedabad.

In order to better understand the differences among these cities, I will look at their industrial development, that forms the underlying structure for the distinct outcomes found. As already outlined in chapter 1, the textile industry in India had a declining phase between 1820s to the late 1850s. But from the twentieth century on, the industry had a continuous development.

With the aim of understanding the differences between the three cities in the western region of the country, I will work with the number of mills as an indicator of the development and growth rates of the textile industry. In the table below, we see the number of textile mills in each of the cities.

Table 5: Number of cotton mills in each city

City/Year	Cotton Mills						Wool Mills
	1919	1921*	1923*	1927	1932	1937	1944
Bombay	85	83	79	83	81	69	4
Ahmedabad	51	64	69	66	78	81	-
Sholapur	-	6	6	-	5	5	-

Source: Report of the Textile Labour Inquiry Committee 1937-1938 (Volume I – Interim Report), p 19 and 57;

*Report on an Enquiry into Conditions of Labour in the woollen industry in India - 1925, p 2 and 14.

The table above illustrates the progress and decline of the industry in the three cities of western India. The official reports used for this study presents these three cities as the major textile centres of the Bombay Presidency. Moreover, by the 1930s Sholapur was in fact the third largest centre of factory production in the Bombay Presidency.⁶² Interestingly, it is immediately noticed the quantitative difference between them. While Bombay and Ahmedabad have between 60 to 80 mills in average during the first half of the twentieth century, Sholapur did not exceed 6 mills, accounting for less than one-tenth of the other textile centres. This indicates that although they were referred to as the major textile centres, they operated in very different proportions.

These numbers also reveal the striking feature of a shift in the centre of the textile industry in India. At the beginning of the century, Bombay city had an outstanding number of mills compared to Ahmedabad. However, in the 1930s, this began to change, with Ahmedabad surpassing Bombay in number of mills. This is apparent not only in the amount of mills each city has but also the capacity of production and labour force they have.

With the growth of factories, the number of workers also grew. Aside from the workers with permanent contracts that were already from the mill cities, surroundings or migrated with their families to these towns, there were other sources of labour.⁶³ India's textile industry depended on seasonal workers, that were usually coming from rural areas. These workers were, in majority, male adults that migrated from poor rural areas to the western region of the country.

⁶² Haynes, D. (2012). p 69.

⁶³ See more Mazumdar (1983) and Breman (2004).

They would usually return home to their villages when the season was over – to help the family on the farm or because the living costs in the urban area was too high.⁶⁴

The so called *jobbers* had an important function within the cotton mills. They would recruit workers in the villages nearby the factories and another part would gather in front of the mill gates’ to try temporary employment. These are called *badli* labourers, who served mainly as temporary substitute labour.⁶⁵ Since it was a newly industrialized area, the greater part of the labourers had a low level of skill formation.⁶⁶

Table 6: Number of workers (male and female) in selected occupations, by city, per year

Row Labels	Ahmedabad	Bombay	Sholapur	Grand Total
1923	4560	31285	4150	39995
F	3443	22076	3695	29214
M	1117	9209	455	10781
1926	11386	20850	3070	35306
F	5380	10107	1675	17162
M	6005	10743	1395	18144
1933	11233	12440	1449	25122
F	6992	12268	1449	20709
M	4241	172		4413
1937	39692	36069	6189	81950
F	13753	16223	2138	32114
M	25939	19846	4051	49836
1944		615		615
F		222		222
M		393		393
Grand Total	66871	101259	14858	182988

As observed in the table above and already expected from the higher number of mills, Bombay had a much bigger workforce than the other cities. Sholapur presents a smaller proportion of the workforce, forming only 8% of the total number of workers during the period of this study. Another interesting feature is the number of female labourers. This number is generally higher than male labourers in the years of 1923 to 1933. But in 1937 this changes. In all cities the number of male workers becomes much higher. This can be explained by the rationalization measures that will be discussed in the next section.

⁶⁴ Mazumdar. (1973). p 487.

⁶⁵ Breman. (2004). p 18-19.

⁶⁶ Mazumdar. (1973). p 481.

From the numbers of table 6, we observe that Bombay had the largest number of female workers, in comparison with Ahmedabad and Sholapur. Two reasons apply for that: first, Bombay had the highest number of mills throughout the period studied. This implies that the production volume is also larger and therefore, depended on more workers – women forming the less skilled and low paid occupations. In second place, the influence of cultural reasons. There was little Muslim influence in this region, thus a more liberal ideology as women had more freedom to work and there was less sexual segregation in society.⁶⁷

Both Bombay and Ahmedabad present a similar pattern of industrial development and workforce. Sholapur, on the other hand, did not develop in the same speed or number even though it relied mainly in the economy of the cotton textile industry.⁶⁸ Since the industry did not develop, it shows that there was very limited investments in the area. These aspects and the results shown here illustrates that industrialization – more specifically, the unequal levels of industrialization -, has worsened the gender gap. The reasons for the stagnant development in Sholapur is beyond the scope of this thesis and should be further researched, but it indicates that in the three cities of this study there were two regimes in place.

3.1 Gender division of labour in the textile industry in India

In this section, I will examine the differences in employment in occupations for male and female labourers in the textile industry. Unlike other countries where the textile industry is predominantly female, we noticed from chapter 2 that the market is extremely segregated in India and women account for only a small part of the activities and workforce. Moreover, the wages among the occupations analysed in chapter 2 follows the same pattern in all three cities, indicating that this was a systematic trend in all western India.

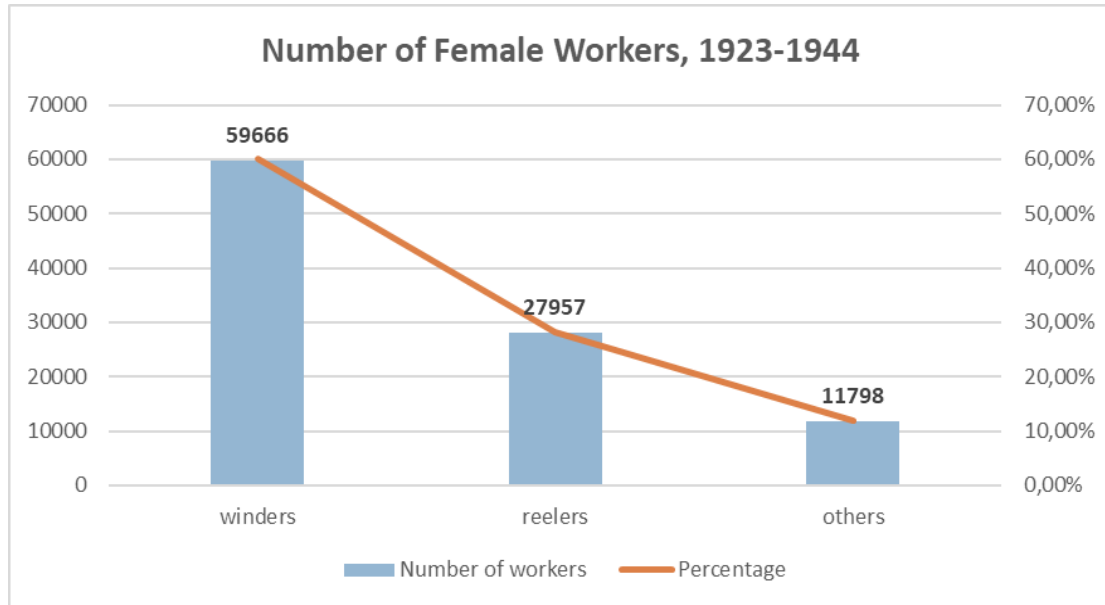
As analysed in the previous chapter, we see that female labourers were employed mainly in winders and reelers activities. In the graph below, there is information on the proportion of the female workforce in the different occupations, from the entire time period in analysis. As expected, the majority of the women are employed as winders, forming 60% of the total female workforce. Next, reelers account for 28% of the female workers. The remaining occupations

⁶⁷ Kumar. (1983). p 94.

⁶⁸ Kamat, M. (2010). Disciplining Sholapur. p 106.

marked as “others”, only account for almost 12% of female labourers. These other occupations included mainly tarwallas, doffers, side siders and gaiters.

Graph 8: Number of female workers, all cities, 1923-1944



The sex pattern occupation and division of labour in the factories were, in general, a universal practice. Usually, male tended to preserve skilled occupations while female workers could reach maximum a supporting or auxiliary functions.⁶⁹ The activities of winding and reeling were highly manual and were necessary for the initial steps in the spinning and warping departments. They consisted mainly of the separation of threads and yarn into specific devices.⁷⁰

Moreover, the notion of female labour being seen as a cheaper alternative to male employment was widespread and reinforced by globalisation. This means that under the prerogative of mass production in the twentieth century, factories were moving the workforce of males to unskilled and underpaid women and children.⁷¹ From the data and results gathered, we see that it did happen. But the situation in India was much more segregated due to cultural factors. This led to women’s employment almost exclusively in those unskilled auxiliary occupations.

⁶⁹ Boserup. (1970). p 142.

⁷⁰ United States Department of Labour (1935). Job Specifications for the cotton textile industry. p xi

⁷¹ Hunter. (2010). p 706.

The results seen in chapter 2 and here, refer back to the debate presented in chapter 1. In the colonial Indian society, women were seen as doing “supplementary” activities outside the household. Hence, they were allocated into auxiliary occupations in the industry as well. While male workers would receive formal training and become skilled labour, women were not accounted for that. The aspects of domesticity and subordination of Indian women are well demonstrated also in the division of labour in the textile industry.

The most frequent reason given for the different roles of men and women is the role each plays in the Indian society. Due to the cultural aspects, women would have separate lives from men, therefore, the same circumstances happen in labour. Initially, women were reluctant to work in the same space as men. Additionally, there was no initiative from the millowners to implement departments exclusively for female workers.⁷² And as a result, they were employed in winding and reeling, the sections with the lowest level of skills. One report from the government mentions that women were recruited in departments where “processes are for the most part carried on with hand machines which are not connected with the engine and therefore do not require attention from the time of starting to that of closing the mill.”⁷³

In a newly industrialized centre, it is expected that the majority of workers will be unskilled. Which is precisely the situation in western India, the existence of a surplus unskilled workers with scarce skilled labour.⁷⁴ Therefore, it is not possible to solve the segregation of the textile industry by the distinction between unskilled and skilled workers only, though they do play a part in the wage rates and selected occupations.⁷⁵

An additional factor to such marked segregation was the supply of labour to the industries. This is related to the economic conditions and the process of change in the rural areas from which the labour was drawn.⁷⁶

As already mentioned in chapter 1, India is a country where agriculture is the biggest source of labour for the majority of the population. With the rise of mechanized industry and the competitive higher earnings, the workforce of textile factories came mostly from the agricultural areas. The migration in India was mostly male for cultural reasons. The low

⁷² Savara. (1986). Changing trends in women’s employment, p 16.

⁷³ Ibid., p 22.

⁷⁴ For example, Mazumdar (1973), p 481 “in the spinning section of the Bombay industry the number of spindles looked after by each operative in 1927 was only 180. In Japan it was 240, in England 540 to 600, and in the U.S. 1,120.”

⁷⁵ Mazumdar. (1973). p 482.

⁷⁶ Savara. (1986). p 4-5.

marriage age and high fertility were an impediment for the mobility of women.⁷⁷ Thus, it was problematic to accept a full-time work or migrate to urban centres.⁷⁸ Additionally, given these circumstances, women were often portrayed as an “unreliable sort of labour”, since beside the work in the factory, they also had to care for their family.⁷⁹

As observed in table 6, we see the decline of female employment from 1937 onwards. With the arrival of more machinery and technology, the “*rationalization*” process took over in the mills. Rationalization is a process of structural and technological changes to increase the productivity of the workers, which reduces the demand for unskilled labour. Women worked in the least skilled section of the factory, thus rationalization displaced women from these occupations. Sub-divisions of the labour process usually meant that less skilled labour could be used in more parts of the task. Therefore, in the case of India, machinery, unskilled labour and women were closely tied together.⁸⁰

An additional point for the decline in the female employment proportion in textiles is the influence of the Factory Acts announced by the British government in 1891. These were an extra motivation for the decrease in the proportion of women in the industry.⁸¹ In 1891, it was established by the British government that night work was prohibited for women and pregnancy leave became compulsory. These set of measures made less profitable for millowners to hire female workers. Since this legislation was not applicable to male labourers, male employment was preferred over female.⁸²

Other cultural aspects in India also play an influential role in the way that labour was recruited. Caste identity was among the forms of division of labour. It should be pointed out that the caste system was much stronger in bigger cities, like Bombay and Ahmedabad. At the end of the nineteenth century, some castes were not admitted to the weaving shops, which were the territory of Muslims and higher castes. This division was justified on the basis that weavers might need at times to use their mouths to cut threads or knot the yarn. If labourers from low castes were to do so, it would mean that the final product would have been “damaged”. Hence, lower castes were not suitable for work at weaving, but on spinning shops, and, consequently, were paid far less. Over time, this segregation became a common practice on how labour was recruited and eventually became an institutionalised system.⁸³

⁷⁷ See: Roy (2002). p 113, Kumar (1983) and Morris (1965).

⁷⁸ Roy. (2002). p 127.

⁷⁹ Morris. (1965). p 68.

⁸⁰ Savara. (1986). p 5-6.

⁸¹ Kumar. (1983). p 81.

⁸² Fóti, K., Lauridsen, L., & Rodgers, G. (2005). The institutional approach to labour and development. p 92.

⁸³ Breman. (2004). p 17-18.

In summary, the gender division of the textile industry is the product of a self-reinforcing cycle of the whole textile industry. In order to attend the growth of the industry, there was a need for workers coming from rural areas. The migration patterns were deeply influenced by cultural aspects of the Indian society, resulting in a division where the men would migrate to urban centres and women were responsible for taking care of the household and children. Along with the rationalization measures and specific legislation for women, this kept the employment of women in the industry very low. Still when possible, in the major textile centres of western India where the industry was much more operative, women were placed in the lowest paid jobs with little employment security. Thus, the gender division of labour in India is intrinsic to its cultural practices and by the position of Indian women as part of the economy and the caste system.

Conclusion

This study has examined the gender wage differences in India's textile industry in the first half of the twentieth century. I argued that the intensification of gender structures depended on a multitude of reinforcing factors. In addition to the wage gender differences, the location of the industry and the occupations performed added different weights into the wage rates and gender inequalities. Different growth rates and development caused differences between the three cities considered in the level of segregation of occupations in the textile mills. Furthermore, cultural aspects and traditions of the country fostered this process.

The contribution of this thesis lies in the unique approach given to the subject of study. Previous research on textile wages during the colonial rule in India is often based on approximations and general averages. In this study, the sources used are from the official Labour Government Office. By using only this source the results can be biased, but on the other hand, I collected detailed information of a big sample of mills in each city, with wages data for male and female workers from various occupations.

The results of this research show that there is a gender wage gap among textile workers and it occurs throughout the entire period studied, with slight variations. Therefore, it is a persistent issue in the textile industry. More interestingly, this gap varies accordingly to different occupations and cities, being more pronounced in Sholapur. The average wages in Bombay and Ahmedabad fluctuated between 0,7 to 1 rupee per day, for female and male workers respectively. Hence, female workers were paid between 75 to 93% the average male worker. Whereas in Sholapur this number goes down to between 0,35 to 0,55 rupee a day, meaning female workers were paid from 63 to 70% the wage of a male worker.

Apart from the evident gender factor in wages, there was a clear importance on the location factor. As analysed, when comparing wages among the three cities, Sholapur presented average wages of 45% lower than the other cities. Furthermore, male workers in Sholapur received about 70% of the average female workers in Bombay and Ahmedabad. Hence, the location factor had a bigger weight than the gender factor – still, female workers in Sholapur were paid less.

While Bombay and Ahmedabad had the most textiles mills of the whole Bombay Presidency, Sholapur accounted for only one-tenth of this. Moreover, the two cities were in constant development – even when Bombay lost the position of biggest textile city to Ahmedabad at the end of the 1930s -, while Sholapur never showed actual growth.

The analysis shown in this study highlights precisely the differences in opportunities available for men and women. Because in the initial phases of development of the textile industry men were the ones recruited, they formed the larger bulk of textile workers, whereas women accounted for about 20%. And these female workers were restricted to a small portion of the activities in the industry, mainly in occupations such as winders and reelers – the lowest paid activities and less mechanized. Thus, the occupations accessible for women were the ones that required less skills formation as men were not willing to take these functions. In all cities analysed, there were no considerable differences in the occupations performed by male or female workers. Men perform an immense variety of occupations while women are restricted to usually only a dozen of occupations. Hence, the occupation factor shows a systematic pattern in all three cities.

The growth of the textile industry at the beginning of the twentieth century attracted a huge amount of workers into urban centres. The majority of them were migrating from rural areas of the country, driven by the hope of higher earnings. In India's case, the majority of migrants were male adults. There are two complementary explanations for this, both are due to the cultural aspects of the country. In the first place, there was the idea of women having supplementary jobs to their partners, who were the actual breadwinners of the household.⁸⁴ Second, Indian women would marry and have children at a very early age and were therefore seen as an “unreliable” sort of labour – especially if migrating with their family.⁸⁵

The number of employed women had a steady decline throughout the century as a result of two factors. In the first place, the Factory Acts of 1891 from the British colonial government that aimed at improving the working conditions of women. It was established that night work was prohibited for female labourers and maternity leave was compulsory. This legislation resulted in a relative increase in the cost of female labour, thus millowners preferred male workers. In second place, the rationalization measures particularly impacted the sectors in which women worked, given they were less mechanized. All in all, there was a clear movement in India in constantly diminishing women's work in the industry, by restricting their functions, offering lower wages and hampering their opportunities.

In India's case we observe that the effects of industrialization actually worsened the gender wage gap, as Boserup states. On the one side, the differences between the three cities were reinforced by the different growth rates and development. On the other hand, there was a

⁸⁴ Van Nederveen Meerkerk. (2010). Market Wage or Discrimination?, p 170.

⁸⁵ Morris. (1965). p 68

continuous restriction on women's activities and role outside the household, emphasizing the gender roles.

The issue of the continuity of a gender wage gap remains an unexplainable practice until today. By taking a threefold comparative analysis, combining time period, occupation and location, this study can lead to a deeper understanding of the complexity of the gender wage gap in the textile industry in western India. Moreover, this thesis shows that the intrinsic factors that sustain the gender wage gap in the Indian industry are tied together and are self-reinforcing. Given the cultural practices of segregation of women from industrial work, the processes in place at the initial phase of industrialization and the patriarchal culture all add to a system that maintains the gender structures.

References

- Acemoglu, D. (2012). Introduction to economic growth. *Journal of economic theory*, 147(2), 545-550.
- Ajit K. Ghose. (2006). Economic Growth and Employment in Labour-Surplus Economies. *Economic and Political Weekly* 41, no. 31, 3430-434.
- Arulampalam, W., Booth, A. L., & Bryan, M. L. (2007). Is there a glass ceiling over Europe? Exploring the gender pay gap across the wage distribution. *ILR Review*, 60(2), 163-186.
- Allen, R. C. (2007). India in the great divergence. *The new comparative economic history: Essays in honor of Jeffrey G. Williamson*, 9-32.
- Banerjee, S. M. (2010). Debates on Domesticity and the Position of Women in Late Colonial India. *History Compass*, 8(6), 455-473.
- Becker, G. S. (2010). *The economics of discrimination*. University of Chicago press.
- Berg, M. (1991). *What difference did women's work make to the industrial revolution?* (No. 2068-2018-802).
- Bishnupriya, G. (2011). Wages, unions, and labour productivity: evidence from Indian cotton mills. *The Economic History Review*, Vol. 64, No. S1, Asia In The Great Divergence, 76-98.
- Boserup, E. (2007). *Woman's role in economic development*. Earthscan.
- Bradley, H. (2016). *Gender and work*, 73-92. London: Sage.
- Breman, J. (2004). *The making and unmaking of an industrial working class: sliding down the labour hierarchy in Ahmedabad, India*. Amsterdam University Press.
- Fóti, K., Lauridsen, L., & Rodgers, G. (Eds.). (2005). *The institutional approach to labour and development* (Vol. 3). Routledge.
- Gender pay gap in Europe: facts and figures. European Parliament News. 2020. Accessed 20 May, 2020.
- <<https://www.europarl.europa.eu/news/en/headlines/society/20200227STO73519/gender-pay-gap-in-europe-facts-and-figures-infographic>>
- Goldin, C. (1994). The U-shaped female labor force function in economic development and economic history (No. w4707). National Bureau of Economic Research.

- Habib, I., Aligarh Historians Society. (2006). *Indian economy, 1858-1914*. New Delhi: Tulika Books.
- Haynes, D. (2012). *Small Town Capitalism in Western India: Artisans, Merchants, and the Making of the Informal Economy, 1870-1960*. (Cambridge Studies in Indian History and Society). Cambridge: Cambridge University Press.
- Hunter, J. and H. Macnaughtan (2010), 'Gender and the global textile industry, in: Heerma van Voss e.a., *History of textile workers, 1650-2000*, 703-724.
- Hinchy, J. (2020). Gender, Family, and the Policing of the 'Criminal Tribes' in Nineteenth-Century North India. *Modern Asian Studies*. 1-43.
- Jeremy, D. J. (2004). The international diffusion of cotton manufacturing technology, 1750-1990s. *The fibre that changed the world. The cotton industry in International Perspective*, 85-128.
- Kamat, M. (2010). Disciplining Sholapur: the industrial city and its workers in the period of the Congress ministry, 1937–1939. *Modern Asian Studies*, 44(1), 99-119.
- Kar, M. (2015). *The Indian Textile and Clothing Industry: An Economic Analysis*. New Delhi: Springer.
- Kumar, R. (1983). Family and factory: women in the Bombay cotton textile industry, 1919-1939. *The Indian Economic & Social History Review*, 20(1), 81-96.
- Lange, M., (2012). *Comparative-Historical Methods*. London: Sage.
- Leythienne, D., & Ronkowski, P. (2018). A decomposition of the unadjusted gender pay gap using Structure of Earnings Survey data. Luxembourg, Publications Office of the European Union.
- Mazumdar, D. (1973). Labour supply in early industrialization: The case of the Bombay textile industry. *The Economic History Review*, 26(3), 477-496.
- Morris (1965), *The Emergence of an Industrial Labor Force in India: A Study of the Bombay Cotton Mills, 1854–1947*, University of California Press: Berkeley.
- Mukherjee (1959), "Trend in Real Wages in Cotton Textile Mills in Bombay City and Island, From 1900 to 1951", *Artha Vijnana*, Vol. 1, No. 1, 82-96.

Musil, C. M., Warner, C. B., Yobas, P. K., & Jones, S. L. (2002). A comparison of imputation techniques for handling missing data. *Western Journal of Nursing Research*, 24(7), 815-829.

Van Nederveen Meerkerk, E. van, L. Heerma van Voss and E. Hiemstra-Kuperus. (2010). Covering the World: some conclusions to the project, in: Heerma van Voss e.a., History of textile workers, 1650-2000, 773-792.

Van Nederveen Meerkerk, E. (2010). Market Wage or discrimination? The remuneration of male and female wool spinners in the seventeenth-century Dutch Republic. *Economic History Review*, 2010, 63, 1, 165-186.

Rudra, Nita (2008). *Globalization and the Race to the Bottom in Developing Countries: Who Really Gets Hurt?*, Cambridge University Press.

Savara, M. (1986). *Changing trends in women's employment: a case study of the textile industry in Bombay*. South Asia Books.

Sen, S. (2008). Gender and class: Women in Indian industry, 1890–1990. *Modern Asian Studies*, 42(1), 75-116.

Ratnam, C. S., & Jain, H. C. (2002). Women in trade unions in India. *International Journal of Manpower*, 23(3), 277-292.

Roy, T. (2010). The long globalization and textile producers in India in: Heerma van Voss e.a., History of textile workers, 1650-2000, 253-274.

Roy, T. (2002). Economic history and modern India: redefining the link. *Journal of Economic Perspectives*, 16(3), 109-130.

Weichselbaumer, D., & Winter-Ebmer, R. (2005). A meta-analysis of the international gender wage gap. *Journal of Economic Surveys*, 19(3), 479-511.

Official Reports

General Wage Census, Part 1 – Perennial Factories, Third Report. Report on Wages, Hours of Work and Conditions of Employment in the Textile Industry (cotton, silk, wool and hosiery) in the Bombay Presidency (excluding Sind). (Bombay, 1937).

Report on an Enquiry into the Wages and Hours of Labour in the Cotton Mill Industry. (Bombay, 1925).

Report on an Enquiry into the Wages and Hours of Labour in the Cotton Mill Industry. (Bombay, 1926).

Report of the Textile Labour Inquiry Committee, 1937–38, Vol I, Interim Report (Bombay, 1938).

Report on an Enquiry Into Conditions of Labour in the Woollen Industry in India. 1945.

United States Department of Labour (1935). Job Specifications for the cotton textile Industry. Washington.

Wages and Unemployment in the Bombay Cotton Textile Industry. Report of the Departmental Enquiry. (Bombay, 1934).

Appendix

Table with the occupations performed by both male and female workers in the textile industry in Bombay, Ahmedabad and Sholapur (specific occupations), per year.

1923	1926	1933	1937	1944
Cheese winders	Cheese winders	Winders: grey and colour	Colour winders	Folders
Colour winders	Colour winders	Grey winders	Grey winders	Menders
Gaiters	Doffers	Colour winders	Pirn winders	Punchers
Grey winders	Grey winders	Inter frame tenters	Drawing tenters	Reelers
Pirn winders	Pirn winders	Drawing tenters	Gaiters (or tarwallas)	Twisters
Reelers	Reelers	Reelers	Doffers	Winders
Coolies	Siders - single side	Roving frame tenters	Siders: single and double	
Drum winders	Tarwallas	Slubbing tenters		
Tarwallas or followers				