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The impact of industrialization on unmarried women’s labour force participation 1812-1932

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Abstract: Recent research based on Dutch marriage records shows a steady decrease of female labour force participation from the 1840s until the 1930s. However, this research relies on combined data from several municipalities. Analysing the sources in this way aggregates the development to such an extent that local variation is completely overlooked. This article contributes to our understanding of regional variation in unmarried women’s labour from 1812 to 1932. The purpose of this research is to isolate the developments in industry from those in agriculture and the service sector. I use marriage records from four regions that list the occupation of the bride to determine the amount of working unmarried women throughout the research period. My data show a different development from the previously mentioned research. Unlike earlier results, I found that unmarried women’s labour force participation in the industrial centres did not decrease gradually throughout the nineteenth and early-twentieth century. Moreover, labour force participation was remarkably high compared to the other sectors, especially during the first decades of the twentieth century. I argue that industry developed in a specific way because it required a cheap labour force which was mostly found among young women. This statement is supported by showing the percentages of brides with a recorded occupation in two industrial centres. Furthermore, I show that in these centres, the younger a woman was, the higher the chance that she stated an occupation in her marriage record. This was not the case in the agricultural and service-oriented regions I have investigated. I therefore argue that research on the history of female labour should be approached from a comparative perspective for a proper understanding of its developments.

Keywords: female labour force participation, unmarried women, industrialization, marriage records.

JEL Codes: J16, J21, N33, N93.

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Introduction

During the nineteenth century, the ideal of the 'male breadwinner society' spread rapidly throughout Europe. Here, the husband was responsible for monetary income while the wife took care of the household and the children went to school. This type of household time allocation differed from preceding centuries when all household members contributed to the monetary household income.¹ In the breadwinner-homemaker household, task division was more explicitly defined and thereby the ways in which each member contributed to the well-being of the household.²

Numerous studies on the Dutch case have attempted to explain this trend, with many of them arguing that explanations can be found in the early modern period.³ According to these studies, the remarkably low labour force participation of Dutch women in the nineteenth century originated in the seventeenth and eighteenth centuries when women withdrew from the labour market as a result of rising male wages.⁴ However, recent research on early modern women's labour shook the foundations of this assumption. Multiple scholars have proven that Dutch women were indeed active in various sectors of the labour market.⁵ Indeed, I will show that unmarried women's labour force participation was (still) high during the first decades of the nineteenth century (see Figure 3). Moreover, Jan de Vries' concept of an 'Industrious Revolution' contradicts the idea that women withdrew from the labour market already in the seventeenth century.⁶ Thus, the precise origins of the Dutch male breadwinner society remain unclear.

Local, comparative research is crucial for an effective approach to this topic. This has been emphasized by Sara Horrell and Jane Humphries among others, who have shown that there existed great regional variation in British household time allocation. Furthermore, they state that, "Grand theorizations of the rise of the male breadwinner family provide falsely homogenizing accounts which are obsessed with monocausality, outcomes and finished worlds."⁷ There are different factors at play and the interactions between them must be analysed.⁸ The only way we can uncover these factors is by using a comparative approach. Possible important factors influencing labour division are the demand for and the supply of

¹ Vries (2008); Vries (1994), 262.

² Janssens (1997), 2.

³ Pott-Buter (1993), 21.

⁴ Among others: Pott-Buter (1993).

⁵ Nederveen Meerkerk (2007); Heuvel (2007); Schmidt (2009); Schmidt & Nederveen Meerkerk (2012).

⁶ De Vries (1994); De Vries (2008). This theory will later on be attended to.

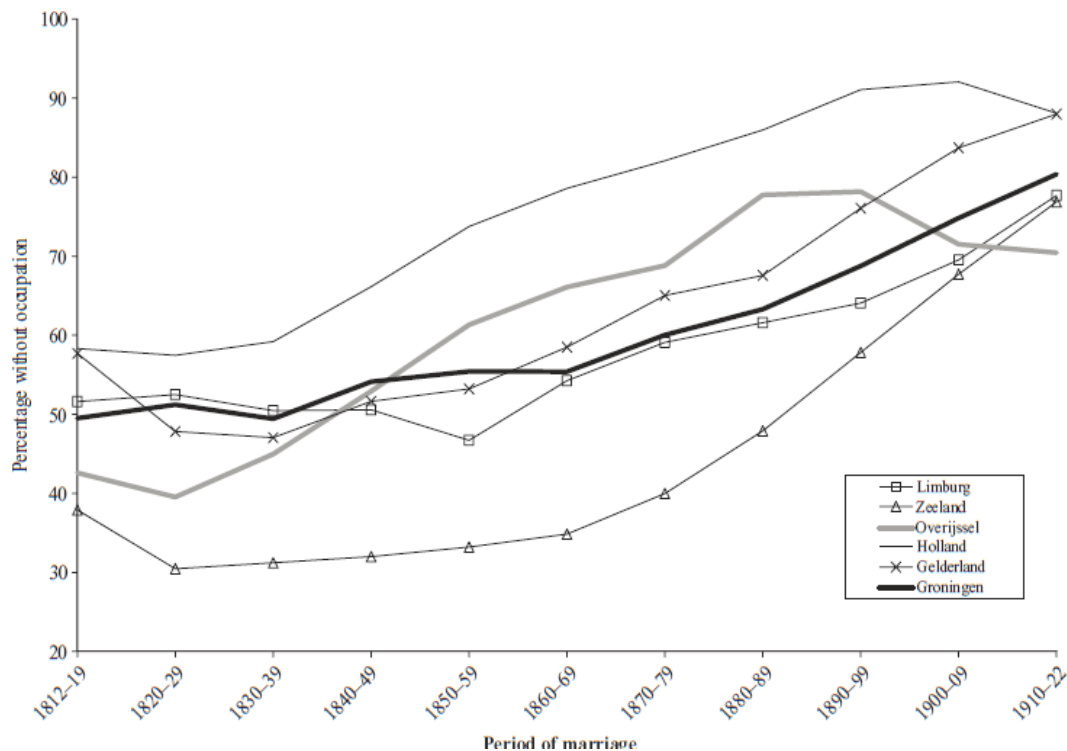
⁷ Horrell & Humphries (1997), 64.

⁸ See also: Creighton (1996), 333-334.

labour in the industrial sector. Furthermore, numerous scholars have proposed that changing preferences and social norms were of great influence on women's labour.

In 2009, Frans van Poppel, Hendrik van Dalen and Evelien Walhout published a paper on the emergence of the housewife in the Netherlands contributing to our understanding of regional variation in women's labour. They analysed marriage records to determine the extent of female labour force participation in various Dutch regions. Their results showed a steady decrease of female LFP during the nineteenth century, continuing well into the twentieth century. Van Poppel et al. argued that the various provinces have experienced different developments. Figure 1 displays their results showing the percentage of women *without* a recorded occupation in six Dutch provinces in the period 1812-1922.

Figure 1: Emergence of the housewife across Dutch provinces (percentage of women without occupation at the time of marriage)⁹



The graph shows that the amount of women without a recorded occupation increased steadily throughout the research period. Only in the province of Overijssel there was a minor decrease in the first decade of the twentieth century. The main explanation given by Van Poppel et al. for this development is the spreading of higher-class social norms. Thus, these new norms not only

⁹ Poppel, Dalen & Walhout (2009), 113.

changed the opportunities for women in the labour market but also affected their desire to work.¹⁰

Van Poppel's article from 2009 was an elaboration of an earlier study by him and Walhout published in 2003. In this article, they used the marriage records of several Dutch municipalities and regions totalling 47.027 records for the period 1812-1930. In both articles, the authors argued that the amount of women with a recorded occupation decreased from the 1840s onwards. Van Poppel and Walhout stressed that this research was only a first attempt to use the marriage records for research on women's work and that their results were not representative for the Netherlands as a whole. Most of the selected municipalities were indeed mainly agricultural while industrial regions were poorly represented. While their 2009 article provides an overview of the situation in six provinces, it fails to incorporate variation between the different sectors *within* these provinces.¹¹ More research is therefore desired.

This article contributes to our understanding of the factors that played a role in the development of 'formal' unmarried women's labour force participation throughout the nineteenth and early-twentieth centuries. Labour force participation (hereafter referred to as LFP), "is the percentage of the total population performing market work."¹² Thus, unmarried women's formal LFP refers to the total share of unmarried, adult women performing formal labour.¹³ According to my definition, 'formal labour' is work that is considered to be an 'occupation' in official documents like censuses. Housework will therefore not be included.

In this article, the focus will be on the influence of industrialization. The underlying question is whether a separate analysis of industrial centres will give another image of historical developments relative to provincial research. A comparison with the agricultural and service sector will further shed light on the influence of industrialization. Part one will provide a short background of my case studies and a description of my source material. Part two will consider several theories that may explain the decrease of female labour. Part three includes the percentage of women with a stated occupation in the marriage records of the investigated regions. These results will then be compared with those from Walhout and Van Poppel. It will become clear that Enschede and Tilburg experienced deviant developments with a remarkably high female LFP from the 1900s onwards. Subsequently, female LFP in industry will be compared with the agricultural and the service sectors to show the unique developments of industry. Part four will provide explanations for the discovered trends when I analyse the

¹⁰ Poppel, Dalen & Walhout (2009).

¹¹ They do distinct between 'rural' and 'urban' places based on the number of inhabitants and the percentage of people working in agriculture in 1889: Poppel, Dalen & Walhout (2009), 112.

¹² Pott-Buter (1993), 7.

¹³ Throughout this paper, I will use the term female LFP, or simply LFP, to refer to unmarried women's formal labour based on the share of brides with a stated occupation in the marriage records. In case I mean the LFP of the total (adult) female population I will use the term 'total female LFP'. Justification for this decision will later on be given.

demand for and supply of labour in the textile industry. Part five moves towards determining the degree of *married* women's LFP based on the occupational census of 1899. Differences between unmarried and married women will be simultaneously analysed. In the conclusion, I will reflect upon the question what this local research can tell us about Dutch women's LFP in general. I stress that general explanations for the rise of the male breadwinner society should first and foremost be found in a comparison between the different sectors of the economy.

The case studies

The case studies were selected on the basis of the economic sector in which the majority of the population worked. Enschede and Tilburg were large industrial centres, Drenthe was an agricultural region and Alkmaar was a service oriented city. Map 1 shows their proximate locations.

For many European countries, the nineteenth century was a period of modern economic growth. The GDP rose rapidly and the economy steadily shifted away from agriculture to industry.¹⁴ In the Netherlands, industrialization started off relatively late compared to surrounding countries such as England and Belgium.¹⁵ Traditionally, it has been argued that the 'Industrial Revolution' started in England around 1750 when "coal became a major source of energy for industry."¹⁶ The main impetus for economic growth was the expanding textile and iron industries made possible by rapid mechanization driven by fossilised sources.¹⁷ However, in the Netherlands these new production methods came in use only during the second half of the nineteenth century. The causes of this backwardness have been extensively investigated by numerous scholars. One proposed explanation is that initially, the Netherlands were economically divided: the northern provinces were engaged in trade while the southern provinces focussed on industry. When in 1830 the southern provinces (present day Belgium) became independent, the Netherlands lost their industry and a large part of their natural resources. Thus, out of necessity, Dutch industrialization only got off the ground from the 1830s onwards.¹⁸ Another explanation is the inability of the Dutch to sufficiently link scientific developments with industry, something the British had done successfully already during the eighteenth century.¹⁹ Again others propose the (political) heritage of the Golden Age and the French occupation to be a crucial factor in the economic development of the Netherlands.²⁰

¹⁴ Extensive research on modern economic growth has been done by Simon Kuznets (1966).

¹⁵ See for a classic overview of industrialisation in the Netherlands: Jonge (1976).

¹⁶ Kooij (2009), 329.

¹⁷ Kooij (2009), 329; Jansen (1999), 252.

¹⁸ Jansen (1999), 256.

¹⁹ Davids (2005), 332.

²⁰ Mokyr (2000), 518; Zanden & Riel (2000), 21.

However, this retarded industrialization did not necessarily mean an economic decline. Dutch industry did in fact grow during the first half of the nineteenth century, only by means of *traditional* production methods. Furthermore, the agricultural and service sector expanded simultaneously.²¹ During the second half of the nineteenth century, the export of among others grain and cattle to neighbouring countries such as England and Germany increased drastically. The expanding demand for Dutch agricultural products in these countries resulted in the abolishment of old import restrictions such as the English *Corn Laws* in 1846.²² These developments would cause Dutch agriculture to further specialize. The Dutch economy would consequently keep its agricultural character throughout the whole nineteenth century.²³

Map 1: proximate location of the three case-studies



²¹ Griffiths (1979), 8-38, cited in: Jansen (1999), 29.

²² Bieleman (2008), 271-279.

²³ Knibbe (1999), 38.

In the Dutch context, Enschede and Tilburg industrialized relatively early. Both cities had a long history of proto-industrialization beginning in the early modern period. Home-produce of merchandize for the market had been a crucial additional income for agricultural families for centuries. Enschede was highly affected by the Belgium revolt in 1830. After the secession of the southern provinces, the cotton industry of Flanders was partly transferred to Twente (a region in the east of the Netherlands where Enschede is situated). Twente was chosen to accommodate the cotton-industry because this region had been skilled in manufacturing textile for centuries and because wages in this region were low. Furthermore, Twente was chosen over the southern provinces because one was afraid unrest after the Belgium revolt would negatively affect cotton-industry in the south and would pave the way for illicit import of cotton from the newly founded Belgium nation.²⁴

A considerable part of the products manufactured in Twente was exported to the Netherlands-Indies on behalf of the Dutch Trading Company (*Nederlandse Handelsmaatschappij: NHM*).²⁵ To make sure that enough cloth would be produced to export to the Netherlands-Indies a special weaving school was founded where the 'flying shuttle' was introduced to the labourers.²⁶ The rapidly growing cotton industry caused an enormous increase of employment opportunities in Enschede. However, mechanization of the Enschede textile industry did not really take off until the second half of the nineteenth century.²⁷

In Tilburg, the wool industry dominated the economy already in the eighteenth century. In 1810, almost half of the total population worked in this sector.²⁸ The use of machinery was by then already widespread, although these machines were generally driven by horse-, wind- and human power.²⁹ The Tilburg textile industry was characterized by a large quantity of small-scale factories instead of an expansion of existing factories. Besides factory industry, domestic manufacturing continued to be of great importance throughout the whole nineteenth century.³⁰ For the many small family businesses the purchase of expensive machines was impossible. In times of crisis, such as the period 1880-1890, many of those enterprises consequently vanished.³¹

The wool industry of Tilburg experienced ups and downs during the nineteenth century because of the one-sided focus on wool manufacturing. The city did not have much else to offer

²⁴ Zanden & Riel (2000), 171.

²⁵ Mokyr (1976), 99-109.

²⁶ Graaf (2012), 60.

²⁷ Mokyr (1976), 105.

²⁸ Janssens (1991), 56.

²⁹ Janssens (1991), 56-57; Gorp (1987), 97.

³⁰ Janssens (1991), 58.

³¹ Gorp (1987), 138.

the market and its economy was therefore vulnerable to fluctuations.³² First, the demand for woollen cloth was heavily dependent on military orders. Thus, war greatly influenced the industry in Tilburg. This had been the case during the Napoleonic wars and again during the French-German War of 1870. Second, imports from surrounding countries affected the economy. “Stagnation in this period [1815-1850] resulted from the heavy British competition which made itself felt soon after French domination had ended, but also from the loss of the Belgian market in the thirties and the general crisis of the forties.”³³ During the 1860s and early 1870s, the wool-industry of Tilburg experienced a boom again as a result of the crisis in cotton. Furthermore, the Netherlands-Indies were an important export market for Tilburg’s wool as well.

There are two motives for studying *two* textile-cities. First, industrialization supposedly affected women’s labour differently in Enschede then in Tilburg. Angélique Janssens has studied women’s roles in the demographic transition of the nineteenth century using Enschede and Tilburg as her case studies. She highlights the differences between the ways these two cities managed their female labour force. In Enschede, women worked in factories in large numbers along with male labourers while in Tilburg women usually worked from home. Moreover, in the Tilburg factories men and women were kept apart which caused specific ‘male’ and ‘female’ occupations. Married women were not allowed in the factories at all. Thus, strict gender segregation existed in Tilburg while this was not so much the case in Enschede where men and women worked abreast.³⁴ Second, the industries of Tilburg and Enschede had distinct characteristics looking at the types of enterprises. In Enschede, large factories dominated while in Tilburg there were many smaller scaled factories. This makes it all the more relevant to analyse the developments of female LFP from a comparative perspective.

Additionally, an agricultural region and a service oriented region were selected to position the developments in the industrial centres in the context of the whole economy. First, Drenthe was chosen to analyse female labour in agriculture. Throughout the whole research period agriculture would stay dominant in this province.³⁵ This province was by far the poorest region of the Netherlands. Second, the city of Alkmaar in the west of the Netherlands will function as an example of a service oriented labour market. Already in the seventeenth century, Alkmaar had become a flourishing centre of trade. Farmers from surrounding cities came to Alkmaar to sell their produce and buy other commodities on one of the many markets.³⁶ Intermediate trade was therefore important for the economy. During the nineteenth century, Alkmaar would still function as an important business centre.

³² Gorp (1987), 159.

³³ Janssens (1991), 57.

³⁴ Janssens (2009), 94. For thorough research on gender segregation in industry see Groot (2001).

³⁵ Bieleman (1987), 22-24.

³⁶ Tielhof (2002), 170.

The sources

This research is based on two types of sources: first, marriage records from all four regions from the period 1812-1932 in which the occupations of the bride and groom were recorded. I have analysed a sample size of 15.942 records from Enschede, 12.329 from Alkmaar and 112.990 from Drenthe. A smaller sample was chosen from Tilburg where I have collected the data from every fifth year in the period 1830-1920 (3.974 marriage records).³⁷ The second source are the occupational censuses of 1849, 1899 and 1932. Both sources provide specific information on women's work as I will now explain.

Marriage records inform us about the occupational status of *unmarried* women. Brides usually stated the occupation they had before their marriage. Indeed, women regularly quit their job after marrying which means the records do not give certainty about a woman's working activities during her married life.³⁸ Furthermore, women's work was probably under registered in the marriage records. Women could choose not to state an occupation while they did have one for various reasons. For instance, they could have been sure to quit their job after marriage which made them choose to say they had no occupation.³⁹ This choice could also have had an ideological incentive.⁴⁰

Unfortunately, this research does not incorporate women that would never marry. Although the majority of the women would eventually marry, still the amount of singles was considerable. For instance, in Tilburg in the year 1900 there were 13.267 women in the age group 15-80 of whom 4.122 were unmarried. This number does not include widows. Thus, a little over thirty percent of the adult women in Tilburg was unmarried in 1900.⁴¹ The ratio married/unmarried women and its development over time will have to be investigated for all four regions to make thorough statements about this topic.

Marriage records offer a great opportunity because they are available on a local level. Furthermore, they are available for the whole research period which makes a longitudinal analyses of unmarried women's labour possible. Studying the working lives of *unmarried* women is important for at least two reasons. First, not investigating women's working activities during this stage of their lives would mean a missing link in women's labour history. Second, women's labour can be approached from a life-course perspective to show the working activities of a woman throughout her whole life. How did events such as marriage change women's

³⁷ This is due to the time-consuming task of entering the data. For the other cities all data were already available.

³⁸ Groot (2001), 394-397; Walhout & Poppel (2003), 304.

³⁹ Walhout & Poppel (2003), 308.

⁴⁰ Poppel, Dalen & Walhout (2009).

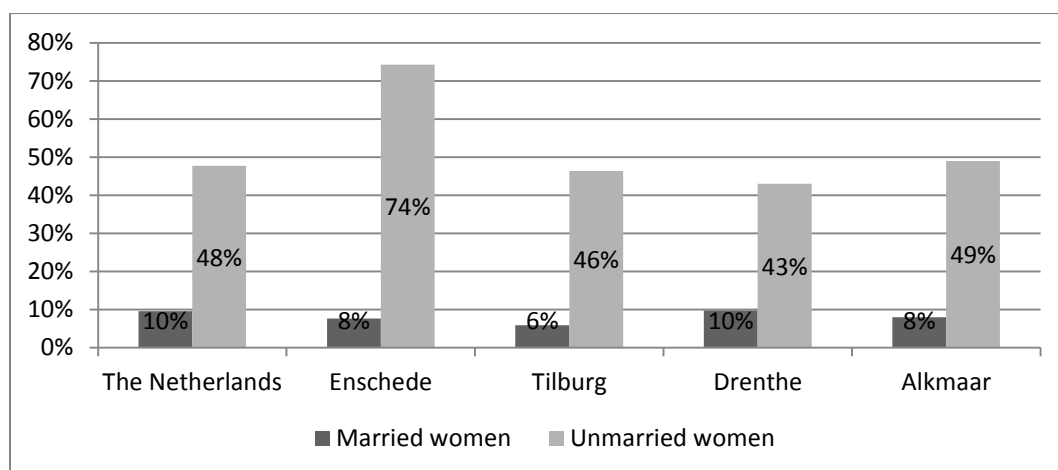
⁴¹ Gemeentebestuur van Tilburg, *Uitvoerig en beredeneerd verslag omtrent den toestand der gemeente Tilburg, over het jaar 1900*, inv.nr. 366, pp. 8.

occupational status? This second question cannot be answered based on these sources, but will be a useful starting point for further research.

Next, censuses tell us about the occupational status of the whole Dutch population on a municipal level.⁴² The advantage of this source is that every person in every municipality of the Netherlands was included which makes this source highly representative. However, the census takers probably under registered the working activities of women and children since they often performed unpaid and part time labour assisting their husbands or fathers in a family business.⁴³ This type of work was seen as ‘complementary’ and was therefore not recorded as an occupation. For this reason, we should see the number of recorded working women and children as a minimum.⁴⁴ The censuses provide us with a cross-sectional dataset allowing for comparison between case studies at a given moment in time.

The marriage records proved to be valuable for investigating unmarried women’s LFP after a comparison with the 1899 census. This census distinguished between married and unmarried women. Figure 2 shows the percentage of unmarried women with a recorded occupation for every region.⁴⁵ These numbers corresponded with the percentages of working women in the marriage records (Table 1 and Figure 3 below). Only the census of Alkmaar does not correspond to the results from the marriage records.

Figure 2: percentage of adult married and unmarried women with a stated occupation in the 1899-census



⁴² See for an overview of the history of the census: Maarseveen (2007).

⁴³ Schmidt & Nederveen Meerkerk (2012); Nederveen Meerkerk (2012); Walhout & Poppel (2003). About problems with the British census: Hill (1993); Higgs (1987). However, some scholars have argued that over counting could also have been the case in England. For example: Hatton & Bailey (2001) who compared the British censuses of 1911, 1921 and 1931 with social surveys and found that the censuses actually overstated female labour force participation.

⁴⁴ Schmidt & Nederveen Meerkerk (2012), 80; Horrell & Humphries (1995a), 95.

⁴⁵ The census of Drenthe is researched on a provincial level as it was hard to find the census on the village-level.

Table 1: percentage of women with a recorded occupation in the marriage records 1895, 1900 and 1905

Year	Enschede	Tilburg	Drenthe	Alkmaar
1895	?	22%	40%	23%
1900	?	46%	41%	12%
1905	73%	47%	43%	6%

Thus, although the marriage records only inform us about women *about to marry*, the census shows that the records give a representative image of the LFP of all unmarried women in Enschede, Tilburg and Drenthe. The fact that the census of Alkmaar does not correspond with the data from the marriage records may be explained by the service oriented labour market of the city. Here, a considerable part of the unmarried women worked as domestic servants and marrying automatically meant the end of this. Therefore, it seems more likely for brides in Alkmaar not to state an occupation. Still, we will see that a considerable part of the brides with an occupation stated to be (or had been) servants. Nevertheless, throughout this paper I will use the term ‘female LFP’ when I mean the share of working unmarried women based on recorded occupations in the marriage records.

Theories accounting for the decrease of female labour force participation

The decreasing total Dutch female LFP during the nineteenth century has been subject of debate. Several relevant theories proposed in this strand of literature will now briefly be discussed.

First, Jan de Vries explains the decrease of the total female LFP in the nineteenth century by changing consumption preferences. During ‘the Industrious Revolution’ of the early modern period, households desired to purchase more market produced goods. To satisfy their needs, all members of the household were mobilized to perform wage labour. However, these patterns changed into “consumption patterns that improved the health, comfort, and, ultimately, the human capital endowments of working people at a time when the goods available for purchase on the market could not, by themselves, deliver such consumption objectives.”⁴⁶ Thus, the so desired ‘homeliness’ had to be produced by a stay-at-home wife. Changes in female LFP were therefore mainly a demand driven phenomenon instead of a supply driven one.⁴⁷ However, arguments have been made not to be blinded by the upcoming desire for ‘homeliness’: according to Myriam Everard this cannot be seen as an exclusive explanatory model for the history of female labour.⁴⁸

⁴⁶ De Vries (2008), 210.

⁴⁷ De Vries uses Becker’s theory of the allocation of time: Becker (1965).

⁴⁸ Everard (2005), 101.

Closely related to Jan de Vries' theory, is the idea that knowledge and beliefs played a crucial role in the developments of women's work. Joel Mokyr has argued to pay close attention to these two factors in explaining the so called "Cowan Paradox", an apparent contradiction pointed out by Ruth Cowan in the mid-1980s. She found that when women withdrew from the labour market and spent more hours performing domestic work, more household activities were simultaneously mechanized. How come they found themselves working more hours at home when new inventions were supposed to relieve them from their domestic tasks? To explain the paradox, Mokyr stressed the importance of knowledge about the correlation between health and cleanliness. The notion that a clean home and good nutrition contributed to the health of all household members led to the belief that it was necessary for women to stay home and realize these needs. Thus, "the *perceived* marginal product of housework increased sharply in the last third of the nineteenth century."⁴⁹

Next, the influence of institutions has been extensively investigated. Douglass North has developed a theoretical framework to investigate changing social norms. He emphasizes the importance of the ongoing dialogue between institutions and organizations. North interprets institutions as "the rules of the game in a society or, more formally, (...) the humanly devised constraints that shape human interaction."⁵⁰ He distinguishes between formal institutions – rules – and informal institutions – codes of behaviour. Institutions interact with organizations which are "groups of individuals bound by some common purpose to achieve objectives."⁵¹ Organizations can be political, economic and social. In a sense, organizations are the players while institutions are the rules that determine the way the game is played.⁵²

Moreover, North distances himself from *utility-theory* often used by neoclassical economists, and instead emphasizes the unpredictability of individual choices. Utility-theory assumes that every individual consumes goods and services in the most rational and beneficial way possible, thus with the highest possible utility. In this way, consumer behaviour can be predicted. According to North, human behaviour is much more complicated. Individuals can be altruistic and do not always possess the information needed to act as rational as possible.

In this tradition, Colin Creighton pleads for investigating "institutional structures of power, for it is these which largely determine how ideologies are reworked as material conditions change and how these ideologies become embodied in concrete policies and forms of action."⁵³ Social legislation is an example of such a 'concrete policy'. It is generally assumed that social legislation is the *result* of changing attitudes in society rather than the reason. Legislation

⁴⁹ Mokyr (2000), 3.

⁵⁰ North (1990), 3.

⁵¹ North (1990), 15.

⁵² Practice theorists like: Bourdieu (1980) and Giddens (1997).

⁵³ Creighton (1996), 313.

alone is not enough to actually initiate change. Whether laws will have the desired effect depends on “emerging socio-economic changes.”⁵⁴ However, according to others, this view on the origins of social legislation is more complicated.⁵⁵ There were always advocates for and opponents against new social laws which means attitudes in society were by no means unanimous. The influence of social legislation and ideology on the rise of the male breadwinner society has also been emphasized by Sara Horrell and Jane Humphries who state that “institutions such as the law and cultural representations of fit work for women in the patchy development of dependence on men”⁵⁶ are crucial explanatory factors.

A large body of literature has attempted to study the effects of industrialization on women’s labour. However, the outcomes are ambiguous. On the one hand, it has been argued that industrialization caused a pushback of women into the private sphere because production was increasingly carried out in the public sphere. On the other hand, it has been stated that industrialization created *more* work for women. This research supports the latter view and argues that industry required a cheap labour force which was principally found among young women. I will further elaborate on this argument after presenting my research results. The next part will discuss unmarried women’s labour force participation in the four chosen regions. They will consequently be compared with findings from other studies.

Unmarried women’s recorded labour force participation 1812-1932

The results obtained from the marriage records are presented in Figure 3 showing the eleven year moving average of women with a stated occupation in percentages.⁵⁷ No reliable sources were available for Enschede between 1880 and 1900. In my opinion, the records for this period are not accurate as no occupations were recorded during this short period of time. What is more, between 1883-1885 the amount of marriages in Enschede tripled from 40 to 120. A possible explanation for these findings is a change of the municipal borders carried out in 1883 when parts of the nearby situated municipality of Lonneker were added to the restriction of Enschede.⁵⁸ This explains the sudden rise of the amount of marriages: the size of the population under the jurisdiction of Enschede had grown suddenly because of this adjustment.

⁵⁴ Lieten & Nederveen Meerkerk (2011), 19.

⁵⁵ For example: Cor Smit nuances this image in his dissertation (to be published in 2014 under the title *De Leidse Fabriekskinderen*).

⁵⁶ Horrell & Humphries (1997), 35.

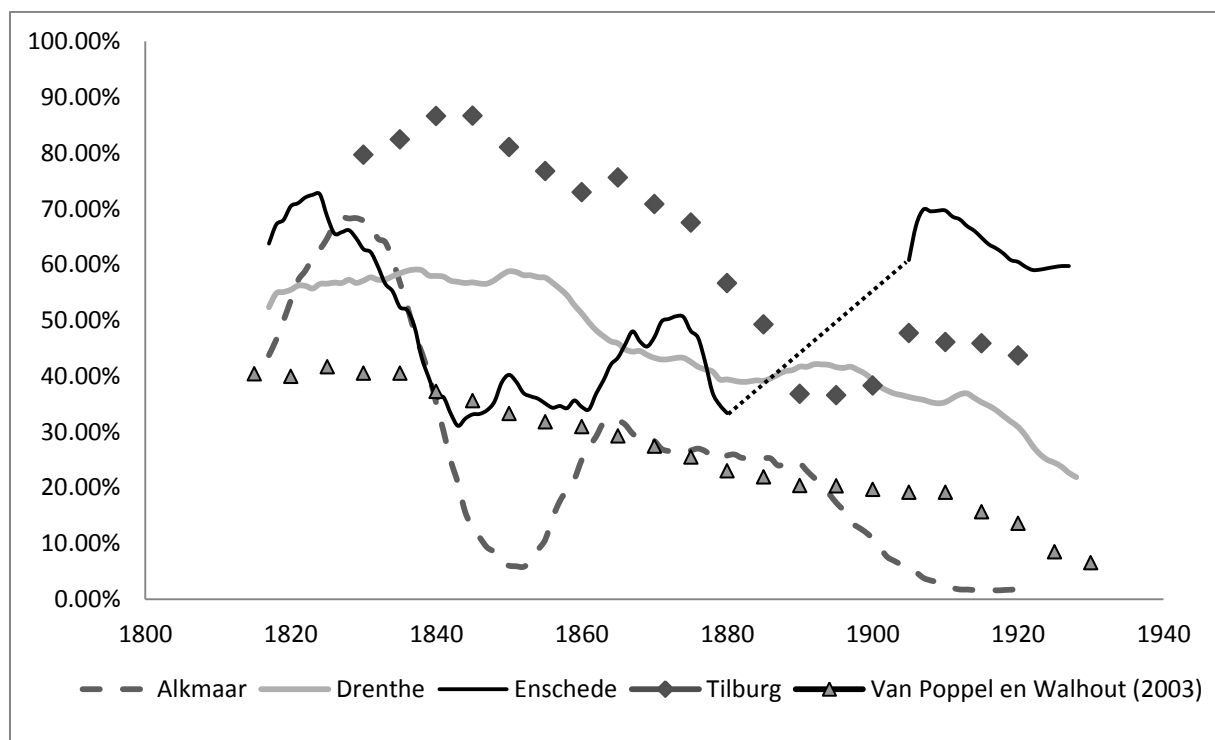
⁵⁷ For Tilburg, the eleven year moving average is based on three sample-years. Thus, for 1835 I have calculated the average of 1830, 1835 and 1840 etc. The same counts for the data from Walhout and Van Poppel who used sample years as well. I have changed their data into eleven year moving averages to make them comparable with my own results. For the original graph see Poppel & Walhout (2003), 313.

⁵⁸ See the introduction on the archives of the municipality of Enschede at the website of the *Historisch Centrum Overijssel* (Historical Centre Overijssel).

Furthermore, it could explain the fact that no occupations were recorded in the marriage records between 1880 and 1900. The rules concerning the recording of marriages may have changed along with the borders.

It was not always explicitly stated when a bride did not state an occupation.⁵⁹ At times it was specified as 'no occupation' (*zonder beroep*), in other cases nothing was recorded at all. It is impossible to find out whether there was a difference between these two types of registration. That is why all of these women are considered to be (officially) unemployed.⁶⁰

Figure 3: percentage of brides stating an occupation 1812-1932 (11-year moving average)⁶¹



In the period between 1820 and 1840, the recording of women's occupations increased steadily everywhere. From the 1840s onwards, an overall downward trend started. The trend of Enschede was unsteady but in general decreased until the 1880s. Tilburg experienced a more steady decrease starting in the 1840s. The trend in Drenthe was remarkably stable compared to those of the industrial centres.⁶² Not until the first decades of the twentieth century, did LFP drop heavily here. Only in the period between 1890 and 1900, LFP in Drenthe was higher than in

⁵⁹ The amount of men without a stated occupation is negligible and will not be attended to explicitly.

⁶⁰ Walhout & Van Poppel (2003), 312.

⁶¹ The data from Enschede from 1880-1905 are not reliable as they show a percentage of zero percent of working women. The 1899-census shows that 74% of the unmarried women had an occupation. Therefore, I excluded this period from the graph.

⁶² This can probably be explained by the fact that for Drenthe, more records have been analysed than for the other regions.

Tilburg and Enschede. Before, it had been considerably lower than in Tilburg and slightly higher than in Enschede. After 1900, the percentage of working women in the industrial cities passed the agricultural region again. Alkmaar on the other hand, experienced a drop between 1840 and 1850 and consequently a rise until the 1860s. Hereafter, LFP decreased steadily until the 1890s after which it decreased more rapidly.

There are some remarkable differences between my results and those presented by Walhout and Van Poppel⁶³ which underline the exceptionality of the industrial sector. First, throughout the whole research period, the industrial centres of Enschede and Tilburg show a higher degree of LFP than the municipalities investigated by Walhout and Van Poppel. During the first decades of the nineteenth century, between seventy and eighty per cent of the brides in Enschede and Tilburg stated an occupation while this was around forty per cent in the regions analysed by Walhout and Van Poppel. Indeed, Tilburg was an exceptional city in terms of total female LFP during this period. Previous research has shown that even *married* women's LFP was exceptionally high in Tilburg: forty percent of all married women were listed with an occupation in the population registers of 1810.⁶⁴ The differences between the industrial centres and the other case-studies are especially apparent during the first decades of the twentieth century.

Second, my results show fluctuating developments and no steady decrease of female LFP. Such fluctuations remain unseen when not paying attention to differences between the sectors. The most striking outcome of my research is that LFP in Enschede around 1900 had risen *again* to the same level as in 1830. In Tilburg the rise had been less drastic but nevertheless showed that almost fifty per cent of the brides stated an occupation during the first decades of the twentieth century. In this period, LFP in Van Poppel's municipalities was around twenty per cent. Figure 1, shown in the introduction of this article, does in fact show a slight rise of female LFP in Overijssel - where Enschede is situated - around 1900. However, the actual extent of female LFP in the separate industrial centres is in this way smoothened out.

Are these trends of Enschede and Tilburg characteristic for these industrial centres? Comparing these cities with the agricultural region of Drenthe and the service-oriented city of Alkmaar will shed light on this question. First, Drenthe experienced a stable development throughout the research period. LFP stayed between fifty and seventy percent until 1870 and from then on decreased steadily until it reached a low of twenty percent in 1920. Compared to Enschede and Tilburg, LFP in Drenthe was low. Only between 1830 and 1860 is the Drenthe line higher than the line of Enschede while Tilburg is continuously higher. The overall *trend* in

⁶³ Walhout & Poppel (2003), 313. This graph is based on the marriage records of ten municipalities and two rural regions in the Netherlands Delft, Elsloo, Kempen, country side Zeeland, country side Zuid-Holland, Bommelerwaard, Midwolda, Oldenzaal, Naarden, Katwijk, Gouda and Woerden: Walhout & Poppel (2003), 310.

⁶⁴ Nederveen Meerkerk (2008), 244.

Drenthe is more or less comparable Van Poppel's results, only LFP in Drenthe was considerably higher throughout the whole research period. Second, Alkmaar had the lowest LFP of all four case studies. This line is the only one comparable with the trend shown in Figure 4.

These results suggest that female LFP in industry experienced a distinct development compared to the developments in agriculture and the service sector. The most remarkable outcome of my research is that in the industrial centres unmarried women's LFP was exceptionally high during the first decades of the twentieth century.

The types of occupations

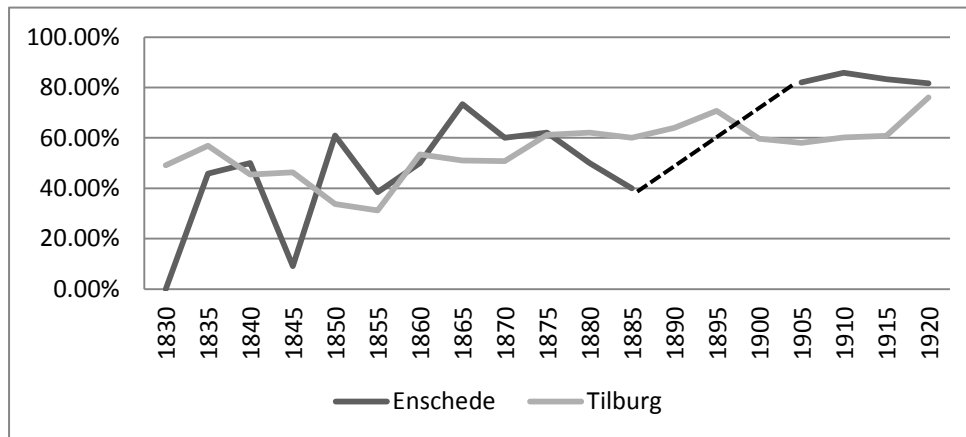
A further analysis of the marriage records will provide more insight into the types of recorded occupations. In the censuses, occupations were divided into five groups: industry, agriculture and fishing, economic services, other services and free labourers. This categorization is used in this article as well. I have studied the occupations in the marriage records for every fifth year in the period 1830-1920.

Indeed, most women in Enschede and Tilburg worked in the textile industry. Figure 5 shows the percentages of the women with a recorded occupation working in industry. Table 2 shows the most common stated occupations of the four investigated regions in three time periods.⁶⁵ The high LFP during the first decades of the twentieth century was almost completely caused by industry with a high amount of factory labourers (*fabrieksarbeidsters*). The share of servants (a traditional 'female occupation') was relatively low. In 1920, 161 factory labourers and 22 servants were recorded. The low amount of servants is probably caused by the social structure of the city which was dominated by the working class who could not afford to hire servants.⁶⁶ In Tilburg the share of women working in industry was more modest. Here, the amount of servants was larger although this changed over time. In 1915, 22 factory workers and 33 servants were recorded while in 1920 these numbers had changed to 179 and 65. The need for industrial labourers apparently rose earlier in Enschede than in Tilburg.

⁶⁵ The last row of this table shows the absolute number of working brides and the total amount of brides. The percentages represent the part of *working* women; brides without a stated occupation are thus not included in the analyses.

⁶⁶ Janssens (1998), 260.

Figure 5: percentage of women with a recorded occupation working in industry in Enschede and Tilburg 1830-1920⁶⁷



Indeed, Table 2 illustrates that in Tilburg, ‘servant’ was the most frequently stated occupation during the first to two periods (1812-1851 and 1852-1891). Only in the period 1892-1932, ‘factory labourer’ would become most common. In Enschede, this shift had already taken place during the period 1852-1891 when almost half of the brides stated to be a factory labourer. However, the total share of *textile workers* was even larger when we include the seamstresses, spinsters, coil labourers and weavers in the analysis. Doing so means that throughout the whole research period the major share of the working brides in Enschede and Tilburg were working in industry – be it in a factory or at home.

In Drenthe, most women were recorded to be servants. During the nineteenth century, the amount of women working in agriculture decreased while the amount of women working in other services increased. Nevertheless, most servants in rural regions were indeed performing agricultural tasks. Here, servants were mainly hired to help on the land. For the case of the province of Zeeland in the southwest of the Netherlands, Hilde Bras has argued that the farmers’ daughters indeed worked as servants for other farmers.⁶⁸ However, during the nineteenth century the share of ‘farm servants’ decreased. In the cities, the want for domestic servants grew and this work was supposedly more attractive than farm work.⁶⁹ Table 2 shows that ‘servant’ was the most commonly stated occupation in the period 1812-1891. In the period 1892-1932, ‘labourer’ would take over this role. What a job as ‘labourer’ entailed sadly remains unclear.

In Alkmaar, the overwhelming part of the brides was active in the domestic service sector (Table 2). Since these women served for urban households, their tasks must have been different from those of their servant colleagues on the countryside. Thus, ‘servant’ can imply two very different types of occupations. Servants in Drenthe could most likely be placed in the

⁶⁷ The data from Enschede 1885-1905 are not incorporated in this graph.

⁶⁸ Bras (2002), 83-84.

⁶⁹ Zanden (1985) 70.

category 'agriculture' while servants in Alkmaar were working in 'other services'. Interesting to note is that the second most stated occupation in Alkmaar was 'shop-keeper'. Although only some 6.5-7.0% of the brides in the period 1852-1922 stated to be a shop-keeper, still it was the second largest group of working (unmarried) women who performed this type of work.

To summarize, Figure 5 and Table 2 have shown that the major part of the working brides in Enschede and Tilburg was active in the industrial sector. In Enschede the share of factory labourers grew earlier than in Tilburg. However, I have argued that at least from the 1860s onwards, also in Tilburg the major part of the brides worked in the industrial sector as seamstresses, cloth pickers and spinsters can be placed in this category as well. These numbers are strikingly different compared to those of Alkmaar and Drenthe where most women were working as servants. 'Seamstress' is the only industrial occupation appearing in the top-5's of these regions.⁷⁰

⁷⁰ As mentioned before, I do not know what a job as 'labourer' entailed. However, I do not expect these women to work in the industrial sector for the province of Drenthe was largely agricultural.

Table 2: Most frequently stated occupations in three time periods per region (in percentages of the total amount of women with a stated occupation).

	Enschede			Tilburg			Alkmaar			Drenthe		
	1812-1851	1852-1891	1892-1932	1812-1851	1852-1891	1892-1920	1812-1851	1852-1891	1892-1922	1812-1851	1852-1891	1892-1932
1	Servant 53.70%	Factory labourer 45.60%	Factory labourer 52.70%	Servant 27.10%	Servant 29.30%	Factory labourer 31.00%	Servant 57.40%	Servant 80.00%	Servant 65.80%	Servant 51.50%	Servant 45.30%	Labourer 43.20%
2	Factory labourer 19.20%	Servant 40.00%	Textile labourer 14.40%	Seamstress 17.90%	Factory labourer 23.60%	Servant 27.70%	Labourer 15.70%	Shop-keeper 6.50%	Shop-keeper 7.10%	Labourer 20.10%	Farmer 9.70%	Servant 42.80%
3	Seamstress 6.90%	Seamstress 6.60%	Servant 12.60%	'Spinster' 15.40%	Seamstress 16.60%	Seamstress 16.00%	Seamstress 8.10%	Seamstress 2.70%	Teacher 5.30%	Farmer 13.40%	Seamstress 4.60%	Seamstress 2.80%
4	Coil labourer 3.50%	Weaver 4.50%	'Ready-to-wear' seamstress 4.30%	Day labourer 14.20%	Cloth picker' 8.90%	Shoemaker 5.20%	Shop-keeper 7.40%	Tradeswoman 2.00%	Seamstress 3.60%	Seamstress 4.90%	Shop-keeper 1.00%	Farmer 2.50%
5	Labourer 2.20%	Tavern labourer 0.60%	Seamstress 2.80%	Farmer 9.60%	Day labourer 8.10%	Damer 3.40%	House-keeper 1.40%	Labourer 1.80%	Fashion designer 3.60%	Farmers- maid 2.10%	Trades- woman 0.80%	House-keeper 2.30%
	Other 14.50%	Other 2.70%	Other 13.60%	Other 15.90%	Other 13.50%	Other 16.70%	Other 10.10%	Other 7.00%	Other 14.6%	Other 8.00%	Other 38.60%	Other 6.60%
Nr. of brides with occupation /total nr. of brides	635/1198	513/2121	6814/12348	402/479	801/891	947/2603	1333/3229	1060/4254	281/4846	10895/19148	15400/34662	18711/59006

The influence of industrialization and changing preferences

Prior studies that have attempted to explain the development of female LFP have focussed on the influence of industrialization and on changing social norms. In the light of these discussions, I will now explain the trends I have found in the marriage records. I first pay attention to use of the 'separate spheres theory' and its relevance in the context of this research. Next, the supply and demand side of the textile industry will be studied. Consequently, the average age at marriage and its developments over time will be analysed.

A growing separation of the public and the private sphere?

There is a large body of literature describing the influence of industrialization on women's labour. An ever returning question is whether women were increasingly restricted to the private sphere and excluded from the public sphere. On the one hand it is argued that industrialization had a negative effect on women's LFP. On the other hand it is argued that it initially created *more* work for women and that they were not pushed back into the private sphere.

The "pessimist" view on the matter is that industrialization caused a growing separation between the public and the private sphere. The dichotomy between the 'female sphere' and the 'male sphere' - or the 'home' and the 'outer world' - would stay dominant in feminist historiography for decades.⁷¹ Supposedly, production was increasingly executed in the public sphere. Activities previously carried out at home (like spinning and weaving) were relocated to factories and partly taken over by machines. Consequently, women could no longer combine wage labour with household labour. Because male wages rose during the nineteenth century, households could afford to miss female incomes.⁷² Walhout and Van Poppel support this view and propose that industrialization was an important reason for the decline of female LFP they found in the marriage records.⁷³

However, during the 1990s a growing work of critique on this framework has appeared. In 1993, Amanda Vickery published an article on the use of "the separate sphere theory". She concludes that this conceptual framework is inadequate for investigating women's labour in the nineteenth century. According to her, this theory could essentially be applied to every period in history as women have always been more associated with the private sphere than men have. Thus, this theory is not fit to explain economic and social developments in one particular era.⁷⁴

⁷¹ Vickery (1993), 386.

⁷² Humphries (2013); De Vries (2008), 210-213; Walhout & Poppel (2003), 315; Vickery (1993); Thomas (1988); Pinchbeck (1977, first published 1930).

⁷³ Walhout & Van Poppel (2003), 315.

⁷⁴ Vickery (1993), 413.

Jan de Vries opposes the separate spheres theory as well, but gives other arguments for its inadequacy. According to him, the idea that the 'family economy' of proto-industrial Western Europe was destroyed by "the expansion of market-based economic relations" is fundamentally wrong. The family economy did not exist as a "cooperative unit of production and labour" but was principally based on individual incomes. Moreover, De Vries stresses the continuity of the low-skilled character of women's work throughout history. Just like Vickery argues that the separate spheres theory could be applied to multiple periods, so does De Vries argue that changes in female labour cannot automatically be linked to the Industrial Revolution.⁷⁵ Furthermore, he states that the two spheres have never been completely separate from each other. De Vries himself proposes changing consumption patterns to be the main explanation for the withdrawal of *married* women from the labour market during the second half of the nineteenth century.

At least two points plead against the relevance of the 'separate spheres theory' in this context.⁷⁶ First, the occupations recorded in the marriage records were those women had before their marriage. The argument that it became harder for women to combine wage labour and household tasks is therefore invalid because they did not yet have their own household to take care of. Second, LFP in the industrial centres (Figure 3) was higher than in agriculture and the service-sector throughout nearly the whole research period. What is more, during the last decade of the nineteenth century, new machinery was introduced in the cotton-industry. "These machines were mainly operationalized by young, unmarried women."⁷⁷ This view is supported by Figure 6 below, which suggests that younger women more often stated an occupation than older women. Future research will determine the relevance of this theory in the context of *married* women's labour.

Preliminary research results on the increase of the produce of textile in Enschede further supports the latter argument. Table 3 shows the total amount of spindles and weaving-loom in use in Enschede. It becomes clear that around the turn of the century, there was a strong increase of the amount of operative spindles and weaving-loom in the city. The idea that these machines were for an important part operated by women (and children) is confirmed by the labour surveys of 1890. A manufacturer of the firma 'Blijdenstein' in Enschede states that "Due to an increase of improved machines, the amount of labourers has grown as well. Physical strength of men and women is no longer necessary. Instead, care and intelligence have become

⁷⁵ De Vries (2008), 103. De Vries bases this argument on an article by Ad Knotter (1994).

⁷⁶ Walhout & Poppel (2003), 314-315.

⁷⁷ Smit (not yet published dissertation), 477.

important. As a result, the amount of women and children in the factories is much larger than it used to be, because even with little physical effort, they are still able to earn some money.”⁷⁸

*Table 3: amount of spindles and weaving-looms in Enschede 1895-1917*⁷⁹

Nr.	1895	1900	1905	1907	1917
Spindles	110.780	198.690	253.358	288.086	439.240
Weaving-looms	6.130	7.722	9.587	10.784	14.677

Industrialization and the demand for labour

In contrast with the previous argument, it has been suggested that industrialization initially increased women’s opportunities in the labour market. In this argumentation, mechanization caused an increasing need for a cheap, unskilled work force. Women were therefore an appealing group of labourers. Consequently, women became independent wage earners which gave them more bargaining power within the household. In the context of industrializing England, some scholars have argued that this would later cause exclusion of women from the labour market. “Fears of replacement by cheap, female labour, evident in cotton spinning as early as 1818, have been argued to be significant in the exclusion of women from well-paid, expanding occupations as industrialization progressed and was institutionalized through legislation.”⁸⁰

Thus, in this line of thought, young women must have been mobilized en masse. The data I have collected support this view: the younger a woman was, the higher was the chance that she stated an (industrial) occupation at marriage. Figure 6 shows the percentage of women with a recorded occupation per age in Enschede and Tilburg. In this figure, no attention has been paid to developments over time.

⁷⁸ Staatscommissie van Arbeidsenquête, Tweede Afdeling (1893), 43. Translated from Dutch: “Door de toeneming van verbeterde machines is ontegenzegglijk het aantal arbeiders toegenomen. Kracht van man en vrouw is niet meer noodig, zorg en intelligentie is daarvoor in de plaats gekomen. Het gevolg is dan ook dat het aantal vrouwen en kinderen in de fabrieken veel grooter is dan vroeger, omdat deze ook met weinig krachtsinspanning nog wat kunnen verdienen.”

⁷⁹ Municipal records of Enschede, *Archives of the Provincial Administration of Overijssel 0025*, inv.nrs. 9453-9486.

⁸⁰ Horrell & Humphries (1997), 50.

Figure 6: percentage of women with a stated occupation per age in Enschede and Tilburg 1812-1932

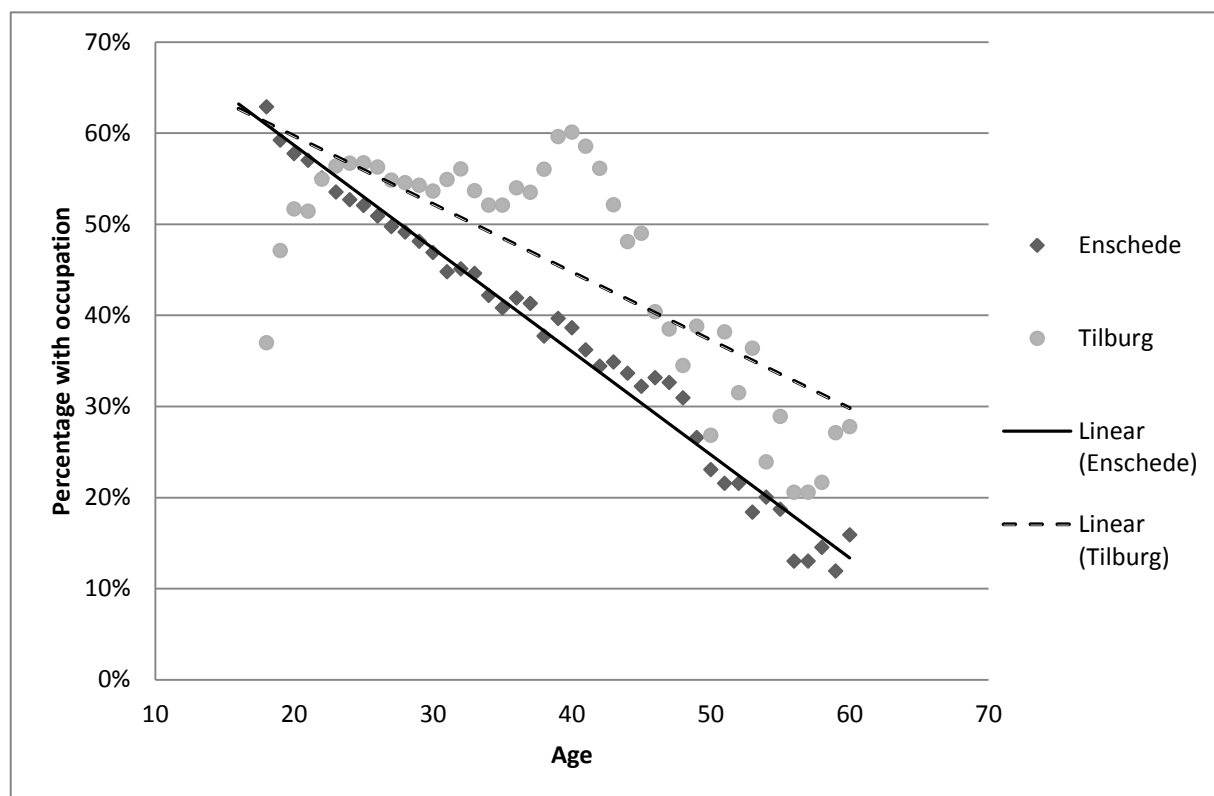


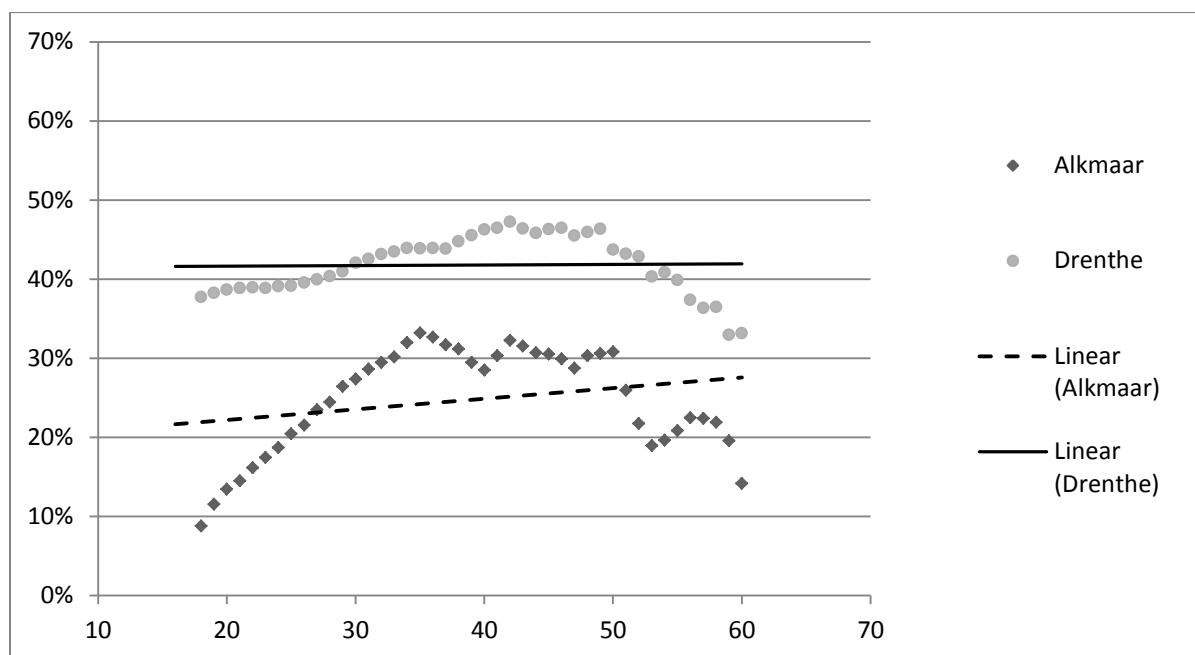
Figure 6 shows a strong correlation between age and LFP, although this is to a lesser extent the case in Tilburg than in Enschede. This can mean two things. First, this graph could indicate that younger women were more active in the industrial sector than older women. This would be in line with the assumption that industrialization required cheap labour which was mainly found among children and (young) women. Second, there could have been other variables at play next to age and occupation causing this apparent correlation. For instance, the absolute number of women marrying within a certain age-group could have differed substantially. This can easily be checked by analysing the ages of the brides – again, without paying attention to developments through time. 63% of *all* the brides in the period 1812-1932 married between the age of 21 and 27. Only 11% married before the age of 21 and 26% after the age of 27. Thus, women younger than 21 are not overrepresented.

A second issue we need to address is the *types* of occupations women stated per age-group. Indeed, the overwhelming part of the young brides in Enschede stated to have an occupation in the (textile)industry. Even the amount of (domestic) servants shrinks into insignificance compared to the amount of factory workers. In Tilburg, the share of servants was slightly larger although the majority of the brides still stated to work in the textile-industry (Figure 5). However, there were fewer factory labourers and more seamstresses and weavers in

Tilburg. This is in line with the idea that women in Tilburg tended to work from home rather than in the factories.⁸¹

Third, one might wonder whether the trend shown in Figure 6 was characteristic for the labour market in the industrial centres. Indeed, the marriage records from Drenthe and Alkmaar gave different results when testing the relationship between age and LFP (Figure 7).

Figure 7: relation between the percentage of women with a stated occupation and age in Alkmaar and Drenthe 1812-1932



From the graph above we can see that the relationships between age and LFP in Drenthe and Alkmaar are strikingly different compared to those in Enschede and Tilburg. In these two regions, no correlation between the two variables could be found. In Drenthe, age did not seem to matter when determining the chance a woman stated an occupation upon marriage. In Alkmaar, it was the group of ‘older’ brides between the age of 30 and 50 who more often stated an occupation.

Would this image change when we would include a time dimension in the analysis? It has been argued that in England industrialization created more work for women only during the early stages of mechanization.⁸² If this were true for the textile cities of Enschede and Tilburg, the amount of women working in industry must have been lower from 1900 onwards. However, when we isolate the records from 1900-1932, the amount of women working in the textile industry in Enschede and Tilburg is (again) very high (Figure 3). Unfortunately, the number of

⁸¹ Janssens (2009).

⁸² Horrell & Humphries (1997).

records in the first half of the research period was too small to find a reliable relationship between age and LFP. However, isolating the data from 1900-1932 shows a clear relationship between these two variables. Thus, based on my results I would state that industrialization did not cause the withdrawal of (young) *unmarried* women from the labour market. If anything, it increased their opportunities in the long run and not only during the early stages of industrialization. This statement is further strengthened by the previously shown relation between the increasing amount of machines and the expanding female labour force.

What do these data tell us about the demand for labour in the textile industry? When brides became older, chances of having a job in the textile industry seemed to shrink significantly. I would propose the following hypothesis. Women became less appealing for employers when they were older because the chance they would soon marry was larger. In Tilburg, women working in factories were usually fired the moment they got married. This statement – among others supported by Angélique Janssens - was confirmed after studying the *arbeidsregisters* (labour registers) of the spinning enterprise Pieter van Dooren in Tilburg. In these registers, reasons for the departure of employees were specified: for female employees ‘marriage’ was the most common reason.⁸³ In Enschede however, married women were allowed to work in the factories. According to the labour surveys of 1890, the amount of children a woman had influenced her choice whether or not to work in the factory. A manufacturer of the firm ‘Blijdenstein’ mentions that, “As a rule, married women working in the factories have one or two children. When they have more, they leave the factory.”⁸⁴ The fact that many young, *unmarried* women worked in the Enschede factories, may be explained by the factory schools. Children usually started working in the factories at the age of 12-14. Until they were 17 years old, they had to attend the factory schools where they received (some) education. Thus, they were bound to the factory from a young age onwards.⁸⁵

Changing preferences and social norms

In 2009, Van Poppel et al focussed on the influence of social norms and related preferences to explain the development of stated occupations in the marriage records. They noticed that women often withdrew from the labour market the moment they married. In contrast with their 2003 article, they emphasized the invalidity of the argument that women had to stay home to take care of the household. Hence, they argued that changing social norms must have been the

⁸³ Regionaal Archief Tilburg, Arbeidsregisters, *Archief Spinnerij Pieter van Dooren Tilburg 1827-1968*, inv.nrs. 684-697.

⁸⁴ Staatscommissie van Arbeidsenquête, *Tweede Afdeling* (1893), 44. Translated from Dutch: “In den regel hebben de gehuwde vrouwen, die in fabrieken werken, een of twee kinderen; komen er meer, dan verlaten zij de fabriek.”

⁸⁵ Staatscommissie van Arbeidsenquête, *Tweede Afdeling* (1893).

main impetus for the growing number of women entering marriage as a housewife.⁸⁶ Supposedly, changing social norms automatically meant changing preferences. Van Poppel et al used the *theory of the leisure class* (the assumption that lower social classes always want to emulate higher classes) to explain why preferences changed. According to them, the day of marriage was the perfect moment to “show the world who one is, or rather to which group one aspires to belong.”⁸⁷ At least for my cases there is not enough supporting evidence to prove that brides indeed used their marriage record for such a statement. However, I do think that changing social norms are a crucial aspect of the developments of female LFP. As Van Poppel et al rightfully point out, women increasingly *entered* marriage as a housewife. Thus, it was not merely a practical phenomenon. However, this image has to be nuanced as my results do not show a continuing decrease in brides without an occupation. If social norms indeed influenced women’s labour, how then do we explain the developments in Enschede and Tilburg?

My sources can shed light on one aspect of these supposed preferences: the age at marriage. Over time, the *average* age at marriage dropped from circa 28 in 1820 to 26 in 1920. The four regions experienced more or less the same development through time. However, the average age in Drenthe was slightly lower than in the other three regions.⁸⁸ Table 4 shows the average age at marriage of the four regions in three periods of forty years.

Table 4: Average age at marriage in three periods of time

	1812-1851	1852-1891	1892-1932
Enschede	27.70	27.31	25.58
Tilburg	28.47	28.00	26.63
Alkmaar	28.66	28.17	26.43
Drenthe	26.68	27.04	25.19

The findings presented in Table 4 suggest that preferences connected to the moment of marriage had changed significantly around 1900. In the industrial centres, women married approximately two years earlier during the last period than their mothers and grandmothers had done before. If marriage indeed meant the end of performing ‘formal labour’, the lower average age at marriage could partially explain the general decrease of female LFP. However, in Enschede and Tilburg women’s labour force participation was high especially in the period when the average age at marriage was low. These findings support my argument that industrialization increased young women’s employment opportunities: in a period when the brides were young, LFP was

⁸⁶ Poppel & Dalen & Walhout (2009), 100.

⁸⁷ Poppel & Dalen & Walhout (2009), 101. They use the theory developed by the nineteenth-century sociologist Thorstein Veblen: Veblen (1899).

⁸⁸ For a thorough analyses of ages at marriage in the Netherlands see: Poppel (1992).

high. Furthermore, Table 4 may add to understanding the findings presented in Figure 6. The larger share of young, working brides may have been intensified by this changed preference.

This development went hand in hand with rapid rising real wages from the 1870s onwards.⁸⁹ Saving a substantial amount of money before marriage was desirable. Because wages rose, men as well as women were able to make more money in a shorter amount of time. Thus, an early marriage became not only more desirable but also more feasible. Together with ample employment opportunities in industry, this must have been a considerable impetus for young women to work.

The differences between unmarried and married women

The working activities of married women are harder to investigate. Their work was more often seen as complementary and as such not recorded in official documents. This is also the case in the occupational censuses of 1849, 1899 and 1930. However, they do provide us with some information about married women's work. The census of 1899 is especially useful for a comparison between unmarried and married women as it recorded the marital status of every single person. Were unmarried women performing specific kinds of jobs compared to married women?⁹⁰

The Netherlands

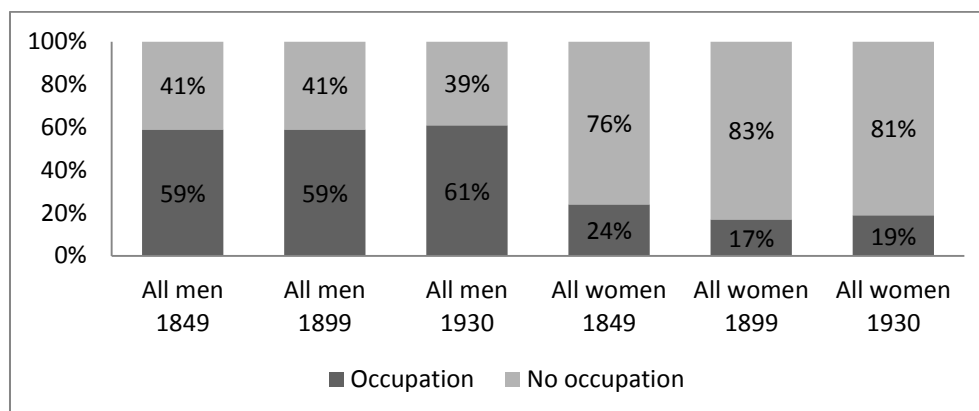
Figure 8 presents the percentage of all men and women with a recorded occupation in the Netherlands at three moments in time. Children are incorporated in these groups as well because the 1930-census did not distinguish people by age. Dutch women's recorded LFP dropped between 1849 and 1899 from 24 to 17 per cent. This development has also been noted by Ariadne Schmidt and Elise van Nederveen Meerkerk. They emphasize that the drop is even more remarkable, given that in 1899 the absolute female population had grown by 1 million whereas only 50.000 more women were listed as working in comparison with 1849.⁹¹ However, including the 1930-census shows that in the period between 1899 and 1930 the female working population would slightly rise again. Thus, nor in the marriage records, nor in the censuses do we see a continuing decrease of the total female LFP until the 1930s. The rise between 1899 and 1930 may be explained by the return of unmarried women to the labour market in industrial centres (Figure 3).

⁸⁹ Zanden & Riel (2004), 275; Smits & Horlings & Zanden (2000); Vermaas (1995).

⁹⁰ NB: widows were also included in the group of 'married women'. However, it is hard to discover the amount of widows because this was not specified in the municipal census. In the future, the analysis of 'married women' will be more nuanced once I have studied this topic more extensively.

⁹¹ Schmidt & Nederveen Meerkerk (2012), 81.

Figure 8: percentage of men and women with a stated occupation in the censuses 1849, 1899 and 1900



The censuses on the municipal level

From the marriage records it became apparent that unmarried women in Enschede and Tilburg were highly active in the textile-industry. The census confirms this observation. We have seen that the census and the marriage records show similar percentages of working women in the industrial centres around 1900 (Figure 2 and Table 1).

Figures 9 and 10 show the percentage of married and unmarried women working in each sector in 1899.⁹² Women without an occupation are not incorporated in these graphs.⁹³ Three findings stand out. First, in every region a fairly large percentage of married women was active in the economic services sector as traders of merchandize while the percentage of unmarried women working in this sector was negligible. Second, considerably more unmarried than married women worked in the other services sector. Young girls often worked as servants, a job which was rarely performed by married women. Third, the share of married and unmarried women working in industry is remarkably similar per region. Only in Alkmaar is there a notable difference. The exact activities of married women in the industry sector will be the next step in my research.

The census broadly confirms the findings from the marriage records. In Enschede and Tilburg most recorded occupations were industrial around 1900. This is also the case in the marriage records from this period. Furthermore, only a negligible part of the unmarried women in the marriage records worked in the economic services sector which is also the case in the

⁹² The findings of Drenthe are based on information about the whole province for it was difficult to trace the census of every individual village.

⁹³ The absolute numbers of women with a recorded occupation in the 1899-census (unmarried/married):

- ❖ The Netherlands: 299.995/97.773
- ❖ Enschede: 2.029/353
- ❖ Tilburg: 2.646/427
- ❖ Drenthe: 5.790/2.836
- ❖ Alkmaar: 1.209/308

census. Working in the economic services sector was thus typical for married women and rarely done by unmarried women.

Figure 9: percentage of working unmarried women active in each sector in the 1899-census

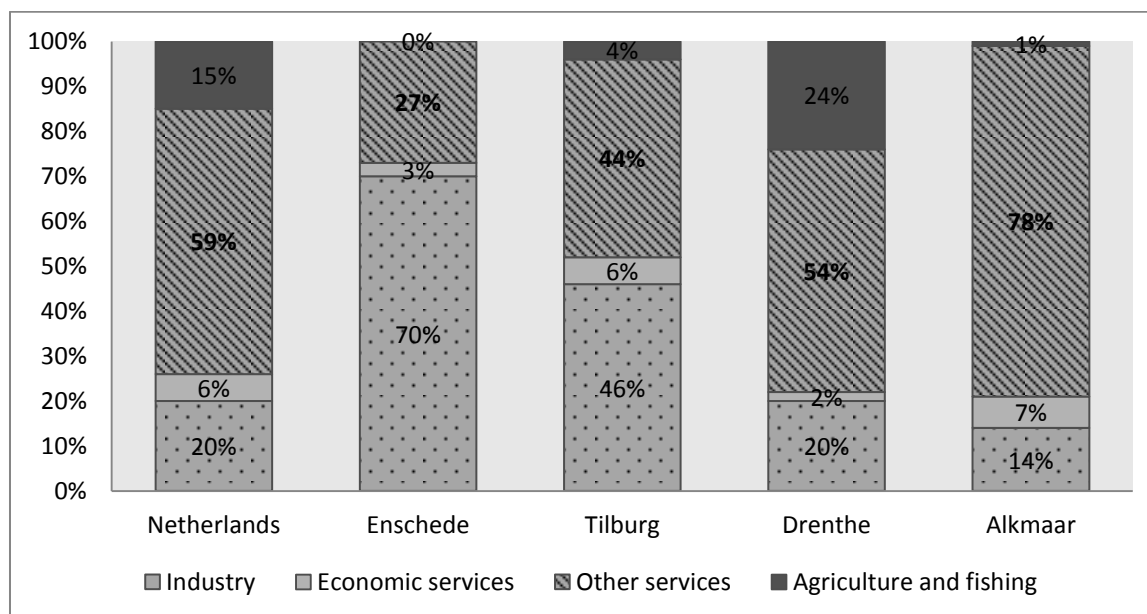
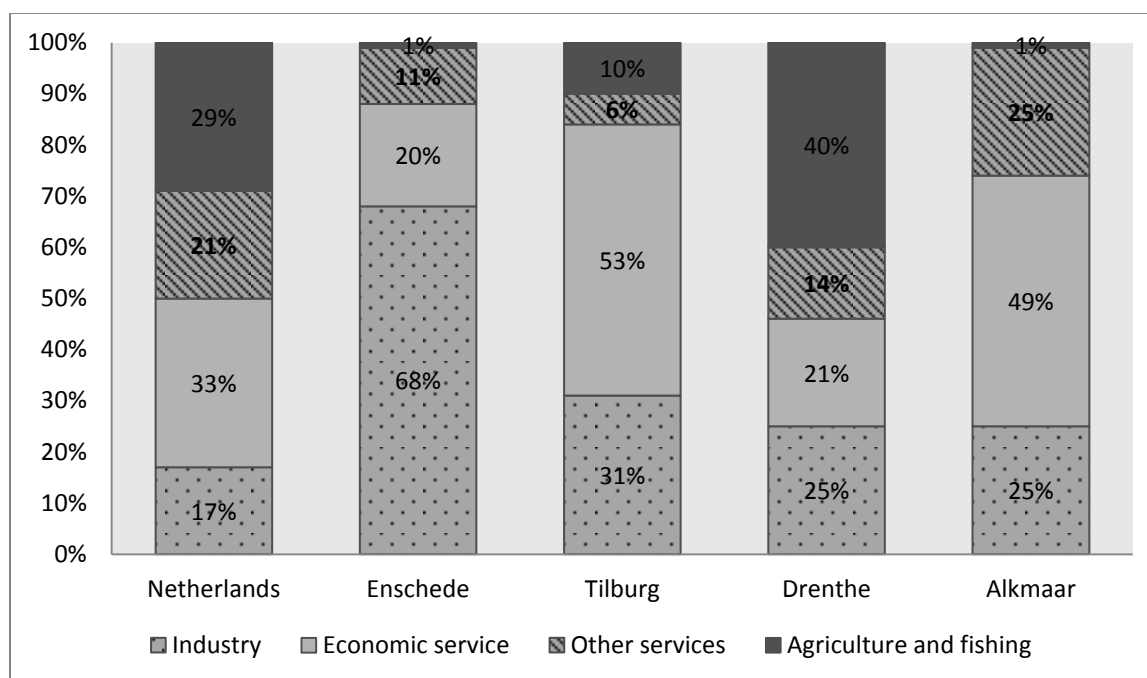


Figure 10: percentage of working married women active in each sector in the 1899-census



Conclusions

This article has argued that the labour force participation of unmarried women developed a specific way in the industrial sector compared to the agricultural and the service sector. Previous research on a provincial as well as on a municipal level has overlooked the differences between the sectors. The apparent gradual decrease of working women shown by Walhout and Van Poppel cannot be found in Enschede and Tilburg. Here, the share of working women went up and down throughout the nineteenth- and early twentieth-century. Moreover, the percentage of women with a recorded occupation was considerably *higher* in the industrial centres than in the regions investigated by Walhout and Van Poppel. This was especially the case during the first decades of the twentieth century.

Explanations for this development were partly found in the conditions for industrial growth. Enterprises required a cheap labour force to eventually industrialize which was found among children and (young) women. This idea is confirmed by Figure 6 which shows that the younger a woman was, the higher the chance that she stated an (industrial) occupation upon marriage. Although other variables may have played a role in the formation of this image, the trend lines are strikingly different from those of Drenthe and Alkmaar. In Drenthe, age did not seem to matter and in Alkmaar it was the group of older women who more often stated an occupation. Explanations ought to be found in the different requirements of the different sectors. Moreover, previous research has shown that important progress that had been made in the mechanization of the textile-industry during the first decades of the twentieth century. The newly introduced machines were mainly operationalized by young, unmarried women. Indeed, LFP is strikingly high in Enschede throughout this period. This confirms the argument that young women were mobilized en masse in the textile-industry.

Furthermore, this article supports the view that female labour was affected by industrialization differently in Tilburg than in Enschede. I found that the share of factory workers was much larger in Enschede than in Tilburg where women more often stated to be seamstresses or weavers. This could imply a larger share of homeworkers in Tilburg. However, women's specific working activities are not further specified in the marriage records.

Women have not always been equally present in the industrial labour market. Between 1880 and 1900, the amount of women with a recorded occupation is unmistakably lower than in the preceding and succeeding decades. It is therefore probable that other factors have played a role as well. I have discussed the role of changing preferences to offer an additional explanation for the discovered developments. I found that the average age at marriage dropped from circa 28 in the early-nineteenth century to circa 26 in the early-twentieth century.

What does this local research tell us about Dutch female LFP in general? First, the decrease of women with an occupation was obviously not a linear process. Analysing information on a provincial level smoothens the development to such an extent that local variation is completely overlooked. Indeed, there were apparent differences between the sectors of the economy that remained unseen in previous studies. Furthermore, we should consider multiple explanatory factors when analysing female labour. The demand and supply of the industrial labour market analysed in this paper is only one of many variables. Although I have argued that industrialization was of great importance on women's labour, I do not plead for a monocausal explanation. Future regional research will shed light on other factors contributing to the fluctuations of female LFP. The road to a 'male breadwinner society' was bumpy and full of surprises. That is why long term, comparative research is necessary for a proper understanding of its origin and expansion.

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Appendix 1: absolute number and percentage of women with a stated occupation working in each sector in the marriage records every fifth year 1830-1920

Enschede

Year	Industry		Agriculture and fishing		Economic services		Other services		Free labourers		Total working women
	N	%	N	%	N	%	N	%	N	%	
1830	0	0.00%	0	0.00%	1	20.00%	4	80.00%	0	0.00%	5
1835	11	45.83%	0	0.00%	0	0.00%	13	54.17%	0	0.00%	24
1840	7	50.00%	0	0.00%	0	0.00%	7	50.00%	0	0.00%	14
1845	1	9.09%	0	0.00%	0	0.00%	10	90.91%	0	0.00%	11
1850	14	60.87%	0	0.00%	0	0.00%	9	39.13%	0	0.00%	23
1855	5	38.46%	0	0.00%	0	0.00%	8	61.54%	0	0.00%	13
1860	5	50.00%	0	0.00%	0	0.00%	5	50.00%	0	0.00%	10
1865	11	73.33%	0	0.00%	0	0.00%	4	26.67%	0	0.00%	15
1870	6	60.00%	0	0.00%	0	0.00%	4	40.00%	0	0.00%	10
1875	18	62.07%	0	0.00%	0	0.00%	11	37.93%	0	0.00%	29
1880	6	50.00%	0	0.00%	0	0.00%	6	50.00%	0	0.00%	12
1885	2	40.00%	0	0.00%	1	20.00%	2	40.00%	0	0.00%	5
1890	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
1895	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
1900	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2
1905	155	82.01%	0	0.00%	0	0.00%	34	17.99%	0	0.00%	189
1910	182	85.85%	0	0.00%	0	0.00%	30	14.15%	0	0.00%	212
1915	144	83.24%	0	0.00%	5	2.89%	23	13.29%	1	0.58%	173
1920	191	81.62%	0	0.00%	5	2.14%	35	14.96%	3	1.28%	234

Tilburg

Year	Industry		Agriculture and fishing		Economic services		Other services		Free labourers		Total working women
	N	%	N	%	N	%	N	%	N	%	
1830	27	49.09%	4	7.27%	1	1.82%	22	40.00%	1	1.82%	55
1835	50	56.82%	9	10.23%	2	2.27%	19	21.59%	8	9.09%	88

1840	40	45.45%	11	12.50%	3	3.41%	22	25.00%	12	13.64%	88
1845	38	46.34%	8	9.76%	2	2.44%	17	20.73%	17	20.73%	82
1850	30	33.71%	6	6.74%	2	2.25%	32	35.96%	19	21.35%	89
1855	20	31.25%	8	12.50%	2	3.13%	23	35.94%	11	17.19%	64
1860	54	53.47%	9	8.91%	3	2.97%	25	24.75%	10	9.90%	101
1865	50	51.02%	6	6.12%	0	0.00%	27	27.55%	15	15.31%	98
1870	67	50.76%	7	5.30%	2	1.52%	39	29.55%	17	12.88%	132
1875	74	61.16%	4	3.31%	3	2.48%	34	28.10%	6	4.96%	121
1880	64	62.14%	3	2.91%	0	0.00%	30	29.13%	6	5.83%	103
1885	51	60.00%	0	0.00%	4	4.71%	27	31.76%	3	3.53%	85
1890	62	63.92%	0	0.00%	2	2.06%	30	30.93%	3	3.09%	97
1895	41	70.69%	0	0.00%	0	0.00%	17	29.31%	0	0.00%	58
1900	96	59.63%	2	1.24%	2	1.24%	59	36.65%	2	1.24%	161
1905	80	57.97%	12	8.70%	4	2.90%	34	24.64%	8	5.80%	138
1910	101	60.12%	6	3.57%	1	0.60%	56	33.33%	4	2.38%	168
1915	82	60.74%	2	1.48%	5	3.70%	36	26.67%	10	7.41%	135
1920	219	76.04%	0	0.00%	0	0.00%	68	23.61%	1	0.35%	288

Drenthe

Year	Industry		Agriculture and fishing		Economic services		Other services		Free labourers		Total working women
	N	%	N	%	N	%	N	%	N	%	
1830	0	0.00%	5	31.25%	0	0.00%	11	68.75%	0	0.00%	16
1835	0	0.00%	9	50.00%	0	0.00%	7	38.89%	2	11.11%	18
1840	1	3.85%	5	19.23%	0	0.00%	16	61.54%	4	15.38%	26
1845	0	0.00%	15	50.00%	0	0.00%	14	46.67%	1	3.33%	30
1850	3	13.04%	5	21.74%	0	0.00%	12	52.17%	3	13.04%	23
1855	0	0.00%	8	33.33%	0	0.00%	12	50.00%	4	16.67%	24
1860	0	0.00%	2	7.69%	0	0.00%	21	80.77%	3	11.54%	26
1865	2	9.52%	1	4.76%	0	0.00%	17	80.95%	1	4.76%	21
1870	0	0.00%	3	12.50%	0	0.00%	20	83.33%	1	4.17%	24
1875	1	5.00%	0	0.00%	0	0.00%	19	95.00%	0	0.00%	20
1880	0	0.00%	0	0.00%	0	0.00%	15	93.75%	1	6.25%	16
1885	1	3.57%	1	3.57%	0	0.00%	20	71.43%	6	21.43%	28
1890	1	4.35%	2	8.70%	1	4.53%	16	69.57%	3	13.04%	23

1895	3	9.68%	5	16.13%	0	0.00%	19	61.29%	4	12.90%	31
1900	2	6.25%	2	6.25%	0	0.00%	27	84.38%	1	3.13%	32
1905	1	4.17%	1	4.17%	0	0.00%	20	83.33%	2	8.33%	24
1910	0	0.00%	1	4.55%	0	0.00%	20	90.91%	1	4.55%	22
1915	0	0.00%	4	25.00%	0	0.00%	9	56.25%	3	18.75%	16
1920	0	0.00%	4	19.05%	0	0.00%	15	71.43%	2	9.52%	21

Alkmaar

Year	Industry		Agriculture and fishing		Economic services		Other services		Free labourers		Total working women
	N	%	N	%	N	%	N	%	N	%	
1830	6	8.00%	3	4.00%	0	0.00%	45	59.00%	0	0.00%	54
1835	5	5.00%	0	0.00%	5	5.00%	51	52.00%	0	0.00%	61
1840	5	7.00%	0	0.00%	4	6.00%	9	13.00%	0	0.00%	18
1845	3	3.00%	0	0.00%	2	2.00%	2	2.00%	0	0.00%	7
1850	1	1.00%	0	0.00%	0	0.00%	3	3.00%	0	0.00%	4
1855	1	1.00%	0	0.00%	4	4.00%	0	0.00%	0	0.00%	5
1860	4	4.00%	1	1.00%	2	2.00%	21	21.00%	0	0.00%	28
1865	1	1.00%	0	0.00%	8	8.00%	35	32.00%	0	0.00%	44
1870	1	1.00%	0	0.00%	7	6.00%	19	18.00%	0	0.00%	27
1875	3	3.00%	0	0.00%	1	1.00%	23	20.00%	0	0.00%	27
1880	0	0.00%	0	0.00%	5	5.00%	29	26.00%	0	0.00%	34
1885	2	2.00%	1	1.00%	3	3.00%	31	29.00%	0	0.00%	38
1890	1	1.00%	0	0.00%	1	1.00%	26	25.00%	0	0.00%	29
1895	3	3.00%	0	0.00%	1	1.00%	25	20.00%	0	0.00%	29
1900	2	2.00%	0	0.00%	0	0.00%	13	10.00%	0	0.00%	15
1905	1	1.00%	0	0.00%	0	0.00%	7	5.00%	0	0.00%	8
1910	0	0.00%	0	0.00%	1	1.00%	1	1.00%	0	0.00%	2
1915	1	1.00%	0	0.00%	1	1.00%	2	1.00%	0	0.00%	4
1920	0	0.00%	0	0.00%	1	0.44%	3	1.31%	0	0.00%	4