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Sectoral Gender Differences

Exploring the Swedish gender wage gap in the 21st century

by

Emilia Folkesson

folkesson.emiliaklara@gmail.com

Abstract

Globally, men tend to earn more money than women. Even in relatively gender equal countries like Sweden wage differences remain. This thesis examines wage differences through the lens of sectoral gender segregation by looking at different wage trajectories, sector-specific gender wage gaps as well as the relationship between gender shares and the gender wage gap within a sector for both public and private sectors in Sweden during the 21st century. This thesis finds that there are no differences in trends for either wage trajectories or sector-specific gender wage gaps, the only differences found between sectors are in the values measured. This thesis also finds a relationship between gender shares and gender wage gaps within the sectors but also finds that the relationship varies for female majority sectors and male majority sectors. This thesis concludes that the welfare state has large effects on sectoral differences in Sweden and that it can negatively affect the perceived human capital for women in the labour market.

Keywords: the gender wage gap, sectoral gender segregation, the welfare state, public sector, private sector

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1 Introduction

Globally, men tend to earn more money than women. Whether it be due to outright discrimination based on gender, a higher degree of part-time work among women, or, occupational segregation due to tasks being perceived as either feminine or masculine, women's wages are generally lower. Sweden has historically been at the forefront of gender issues and has had a high degree of female labour force participation since the 1980s (Gustafsson & Jacobsson 1985; Statistics Sweden, 2019). Many legislative changes have been made over the last century to ensure equality, diminish the pay gap and increase the female labour force participation. The 20th century saw increased rights for women through the right to autonomy and the right to vote, freedom to contraceptives and abortions are other important 20th century factors that increased female labour force participation (Statistiska Centralbyrån, 2010).

However, even in Sweden, a country which generally scores high in equality and where women have been integrated into the labour market for many decades, a pay gap remains. In 2020, the gap was estimated to be 9,8% (Swedish Institute, 2021). Alternatively, when accounting for differences in choice of occupation, the gap is 4,4%. This difference is part of a large discussion about the different contributing factors to the gender pay gap, as well as how much each of these factors actually influences the gap. This is especially interesting in countries like Sweden with a welfare state where women are more likely to be employed by the, often lower-wage, public sector.

This thesis will analyse the different patterns of wages and sector-specific wage gaps for different public and private sectors in the Swedish economy. Given the nature of the welfare state, the public sector in Sweden is relatively large and tends to employ a larger amount of women that are uncompetitive in the private labour market due to the many accommodations guaranteed by the welfare state (Eurostat, n.d.). Thus, sectoral gender segregation should have a larger impact on the gender wage gap as a whole in Sweden. The sectoral wage differences between men and women in Sweden will be examined through data from Statistics Sweden's statistical database and presented in tables and graphs.

The analysis of previous research and results regarding the gender wage gap and sectoral gender differences in this thesis will be conducted on the basis of three theoretical concepts.

The first is the concept surrounding the effects of a welfare state on sectoral gender segregation, women's wages, and the gender wage gap within a society. The second concerns the differences in occupational preference and choice of individuals and groups. Discussing many reasons as to why men and women might have different preferences on what to work with and why they ultimately make different choices about their line of work and time spent working. The third concept covers human capital and its effects on a sector's perceived value. Suggesting that women accumulate lower stocks of human capital than men and that it affects wages, not only on an individual level but also on a sectoral level through devaluation of female-majority sectors due to a lower stock of perceived human capital.

At a quick glance, one could assume that the male majority private sectors would have higher wage levels. However, this thesis finds that there are no clear patterns of higher wages or higher gender wage gaps in the private sector. Rather it finds that individual public and private sectors have similar wage patterns and large, non-categorical, differences in wage levels or gender wage gaps. Finally, this thesis finds a relationship between sector-specific gender wage gaps and sectoral gender shares and discusses from the point of the mentioned theoretical concepts what implications this has for women in the Swedish welfare state.

1.1 Aim and Research Question

This essay aims to examine the differences between men and women in the Swedish labour market in the 21st century and to investigate the sectoral gender segregation aspect of the total gender wage gap in the Swedish labour market. While vertical gender segregation, the unequal distribution of men and women in leadership positions, will be discussed, the main focus of this thesis will be on horizontal gender segregation, the unequal distribution, and the overrepresentation of men and women in certain sectors. In order to identify and discuss the aspects of the differences between men and women in the Swedish labour market, 3 research questions will be answered.

Research question 1

Is there a difference in the wage trajectory for the public and the private sectors Sweden 2003-2020?

Research question 2

Is there a difference in the gender wage gap for the public and the private sectors Sweden 2003-2020?

Research question 3

Is there a relationship between the sector specific gender wage gap and the sectoral gender shares Sweden 2003-2020?

1.2 Relevance

While the gender wage gap has been discussed at length for many parts of the world, sectoral gender segregation is a somewhat less debated topic. There has been a lot of previous work on the effects and causes of occupational gender segregation in Sweden, this thesis will add further insight into the situation for women in the Swedish labour market, most importantly, by reaching modern times. The analysis of the trends found through the lens of existing theoretical concepts will help the continued discussion about the causes of sectoral gender segregation in Sweden and the effects it has on the gender pay gap as a whole.

1.3 Limitations

This thesis will provide good insights into the patterns of wages for men and women as well as patterns of male or female majority and wage gaps for the sectors of the Swedish economy, however, it will not provide any econometric tests of the discussed theoretical concepts. As will be discussed further in the limitations of the data used, this thesis will not discuss occupational differences, as most papers of this type do, but rather it will use sectors as a broader representation of differences in men's and women's position on the labour market and their corresponding wage. While this reduces the precision of the discussions in this thesis, it does not take away from conclusions that can be made about the Swedish situation in broad terms.

The three theoretical concepts used in this thesis are comprised of many different theories discussing the same aspects of sectoral gender segregation and its causes and effects on the gender wage gap in Sweden. While this reduces the theoretical precision of the discussion in this thesis, it opens up for a broader discussion of different aspects of the larger concepts. This ensures a fruitful discussion despite the broad data and lack of econometric tests.

1.4 Definitions of Concepts

A welfare state ensures that its citizens are protected and cared for. For the purpose of this thesis, the welfare state is defined as government entities ensuring the protection and participation of women in the labour market through tax revenue. The welfare state here is also the cause of the large public sector in Sweden.

The sector-specific gender wage gap refers to the differences in wages between men and women within a sector. This is calculated as female wage divided by male wage and is presented as a percentage.

Table 1 gives specific explanations of the sectors that will be used in this thesis.

Table 1: Sectoral Definitions and Explanations

Sector	Explanation
All Sectors	Comprised of all sectors below
Public Sector	Comprised of the state sector, the municipal sector, and the regional sector
State Sector	People employed by the state, for example, people employed in government agencies.
Municipal Sector	People employed by a municipality, for example, teachers and social workers.
Regional Sector	People employed by a region, for example, healthcare workers
Private Sector	Comprised of private workers and private officials
Private Workers	People employed in the private sector that work with practical aspects of a business such as manual labour. Wages for people employed in this sector are determined by the value of all workers in a union. This sector includes jobs like electricians and industrial workers.
Private Officials (Tjänstemän)	People employed in the private sector that work with planning aspects of a business, mainly office jobs. Wages for people employed in this sector is determined by their individual value. This sector includes jobs like accountants and engineers.

Definitions and explanations for sectors in Sweden for the period 2003-2020 (Statistics Sweden, n.d a&b)

2 Background

Sweden is a social-democratic welfare state that grew notably during the 20th century, developing the economy and welfare state we see today. Sweden, together with the other Nordic nations, are often seen as the leading nations in gender equality and in 2021, Sweden scored 83,9 on the European Institute for Gender Equality's gender equality index. The score for the EU as a whole was 68 (European Institute for Gender Equality, 2022). From the 1960s to the 1980s the female labour force participation in Sweden rose from 50% to just above 83% and it seems to have remained stable and high, amounting to 87% in 2019 (Gustafsson & Jacobsson 1985; Statistics Sweden, 2019). Since the 1970s Sweden has had a relatively low wage gap compared to other countries and since 2006, Sweden has not ranked lower than fifth in the World Economic Forum's ranking of 150 countries based on the gender gap. It seems the Swedish welfare state truly has come a long way to achieving gender equality, yet Sweden, and the other Nordic countries, have historically been and still are to some extent, troubled by high levels of occupational gender segregation (Ellingsæter, 2013). There are many scholars who have discussed the welfare states impact on occupational gender segregation and its contribution to the gender wage gap, this concept will be elaborated on further in the next section while this section will give context to the Swedish welfare state and its policies as well as continued context about the Swedish government's work towards gender equality.

2.1 The Swedish Welfare State

As mentioned above, the Swedish welfare state started forming into the one we see today during the 20th century and was very progressive for its time. In the first half of the century, policies of the Swedish welfare state were meant to decrease infant mortality rates and increase fertility rates which had dropped to one of the lowest in the world. Some of the laws implemented in the 1930s still remain today, including the laws prohibiting the firing of women due to their marital status or pregnancy (Wells & Bergnehr, 2014). Since the 1970s, Sweden's welfare system has had a clear goal of achieving gender equality for parents in the labour market. Not only by increasing women's work but also by increasing men's contribution to household chores and childcare. Thus, the Swedish model promotes dual-income households (Wells & Bergnehr, 2014).

Further examples of policies and legislations the Swedish government has implemented aimed at increasing women's rights in the workplace are the 1925 act giving women equal rights to

men for government professions and later, in 1947, these occupations enforced equal pay for equal work (Statistiska Centralbyrån, 2010). In 1939, women could no longer be fired when they were starting a family. Two important legislations are the 1980 law against gender-based discrimination in the workplace and the 2009 law of discrimination that further prevented gender-based discrimination (Statistiska Centralbyrån, 2010).

Furthermore, Sweden has had a long history of parental leave policies. As early as 1900, all mothers were expected to stay home from work for 4 weeks with their newborn babies (Wells & Bergnehr, 2014). Now, parents in Sweden are guaranteed 480 days of parental leave that can be split between parents, with 2 months being completely reserved for the father. However, despite many campaigns to get fathers to take more time off with their children, fathers still only took an average of 23% of the days in 2014. For fathers with higher education, the number tends to be somewhat higher. However, for women, a higher degree of education usually means a lower amount of parental leave utilized (Wells & Bergnehr, 2014). A possible explanation for this is that people tend to marry someone of a similar education level, so the decrease in parental leave for highly educated women is most likely due to their highly educated partners taking a larger share of the time (Zill, n.d.).

Many of the Swedish policies that helped women enter and gain a stable footing in the labour market are strongly associated with the second demographic transition. This is a theoretical framework that explains women's increased opportunities as the role of families shifts in society. As both fertility and marital rates decrease, women have time to fulfil themselves as individuals without the pressure of having a family (Lesthaeghe, 2020). Fertility rates decreased as Swedish women in 1938 were given access to contraceptives. In 1974, abortion was legalised, leaving the choice completely to the women up until the eighteenth week of pregnancy. These policy changes, among others surrounding women's rights to bodily and economic autonomy, gave women more freedom to plan their family life and plan their careers. Today, the average age of first birth in Sweden is around 30, giving women plenty of time to get an education and start a career before they start a family (Eurostat, 2021). The Swedish welfare state also helps families with affordable childcare which further makes the dual income household a possibility and helps reduce the time that women have to, or in society's eyes should, spend on unpaid domestic work (Wells & Bergnehr, 2014). While this framework doesn't explain any recent change in the role of women in the Swedish labour market, it is an

important factor for early changes and for women's ability to return to work after starting a family.

Today the Swedish government works towards six smaller goals to help achieve total gender equality. These include an equal distribution of power and influence, economic equality, equality in education, equal distribution of unpaid domestic labour, equality in health, and putting a stop to men's violence against women (Statistics Sweden, 2020). Many of these goals are similar to older attempts to achieve gender equality and get women into the labour market. While some of today's goals are not directly connected to a decrease in wage differences between men and women in the Swedish labour market, total equality between men and women over a long period of time is needed if the gender wage gap is ever to become statistically insignificant. For example, both current and previous family policies attempting to increase men's unpaid domestic work and thus further increase women's opportunities on the paid labour market has not been entirely successful despite decades worth of work. While the gender roles in Sweden has changed remarkably, allowing for the initial entrance of women on the labour market and, later, a decrease in the gender wage gap, there is still work that can be done (Wells & Bergnehr, 2014; Polacheck, 2004).

2.2 The Public and Private Sector

Throughout women's history in the labour market, the state and public sector have been an important employer for Swedish women (Melkas & Anker, 1997). Despite being characterised by lower wages, the public sector offered a larger security and a lower penalty for women with families. Furthermore, the public sector also entails many of the caring occupations that fit the traditional gender roles of women. Throughout history, Nordic women have, in general, been concentrated in these lower wage and lower status occupations, however, from 1970-1990 more women started to move into traditionally male dominated occupations. Despite this, occupational gender segregation was continuously high at the end of the 20th century (Melkas & Anker, 1997).

Many scholars have debated, which is further explored in the next section, why female majority occupations and sectors are characterised by lower wages. However, there may be contextual factors other than gender concentration that affects wages in the public and private sectors. One important contextual factor for the public sector is the fact that wages are paid by taxes and

that the wage structure is very compressed (Arrius & Granqvist, 2018). Due to the limited profits of the welfare state, wages can only increase a limited amount, whereas private sector wages can increase with profit. These differences are important to remember when discussing and analysing results later in this thesis as they can inflate the perceived differences between public and private sectors caused by gender.

This information on the Swedish welfare state gives important context to the Swedish labour market and its pattern of horizontal segregation of men in the private sector and women in the public sector. The effects of the Swedish welfare state, as well as other factors such as human capital and occupational preferences, has on women's wages and the gender wage gap, has been researched by other scholars using different methods, data and time periods. A selection of relevant papers and results will be presented in the next section.

3 Literature Review

The literature on the gender wage gap is extensive, perhaps even more so in regard to the Nordic countries. One general theory of discrimination is that of Becker (1971), which states that in an instance of complete segregation of a minority or marginalised group, this group's relative wage will be lower than if they had to fight discrimination in an integrated labour market. This is an important point for current debates on occupational gender segregation and its contribution to the total gender wage gap. As it stands, even if discrimination against women stopped altogether, the wage gap due to systematic differences in the types of occupations men and women hold would ensure continued differences between the wages of men and women (Hansen & Wahlberg, 2008).

A 1996 paper by Petersen, Meyerson, and Snartland examines the within-job gender wage gap in Sweden and finds that within occupations, wages are generally very similar for men and women. However, when differentiating between blue-collar jobs and white-collar jobs, they find that white-collar jobs are associated with a much higher wage gap. Similarly, Hansen and Wahlberg (2008) find that the gender wage gap tends to be higher in female dominated occupations than in male dominated occupations. Interestingly, they also find that wage differences that are not due to any observable factors are larger in the, often male majority, private sector. This suggests a larger degree of vertical segregation in the female dominated

occupations than in the male dominated ones, and a larger degree of discrimination in the male majority private sector than in the female majority public sector.

3.1 The Welfare State

For Sweden, the clustering of men and women in the private and public sectors respectively is an important aspect in the discussion of differences between men and women in the labour market. Here, the welfare state is often debated as a contributing factor to gender segregation, sometimes referred to as the welfare state paradox (Mandel & Semyonov, 2006). This theory aims to explain the negative effects that family friendly policies have on women's economic achievements, suggesting that policies aimed at helping women, might actually increase statistical discrimination against women (Ellinsaeter, 2013; Grönlund & Magnusson, 2016). Thus, while a welfare state often is characterised by a large degree of female labour force participation, it is also subject to a relatively large degree of both horizontal and vertical segregation in the labour market.

One factor of occupational gender segregation in Sweden is the penalty for having children. Women who take the average amount of maternity leave are not discriminated against whereas women who utilise the entire parental leave are. This suggests that while the labour market accepts the laws of the welfare state to a certain extent, utilising it to the full extent still gives women a disadvantage. Furthermore, the penalty for taking time off, for example, maternity leave, is significantly smaller in the public sector than in the private (Ellingsæter, 2013).

Grönlund and Magnusson (2016) argue that the welfare state might be the most harmful to the wages of highly educated women. While women have surpassed men in higher education in Sweden, the welfare state and the penalty it puts on women in the higher wage private sector means that women still lag behind on wages. Grönlund and Magnusson theorise this to be due to the devaluation of education as the importance of workplace skills increases, something women lose when they take time off. They do however find that this theory of a welfare state paradox, while not completely untrue, is not a sufficient explanation for the difference in wages between men and women in Sweden. In contrast to their theory, they find that occupational gender segregation has the largest effects on wages in low skilled occupations, and Ellingsæter (2013), highlights that desegregation has been the faster in middle class occupations.

Korpi and Stern (2006) conclude that domestic policy has had a large impact on the successful levels of female labour force participation. However, even though Sweden has had good childcare policies that have allowed mothers to work, the societal responsibility for families has continued to fall on women. In occupations where women, and thus part time work cluster, the gender wage gap tends to be higher than in occupations where men are a majority. Hansen & Wahlberg (2008) estimates that about 30% of the total gender wage gap is due to occupational gender segregation.

In Sweden, it has been found that women tend to work in people-oriented occupations. Although this research by Bandholtz, Dekhtyar, Herlitz, and Hustad (2020) shows an improvement in the integration of women into all occupations and positions in recent years, a general trend of gendered occupation segregation remains in the Swedish labour market. However, this does not mean that there is no segregation of men and women within these occupations. A study by Snyder and Green (2014) on nurses in the United States, shows that while women dominate the nursing field and have, in that specific instance, broken through the glass ceiling and placed women in higher positions. The choice of specialty, with varying levels of wages, is still segregated with male nurses overrepresented in specialties considered more masculine.

3.2 Preference and Choice

In an early paper, Blau, Custard, Jessor, Parres & Wilcock, (1956) explain that in a society, the likelihood of a marginalised group entering an occupation has little to do with their actual capacity to execute the necessary tasks. Instead, they argued that occupational choice is based on the compromise between the individual's preferences and society's expectations.

Blackburn, Browne, Brooks, and Jarman (2002) discuss the concept of individual preference and its impact on occupational gender segregation. While they accept that preference impacts an individual's choice of occupation, they reject that it has any real value in explaining the patterns of segregation visible in the labour market. The argument for preferences affecting segregation is that people's choices and preferences are influenced by their environment, meaning that women might choose an occupation based on societal influences. However, the authors underline the fact that men and women are not homogenous groups that will have similar preferences and make similar choices about their families and occupations. They also

highlight the fact that preferences change over a person's lifetime and as new opportunities arise. Finally, they highlight that theories of preference and choice at their effects on the gender wage gap must be discussed both from the position of women's preferences as well as from the position of employers' preferences that might increase statistical discrimination.

Further, the fact that the public sector tends to have higher rewards for women and that the private sector has higher rewards for men suggests rationality in the choice of men and women in the labour market (Hansen, 1997). For a woman who wants to avoid being penalised for having a family, it is perfectly reasonable to enter the public sector. Goldin and Katz (2011) find that the largest wage differences between men and women are found in occupations where there is little flexibility for workers. Interestingly, one of the industries with the highest level of flexibility is the tech industry, a traditionally male dominated industry. Although there are other reasons for women not entering the tech industry thus far, this suggests that women are perhaps not as rational in their occupational choices as some scholars have theorised. Thus, the degree to which people actually consider these factors when choosing to enter an occupation or field of studies is not clear enough to suggest that this is the main explanation for gendered segregation. Cech (2013) argues that men and women choose their occupations based on cultural influence and what they think it means to be a man or a woman. He argues further that these structural aspects of gender, influence our sense of self and our choice of occupation. However, he also concludes that, for men, the self-expression mirrored in the choice of occupations tends to be stronger than for women.

3.3 Human Capital and Devaluation

One noteworthy theory about women's early effects on the labour market, presented by Goldin (2002), is the theory of pollution. It states that when women entered the labour market, their individual skills and characteristics were unknown, and instead it was the public perception of the capabilities of women as a whole that determined whether or not they would be qualified for a specific job. This would, according to Goldin, result in the presence of women polluting the status of an occupation, even though all employed women might have been completely qualified. Similarly, Blackburn, Browne, Brooks, and Jarman (2002) find that the devaluating of occupational status and pay as women enter an occupation in large numbers is one of the most promising explanations for what happened in England during times of large economic expansion in the 20th century.

In a recent study, Harris (2022) examines the effect on wages when women enter a male dominated occupation. He finds that women entering an occupation in large numbers is still associated with a wage decrease. This devaluation of the occupation affects the wage trajectories and starting wages for the men that remain in the occupation to some extent, but its largest effect is on the wages of women. Thus, the gender wage gap in this specific occupation would grow as the women entering receive decreasing starting salaries. Harris' presented evidence suggests that a part of this wage decline is due to lower prestige of the occupation once women participate to a larger degree. In line with this, Grönlund and Magnusson (2013) state that a higher percentage of women in an occupation is associated with a decrease in wages. However, they also state that his relationship might be non-linear. In contrast to Harris (2022), they do not find that this wage decrease is due to any devaluation of the occupation for the Swedish labour market. The only explanation they find to have a slight statistical significance is the value of on the job training that is likely to be lost as a woman starts a family.

Another theory is that these differences in wages between men and women shows that women are less productive (Meyerson, Petersen & Snartland, 1998). The theory is that wages, the price of labour, should reflect the quality, or productivity level, of the labour supplied. Meyerson et.al., however, find in their paper that men and women are equally productive on the total labour market in Sweden. While productivity is harder to measure in some occupations than in others, their findings strongly suggests that differences in productivity should be discredited as an explanation for wage differences between men and women. Similarly, a more recent study by Grönlund & Magnusson (2016), finds that differences in education and work experience between men and women do not explain the gender wage gap in Sweden. On the contrary, Swedish women are generally more educated than Swedish men and the gender wage gap for recent university graduates in Sweden is one of the lowest in Europe (Triventi, 2013).

Blackburn, Browne, Brooks, and Jarman (2002) criticise the theory that human capital is an explanation of the gender wage gap. They explain that while human capital investments in human capital have historically been harder for women due to a larger degree of domestic work, ultimately the differences are a lot smaller than what the gender wage gap would suggest. They do highlight that domestic work also creates skills; however, they also describe the implications of these skills' marketability being towards traditionally female occupations and thus has had an impact on occupational gender segregation. Their final criticism is that the lens

of human capital has historically underestimated women and overestimated men and that, ultimately, gender is not, and never has been, a determinant of good or bad jobs.

The literature surrounding the gender wage gap and occupational gender segregation here examined through the lens of theories surrounding the welfare state, personal preference, and choices as well as the effects of human capital and devaluation of occupations held by women, all offer possible explanations as to why the Swedish labour market still experiences gender segregation and differences in wages between men and women. However, Goldin (2014) argues that many of the previously discussed influences for the gender wage gap and occupational gender segregation are not large enough explanations on their own anymore. She says that the culmination of all these differences between men and women in the labour market could be solved with a larger degree of flexibility, mainly in male majority occupations. The previous work on these discussed theories will aid this thesis in its analysis of the statistics later presented and will help determine what different trends might mean for the validity of these theories in both the past and the present.

4 Theoretical Concepts

This thesis will use the set of theoretical concepts introduced and discussed in the section on previous research above. Here they will be thoroughly defined and discussed as to their contributions and relevance to the research questions.

4.1 The Welfare State

The concept of the welfare state is useful for attempts to describe why men and women are located in different sectors of the economy, namely, women in the public sector and men in the private sector. The labour market in a welfare state is characterized by a large public sector and it usually has a history of high levels of sectoral gender segregation. Furthermore, a welfare state is also theorised to influence women's wages through family friendly policies that allow women to combine career and family. The number of accommodations for women in the labour market in a welfare state makes them less competitive in the labour market. Thus, women in a welfare state are considered to be more likely to accept lower wages in the public sector than men who are comparably more competitive in the labour market (Mandel & Semyonov, 2006; Ellingsaeter, 2013; Magnusson & Grönlund 2016).

This theoretical concept is important for all research questions that will be examined in this thesis as it describes the context of the examined labour market. More specifically, it can provide possible explanations for why sectors might have different internal wage gaps. The nature of the Swedish welfare state and its goal of total gender equality might also help to explain why there may be a lack of differences in patterns of wage trajectories. Finally, the welfare state and its possible trade-offs are central in the discussion of a possible relationship between sectoral gender shares and sectoral gender wage gaps.

4.2 Preference and Choice

The theoretical concepts of occupational, or in this case sectoral preferences and ultimately choices are relevant for the discussion of this thesis as it aims to explain why men and women choose to enter certain occupations or sectors based on their preferences. This concept appears to be rooted in rational choice but that may not be the case. Men and women choose occupations based on a number of things that may have nothing to do with any economic rationality but simply to do with personal fulfilment. Preferences for practical things such as the possibility for flexibility may in this case be a secondary thought, only becoming important once a choice of general career has been made. One important factor when discussing choice of occupations or sectors for individuals is the place in which they make their decision. Meaning that in Sweden, despite being one of the more gender equal countries, some level of traditional gender norms remains and influence the decisions of individuals. Perhaps not consciously, but through upbringing and what society believes men and women to be good at (Blackburn, Browne, Brook & Jartman, 2002; Cech, 2013).

This concept is important for the discussion of this thesis as it further develops the foundation of why men and women might work in different sectors. It complements the concept of the welfare state to broaden the discussion on the implications of the results presented. Mainly for the third research question of this thesis.

4.3 Human Capital and Devaluation

The theoretical concepts of human capital and devaluation work together to describe and suggest how human capital differs between men and women and how that might be reflected through the value, represented by wage, for an occupation, or in this case sector. Human capital is in this instance not referring to education but rather to the human capital accumulated during

an individual's time in the labour market. Despite women in Sweden having higher levels of education than men in general, their stock of human capital accumulated on the job is lower as women are more likely to be away from work to care for their families. Once a worker has been established in the labour market based on their educational level, on the job training increases in value for employers. Thus, sectors that have a higher share of women would have a lower stock of human capital accumulated through on the job training, leading to a decrease or stagnation in the wage trajectory (Blackburn, Browne, Brook & Jartman, 2002; Grönlund & Magnusson, 2013; Harris, 2022).

As this concept theorises not only stagnation in wages for female majority sectors as a whole but also for the individual women in male majority sectors, this is an important concept for the discussion in this thesis. It will help provide possible explanations for patterns observed for all research questions in this thesis, but it holds the most possible explanations for research questions two and three regarding gender wage gaps in the different sectors. If this concept has any validity, we should observe a larger wage gap within a sector as the share of women increases.

5 Method and Data

Apart from contextual literature and theoretical discussion, this thesis will use descriptive statistics to answer the posed research questions. All data used is collected from Statistics Sweden and is part of Sweden's official statistics database. It is collected for 2003-2020 as two different periods which contain the same variables (Statistics Sweden, n.d. a&b). This thesis will use 4 variables to produce the necessary graph and tables. These variables are average monthly wage, female wage as a percentage of male wage, percent women employed, and percent men employed for all sectors presented in the introduction. Additionally, the consumer price index has been used to deflate the average monthly wages to better isolate the patterns of increase for real wages (Statistics Sweden, n.d.c).

The data used for the first research question, average monthly wages for each sector, will be presented as line graphs. This will portray how the average monthly wages for each sector has changed so that possible differences and similarities can be highlighted. Further, the data for the second research question, the gender wage gap for each sector during the chosen period, will be presented in a table to best highlight the differences between sectors. For the third and last research question, a scatter plot will be created for each sector. This will show the

relationship between the sector specific gender wage gap and the share of women in the sector. The results will be of great help when discussing both theories surrounding devaluation as well as occupational choice.

Additionally, while the used dataset does not contain sufficient data on occupations for a full analysis and comparison, occupational data for CEO's (Chief Executive Officer) will be used from the dataset to aid in the discussion in this thesis of vertical segregation and its contributions to the gender wage gap. For this, the variables percent women employed and female wage as a percentage of male wage will be used (Statistics Sweden, n.d. a&b).

5.1 Summary Statistics

The variables used from the chosen dataset are, 8 sectors and their monthly wage, female wage as a percentage of male wage, numbers employed, percent women in the sector and percent men in the sector. Table 2 shows the sectors included in the dataset and their mean size for the period 2003-2020. From this we can see that the private sector as a whole is larger than the public sector as a whole. We can also determine that on average, for the period 2003-2020, the smallest private sector is larger than the smallest public sector.

Table 2: Sectoral Sizes Sweden 2003-2020

Sector	Mean number employed	Highest number employed
All Sectors	3 846 956	4 368 200
Public Sector	1 234 039	1 329 500
State Sector	221 361	245 600
Municipal Sector	778 889	836 400
Regional Sector	233 783	255 800
Private Sector	2 612 922	3 043 200
Private Workers	1 305 733	1 605 500
Private Officials	1 307 172	1 457 300

Mean number of workers employed in each sector and highest number of workers employed in each sector in Sweden for the period 2003-2020 (Statistics Sweden, n.d a&b)

Table 3 shows a summary of the average values for all variables that will be used in this analysis. Here we can see that the public sector, as a whole, has a majority of female workers while the private sector, as a whole, has a majority of male workers. We can also see that the state sector is an outlier in its equal distribution of men and women and that the public sectors, in general, have a larger majority of women than the private sectors have a majority of men. Important to note here is the before mentioned fact that the total private sector is a lot larger than the total public sector. Interestingly, due to the larger size of the private sector and the very large share of women in the public sector, the actual number of women in each sector is rather equal. In fact, the private sector actually has more women employed, on average, than the public sector does. This is interesting for the discussion of this thesis as it suggests that the share of women compared to the share of men within an occupation, is of greater importance than the actual number of women in the public sector compared to the private sector.

Table 3: Average Sectoral Gender Shares, Gender Gaps and Monthly Wage Sweden 2003-2020

Sector	Percent Women	Percent Men	Monthly Wage (kr)	Female Wage as a % of Male Wage
All Sectors	50%	50%	29456	86%
Public Sector	74%	26%	27917	86%
State Sector	51%	49%	32111	90%
Municipal Sector	78%	22%	25622	94%
Regional Sector	79%	21%	31533	75%
Private Sector	38%	62%	30188	88%
Private Workers	33%	67%	24583	90%
Private Officials	44%	56%	35844	80%

Average percent of the majority gender in each sector, average monthly wage for men and women in each sector and female wage as a percentage of male wage for each sector in Sweden for the period 2003-2020 (Statistics Sweden, n.d. a&b).

5.2 Limitations of the data

The data used in this thesis is collected from two datasets, they portray the same set of variables, but they use different versions of the standard for Swedish occupational classification. The first dataset, ranging from 2003 to 2013 use the SSYK96 classifications whereas the second dataset, ranging from 2014 to 2020 uses the SSYK2012. They are both based on the international standard classification of occupation, however from the 1996 version to the 2012 version the structure of the Swedish labour market changed so much that they are no longer comparable at the occupational level. This creates large limitations in comparing the data before 2013 with the one after as the occupations that are grouped together have changed drastically in some cases (Statistics Sweden, n.d.d). Therefore, this thesis has opted to use sectors as representations of occupational groups for easier comparison as the classification did not change the sectoral compositions. However, the occupation of CEOs that is used in this thesis, is one of the occupations whose change in classification did not alter its sample.

One large limitation with this data is that it is not clear if the wage data on monthly wages are solely based on full time workers or if it is also comprised of wages received by part time workers. Thus, this thesis cannot, apart from the contextual literature and basic statistics, analyse the effects of part time work on women's behaviour and earnings on the Swedish labour market.

6 Results

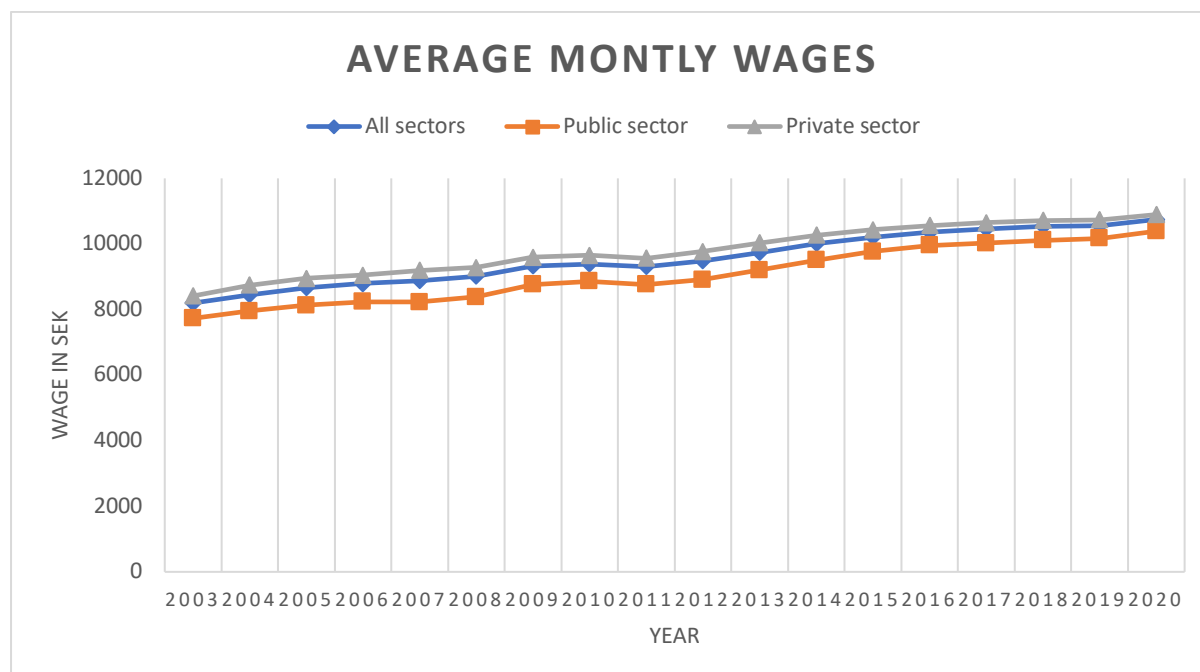
In broad strokes, the results that can be interpreted from the descriptive statistics are that the patterns of wage increases have been the same for all sectors, regardless of any gender majority. Further, the public sector has lower wages and larger wage gaps than the private sector. In the following sub-sections, more detailed interpretations and illustrations follow.

6.1 Wage Trajectories

For the 3 summarizing sectors, all sectors, the public sector and the private sector, we can see in figure 1 that the female majority public sector and the male majority private sector have very similar wage trajectories to each other as well as to the gender equal "all sectors" variable that represents the Swedish economy as a whole. While the patterns are similar, we can see that the public sector reaches the lowest nominal value for its wages whereas the private sector reaches

the highest. As the variable “all sectors” represents the average of the public and private sectors together, it is no surprise that it is located in between these two.

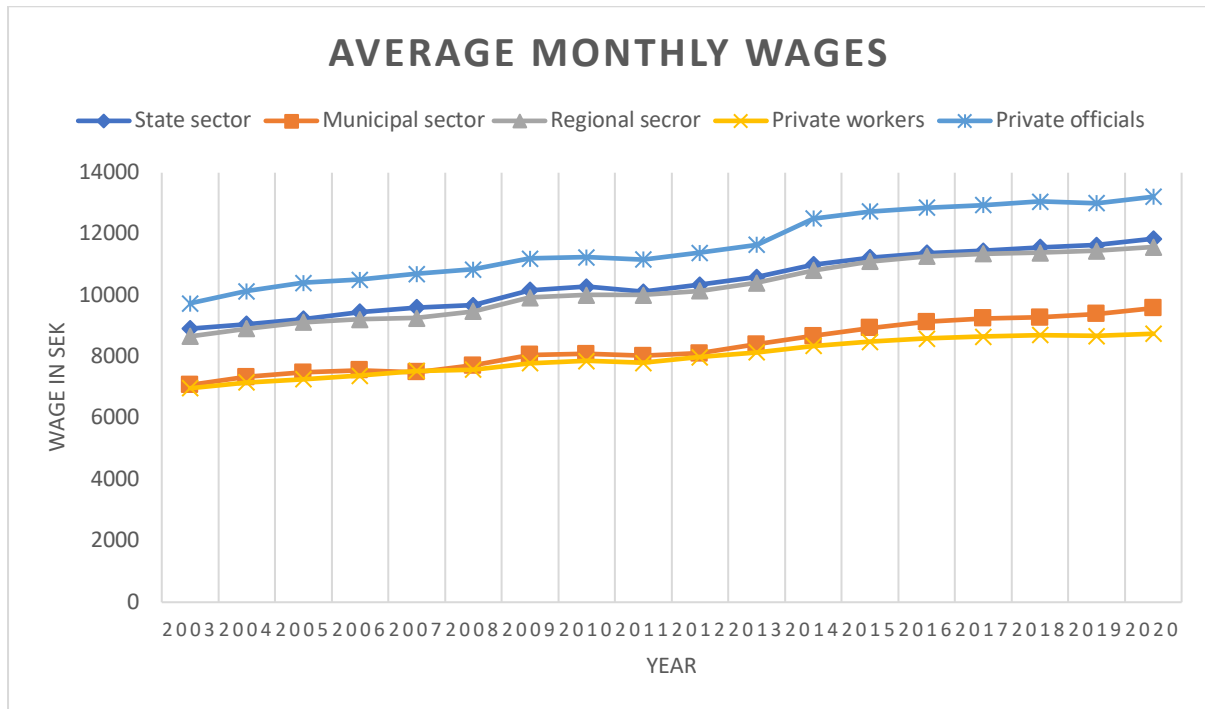
Figure 1: Average Monthly Wages Deflated by CPI Sweden 2003-2020



Average monthly wages deflated by CPI (1980=1) for 3 sectors in Sweden for the period 2003-2020 (Statistics Sweden, n.d. a;b&c).

Taking a look at the five smaller and more specified sectors, we can see in figure 2 that patterns of wage increase has followed each other for the male majority sectors, female majority sectors as well as the relatively equal state sector. Interestingly, the sector which has the strongest majority men, private workers, is also the sector with the lowest wage levels. Although, given that this is one of the largest sectors of the Swedish economy, and encompasses all privately employed people who work with all external activities in a business, it is perhaps not surprising that it has lower average wage levels than the private officials who work with all aspects of planning and managing in a business. It is this mentioned sector, private officials, that has the highest nominal wage. The state sector and the regional sector place just below, and the municipal sector reaches levels almost as low as the private workers.

Figure 2: Average Monthly Wages Deflated by CPI Sweden 2003-2020



Average monthly wages deflated by CPI (1980=1) for 5 sectors in Sweden for the period 2003-2020 (Statistics Sweden, n.d. a;b&c).

On the total sectoral level, we can thus see that regarding increases in wages, all sector has followed a similar pattern. The next section, presenting the evolution of sector specific wage gaps, will tell us how wage differences between men and women have evolved together with the slight real increase in total wages.

6.2 Wage Gaps

From the table below we can read that for all the sectors presented, the wage gap has been decreasing during the 21st century. We can also read that, for the end of our period, the regional sector has the largest gender wage gap whereas the municipal sector has the smallest. This is interesting as they are both part of the public sector and the municipal sector has, on average for the period, the second largest female majority, surpassed only by the regional sector with a one percentage point larger share of women.

Table 4: Female Wage as a Percentage of Male Wage Sweden 2003-2020

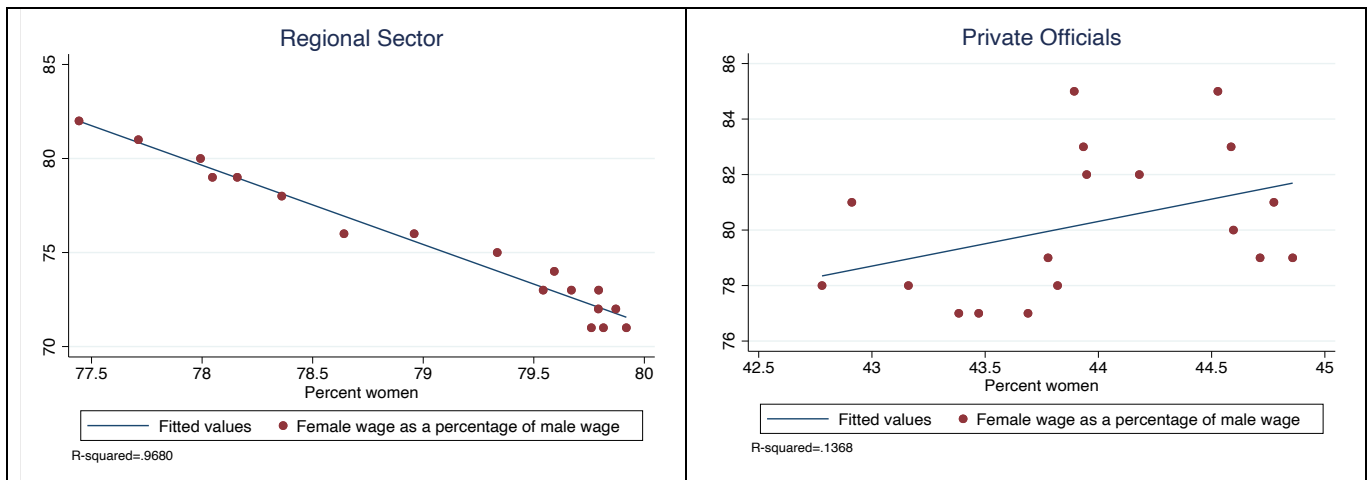
Year	All sectors	Public sectors	State sector	Municipal sector	Regional sector	Private sectors	Private workers	Private officials
2003	84	82	85	91	71	85	88	77
2004	84	83	85	91	71	85	89	77
2005	84	83	86	92	71	85	88	77
2006	84	84	87	92	72	86	89	78
2007	84	83	87	91	72	86	90	78
2008	84	84	88	92	73	86	89	78
2009	85	85	89	93	73	87	90	79
2010	86	85	89	94	73	87	90	79
2011	86	86	91	94	74	87	90	79
2012	86	86	91	94	75	88	91	80
2013	87	87	92	94	76	88	91	81
2014	87	87	92	95	76	88	90	81
2015	87	88	93	95	78	88	90	82
2016	88	89	93	97	79	88	90	82
2017	89	90	93	97	79	89	90	83
2018	89	90	93	97	80	90	90	83
2019	90	91	94	98	81	91	90	85
2020	90	91	94	98	82	91	90	85

Annual female wage as a percentage of male wage for each sector in Sweden for the period 2003-2020 (Statistics Sweden, n.d. a&b).

6.3 Wage Gaps and Sectoral Shares

For the relationship between sector specific gender wage gaps and the share of women in the sector, we can see that the strength of the relationship varies somewhat. In the female majority regional sector, there is a strong relationship, between the wage gap and the share of women, showing a decrease in the wage gap as the share of women increase. In contrast, for the male majority private officials' sector, the wage gap increases as the share of women increase. However, this relationship is a lot weaker than the relationship for the female majority sector, here the R-squared only measures 0,14 in contrast to an almost perfect relationship with R-squared being 0,97 for the regional sector.

Figure 3: Relationship Between Sector-Specific Gender Shares and Gender Wage Gaps Sweden 2003-2020



Scatter plots showing relationships between gender shares and wage gaps for the regional sector and the private officials sector in Sweden for the period 2003-2020 (Statistics Sweden, n.d. a&b). Contains trend line and R-squared value.

The municipal sector shows a similar relationship between the sector specific wage gap and its percentage of women employed. However, the state sector, which is a lot more gender equal when looking at gender shares, follows a similar pattern to that of the private official’s sector. Interestingly, when examining the variable “all sectors”, representing the economy as a whole, there is no relationship between the sector specific wage gap and the share of women employed.¹ This would then suggest that for sectors with a lower share of women employed, an increase in women leads to an increase in the sector specific gender wage gap. Furthermore, for sectors with an already large share of women employed, a further increase in the share of women leads to a decrease in the sector specific gender wage gap.

While further discussions about the possible reasons for the trends and relationships presented will be conducted in the next part, the large differences between the relationships of gender wage gaps and gender shares between the state sector and the total economy are not hard to conclude. The economy as a whole might be too large to realise any specific relationship between two variables, any possible relationship might be swallowed by other factors on such a large sector. The state sector is a lot smaller and can thus present the isolated relationship between the two variables examined.

¹ Scatter plot for the municipal sector, state sector, and the economy as a whole can be found in the appendix.

6.4 Occupational Data

The table below provides an occupational example that can be helpful when discussing the aspects of vertical segregation. The occupation of CEOs is a relatively small occupation that, as is visible in the table, has varying values from year to year. This is not surprising as only about 30 000 people are employed in this occupation, thus increasing the statistical significance of each CEO and their company's performance on the data. The key takeaway is that there is a continued low share of women in these highest leadership positions but that the wages are becoming more equal for men and women.

Table 5: Share of Women and the Gender Wage Gap for CEOs Sweden 2003-2020

Year	Percent women	Female Wage as a % of Male Wage
2003	13%	81%
2005	9%	87%
2007	11%	88%
2009	17%	81%
2011	19%	76%
2013	21%	79%
2015	20%	81%
2017	23%	91%
2019	19%	101%

Percent women and female wage as a percentage of male wage for CEOs in Sweden for the period 2003-2020 (Statistics Sweden, n.d a&b)

7 Discussion

During the observed period, the share of men and women in the public and private sectors have started to converge. Now more men work in the public sectors and more women work in the private sectors. Despite this, the level of segregation is still high on the Swedish labour market. The theoretical concepts used in this thesis provide 2 separate explanations as to why this level of segregation persists. On one hand the Swedish welfare state and the implications it has on

women's availability in the workplace compared to the availability of men provides one possible explanation. Suggesting that women are clustered in the public sectors because it offers lower penalties for taking time off. However, when looking at the real number of women in an occupation instead of gender shares, there are more women working in the private sectors than in the public sectors. This would suggest that women do not gravitate towards the safer public sectors due to any fault of the welfare state.

On the contrary, it could also suggest that women enter the occupation they want to enter, regardless of any penalties that might come with domestic duties. Although the notion of a free choice based on interest's might not be completely free of gender biases. The fact remains that women make up a large part of the caring occupation in the public sectors, performing tasks that are often credited as female. This thesis will not investigate the intricacies of occupational choice in this context any further, rather the conceptual frameworks will henceforth be discussed in relation to the results presented in the previous section.

The first research question in this thesis concerns the wage trajectories for the female majority public sectors and the male majority private sectors. The results of this thesis found that there are no significant differences in the trajectories, nor is there a clear pattern of nominal wage levels being categorically higher for the male majority sectors than the female majority sectors (figure 1 and 2). Given the extensive contextual information about the Swedish welfare state and its work towards total gender equality, it is not surprising that wage levels increase at an equal rate for female majority sectors and male majority sectors. The initial hypothesis was that the male majority private sectors would have higher wage levels for the entire period as they are both characterized by a more competitive market where prices of labour can be more extreme and are dominated by the historically higher-paid gender. While these results point to a general tendency for the public sector to have lower wage levels⁹ than the private sector, it does not hold true for all individual public and private sectors.

There are many possible explanations for trends like these illustrated. The fact that all the presented sectors follow a very similar pattern of increase in the average monthly wage suggests that there is no broad contemporary devaluation of female majority sectors that has had any impact on the wages. On the contrary, wages for the female majority public sector has seen a real increase, although not to the extent that they have reached equal levels to the male majority private sector. The difficulty of discussions and comparisons of sectors like this is that

there are many contributing factors apart from gender that influence wage levels. For example, the public sector might never reach wage levels at the level observed for the private sector due to the way the Swedish welfare state and labour market are structured. It is not feasible that a welfare state, without large profits, could ever reach the wage levels of large private companies whose main goal is to make a profit.

It could be argued that lower wage levels in general in sectors that have a larger share of women could have a connection to human capital, more specifically to on-the-job training. As mentioned in a previous section describing the Swedish welfare state, women spend more time away from work due to family matters than men do, resulting in a lower level of accumulated human capital that is specifically relevant for the occupation of the employee. Thus, reducing the value of the employee to the employer. However, this is perhaps a better explanation for sector-specific wage gaps than for wage differences between sectors with varying gender shares.

For the observed period, the sector-specific gender wage gaps have been decreasing across the board, although some differences between the sectors remain (table 4). Thus, we can suggest that similarly to the wage trajectories for the different sectors, there is no categorical results of the public sector's specific wage gaps performing in one way and the private sector's wage gaps performing in another. On the contrary, both the highest and lowest sector-specific wage gaps are found within the public sector. However, the large gender wage gap in the regional sector is perhaps not surprising given that majority of the people employed in the sector are women in the healthcare industry and that a large portion of the men in the sector are employed in high ranking regional positions.

On a similar note, it is important for the within sector gender wage gaps to remember that it refers to women's wages as a total of the men's wages, regardless of which level of position they hold. Therefore, the wage gap might appear larger than the degree of outright discrimination in the Swedish labour market. For example, data on CEOs in Sweden shows a large majority of men in the highest leadership positions (table 5). Its large number of men suggests that in sectors where women are a majority, men might still hold the top positions. This could contribute to a larger wage gap within the sector than what can be accounted for by any of the theoretical concepts discussed here. Given the structure of today's labour market, it

is not unreasonable that someone in a leadership position would be paid more than the people they are leading

One possible conclusion that could be drawn from large gender wage gaps in female majority sectors is that it would be a large contributor to the total gender wage gap in Sweden. While it is probable that it does contribute more than the smaller gender wage gaps in other sectors, it is probably perceived as a bigger contributor than it should when only viewing gender shares and not the real number of men or women in the sector. While the public sector has a larger share of women than men, the private sector, as previously mentioned, has a larger number of women than the public sector. Thus, the contribution of a large gender wage gap in a female majority public sector might not be as large as one might think at first glance.

The decreasing gender wage gaps in all sectors might however have implications on the previously discussed real increase in average monthly wages for all sectors. A slight real increase in wages for all sectors combined with a decrease in the gender wage gaps, suggests that women's wages have been increasing and this might be why average total wages have increased more than the rate of inflation. Subsequently, the decrease in the gender wage gaps for all sectors suggests that women's wages have been increasing at a larger rate than men's in the 21st century. Looking at it from the angle of the theoretical concepts used in this thesis, this would either suggest a decrease in the penalty of domestic duties for women, an increase in men's domestic duties, or an increased stock of human capital for women. Given the observations of persistent sectoral gender segregation, it is unlikely that a change of preferences or choice has been a driver of this convergence of wages.

The results of the scatter plots examining the relationship between the sectoral share of women and the sector-specific gender wage gap, suggest some sort of relationship although with varying strengths and implications. It would seem that for sectors with a larger share of women, a further increase in the share of women leads to a decrease in the sector-specific gender wage gap. On the contrary, for sectors with a lower share of women, an increase in this share leads to an increase in the sector-specific gender wage gap. This suggests that a larger share of women in a sector indeed leads to a larger gender wage gap up until the point where the women are the clear majority in the sector and hold enough higher positions that the wage gap starts to decline.

The theoretical implications of this relationship are many. For one, it suggests that the discussed welfare state perhaps creates safe environments where women can, given enough time, gain a majority in numbers and subsequently start the convergence of wages. However, in this instance, the convergence would only happen because women enter higher positions. Thus, for the average woman in the sector, the situation remains unchanged. Nevertheless, for the occupations with a lower share of women, the fact remains that the wage gap increases with the share of women. Perhaps suggesting that women who enter these traditionally male majority sectors have a lower real, or perceived, stock of human capital. The increase in the sector-specific gender wage gap does however point to a lower wage level for only women rather than a devaluation of the sector as a whole. Furthermore, the immediate increase in the gender wage gap for a sector with a majority of male employees when more women enter, could be an indicator of the welfare state's effects on women entering a sector and finding increased levels of penalty for domestic duties.

The implications of these results on sectoral choice is hard to determine. One large factor to this is that a woman still could earn more money in one sector than in another despite there being a larger gender wage gap. Perhaps the very reason why some sectors do experience an increase of female workers and a subsequent increase in the gender wage gap is because women are prioritising wages and entering occupations with higher wage levels. Nonetheless, the fact that there is a relationship between gender shares and the gender wage gap in sectors in the Swedish labour market suggests that the differences between men's and women's wages and the persistence of sectoral gender segregation is not just a legacy left from less gender equal time periods. Rather it is a phenomenon that continues to fester and grow, although at a slower rate, within the Swedish welfare state.

8 Conclusion

The persisting sectoral gender segregation in the Swedish labour market is one of the obstacles standing in the way of the Swedish welfare state reaching its goal of total gender equality. This thesis aimed to examine the differences between men and women in the Swedish labour market through the lens of sectoral gender segregation and its possible causes and implications. Data from Statistics Sweden's statistical database was collected and presented as descriptive statistics to be discussed on the basis of three theoretical concepts. The effects of the welfare

state on sectoral gender segregation as well as on wage gaps have been discussed together with the implications of human capital and sectoral preferences.

This thesis finds that in the Swedish labour market for the period 2003-2020, there are no significant differences in the wage patterns for female majority public sectors and male majority private sectors. Neither is there any large difference in the patterns of decrease of sector-specific wage gaps. However, for both research questions one and two, the real values differ in varying degrees between the sectors despite the general trend of increasing wage levels and decreasing gender wage gaps. Finally, this thesis finds that there is a relationship between sector-specific gender wage gaps and gender shares. For female majority sectors, a further increase in the share of women is associated with a decrease in the gender wage gap whereas, for male majority sectors, an increase in the share of women is associated with an increasing gender wage gap in the sector.

The theoretical implications of these findings suggest that, due to the relationship found between gender shares and gender wage gaps in female majority sectors, men's and women's wages will continue to converge. However, this convergence can never reach equality due to the limitations of the welfare state and its compressed wage structure. In the private sector, the wage gap is more likely to increase if more women enter the sector as the welfare state reduces the statistical likelihood of women accumulating large stocks of human capital through on the job training. In line with Golding (2014) these results suggest that larger flexibility is needed for both men and women to reduce the strain of domestic labour on women and thus reducing the possible trade-offs associated with a large welfare state.

This thesis contributes to existing research by discussing the effects of the welfare state on sectoral gender differences, perceived human capital, and subsequent devaluation of certain occupations as well as on preferences of men and women in the labour market in modern day Sweden. Additional research on specific occupational data or sectoral data that allows for sufficient econometric tests would further develop the discussion of this thesis and help determine the statistical validity of the theoretical concepts discussed for Sweden in this thesis.

References

Arrius, G. & Granqvist, L. (2018). Fler män inom ett yrke ger inte kvinnor högre lön, Available online: <https://www.saco.se/opinion--fakta/aktuellt-fran-saco/debatt/fler-man-inom-ett-yrke-ger-inte-kvinnor-hogre-lon/> [Accessed May 24 2022]

Becker, G.S. (1971). *The Economics of Discrimination*, 2nd edn, Chicago: The University of Chicago Press

Blackburn, R.M., Browne, J., Brooks, B & Jarman, J. (2002). Explaining gender segregation, *British Journal of Sociology*, no.4, pp. 513-536

Blau, P.M., Gustard, J.W., Jessor, R., Parnes, H.S. & Wilcock, R.C. (1956). Occupational Choice: A Conceptual Framework, *ILR Review*, vol. 9, no. 4, pp. 531-543, Available through: LUSEM Library website <https://www.lusem.lu.se/library> [Accessed 14 May 2022]

Cech, E.A. (2013). The Self-Expressive Edge of Occupational Sex Segregation, *American Journal of Sociology*, vol. 119, no. 3, pp. 747–89, Available online: <https://www.journals.uchicago.edu/doi/abs/10.1086/673969> [Accessed 17 May 2022]

European Institute for Gender Equality. (2022). Gender Equality Index, Available online: <https://eige.europa.eu/gender-equality-index/2021/SE> [Accessed 20 May 2022]

Ellingsæter, A.L. (2013). Scandinavian welfare states and gender (de)segregation: Recent trends and processes, *Economic and Industrial Democracy*, vol. 34, no. 3, pp. 501-518

European Institute for Gender Equality. (2022). Gender Equality Index, Available online: <https://eige.europa.eu/gender-equality-index/2021/SE> [Accessed 10 May 2022]

Eurostat. (n.d). Share of government employment nearly stable, Available online: https://ec.europa.eu/eurostat/cache/digpub/european_economy/bloc-4d.html?lang=en [Accessed 23 May 2022]

Eurostat. (2021). Women in the EU are having their first child later, Available online: <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20210224-1> [Accessed 11 May 2022]

Grönlund, A & Magnusson, C. (2016). Family-friendly policies and women's wages – is there a trade-off? Skill investments, occupational segregation and the gender pay gap in Germany, Sweden and the UK, *European Societies*, vol. 18, no. 1, pp. 91–113

Grönlund, A & Magnusson, C. (2013). Devaluation, crowding or skill specificity? Exploring the mechanisms behind the lower wages in female professions. *Social Science Research*, vol.42, Available online: <https://www.sciencedirect.com/science/article/abs/pii/S0049089X13000525> [Accessed 24 February 2022]

Goldin, C. (2014). A Grand Gender Convergence: Its Last Chapter, *American Economic Review*, vol. 104. no. 4, pp. 091–1119

Goldin, C. & Katz, F.L. (2011). The Cost of Workplace Flexibility for High-Powered Professionals, *The Annals of the American Academy*, vol. 638, Available online: <https://journals.sagepub.com/doi/full/10.1177/0002716211414398> [Accessed 21 May 2022]

Goldin, C. (2002). A Pollution Theory of Discrimination: Male and female differences in occupations and earnings, nber working paper series, no. 8985, Available online: <https://www.nber.org/papers/w8985> [Accessed 28 February 2022]

Gustafsson, S. & Jacobsson, R. (1985). Trends in Female Labor Force Participation in Sweden, *Journal of Labor Economic*, vol. 3, no. 1, pp. S256-S274, Available online: <https://www.jstor.org/stable/2535006?seq=16> [Accessed 17 May 2022]

Hansen, M.N. (1997). The Scandinavian Welfare State Model: the impact of the public sector on segregation and gender equality, *Work, Employment & Society*, vol. 11, no. 1, pp. 83-99

Hansen, J. & Wahlberg, R. (2008). Occupational gender composition and the gender wage gap in Sweden, *Work, Earnings and Other Aspects of the Employment Relation*, pp. 353-369,

Available through: LUSEM Library website <https://www.lusem.lu.se/library> [Accessed 14 May 2022]

Harris, J. (2022). Do wages fall when women enter an occupation?, *Labour Economics*, vol. 74, Available online: <https://www.sciencedirect.com/science/article/abs/pii/S0927537121001378> [Accessed 11 March 2022]

Hustad, I.B., Bandholtz, J., Herlitz, A., & Dekhtyar, S. (2020). Occupational Attributes and Occupational Gender Segregation in Sweden: Does it change over time? *Frontiers in Psychology*, 2020, Available online: <https://www.frontiersin.org/article/10.3389/fpsyg.2020.00554> [Accessed 24 February 2022]

Korpi, T., & Stern, C. (2006). Women's Employment in Sweden: Globalization, deindustrialization, and the labor market experiences of Swedish Women 1950 – 2000, in Blossfeld. H.P., & Hofmeister, H (eds.), *Globalization, Uncertainty and Women in Society*, chap. 5, Frankfurt: Edward Elgar Publishing Ltd

Lesthaeghe, R. (2020). The second demographic transition, 1986–2020: sub-replacement fertility and rising cohabitation—a global update, *Genus*, vol. 76, no. 10, Available online: <https://genus.springeropen.com/articles/10.1186/s41118-020-00077-4#citeas> [Accessed May 13 2022]

Mandel, H. T Semyonov, M. (2006). A welfare state paradox: State intervention and women's employment in 22 countries. *American Journal of Sociology* 111(6): 1910–1949

Melkas, H., & Anker, R. (1997). Occupational segregation by sex in nordic countries: an empirical investigation. *International Labour Review*, vol. 136, no. 3, pp. 341-364.

Meyerson, E.M., Petersen, T., & Snartland, V. (1998). Are Female Workers Less Productive than Male Workers? Productivity and the gender wage gap, The Research Institute of Industrial Economics, working paper no. 509

Petersen, T., Meyerson, E.M., & Snartland, V. (1996). The Within Job Gender Wage gap: The case of Sweden, The Research Institute of Industrial Economics, working paper no.

470

Polacheck, S.M. (2004). How the Human Capital Model Explains Why the Gender Wage Gap Narrowed, IZA dp no. 1102, Available online:

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=527142 [Accessed 4 May 2022]

Snyder, K.A., & Green, A.I. (2014). Revisiting the Glass Escalator: The case of gender segregation in a female dominated occupation, *Social Problems*, vol. 55, pp 271-299,

Available online: <https://doi.org/10.1525/sp.2008.55.2.271> [Accessed 27 February 2022]

Stanfors, M. (2014). Women in a changing economy: the misleading tale of participation rates in a historical perspective, *The History of the Family*, vol.19

Stenmark, H. (2010). Gender segregation in the Swedish labour market: Historical, Sociological and Rational Choice institutionalism as tools for understanding inequality and why it still exists, Available online:

<https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A392026&dswid=-563>

[Accessed 13 March 2022]

Statistics Sweden. (2010). På tal om kvinnor och män – Lathund om jämställdhet 2010

Available online: <https://www.scb.se/hitta-statistik/statistik-efter-amne/levnadsforhallanden/jamstallldhet/jamstallldhetsstatistik/pong/publikationer/pa-tal-om-kvinnor-och-man--lathund-om-jamstallldhet-2010/> [Accessed 10 March 2022]

Statistics Sweden. (2019). Labour market participation rate higher among both Swedish born and foreign born persons, Available online: <https://www.scb.se/en/finding-statistics/statistics-by-subject-area/labour-market/labour-force-surveys/labour-force-surveyslfs/pong/statistical-news/labour-force-surveys-lfs-1st-quarter-2019/> [Accessed 14 May 2022]

Statistics Sweden. (2020). På tal om kvinnor och män – Lathund om jämställdhet 2020

Available online: <https://www.scb.se/hittastatistik/statistikefteramne/levnadsforhallanden/jamstallldhet/jamstall>

dhetsstatistik/pong/publikationer/pa- tal-om-kvinnor-och-man--lathund-om-jamstalldhet-2010/ [Accessed 10 April 2022]

Statistics Sweden. (n.d.a). Genomsnittlig grund- och månadslön samt kvinnors lön i procent av mäns lön efter region, sektor, yrkesgrupp (SSYK) och kön. År 2003 – 2013, Available online: https://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START__AM__AM0110__AM0110B/LonYrkeRegion/?rxid=6fef5754-338d-467c-bb2b-3c393b95d7bf [Accessed 24 May 2022]

Statistics Sweden. (n.d.b). Genomsnittlig grund- och månadslön samt kvinnors lön i procent av mäns lön efter region, sektor, yrkesgrupp (SSYK 2012) och kön. År 2014 – 2020, Available online: https://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START__AM__AM0110__AM0110B/LonYrkeRegionA/?rxid=6fef5754-338d-467c-bb2b-3c393b95d7bf [Accessed 24 May 2022]

Statistics Sweden. (n.d.c). Consumer Price Index (CPI), total annual averages, Shadow Index numbers, 1980=100. Year 1980 – 2021, Available online: https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__PR__PR0101__PR0101A/KPI_SkuggAr/ [Accessed 20 May 2022]

Statistics Sweden. (n.d.d). Standard för svensk yrkesklassificering (SSYK) Available online: <https://www.scb.se/dokumentation/klassifikationer-och-standarder/standard-for-svensk-yrkesklassificering-ssyk/> [Accessed 24 May 2022]

Swedish Institute. (2021). Equal power and influence for women and men – that's what Sweden is aiming for, Available online: <https://sweden.se/life/equality/gender-equality> [Accessed 10 March 2022]

The World Bank. (2022). Economic inequality by gender, Available online: <https://ourworldindata.org/economic-inequality-by-gender> [Accessed 4 March 2022]

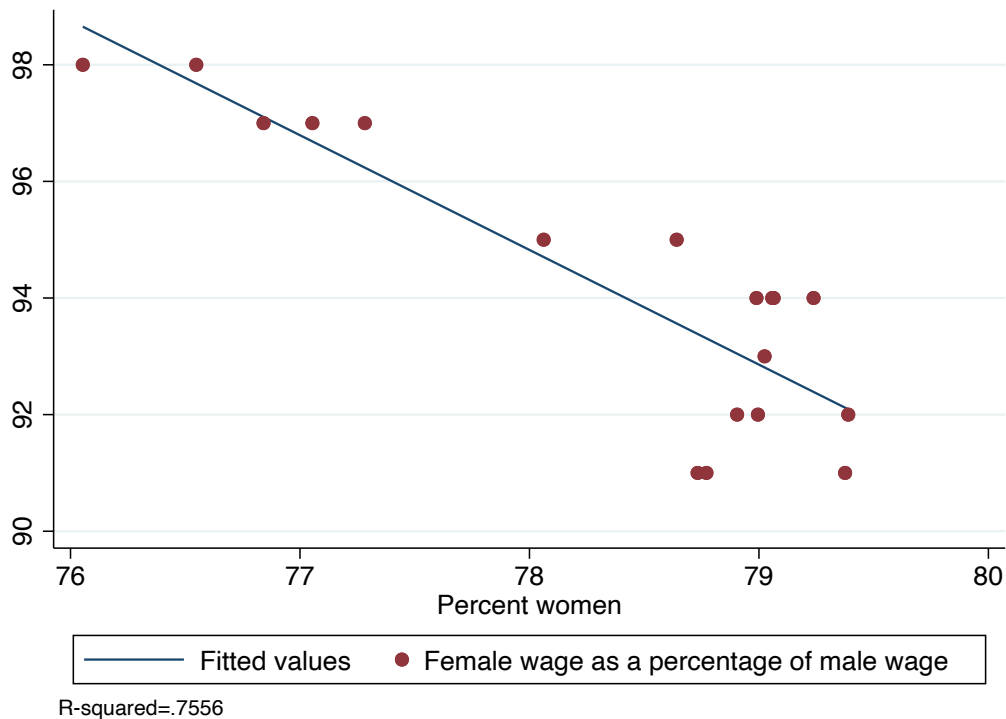
Triventi, M. (2013). The gender wage gap and its institutional context: a comparative analysis of European graduates

Wells, M.B. & Bergnehr, D. (2014). Family and Family Policies in Sweden, in Robila, M. (ed), *Handbook of Family Policies Across the Globe*, Springer New York, pp. 81-107

Zill, N. (n.d.). Does the “Marriage of Equals” Exacerbate Educational Inequality? Available online: <https://ifstudies.org/blog/does-the-marriage-of-equals-exacerbate-educationalinequality/> [Accessed 23 May 2022]

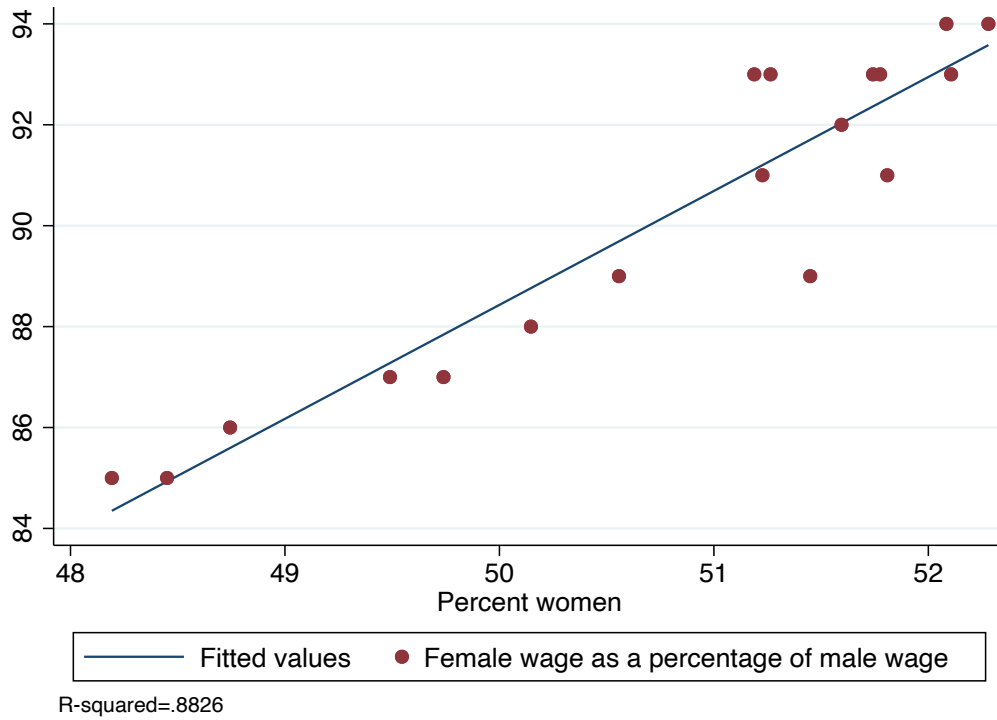
Appendix

Municipal sector



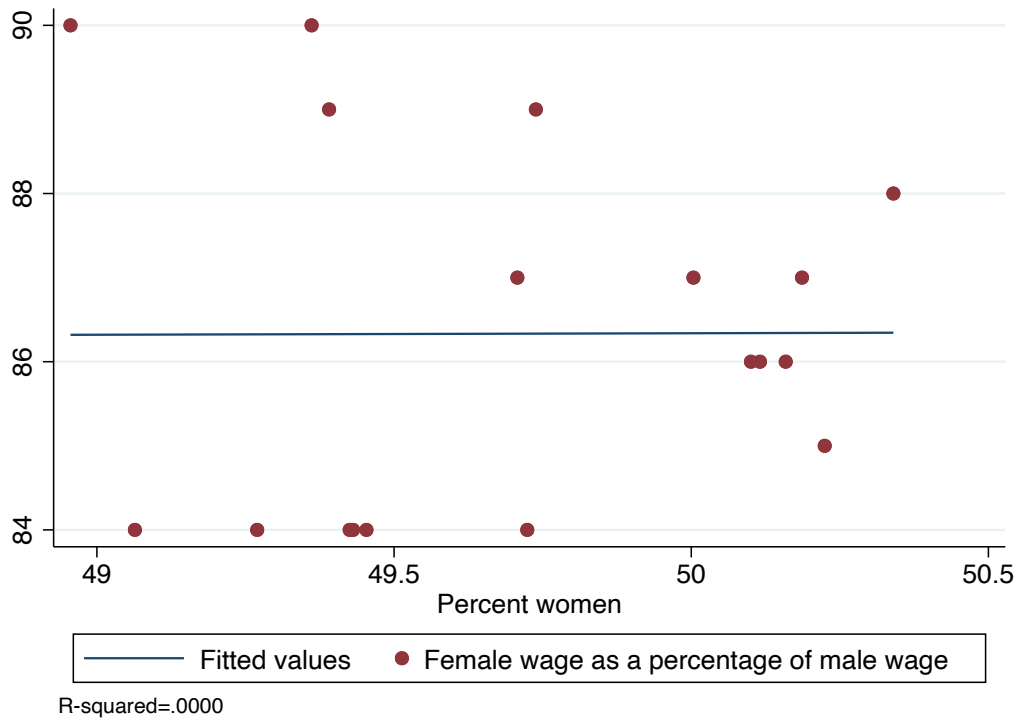
Scatter plots showing relationships between gender shares and wage gaps for the municipal sector in Sweden for the period 2003-2020 (Statistics Sweden, n.d. a&b). Contains trend line and R-squared value.

State sector



Scatter plots showing relationships between gender shares and wage gaps for statesector in Sweden for the period 2003-2020 (Statistics Sweden, n.d. a&b). Contains trend line and R-squared value.

All sectors



Scatter plots showing relationships between gender shares and wage gaps for all sectors in Sweden for the period 2003-2020 (Statistics Sweden, n.d. a&b). Contains trend line and R-squared value.