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Bachelor Thesis

The Gender Earnings Gap among Immigrants in Sweden

*How does the immigrants' gender earnings gap vary
relative to the natives' gender earnings gap in
Sweden?*



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Abstract

Using data from 1999 on immigrants in Sweden, we find that the gender earnings gap among immigrant is lower than natives' gender earnings gap and negatively related to their source country gender earnings gap. We also show that immigrants' earnings are lower and more concentrated than the natives' ones which leads to a lower gender earnings gap for immigrants. Then, regarding the gender earnings gap along the earnings distribution and linking it with earnings distribution of immigrants and natives, we are able to conclude that immigrants are not strongly affected by the glass ceiling effect since they are not present in the upper tail of the distribution. We reach the conclusion that such gender earnings gap differences between natives and immigrants may be explained by selection in the labour force participation, occupational segregation of immigrants, source country culture and discrimination.

Keywords: Gender earnings gap, immigration, glass ceiling

I. Introduction

If several studies have dealt with immigrants' and natives' earnings, very few of them based their analysis on the comparison between immigrants and natives according to their gender earnings gap. A very small gender earnings gap is synonym to good equality between men and women. Therefore, immigrants and natives should have the same level of gender equality since they live in the same country, face the same labour market conditions and the same laws. However, many factors influence the gender earnings gaps and we will try to explain why it could be some differences between the gender earnings gap of immigrants and the one of natives. Hence, in a non-perfect equal country, natives and immigrants have differences in their respective gender earnings gap. However, do these inequalities increase as they get more paid? Is the gender earnings gap stronger at the upper tail of the distribution?

These questions we asked ourselves were the starting point of our study. This refers to the presence of a glass ceiling for immigrants and natives. The glass ceiling represents all the obstacles a woman faces when she tries to access power and decision positions (Laufer, 2002). Such barriers are due to implicit prejudices on women. Although generally invisible, these barriers prevent women from accessing powerful positions, and reduce their return when they exercise those occupations. We observe a glass ceiling when the difference between men's and women's earnings accelerates at the upper part of the distribution. However, is this glass ceiling stronger for natives or immigrants? We want to see if gender inequalities are even more present when the earnings delivered are high, and if this effect differs for natives and immigrants. In other words, our results will enable us to conclude whether a glass ceiling exists in the Swedish labour market, and if it affects immigrants as much as natives.

As far as we know, no studies have compared the presence of a glass ceiling between natives and immigrants. We tried to treat an innovative subject in order to bring new findings to the literature. We hope our essay will give incentives for searchers to dig in our direction, leading to a long list of new studies on the subject. We thus study two main subjects. The first one is the comparison between the gender earnings gap of different groups of immigrants and the one of natives. The second one is the analysis on the presence of a glass ceiling between

each group of immigrants and the natives. We will therefore see if men and women immigrants have the same opportunities on the Swedish labour market as natives Swedes men and women.

Sweden is one of the most world equal gender countries (Hausmann, Tyson and Saadia, various years). Thanks to fair earnings setting institutions, the earnings distribution is concentrated around the mean. In addition, the expended childcare facilities and generous child benefits may encourage the female labour participation. Those reassuring labour market conditions attracted immigrants from all around the world. In our study, immigrants are grouped by country of origin based on their remoteness from Sweden and their GDP per capita, which gave us eight regions.

In a first part, we will compare the earnings gap of immigrant men and women from eight different ethnic groups to the gender earnings gap of natives. If the gap differs between the immigrant groups and the natives' group, we will try to determine if the source country gender earnings gap could be an explanation using data from Neuman (2014). In a second time, we will analyze the gender earnings gap along the earnings distribution for the eight groups of immigrants and for natives. We want to find out if the differences in earnings between men and women depends on the level of earnings they get, i.e we want to know if female earnings tends to better catch up with males earnings whether they are from the lower, middle or upper class. We will compare the immigrants' gender earnings gaps along the distribution to the one of natives.

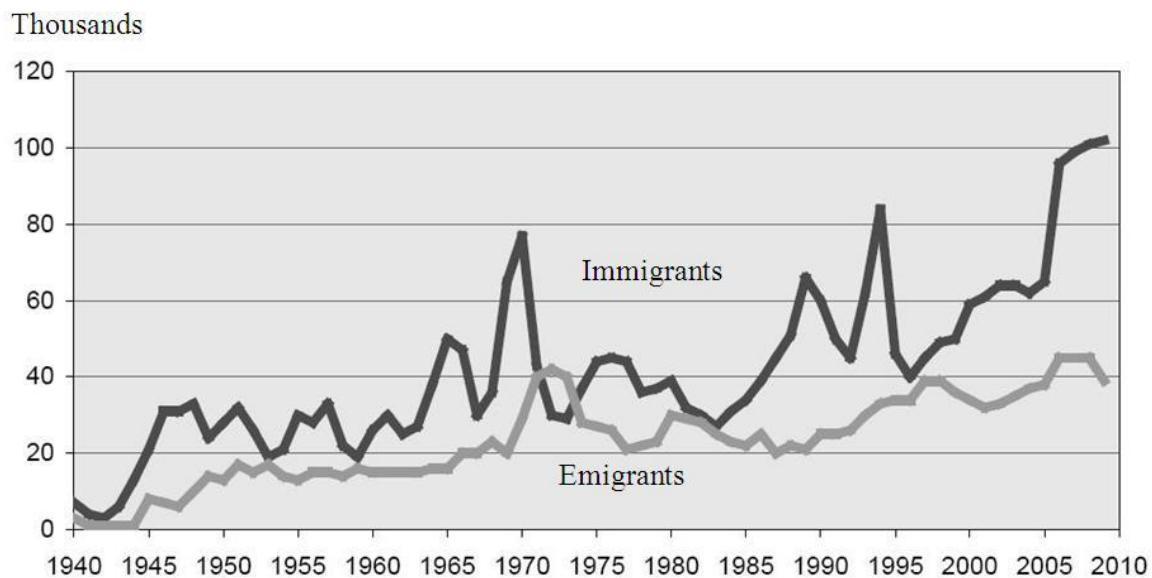
More explicitly, we will try to answer the question: How does the immigrants' gender earnings gap vary relative to the natives' gender earnings gap in Sweden?

To address this issue, we proceed in six different steps. Section II draws the history of immigrants in Sweden. Section III provides a critical review of the previous literature and Section IV describes the theories we rely on. Then, in section V, we describe our data and in section VI, we explain the method used to obtain our estimates. Finally, in Section VII and Section VIII, we analyze the results and conclude answering the research questions.

II. Immigrants in Sweden

Since our study operates in the Swedish labour market, it is important to look at the history of immigration in Sweden to determine what kind of immigrant moved to Sweden. After the Second World War, the share of immigrants in the Swedish population has increased rapidly. The number of immigrants has even exceeded the number of emigrants (Le Grand and Szulkin, 2002).

Figure 1. Annual immigration and emigration in Sweden over the period 1940-2009



Source: Ekberg, 2011

In 1940, the share of immigrants in the Swedish population was about 1 percent while in 1970 this share was around 7 percent (Hammarstedt and Shukur, 2006) and amounted 14 percent in 2009. The last figure represents about 1.3 million individuals (Ekberg, 2011). Moreover, there are more and more immigrants who were born in Sweden and have at least one parent born abroad. We call them “the second generation immigrants”. They are around 1 million in Sweden. Therefore, today, around 2 million of the Swedish population has an immigrant background (Ekberg, 2011). Over time, the number of immigrants has evolved, as well as their origin. In 1960, only 5 percent of immigrants were born in non-European countries whereas 58 percent were born in Nordic countries. Forty years later, in 2000, about 39 percent

of the immigrants come from non-European countries and only 28 percent from Nordic countries (Hammarstedt and Shukur, 2006). The type of immigrants also changed over time. The post-war immigrants from Finland and European countries were on average well educated. These labour immigrants went to Sweden due to a great labour demand in Sweden between the 1950s and 1970s. In 1970, around 60% of the immigrants were from Nordic countries (Denmark, Norway and Finland) and more than 90% were born in Europe (Ekberg, 2011). In the 1960s and the 1970s, a lot of Finns moved to Sweden. During this period, 75 percent of all the Finnish emigrants went to Sweden. Unemployment in Finland and higher salaries in Sweden were the main reason of the large inflow of Finns in Sweden (Korkiasaari and Söderling, 2003). Before the middle of the 1970s, the immigrants were mainly “labour immigrants”. They contributed actively to the Swedish labour market, which was beneficial for Sweden. The unemployment among immigrants was even lower than the one among natives. During the 1970s and the 1980s, due to the deterioration of the Swedish labour market, the proportion of refugees from Latin America, Asia and Africa increased relative to labour force immigrants. In the 1990s, the number of refugees was still increasing. They were mainly from Yugoslavia and the Middle East (Hammarstedt and Shukur, 2006). When immigrants come to seek asylum in Sweden, their integration to the Swedish labour market is even harder. If an entire family migrate, due to religious and cultural background, the husband is more likely to seek for a job than the wife. Immigrants’ women suffer from seclusion and lack of self-confidence. Furthermore, those women have no network and a weak knowledge of Swedes consumption. In order to increase women immigrants’ chances of integration into the Swedish society, the Swedish Federation of Immigrant Women’s Associations (RIFFI) was created in 1974². If such federation was born, it is certainly because very low immigrant’s female labour participation was observed. The creation of this Federation illustrates the beginning of a period of labour market deterioration in Sweden.

² Source: www.riffi.nu

III. Literature Review

Several studies have investigated differences in earnings between immigrants and natives. Hammarstedt and Shukur (2006) studied the assimilation of immigrants on natives in Sweden. According to their findings, male and female immigrants from Eastern European countries have greater earnings differentials than male and female immigrants from Western countries. The main explanation to these earnings differential is the lack of “country-specific” human capital for immigrants. At their arrival in Sweden, immigrants have a clear disadvantage in terms of language skills for instance, therefore they appear to be less-productive than natives (Le Grand and Szulkin, 2002). Besides, Blau (1992) argues that these differences reduce over time since their behavior adjusts to the norms of the host country. However, there are also earnings differentials between males and females within immigrants. Moreover, the gender earnings gap differs along the earnings distribution both for natives and immigrants.

1. Differences in gender earnings gaps across different groups of immigrant

We chose three main studies that try to figure out if cultural background of a group of immigrant has an impact on their gender earnings gap in the host country. We chose those studies because in the first step of their analysis they look at the gender earnings gap among various groups of immigrant.

Antecol (2001) analyzes interethnic variation in the gender earnings gap among immigrants aged from 25 to 54 years old in the United States. As we do in our study, Antecol first analyzes the unadjusted gender earnings gap. He finds for instance that immigrants who come from The Philippines have a gender earnings gap of 12.4 percent while the ones from Japan have a gender pay gap of 70.5 percent. The variations in gender earnings gap reduce across ethnic origin groups when controlling for exogenous (age, region) and some endogenous (number of children, education and marital status) personal characteristics. However, there is still a gender gap and Antecol tries to determine the role of home country factors in these gender earnings gaps. He finds a positive significant correlation between the gender gap in the

home country and the gender gap of each group in the US. A one percentage point increase in the home country gender gap increases the adjusted gender gap in the host country for one group of immigrant by 0.69 percentage point.

In another research done in 2003, Antecol tries to find a new result on the role of cultural factors in the explanation of inter-ethnic variations in the gender earnings gap. However, this time, he restricts the sample to married immigrants and to married immigrants whose wife comes from the same country of origin. Computing differences in log earnings, he finds different gender earnings gaps across each group of immigrant. For example, the gender earnings gap for Filipinos is 12.42 log points while it is 34.80 log points for Greek and 70.49 log points for Japanese. Concerning the impact of the home gender earnings gap, he finds, as in 2001, a positive correlation between the gender earnings gaps in home countries and the gender earnings gaps in host country but the effect is higher for married immigrants. A 1 log point increase in the home country gender pay gap is associated with a 0.51 log point increase in the adjusted host country gender pay gap for the total sample.

The third study was done by Neuman in 2014. She investigates on the role of culture, that is, the gender gap in home country, to explain the gender earnings gaps in the host country. She firstly divides immigrants into three cohorts over a period from 1970 to 1999. She notices that there are differences in the gender earnings gap across the three cohorts. For example, for immigrants from Greece and Chile, their gender earnings gap is smaller for the most recent cohorts. On the contrary, for immigrants from Hungary, Norway and the United States, the gender gap is smaller for the oldest cohort. These remarks show that gender earnings gaps vary between immigrants groups in Sweden depending on the cohort we consider. At the end, Neuman concludes that immigrants whose gender earnings gap is high in their home country tend to have lower gender earnings gap once they migrated to Sweden. She says that it could be due to the selection into the labour force participation among women. Indeed, when female participation rate is low in one immigrant group (and high gender gap in the home country), only the most “able” ones work and so the average earnings of women is overstated in the host country.

2. Differences in gender earnings gaps depending on the sub-group of immigrants

The literature concerning the “glass ceiling” effect deals with the presence of this effect in a country but does not look at the phenomenon across immigrant groups. Among Mediterranean countries, the glass ceiling effect is present only in France (Nicodemo, 2009). Concerning the Swedish labour market, Albrecht, Björklund and Vroman have investigated, in 2003, the presence of a glass ceiling in Sweden. They observe that the difference between male and female log earnings accelerates in the upper part of the distribution. Moreover, even after controlling for age, education, sector, industry and occupation, they still find a glass ceiling in Sweden in 1998. Since our study uses data from 1999, we could expect to get similar results from those found by Albrecht et al.

3. The comparison between the gender earnings gap of natives and the one of immigrants

When it comes to compare the gender gap of natives to the one of immigrants, the study made by Neuman (2014) is still relevant to mention. Indeed, in a second part of her study, she tries to figure out if gender gaps within cohort of immigrants tend to catch up the one of natives. The results we focus on concern the comparison between the gender earnings gap of immigrants who arrived in Sweden since at least 18 years and the one of natives. The main finding is that for all three cohorts, the unadjusted gender earnings gap is lower for immigrants than for natives. She then restricts the analysis on the cohort which arrived in Sweden in the 1980s. She divides the cohort into four percentile groups, depending on their country of origin. Percentile 1 includes Denmark, India and Turkey while percentile 2 includes Finland, Norway and Poland, percentile 3 contains Russia and UK and finally percentile 4 includes Chile, Greece and the US. She wants to see if the difference with natives in terms of gender gap depends on the country of origin. After 18 years in Sweden, immigrants tend to have higher gender earnings gap than natives. Indeed, except for percentile 4, all other percentiles have an adjusted gender earnings gap over the one of Swedes. Since we study, in 1999, immigrants who arrived in

Sweden before 1980, we expect to see the same phenomenon, that is, a higher gender earnings gap for immigrants than for natives.

IV. Theoretical Framework

The causes of the gender gap have been studied a lot by researchers during the last decades. Many different datasets, various estimation methods, and numerous employee subgroups have been used, but researchers still debate on the subject (Weichselbaumer & WinterEbmer, 2003). Several theories participate to the explanation of the gender earnings gap. We chose to develop the ones that could explain both the differences between the gender earnings gap of natives and the one of each group of immigrants. Except for the Human Capital Theory, all following theories clarify the unexplained gender earnings gap that remains after controlling for individual characteristics. We thought however that it was interesting to mention the Human Capital Theory since previous studies have found that half of the gender earnings gap was explained by human capital factors (Manning and Swaffield, 2005).

1. The Human capital Theory: differences in productivity

The human capital represents the set of abilities and skills someone has. Workers add to their stock of human capital through their job experiences and education. The incentive for people to invest in schooling depends on the returns of their investment. The theory suggests that women tend to develop more their non-market skills, whereas men more develop their market skills. According to Becker (1957) and Polachek (2004), men and women invest in schooling proportionally to the time they expect to work. The longer they expect to work, the higher are the expected returns, the more they invest in schooling, the more they are productive and better they will get paid. Therefore, one reason that generates gender gap is the male-female lifetime work expectation and differences in returns on these skills. When they become similar, the gender gap decreases. This theory justifies our choice to control for individual characteristics such as the level of education. We want to compare men and women

that have similar levels of education in order to delete the impact of educational attainment on the gender earnings gap. Besides, the differences between the immigrants' and natives' gender earnings gap could be explained by differences in their investment in human capital. Therefore, if we want to compare natives and immigrants with objectivity, we have to control for human capital factors.

2. Occupational and sector segregation

We find two types of segregation. The first one, the "horizontal" segregation, suggests that women are hired in different occupations than men and especially in low paid occupations. Women are more likely to be employed in health work, social work and administration than men, who are more likely to be hired in manufacturing, construction and transport, storage and communications. Besides, there are a lot of part-time jobs in occupations preferred by women; this is a reason why they are over represented in those occupations (Blau and Kahn, 2000). If we find differences between the gender earnings gap of natives and immigrants, that could be explained by a stronger horizontal segregation for native women than for female immigrants or inversely. For instance, let's imagine that the natives' gender earnings gap is higher than the immigrants' one. It could mean that the native women tend to work more in low paid occupations than the female immigrants. However, a "negative" segregation could also affect male immigrants. Indeed, supposing that both male and female Immigrants tend to work in low-paid occupations, the gender earnings gap will thus be lower for immigrants. Therefore, we have to be careful with the formulation of our expectations from this theory. If the natives' gender earnings gap is higher than the immigrants' one, we expect to see either a stronger segregation for native females in low-paid jobs or a male segregation for immigrants in low-paid occupations. On the contrary, if the immigrants' gender earnings gap is higher than the natives' one, we expect to see a stronger segregation for the female immigrants or a male segregation for natives in low-paid jobs.

The second one, the “vertical” segregation, implies that men will tend to be higher paid and have higher responsibilities within the same occupation than women (Bettio and Verashchagina, 2009). The vertical segregation refers to the “glass ceiling” which implies the existence of visible or invisible obstacles for women who try to access power and decision positions. This “glass ceiling” phenomenon occurs in public organization, in private firms and also in associations and trade unions (Laufer, 2002). A glass ceiling could be present both for immigrants and natives. In that case, we expect to see a higher gender earnings gap in the upper part of the distribution both for natives and each group of immigrants. Indeed, since women face obstacles to have access to power and well-paid positions, they are less numerous in that kind of job and the difference in term of earnings between men and women should be even higher.

We mention this theory on occupations’ segregation because we are aware that controlling for occupational sector would have made our analysis even more relevant. If a men and a women working in the same occupation have a different salary, it would have given us irrefutable evidence that a gender earnings gap exists. Unfortunately, we do not have information on occupation in our dataset. This is a limit of our study.

3. The Theory of taste-based and statistical discrimination

The unexplained gender pay gap after controlling for individual characteristics may be due to discrimination. Discrimination can be defined as a situation where two equally productive individuals are treated unequally because of observable characteristics such as ethnicity or gender. There are two main forms of discrimination; the taste-based discrimination and the statistical discrimination. Both are developed by Becker in 1957 in his book *The Economics of Discrimination*.

The taste based discrimination, in the case of gender discrimination, means that employers will see the cost of hiring women higher than the real cost. However, in our study case, since we compare natives’ and immigrants’ gender earnings gap, it implies that the

employer discriminates not according to the gender but to the origin. Let's make an example. W_{IM} is the earnings of immigrants and W_N is the earnings of natives. The variable 'd' represents the coefficient of discrimination. The lower is d, the less discriminatory is the firm. The employer who discriminates will compute the adjusted earnings due to discrimination and will hire immigrants only if $W_{IM} (1 + d) < W_N$. If $W_{IM} < W_N$ and if the firm discriminates, it will get lower profits than without discrimination. However, if we see a lower gender earnings gap for immigrants, it could mean that male immigrants are even more discriminated than female immigrants. In this case, the coefficient of discrimination could be even higher for male immigrants. Indeed, since men tend to work in higher-paid occupations, we expect to see higher discrimination from the employer for men. The employer cares more about the person he employs when the job implies responsibilities. Therefore, the earnings gap between male and female immigrants decreases due to stronger discrimination on male immigrants.

Statistical discrimination, also called non intentional discrimination, refers to discrimination that is due to an asymmetry of information. In our case, the employer has imperfect information about productivity of immigrants compared to natives. More precisely, the educational attainment is less informative for immigrants than for natives. Indeed, the employer knows better the quality of Swedish universities than the foreign ones. The employer will then discriminate considering that the productivity of the applicant immigrant equals the average productivity of his/her immigrants group that presents similar observable characteristics. Although the applicant has a higher educational level than the average level of his ethnic group, he will get the same earnings as the other group members. The employer will either employ only natives or employ immigrants but at a lower earnings. (Meulders, Plasman, Rigo, O'Dorchai, 2010)

4. The positive selection theory

The positive selection theory holds at two levels.

Firstly, migration costs constitute a significant barrier to migration, especially for low skilled individuals. Indeed, Borjas (2005) says that high educated workers may be more efficient at looking for employment opportunities in other labour markets. Moreover, he observes that

college graduates migrate at a substantially higher rate than high school graduates. According to Chiswick (2000), economic migrants tend to be more able, ambitious and entrepreneurial than the ones who stayed in their country. This implies that there is a positive correlation between workers' level of education and the probability to migrate. We can therefore suggest that migrants who go to Sweden are positively selected, especially those who come from far countries.

However, the relevance of this selection theory concerning immigration has to be discussed. Indeed, the positive selection theory holds for immigrants who come to Sweden to work. As mentioned before, there is a growing part of immigrants that are refugees, that is, that comes to Sweden to escape from bad political and economic conditions in their home country. Therefore, we have to mention another aspect of selection theory which concerns the labour force participation of women. Indeed, once immigrants moved to Sweden, the immigrant women labour force participation rate will depend on several factors. The main one is the reason of migration. If women migrated due to family reasons or to political reasons, they might not put a lot of energy looking for a job and their participation rate could be quite low. In that case, only the most able women will work. For instance, a higher level of education, a smaller number of children and higher English skills, positively influence the rate of labour force participation among Asian immigrant women in the US (Sungkyu, Huiquan, Youngmi, 2014). Therefore, generally, when the participation rate of women is low, only the most educated work. Then, the average earnings of the immigrant women will be higher and the gender earnings gap for this group of immigrants will be lower.

V. Data and summary statistics

The data used to conduct the analysis are from Statistics Sweden. Our data are from the database LISA, a Swedish acronym corresponding to "longitudinal integration database for health insurance and labour market studies". The sample we have selected is from 1999 and regroups 94219 individuals; 63 181 are foreign born and 31038 are natives. The latest will be used as a control group to compare the immigrants' gender gap with the Swedish gender gap.

The foreign born persons are regrouped by the world region they come from and where they are born. We have eight regions of immigration. Among the 63 181 immigrants in the sample selected, 16775 emigrate from Finland, 5365 are from the Nordic countries excepted Finland, 6218 are from the Western countries, 6464 are from the Eastern Europe, 8949 are from the Southern Europe, 4029 emigrate from Latin America and 3037 are from Africa. Those regions have been defined to get groups of immigrants who are similar either because they come from the same world geographical location, or because they come from countries with approximatively equivalent GNP per capita. Thus, the USA, Canada, Israel and Oceania are included in the Western countries group. We found interesting to separate Finland from the other Nordic countries since, as we can see in the Table 1, Finnish people is the most represented immigrant group in Sweden in 1999. We were curious to know if their gender gap is close from the Swedes one or not.

In order to get an overview of our sample, we summarized in Table 1 the main individual characteristics of the eight groups of immigrants and of the natives group in Sweden in 1999.

Table 1. Summary of the main characteristics of immigrants and natives in 1999

	Finland	Nordic Countries	Western countries	Eastern Europe	Southern Europe	Asia	Latin America	Africa	Natives
Mean variables									
Ln earnings	7.52	7.52	7.58	7.44	7.31	7.18	7.28	7.22	7.53
Age	46.34	43.77	43.88	43.25	40.10	36.51	38.22	36.55	41.46

	Finland	Nordic Countries	Western countries	Eastern Europe	Southern Europe	Asia	Latin America	Africa	Natives
Proportions									
Secondary	0.46	0.44	0.38	0.45	0.51	0.38	0.46	0.45	0.51
University	0.22	0.27	0.43	0.43	0.22	0.31	0.29	0.26	0.30
Metropolitan	0.61	0.63	0.72	0.75	0.65	0.74	0.78	0.83	0.52
North of Sweden	0.09	0.05	0.03	0.02	0.02	0.04	0.03	0.04	0.11
Immigrated before 1980	0.86	0.61	0.56	0.40	0.37	0.29	0.32	0.22	1.00
Married	0.50	0.52	0.56	0.59	0.66	0.59	0.44	0.50	0.47
Women	0.56	0.51	0.40	0.60	0.40	0.44	0.48	0.39	0.48
Observations	16775	5365	6218	6464	8949	12344	4029	3037	31038

Each of the nine groups contains individuals aged 20-64 years old. On average, natives are aged around 41 years old while immigrants are on average aged from 36 years old to 46 years old. However, in order to test the robustness of our figures, we will restrict the age range to 25-54 years old. Indeed, a part of students who go to the university try to find a job during their free time that does not necessarily correspond to their level of skills. Concerning the old persons, some who are retired try to keep working for a better retirement income. By restricting the age range in a second time, we want to skip the problem of students and old persons. We will mention the new results to compare with our findings.

All those men and women are in the labour force and earned a positive labour income during the studied year 1999. The sample includes both earnings and self-employed. Here is one of the main limits of our study. Since our data include the self-employment, the analysis of the presence of the glass ceiling will be biased. Moreover, we have yearly earnings and not hourly earnings. It means that we will compare a person who has a full-time job to a person who has a part-time job. That will also bias our results. When we look at the summary statistics, we see that the mean log earnings for immigrants is between 7.22 for Africa and 7.58 for Western

countries. Concerning the natives, their mean log earnings is 7.53. It is important for us to work only with data on active and working people to get relevant results. Indeed, our study focuses on the gender earnings gap, so including persons who do not get any earnings such as unemployed or out of the labour force individuals, would bias the results.

The main objective is to look at the gender earnings gap across immigrants groups and natives, and we can see that each group is quite equal in terms of male and female proportion. In the native group, there are 48% of women. Women are more represented than men only for immigrants who come from Finland, Nordic countries and Eastern European countries. Hence, we can see that immigrants who come to Sweden are almost perfectly mixed. In the Immigrants groups, women represent from 39% for African countries to 60% for Eastern European countries.

For every individual included in the sample, in addition to the birth country, we have information on his gender, his age in 1999, his educational attainment, his region of residence in Sweden, his marital status, and whether he immigrated in Sweden before or after 1980. This will allow us to control for each of those variables in our regressions analysis. Except for the age, all these variables are dummies. Educational attainment is decomposed into persons who left school before entering high school, persons who attended high school, and persons who studied at university. For instance, we can see that among natives, 51% left school after the secondary whereas 30% went to university. On average, between 38% and 51% of immigrants left school after the secondary school while between 22% and 43% went to the university. We also control for region of residence, that is, if the individual lives in a metropolitan area, in the north of Sweden, or neither one nor the other. As we can see in Table 1, immigrants of our sample live more in metropolitan area than the natives group. It is important to control for these nine variables because they can be a factor of differences in earnings. For instance, a 20 years old man will probably earn less than a 45 years old man. Or a men living in a metropolitan area will tend to work in a different occupation compared to a men working in a region of the northern Sweden, and thus will get a different pay.

Besides that, in order to find out if there is any correlation between the gender gap an immigrant group faces in Sweden and the gender gap existing in its home country, we rely on Emma Neuman article from 2014, “Culture, Assimilation, and Gender Gaps in Labour Market Outcomes”. This article provides data for 1990 on the gender gap in the source country of numerous countries. Regrouping them according to our eight region of birth, we will be able to analyze whether the gender gap of a group of immigrants in Sweden differs from the gap in its source country or not.

VI. Method

Our Method is based on two main statistical tools; the linear regression and the quantile regression. Both are drawn thanks to the software STATA. The Method part is divided into the three following steps. For each steps, the earnings regressions are estimated by ordinary least squares (OLS). In all our analysis, the earnings represent the yearly labour income, in hundred, before taxes. Wage-employment and self-employment are included in the earnings. As mentioned in the data part, our result will be biased because of the self-employment and the fact that it is yearly earnings and not hourly earnings. However, we will make the analysis in order to have a first hypothesis of what could happen in reality. We encourage following studies to delete the self-employment from the data and to take into account hourly wage.

1. The average unadjusted gender earnings gap

We first compute the gender earnings gap without doing any control, for natives and for each group of immigrants. We use the following linear regression line:

$$[1] \quad \ln(\text{earnings}) = \alpha_0 + \alpha_1 \text{gender} + \varepsilon$$

$\ln(\text{earnings})$: logarithm of earnings in Swedish kroner
gender: dummy variable that takes 1 if female and 0 if male
 α_1 : OLS estimates that gives us the gender earnings gap

Doing this regression will enable us to compare the unadjusted to the adjusted gender earnings gap. That way, we will see how large is the impact of individual characteristics on the level of the gender earnings gap.

2. The average adjusted gender earnings gap

Then, we control the estimation for endogenous variables in order to isolate the gender gap that is not due to individual characteristics. We estimate the following equation separately for each group of immigrants and for natives:

$$[2] \quad \ln(\text{earnings}) = \beta_0 + \beta_1 \text{age} + \beta_2 \text{age}^2 + \beta_3 \text{secondary school} + \beta_4 \text{university} + \beta_5 \text{metropolis} + \beta_6 \text{north} + \beta_7 \text{Immigrated before 1980} + \beta_8 \text{marital status} + \beta_9 \text{gender} + \varepsilon$$

Secondary school : 1 if the person went to secondary school, 0 otherwise.

University : 1 if the person went to university, 0 otherwise.

Metropolis : 1 with the person lives in a metropolis in Sweden, 0 otherwise.

North : 1 if the person lives in the North of Sweden

Immigrated before 1980 : 1 if the person immigrated in Sweden before 1980, 0 otherwise.

Marital status : 1 if the person is married, 0 otherwise.

Gender : 1 if the person is a female, 0 otherwise.

Except for the *age* and the *age*², all variables are dummy variables

We tried to control for as much variables as we had with our Data. We could not control for occupations (low/medium/high) and the sectors (private/public) since these data are not available for this year. We wanted to range the occupations of immigrants and natives according to the Swedish classification called SSYK (Standard för Svensk Yrkesklassificering). Even if we don't have this information in our data, we are clearly aware of their impact on the earnings level. A man who works as manager will have a higher salary than one who works in the administration. These differences are the same for women. Moreover, the earnings vary from private sector to public sector. For instance, it has been found that the glass ceiling is

stronger in the public sector than the private in Sweden (Özcan, 2010). After controlling from 13 industry categories and 27 occupational categories, Özcan (2010) finds a weaker glass ceiling for the private than the public sector. This shows how important it is to control for occupations and the two sectors. However, we still control for the level of education which is a variable in link with occupations. Therefore, our results will still be relevant even if it would have been better to control for occupations.

Besides, we compare the gender earnings gap for every immigrant group to the existing gap in the region of origin. This will help us to bring some explanations about variation in the gender earnings gap across immigrants groups. If the gender gap of a particular group of immigrant is lower in Sweden than the one faced in its region of origin, selective migration may be an explanation.

We then compare the adjusted gender earnings gap of each group of immigrant with the earnings gap between Swedish men and Swedish women. This second comparison will allow us to have an idea on which group of immigrant assimilate better to the relatively low Swedish earnings gap.

3. The adjusted gender gap at different quantiles of the earnings distribution

Using the quantile regression, we analyze how the gender earnings gap varies if we compute it for narrower subgroups of immigrants made according to their earnings level. We want to find out if the differences in earnings between men and women depends on the level of earnings they get, i.e we want to know if female earnings tends to better catch up with males earnings whether they are from the lower, middle or upper income class. To do so, we slice the earnings distribution into six quantiles (25th; 50th; 75th; 90th; 95th and 99th). For each quantile, we regress equation [2] and get the OLS estimates for all variables including the gender earnings gap. This will enable us to determine whether the glass ceiling effect is present and for which group of immigrants this effect is stronger.

In order to have more precise information on the labour income distribution of our nine groups, we have computed the earnings distribution decomposed into nine percentiles including the median, the mean earnings of the group and the standard deviation (see Tables A5). Those information will enable us to bring consistent analysis of our results.

VII. Results and analysis

1. The average unadjusted gender earnings gap

The following table shows the unadjusted gender earnings gap for each group of immigrants and for natives. When the gender variable corresponds to a woman, we see that whatever the region where the immigrant comes from, its coefficient is negative. This means that being a woman affects negatively the mean earnings, differently said, women are given lower earnings than men. This refers to the occupational segregation theory which implies that women tend to work in low-paid occupations.

Table 2. Unadjusted gender earnings gap

	Finland	Nordic countries	Western countries	Eastern Europe
	(1)	(2)	(3)	(4)
VARIABLES				
gender	-0.198*** (0.00752)	-0.344*** (0.0152)	-0.263*** (0.0154)	-0.227*** (0.0148)
Constant	7.633*** (0.00565)	7.696*** (0.0109)	7.682*** (0.00979)	7.578*** (0.0114)
Observations	16,775	5,365	6,218	6,464
R-squared	0.040	0.087	0.044	0.035

	Southern Europe	Asia	Latin	Africa	Natives
	(5)	(6)	(7)	(8)	(9)
VARIABLES					
gender	-0.181*** (0.0118)	-0.116*** (0.0109)	-0.194*** (0.0179)	-0.138*** (0.0214)	-0.290*** (0.00589)
Constant	7.380*** (0.00749)	7.234*** (0.00722)	7.371*** (0.0125)	7.273*** (0.0134)	7.675*** (0.00410)
Observations	8,949	12,344	4,029	3,037	31,038
R-squared	0.025	0.009	0.028	0.014	0.072

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

All our OLS estimates for gender gap are significant at 1% level. We can see that, except for immigrants from Nordic countries, all the other groups of immigrants have a gender gap below the one of natives which is of 29%. The gender gap is low for the Asian and immigrants from Southern Europe, around 11% and 18% respectively. Finnish immigrants, who represent the greater part of the immigrants in Sweden, have a gender earnings gap of around 20%. However, we have to control for all individual characteristics in order to compare similar immigrants. Then, our comparison will be more relevant.

2. The average adjusted gender earnings gap

After controlling for exogenous variables on individual characteristics such as the age, the level of education, the region of living, the marital status, and if the person immigrated in Sweden since at least 20 years, we find other OLS estimates (Table 3).

Table 3. Average adjusted gender earnings gap

VARIABLE	(1)
Gender gap	
Finland	-0.245*** (0.00726)
Nordic	-0.370*** (0.0142)
Western	-0.284*** (0.0147)
Eastern	-0.246*** (0.0139)
Southern	-0.185*** (0.0115)
Asia	-0.0998*** (0.0105)
Latin	-0.207*** (0.0169)
Africa	-0.0812*** (0.0208)
Natives	-0.322*** (0.00536)
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1	

Even with this less biased regression, we observe that the gender coefficient still impacts negatively the earnings, meaning that women have on average lower earnings than men for every immigrant group. Moreover, there is no tendency for less earnings disparities between men and women after controlling for observable characteristics. That means that other variables than the observable characteristics explain the gender wage gap. Moreover, to know if our figures are reliable and robust, we did the same regressions restricting the age range to 25-54 years old (see Table A2). Comparing the gender gap coefficients of Table A1 (ages range 20-64) with Table A2 (ages range 25-54), we observe pretty similar figures rounded to two decimals places. Thus, we can consider the results obtained with the widest age bracket.

- Immigrants gender earnings gap versus Natives gender earnings gap

As we can see in Table 3, all gender earnings gap coefficients are still negative. This is consistent with the occupational segregation theory, stating that female occupations pay less. Besides, except for immigrants from Nordic countries, the gender earnings gap of each immigrants group is smaller than the gender gap of natives Swedes, which is 32%.

Immigrants from Asia and Southern Europe have respectively a gender gap of 10% and 18.5% at 1% of statistical significance, which is approximatively similar to the values obtained when no control is made. There is almost no gender earnings gap among African immigrants (8%). Concerning Finns immigrants, women earn 24.5% less than men. The largest gender gap is among immigrants from Nordic countries, where women earn 37% less than men. All variables are significant at the 1% level.

Through the estimates we can wonder why the African or Asian gender earnings gap is by far lower than the Finnish or the Nordic gender earnings gap. In order to interpret the results, we then have to introduce the wage distribution of each group of immigrants and natives.

Table 4. Wage distribution for each immigrant group and the natives (in SEK)

Percentiles	0.01	0.05	0.1	0.25	0.5	0.75	0.90	0.95	0.99
Immigrant groups									
Finland	42300	67600	91300	150500	200800	246900	302700	364400	539800
Nordic countries	41500	60700	82500	136900	195400	255700	357100	464700	745000
Western Countries	41000	59500	82800	142700	210850	279000	391800	486900	802100
Eastern Europe	39300	53500	71100	122000	188350	244500	330800	413400	658900
Southern Europe	38800	49400	64000	104900	171600	219500	262900	299300	466600
Asia	38000	44700	54000	83900	1451500	204200	264800	316800	494900
Latin America	38200	46400	59100	99800	164600	215900	269000	310100	484400
Africa	38400	46300	57200	90300	151900	206400	261700	311000	483300
Natives	41400	63300	89500	146700	200900	255300	333100	409900	627200

Table 4 shows that the groups of immigrant that have a low gender earnings gap (Africa, Latin America, Asia and Southern Europe), have earnings more concentrated than the natives. At the 95th percentile, they earn around the same wage that natives earn at the 75th percentile. That means these groups of immigrant get less paid than natives along the earnings distribution. Both women and men immigrants from these groups have a more concentrated wage than natives. Hence, their gender earnings gaps will be lower.

Moreover, African immigrants and Southern Europe immigrants often come to Sweden to escape bad political situations. Since refugees come to Sweden not because of labour reasons but more for family rapprochement, very few women try to get a job, only the most able work and the gender earnings gap is thus lower for those groups. Hence, if they have lower gender earnings gaps, it could probably be due to the low labour force participation of women from these groups. This hypothesis could hold to explain the weak gender coefficient for the African, Asian, Southern Europe and Latin America groups, which are 8%, 10%, 18% and 20% respectively.

Besides, other factors than the selection problem could explain the differences between the gender gaps across immigrant groups. Indeed, we see that when we control for individual characteristics, there is still quite large gender earnings gap. That means that other factors than the individual ones generate gender earnings gap among immigrants. According to the previous researches, the unexplained gender gap between immigrant groups could be due to differences in home culture. The culture influences the gender earnings gap. According to Neuman findings, « high source country gender gaps in earnings are associated with lower gender gaps in earnings within immigrant groups in Sweden » (Neuman, abstract).

- Immigrants gender earnings gap versus source-country gender earnings gap

In addition to have a smaller gender earnings gap than natives, immigrants from high source country gender gap seems to have a lower gender earnings gap in Sweden and immigrants from low source country gap have a high gap in Sweden. When we look at Neuman's data on the home gender earnings gap we see that the home gender earnings gap for Nordic countries is between 15% and 18% (versus 37% for Nordic immigrants) while the one for Asian countries is between 44% and 49% (versus 10% for Asian immigrants). We observe a negative relationship between source country gender gaps in earnings and corresponding gaps in Sweden. Consequently, the cultural factor does not seem to persist for immigrants in Sweden.

Immigration selection in the labour force participation of women immigrants in Sweden could here also explain why for workers coming from Norway, Denmark and Iceland, the difference between women earnings and men earnings is higher than the difference in their home country. These workers are more likely to come to Sweden for labour reasons than for political reasons. Then, almost all Nordic women that migrate to Sweden will try to get a job, meaning that all women work, including those with lower income. We can then think that the labour participation rate of women from Nordic countries is even higher in Sweden than in their home country. Since the labour participation rate will be very high in Sweden for Nordic women, it leads to a lower women average earnings in Sweden than in their home country, and consequently to a higher earnings gap in Sweden.

In contrast, other immigrant groups seem to have lower gender earnings gaps in Sweden than in their home country. Concerning those countries, Swedish labour market opportunities may not be the main reason to their migration. For those regions, women are less likely to work and only the most able women work. It leads to high women average earnings in Sweden, and thus a lower earnings gap. Here again the selection phenomenon concerning the labour force participation holds.

Beside the immigration selection, other factors might explain such differences between home and host country labour earnings gap. Immigrants may benefit from Swedish social

institutions. Indeed, Sweden is one of the most gender equal countries (Haunsmann, Tyson and Saadia, various years). It provides numerous policies that facilitate immigrants' integration and families' responsibilities. Also, the expended childcare facilities make it easier for women to combine work and family, which encourage them to work in full time jobs and in jobs that require more involvement but also that are better paid. Furthermore, the concentrated earnings distribution in Sweden, added to earnings setting institutions aimed to reduce earnings disparities, are in favour of lower gender earnings gap. Since immigrants in Sweden benefit from the Swedish rules and policies on the labour market, it may be another reason why their gender gap is weaker than their source country gap. Finally, the ethnic discrimination could also explain the differences between host and home country gender gaps.

Finally, when we look at table 4, we observe that immigrants are segregated in low paid occupations compared to natives. This might be due to taste-based or statistical discrimination. Since both women and men in some immigrant groups are segregated, the differences between male immigrants' earnings and female immigrants' earnings are low. That could explain why some groups of immigrants have a lower gender earnings gap in Sweden than in their home country.

In order to have a more precise overview on immigrants earnings gap in Sweden, we have run a quantile regression for several quantiles (25%, 50%, 75%, 95%, 99%) across the earnings distribution.

3. The adjusted gender gap across the distribution

To investigate whether a glass ceiling exists, it is required to examine the gender gap in different parts of the earnings distribution.

Table 5. Gender gap coefficients

REGIONS	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
Finland	-0.261*** (0.0120)	-0.251*** (0.00634)	-0.249*** (0.00501)	-0.267*** (0.0105)	-0.302*** (0.0113)	-0.357*** (0.0375)
Nordic countries	-0.363*** (0.0243)	-0.339*** (0.0129)	-0.402*** (0.0127)	-0.403*** (0.0213)	-0.451*** (0.0198)	-0.532*** (0.0283)
Western Countries	-0.305*** (0.0146)	-0.266*** (0.00923)	-0.278*** (0.0136)	-0.303*** (0.0204)	-0.366*** (0.0292)	-0.372*** (0.0676)
Eastern Europe	-0.255*** (0.0333)	-0.249*** (0.0162)	-0.266*** (0.0120)	-0.303*** (0.0169)	-0.310*** (0.0236)	-0.351*** (0.0574)
Southern Europe	-0.237*** (0.0228)	-0.218*** (0.0119)	-0.188*** (0.00833)	-0.172*** (0.0115)	-0.187*** (0.0113)	-0.233*** (0.0293)
Asia	-0.0305 (0.0265)	-0.0844*** (0.0171)	-0.172*** (0.0105)	-0.196*** (0.0103)	-0.235*** (0.0160)	-0.338*** (0.0409)
Latin America	-0.222*** (0.0346)	-0.212*** (0.0113)	-0.235*** (0.0110)	-0.239*** (0.0159)	-0.225*** (0.0183)	-0.289*** (0.0340)
Africa	0.00541 (0.0420)	-0.118*** (0.0266)	-0.158*** (0.0145)	-0.167*** (0.0252)	-0.185*** (0.0385)	-0.180** (0.0762)
Natives	-0.344*** (0.00762)	-0.318*** (0.00334)	-0.324*** (0.00391)	-0.340*** (0.00631)	-0.345*** (0.00672)	-0.411*** (0.0210)

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5 shows the gender coefficients obtained for each immigrant group and the natives at six different earnings levels. We observe the gender earnings gap for each quartile (25%, 50%, 75%) and we detail the values for the upper quartile, looking at the 90%, 95% and 99% quantiles of the earnings distribution. Almost all the figures are negatives, and statistically significant at 1%.

The gender earnings gap for Natives increases along the earnings distribution and it accelerates in the upper tail. In the middle of the earnings distribution, women earn about 32% less than men, whereas among the 1% of the most paid Swedes, women earn 41% less than men. Those figures point the existence of a strong glass ceiling for natives in Sweden, which is also supported by Albrecht et al. (2003) in their study on the glass ceiling in Sweden.

As we did for the adjusted gender earnings gap regression in part VII - 2, here also we ran the quantile regression for the restricted age bracket 25-54. The gender gap coefficients are

given in the Table A4. We observe that for far region groups, the gender earnings gaps tend to increase less across the distribution than the gaps found with the 20-64 age range. For the group closer to Sweden (Western countries, Nordic Countries, Finland) and the Natives, the tendency seems to be the opposite; the glass ceiling appears to be slightly stronger with the age restriction.

For immigrants from Southern European countries, from Latin America and from African countries, the gender earnings gap remains quite constant across the distribution. However, when we look at table 4 and the wage distribution, we see that these immigrant groups are paid lower than natives. They have a wage concentrated in the low percentiles of the natives. That means that these groups of immigrants are not present in high paid occupations, leading to a weak glass ceiling in the data table. It could be the case that immigrant males are not able to realize their labour supply, they do not work as much as they would like to, leading to decrease their earnings. The consequence is a low and constant gender earnings gap across their earnings distribution. This refers to the segregation theory that can also occur for men. In our case, we can suggest that not only women but also men immigrants are segregated in low-paid occupations.

In the Nordic and Asian case, the glass ceiling seems to be more present. For instance in Asia, the gender earnings gap is ten times higher for the persons at the top 1% of the earnings distribution than for the persons at the 25% of the distribution. The gender earnings gap, concerning immigrants from Nordics countries, follows the same trend as the natives gender earnings gap, although it is generally higher; it goes from 36% concerning the 25th quantile to 40% for the 95th quantile and almost reaches 54% for the 1% top of the distribution. A quite high glass ceiling for Nordic immigrants could be due to their strong presence in high-paid occupations. Indeed, at the 95th percentile of their wage distribution they even have a higher wage than the natives (see table 4).

Concerning the western countries, the eastern European countries and the Finnish, we see that women's earnings is lower than men's earnings more at the top of the earnings

distribution than in the middle or bottom, leading to conclude that a glass ceiling exists for those groups of workers. However, their glass ceiling is weaker than for the natives. Then, when we look at the wage distribution, we see that these groups of immigrants are not segregated in low-paid occupations. We could then imagine that their glass ceiling is lower than the natives' one because immigrant men are less rewarded by the Swedish labour market than Natives men on average. Since immigrants went to different school as natives', their educational level may be less informative for Swedish employers and thus being less rewarded in the Swedish labour market. As the Statistical discrimination theory predicts, this would be consistent with a lower gap at the top of the distribution for immigrants. Indeed, associating the most productive with the highest paid persons, if the signal of productivity is weaker for immigrants, the earnings corresponding will be lower, reducing the gender earnings gap. Furthermore, among the most productive immigrants, we suppose that women represent a larger share than among natives, since only the most able immigrant women try to get a job.

To sum up, when looking at the earnings distribution (table 4) within each groups of immigrants and natives. We see that for the four immigrant groups; Finland, Nordic Countries, Western countries, Eastern Europe and the Natives' group, the yearly earnings at the 0.95 percentile of the distribution is between 3644 hundred SEK and 4869 hundred SEK. The mean yearly earnings is about 2100 hundred SEK for those groups. In comparison, the four other groups (Southern Europe, Asia, Latin America and Africa) have a yearly earnings around 3000 hundred SEK at the 0.95 percentile. Their mean earnings is comprised between 1570 hundred SEK (Asian group) and 1717 hundred SEK (Southern Europe group).

Those differences in earnings distributions suggest the immigrants from the latest groups to be less represented in the high-paid occupations than immigrants from the former groups. In other words, immigrants from Finland, Nordic countries, Western countries and Eastern Europe tend to be less segregated in low-paid occupations than immigrants from Southern Europe, Asia, Latin America and Africa. That holds for both men and women immigrants. The fact that immigrants from Southern Europe, Asia, Latin America and Africa are very few in the highest paid positions may explain the weak gender earnings gap observed for those groups, even at the upper tail of the distribution. Indeed, for those immigrants, the 1%

richest are given a yearly earnings of 4800 hundred SEK whereas it is between 6660 hundred and 8000 hundred SEK for immigrants from Nordic Countries, Western countries and Eastern Europe.

Above the median earnings, natives' earnings are slightly lower than Immigrants' earnings from Nordic Countries, Western countries and Eastern Europe, but higher than immigrants' earnings from Southern Europe, Asia, Latin America and Africa. It could be that immigrants from Southern Europe, Asia, Latin America and Africa account more refugees and non-labour immigrants than the Nordic Countries, Western countries and Eastern Europe groups. Moreover, immigrants from the latest group might be positively selected, explaining why the observed earnings exceed natives' earnings. When it comes to Finnish immigrants, their distribution closely follows the one of natives.

Finally, in addition to segregation, discrimination against immigrants could here also hold to explain the lower and constant gender gap for immigrants across the distribution. According to the taste-based theory developed in Section IV, employers don't discriminate according to gender but according to the origin of immigrants. Thus, within an immigrant group, women as men face the same discrimination, making the access to responsibility positions also more difficult for men.

VIII. Conclusion

Throughout our study, we analyse in different steps how the gender earnings gap of immigrants differs within groups and from natives' gender earnings gap.

We found that a gender gap exists among immigrants and depends on the immigrants' region of origin. The source country gender earnings gaps, as well as the political and economic conditions present in those regions, influence the immigrants' gender gap in Sweden. This is implicitly linked to their female labour participation.

Besides, for a part of the immigrant groups, the gender earnings gap is constant across the distribution, whereas it is increasing for the natives and Nordic immigrants. This is mainly

due to a segregation of these immigrants in low paid occupations. The earnings distribution is by far wider and less concentrated for natives than for these groups of immigrants. Selection in female labour participation rates, less informative educational attainment for immigrants, discrimination, as well as difficulties for immigrant men to realize their labour supply, can also explain why earnings between immigrants men and women doesn't differ as much as native men's and women's earnings when it comes to the upper tail of the earnings distribution.

The figures obtained also show a smaller gender gap for immigrants relative to natives. Sweden being one of the most world equal gender countries, we could think that Swedish institutions are beneficial for immigrants. Notwithstanding, through our reasoning, we come to the conclusion that those smaller gaps are not just the reflection of a better integration of immigrant women in the Swedish labour market. It could also be that immigrant men suffer from difficulties and obstacles to succeed in Sweden, whereas it is easier for immigrant women to reach natives women earnings, since natives women suffer from the glass ceiling.

In every steps of our analysis, we see that immigrants from Nordic countries follow the same trend as Natives Swedes in the Swedish labour market. Employers may consider them as Swedes close substitutes, because they are from countries quite similar to Sweden in term of education and standards of living. They may be less discriminated in the labour market, and less selected to move to Sweden than immigrants from other world regions.

However, there are different limits of our study. Our dataset is not so well adapted to our research question. We could not have excluded self-employment and the occupational variables. The fact that we have only yearly earnings is also a barrier to a good interpretation of our results. It could be very interesting to see the results while including occupations and sectors controls as well as working time using only wage employment.

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Appendix

The regions have been regrouped in the following way:

Finland

The Nordic countries:

Norway, Denmark, Iceland.

Western countries:

Austria, Belgium, Canada, France, Germany, Great Britain, Ireland, Israel, Liechtenstein, Luxembourg, the Netherlands, Oceania, Switzerland, the USA.

Eastern Europe:

Albania, Belarus, Bulgaria, Czechoslovakia, Estonia, the German Democratic Republic, Hungary, Latvia, Lithuania, Poland, Romania, Russia, the Soviet Union, Ukraine.

Southern Europe:

Bosnia-Herzegovina, Croatia, Cyprus, Greece, Italy, Macedonia, Malta, Portugal, San Marino, Slovenia, Spain, Turkey, Yugoslavia.

Africa:

African countries.

Asia:

Asian countries.

Latin America:

Latin American countries.

Table A1. Adjusted linear regression for each world region and for natives aged 20-64.

	Finland	Nordic countries	Western countries	Eastern Europe
VARIABLES	(1) lnai	(1) lnai	(1) lnai	(1) lnai
age	0.0564*** (0.00308)	0.0667*** (0.00530)	0.0666*** (0.00539)	0.0626*** (0.00477)
agesq	-0.000596*** (3.39e-05)	-0.000696*** (6.06e-05)	-0.000678*** (6.14e-05)	-0.000650*** (5.66e-05)
utb1	0.0672*** (0.00831)	0.0856*** (0.0170)	0.0251 (0.0203)	0.0287 (0.0217)
utb2	0.324*** (0.0101)	0.398*** (0.0192)	0.284*** (0.0199)	0.275*** (0.0219)
metro	0.0535*** (0.00800)	0.0665*** (0.0154)	0.0884*** (0.0168)	0.00497 (0.0163)
north	-0.0543*** (0.0133)	-0.0617* (0.0332)	-0.0247 (0.0410)	-0.0155 (0.0486)
inv80sv	0.0608*** (0.0109)	-0.0179 (0.0162)	0.0400** (0.0178)	0.164*** (0.0156)
civ	0.0642*** (0.00731)	0.0434*** (0.0151)	0.0680*** (0.0152)	0.0753*** (0.0143)
gender	-0.245*** (0.00726)	-0.370*** (0.0142)	-0.284*** (0.0147)	-0.246*** (0.0139)
Constant	6.170*** (0.0671)	6.013*** (0.110)	5.912*** (0.113)	5.928*** (0.0956)
Observations	16,775	5,365	6,218	6,464
R-squared	0.136	0.213	0.148	0.170

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

	Southern Europe	Asia	Latin America	Africa
	(1)	(1)	(1)	(1)
VARIABLES	lnai	lnai	lnai	lnai
age	0.0437*** (0.00416)	0.0466*** (0.00398)	0.0663*** (0.00586)	0.0452*** (0.00791)
agesq	-0.000498*** (5.02e-05)	-0.000462*** (5.11e-05)	-0.000698*** (7.36e-05)	-0.000445*** (0.000102)
utb1	0.0554*** (0.0134)	0.0867*** (0.0127)	0.0822*** (0.0214)	0.0348 (0.0239)
utb2	0.186*** (0.0162)	0.286*** (0.0132)	0.186*** (0.0233)	0.118*** (0.0274)
metro	0.0112 (0.0120)	0.0128 (0.0125)	0.0712*** (0.0214)	0.0332 (0.0294)
north	-0.0957** (0.0433)	-0.0744*** (0.0287)	0.0941* (0.0526)	0.0526 (0.0596)
inv80sv	0.233*** (0.0137)	0.148*** (0.0118)	0.0922*** (0.0190)	0.237*** (0.0277)
civ	0.0517*** (0.0125)	-0.00774 (0.0115)	0.0912*** (0.0182)	0.0208 (0.0207)
gender	-0.185*** (0.0115)	-0.0998*** (0.0105)	-0.207*** (0.0169)	-0.0812*** (0.0208)
Constant	6.286*** (0.0821)	6.017*** (0.0745)	5.722*** (0.113)	6.092*** (0.150)
Observations	8,949	12,344	4,029	3,037
R-squared	0.103	0.101	0.141	0.109

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Natives	
VARIABLES	(1) lnai
age	0.0778*** (0.00174)
agesq	-0.000818*** (2.07e-05)
utb1	0.137*** (0.00735)
utb2	0.358*** (0.00800)
metro	0.0771*** (0.00574)
north	-0.0368*** (0.00925)
o.inv80sv	-
civ	0.0494*** (0.00595)
gender	-0.322*** (0.00536)
Constant	5.747*** (0.0350)
Observations	31,038
R-squared	0.240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2. Adjusted linear regression for each world region and for natives aged 25-54.

	Finland	Nordic	Western	Eastern	Southern	Asia	Latin	Africa	Natives
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	lnai	lnai	lnai	lnai	lnai	lnai	lnai	lnai	lnai
age	0.0275*** (0.00595)	0.0468*** (0.0103)	0.0672*** (0.0109)	0.0656*** (0.00987)	0.0299*** (0.00825)	0.0375*** (0.00757)	0.0519*** (0.0120)	0.0265* (0.0148)	0.0422*** (0.00355)
agesq	- 0.000250*** (7.11e-05)	- 0.000466*** (0.000128)	- 0.000721*** (0.000136)	- 0.000700*** (0.000123)	- 0.000354*** (0.000104)	- 0.000368*** (9.82e-05)	- 0.000537*** (0.000153)	-0.000241 (0.000194)	- 0.000407*** (4.45e-05)
utb1	0.0669*** (0.00965)	0.0878*** (0.0199)	0.00385 (0.0247)	0.00767 (0.0253)	0.0583*** (0.0148)	0.0837*** (0.0140)	0.0719*** (0.0240)	0.00995 (0.0258)	0.100*** (0.00818)
utb2	0.327*** (0.0115)	0.389*** (0.0218)	0.273*** (0.0233)	0.256*** (0.0253)	0.188*** (0.0174)	0.297*** (0.0140)	0.194*** (0.0255)	0.0871*** (0.0289)	0.320*** (0.00878)
metro	0.0544*** (0.00915)	0.0628*** (0.0177)	0.0896*** (0.0202)	-0.00173 (0.0183)	0.00656 (0.0130)	0.00812 (0.0137)	0.0737*** (0.0240)	0.0294 (0.0316)	0.0703*** (0.00642)
north	-0.0483*** (0.0149)	-0.0809** (0.0370)	-0.0203 (0.0471)	-0.0240 (0.0526)	-0.0995** (0.0475)	-0.0757** (0.0319)	0.0995 (0.0607)	0.0361 (0.0626)	-0.0329*** (0.0105)
inv80sv	0.0560*** (0.0115)	-0.0256 (0.0177)	0.0380* (0.0199)	0.169*** (0.0172)	0.233*** (0.0143)	0.154*** (0.0132)	0.110*** (0.0220)	0.252*** (0.0294)	0.384*** (0.0111)
civ	0.0698*** (0.00827)	0.0509*** (0.0170)	0.0785*** (0.0180)	0.0690*** (0.0157)	0.0516*** (0.0136)	-0.00930 (0.0123)	0.103*** (0.0195)	0.0245 (0.0218)	0.0585*** (0.00622)
gender	-0.254*** (0.00827)	-0.371*** (0.0162)	-0.302*** (0.0175)	-0.244*** (0.0156)	-0.178*** (0.0123)	-0.0999*** (0.0114)	-0.218*** (0.0188)	- 0.0836*** (0.0221)	-0.303*** (0.00586)
Constant	6.760*** (0.121)	6.430*** (0.202)	5.970*** (0.211)	5.914*** (0.193)	6.594*** (0.159)	6.220*** (0.142)	6.024*** (0.229)	6.517*** (0.279)	6.118*** (0.0697)
Observations	12,870	4,126	4,548	5,134	7,566	10,564	3,283	2,658	26,008
R-squared	0.131	0.198	0.131	0.141	0.079	0.079	0.101	0.073	0.207

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A3. Quantile regression for each world region and for natives aged 20-64.

Finland						
VARIABLES	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
age	0.0852*** (0.00563)	0.0456*** (0.00250)	0.0330*** (0.00192)	0.0372*** (0.00345)	0.0433*** (0.00451)	0.0468*** (0.00931)
agesq	-0.000896*** (6.25e-05)	-0.000477*** (2.72e-05)	-0.000351*** (2.06e-05)	-0.000397*** (3.82e-05)	-0.000459*** (5.24e-05)	-0.000474*** (0.000112)
utb1	0.0745*** (0.0153)	0.0456*** (0.00758)	0.0433*** (0.00577)	0.0655*** (0.0110)	0.0865*** (0.0125)	0.120*** (0.0407)
utb2	0.322*** (0.0187)	0.266*** (0.00742)	0.304*** (0.00879)	0.400*** (0.0176)	0.466*** (0.0181)	0.549*** (0.0417)
metro	0.0528*** (0.0114)	0.0389*** (0.00493)	0.0554*** (0.00692)	0.0753*** (0.00864)	0.108*** (0.0114)	0.176*** (0.0311)
north	-0.0573** (0.0226)	-0.0474*** (0.0108)	-0.0397*** (0.0116)	-0.0447* (0.0234)	-0.0536** (0.0218)	-0.0722* (0.0419)
inv80sv	0.154*** (0.0220)	0.0555*** (0.0123)	0.00940 (0.0141)	-0.0295* (0.0161)	-0.0743*** (0.0243)	-0.197*** (0.0339)
civ	0.0697*** (0.0141)	0.0342*** (0.00694)	0.0366*** (0.00673)	0.0497*** (0.00779)	0.0468*** (0.00968)	0.125*** (0.0272)
gender	-0.261*** (0.0120)	-0.251*** (0.00634)	-0.249*** (0.00501)	-0.267*** (0.0105)	-0.302*** (0.0113)	-0.357*** (0.0375)
Constant	5.251*** (0.122)	6.545*** (0.0607)	7.045*** (0.0451)	7.139*** (0.0850)	7.140*** (0.101)	7.317*** (0.173)
Observations	16,775	16,775	16,775	16,775	16,775	16,775

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Nordic Countries

VARIABLES	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
age	0.0875*** (0.0101)	0.0569*** (0.00366)	0.0511*** (0.00595)	0.0576*** (0.00865)	0.0585*** (0.00871)	0.0770*** (0.0188)
agesq	-0.000928*** (0.000123)	-0.000596*** (4.41e-05)	-0.000522*** (6.57e-05)	-0.000589*** (9.52e-05)	-0.000594*** (0.000103)	-0.000825*** (0.000225)
utb1	0.136*** (0.0377)	0.0893*** (0.0156)	0.0750*** (0.0191)	0.0846*** (0.0228)	0.0532 (0.0338)	0.0107 (0.0610)
utb2	0.418*** (0.0306)	0.345*** (0.0163)	0.436*** (0.0224)	0.553*** (0.0323)	0.526*** (0.0400)	0.473*** (0.0829)
metro	0.0649*** (0.0190)	0.0512*** (0.0103)	0.0823*** (0.0141)	0.125*** (0.0107)	0.139*** (0.0320)	0.228*** (0.0471)
north	-0.0188 (0.0864)	-0.0541** (0.0246)	-0.0541** (0.0263)	-0.0534* (0.0282)	-0.0874** (0.0425)	0.0576 (0.152)
inv80sv	0.0515* (0.0283)	0.0136 (0.0144)	-0.0537*** (0.0189)	-0.116*** (0.0264)	-0.143*** (0.0300)	-0.161** (0.0664)
civ	0.0177 (0.0194)	0.00798 (0.0122)	0.0286*** (0.0101)	0.0216 (0.0156)	0.0168 (0.0282)	0.154*** (0.0445)
gender	-0.363*** (0.0243)	-0.339*** (0.0129)	-0.402*** (0.0127)	-0.403*** (0.0213)	-0.451*** (0.0198)	-0.532*** (0.0283)
Constant	5.261*** (0.194)	6.322*** (0.0820)	6.689*** (0.116)	6.763*** (0.181)	6.942*** (0.183)	6.872*** (0.367)
Observations	5,365	5,365	5,365	5,365	5,365	5,365

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Western countries

VARIABLES	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
age	0.0794*** (0.00712)	0.0520*** (0.00500)	0.0473*** (0.00622)	0.0612*** (0.00676)	0.0686*** (0.0124)	0.104*** (0.0195)
agesq	-0.000773*** (8.07e-05)	-0.000520*** (5.44e-05)	-0.000481*** (7.01e-05)	-0.000631*** (7.47e-05)	-0.000711*** (0.000140)	-0.00109*** (0.000215)
utb1	0.111*** (0.0405)	0.0565*** (0.0146)	0.0284 (0.0222)	-0.0537* (0.0321)	-0.125*** (0.0428)	-0.455*** (0.168)
utb2	0.359*** (0.0333)	0.298*** (0.0173)	0.317*** (0.0180)	0.257*** (0.0380)	0.203*** (0.0394)	-0.134 (0.145)
metro	0.0728*** (0.0233)	0.0647*** (0.0125)	0.115*** (0.0146)	0.133*** (0.0302)	0.128*** (0.0383)	0.216*** (0.0667)
north	-0.0556 (0.0743)	-0.0192 (0.0370)	-0.00267 (0.0543)	0.0234 (0.0555)	0.00756 (0.0772)	-0.127 (0.0822)
inv80sv	0.104*** (0.0238)	0.0469*** (0.0149)	-0.000563 (0.0148)	-0.0664*** (0.0243)	-0.115*** (0.0322)	-0.131 (0.0861)
civ	0.0466** (0.0236)	0.0270* (0.0147)	0.0490*** (0.0175)	0.108*** (0.0221)	0.140*** (0.0263)	0.223*** (0.0667)
gender	-0.305*** (0.0146)	-0.266*** (0.00923)	-0.278*** (0.0136)	-0.303*** (0.0204)	-0.366*** (0.0292)	-0.372*** (0.0676)
Constant	5.191*** (0.137)	6.309*** (0.106)	6.690*** (0.134)	6.714*** (0.130)	6.827*** (0.256)	6.690*** (0.503)
Observations	6,218	6,218	6,218	6,218	6,218	6,218

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Eastern Europe

VARIABLES	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
age	0.0869*** (0.00946)	0.0564*** (0.00490)	0.0461*** (0.00286)	0.0419*** (0.00490)	0.0310*** (0.00589)	0.0195 (0.0138)
agesq	-0.000889*** (0.000110)	-0.000579*** (5.73e-05)	-0.000491*** (3.53e-05)	-0.000424*** (5.57e-05)	-0.000275*** (7.21e-05)	-0.000148 (0.000147)
utb1	0.0519 (0.0398)	0.0503* (0.0271)	0.0158 (0.0167)	0.0176 (0.0291)	0.0211 (0.0274)	-0.00525 (0.0743)
utb2	0.262*** (0.0339)	0.259*** (0.0241)	0.280*** (0.0207)	0.407*** (0.0338)	0.506*** (0.0389)	0.511*** (0.0693)
metro	-0.0403 (0.0264)	0.0126 (0.0148)	0.0283* (0.0167)	0.0461* (0.0258)	0.0587* (0.0317)	0.0820 (0.0691)
north	-0.218** (0.0869)	0.0125 (0.0520)	0.0967** (0.0386)	0.0557 (0.0470)	0.0375 (0.135)	0.355 (0.315)
inv80sv	0.194*** (0.0349)	0.128*** (0.0129)	0.148*** (0.0145)	0.136*** (0.0231)	0.145*** (0.0283)	0.175*** (0.0615)
civ	0.105*** (0.0281)	0.0548*** (0.0133)	0.0430*** (0.0130)	0.0517*** (0.0175)	0.0656*** (0.0174)	0.134*** (0.0380)
gender	-0.255*** (0.0333)	-0.249*** (0.0162)	-0.266*** (0.0120)	-0.303*** (0.0169)	-0.310*** (0.0236)	-0.351*** (0.0574)
Constant	5.083*** (0.190)	6.173*** (0.0982)	6.698*** (0.0502)	6.922*** (0.106)	7.207*** (0.101)	7.728*** (0.309)
Observations	6,464	6,464	6,464	6,464	6,464	6,464

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Southern Europe

VARIABLES	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
age	0.0662*** (0.00895)	0.0486*** (0.00572)	0.0267*** (0.00281)	0.0270*** (0.00341)	0.0287*** (0.00512)	0.0322*** (0.00877)
agesq	-0.000782*** (0.000113)	-0.000543*** (6.94e-05)	-0.000301*** (3.54e-05)	-0.000293*** (4.48e-05)	-0.000305*** (6.68e-05)	-0.000305*** (0.000117)
utb1	0.102*** (0.0242)	0.0560*** (0.0119)	0.0243** (0.0118)	0.0303** (0.0118)	0.0314*** (0.0110)	0.0372 (0.0228)
utb2	0.179*** (0.0406)	0.153*** (0.0173)	0.173*** (0.0172)	0.288*** (0.0196)	0.415*** (0.0252)	0.614*** (0.0494)
metro	0.00743 (0.0285)	0.00294 (0.0127)	0.0197** (0.00835)	0.0384*** (0.0110)	0.0499*** (0.0141)	0.0571** (0.0282)
north	-0.102 (0.0792)	-0.120** (0.0558)	-0.0987** (0.0462)	-0.120*** (0.0400)	-0.0982** (0.0488)	0.0637 (0.193)
inv80sv	0.347*** (0.0233)	0.208*** (0.0114)	0.155*** (0.0111)	0.154*** (0.0148)	0.157*** (0.0184)	0.178*** (0.0452)
civ	0.110*** (0.0268)	0.0488*** (0.0101)	0.0238*** (0.00695)	0.0171* (0.00907)	0.0135 (0.0134)	0.0360 (0.0265)
gender	-0.237*** (0.0228)	-0.218*** (0.0119)	-0.188*** (0.00833)	-0.172*** (0.0115)	-0.187*** (0.0113)	-0.233*** (0.0293)
Constant	5.480*** (0.168)	6.333*** (0.114)	7.053*** (0.0529)	7.172*** (0.0643)	7.220*** (0.0924)	7.283*** (0.161)
Observations	8,949	8,949	8,949	8,949	8,949	8,949

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Asia

VARIABLES	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
age	0.0484*** (0.00669)	0.0591*** (0.00372)	0.0498*** (0.00382)	0.0419*** (0.00498)	0.0373*** (0.00580)	0.0679*** (0.0112)
agesq	-0.000460*** (8.58e-05)	-0.000595*** (4.89e-05)	-0.000540*** (4.58e-05)	-0.000448*** (6.03e-05)	-0.000378*** (8.60e-05)	-0.000700*** (0.000143)
utb1	0.0861*** (0.0236)	0.117*** (0.0154)	0.0920*** (0.0103)	0.0856*** (0.00745)	0.0861*** (0.0138)	0.0269 (0.0699)
utb2	0.259*** (0.0262)	0.322*** (0.0210)	0.303*** (0.0120)	0.375*** (0.0129)	0.447*** (0.0187)	0.374*** (0.0474)
metro	-0.0126 (0.0233)	0.0206 (0.0167)	0.0110 (0.0125)	0.0263* (0.0149)	-0.000385 (0.0202)	0.0820 (0.0545)
north	-0.0704 (0.0445)	-0.0827* (0.0423)	-0.0830** (0.0358)	-0.0747*** (0.0268)	-0.0832* (0.0445)	0.0542 (0.0770)
inv80sv	0.206*** (0.0247)	0.169*** (0.0190)	0.105*** (0.00871)	0.0677*** (0.0124)	0.0931*** (0.0190)	0.0878*** (0.0320)
civ	0.00863 (0.0211)	-0.0333** (0.0165)	-0.0213** (0.0103)	-0.0112 (0.0125)	-0.00154 (0.0160)	-0.0849* (0.0469)
gender	-0.0305 (0.0265)	-0.0844*** (0.0171)	-0.172*** (0.0105)	-0.196*** (0.0103)	-0.235*** (0.0160)	-0.338*** (0.0409)
Constant	5.504*** (0.124)	5.824*** (0.0675)	6.481*** (0.0787)	6.840*** (0.0917)	7.065*** (0.0871)	6.796*** (0.234)
Observations	12,344	12,344	12,344	12,344	12,344	12,344

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Latin America

VARIABLES	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
age	0.0890*** (0.0109)	0.0733*** (0.00592)	0.0471*** (0.00466)	0.0456*** (0.00593)	0.0543*** (0.00705)	0.0292 (0.0200)
agesq	-0.000919*** (0.000140)	-0.000770*** (6.64e-05)	-0.000515*** (5.85e-05)	-0.000502*** (7.25e-05)	-0.000606*** (8.70e-05)	-0.000295 (0.000277)
utb1	0.0944*** (0.0338)	0.0999*** (0.0277)	0.0767*** (0.0216)	0.0636*** (0.0216)	0.0762*** (0.0226)	0.110 (0.0837)
utb2	0.109** (0.0449)	0.195*** (0.0306)	0.238*** (0.0188)	0.343*** (0.0342)	0.435*** (0.0413)	0.573*** (0.0856)
metro	0.126** (0.0541)	0.0435** (0.0199)	0.0425*** (0.0149)	0.0594*** (0.0197)	0.0730*** (0.0243)	0.0626 (0.0634)
north	0.215** (0.0995)	0.0207 (0.0387)	0.0191 (0.0596)	0.113* (0.0681)	0.122 (0.0782)	0.319* (0.190)
inv80sv	0.129*** (0.0381)	0.0735*** (0.0171)	0.0563*** (0.0136)	0.0500** (0.0232)	0.0826*** (0.0301)	0.0706 (0.0614)
civ	0.143*** (0.0313)	0.0881*** (0.0131)	0.0433*** (0.0109)	0.0201 (0.0175)	0.0180 (0.0253)	0.0841 (0.0760)
gender	-0.222*** (0.0346)	-0.212*** (0.0113)	-0.235*** (0.0110)	-0.239*** (0.0159)	-0.225*** (0.0183)	-0.289*** (0.0340)
Constant	4.846*** (0.200)	5.697*** (0.137)	6.599*** (0.0927)	6.817*** (0.120)	6.716*** (0.129)	7.402*** (0.364)
Observations	4,029	4,029	4,029	4,029	4,029	4,029

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Africa						
VARIABLES	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
age	0.0549*** (0.0153)	0.0628*** (0.0131)	0.0465*** (0.00792)	0.0316*** (0.00927)	0.0155 (0.0170)	-0.00935 (0.0296)
agesq	-0.000549*** (0.000197)	-0.000656*** (0.000165)	-0.000497*** (0.000101)	-0.000329*** (0.000126)	-0.000117 (0.000223)	0.000248 (0.000403)
utb1	0.0379 (0.0364)	0.0427* (0.0227)	0.0441*** (0.0163)	0.0344* (0.0180)	0.0410 (0.0256)	0.0623 (0.0757)
utb2	0.0220 (0.0435)	0.147*** (0.0408)	0.195*** (0.0249)	0.241*** (0.0402)	0.313*** (0.0662)	0.519*** (0.0992)
metro	0.102 (0.0722)	0.000365 (0.0334)	0.00220 (0.0225)	0.0341 (0.0224)	0.0989* (0.0553)	0.145 (0.0898)
north	0.219* (0.121)	0.000165 (0.0566)	0.0203 (0.0695)	-0.0411 (0.0378)	0.0310 (0.0737)	-0.138 (0.0918)
inv80sv	0.360*** (0.0434)	0.182*** (0.0232)	0.140*** (0.0304)	0.195*** (0.0313)	0.170*** (0.0544)	0.129 (0.135)
civ	0.0501 (0.0357)	0.0120 (0.0261)	0.0123 (0.0239)	0.0176 (0.0265)	0.0283 (0.0466)	0.00564 (0.0727)
gender	0.00541 (0.0420)	-0.118*** (0.0266)	-0.158*** (0.0145)	-0.167*** (0.0252)	-0.185*** (0.0385)	-0.180** (0.0762)
Constant	5.387*** (0.291)	5.906*** (0.248)	6.573*** (0.158)	7.050*** (0.188)	7.399*** (0.352)	8.051*** (0.516)
Observations	3,037	3,037	3,037	3,037	3,037	3,037

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Natives

VARIABLES	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
age	0.101*** (0.00303)	0.0573*** (0.00197)	0.0483*** (0.00131)	0.0519*** (0.00177)	0.0568*** (0.00215)	0.0533*** (0.00898)
agesq	-0.00107*** (3.56e-05)	-0.000593*** (2.31e-05)	-0.000494*** (1.56e-05)	-0.000524*** (2.15e-05)	-0.000567*** (2.65e-05)	-0.000492*** (0.000112)
utb1	0.137*** (0.0118)	0.104*** (0.00593)	0.107*** (0.00580)	0.123*** (0.00780)	0.134*** (0.0104)	0.140*** (0.0267)
utb2	0.332*** (0.0136)	0.326*** (0.00657)	0.359*** (0.00561)	0.422*** (0.0112)	0.481*** (0.0174)	0.581*** (0.0317)
metro	0.0458*** (0.00803)	0.0609*** (0.00370)	0.0932*** (0.00394)	0.132*** (0.00750)	0.159*** (0.0127)	0.228*** (0.0266)
north	-0.0462*** (0.00806)	-0.0139** (0.00606)	-0.0136** (0.00661)	-0.0167** (0.00824)	0.00137 (0.0143)	0.0291 (0.0514)
civ	0.0440*** (0.00962)	0.0154*** (0.00443)	0.0298*** (0.00428)	0.0412*** (0.00681)	0.0643*** (0.0139)	0.0995*** (0.0309)
gender	-0.344*** (0.00762)	-0.318*** (0.00334)	-0.324*** (0.00391)	-0.340*** (0.00631)	-0.345*** (0.00672)	-0.411*** (0.0210)
Constant	5.091*** (0.0642)	6.302*** (0.0404)	6.665*** (0.0266)	6.729*** (0.0309)	6.706*** (0.0410)	6.980*** (0.159)
Observations	31,038	31,038	31,038	31,038	31,038	31,038

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A4. Gender gap coefficient computed with the quantile regression for each world region and for natives aged 20-64

REGIONS	Gender gap coefficients					
	(1) q25	(2) q50	(3) q75	(4) q90	(5) q95	(6) q99
Finland	-0.266*** (0.0152)	-0.255*** (0.00629)	-0.257*** (0.00503)	-0.267*** (0.0109)	-0.306*** (0.0123)	-0.331*** (0.0303)
Nordic	-0.349*** (0.0305)	-0.341*** (0.0214)	-0.402*** (0.0199)	-0.398*** (0.0173)	-0.427*** (0.0279)	-0.519*** (0.0689)
Western Europe	-0.343*** (0.0238)	-0.292*** (0.0206)	-0.278*** (0.0205)	-0.298*** (0.0275)	-0.346*** (0.0307)	-0.431*** (0.0582)
Eastern Europe	-0.255*** (0.0240)	-0.248*** (0.0124)	-0.257*** (0.0157)	-0.293*** (0.0239)	-0.306*** (0.0287)	-0.298*** (0.0488)
Southern Europe	-0.222*** (0.0275)	-0.209*** (0.0146)	-0.187*** (0.00888)	-0.165*** (0.0136)	-0.180*** (0.0171)	-0.221*** (0.0357)
Asia	-0.0168 (0.0253)	-0.0840*** (0.0146)	-0.181*** (0.0139)	-0.203*** (0.0106)	-0.240*** (0.0162)	-0.355*** (0.0426)
Latin America	-0.228*** (0.0350)	-0.232*** (0.0230)	-0.242*** (0.0216)	-0.238*** (0.0204)	-0.223*** (0.0282)	-0.325*** (0.0731)
Africa	-0.0234 (0.0407)	-0.118*** (0.0316)	-0.157*** (0.0212)	-0.173*** (0.0207)	-0.178*** (0.0337)	-0.115 (0.114)
Natives	-0.355*** (0.0125)	-0.309*** (0.00546)	-0.315*** (0.00559)	-0.330*** (0.00824)	-0.334*** (0.0124)	-0.398*** (0.0307)

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A5. Wage distribution for each immigrants groups and the natives

Percentiles	0.01	0.05	0.1	0.25	0.5	0.75	0.90	0.95	0.99
Immigrant groups									
Finland	42300	67600	91300	150500	200800	246900	302700	364400	539800
Nordic countries	41500	60700	82500	136900	195400	255700	357100	464700	745000
Western Countries	41000	59500	82800	142700	210850	279000	391800	486900	802100
Eastern Europe	39300	53500	71100	122000	188350	244500	330800	413400	658900
Southern Europe	38800	49400	64000	104900	171600	219500	262900	299300	466600
Asia	38000	44700	54000	83900	1451500	204200	264800	316800	494900
Latin America	38200	46400	59100	99800	164600	215900	269000	310100	484400
Africa	38400	46300	57200	90300	151900	206400	261700	311000	483300
Natives	41400	63300	89500	146700	200900	255300	333100	409900	627200

