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No. 586

German Stagnation vs. Swedish Progression: Gender Wage Gaps in Comparison, 1960-2006

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Abstract

This article provides a comparative analysis of the development of the gender wage gap in West Germany and Sweden during the period 1960–2006. Despite the economic similarities including broad social safety nets, the gap has developed differently since 1960. This analysis accounts for micro- and macroeconomic factors and politics and concludes that norms and traditions penetrate institutional settings and ensnare Germany in a cultural trap with regard to gender equality. While Sweden has moved to a two-earner model, German society expects mothers to stay at home. The micro analysis shows that family concerns (e.g., marriage and motherhood) decrease female income in Germany to a far greater extent than do such factors in Sweden, which can be explained in part by deeply held social attitudes.

Keywords: Culture, gender wage gap, Germany, Sweden, welfare state

JEL classification: N34, J16, I38, J31, Z1

1. Introduction

On average, the gender wage gap has decreased in Europe during the post-war period. West Germany and Sweden, however, comprise two outstanding examples: The comparison of these two countries illustrates a confrontation of an often-claimed model of gender equality (Sweden) and the rear light of European nations in terms of equal pay (West Germany). The investigation starts 1960 and is confined to the period of time after which West Germany has recovered from the Second World War.¹ At that time, the wage gap was almost identical in both countries—30% in Sweden, 34% in West Germany. In the following decades, Sweden succeeded in closing the gap to a remarkable extent, while the situation essentially stagnated in West Germany. The two countries do not seem to differ dramatically in economic terms: The Human Development Index for each developed hand in hand,² and the GDP per capita are in similar ranges;³ the unadjusted gender wage gap for the industrial sector, however, was around 25% in Germany as compared to only 10% in Sweden as of 2006. What are the factors that have led to the closing of the gap in Sweden and why has the gap in Germany stagnated by comparison? The answers to these questions will give us important insight into the mechanisms that help to reduce gender pay gaps. What were the driving factors and why did they not have the same impact in the West German context? The existing literature has often

¹ The decision to limit the investigation to West Germany in the macro analysis is due to the fact that studies have shown deep cultural differences between West and East Germany. Including data from both contexts following their reunification in 1990 would equate to the inclusion of a third and distinct country, at least in a cultural sense.

² UN Data

³ World Bank

focused on market factors, such as human capital, demand and supply and occupational segregation, as well as on political regulations. This paper will discuss a third pillar, one which becomes visible only when looking through a comparative lens: norms and traditions.

The investigation begins with a traditional microeconomic comparison of the wage gap in both countries as of 2004/5. Controlling for human capital factors and other attributes that impact on earnings helps to explain a portion of the observed gap.⁴ Whereas many previous microanalyses have explained any further gender wage gap by citing discrimination, this analysis will go further by undertaking a macroeconomic analysis of the remaining variables. Most macroeconomic research in this field has focused on two pillars—political regulation and market forces.⁵ Drawing comparisons between the two countries leads to the conclusion that the main difference does not lie in such hard facts but rather in soft factors, such as norms and traditions. The analysis suggests that the predominant attitudes concerning women's role in society differ and that these attitudes penetrate institutional settings such as systems of taxation and the welfare state. The signals to the market that emanate from these norms and traditions have not received sufficient attention in recent research. Comparisons of two countries that are equal across multiple dimensions is the only possible means of uncovering the impact of such factors, which often go overlooked in studies that consider only a single country.

⁴ Oaxaca, 'Wage Differentials' (1973).

⁵ E.g., Svensson, 'Politics' (1996).

2. Previous Research

2.1 Sweden

The numerous studies of gender wage inequality can be divided into bodies of research that have focused on either micro- or macro-economic factors. Comparative studies are in relation to this few, and even fewer is the number that have sought to compare the former West Germany with Sweden. To start with country-specific microeconomic studies in Sweden, one has to mention the skill-mismatch investigation by Johansson and Katz for the period 1993–2002.⁶ The authors show that women are more likely to be overeducated, while men are more often undereducated in relation to the formal education that is typically required for their jobs.⁷ Edin and Richardson have examined the impact of the solidarity wage policy on gender inequality and stressed its importance in the Swedish context.⁸ Furthermore, they argued that changes in industry wage differentials have worked against women, while the impact of human capital factors has favoured the reduction of the wage gap. Grand investigated the wage gap with regard to four explanations: women's responsibility for family and household, human capital, compensating wage differentials between men and women and job segregation.⁹ The study showed that job segregation explained a sizeable percentage of the gender wage gap as of 1981, using Swedish register data. Edin and Zetterberg compared the gap in Sweden to that which existed in the USA and concluded that much of the observed industry wage differentials in Sweden were attributable to industry-specific differences in

⁶ Johansson/Katz, 'Skill mismatch' (2006).

⁷ See also Johansson et al., 'Gender discrimination' (2005).

⁸ Edin/Richardson, 'Swimming with the tide' (2002), 50.

⁹ Grand, 'Job Segregation' (1991).

labour quality and working conditions.¹⁰ Wage policies—such as the solidarity wage policy—might explain the differences between the Swedish and American contexts.

From a macroeconomic perspective, Svensson described the development of relative earnings with an exclusive focus on Sweden.¹¹ In his long-term study, Svensson concluded that, despite the rapid narrowing of the gender wage gap that occurred contemporary to the solidarity wage policy, excess demand for female labour was the main driving force. Institutions were important during the interwar years but, according to Svensson, market forces were the main driving factors after 1960. In this, he stands in contrast to the micro-analytical study of Edin and Richardson, as well as the macro-analytical study of Gustafsson and Löfström. The latter investigated particular policy changes and ascribed them a certain impact.¹² Kjelstad also focused on institutions in the Nordic countries in general;¹³ he concluded that these countries possessed a longer and stronger tradition of institutional arrangements stimulating gender equality.

2.2 Germany

Micro-analytical studies of the German context have been carried out, for instance, by Rosenfeld and Trappe, who analysed the impact of children on income and compared West and East Germany.¹⁴ Hinz and Gartner showed that, for Germany during the period 1993–

¹⁰ Edin/Zetterberg, 'Wage Differentials' (1992).

¹¹ Svensson, 'Explaining equalization' (2003); Svensson, *Closing the gender gap* (1995); Svensson, 'Politics' (1996).

¹² Gustafsson/Löfström, 'Policy changes' (1991).

¹³ Kjelstad, 'Gender Policies' (2001).

¹⁴ Rosenfeld et al., 'Before and after reunification' (2004); Trappe/Rosenfeld, 'How do children matter' (2000).

2001, the wage gap was comparatively high even when controlling for occupation and enterprise.¹⁵ Hannan et al. conducted a cohort analysis to investigate the educational payoff in different career stages,¹⁶ using an approach similar to that of Kunze in that it focused on early-career wage gaps and the effect on wages of having a first child.¹⁷ In her 2005 paper, Kunze concluded that gender-based segregation in terms of occupational qualifications explained a significant percentage of the persisting wage gap and lead to a permanent wage disadvantage for women. Fitzenberger and Wunderlich offered one of the few long-term analyses of the wage gap in West Germany, in which they considered data from the period 1975–1995.¹⁸ They concluded that life-cycle wage growth is far less for females compared to males.

Ostner focused on ideas, traditions and institutions in West Germany, which she compared in part with data from the German Democratic Republic.¹⁹ In her macro-level analysis she highlighted the differences in employment status and the impact of social policies on families and the division of labour but did not provide any analysis of equality in earnings. Other macro-level studies include Gartner and Stephan on collective contracts and Rusciano on political elections.²⁰ Most studies have focused on a particular topic, but the impact of laws and regulations on the gender wage gap in Germany has not been analysed.

¹⁵ Hinz/Gartner, 'Lohnunterschiede' (2005).

¹⁶ Hannan, et al., 'Sex and sector differences' (1990).

¹⁷ Kunze, 'Determination of Wages' (2000); Kunze, 'Early Career Gender Wage' (2002); Kunze, 'Entry Wages' (2003); Kunze, 'Evolution of the gender wage' (2005); Kunze/Ejraes, 'Wage Dips' (2004).

¹⁸ Fitzenberger/Wunderlich, 'Gender wage differences in West Germany' (2002).

¹⁹ Ostner, 'Slow motion' (1993).

²⁰ Gartner/Stephan, 'Collective contracts' (2004); Rusciano, 'Rethinking the gender gap' (1992).

2.3 Comparative studies

Investigations undertaken at an international comparative level include micro-analytical studies by Blau and Kahn as well as studies by Mandel and Semyonov on family policies and wage structures in 20 countries. Mandel and Semyonov conclude that the lower earnings differentials between men and women in developed welfare states should be attributed to their more egalitarian wage structures rather than to their family policies.²¹ In contrast, Waldfogel suggested that maternity leave, along with other family-oriented policies, could be an effective remedy for the gender wage gap.²² The research community in this field has not yet come to any clear-cut results.

Gustaffson compared the tax systems in West Germany and Sweden and identified both a meaningful difference in the tax codes as well as the fact that children might act as a deterrent to female labour force participation in West Germany.²³ West Germany and Sweden are also part of the panel of countries included in Sørensen's analysis.²⁴ The author noted the diverging gender equality in the Nordic countries as compared to Germany or Britain but did not provide an explanatory analysis.

Comparing the Swedish and German state of art, studies of the Swedish context seem to have focused more on market forces and political regulations. Studies of the latter are virtually non-existent in the German literature, which concentrates mainly on the motherhood penalty and associated factors to explain the gap.

²¹ Blau/Kahn, 'The gender earnings gap' (1992); Mandel/Semyonov, 'Family policies and gender gaps' (2005).

²² Waldfogel, 'Understanding the "family gap"' (1998).

²³ Gustafsson, 'Seperate taxation' (1992).

²⁴ Sørensen, 'Gender equality in earnings' (2001).

One study that comes close to the approach adopted here is that of van der Lippe et al.²⁵ The authors combined micro- and macro-analytical approaches in considering data from 17 countries during the period 1965–1998. They analysed the impact of economic circumstances, policies and culture on employment, rather than on wage differences, and concluded that institutional conditions are important in bringing women into the labour force. With respect to the influence of culture, it appears that highly educated, married women in masculine cultures do less paid work. The present study will allow us to determine whether a deeper analysis of only two countries—a so-called masculine state and a feminine state—will support these results in case for the wage gap.²⁶ Kidd and Shannon’s study of Australia and Canada provides a template for a two-case, micro-level comparison.²⁷

As this literature review has shown, there has been no in-depth comparison of the wage gap in Sweden and the Germany that captures both micro and macro factors. The comparison of two countries that are broadly similar in economic terms offers the possibility of uncovering the true impact of political regulations, institutional setting and traditions. This would likely be impossible to achieve if one focuses on only a single factor, since all factors are interwoven.

²⁵ van der Lippe et al., 'Persistent inequalities' (2011); see also van der Lippe/van Dijk, 'Comparative research' (2002).

²⁶ Hofstede, *Masculinity and femininity* (1998).

²⁷ Kidd/Shannon, 'Comparison of Australia and Canada' (1996).

3. Micro-economic analysis

3.1 Data

To eliminate differences stemming from human capital and from individual factors a classic micro-economic analysis will first be undertaken. Using data from the Luxembourg Income Study (LIS),²⁸ the well-established Mincer wage equation will be estimated.²⁹ Previous research has attributed much of the gap to occupational segregation.³⁰ That is why the regression will be estimated under industry and occupational fixed effects. The data provide individual information for several waves since 1984. This microanalysis will be restricted to Wave VI, which was conducted in 2004 in Germany and 2005 in Sweden, for reasons related to data availability and comparability. The datasets are constructed in broadly similar ways and are therefore useful for comparative analyses. Some variables have different sub-categories (such as occupation) which weakens a comparisons but that nevertheless yield important insights (see App 3).

Before considering the differences in the gender wage gap, some descriptive evidence is provided for the year 2004/5 for orientation.

²⁸ 'Luxembourg Income Study (LIS) Database'

²⁹ Mincer, *Schooling and Earnings* (1974), chap. 5.

³⁰ Kunze, 'Evolution of the gender wage' (2005), 75ff. , Svensson, *Closing the gender gap* (1995), chap. 2.

Table 1 Earnings ratio by age and household composition (female/male)

	Age		
	20-24	25-49	50-54
Germany	0.98	0.62	0.61
Sweden	0.75	0.72	0.71
	Parent / Partner Status		
	partner/no child	partner/child	no partner/no child
Germany	0.74	0.38	0.88
Sweden	0.74	0.62	0.91
	Age of Youngest Child		
	no	<6	6-17
Germany	0.82	0.33	0.41
Sweden	0.83	0.54	0.68
	Number of Children < 18		
	1	2	3
Germany	0.47	0.34	0.26
Sweden	0.69	0.64	0.51

Source: LIS Employment Key Figures by Gender

Table 1 shows the earnings ratios according to different specifications. While younger German women (ages 20–24) earn almost as much as do their male counterparts, this changes quickly by the time women reach typical child-bearing ages. The emergence of this gap as women reach middle age is not seen to be reduced with time. Swedish women already face a gap of approximately 25% at an early age, which is fairly stable over their working lives.³¹ In Germany, child birth seems to be the important point of fracture, whereas the Swedish gap might be able to be explained via other factors, such as occupational segregation, that are not controlled for here. The fact that child bearing might be crucial to the German data, support the next rows. A woman with no partner and no child faces an earnings gap of approximately 12%, whereas a woman of the same age with a child will face a far greater earnings gap in

³¹ For a more in-depth discussion of gender-specific wages over the life course, see Gustafsson/Tasiran, 'Wages in Sweden' (1994).

Germany. This trend of wider earnings gaps for mothers is also observed in Sweden, although it is far less extreme. The age and number of children can exacerbate these differences.³²

3.2 Regression analysis

The estimates of female/male earnings ratios given in the previous section do not control for individual differences, which will be done in a subsequent step. The LIS data for both countries will be used to calculate the pay gap while controlling for human capital and occupational factors. The regression equation follows the well-established Mincer wage equation also employed by Kidd and Shannon.³³ The log labour income Y of person i in country c may be specified as:

$$Y_{i,c} = c + X_{i,c}\beta_c + e_{i,c} \quad (1)$$

where $X_{i,c}$ is the vector of human capital and other individual characteristics, including marital status, number of children, weeks worked, work experience and education. β_c is the vector of parameters to be estimated and $e_{i,c}$ is a random error. This regression will be performed under industry- and occupational fixed effects, separate for men and women in the industrial sector (see App. 1 for summary statistics of the data).

³² Budig et al., 'Motherhood Penalty' (2010), 20.

³³ Mincer, *Schooling and Earnings* (1974); Kidd/Shannon, 'Comparison of Australia and Canada' (1996), 732.

Table 2 Regression results

	Sweden		Germany	
	female	male	female	male
marital	-0.035 (0.0247)	0.066*** (0.0171)	-0.3*** (0.0364)	0.088*** (0.02659)
n.children	-0.098*** (0.01136)	-0.0093 (0.00754)	-0.08*** (0.0157)	0.03*** (0.00919)
education	0.069*** (0.01367)	0.084*** (0.008632)	0.128*** (0.01105)	0.1149*** (0.007044)
experience	0.05*** (0.0044)	0.018*** (0.00295)	0.047*** (0.00544)	0.026*** (0.00367)
experience sq	-0.0008*** (0.0001)	-0.00027*** (0.0001)	-0.00084*** (0.00014)	-0.00042*** (8.07E-05v)
weeks	0.011*** (0.00287)	0.014*** (0.00166)	0.0226*** (0.00186)	0.031*** (0.00165)
cons	10.53*** (0.1733)	11.148*** (0.0958)	8.41*** (0.01269)	8.37*** (0.09442)
N	3133	3315	2169	2883

Note: ***Statistically significant at the 1% level; **statistically significant at the 5% level; * statistically significant at the 10% level. Standard errors are given in parentheses. Fixed-effect regression controlling for industries and occupations, LIS data Wave IV

The result of the OLS regression of equation (1), which controls for industry- and occupational fixed effects, shows how various factors impact men and women differently in the two countries. The dependent variable is the log labour income. Because the Swedish data do not include part-time work, both regressions were made for permanent employees without the possibility to control for working hours (but number of weeks worked), which biases the results upwards.

A feature common to both countries is the decrease in relative earnings for women in the case of marriage, although the size of the decrease is remarkably different: German women suffer ten times higher wage losses than do their Swedish counterparts. In both countries, there exists a comparable motherhood penalty of 8%–9%. This number increases dramatically (50%) in the case that one does not control for marriage in Germany but rises only to 12% in the case of

Sweden (see App. 2). These two variables might be strongly correlated, especially in Germany, where more than 80% of child births occur after marriage (Figure 6). Men, in contrast, benefit in their earnings as a result of being fathers and husbands, at least in the German context. The negative impact on men's earnings is not significant in the Swedish case.

Differences also can be identified with regard to educational pay-off. Education seems to be more important in Germany than in Sweden and women benefit more than men. In Sweden, the obverse is true and men realise an approximately one-percentage-point greater benefit from higher education than women. A look at educational levels at the macro level in both countries reveals that, since 1995, German women have achieved higher graduation rates from final secondary school. With a higher educational premium, this should act to reduce the differences in the wage gap between the German and Swedish contexts; as the following section will illustrate, however, this has not yet been the case.

Experience shows an inverted, U-shaped impact course on income, as could be expected from the prevailing theory. In both countries, work experience has a greater impact on pay for women. As we will see, this is a clear problem because this is the factor that mothers lack the most.

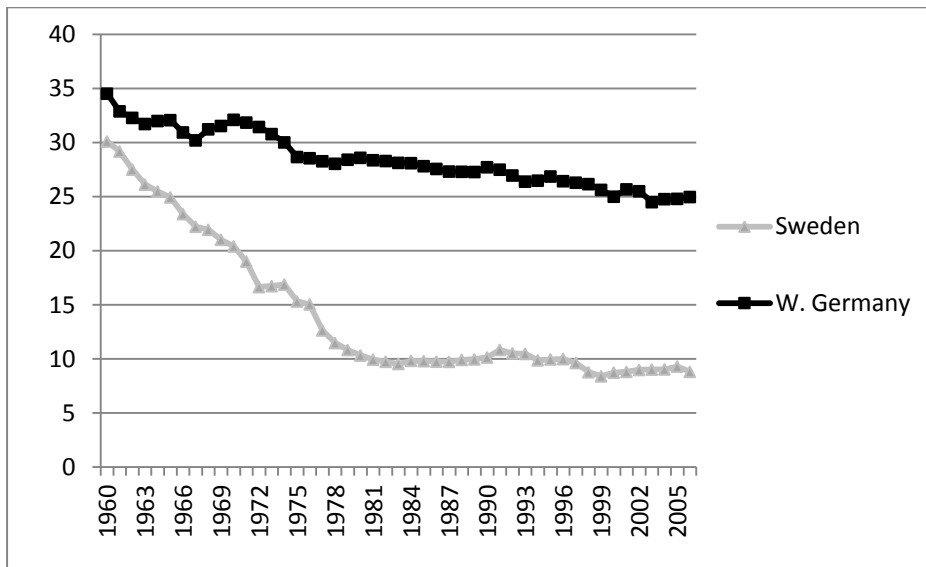
The data do not allow drawing serious conclusions for comparison due to a lack of information on hours worked, different information about part-time work and not-similarly-aggregated industries. The micro-level analysis has revealed that factors such as marriage, children, education and weeks worked, have differential impacts in the two countries. To explain why this is the case, we will have to leave behind the micro-economic aspects and

attempt to explain the leftovers—i.e., the factors that are not due to human capital and other individual characteristics—through macro-level differences.

4. The macroeconomic picture

A significant percentage of the gap cannot be explained except by macroeconomic factors such as politics, institutional arrangements and traditions. From a macroeconomic perspective, the long-term development of the gender wage gap in the industrial sector appears as is shown in Figure 1. Here, differences between West Germany and Sweden are brought into sharper relief. Whereas Sweden had only a slightly narrower gap in the 1960s, the difference between the two countries has widened over time. In West Germany, progress has been very slow and women faced a wage gap of 25% as recently as 2006. In 1960, the difference between West Germany and Sweden was around five percentage points; in 2006, however, the difference was approximately 15 percentage points. What did Sweden do differently and why did West Germany fail to make significant progress toward gender equality? This is the puzzle to be solved in the further analysis.

Figure 1 Aggregated gender wage gap of the industrial sector



Sources: Sweden: HILD 1960-1990, 1990-2006 ILO; West Germany: Statistisches Bundesamt; whole industry sector³⁴

To do so, and before delving into the impact of politics and norms, the impact of some macroeconomic leftovers should be mentioned, such as the overall degree of inequality, the presence and impact of labour unions and work force composition effects. The reasons behind a narrowing of the gender wage gap are manifold and hence no one factor should be neglected. Regardless, this paper focuses on politics and norms because these factors have not received sufficient attention in the available literature.

Cross-country studies have found that wage structure, the prevailing bargaining system and the presence of egalitarian policies play a decisive role in reducing the gender gap.³⁵ Did

³⁴ The gap is calculated as $\left(1 - \frac{wage_{female}}{wage_{male}}\right) * 100$. In order to account for differences in working hours and the impact of the respective tax codes, estimates are based on gross hourly earnings. The ratios exclude overtime pay, bonuses and other perks, since men are more likely to have access to these “extras” along with a higher number of working hours (Lips, 'Concrete indicator' (2003), p88).

³⁵ Blau/Kahn, 'Analyzing the gap' (1999); Gartner/Stephan, 'Collective contracts' (2004); Kidd/Shannon, 'Comparison of Australia and Canada' (1996).

Sweden have more powerful labour unions that were better equipped to enforce equal pay? The fact that the wage gap in West Germany differed more widely between industries also hints at the impact of the more centralised bargaining system that prevails in Sweden. The period considered here was characterised by the solidarity wage policy in Sweden, which was in force until 1983 and which led to a generally greater degree of wage equality.³⁶ That wage inequality in general is connected to gender wage inequality has long been established,³⁷ and has previously been investigated for the Swedish context by Edin and Richardson.³⁸ In fact, the data show a connection between the gender gap and general wage inequality for Sweden, whereas the fact of a narrowing gap in the West German context complies with the notion of swimming against the tide. The heyday of the solidarity wage policy can be dated to the 1960s and 1970s, the same period during which the gender wage gap saw the most marked narrowing. The timing of the downturn of these trends (beginning in the 1980s) co-varies with changes in the labour market institutions: in 1983 broke the system of coordinated, centralised negotiation that had existed between the Swedish Employer's Confederation (SAF) and the Swedish Trade Union Confederation (LO).³⁹ However, Svensson has argued that the trend had emerged by 1961, even though no policy had been implemented prior to 1962.⁴⁰ West Germany did not institute a comparable shift in policy.

The impact of labour unions is connected to any discussion of wage inequality. Theoretically, labour unions are expected to fight for equal rights and fair work conditions, including the

³⁶ Edin/Holmlund, 'Wage Structure' (1995).

³⁷ Blau/Kahn, 'The gender earnings gap' (1992); Korpi, 'Faces of inequality' (2000).

³⁸ Edin/Richardson, 'Swimming with the tide' (2002).

³⁹ SAF: *Svenska Arbetsgivareföreningen*; LO: *fackorganisationen Landsorganisationen i Sverige*.

⁴⁰ Svensson, *Closing the gender gap* (1995), 128.

reduction of any gender wage gap. Even though no quantitative difference is observable, a qualitative difference can be said to exist. Following the Second World War, German trade unions were hesitant to fight for female participation in the labour force and for female labourers receiving a fair wage. Although their subsequent work for female rights did bring this topic before the public, their efforts were often focused on female rights leaving out the question of wage equality. The comparatively large wage gap can be a consequence of how the German trade unions operated, namely their decision to introduce the so-called *Leichtlohngruppen*. These were created to prevent female wages in 1955 but instead came to be a substitution for them, placed at the very bottom of the wage scale. *Leichtlohngruppen* were applied to jobs that did not require heavy body work and that were mainly done by women. As technological progress has led to male workers assuming increasing amounts of light labour the system was revised.⁴¹

Much of the reduction in the wage gap in Sweden has been ascribed to changes to the composition of industries and of workers.⁴² The extent, to which these changes have influenced the gender wage gap in Sweden and West Germany differently, remains unclear. The proportion of female workers has increased markedly in the electronic, metal and chemical engineering industries. The fact that high-wage sectors attract increasing numbers of women can have contributed to a reduction in the aggregate gender gap for the economy as a whole.⁴³ In West Germany the structural change did not help to narrow the gender wage gap. To understand why this was the case we must leave behind the usual market explanations and

⁴¹ Drohsel, *Lohndiskriminierung* (1986), chap. 3.1(p. 167ff).

⁴² Svensson, *Closing the gender gap* (1995), 133; Stanfors, *A study of women* (2003), 51.

⁴³ Svensson, 'Politics' (1996), 169.

instead consider alternative explanations, such as norms, traditions and the social safety nets of the respective countries.

5. Politics

When market mechanisms fail to achieve a certain outcome the state is often required to intervene, as happened in both Sweden and West Germany. However, a closer look reveals that the gender-based laws and regulations not only differ in quantity but mainly in quality.

Although some gender-based laws can be found in the history of West Germany, doubt can be cast on their outcomes. It is notable that the impetus for policy change has often come from pressure exerted from outside of West Germany. In 1945, it was the United Nations (UN) that required the nation convey respect to all peoples regardless of gender. After having twice failed to pass the Parliament, the Equal Rights Act (ERA) was only accepted under public pressure in 1949 (Basic Constitutional Law (GG), article 3).⁴⁴ In addition, West Germany bound itself to European and international agreements concerning equality. A look at the available data suggests that these regulations existed only in written form and were not applied or observed in practice. This is the same criticism that was raised by the Federation of German Trade Unions (DGB). The *Equal Pay for Equal Work Act* was implemented in 1956. In 1958, the law about equal rights under civil law was enacted, which meant that husbands no longer had the right to make the final decision in all of the affairs of a marriage. Furthermore, the

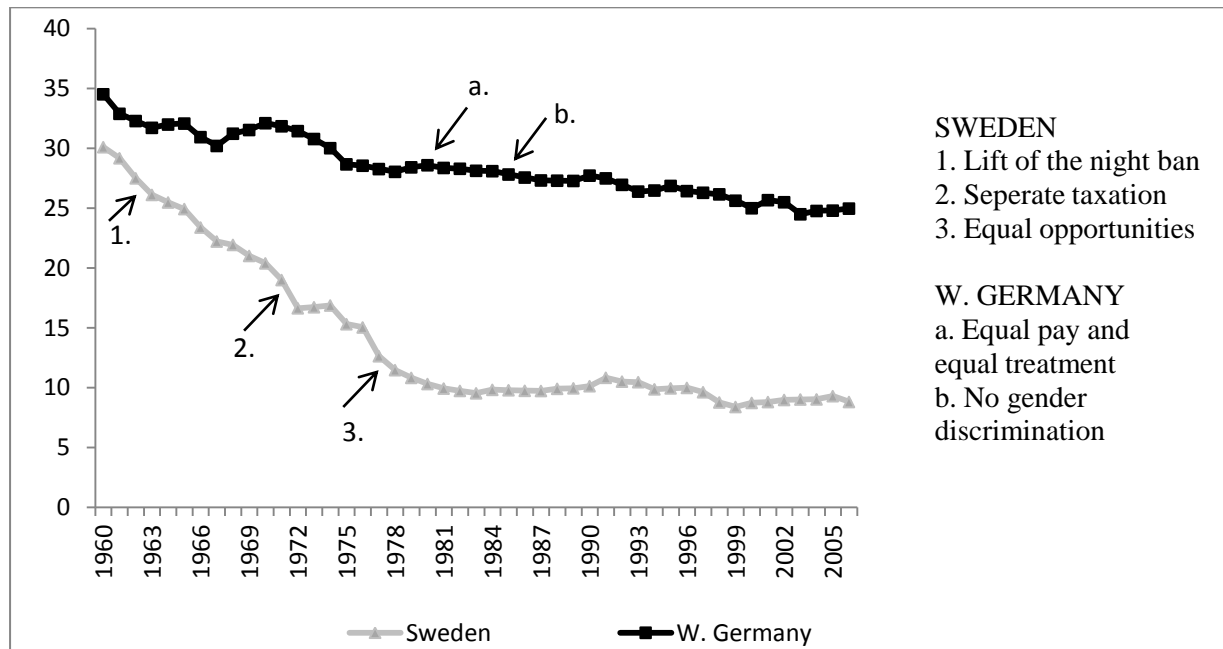
⁴⁴ Article 3 GG (Grundgesetz):

- (1) Alle Menschen sind vor dem Gesetz gleich.
- (2) Männer und Frauen sind gleichberechtigt.
- (3) Niemand darf wegen seines Geschlechts, seiner Abstammung, seiner Rasse, seiner Anschauungen benachteiligt oder bevorzugt werden.

husband was no longer allowed to abrogate his wife's job. In 1977, a law was implemented that gave a wife the right to seek employment without her husband's consent. The external pressure was also visible in West Germany's adoption of European law. In 1980, the right of women to receive equal pay to men was written into German civil law, as was the convention of equal treatment in the place of employment. The law that abolished all forms of gender discrimination was decided in the UN in 1979 but was only enacted in West Germany in 1985.⁴⁵ Even in cases in which a new law had been written by the international or European communities, it still can have an impact on the domestic market. The visual impression, however, suggests that none of the regulations led to a breakthrough in terms of gender equality. The changes in the wage gap are too smooth to be linked to any one political intervention. Figure 2 illustrates how each new regulation relates to the gender wage gap over time for Sweden and West Germany, respectively.

⁴⁵ Handelskammer, 'Chronik der Frauenrechte'.

Figure 2 Policy changes



Note: Data see Figure 1

In Sweden, policy changes comparable to those made in West Germany were pursued. Sweden is also a member of the UN and therefore was party to the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW). The impacts of national policy changes have been investigated by Gustafsson and Löfström.⁴⁶ In focus are four regulations that could have changed the participation, therefore the supply and ultimately the wages of female labour. First, the abolishment of separate tariffs had been agreed between the LO and SAF in 1960, which were comparable to regulations enacted in West Germany in 1956 and 1980. The negotiating partners recommended equal pay for equal work in different branches, which was part of the solidarity wage policy and was not initially intended to narrow the gender wage gap.⁴⁷ Second, Sweden lifted its ban on night work by women in industrial

⁴⁶ Gustafsson/Löfström, 'Policy changes' (1991).

⁴⁷ Stanfors, *A study of women* (2003), 51.

contexts in 1962; a similar ban was lifted in West Germany 30 years later, in 1992. In 1971, Sweden undertook what was likely the most important change, giving wives a stronger economic incentive to work by instituting the policy of separate taxation for spouses. In comparison, West Germany agreed in the 1970s that women may work without the husband's permission, a clear arrear compared to Sweden. Fourth, an agreement on equal opportunity was decided upon in Sweden in 1977.

It is difficult to estimate the true impact of policy changes. Gustafsson and Löfström concluded that half of the change in the gender wage gap can be attributed to policies.⁴⁸ Svensson, on the other hand, claimed that the observed labour market changes can also have their impetus in other events that occurred at the same time.⁴⁹ Whether there was an effect at all is illustrated in Table 3. The Chow test, which tests for structural breaks, indicates significant change occurred in 1962 and 1977 in the case of Sweden.⁵⁰ The German laws from 1980 and 1985, on the other hand, did not lead to a break in the time series.

Table 3 Tests for structural breaks

Sweden	1959	1962	1971	1977	West Germany	1980	1985
p-value	0.447	0.007	0.246	0.0178	p-value	0.443	0.277
F	0.59	5.44***	1.45	4.52**	F	0.83	1.32

Note: The gap is regressed on the lagged gap, a dummy for the year in which the regulation was implemented, and an interaction variable of the gap time of the lagged dummy variable. The corresponding equation is given by $gap_i = L.gap_i + Law + L.Law * gap_i + e$. ***Statistically significant at the 1% level; **statistically significant at the 5% level; * statistically significant at the 10% level.

⁴⁸ Gustafsson/Löfström, 'Policy changes' (1991), 328.

⁴⁹ Svensson, *Closing the gender gap* (1995), 130.

⁵⁰ Stock, 'Unit roots' (1994).

This impression is further strengthened by referring to the time series illustrated in Figure 2, which suggested that the equal pay agreement and the lifting of the night ban initiated the narrowing of the gender wage gap in Sweden. The new taxation has been implemented at a time when the gap was already narrowing.⁵¹ Regardless, it is not possible to say how the gap would have developed without this seemingly important change. In short, in West Germany the gap was relatively stable and persistent, a pattern that does not speak in favour of the importance of policy changes. Graphically, the gap has narrowed noticeably in Sweden after the lifting of the night ban and the equal pay for equal work agreement. Finally, it seems as though Sweden was more eager to pursue change independently. Most political change in West Germany was instigated, to some extent, by external pressure and did not correspond to the prevailing attitudes and discussions occurring in society.

6. Macroeconomic factors

6.1 Labour force participation

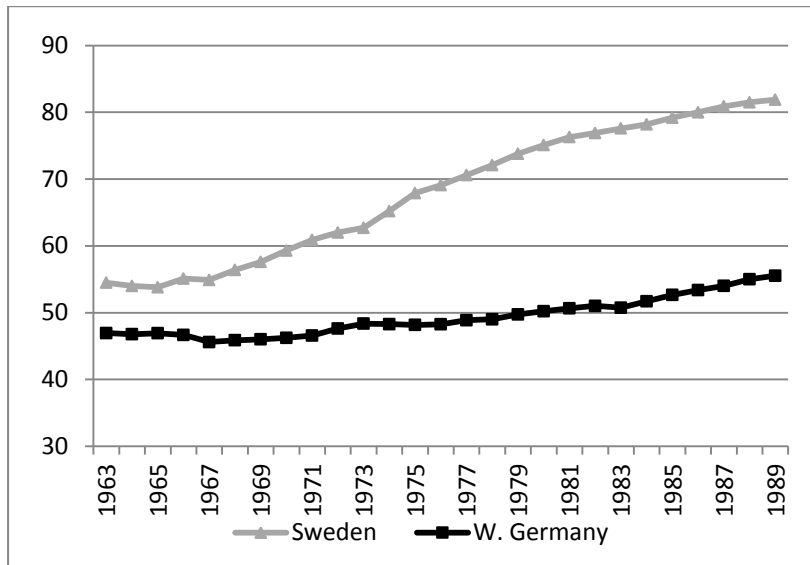
Drohse argued that female labour force participation is more dependent on the business cycle than is male participation. She ascribed to female work a 'buffer function', with women entering the work force if no other labour is available.⁵² This holds true for both West Germany and Sweden early in the period being considered here. In Sweden, however, norms have changed, while in West Germany there was continued difficulty to adjust to the ordinariness of female labour force participation. Despite the very low unemployment in West

⁵¹ This is in accordance with the findings presented in Schettkat, *Erwerbsbeteiligung und Politik* (1987), which ascribed the result to gradual change.

⁵² Drohse, *Lohndiskriminierung* (1986), 159.

Germany in the 1960s, there was no significant upturn in the rate of female labour force participation.

Figure 3 Female Labor Force Participation (in%) ⁵³



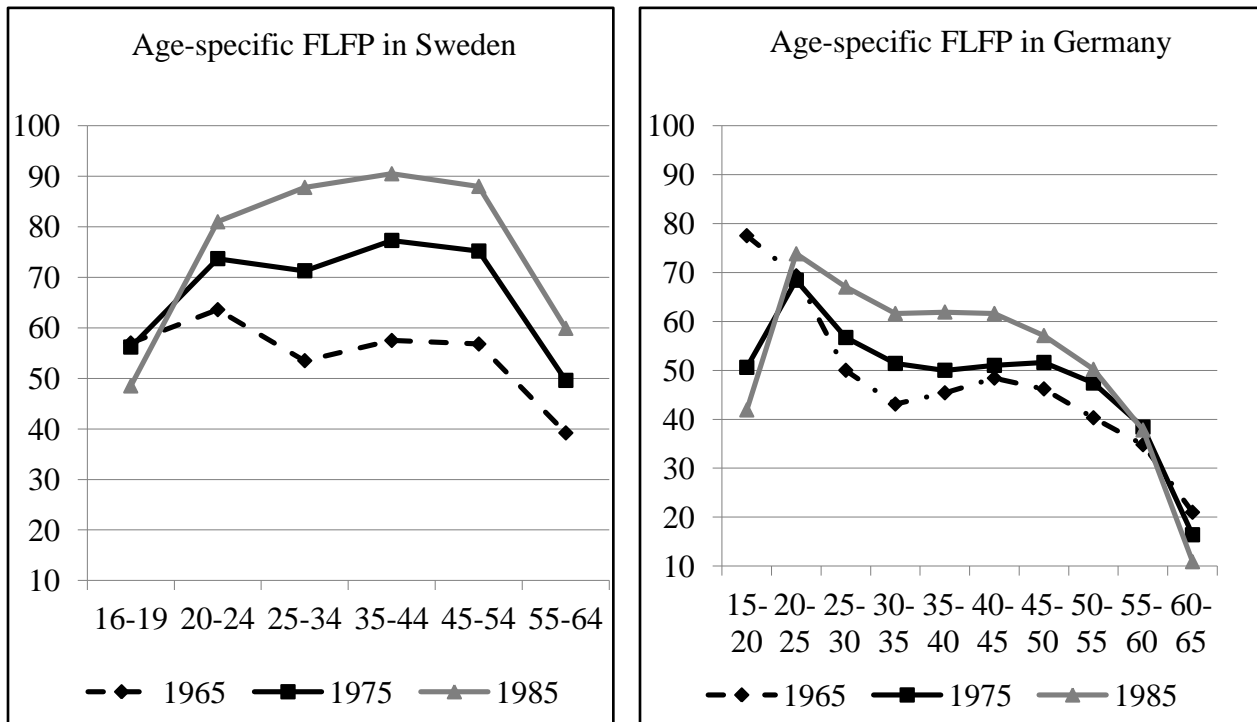
Sources: Gustfasson (1992), World Bank

The female labour force participation for the two countries began on more or less equal levels in 1963, from which point it increased steadily in Sweden, whereas it showed only halting increases in West Germany. By the close of the 1980s, there was a difference of almost 30 percentage points in the rate of female labour force participation in Sweden as compared to West Germany. It is of note that the rate of Swedish female labour force participation increased steadily and showed no reaction to business cycles. The market sets important incentives but sometimes market incentives are not sufficient if the predominant attitudes in a society are opposed to female participation in the labour force. Female labour force

⁵³ The graph ends in 1990 since after the reunification female labor force participation is given for the whole Federal Republic including the Eastern part, which historically has higher female labor force participation.

participation is a somewhat general indicator. To uncover factors that have contributed to its development, it is useful to look at age-specific labour force participation rates.

Figure 4 Age-specific female labour force participation in Sweden and West Germany (in %)



Sources: West Germany: Engstler and Menning 2004; Sweden: Stanfors 2003

The lines plotted in Figure 4 show the participation rates of women grouped by age in 1965, 1975 and 1985. While the differences in female labour force participation at a young age (until 20–25) are less pronounced, German women tended to drop out of the labour force with age. A similar trend can be observed in Sweden in 1965 and 1975, when public child care and working mothers were both less common. Nevertheless, even early on, the age-related decline of female participation was much smoother than that measured for contemporary West Germany. There, as late as 1985, one can assume that child-bearing forced women out of the

labour market while in Sweden the rate of female labour force participation increased continuously up to the age of 55. Furthermore, decade by decade, progress can be seen in Sweden, where the female labour force participation is higher in 1985 than it is for earlier years independent of age; progress in West Germany, on the other hand, has been comparatively little. Over the three decades, the highest rate of female labour force participation in West Germany occurred among women aged 20–25. When women reach typical child-bearing age they cease to participate in the labour market, or at least more than in Sweden. These results support the results of the microeconomic analysis and especially the earnings ratios presented in Table 1. Already one could suppose that women drop out of the labour market in the cases of marriage and motherhood. The microeconomic analysis, furthermore, has revealed that work experience has a higher payoff for women than it does for men. Consequently, the incompatibility or undesired combination of career and family hits even harder. This is a functional chain that reinforces itself and, when considered together, can explain a part of the large difference between West Germany and Sweden.

6.2 Tax code

The tax code has special import for female labour force participation and shows an incisive difference between West Germany and Sweden.⁵⁴ Through different methods of taxation, the net earnings and thus the incentive to work are distinctive. But, female labour force participation plays not only a role from a market perspective. Furthermore, countries with well-established rates of female labour force participation will develop a different view on

⁵⁴ Gustafsson, 'Seperate taxation' (1992).

that. The more common it is for women to work, the lower should be a degradation of the value of female work. The tax code is not just a system imposed by an exogenous entity; it is something that develops over time and displays, communicates or regulates society's prevailing attitudes and values.

The tax codes in Sweden and West Germany are both progressive but the crucial point is the introduction of separate taxation in Sweden in 1971, whereas German women are confronted with high marginal tax rates as a result of split taxation. This split-income taxation means there is a substantial gain to be realised through marriage. In other words, in West Germany, the incomes of a husband and wife are added together and taxed at a joint tax rate under a splitting tariff. This means that spouses can choose whether both are taxed at the same rate or if they split their incomes across two different rates. This is advantageous when one spouse earns more than the other, which is usually the case. The main breadwinner is then taxed according to a lower tax bracket, while the secondary wage earner is placed in a higher tax bracket. Consequently, wives are taxed on the very first hour of work at a higher rate than they would be under separate taxation because of their full-time working husbands. The German wife has to earn a lot to offset the marriage gain before she contributes to the family's overall income.⁵⁵ In the Swedish system, tax rates depend only on the individual's income. Such a system encourages part-time work in favour of being house wives. Even after accounting for the income-related charge for public day care it is still beneficial for women to work.⁵⁶ Gustafsson and Löfström concluded that German couples are fully aware of the fact that a

⁵⁵ Ibid., 69ff.

⁵⁶ Svensson, *Closing the gender gap* (1995), 115.

partner with part-time work realises a very low return on their labour.⁵⁷ This reform is considered one of the most important factors that have contributed to the substantial increase in the rate of labour force participation of married women in Sweden in the 1970s (see Figure 3).⁵⁸ A closer look, however, shows that female labour force participation had already begun to increase by the close of the 1960s. One reason for this could be that the politics had adapted to a change that was already on-going in society. Women wanted to work and the tax system was adjusted so as to reflect this new attitude that recognised women as equal workers who deserved to pay the same tax rate as their male counterparts. Here we have a factor on which Sweden has moved forward, toward a two-earner household model, while West Germany held on to a male-breadwinner model.

7. The welfare state and cultural norms

7.1 Theory

According to Esping-Andersen's categorisation of welfare states, West Germany can best be described as a conservative welfare state system where family policies are the prerogative of the family. The Swedish system, in contrast, has extensive public family policies, supports dual-earner families and can be classified as a social-democratic welfare state.⁵⁹ Such classifications have been criticized for not considering a gender-based perspective. Even though Esping-Andersen's classifications contained implicit factors that might have impacted

⁵⁷ Gustafsson/Löfström, 'Policy changes' (1991), 322.

⁵⁸ Sundström, 'Det svenska arbetskraftsutbudet' (1982), 190.

⁵⁹ Esping-Andersen, *Welfare capitalism* (1990), van der Lippe/van Dijk, 'Comparative research' (2002), 226.

on gender equality, new theories were developed. The welfare system is expected to have a considerable impact on the decisions of females to participate in the labour force and thus on wages. Furthermore, the social system communicates values. These are reasons enough to provide a brief overview of welfare state theories that account for gender.

Korpi developed a new typology based on institutional structures and their impact on the distribution of paid and unpaid work.⁶⁰ He used the male-breadwinner model to indicate the degree to which public policies presume that the husband is the dominant earner within a family. Starting from this concept, Korpi distinguished three types of welfare state models: dual-earner support, general family support and market-oriented policies. According to this scale, West Germany is a clear case of general family support, while Sweden stands as an example of a dual-earner-support model.⁶¹

A dual-earner model encourages female participation in the labour force, as well as the redistribution of social care work in society and within the family. The German context reflects one in which general support is given to the nuclear family, presuming a traditional, gendered division of labour in both society and the family. Indicators of this are, for instance, the provisioning of only half-day child care, without lunch—which assumes the presence of a stay-at-home mother—compared to the full-day child care services that enable and facilitate mothers' pursuit of full-time employment. As empirical proof, Korpi selected variables such as public day care for children younger than two, paid maternity leave and public home help provided to the elderly. Korpi's rankings of countries according to their levels of general family and dual-earner support brought several clear differences into focus: In terms of

⁶⁰ Korpi, 'Faces of inequality' (2000).

⁶¹ See also Lewis, 'Gender welfare regimes' (1992)

general *family* support, West Germany ranked second during the period 1985–1990, whereas in terms of *dual-earner* support, Sweden ranked first during the same period. Dual-earner policies such as those enacted in the Nordic countries are thought to promote gender equality.⁶² Korpi also noted that the major actors are not only political parties but also churches and other social movements. So advocate confessional parties in continental Europe for maintaining the traditional family as the moral basis for a good society.

A range of authors, including Duncan, Lewis, Pfau-Effinger and Budig et al., have adopted an approach similar to Korpi's.⁶³ Lewis categorised countries as strong, modified and weak breadwinner states. Sweden serves in this framework as an example of the weak breadwinner model. This has not always been the case but can be seen to be a result of the events of the 1960s and 1970s, supported by separate taxation, parental leave and day care provisioning. Sweden shifted from a male- toward a dual-breadwinner model. West Germany, on the other hand, belongs to the strong breadwinner model, comparable to Great Britain. One indicator of this is the large number of non-working mothers with children who are too young for schooling,⁶⁴ which is related to the low level of child care provisioning. Furthermore, male breadwinner states draw a line between public and private responsibility, which translates to a motherhood penalty. Joshi and Davies calculated that a motherhood penalty of 50% existed in West Germany while that same figure was 16% or less in contemporary Sweden.⁶⁵

⁶² Korpi, 'Faces of inequality' (2000), 142-148.

⁶³ Duncan, 'Gender Systems' (1995); Duncan/Edwards, 'Lone Mothers' (1997); Lewis, 'Welfare regimes' (1992); Pfau-Effinger, 'Gender cultures' (1998); Budig et al., 'Motherhood Penalty' (2010).

⁶⁴ Lewis/Ostner, 'European social policies' (1994), 19f, 27f.

⁶⁵ The scale of the penalty depends on family size. Joshi/Davies, 'Day care' (1992).

Pfau-Effinger used Lewis' categorisations to compare West Germany, the Netherlands and Finland. She found that women are often full-time workers in Finland despite also being mothers but are more likely to be dependents and housewives in West Germany, earning only supplementary income through part-time work. Pfau-Effinger explained these differences by referring to the complex interplay of gender culture and institutions.⁶⁶ The same factors that Korpi attempted to quantify by considering the impact of confessional parties have been expanded into "gendered moral rationalities" by Duncan and Edwards.⁶⁷ These are "nonmarket, collective relations and understandings about motherhood and employment". These gendered rationalities are additional constraints placed on a rational decision maker in the decision making process. The concept focuses on the decision maker's understanding of what is morally right and socially acceptable.⁶⁸

Budig et al. focused their attention on this topic, as well, and found that motherhood penalties are smaller when cultural attitudes support maternal employment. Policies and attitudes cannot be separated, however; instead, they reinforce one another. Policies may alter socio-political norms but are themselves influenced by cultural expectations. That is why similar policies can have divergent outcomes in different national contexts.⁶⁹ Pfau-Effinger also emphasised the fact that the 'social practice of women is heavily influenced by predominant norms and values about the "correct" gender division of labor'.⁷⁰

⁶⁶ Pfau-Effinger, 'Gender cultures' (1998).

⁶⁷ Korpi, 'Faces of inequality' (2000), 139.

⁶⁸ Duncan/Edwards, 'Lone Mothers' (1997), 29.

⁶⁹ Budig et al., 'Motherhood Penalty' (2010), 4.

⁷⁰ Pfau-Effinger, 'Gender cultures' (1998), 147.

7.2 Measuring cultural differences⁷¹

After investigating the economic, political and institutional forces, it is suggested that cultural norms make the decisive difference in explaining the divergent development of the gender wage gap between Sweden and West Germany. As this paper has attempted to show, the German view on the compatibility of family and work differs markedly from the Swedish view. This is on the one hand caused by the welfare state system and, on the other hand, it is reinforced by the predominant ways of thinking and the ideologies that legitimise policies.⁷² Even though culture seems to be intangible there are ways to measure it. This section will attempt to approximate cultural differences through the use of three indicators: Hofstede's masculinity index (MAS),⁷³ the European Values Survey (EVS) and the number of births that occurred outside of marriage.

The cultural difference is confirmed by Hofstede's MAS, which produces a score that ranges between 0 and 100. The higher the score, the more the values are attached to masculine standards and the less associated they are with a good work-life balance.⁷⁴ West Germany ranked ninth, with 66 points out of 100; Sweden, on the other hand, ranked 53rd, with a MAS score of five. Masculine countries are typified by women who are expected to be tender and to foster relationships, whereas this yields for men and women in feminine societies.⁷⁵

⁷¹ Culture is here defined as norms, traditions and ideologies, as well as prevailing attitudes within a society.

⁷² Pfau-Effinger, 'Cultural change' (2008), 188.

⁷³ Hofstede, *Masculinity and femininity* (1998).

⁷⁴ van der Lippe et al., 'Persistent inequalities' (2011), 171.

⁷⁵ Hofstede, *Masculinity and femininity* (1998), 9–17.

This difference in attitudes also has been confirmed by the EVS of 1990, in which people were asked whether they agree with the statement that ‘a working mother can establish just as warm and secure a relationship with her children as a mother who does not work’. Whereas nearly 45% of the Swedish sample replied that they ‘strongly agree’, fewer than 10% of respondents in the West German sample responded in a similar manner. If ‘strongly agree’ and ‘agree’ were to be added together, as well as ‘strongly disagree’ and ‘disagree’, the picture becomes even clearer—71% of respondents in Sweden agreed with the above statement while the majority of respondents in West Germany disagreed—54%.

Figure 5 European Value Survey 1990



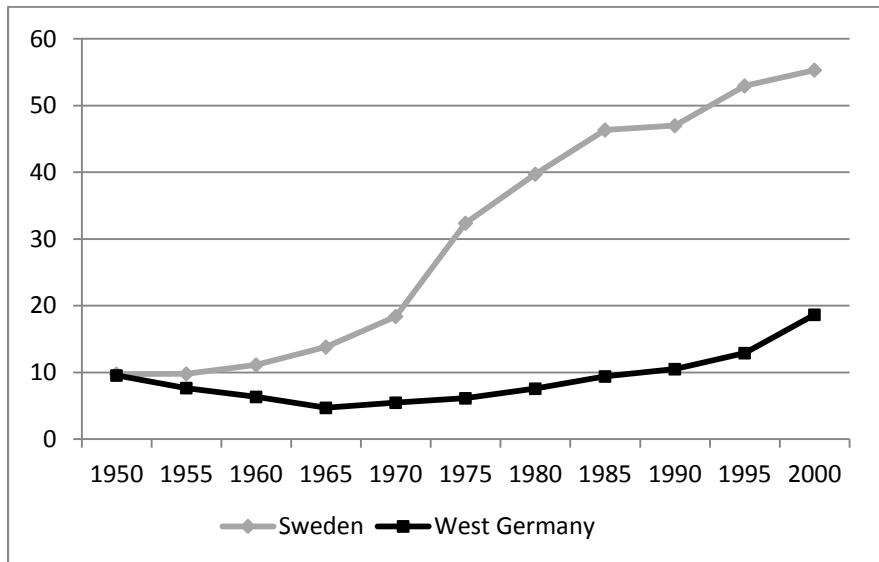
Source: GESIS 2011

Note: The numbers do not add up to 100% due to missing data, unusable answers, etc.

Unfortunately, it is not possible to compare responses to an EVS from the 1950s with responses to more recent iterations of the survey in order to investigate whether Sweden and West Germany held different attitudes from the start or if Sweden has developed into a country with more “modern” values in recent decades, as has been suggested by Lewis and

Ostner as well as Leira.⁷⁶ Other indicators, such as the number of reported births outside of marriage, however, provide a hint to which extent countries are bound to conservative values and are available in a longer run.

Figure 6 Births outside of marriage (in % of all births)



Sources: Statistical Yearbooks for West Germany and Sweden.

Note: In Sweden from 1975 the data not only distinguish married versus unmarried birth but also count births by widows and the divorced.

Figure 6 shows how the number of births outside of marriage has increased in Sweden since the 1960s. The German data is very stable, only edging over 10 per cent in 1990. Interestingly, the rates of such births for the two countries were virtually identical in 1950. A development—a release from conservative values—occurred in Sweden at some point in the 1960s. By 1990, almost half of all children were born outside of marriage. This is just a broad indicator that shows that West Germany retains its conservative values, which encompassed many beliefs, including births outside of marriage and working mothers. Perhaps the increased

⁷⁶ Lewis/Ostner, 'European social policies' (1994), 27, Leira, 'Woman-friendly welfare state' (1993), 57.

number of births outside of marriage in West Germany, along with the increase in female labour force participation since the end of the 1990s, indicate a slight change driven by Germany's reunification.

7.3 The German dilemma: Caught in a cultural trap

Family policies in West Germany have been designed to sustain the traditional family with an at-home mother. This has been further underpinned by the German tax code, which tends to discourage dual-earner couples. This supports the overall impression that West German social policy has tended to treat women as wives and mothers, and men as breadwinners. Gender wages present this phenomenon as a 'child penalty' for women and a 'child bonus' for men.⁷⁷ The high degrees of family support decrease the career opportunities available to women by reducing their work experience and on-the-job training.⁷⁸ As the micro-level analysis has shown, work experience is especially important for women. In most industrialised countries, higher female wages lead to higher female labour supply and to lower fertility rates. West Germany, however, is an exception: At comparable large wage gaps, the female labour force participation rate is low and yet fertility rates are among the lowest in Europe.⁷⁹ Highly educated and full-time employed women in West Germany in particular had a childlessness

⁷⁷ Rosenfeld et al., 'Before and after reunification' (2004); Trappe/Rosenfeld, 'How do children matter' (2000).

⁷⁸ Waldfogel, 'Understanding the "family gap"' (1998), 150.

⁷⁹ France has a fertility rate of 2.1 per cent with a full-time labour force participation of women of about 70 per cent. The reason for this has been described as 'a different culture, a different image of women' (Evelyne Freitag, in Schmidt/Engeser, 'Die gläserne Decke' (2012).

rate of 89%. This might be due to foreseen difficulties in combining career and family.⁸⁰ A social safety net that offers only limited public child care reinforces this impression.

The German welfare system relies upon traditional family roles that remain predominant among the population. Keeping this in mind, it is less surprising that the gender wage gap has been slow to narrow. In a society like Sweden, in which working women have been the norm, and a social safety net that attempts to support female participation in the labour force, female labour is valued more highly not only because women have more work experience. The fight for equal wages has received increased public attention and has not been treated as a minor issue, as it was for a long time in German politics. At the same time, Sweden should not be taken as a role model. In Sweden, it is often necessary and expected that women work. Instead of judging one system as being superior to the other, the aim should be to show that different norms and traditions have a clear impact on the gender wage gap.

German policies have shifted cautiously to lend increased encouragement to female labour force participation but the impact of policy changes is dependent on culture. An example of how culture can impact the market can be seen in the tax code of Germany, which rewards a single breadwinner, who is typically male. Even though maternity leave has been extended several times, access to pre-school and child care remain poor. In Germany, only 4.2% of children younger than three years have access to public child care.⁸¹ Here, the cultural norm that states that children younger than three should be cared for at home by their mother comes

⁸⁰ Hara, 'Fertility trends' (2003), 181.

⁸¹ Ibid., 183

into play.⁸² This includes that working women often drop out of the labour market while pregnant, as the age-specific data on female labour force participation has shown. Even as recently as 1990, 38% of all 25–54 year-olds had a negative attitude concerning female employment; that figure was even higher, 56%, for people 55–76 years of age. In Sweden, the comparable figure is only 18%.⁸³ This undermines the stereotype that, together with institutional factors such as the tax code and access to public child care, creates a cultural trap in which Germany has been caught for many years.

8. Conclusions

Compared to 1960, the gender wage gap was considerably higher in West Germany than it was in Sweden as of 2006. This investigation has tried to explain why West Germany missed out on the considerable progress toward gender equality that allowed Sweden to narrow this gap. In focus has been the question whether the market dictates different wages or whether public policies have a significant impact on the size of the gap. The paper has shown that it is necessary but not sufficient to account for market and political forces. To explain the differential development that occurs between countries, the social safety net and traditional attitudes must not be omitted. These, however, cannot be uncovered in studies that focus on a single country. Only the comparison of two seemingly equal countries—at least in economic terms—can illustrate how norms and traditions influence the gender wage gap.

⁸² Angelika Dammann, staff manager at SAP said: ‘When you have children, you’re expected to stay at home for a significant period; otherwise you are considered a bad mother’. (in Bennhold ‘Women nudged out’ (2011)).

⁸³ Korpi, ‘Faces of inequality’ (2000), 158-159.

From a political perspective, West Germany had ample opportunity to exert additional pressure in pursuit of gender equality, as was done in other European countries and as was demanded by European and international organisations. The resultant changes were written cautiously and thus performed weakly. Even though Sweden had a much more intense set of gender-related policies, the extent to which these regulations affected the gender wage gap has remained unclear. Reductions of the gap that have been achieved simultaneously with the passage of new laws can also be explained, in part, by the contemporaneous market forces. It is further plausible that politics reacted to changes in the market and in the ideology of the population. The impact of new regulations depends on the extent to which those regulations reflect society's attitudes.

From a market perspective, West Germany has had chances to increase female wages as an incentive to increase the rate of female labour force participation and as a way to overcome the labour shortages of the 1950s and 1960s. Prohibited by family policies and conservative ideologies, these chances were not taken and the gap did not decrease as it did in other, originally comparable countries. The problem can be described as an interaction of the different factors that has since led to the *German dilemma*: If mothers want to work, the underdeveloped state of public day care forces them to limit themselves to part-time work. Here, the disadvantage of the German tax code takes effect. They earn only a small amount of marginal income after taxes, so that many decline to pursue work at all. If they stay at home, as they are encouraged to do by the way in which the social safety net is structured and by the prevailing attitudes in German society, they lose out on work experience, which further reduces their wages. Swedish public day care, on the other hand, makes it possible for women to re-enter the labour market quickly and thus not to lose out on as much work experience.

Swedish society had more dynamics affecting its gender wage gap largely due to a competing ideology concerning female labour force participation, which has since been institutionalised in the social safety net and the Swedish tax code. West Germany, on the other hand, has continued to enact conservative family policies despite the social modernism. The lower rate of female labour force participation, mother-bound childcare and the cautious regulations all contribute to the fact that a full-time working mother is an exception. With this in mind it is less surprising that female wages differ dramatically as compared to male wages. Institutional changes alone, like separate taxation, would not help West Germany achieve gender equality in pay as long as family policies, including public child care, are rooted in conservative ideologies. As Thomas Sattelberger, human resource chief at *Deutsche Telekom* said in the *New York Times*, ‘Germany is good at structural reforms, but not at cultural reforms’.⁸⁴ The Swedish case shows that norms and traditions in a society might change. As gender equality has reappeared on the political agenda in recent times and the female labour force participation rate has increased slightly, Germany may free themselves of conservative ideologies so that they can finally follow the Swedish path.

⁸⁴ In Bennhold ‘Women nudged out’ (2011)

References

- Bennhold, Katrin (2011), 'Women nudged out of German workforce'. *The New York Times*, 29 June 2011, <http://www.nytimes.com/2011/06/29/world/europe/29iht-FFgermany29.html?pagewanted=all&r=0>.
- Blau, Francine D./Kahn, Lawrence M. (1992), 'The gender earnings gap: Learning from international comparisons' in: *The American Economic Review* 82, no. 2, 533-538.
- Blau, Francine D./Kahn, Lawrence M. (1999), 'Analyzing the gender pay gap' in: *The Quarterly Review of Economics and Finance* 39, no. 5, 625-646.
- Budig, Michelle J. et al. (2010), 'The Motherhood Penalty in Cross-National Perspective: The Importance of Work-Family Policies and Cultural Attitudes', Luxembourg Income Study Working Paper Series 542, <http://www.lisproject.org/publications/liswps/542.pdf>.
- Drohsel, Petra (1986), *Die Lohndiskriminierung der Frauen: eine Studie über Lohn und Lohndiskriminierung von erwerbstätigen Frauen in der Bundesrepublik Deutschland 1945-1984*, Marburg: SP-Verlag.
- Duncan, Simon (1995), 'Theorizing European gender systems' in: *Journal of European Social Policy* 5, no. 4, 263-284.
- Duncan, Simon/Edwards, Rosalind (1997), 'Lone mothers and paid work - Rational economic man or gendered moral rationalities?' in: *Feminist Economics* 3, no. 2, 29-61.
- Edin, Per-Anders/Holmlund, Bertil (1995), 'The Swedish wage structure: The rise and fall of solidarity wage policy?', in: *Differences and Changes in Wage Structures*, ed. by R.B. Freeman/L.F. Katz, Chicago, IL: University of Chicago Press, 307-344.

- Edin, Per-Anders/Richardson, Katarina (2002), 'Swimming with the tide: Solidarity wage policy and the gender earnings gap' in: *The Scandinavian Journal of Economics* 104, no. 1, 49-67.
- Edin, Per-Anders/Zetterberg, Johnny (1992), 'Interindustry wage differentials: Evidence from Sweden and a comparison with the United States' in: *The American Economic Review* 82, no. 5, 1341-1349.
- Engstler, H. and Menning, S. (2004), *Statistisches Taschenbuch 2004. Arbeits- und Sozialstatistik.*, Bundesamt, S. Bonn: Bundesministerium fuer Arbeit und Soziales.
- Esping-Andersen, Gøsta (1990), *The three worlds of welfare capitalism*, Princeton, NJ: Princeton University Press.
- Fitzenberger, Bernd/Wunderlich, Gaby (2002), 'Gender wage differences in West Germany: A cohort analysis' in: *German Economic Review* 3, no. 4, 379-414.
- Gartner, Hermann/Stephan, Gesine (2004), 'How Collective Contracts and Work Councils Reduce the Gender Wage Gap', IAB Discussion Paper no. 7/2004, <http://doku.iab.de/discussionpapers/2004/dp0704.pdf>.
- GESIS 'EVS - European Values Study 1990 - Integrated Dataset.' (2011) ZA4460 Cologne.
- Grand, Carl le (1991), 'Explaining the male-female wage gap: Job segregation and solidarity wage bargaining in Sweden' in: *Acta Sociologica* 34, no. 4, 261-278.
- Gustafsson, Björn/Tasiran, Ali C. (1994), 'Wages in Sweden since World War II - Gender and age specific salaries in wholesale and retail trade.' in: *Scandinavian Economic History Review* 42, no. 1, 77-100.
- Gustafsson, Siv (1992), 'Separate taxation and married women's labor supply: A comparison of West Germany and Sweden' in: *Journal of Population Economics* 5, no. 1, 61-85.

- Gustafsson, Siv/Löfström, Åsa (1991), 'Policy changes and women's wages in Sweden', in:
Stability and Change in Six Industrialized Countries, ed. by S.L. Willborn, Women's
Wages (International Review of Comparative Public Policy, vol. 3), Greenwich, CT:
JAI Press, 313-330.
- Handelskammer, 'Kleine Chronik der Frauenrechte - eine thematisch geordnete Uebersicht'.
<http://www.frauen-im-blick.de/pages/hintergrund.html#chronik>
- Hannan, Michael T. et al. (1990), 'Sex and sector differences in the dynamics of wage growth
in the Federal Republic of Germany' in: *American Sociological Review* 55, no. 5, 694-
713.
- Hara, Toshihiko (2003), 'Fertility trend and family policies in Germany, Austria, Switzerland
and the Netherlands.' in: *Journal of Population and Social Security* Supplement to Vol.
1, 172-202.
- Hinz, Thomas/Gartner, Hermann (2005), 'Lohnunterschiede zwischen Frauen und Männern in
Branchen, Berufen und Betrieben', IAB Discussion Paper 4/2005,
<http://doku.iab.de/discussionpapers/2005/dp0405.pdf>.
- Historical Labor Database (HILD)* (forthcoming), University of Gothenburg.
- Hofstede, Geert H. (1998), *Masculinity and femininity: The taboo dimension of natural
cultures*, Thousand Oaks, CA: SAGE Publications.
- ILOSTAT Database*, International Labour Organization
- Johansson, Mats/Katz, Katarina (2006), 'Wage Differences between Women and Men in
Sweden – The Impact of Skill Mismatch', IFAU Working Paper 2007: 13,
<http://www.ifau.se/upload/pdf/se/2007/wp07-13.pdf>.
- Johansson, Mats et al. (2005), 'Wage differentials and gender discrimination: Changes in
Sweden 1981-98' in: *Acta Sociologica* 48, no. 4, 341-364.

- Joshi, Heather/Davies, Hugh (1992), 'Day care in Europe and mothers' forgone earnings' in:
International Labour Review 131, no. 6, 561-579.
- Kidd, Michael P./Shannon, Michael (1996), 'The gender wage gap: A comparison of Australia and Canada' in: *Industrial and Labor Relations Review* 49, no. 4, 729-746.
- Kjelstad, Randi (2001), 'Gender Policies and gender equality', in: *Nordic Welfare States in the European Context*, ed. by M. Kautto et al., London: Routledge, 55-78.
- Korpi, Walter (2000), 'Faces of inequality: Gender, class, and patterns of inequality in different types of welfare states' in: *Social Politics* 7, no. 2, 127-191.
- Kunze, Astrid (2000), 'The Determination of Wages and the Gender Wage Gap: A Survey', IZA Discussion Paper 193, <http://ftp.iza.org/dp193.pdf>.
- Kunze, Astrid (2002), 'The Evolution of the Early Career Gender Wage Gap', IZA Discussion Paper 436, <http://ftp.iza.org/dp436.pdf>.
- Kunze, Astrid (2003), 'Gender differences in entry wages and early career wages' in: *Annals of Economics and Statistics* 71/72, 245-265.
- Kunze, Astrid (2005), 'The evolution of the gender wage gap' in: *Labour Economics* 12, no. 1, 73-97.
- Kunze, Astrid/Ejrnaes, Mette (2004), 'Wage Dips and Drops around First Birth', IZA Discussion Paper no. 1011, <http://ftp.iza.org/dp1011.pdf>.
- Leira, Arnlaug (1993), 'The 'woman-friendly' welfare state? The case of Norway and Sweden', in: *Women and Social Policies in Europe*, ed. by J. Lewis, Aldershot: Edward Elgar, 49-71.
- Lewis, Jane (1992), 'Gender and the development of welfare regimes' in: *Journal of European Social Policy* 2, no. 3, 159-173.

- Lewis, Jane/Ostner, Ilona (1994), 'Gender and the evolution of European social policies', *ZeS-Arbeitspapier Issue 94*, Bremen:Zentrum für Sozialpolitik.
- Lips, Hilary M. (2003), 'The gender pay gap: Concrete indicator of women's progress toward equality' in: *Analyses of Social Issues and Public Policy* 3, no. 1, 87-109.
- 'LIS Employment Key Figures by Gender,' Luxembourg <http://www.lisdatacenter.org>.
- Luxembourg Income Study (LIS) Database. <http://www.lisdatacenter.org>
- Mandel, Hadas/Semyonov, Moshe (2005), 'Family policies, wage structures, and gender gaps: Sources of earnings inequality in 20 countries' in: *American Sociological Review* 70, no. 6, 949-967.
- Mincer, J. (1974), *Schooling and Earnings*, Columbia University Press.
- Oaxaca, Ronald (1973), 'Male-female wage differentials in urban labor markets' in: *International Economic Review* 14, no. 3, 693-709.
- Ostner, Ilona (1993), 'Slow motion: Women, work, and the family in Germany', in: *Women and Social Policies in Europe*, ed. by J. Lewis, Aldershot: Edward Elgar, 92-115.
- Pfau-Effinger, Birgit (1998), 'Gender cultures and the gender arrangement—a theoretical framework for cross-national gender research' in: *Innovation: The European Journal of Social Science Research* 11, no. 2, 147-166.
- Pfau-Effinger, Birgit (2008), 'Cultural change and path departure: the example of family policies in conservative welfare states ', in: *Culture and Welfare State*, ed. by W. van Oorschot et al., Cheltenham, UK: Edward Elgar, 185-204.
- Rosenfeld, Rachel A. et al., (2004), 'Gender and work in Germany: Before and after reunification' in: *Annual Review of Sociology* 30, no. 1, 103-124.
- Rusciano, Frank L. (1992), 'Rethinking the gender gap: The case of West German elections, 1949-1987' in: *Comparative Politics* 24, no. 3, 335-357.

- Schettkat, Ronald (1987), *Erwerbsbeteiligung und Politik. Theoretische und empirische Analysen von Determinanten und Dynamik des Arbeitsangebots in Schweden und der Bundesrepublik Deutschland.*, Berlin: Edition Sigma.
- Schmidt, Kristin/Engeser, Manfred, 'Die gläserne Decke existiert'. *Die Zeit* 2012, <http://www.zeit.de/karriere/beruf/2012-06/frauen-management>.
- Sørensen, Annemette (2001), 'Gender equality in earnings at home and at work', in: *Nordic Welfare States in the European Context*, ed. by M. Kautto et al., London and New York: Routledge, 98-115.
- Stanfors, Maria (2003), *Education, labor force participation and changing fertility patterns: A study of women and socioeconomic change in twentieth century Sweden*, (Lund Studies in Economic History, vol. 22), Stockholm: Almqvist & Wiksell International.
- Statistisches Jahrbuch der Bundesrepublik Deutschland* (diverse volumes, 1950–1990), Wiesbaden: Statistisches Bundesamt
- Statistiska årsbok* (diverse volumes), Stockholm: Statistics Sweden.
- Stock, James H. (1994), 'Unit roots, structural breaks and trends' in: *Handbook of econometric* 4, no. 4, 4-46.
- Sundström, Marianne (1982), 'Det svenska arbetskraftsutbudet—förändringar och framtidsutsikter', in: *Arbetsmarknadspolitik under debatt. 10 forskares syn på arbetsmarknadsproblem*, Stockholm: Liber Förlag.
- Svensson, Lars (1995), *Closing the gender gap: determinants of change in the female-to-male blue-collar wage ratio in the Swedish manufacturing 1913-1990*, Lund: Ekonomisk-historiska fören.

- Svensson, Lars (1996), 'Politics or market forces? The determinants of the relative wage movements of female industrial workers in Sweden, 1960–1990' in: *Scandinavian Economic History Review* 44, no. 2, 161-182.
- Svensson, Lars (2003), 'Explaining equalization: Political institutions, market forces, and reduction of the gender wage gap in Sweden, 1920-95' in: *Social Science History* 27, no. 3, 371-395.
- Trappe, Heike/Rosenfeld, Rachel A. (2000), 'How do children matter? A comparison of gender earnings inequality for young adults in the former East Germany and the former West Germany' in: *Journal of Marriage and Family* 62, no. 2, 489-507.
- UN Data: United Nations Development Programme - Human Development Indices.
<http://data.un.org/DocumentData.aspx?q=HDI&id=269>.
- van der Lippe, Tanja et al. (2011), 'Persistent inequalities in time use between men and women: A detailed look at the influence of economic circumstances, policies, and culture' in: *European Sociological Review* 27, no. 2, 164-179.
- van der Lippe, Tanja/van Dijk, Liset (2002), 'Comparative research on women's employment' in: *Annual Review of Sociology* 28, 221-241.
- Waldfoegel, Jane (1998), 'Understanding the "family gap" in pay for women with children' in: *The Journal of Economic Perspectives* 12, no. 1, 137-156.
- World Bank Data. 1960-90.

Appendices

A 1 Summary Statistics

	GERMANY				SWEDEN			
	female		male		female		male	
	mean	std	mean	std	mean	std	mean	std
Employment	0.705	0.45	0.85	0.35	0.85	0.35	0.88	0.31
Marital	0.64	0.47	0.61	0.48	0.587	0.49	0.52	0.49
log income	9.55	1.11	10.22	1.03	11.9	1.08	12.34	1.01
Age	39.22	13.08	39.74	12.82	41.65	11.75	42.09	11.89
Education	3.54	1.57	3.73	1.64	3.71	1.12	3.45	1.15
Experience	11.35	9.85	16.75	12.26	20.079	12.14	21.94	12.84
Permanent	0.47	0.49	0.61	0.48	0.72	0.44	0.71	0.45
Weeks	33.29	23.204	42.81	18.17	47.11	13.25	47.16	13.1
n. children	.93	1.035	1.00	1.05	1.09	1.11	1.03	1.12

A 2 Regression Results

	Sweden		Germany	
	female	male	female	male
n. children	-0.1019*** (0.011)	-0.000627 (0.0072)	-0.1401*** (0.0144)	0.0432*** (0.00846)
education	0.0692*** (0.013675)	0.08688*** (0.0086)	0.1352*** (0.0112)	0.1164*** (0.00704)
experience	0.05132*** (0.004437)	0.01924*** (0.00296)	0.0356*** (0.0053)	0.0297*** (0.003551)
experience sq	-0.00084*** (0.000096)	-0.000258*** (0.000061)	-0.00067*** (0.00014)	-0.00046*** (0.00008)
weeks	0.01196*** (0.002877)	0.01459*** (0.00166)	0.0225*** (0.00189)	0.03157*** (0.00166)
cons	10.526*** (0.1732)	11.1279*** (0.09595)	8.358*** (0.1287)	8.372*** (0.0946)
N	3133	3315	2169	2883

Note: ***Statistically significant at the 1% level; **statistically significant at the 5% level; * statistically significant at the 10% level. Standard errors are given in parentheses. Fixed-effect regression controlling for industries and occupations, LIS data wave IV

A 3 Dummy variables for fixed effects

	Germany	Sweden
industry	agriculture, hunting, forestry	agriculture, forestry and fishing
	fishing	mining and quarrying; manufacturing; utilities
	mining and quarrying	construction
	manufacturing	wholesale and retail trade; repairs; hotels and restaurants
	electricity, gas, water supply	transport, storage and communication
	construction	financial intermediation
	wholesale and retail trade; repairs	real estate, renting and business activities
	hotels and restaurants	public administration; education; health and social work
	transport, storage and communication	other community, social and personal services; household activities; extra-territorial
	financial intermediation	
	real estate, renting and business activities	
	public administration and defence; compulsory social security	
	education	
	health and social work	
	other community, social and personal service activities	
	activities of private households as employers	
	extra-territorial organizations and bodies	
occupation	managers	leading position
	professionals	high-level employee
	technicians and associate professionals	medium-level employee
	clerical support workers	lower-level 2 employee
	service and sales workers	lower-level 1 employee
	skilled agricultural, forestry and fishery workers	skilled worker in service production
	craft and related trades workers	skilled worker in goods production
	plant and machine operators	unskilled worker in services production
	elementary occupations	unskilled worker in goods production
	armed forces occupations	