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What difference do beliefs make?
Gender job associations and work climate

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Abstract

This paper investigates how women and men value their work climate if performing jobs with stereotypical male or female tasks. Using a special variable from a big data set we are able to address whether tasks or jobs are considered as more appropriate for males or females by society. We find that women report lower satisfaction with their work climate if performing jobs with stereotypical male tasks and vice versa. We argue that our results are in line with a recent study of Akerlof and Kranton (2000) considering identity based utility outcomes. The results indicate that the work climate might lead to gender specific utility outcomes and trade-off decisions. Thus, the results might help to enlarge the understanding of occupational segregation by gender. We apply a simultaneous equation model to model the selection into the job alongside our ordered probit model for work climate to cope with the endogeneity of the job choice.

1 Introduction

The concept of social climate or work climate, has received substantial attention in the organizational literature (Parker et al. (2003)) indicating important relations between work climate and motivation or productivity. In contrast this topic has hardly received attention in the economic literature. Especially the relation between work climate and gender is hardly investigated in empirical studies with an economic background.¹

However, recent theoretical papers incorporating the sociological concept of identity into a classical economic framework led us to expect that understanding work place interactions between men and women might help us to understand better why we still face gender segregation in the labor markets of most western countries. Especially if jobs or job contents are related to different cultural environments.

A recent study of Akerlof and Kranton (2000), for instance, states that the gender specific identity of individuals and their coworkers might be affected very differently according to whether their jobs are related to "stereotypical" male or "stereotypical" female tasks or characteristics. The interactive culture among marine fighters, for instance, might affect the gender specific identity in different ways than the cultural environment of primary school teachers. Thus, men and women might feel very different about their work climate in the same kind of job. Therefore, the goal of this study is to investigate the relationship between work climate and gender specific tasks or jobs more closely.

¹Exceptions are Clark (1997) and Bender et al. (2005) who investigate this issue aside their main objective of the gender job satisfaction gap.

Such an approach is important for the following reasons: First, work climate influences overall job utility, performance and motivation. Hence, it is very likely to influence the individual's job choices as well as their productivity outcomes in general. Second, women and men are likely to value their work climate very differently. Clark (1997) shows, for instance, that the weight women put on work place relations is much higher than that of men. Men in contrast seem to put more weight on tenure and wages (Donohue and Heywood (2004)). Thus, if women and men not only put different weight on their work climate but also benefit or suffer from it in different ways they might face different trade-off decisions when deciding on which job to choose. Hence, our results might help us to understand better why gender segregations is still persistent in most western countries and even seem to rise in some. This understanding is of special importance as many studies attribute the gender wage gap to the degree of occupational segregation (Blau and Kahn (2000), Groshen (1991) etc.

In addition the results might help us to understand why many studies observe a satisfaction gap in favor for women if looking on general job satisfaction (Bender et al. (2005), Sousa-Poza and Sousa-Poza (2000), Clark (1997) Heywood(2004) and Donohue and Heywood (2004)).

We try to consider the idea of gender specific jobs or job tasks as closely as possible by creating a conditional measure indicating whether the society associates the individuals' job tasks rather with female or male characteristics. Thus, we use a very unique data set with around 30000 observations which contains a variable indicating whether individuals' belief their jobs to be more appropriate for females or males and detailed information about the

individual's contents of tasks. Hence, we are able to assign values to an individual's job or contents of tasks which tell us whether these job or tasks are viewed as rather female or male by the society on average. We use our conditional gender job association measures in an empirical framework to reveal the effects on the individual's satisfaction with their work place climate.

Using simple ordered probit estimations our indicate that women do indeed favor their workplace climate if performing female jobs containing female tasks. Men in contrast seem to be either indifferent or even prefer the work climate in male jobs depending on the specification we use.

However, individuals working in male or female jobs are prone to be rather different or have chosen their jobs for very different reasons. Thus, we run regressions where we model the selection into male and female jobs directly. The results of this approach reveal basically the findings which we obtain in the usual ordered probit regression. However, if we consider the selection into the job directly we find significant support that men favor their work place relations if they predominantly perform male tasks.

The reminder of the paper is organized as follows. Section 2 describes the theoretical background in more detail. Section 3 contains the data description and section 4 shows our methods. Section 5 contains the results and section 6 concludes.

2 Theory

There are various reasons and concepts which explain why women and men might have different feelings about the work climate within their jobs. Most

of them belonging to behavioral science or psychology. However, for the purpose of this paper we rely mostly on the theoretical considerations of Akerlof and Kranton (2000)² Therefore, we will give a more comprehensive overview of their theory. Nevertheless, we also take other considerations into account.

Akerlof and Kranton (2000) incorporate the sociological concept of identity in a classical utility framework. Therefore, Akerlof and Kranton (2000) indicate directly the concept of social gender categories and argue that psychological and sociological factors related to workplace selection of individuals could influence utility outcomes of females and males differently.

In detail, Akerlof and Kranton (2000) state that individuals are assigned to different social categories and these social categories are associated with different attributes and prescribed behaviors. If individuals violate these behaviors they could suffer identity losses. In contrast, if they behave in line with the prescriptions of their social category they might gain utility.

Indeed, it has been shown in social psychological experiments that even arbitrary social categories affect human behavior (Brown (1986)). However, gender is one of the most familiar category of identity as everybody is assigned to either the category *female* or *male*. Moreover, from the person's dress to the way of communication we could probably find strong prescriptions about gender specific behavior in every culture. Like Reskin and Bielby (2005) argue, every culture is prone to categorize their members by gender.

As a consequence also occupations and tasks are strongly associated with

²The concept of identity is not completely autonomous from other theories on discrimination it rather provides a more detailed explanation for the mechanisms behind discrimination. Moreover, it is also used to explain a variety other economic topics Akerlof and Kranton (2002) and Akerlof and Kranton (2005)

social gender categories indicating either male or female attributes or behavior and follow therefore the mentioned categorical prescriptions. Hence, depending on their contents, some jobs labeled as female are associated to stereotypically female traits like emotionality, cooperativeness and others are associated with stereotypically male traits such as rationality, competitiveness and robustness. Firefighter, for example, is probably considered by large parts of the society as male job, resulting in the curiosity that it is even hard for female fire fighters to find firefighting gear that fits properly (Reskin and Bielby (2005)). In contrast, jobs including especially domestic tasks such as child care or education of children are rather considered as female jobs.

In such a framework women would deviate from their social expected behavior whenever working in male jobs or performing tasks which are associated with the social category of males. Their jobs might, for example, demand them to be aggressive or competitive and therefore putting in doubt their stereotypical female identity. As a result, women would violate the prescription of their female social category and this behavior imposes an identity based utility loss. Needless to say, that this could also be true for men working in women's jobs. Men, for example, might worry about their male identity if working as nursery-school teachers because this job involves tasks like child care and might demand them to be highly sensitive or emotionally.

Most important for our concerns: Deviating from one's social category does not only affect one's own sense of self but also the identity of people around. Hence, a woman in a men's job could, for example, affect the identity of her male coworkers. She could make her male colleagues feel less like men.

Imagine, for instance, a female car mechanic outperforming her male colleagues. Male coworkers could react in a bad manner as a result of suffering a loss in their own identity. Thus, they might refuse assistance or punish the female coworker, for example, by convincing others (or even herself) that she is not able to perform her job properly. Padavic (1991) provides a rather extreme example of male coal handlers attempting to push their female colleague onto the coal conveyor belt.³

Nevertheless, we argue that identity and the feelings about someone's own identity as well as the identity of others should evolve mostly through the interaction or affect the interaction with others. Therefore, work climate rather than other aspects of the job is most likely to be affected by such identity considerations.

However, identity might not be the only factor influencing someone's feeling about the work climate. There might be, for example, certain specific job characteristics causing more stress for one sex than for the other leading individuals to feel different about their work place climate. It might be, for example, that individuals of different sex have different abilities to cope with competition or physical stress.

The literature on general job satisfaction provides some insights explaining why women and men might report different job satisfaction values. Even though, they do not all look on work climate directly it is worthwhile to take a glance on this literature. Bender et al. (2005), for instance, show that the satisfaction gap of women and men can be explained by work time flexibility.

³Note that the theory of Akerlof and Kranton (2000) is not independent of earlier theories on discrimination and especially discrimination by co workers such as Becker (1971).

They argue that women put a much higher value on work time flexibility as they often have to combine motherhood duties with their labor market career. Bender et al. (2005) conclude that the gender composition itself does not effect job satisfaction after accounting for flexibility. If a low amount of flexibility causes more stress in women then men it might as well affect the subjective perception about the work climate in different ways.

Clark (1997) in contrast argues that women have higher expectations if applying for male jobs which are not that easily fulfilled and thus report lower job satisfaction in male then in female jobs. This might be less valid for the case of work climate. One might guess that women should not expect a better work climate in stereotypical male jobs it is more likely that they rather choose these kinds of jobs to earn more or perform more interesting tasks.

Another ad hoc consideration might be that men and women simply differ in their abilities or talents in performing different kinds of tasks. On one hand there might be some jobs demanding the performance of tasks which favor women's attributes and abilities. On the other hand there might be other jobs which favor male attributes and talents. One might guess, for instance, that men might be less able if working as hairdressers, cleaners or in other occupations related to domestic tasks which are usually associated with female attributes. In contrast, women might show lower productivity if working as mechanics, engineers or similar technological occupations which are usually associated with male attributes. Thus, individuals might perform worse then most of their sexual counterparts if working in jobs associated with the opposite gender category. As a result they might feel uncomfortable

among their coworkers and experience a bad work climate.⁴

3 Empirical model

To investigate the link between jobs with gender specific contents or job associations and the subjective feeling about the individual's work climate we have to find an indicator for the *expected gender specificity* of a job or its contents. Speaking in terms of gender job associations, we propose to calculate an indirect reference measure for the expected maleness or femaleness of an individual's job. We argue that our measure should mirror the majority's view or average population's opinion about an individual's gender job association. Considering, for instance, the theory of Akerlof and Kranton (2000) it is important what people think about my job in general rather than what I do think about it. The effect of my utility based payoffs might be driven by my work peers as well as my social category which was given to me by the outside world. Therefore, we propose to use a conditional reference measures indicating the typical gender associations conditional on the tasks an individual is performing. As a job is largely determinate by its contents of tasks such a measure would assign a proper value for gender job associations. We create such a measure by running a simple ols regression of our variable for gender job associations on all of our tasks variables. Afterwards we obtain the predicted values from that regression which will give us a proper

⁴Pre-labor market influences could be considered as reason for gender specific productivity outcomes in different occupations. Gender specific differences in early childhood education or treatment could, for instance, result in productivity differences later on. Another reason might be that physical attributes differ between men and women on average. One consideration might be that women are less productive in jobs demanding high amounts of physical strength.

indicator for the gender job association persistent in society. For the ease of interpretation we rescaled the predicted values such that the most male task set in our sample has a value of 100 and the most female (i.e. less male) task set has a value of 0.

Equipped with these reference values for the individual gender job associations we will estimate the following two equation system:

$$y_i^* = \beta_1 GS_i + X_i' \gamma + \epsilon_i^5 \quad (1)$$

$$GS_i = Z_i' \delta + u_i \quad (2)$$

The first equation models the determinants of the individuals subjective belief about her work climate. y_i^* is a latent unobservable variable which affects our categorical work climate measure. GS_i is our indirect reference measures for the expected gender job associations as we described it above. $X_i' \gamma$ contains a broad set of individual characteristics as well as job and firm attributes and its coefficient vector.⁶ ϵ_i is the error term.

However, according to the usual application of such models we assume the following connection between our outcome variable and the latent utility variable of (1):

⁵We did not incorporate a constant as we deal with ordered response variables later on.

⁶We will give detailed description in the data section.

$$y_i = \begin{cases} 1 & \text{if } y_i^* < \kappa_1 \\ 2 & \text{if } \kappa_1 \leq y_i^* < \kappa_2 \\ 3 & \text{if } \kappa_2 \leq y_i^* < \kappa_3 \\ 4 & \text{if } \kappa_3 \leq y_i^* \end{cases}$$

whereby κ_i are cut parameters which have to be estimated. Most commonly ϵ_i is assumed to be normally distributed and ordered probit or ordered logit is applied. We rely on the ordered probit model.

The second equation takes care of the fact that individuals do not choose randomly whether to do a job containing predominantly male or female tasks. This is important because individuals choose their jobs according to their preferences and their abilities to perform certain jobs as well as the employers hiring decisions. Hence, equation (2) models this selection alongside the ordered probit model. Again, GS_i is our conditional reference measure for the expected gender job associations. $Z_i'\delta$ contains a set of variables influencing the individuals job choices which are similar to the variables of X_i plus a set of exclusion restrictions which we assume to be correlated with GS_i but not with ϵ_i to identify the system properly.

We argue that the mean as well as the standard deviation of GS_i calculated at the state level of the individuals residence will do that job. Hence, if the individual lives in federal state where we find a lot of jobs containing male tasks it is more likely that the individual chooses a job containing these tasks.⁷ Some states like Berlin, for example, are much more likely to provide

⁷Note that individuals are much less mobile then for instance in the states.

service jobs, usually addressed as female jobs, then other states. However, the industrial structure should not affect the individuals feeling about the work climate in his job directly. Hence, someone should not like or dislike his working mates more or less just because there is a big industry sector in the federal state of his residence.

We will estimate the system in a two stage procedure similar to the two stage conditional maximum likelihood approach proposed by Rivers and Vuong (1988). Hence, we obtain first $\hat{u}_i = GS_i - Z_i'\hat{\delta}$ from the first stage and obtain the estimates for $\hat{\beta}_1$ from an ordered probit regression of y_i on GS_i , X_i and \hat{u}_i . Whereby θ is referred to as the additional coefficient of \hat{u}_i . A nice feature of this procedure is that the t-statistics of θ serves as a test for the exogeneity of GS_i . Hence, the null hypothesis that GS_i is exogenous has to be rejected if $\theta \neq 0$. Obtaining the standard errors directly from such a procedure would lead to misleading conclusions as the naive standard errors do not take into account that the first stage is estimated with a bias. Thus, we adjusted the errors according to Murphy and Topel (1985)

4 Data

For the entire investigation, we will make use of the 1991/92⁸ wave of the Qualification and Career Survey. This survey is carried out by the German Federal Institute for Vocational Training (Bundesinstitut für Berufsbildung) and the research Institute of the Federal Employment Service (Institut für Arbeitsmarkt- und Berufsforschung). It is a representative *one percent sam-*

⁸We rely on this wave because the variables to investigate this topics do not exist in more recent waves of the data.

ple of the German workforce and contains roughly 30,000 observations and a wide range of individual and workplace related variables. We decided to drop observation from the occupations where we cannot observe a single woman. Besides this restriction we stayed with the whole sample as long as we had no missing values on the explanatory variables. In the following we will describe the variables used in our empirical investigation in detail and provide first descriptive statistics.

Work climate satisfaction: We rely on a categorical measure which describes the individuals feeling about the work place climate.⁹ The exact questions for the variable is as follows:

- *How satisfied are you with your occupational activity considering work climate?*

On every question the answer contains four choice categories from very unsatisfied to very satisfied.

We present some descriptive statistics in table 1. The numbers give the percental values for all women and men within our sample.

In table 1 we observe a rather typical pattern for this kind of satisfaction measures. Most of the individuals choose *rather satisfied* as outcome. However, women seem to be a little more satisfied with their work climate then men. This is similar to the often found pattern in studies looking on general job satisfaction where women usually report higher satisfaction values.

⁹Some economists worry about the reliability of these kind of satisfaction measures. Nevertheless, it is used widely in psychological literature. Hence, like stated by Clark and Oswald (1996) this should be interpreted as proof of seriousness of these kind of investigations. At least if one does not belief that psychologist are less interested in reliable measures. Moreover, these and similar kinds of research seem to find more and more acceptance even within economics. (Frey and Stutzer (2002)).

Table 1: **Wor climate satisfaction measures in percent**

Category:	Women	Men
very unsatisfied	2.87	2.52
rather unsatisfied	10.14	10.26
rather satisfied	52.57	56.65
very satisfied	34.42	30.57

Source: Own calculations with BIBB/IAB Strukturerhebung

Gender job associations: Our explanatory variable of main interest measures the gender job associations. As our variable is rather unique, we will provide detailed descriptive statistics in the following. In the questionnaire individuals were asked whether they think that their jobs can only be performed by men, women or by both sexes equally. The question asks exactly:

- *Can your job be performed equally by men and women, if they had the same formation?*

The possible answers are *My job can be performed only by a woman; rather by a woman; equally by women and men; rather by a man and only by a man*. The advantage of such a variable is that it is directly related to the societal gender job associations which were considered by Akerlof and Kranton (2000). However, also other theoretical works on discrimination argue that social norms and beliefs are assumed to be the driving force behind their concepts. Nevertheless, in empirical works they were seldom addressed that closely.

Table 2 gives descriptive statistics of this variable for men and women. Not surprisingly there is a rather low amount of men saying that their own job could not be performed by a man or would be performed better by a

woman. Anyhow, we see that around 3 percent of all females' state that their jobs could not be performed by a man at all and around 12 percent belief that it would be better performed by women.

Table 2: **Gender job association in percent**

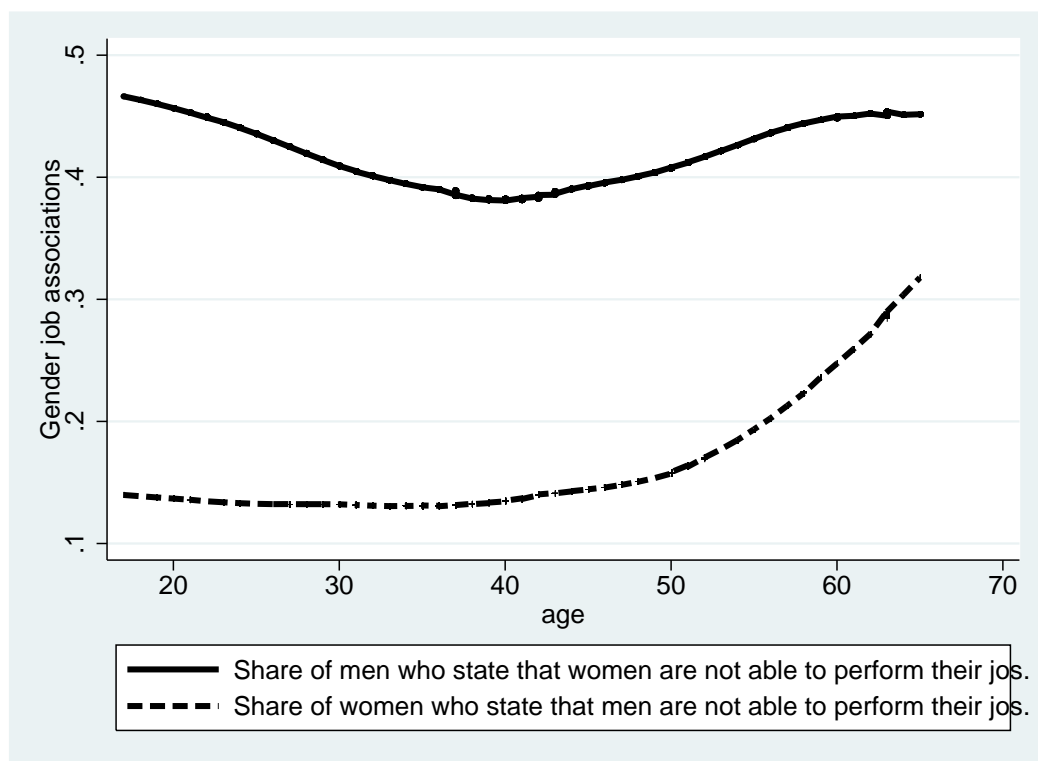
Gender:	male	female
only woman	0.03	3.13
rather woman	0.19	11.67
man and woman equally	58.74	84.83
rather man	23.73	0.33
only man	17.31	0.04

Source: Own calculations with BIBB/IAB Strukturerhebung 1991/92

On the other hand we find 17 percent of male workers stating that their jobs could not be performed by women and around 24 percent of the men state that their jobs would be performed worse by females. Adding up these values it amounts to 41 percent and is nearly half all observed men. Thus, it is obvious that men do believe more often that their jobs are not appropriate for women then women belief that their jobs are not appropriate for men.

In figure 1 we present a smoothed scatter plot of the percentage of individuals stating that individuals of the opposite sex cannot perform their jobs or would it perform worse. The dashed line presents the results for the females and the solid line for males. The graphic shows that the amount of men stating that women are not able to perform their jobs is over 35 percent within all age groups. It shows the lowest values among the age groups between 35 and 45 but lies clearly over 40 percent among the youngest and the oldest men. Hence, one can argue that gender job association is not just a phenomenon among older generations. Nevertheless, the picture looks quite

Figure 1: Gender job associations



different for women. Here the results show that especially older women make gender job associations but the share of women stating that men are not able to perform their jobs is quite low among younger women. Anyhow, we see that gender job associations are quite persistent among the individuals in our sample.

Tasks: Our data contains very detailed descriptions on the job tasks individuals are performing. These variables come along as dummy variables being 1 if the individual performs the mentioned tasks and 0 otherwise. Table 3 provides as list of all task variables.

Table 3: **Job tasks**

<i>equip machines</i>	<i>control machines</i>	<i>maintain machines</i>
<i>driving</i>	<i>restaurate</i>	<i>breed, plant</i>
<i>gaining commodities</i>	<i>prepare food etc.</i>	<i>work on buildings</i>
<i>serve, accommodate</i>	<i>cleaning</i>	<i>abolish litter</i>
<i>analyze, research</i>	<i>load, pack</i>	<i>sort, archive</i>
<i>writing</i>	<i>construct paint</i>	<i>buy, sell, advertise</i>
<i>calculate</i>	<i>computer tasks</i>	<i>guard</i>
<i>work with laws</i>	<i>educate</i>	<i>caring, tending</i>
<i>publish</i>	<i>guide personal</i>	<i>coordinate</i>

Work place characteristics: The battery of work place characteristics are also observed as dummy variables indicating whether a worker carries or lifts heavy weight, works in wet and cold or smoky and dusty/dirty/noisy surroundings, whether he or she works in unhealthy positions or works night shifts. We show the descriptives of the workplace characteristics separately for women and men in table 4.

It is obvious from table 4 that men work more often under rather unhealthy working condition then women. Apart from night shift the proba-

Table 4: **Workplace characteristics for women and men**

Sex:	women	men
heavy weight	0.15	0.38
night shift	0.20	0.27
unhealthy posture	0.15	0.31

Source: Own calculations with BIBB/IAB Strukturerhebung.

bility for men to work under unhealthy conditions is twice as high as the probability for women.

Socio-economic characteristics : Finally to complete our data section we refer to the other rather typical variables we are able to observe. Hence, we are able to observe an individual's age in years and a dummy variable indicating whether a persons was born in east Germany. The latter is important because the industrial structure as well as the culture might differ between east and west Germany to a high degree. Moreover, we created a categorical variable for the worker's type of education. The first category of the latter variable marks low educated people as those without a university or apprenticeship degree. The second category contains people having an apprenticeship degree and the last indicates whether the individual holds a university degree. Furthermore, we observe the weekly working hours and the monthly wage. The latter variable was observed in 16 categories. However, we assigned midpoints to these categories and treated the variable as continuous like DiNardo and Pischke (1997) did when using this data. Last but not least we are able to observe the firm size in eight categories.

5 Results

Before we consider the main results we take a short look at table 10 in the appendix where we present the results of our ols regression which was the base for our measure on gender job associations. As you see in the table nearly every coefficient is statistically significant different from zero and around 27 percent of the variance is explained by the model. The statistics strongly support a clich stereotype of expected gender task associations in the labor market. Most technical tasks, such as maintaining or controlling machines are rather associated with male job associations. Also tasks such as driving cars or motor cycles as well as rather analytical tasks such as bookkeeping or tasks related to higher positions such as guiding personal show significant positive coefficients. In contrast, the typical secretary tasks, such as sort and achieve, write or EDV tasks are prone to be correlated with female job associations. Moreover, tasks which might support stereotypical female traits such as caring and tending, cleaning or educating show significant negative correlations.

However, let us turn to table 5 and 6 where we first present the results of a simple ordered probit regressions.¹⁰ The tables presents the specification for women and men separately. In table 5 and 6 we did not take into account the selection into the job so far. The first specification is rather sparse as we only include variables referring to individual characteristics. This reason behind that is to avoid including variables which are strongly related to either tasks with male associations or tasks with female associations; i.e. firm and job

¹⁰We reported the coefficients and not the marginal effects for matters of space.

characteristics are very likely to be correlated in either direction.¹¹ Hence, the first specification is of most interest for us.

Our variable of main interest is the indicator for male tasks. The coefficients in column 1 of table 5 and 6 indicate a negative significant effect for women but a insignificant effect for men. Hence, the sparse specification reveals that women might feel more uncomfortable with their work climate if performing tasks with male job associations. However, there is no such effect for men.

In the next specifications we successive add further controls for both sex. As we already mentioned these controls are likely to be correlated with either male or female jobs and might therefore take away some of the real underlying effects. In the second specification we add log wages, in the third we add working hours. The fourth includes firm size and the last incorporates variables indicating whether an individual has to perform physical demanding work.

In the case of women, including these variable does not change our variable of main interest very much. The effect stays negative significant in all specifications. However, the controls itself do have significant effects on our dependent variable. Therefore, we will take a glance on this results. Interestingly wages show a negative significant effect for women as long as we do not control for firm size. (Firm size and wages are likely to be correlated.) This might indicate that women earning higher wages might feel a higher pressure of their working mates. In terms of the theory it might be that women in higher positions violate the identity of men who might hold lower positions.

¹¹Firm size for instance might be highly correlated with typical male job tasks as male jobs are likely to be industry jobs.

Table 5: **Ordered probit: Work climate (women)**

	1	2	3	4	5
Male tasks	-0.007*** (0.001)	-0.006*** (0.001)	-0.006*** (0.002)	-0.003* (0.002)	-0.004** (0.002)
Apprenticeship	0.111*** (0.026)	0.108*** (0.027)	0.120*** (0.027)	0.109*** (0.028)	0.100*** (0.028)
University	0.054* (0.032)	0.081** (0.035)	0.074** (0.036)	0.049 (0.036)	0.036 (0.036)
Age	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Age squared	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
East Germany	-0.417*** (0.024)	-0.446*** (0.026)	-0.415*** (0.030)	-0.364*** (0.030)	-0.362*** (0.030)
Monthly wage		-0.066** (0.020)	-0.065** (0.026)	0.031 (0.027)	0.012 (0.027)
Working hours			-0.001 (0.002)	-0.001 (0.002)	-0.000 (0.002)
Heavy weight					-0.120*** (0.036)
Night shift					-0.055* (0.029)
Unhealthy posture					-0.083** (0.034)
<i>N</i>	12002	11100	10813	10785	10785

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$

As a result these men might behave badly towards them and create a bad work climate. Another argument might be that higher wages lead people to suffer more competition in general and therefore cause a worse work climate. The amount of working hours has no significant effect in all specifications. The firm size dummies ¹², in contrast, show negative significant effects in all specifications. This is pretty much in line with what was found in the previous literature. Idson (1990) shows, for instance, that firm size is negative correlated with general job satisfaction. Idson (1990) explains this finding through a less flexible production environment in large firms. However, it is not necessarily the case that the production environment affects the work climate itself. It might be that there is more internal competition in larger firms or that small firms are more likely to create some kind of family atmosphere. The last specification adds the indicators for physical demanding work. All of them are negative significant indicating that women report lower satisfaction with their work climate. Physical demand might cause stress and malaise which affects the individual's work climate.

To sum up the observable factors which are available to us are not able to fully explain the negative effect which is present if women perform jobs containing predominantly tasks with male job associations. This might leave room for the theory of Akerlof and Kranton (2000) that identity plays an important role in labor markets.

Let us take a closer look at the results for men. The sparse specification shows no significant coefficient for the variable on male tasks. Moreover, the effect stays insignificant if we include wages, working hours as well as firm

¹²We did not show them in the table due to space restrictions.

Table 6: **Ordered probit: Work climate (men)**

	1	2	3	4	5
Male tasks	-0.000 (0.001)	0.000 (0.001)	0.001 (0.001)	-0.000 (0.001)	0.002* (0.001)
Apprenticeship	0.069** (0.026)	0.063** (0.027)	0.068** (0.028)	0.059** (0.028)	0.050* (0.028)
University	0.034 (0.031)	0.014 (0.035)	0.017 (0.035)	0.003 (0.036)	-0.034 (0.036)
Age	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Age squared	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
East Germany	-0.424*** (0.022)	-0.377*** (0.029)	-0.382*** (0.031)	-0.335*** (0.031)	-0.335*** (0.031)
ln(Month. wage)		0.080** (0.028)	0.056* (0.029)	0.129*** (0.030)	0.098** (0.030)
Working hours			0.003** (0.001)	0.001 (0.001)	0.002 (0.001)
Heavy weight					-0.069** (0.023)
Night shift					-0.101*** (0.022)
Unhealthy posture					-0.053** (0.024)
<i>N</i>	17133	15528	15301	15263	15263

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$

size. However, if we add the indicators for physical demanding work the effect becomes positive significant. One might argue that men even prefer their work climate in jobs with male job associations as long as we control for physical demand likely to occur in these kinds of jobs. Hence, if the work would not be that hard they would prefer the male job atmosphere. However, one has to be careful with such a conclusion. As most of our controls are likely to be correlated with male jobs. Hence we might neutralise the underlying effect by controlling away the harm of jobs with male tasks associations but not the harm of jobs with female tasks associations. Thus the results of table 5 and 6 show a negative effect for women but not so for men indicating that women might suffer an additional cost in male jobs which does not apply for men. As a result women and men might face different cost benefit trade-offs if applying for similar jobs even if they have the same abilities and would earn the same wages.

Moreover the tables show some contrasting effects for men and women for the coefficients of the control variables. Having higher wages seems to benefit men in contrast to women. They seem to prefer their work climate if earning more. Arguing according to the theory of Akerlof and Kranton (2000) it might be the case that higher wages (and therefore a higher job position) are more in line with the male identity increasing its payoffs which are mirrored in the work climate. Another interpretation might be that men put a high value on wages and wages do make them so happy that it affects the feeling about the work climate itself. The firm size dummies as well as the indicators for physical demanding jobs show similar results like in the case of women. Thus, the effects are negative significant and might lead to

Table 7: **Work climate: 2SCML Estimates**

	women	men
Male tasks	-0.122* (0.065)	0.100** (0.037)
Apprenticeship	0.068 (0.041)	-0.050 (0.039)
University	-0.148 (0.123)	-0.908 (0.331)
age	0.000 (0.000)	0.000 (0.000)
Age squared	-0.000 (0.000)	-0.000 (0.000)
East Germany	-0.276*** (0.083)	-0.865*** (0.160)
$\theta = 0$	1.74	2.68
N	12002	17133
F value first stage	5.80	17.34

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$

similar interpretations.

As mentioned before self selection of individuals in different kinds of jobs might influence our results. There might be some women, for instance, which especially like the work place atmosphere in male jobs and therefore choose their jobs just to appreciate a male work climate. Understood, the same might be true for men.

For this reason we modeled the selection into the job alongside our regressions for work climate. We present the results in table 7. First of all we

see that our exclusion restrictions have significant influence our variable on male tasks.¹³ However, the test statistic for males is quite higher than in the case of females. The reason behind this might be that women are more likely to drop out of the labor market instead of doing a male job which they might not like. The null hypothesis of $\theta = 0$ is rejected in both cases and we have to assume that our variable on male tasks is not exogenous. However, looking on our variable of main interest, we see that the effect of our first tables for women is revealed. Thus, we obtain a negative significant coefficient. The effect for men now differs somewhat from our first approach. Hence we observe a positive significant coefficient for men. Thus, the results seem to indicate that men might favour their workplace climate if performing predominantly male jobs.

A concern might be that both of our exclusion restrictions are indicators for something that forces individuals in jobs they might not like. This can give a reason to worry. Individuals being forced in their jobs might be more likely to feel bad about their workplace relations in general. However, it is hard to find an instrument which overcomes this drawback. Therefore we carry out another exercise which might shed some light on this issue. The next table shows some results where we restricted our sample to job changers who did not choose their jobs for voluntary reasons. Hence, they either changed their jobs to earn more, to have more interesting subjects or to have more responsibility or influence. The results are shown in table 8.

The results reveal a significant negative effect for women but not so for men. Hence, even women who chose a male job voluntarily seem to be less

¹³Note that we also used the observations lacking information about work climate in the first stage. Thus, we used all information available to achieve more precise estimates.

Table 8: **Voluntary Movers**

	women	men
Male tasks	-0.010** (0.004)	0.001 (0.002)
Apprenticeship	0.055 (0.070)	0.053 (0.057)
University	-0.126 (0.090)	0.054 (0.070)
Age	-0.000 (0.000)	-0.000** (0.000)
Age2	0.000** (0.000)	0.000** (0.000)
East Germany	-0.313*** (0.063)	-0.353*** (0.047)
<i>N</i>	1476	3462

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$

satisfied with their work climate the women who voluntary choosed a female job.

6 Conclusion

This paper has investigated the link between gender job associations and the individuals perception about her work climate. Our data revealed first of all that gender job associations are substantial as a high fraction of the workforce states that their jobs are only suitable for one sex and not the other. Using this special variable we were able to calculate a measure for the gender specify workplace tasks. Investigating the link between these gender specific job attributes and the individuals work climate we find that women and men seem to feel very different about their work climate in similar jobs.

In detail we find that women are less satisfied with their work climate if performing predomnatly male tasks. This finding is very robust to the econometric specification and still holds if we consider the selection into the job with in a simultaneous equation framework. Men in contrast seem to be either indifferent or even prefer their work climate in male jobs. Especially if we consider the selection into the job the latter result is confirmed.

We argue that these findings are very much in line with the predictions of Akerlof and Kranton (2000) who argue that individuals have identity based utility pay offs and might therefore support their approach to explain why occupational segregation is still persistent even in western countries. Our results are of importance as they could give reasons why certain laws aiming at gender equality might not have the expected outcomes or why programs

trying to encourage young women to do stereotypical male jobs are not as fruitful as expected.

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A Tables

Table 9: First stage regression

Variable	Coefficient	(Std. Err.)
Tasks		
equip machines	0.049	(0.012)
control machines	0.123	(0.009)
maintain machines	0.239	(0.011)
driving	0.199	(0.009)
restaurate	0.226	(0.015)
breed, plant	-0.060	(0.019)

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... table 9 continued

Variable	Coefficient	(Std. Err.)
gaining commodities	0.158	(0.041)
prepare food etc.	0.014	(0.014)
work on buildings	0.226	(0.013)
cleaning	-0.292	(0.014)
serve, accommodate	-0.091	(0.017)
abolish litter	0.029	(0.013)
load, pack	0.080	(0.012)
sort, archive	-0.058	(0.008)
analyse, research	-0.009	(0.008)
construct paint	-0.044	(0.010)
buy, sell, advertise	-0.115	(0.007)
writing	-0.115	(0.007)
calculate bookkeeping	0.024	(0.007)
EDV tasks	-0.077	(0.007)
guard	0.139	(0.015)
work with laws	-0.008	(0.007)
educate	-0.087	(0.007)
caring, tending	-0.228	(0.011)
publish	-0.002	(0.010)
guide personal	0.033	(0.008)
coordinate	-0.001	(0.007)
Intercept	2.172	(0.005)

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... table 9 continued

Variable	Coefficient	(Std. Err.)
R squared		0.27
N		26033