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A tradable employment quota

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HIGHLIGHTS

- A tradable employment quota is proposed as an alternative affirmative action policy
- Firms need to purchase permits to employ men
- A model of a search and matching labor market and a permit market is developed
- Effects of a tradable permits policy on wages, employment, and welfare are analyzed
- A permit solution increases welfare compared to a fixed employment quota

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ABSTRACT

Discrimination of women in the labor market requires appropriate policy interventions. Affirmative action policies typically advocate the introduction of an employment quota uniformly applied to all firms. In a heterogeneous labor market such a policy may yield avoidable welfare losses. We propose a tradable employment quota showing its effects on wages, employment, and welfare in a labor market with search frictions and taste discrimination. A tradable employment quota appears to be a viable alternative yielding superior labor market outcomes.

1. Introduction

Affirmative action policies very often take the form of employment quotas. Norway introduced a quota in 2003 already. France, Iceland, and Spain have mandatory boardroom gender quotas forcing firms to have boards with 40% women by the years 2017, 2013, and 2015, respectively. German publicly listed firms subject to co-determination have to comply with a boardroom quota of 30% from 2016 onwards. Furthermore, the European Parliament passed a proposal by the European Commission to break the glass ceiling. According to this envisaged bill, European firms have to appoint female directors in order to make supervisory boards two-fifths female by 2020. [1]

As it is very likely that a uniform employment quota imposes larger adjustment costs on some firms than on others the question arises whether the goal of paving the way for more female employment can be achieved at lower costs. In particular, as the size of women's labor supply is heterogeneous across occupations, sectors, and regions, some of the firms forced to fulfill a fixed quota will find it more difficult to hire women who match the vacancies than others. A more flexible instrument is called for that does not compromise on the overall goal of achieving a certain share of female employment. Such an instrument should allow firms to fall short of the quota if costs of compliance would become unreasonable, while allowing others to gain from employing relatively more women.

In this article we propose and analyze the labor market effects of a tradable employment quota. Borrowing from the experience with environmental regulation policies to combat excessive emissions, we suggest to implement a mechanism that efficiently achieves a fixed share

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[1] See the European Commission Database on Women and Men in Decision Making.

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of women working in relation to men. The idea is to issue permits to firms that give them the right to employ men and make these permits tradable. With such an affirmative action policy firms would only be allowed to employ men up to a number that matches the stock of permits that they hold. As a particular firm wants to employ an additional man it would only be able to do so by purchasing an additional employment right. Firms being in excess of permits because they find it more profitable to employ a woman than to hold a permit will want to sell this right. Trading of permits between those firms that want to buy and those firms willing to sell would yield a market price of a permit reflecting the profitability of employing an additional man. While the overall supply of permits of an issuing body would determine the share of female employment in the economy, single firms could adjust more flexibly and still comply.

We are aware of the fact that very often economists' ideas for resolving societal issues do not find widespread support outside of their own community. Sometimes even fierce opposition arises and we would not be surprised if such a reaction emerges as a response to our proposal. The public discussion of affirmative action policies is very much centered on equity considerations. It appears to us that efficiency or the loss of efficiency is of secondary importance, maybe because policymakers or those whom they represent are not willing to trade equity for efficiency. On this background we believe that it is important to stress that our proposal does not question the equity related aim of improving women's participation in the labor market. Personally, we also think that this should be an important goal for policymakers. What we suggest here is, however, a policy measure that has the potential to achieve equity at a lower cost for society. The way that this may be achieved is via a market-oriented instrument.

We expect that recurring to market mechanisms to resolve equity issues may become another reason why our proposal could be dismissed by the broader public upfront. In fact, it has been reported that initially there was heavy opposition to the introduction of tradable carbon dioxide emission rights coming from environmental groups. The hostility towards a market-oriented instrument was mostly driven by moral or philosophical reasoning where it was argued that "It's Immoral to Buy the Right to Pollute" as the New York Times titled an article.[2] Similar objections may arise with respect to our proposal. Some critics may claim that it is immoral that firms can buy themselves out of the obligation to hire women by purchasing permits that allow them to employ men rather than women. We find it very difficult to resolve such kind of moral concerns. But we would like to point to a more recent discussion that has arisen as employment quotas got implemented. There is evidence that women feel stigmatized when their employer is subject to a quota (Heilman et al., 1992, 1997). The unease comes from the perception that fellow employees may think that a particular woman was only employed because of the quota policy rather than because of her qualification. Interestingly, in our proposal such a stigma is less likely to emerge because the mere fact that the employer chose to offer a contract to a woman signals appreciation. Alternatively, the employer could have employed a man by not selling a permit or buying an additional permit (which he did not do).

In the context of environmental policies the use of tradable permits is based on Ronald Coase's idea that market participants may correct for negative externalities without the intervention of governments if legal rules of entitlement exist and transaction costs are negligible (Coase, 1960). Negative externalities which are arising from production through the emission of health and climate damaging gases are corrected for by giving firms the right to pollute (or those affected by the emission the right for unpolluted air). Consequently, emissions are only allowed if costly permits are held so that firms are confronted with the socially relevant marginal costs of production rather than their private marginal costs only. It follows that production is extended up to the socially desirable level only. Moreover, the abatement of (environmentally) unhealthy substances takes place at the lowest costs possible. Those firms with relatively low marginal abatement costs will choose to invest in clean technologies and sell their permits, whereas the firms with relatively high marginal abatement costs will want to expand production by purchasing permits. It is the cost reducing feature of permit trading which we borrow for developing our proposal of an affirmative action policy that increases female employment shares at relatively lower costs than one would have with a uniform quota. As in the case of environmental policies, we expect that those firms which will find it inherently difficult to hire women will rather purchase permits than leave vacancies unproductive or costly retrain their newly hired employees, whereas those firms able to hire women will sell their permits. All these cost saving decisions of firms leading to trades on the permit market, however, should not jeopardize the goal of achieving an overall female employment rate set by policymakers and implemented by issuing a corresponding number of tradable employment permits.[3]

We would like to give some empirical evidence on the current situation with respect to female participation in advisory and executive boards of mostly publicly listed firms. Restricting to these figures for illustrative purposes may be justified by the recent policy moves that started to regulate this particular part of the labor market. With 16% the U.S. and the 27 (by 2007) EU member states fare equally in terms of female representation on firm boards. Japan, as another major industrialized country, has only 1% women on firm boards. A closer look into single European countries reveals a large dispersion of female representation. In the three countries with the largest representation almost every third member is female, a share which, however, still falls short of Norway where a quota was introduced in 2003 already, forcing firms to comply by 2008. In the European countries that do worst less than one tenth of the positions are held by women. Interestingly, the countries doing relatively well in terms of female board membership hardly have women leading the board or being a CEO. Data for Germany allows for a closer look into the within country distribution of female representation. Again, we find a large variance between firms. Among the companies listed in the DAX (the major German stock market index), seven women served on the board of Henkel (a company producing personal care products) which was composed of 16 members at the time of data collection, while no woman was serving on the board of Fresenius (a medical care company).[4]

The introduction of a female board quota in Norway constituted a natural experiment that allowed for an analysis of firm reactions and their consequences more closely. At the time the law was introduced only 9% of women were on the boards of Norwegian firms. A legislated quota of 40% imposed a major change on the composition of Norwegian firm boards. Ahern and Dittmar (2012) use the pre-quota female representation across firms as an instrument for the changes of boards that followed the quota. For the days around the announcement of the law they find that stock returns fell by 3.52% for those firms with no female representation compared to firms that had at least one woman on the board. For the longer term, they estimate a decline in Tobin's Q of 12.4% as a response to a 10% forced increase in women representation on the boards. Overall they conclude that the imposed constraint had a large negative impact on firm value driven by the reorganizations of the boards. Drawing on the same policy change, Bohren and Staubo (2014) find that half of the firms that would have been affected by the

[2] See Sandel (1997).

[3] We have been asked at various occasions whether our case of a discriminatory labor market entails some form of externality, which is then resolved through our proposed permit solution. In the sense that an externality is present whenever some economic agent's welfare is directly affected by the action of another agent (see, e.g., Hindriks and Myles, 2013) a discriminating firm does not constitute an externality. Choices of discriminating firms have effects on other agents' payoffs but they are mediated by prices, i.e. they are indirect or so-called pecuniary externalities. Thus, it is not an externality that we correct for with tradable employment rights, but we rather target the heterogeneous adjustment costs of firms that can be handled more efficiently through our proposal.

[4] A table summarizing these figures and some additional information can be found in the Appendix (see Table 7).