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ABSTRACT

Gender Discrimination: The Role of Males and Per Capita Income*

This paper models gender discrimination in the labor market as originating from bargaining between husbands and wives within the family. The husband-wife household bargains over resource distribution, with each spouse's bargaining power determined by his/her market income. Men are reluctant to grant women easy access to the labor market as, despite the obvious income drag on family income, gender discrimination allows the male to benefit from greater bargaining power. In a model with endogenous savings, fertility, labor force participation, and gender wage discrimination, we demonstrate how economic development, which increases the financial cost of discrimination, gives rise to a positive cycle of greater female participation, lower fertility, and higher income. We use data from the World Value Survey and the International Social Survey Program and show that economic development is negatively related to male “preference for discrimination". For low levels of development, a majority of men have discriminatory views; at around annual per capita incomes of $15,000 there is a turning point and non-discriminatory men become the majority. Using the National Longitudinal Survey of Youth in the U.S., we show that men with high-income spouses change their discriminatory views over time. Our findings suggest that discriminatory beliefs are indeed endogenous and lose strength over the course of economic development.

JEL Classification: D13, J13, J16, J7 and O15
Keywords: economic development, female labor force participation, fertility and gender discrimination

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1 Introduction

Economic development is a complex process. Among many other variables, growth and development impact social perceptions as to the role and the rights of women in society.[1] Historically, men have been predominant in politics and business, even in organized religion. Their discriminatory views on gender issues have permeated the culture and have been a major factor hindering female participation in economic and political life. Our paper takes seriously the assumption that male views on gender are self-serving. We consider that the level of male preferences for women to stay at home, for instance, depends on the opportunity cost of female non-employment. The idea that the level of discrimination is "chosen" by males is less shocking once we concede that historically, male views have been coordinated in discriminating "no females welcome" environments such as political and religious hierarchies, and even at gathering places such as bars, clubs, and communal gatherings. Of course, dominant groups can choose to give up their privileges for a variety of reasons, and even for purely altruistic reasons. Possible instances of such behavior may include the abolition of slavery (Wright 2006), the spread of public education to the masses (Galor and Moav 2006), or the extension of voting rights (Acemoglu and Robinson 2000, Lizzeri and Persico 2004). However, as even the discussion of these other breakthrough social changes makes clear, there are often selfish reasons behind important cultural changes. In this paper we take the assumption of male determination of discrimination based on selfish reasons to the extreme, and then test the empirical consequences of that assumption.

We model a relationship whereby rises in income per capita affect male discriminatory views on the role of women. Empirically, economic development is associated with higher levels of female labor force participation, lower gender wage gaps, and lower levels of gender discrimination. Our paper models gender discrimination as the resultant of two forces: on the one hand, the benefit men obtain from gender discrimination in intra-household bargaining; on the other hand, the income cost families incur by discriminating against female participation in the labor market. We examine, for the first time in the literature, how the discriminatory views of males are affected by the opportunity cost of not-working, associated with country income and female wages. Using three different datasets, we find unequivocal evidence that indeed male views on gender discrimination change with income, and in the direction predicted by theory: as market opportunities for

[1] A recent example of a clear identification of how technology, which is associated with development, has been identified at the origin of norms and beliefs on gender roles is Alesina, Guiliano, and Nunn (2011). The authors identify the type of agriculture and the different physical demands it puts on men and women's physical effort as a determinant of beliefs on proper gender roles. In another recent development, Giavazzi, Schiantarelli, and Serafinelli (2010) study the role of institutions, policy, and culture in determining, among other aspects, female labor force participation. Dealing explicitly with the endogeneity of attitudes, these authors find that culture still matters for women's employment rates and for hours worked.

females improve, male views become less discriminatory. Not surprisingly, the percentage of males in favor of discrimination is higher than that of females, but those discriminatory views decrease in a more pronounced way the higher the market income that females can access.

Our model draws on Galor and Weil (1996), who developed a theory of economic development that depends on rising female labor force participation, declining gender wage gaps, and fertility. In this model, capital is a complement to skilled labor so that economic growth increases the opportunity cost of gender discrimination and promotes female market participation. However, as documented in the literature, the declining gender wage gap remains sizable even in advanced economies.[2] We take gender bias in labor market participation as a fact, and suggest that this bias is rooted in intra-household bargaining over the allocation of resources. Alternatively, and of no consequence to our model, bargaining could be over the execution of domestic tasks, including, possibly, child care.[3] As income per capita rises, males have fewer incentives to adopt discriminatory views.

Essential to our analysis is the assumption that the distribution of resources within the household is dependent on the balance of power between male and female, which depends on their relative contribution to family income. In other words, males face a trade-off between total family income and its intra-household allocation. This is the basis for the reluctance of men to grant women equal access to labor markets despite the fact that this hurts total family income to be distributed. For low levels of development (and low overall wages) men forgo market income from their wives' participation in the labor market in exchange for more bargaining power at home.[4] Capital accumulation, and the associated rise in productivity and wages, increases the cost of discrimination against women. Male support for gender discrimination wanes, initiating a positive cycle of greater female participation and higher income.[5]

[2]According to O'Neill (2003), at least 10 percent of the gender wage gap in the U.S. is unaccounted for by differences in schooling, tenure and occupational choice. See also Cavalcanti and Tavares (2008b) for estimates of the extent and cost of gender discrimination across economies.

[3]Doepke and Tertilt (2011) explore the consequences for children of empowering women within the family through resource transfers.

[4]In Becker (1985), the division of labor within the family attributes effort-intensive tasks, such as childcare and household chores, to women, forcing women to spend less effort than men in the market place and self-select into less demanding occupations. Along the same lines, Albanesi and Olivetti (2006) models the division of labor at home as dependent on a utility cost of work that increases in hours spent at home. Under imperfect information about effort, employers may pay women lower wages as they expect them to exert less effort than men at work, further reinforcing the perverse division of labor at home, and promoting gender discrimination. Employers' expectations are, in this case, self-fulfilling. Economic growth improves the return to market work relative to effort at home and helps to break the vicious cycle between few market opportunities and gender discrimination.

[5]Several authors have emphasized technological improvements in home production as key to an increase in female labor force participation. Greenwood, Seshadri, and Yorukoglu (2005) focus on the expansion of time-saving durable goods used in home production,

Our paper focuses on the twin roles of rising female wages and wage discrimination as determined by male attitudes. We build on the previous literature, Fernández (2009) and Doepke and Tertilt (2011), which rationalize shifts from patriarchal regimes to more egalitarian economic and legal regimes. Fernández (2009) suggests that economic development, in its guises of capital accumulation and declining fertility, ultimately leads men to favour legal changes in favour of their daughters, and abandoning their privileged position as husbands in a patriarchal system.[6] The attractiveness of reform in non-monotonic in capital accumulation but inevitably leads to the move to a more egalitarian legal system. In contrast, our model accommodates situations where the rise in female wages with capital accumulation leads to a steady-state with no reform. Doepke and Tertilt (2011) suggest a mechanism whereby men are torn between holding power at home, and promoting their daughters welfare. Financial transfers to their daughters are captured by their sons-in-laws, and this loss becomes more relevant as wealth accumulates, ultimately leading men to commit to a higher level of women rights to benefit their daughters.

An alternative avenue for explaining the endogenous fall of patriarchal systems, which we do not explore here, is the association of economic development with technological improvements that alter the bargaining position of females. Goldin and Katz (2002) suggest the availability of contraceptive methods is such a mechanism, while Akerlof, Yellen, and Katz (1996) and Oreffice (2007) assess the impact of the liberalization of abortion.

The idea that individuals may oppose social changes to their detriment is also present in Olivier, Thoenig, and Verdier (2008) who model cultural identity driven by an international trade equilibrium. We see this model as presenting a story complementary to ours, with some important common points. As in our model, in Olivier, Thoenig, and Verdier (2008) preferences are endogenous and individuals who cling to their culture pay an economic price (in our case, due to discrimination, firms do not hire female laborers at their marginal productivity). However, while in Olivier, Thoenig, and Verdier (2008) attachment to culture derives from a positive externality among the group of agents sharing cultural traits, we see the "cultural equilibrium" as deriving from pure selfish male self-interest. Here, it is economic development and the rising opportunity cost of female time that drives cultural change.

Empirically, several determinants of gender discrimination have been ad-

Goldin and Katz (2002) consider the role of contraceptive methods in women's decisions to join the labor market, and Albanesi and Olivetti (2007) examines the importance of medical improvements in childbearing on female market participation. Cavalcanti and Tavares (2008a) uncover an empirical relationship between the relative cost of household appliances and female participation in a sample of OECD countries. Cardia (2010), on the other hand, shows that improvements in plumbing and sewage led to higher female participation in clerical and sales occupations in the U.S in the 1940-50s, and does not reject that those same technologies may have had an impact in cross-country differences in female labor force participation.

[6]Fernández (2009) supports this claim by showing that states that had lower levels of fertility reformed earlier in the U.S.

vanced in the literature. The relationship between economic development and lower gender discrimination, sometimes intermediated by culture, is part of this debate. In an influential paper, Fernández, Fogli, and Olivetti (2004) assess the role of the intergenerational transmission of values as a determinant of changes in gender bias: men who grew up with working mothers have more progressive attitudes toward female labor force participation and housework.[7] Chiappori and Oreffice (2008) model the impact of technological improvements in birth control on the empowerment of women and on female market participation. Bertocchi (2007) attribute the extension of voting rights to women to a falling gender wage gap, which has reduced the divergence between men and women as to the preferred size and scope of government.[8] Geddes and Lueck (2002) discuss the role of human capital. As the returns to human capital increase, the interest of men is to loosen control and provide incentives for women to invest more in education. The authors support their claim by showing that the cross-state variations in the date at which property rights were granted to women in 19th century U.S. are related to differences in female human capital. All these papers propose and investigate different channels through which female empowerment and lower gender discrimination are achieved.

The paper is organized as follows. Section 2 presents the benchmark model, and Section 3 the empirical investigation. Section 4 concludes.

2 Model

In this section, we develop a model of endogenous labor market discrimination as a function of the preferences of males and income per capita.

2.1 Production Technology

Consider the following production function with three factors of production, physical capital (K), mental labor (L^m) and physical labor (L^p), where mental labor is complementary to physical capital, while physical labor is neither a complement nor a substitute to physical capital, as in Galor and Weil (1996).

$$Y_t = K_t^{\alpha} \left(A_t L_t^m\right)^{1-\alpha} + BA_t L_t^p \tag{1}$$

where $A_t = (1+\mu)^t, B > 0$

[7] Rahim and Tavares (2011) examine the transmission of values from mothers to sons and to daughters through both example and opinion contagion. There is also evidence of causality running from the offspring to the parents. Oswald and Powdthavee (2010) present convincing evidence that having daughters increases the propensity for parents to favor left-wing political parties, and having sons has the reverse effect. Washington (2008) had documented a similar effect of daughters on U.S. congressmen's voting patterns.

[8] A parallel literature examines the consequences for the size of government of the historical extension of voting rights to women. See, for instance, Lott and Kenny (1999), Aidt, Dutta, and Loukoianova (2006), Funk and Gathmann (2006), and Cavalcanti and Tavares (2010).

The returns to the factors of production are then computed as

$$w_t^p = A_t B \quad (2)$$
$$w_t^m = (1-\alpha) A_t k_t^{\alpha} m_t^{-\alpha} \quad (3)$$
$$r_t = \alpha k_t^{\alpha-1} m_t^{1-\alpha} \quad (4)$$

where $k_t = K_t/(A_t L_t^p)$ and $m_t = L_t^m/L_t^p$

As in Galor and Weil (1996), it is assumed that men are endowed with both physical and mental labor while women are endowed with mental labor only. The return to mental labor is increasing in physical capital. Since the wage of physical labor is independent of capital accumulation, for this reason alone, the gender wage gap decreases over time. However, the presence of gender discrimination leads producers to pay women a fraction ϕ_t of the mental wage paid to males, discouraging female labor force participation.

2.2 Preferences

Individuals have an equal probability of being born male or female and they live for three periods. During childhood, an agent is raised by father and mother. During adulthood, which also correspond to the productive years of the agent in terms of both production and fertility, two agents of opposite sex form a couple, make choices regarding labor supply, fertility, and savings. They also decide on the allocation of savings for old-age, when income saved during adulthood is consumed.

Husband and wife have the following utility functions (respectively u_t^H and u_t^W), valuing their own old-age consumption (respectively d_{t+1}^H and d_{t+1}^W) and the number of children (n_t).

$$u_t^H = \ln d_{t+1}^W + \gamma \ln n_t$$
$$u_t^W = \ln d_{t+1}^W + \gamma \ln n_t$$

where $\gamma \in (0,1)$

Household labor supply is given by l_t and as in Greenwood, Seshadri, and Vandenbroucke (2005), children are assumed to be costly in terms of parental time only.

$$n_t = D(2-l_t)^{\theta} \quad (5)$$

where $D > 0$; $\theta > 0$; $l_t \in (0,2)$

We follow a collective approach to the household, along the lines of Chiappori (1988). In this approach, the household is assumed to have a welfare function that is a weighted sum of the husband's and wife's private utility function. In a setting with private goods, as is the case here, this approach is conceptually equivalent to giving each member their share of total family income, according to a sharing rule, in order for them to buy their private goods. There is strong empirical evidence that this sharing rule is dependent on relative income (Browning, Bourguignon, Chiappori, and

Lechene 1994), i.e. the more income the wife brings home, the higher her share of total income. Relative income, in the present model, is dependent, among other things, on the degree of gender wage discrimination and for the sake of simplicity, we assume that the sharing rule is dependent on ϕ only[9]. Thus the household welfare function is as follows:

$$u_t = \eta(\phi_t) \ln d^H_{t+1} + (1 - \eta(\phi_t)) \ln d^W_{t+1} + \gamma \ln n_t \tag{6}$$

where $\eta(\phi_t)$ is the husband's Pareto weight; $\eta'(\cdot) < 0$

2.3 Household maximization

Budget Constraints: We note that since the opportunity cost of raising children is always higher for the husband than for the wife, husbands get involved in raising children only if $l_t < 1$.

$$d^H_{t+1} + d^W_{t+1} \leq \begin{cases} (1 + r_{t+1})(w^p_t + w^m_t) l_t & \text{if } l_t \leq 1 \\ (1 + r_{t+1})(w^p_t + w^m_t + (l_t - 1)\phi_t w^m_t) & \text{if } l_t > 1 \end{cases} \tag{7}$$

Thus, the household problem reduces to choosing its collective labor supply, l_t and the husband's old-age consumption, d^H_{t+1}.

In order to discuss the meaningful problem where women desire to participate in the labor force, we must assume that the utility from children is low enough and/or raising children is costly enough. We analyze the situation where the household chooses a fertility level compatible with the husband devoting all his time endowment to market work so that the margin in terms of labor force participation is associated with females:

Assumption 1. $\gamma\theta \leq 1$

The chosen level of FLP and male old-age consumption are given by

$$l_t = \max\left\{1, 2 - \frac{\gamma\theta}{1 + \gamma\theta}\left(\frac{1 + \phi_t}{\phi_t} + \frac{w^p_t}{\phi_t w^m_t}\right)\right\} \tag{8}$$

$$d^H_{t+1} = (1 + r_{t+1}) \cdot \eta(\phi_t) \cdot s_t \tag{9}$$

$$s_t = \begin{cases} w^p_t + w^m_t & \text{if } l_t = 1 \\ \frac{1}{1+\gamma\theta} \cdot (w^p_t + (1 + \phi_t) w^m_t) & \text{if } l_t > 1 \end{cases} \tag{10}$$

2.4 Endogenous discrimination

At a household level, gender wage discrimination is taken as given. It reduces the amount of time spent by women in the labor force (consequently increasing fertility) and it also increases the share of household savings that go to the husband. At the economy-wide level, men are called upon to choose the

[9]Other formulations in the literature have made the sharing rule dependent on sex ratio (more women means higher bargaining power), the pre-marriage wealth of the spouses, or the level of income each member can attain outside of marriage, which in turn depends on the tax regime and the level of single-parent benefits (see Browning, Chiappori, and Lechene (2006) for a survey).

coefficient ϕ_t. For the sake of simplicity, they are given the choice between two possible values: ϕ_l and ϕ_h, where $\phi_h > \phi_l$. In effect, ϕ_l corresponds to a high level of gender discrimination.

Male utilities in the two possible configurations are

$$u_t^H = \begin{cases} \ln \eta(\phi_l) + \ln(1 + r_{t+1}) + \ln s_t(\phi_l) + \gamma \ln D + \gamma\theta \ln(2 - l_t(\phi_l)) & \text{if } \phi = \phi_l \\ \ln \eta(\phi_h) + \ln(1 + r_{t+1}) + \ln s_t(\phi_h) + \gamma \ln D + \gamma\theta \ln(2 - l_t(\phi_h)) & \text{if } \phi = \phi_h \end{cases}$$

Men benefit from high discrimination as this increases their share of household resources. However, high discrimination is costly in terms of total earnings of the family. When FLP is zero, the cost of discrimination to men is also zero, meaning that they will always choose ϕ_l. We therefore focus on the case where $l_t > 1$. Define $\tilde{u}_t^m$ as the utility difference for men between choosing low discrimination and choosing high discrimination:

$$\tilde{u}_t^H = u_t^H(\phi_h) - u_t^H(\phi_l) \quad = \quad \ln\left(\frac{(1 + (1 + \phi_h)\omega_t)^{1+\gamma\theta}\, \phi_l^{\gamma\theta}\eta_h}{(1 + (1 + \phi_l)\,\omega_t)^{1+\gamma\theta}\phi_h^{\gamma\theta}\eta_l}\right)$$

where $\omega_t = w_t^m / w_t^p$

Note that

$$\frac{\partial \tilde{u}^H}{\partial \omega_t} \quad = \quad \left(\frac{(1 + \gamma\theta)(\phi_h - \phi_l)}{(1 + (1 + \phi_l)\omega_t)(1 + (1 + \phi_h)\omega_t)}\right) > 0$$

Denote the ratio mental wage - physical wage for which men are indifferent between high and low discrimination as $\tilde{\omega}$:

$$\tilde{\omega} = \frac{\left(\frac{\phi_h^{\gamma\theta}\eta_l}{\phi_l^{\gamma\theta}\eta_h}\right)^{1/(1+\gamma\theta)} - 1}{1 + \phi_h - \left(\frac{\phi_h^{\gamma\theta}\eta_l}{\phi_l^{\gamma\theta}\eta_h}\right)^{1/(1+\gamma\theta)}(1 + \phi_l)}$$

2.5 Equilibrium

In the market for mental labor, we have, in equilibrium, that $L_t^m = L_t^p l_t$. Using this equilibrium condition, replacing equations 2 and 3 into 8 yields

$$l(k_t) = \max\left\{1, 2 - \frac{\gamma\theta}{1 + \gamma\theta}\left(\frac{1 + \phi(k_t)}{\phi(k_t)} + \frac{B}{\phi(k_t)(1 - \alpha)k_t^\alpha l(k_t)^{-\alpha}}\right)\right\} \quad (11)$$

where

$$\phi(k_t) = \begin{cases} \phi_l & \text{for } B^{-1}(1 - \alpha)k_t^\alpha l(k_t)^{-\alpha} \leq \tilde{\omega} \\ \phi_h & \text{for } B^{-1}(1 - \alpha)k_t^\alpha l(k_t)^{-\alpha} \geq \tilde{\omega} \end{cases} \quad (12)$$

Proposition 1. *l_t is increasing with k_t. There exists $\tilde{k}$ such that*

$$\phi(k_t) = \begin{cases} \phi_l & \textit{for } k_t \leq \tilde{k} \\ \phi_h & \textit{for } k_t \geq \tilde{k} \end{cases}$$

Proof. See Appendix A □

. In addition, the condition that equilibrates the capital market is

$$K_{t+1} = L_t^p s_t \tag{13}$$

This gives us

$$k_{t+1} = \frac{s_t}{(1+\mu)A_t h_t^\theta D}$$

We identify the value of k_t above which female participation in the labor market is positive as

$$\bar{k} = \left(\frac{B\gamma\theta}{(1-\alpha)(\phi_l - \gamma\theta)}\right)^{1/\alpha}$$

We can show that for $\bar{k} < \tilde{k}$,

$$k_{t+1} = \begin{cases} \frac{B+(1-\alpha)k_t^\alpha}{(1+\mu)D} & \text{if } k_t \leq \bar{k} \\ \frac{\left(\phi_l(1-\alpha)k_t^\alpha l(k_t)^{-\alpha}\right)^\theta \left((1+\phi_l)(1-\alpha)k_t^\alpha l(k_t)^{-\alpha}+B\right)^{1-\theta}}{D(1+\mu)(\gamma\theta)^\theta(1+\gamma\theta)^{1-\theta}} & \text{if } \bar{k} < k_t < \tilde{k} \\ \frac{\left(\phi_h(1-\alpha)k_t^\alpha l(k_t)^{-\alpha}\right)^\theta \left((1+\phi_h)(1-\alpha)k_t^\alpha l(k_t)^{-\alpha}+B\right)^{1-\theta}}{D(1+\mu)(\gamma\theta)^\theta(1+\gamma\theta)^{1-\theta}} & \text{if } k_t > \tilde{k} \end{cases} \tag{14}$$

As detailed above, female participation in the labor market is zero for low levels of capital per head, that is when k_t is below $\bar{k}$. For values of k_t above $\bar{k}$, women face a high level of gender discrimination since the mental wage is relatively low, until further accumulation of $\tilde{k}$ leads to a point at which the economy switches to a low gender discrimination regime. It is possible that $\tilde{k}$ is reached before $\bar{k}$, in which case the dynamics of k_t is given by

$$k_{t+1} = \begin{cases} \frac{B+(1-\alpha)k_t^\alpha}{(1+\mu)D} & \text{if } k_t \leq \bar{k} \\ \frac{\left(\phi_h(1-\alpha)k_t^\alpha l(k_t)^{-\alpha}\right)^\theta \left((1+\phi_h)(1-\alpha)k_t^\alpha l(k_t)^{-\alpha}+B\right)^{1-\theta}}{D(1+\mu)(\gamma\theta)^\theta(1+\gamma\theta)^{1-\theta}} & \text{if } k_t > \bar{k} \end{cases} \tag{15}$$

We can find the condition necessary for $\bar{k} > \tilde{k}$. Using the fact that $l(\tilde{k}) = 1$ for $k_t < \bar{k}$, we have :

$$\frac{\eta_l}{\eta_h} < \left(\frac{1+\gamma\theta\frac{\phi_h}{\phi_l}}{1+\gamma\theta}\right)^{1+\gamma\theta} \left(\frac{\phi_l}{\phi_h}\right)^{\gamma\theta} \tag{16}$$

Figure 1 shows four different configurations depending on condition 16. In the first two at the top, the switch to a low-discrimination regime occurs after women have joined the labor force (i.e. $\bar{k} < \tilde{k}$) and this occurs when men stand to lose significantly from the switch from high discrimination to low discrimination (i.e., η_l/η_h is high).[10] In this case, when women join the labor

[10]Intuitively, a high ratio η_l/η_h implies that there is a big gap in the shares of household income that men can capture in the high discrimination regime as opposed to the low-discrimination regime.

force, they face high discrimination and only later does the regime switch occur. There are two possible scenarios in steady-state: the economy reaches steady-state before the switch to a low-discrimination regime could occur (first graph) or steady-state is reached only after (second graph). This suggests that it is possible for economies to be trapped in a high-discrimination regime, despite having positive female labor force participation.

In the bottom two, the switch to a low-discrimination regime occurs early, at a time when women are not yet participating in the labor force. This occurs when the male share of household income does not vary much from the high discrimination regime to the low discrimination one (i.e., η_l/η_h is low). Again, depending on the production technology, the economy could be trapped in a zero-FLP regime (first graph) or a positive-FLP regime (second graph). We consider these two situations to be less interesting than the previous two as historically the rise in female labor participation has preceded the decline in the gender wage gaps.[11]

Proposition 2. *There exists at least one locally stable positive steady-state equilibrium*

Proof. See Appendix A. □

3 Data

In this section, we test an important implication of our model of endogenous gender discrimination: the greater he economic opportunities available to women, the less discriminatory are male views on gender. Because we cross aggregate date on income and individual opinion data, in one case, and use individual data on two different moments in time, in another case, we believe we have been able to handle the issue of endogeneity appropriately.

At the economy level, higher per capita income should be associated with reductions in male preferences for discrimination. Here we exploit two repeated cross-section (RCS) datasets, namely the World Value Survey (WVS) and the International Social Survey Program (ISSP). The WVS has been conducted every five years since 1985 and we use data from the four last rounds - 1990, 1995, 2000 and 2005 - amounting to around 180 000 observations for 79 different countries. The ISSP data have around 90 000 observations, span three rounds - 2002, 1994, 1988 - for 35 countries.

Second, we conduct an investigation at the household level: our model predicts that if the economic opportunity cost of the wife staying at home is high, her male partner should respond with a higher preference for low discrimination. Here we use the National Longitudinal Survey of Youth 1979, which consists of about 12000 US adults who were successively surveyed since 1979, when aged then between 14 and 22. These adults have been repeatedly surveyed since then and asked, among other things, about

[11] For instance, in the case of the U.S., the gender wage gap started falling in the 1970s while FLP rose substantially from the 1940s on.

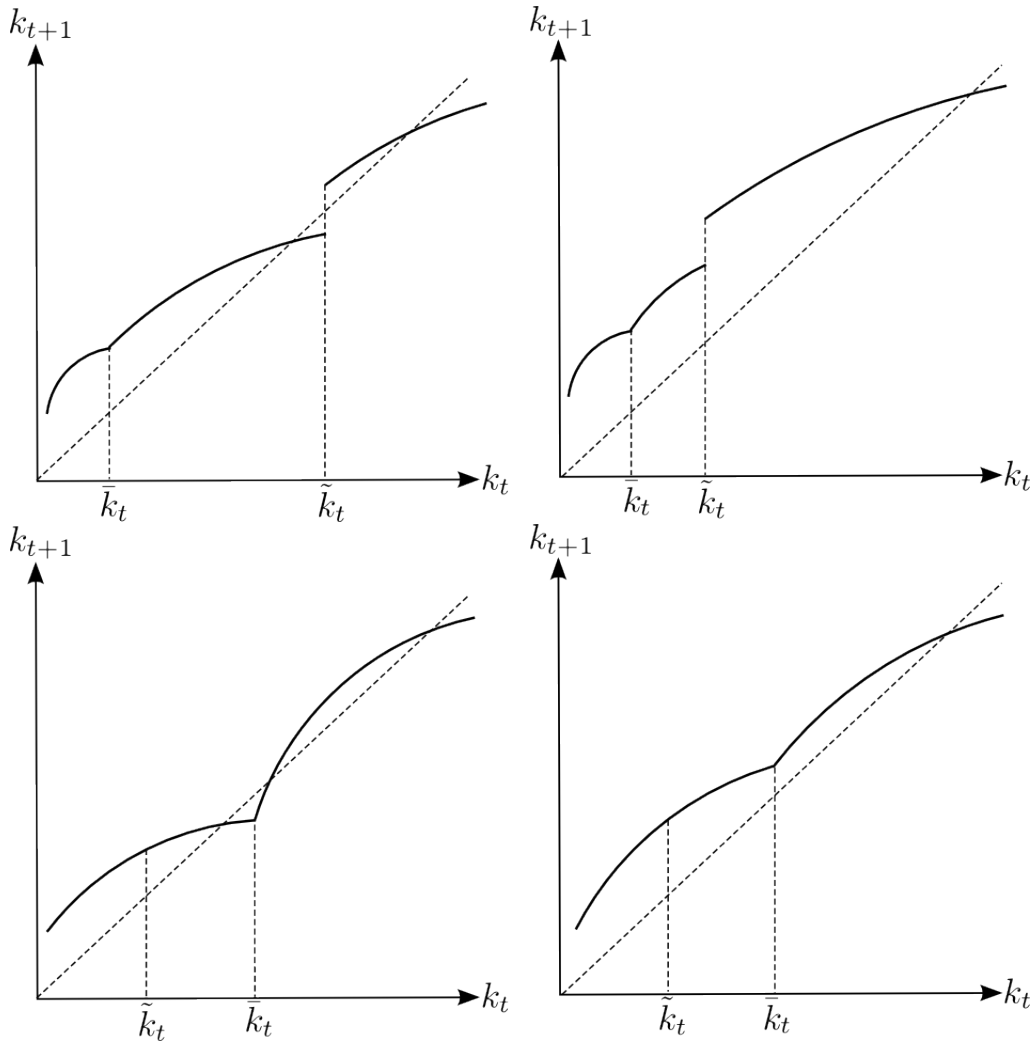

Figure 1: Steady-states: (i) $\tilde{k}_t > \bar{k}_t$, (ii) $\tilde{k}_t < \bar{k}_t$

their views on women's role in the home, in the labor market, and in society in general. Since individuals change over time, namely men marry women with different abilities to earn market income, we are able to determine whether the latter factor is determinant for a change of the male views on discrimination.

3.1 Cross-Country Differences

3.1.1 Methodology

From the WVS and the ISSP datasets, we identify six variables that capture an individual's 'preference for discrimination'.

1. **PRIORITY**: "When jobs are scarce, men should have more right to a job than women". 1 - disagree, 2 - neither, 3 - agree. (Source: WVS)
2. **HOMEKIDS**: "What women really want is home and kids". 1 - strongly disagree, 2 - disagree, 3 - neither, 4 - agree, 5 - strongly agree. (Source: ISSP)
3. **HOUSEWORK**: "Housework satisfies as much as paid work". 1 - strongly disagree, 2 - disagree, 3 - neither, 4 - agree, 5 - strongly agree. (Source: ISSP)
4. **INDEPENDENCE**: "Work is best for women's independence". 1 - strongly agree, 2 - agree, 3 - neither, 4 - disagree, 5 - strongly disagree.(Source: ISSP)
5. **BOTHCONTRIBUTE**: "Both husband and wife should contribute to household income". 1 - strongly agree, 2 - agree, 3 - neither, 4 - disagree, 5 - strongly disagree. (Source: ISSP)
6. **PLACEATHOME**: "Men's job is at work and women's job is in the household". 1 - strongly disagree, 2 - disagree, 3 - neither, 4 - agree, 5 - strongly agree. (Source: ISSP)

We have rescaled all variables so that a higher value represents a higher preference for discrimination.

3.1.2 Probit regressions

In the RCS datasets, we estimate in the first instance the following model

$$Y_i = \beta_0 + \beta_1 M_i + \beta_2 \text{logGDP}_i + \beta_3 M_i * \text{logGDP}_i + \beta_4 X_i' + \beta_5 D_i' + \varepsilon_i \quad (17)$$

where Y_i is the ordered response of individual i to the above questions; M_i is an indicator variable taking a value of 1 if the respondent is male; logGDP is the log of GDP of the country of residence of the respondent; X_i' is a vector of controls that varies according to the chosen specification; D_i is a set of dummy variables.

For variable PRIORITY, the controls variables, X_i consist of the age of the respondent (AGE), his/her marital status (MARRIED), his/her education level (EDUC), the number of children he/she has (CHILD), the size of the town he/she lives in (TOWNSIZE), and his/her reported degree of religiosity (RELIGIOSITY). The set of dummy variables consists of (1) country dummies, i.e., the respondent's country of residence, (2) cultural dummies, i.e., the cultural group to which the country is associated (based on Inglehart-Welzel Cultural Map of the World), and (3) the occupation type of the respondent.

For variables (2) - (6), the control variables consist of the age of the respondent (AGE), his/her marital status (MARRIED), his/her education level (EDUC), and whether he/she lives in urban or rural areas (URBAN).[12]. The set of dummy variables consists of (1) country dummies and (2) religion dummies, i.e., the respondent's religion.

For dependent variables (1) -(6), probit regressions are carried out. From variables (2) - (6), a latent variable is generated from factor analysis and is denoted Index, for which OLS regressions are carried out. We are aware of the fact that clustering in RCS data leads to grossly under-estimated standard errors (see Moulton 1990, Bertrand, Duflo, and Mullainathan 2004, Kézdi 2004). We therefore report "cluster-robust" standard errors that cluster by country and time following the estimator developed by Cameron, Gelbach, and Miller (2010).[13]

Figure 2 shows the inverse relationship between the variables that characterize preference for gender discrimination and log GDP. Controlling for individual-specific characteristics such as education, age, religiosity, number of children and respondent's town size, the columns named "probit" in Tables 1 and 2 confirm this relationship. Additionally, we can see that although men are more discriminatory than women (the negative coefficient on the male dummy), their views converge to those of women (as shown by the negative coefficient on the interaction variable LOGGDP*MALE), which is line with our model. Accounting for potential clustering in the data increased considerably the standard errors, as expected (up to a ten-fold increase in some cases). Nevertheless, all the coefficients remain significant.

The coefficients on the control variables suggest that (i) older people, less educated people, people with more children, people living in smaller towns, and religious people tend to have more discriminatory views. Although not reported here, all regressions have also been carried out without the dummy variables, and the results do not change.

3.1.3 Instrumental Variables

An important criticism is the issue of endogeneity. Attitudes can affect the level of income per capita, as well as the opposite. We produce instrumen-

[12]The control variables are different from those used for PRIORITY, because the variables are from another dataset, namely the ISSP.

[13]The code used for the ordered probit regressions is an adaptation here from Mitchell Petersen's Stata routine that allows for two-way clustering. Code available on request.

tal variables estimates to overcome the issue. Our instrumental variables are the ratio of the price of exports to the price of imports, the ratios of the value of energy exports relative to manufacturing exports, and value of energy imports to manufacturing imports. The first two variables capture positive external shocks to the economy, likely to positively affect income per capita, while the third captures negative income shocks for energy importing countries. Given their specificity and sectoral impact, each of these three variables is unlikely to affect social attitudes so that they can appropriately play the role of instrumental variables.

In Tables 1and 2 we present IV estimates side by side with probit estimates. With the exception of the most basic specification, in Table1, our IV estimates confirm our results that exogenous increases in income lead to a decrease in discriminatory attitudes. Actually, even the size of the coefficients is strikingly similar, though smaller, which is consistent with mild presence of reverse causality. Furthermore, the sign and size of the control variables are not affected by the estimation method, further adding to our confidence in the robustness of our results.

3.1.4 Pseudo panel:

From the RCS data, we construct pseudo-panel data, according to the method proposed by (Deaton 1985). We build our cohorts around four birth-year bands (before 1939, 1940-1954, 1955-1969, after 1970), three education groups (primary education, secondary education, higher education), two gender groups and 80 countries for WVS / 38 countries for ISSP, giving 2560 cohort-year observations for the WVS data and 1216 cohort-year observations for the ISSP data. We run both fixed-effect and random-effect regressions and run the Hausman test to choose between them.

$$Y_{it} = \beta_0 + \beta_1 M_i + \beta_2 \text{logGDP}_{it} + \beta_3 M_i * \text{logGDP}_{it} + \beta_4 X_i' + \varepsilon_i \qquad (18)$$

where Y_i is the average response of cohort i; M_i is an indicator variable taking a value of 1 if the cohort is male; logGDP is the log of GDP of the country of residence of the cohort; X_i' is a vector of time-invariant controls.

From Table 3, we are led to conclude that an increase in GDP leads to a reduction in the "preference for discrimination".

3.1.5 Predicted probabilities

Figure 4(a) shows the predicted probabilities of the respondent agreeing that job priority be given to men when jobs are scarce, conditional on the gender and on the country GDP of the respondents. Both men and women become less discriminatory as GDP increases, but the decline is more significant for men. Figures 4(b) to 4(f) show predicted probabilities from the ISSP variables. Again, men become less discriminatory as GDP increases and the gap between men and women shrinks with GDP.

3.2 Changes in preferences

The National Longitudinal Survey of Youth 1979 enables us to understand how life circumstances influence people's attitude to gender roles. On four occasions (1979, 1982, 1987 and 2004), the same adults (aged between 14 and 22 in 1979) were asked whether they strongly agree, agree, disagree or strongly disagree with the following statements:

1. **PLACE HOME**: "A woman's place is at home, not in the office".
2. **MAN ACHEIVER**: "It is much better for everyone if the man is the achiever outside the home and the woman takes care of the home and family".
3. **HAPPY AT HOME**: "Women are much happier if they stay at home and take care of children".

We regroup responses into two categories, **AGREE** consisting of those who agree and those who strongly agree with the given statement and **DISAGREE** consisting of those who disagree and those who strongly disagree. For each variable, we construct the following variable:

$$W = \begin{cases} 0 & \text{for } Y_{1987} = \text{agree } \& \ Y_{2004} = \text{agree} \\ 1 & \text{for } Y_{1987} = \text{disagree } \& \ Y_{2004} = \text{agree} \\ 2 & \text{for } Y_{1987} = \text{agree } \& \ Y_{2004} = \text{disagree} \\ 3 & \text{for } Y_{1987} = \text{disagree } \& \ Y_{2004} = \text{disagree} \end{cases}$$

where Y_{1987} and Y_{2004} represent variables PLACE HOME, MAN ACHEIVER and HAPPY AT HOME as observed in 1987 and 2004.

Table 4 summarizes the proportion of respondents who fall into the different categories. We restrict our analysis to married men and women and consider potential explanatory variables that can lead respondents to alter or keep their opinion from 1987 to 2004: years of schooling, age, race, region of residence, the number of sons and daughters the individuals has within this period, the ratio of the spouse's income to the respondent's own income, the level of education (EDUC) and the ratio of spouse's income to respondent's own income (RATIOINCOME).

We consider a multinomial probit model. In the top part of Table 5, the comparison category consists of individuals who had discriminatory views in both 1987 and 2004, i.e., Y_{1987} = agree & Y_{2004} = agree. The group of individuals who had discriminatory views in 1987 but who changed their views in 2004, i.e., Y_{1987} = agree & Y_{2004} = disagree, are compared against the comparison group and it can be found that, controlling for race and education, the spouse-respondent income ratio positively influences the probability of falling into the group who "improve" their views of women over time. Put crudely, men married to high-income women tend to improve their attitude toward working women over time. This effect is not present in the case of women.

In the bottom part of Table 5, the comparison category consists of individuals who had non-discriminatory views in both 1987 and 2004, i.e., Y_{1987} = disagree & Y_{2004} = disagree. The group of individuals who had non-discriminatory views in 1987 but who changed their views in 2004, i.e., Y_{1987} = disagree & Y_{2004} = agree are compared against the comparison group and it can be found that, controlling for race and education, the spouse-respondent income ratio negatively influences the probability of falling into the group who "improve" their views of women over time. More simply, men married to high-income women are less likely to become discriminatory over time. Notice that relative spousal income has no significant effect on the views of women on the issues at stake, which supports our view of the role of males in discrimination.

4 Conclusion

Gender discrimination entails high output costs and yet it remains a pervasive phenomenon. In this paper we show that a simple non-unitary model of the household can explain persistent male support for gender wage-discrimination. While in the current literature men extend legal and property rights (and potentially "equal-pay" rights) to women because of the concern they have for their daughters, we identify another channel through which gender discrimination hurts men. We highlight the existence of a trade-off between the benefit of discrimination to men in terms of higher bargaining power within the household and the cost in terms of lost family income and show how costs and benefits change with the level of economic development. Unlike other papers, in which there is a discrete switch from a "no-right" regime to "full-rights" regime, we show, as historical evidence suggests, that the process toward "equal pay" between men and women is a gradual one.

We test and confirm the two key implications of our model, namely that economic development, by enhancing the returns to human capital, reduces male support for discrimination, and that men "adjust" their support for discrimination according to the earning capacity of their spouse. The latter result confirms our claim that discriminatory views are to some extent endogenous to the family.

One limitation of our analysis is the restriction to a representative-agent model, which implies that there is always consensus among men as to which ϕ to choose. A possible extension of the model would be to allow for heterogeneity (possibly along income lines), with the consequence of having some men more in favor of discrimination than others. This would have to be compared with our empirical findings that there is a majority of men favoring discriminatory practices at low levels of development and a turning point where this group becomes a minority at the level of income equivalent to that of a middle-income country today.

A Proofs

A.1 Proposition 1

Using the Implicit Function Theorem in equation 11, we have[14]

$$\frac{\partial l_t}{\partial k_t} = \begin{cases} \frac{B\gamma\alpha k_t^{-1} l_t}{(1+\gamma\theta)\phi_l(1-\alpha)k_t^{\alpha} l_t^{1-\alpha}+B\gamma\alpha} > 0 & \text{if } B^{-1}(1-\alpha)k_t^{\alpha} l_t^{-\alpha} < \tilde{\omega} \\ \frac{B\gamma\alpha k_t^{-1} l_t}{(1+\gamma\theta)\phi_h(1-\alpha)k_t^{\alpha} l_t^{1-\alpha}+B\gamma\alpha} > 0 & \text{if } B^{-1}(1-\alpha)k_t^{\alpha} l_t^{-\alpha} > \tilde{\omega} \end{cases}$$

Using the above and the fact that $\omega_t = B^{-1}(1-\alpha)k_t^{\alpha} l (k_t)^{-\alpha}$, we have

$$\frac{\partial \omega_t}{\partial k_t} = \begin{cases} \frac{\alpha(1+\gamma\theta)\phi_l \omega_t^2 l_t k_t^{-1}}{(1+\gamma\theta)\phi_l \omega_t l_t+\gamma\alpha} > 0 & \text{if } k_t < \tilde{k} \\ \frac{\alpha(1+\gamma\theta)\phi_h \omega_t^2 l_t k_t^{-1}}{(1+\gamma\theta)\phi_h \omega_t l_t+\gamma\alpha} > 0 & \text{if } k_t > \tilde{k} \end{cases}$$

where $\tilde{k} = \left(\frac{B\tilde{\omega} l(\tilde{k})^{\alpha}}{1-\alpha}\right)^{1/\alpha}$

A.2 Proposition 2

1. For $\tilde{k} \leq \bar{k}$, k_{t+1}, as given by equation 15, is continuous.

   - When $k_t < \bar{k}$ we have

$$\begin{aligned} \frac{\partial k_{t+1}}{\partial k_t} &= \frac{(1-\alpha)\alpha \bar{k}_t^{\alpha-1}}{(1+\mu)D} > 0 \\ \frac{\partial^2 k_{t+1}}{\partial k_t^2} &= \frac{-(1-\alpha)^2 \alpha \bar{k}_t^{\alpha-2}}{(1+\mu)D} < 0 \\ \lim_{k_t \to 0} \frac{\partial k_{t+1}}{\partial k_t} &= \lim_{k_t \to 0} \frac{(1-\alpha)\alpha \bar{k}_t^{\alpha-1}}{(1+\mu)D} = \infty \end{aligned}$$

[14] Note that $l(k_t)$ is not differentiable for $B^{-1}(1-\alpha)k_t^{\alpha} l_t^{-\alpha} = \tilde{\omega}$

- When $k_t > \bar{k}$,

$$\begin{aligned}
\frac{\partial k_{t+1}}{\partial k_t} &= \frac{k_{t+1}}{k_t} \cdot \\
&\quad \left(\frac{(1+\gamma\theta)\phi_h(1-\alpha)k_t^{\alpha} l_t^{1-\alpha}}{(1+\gamma\theta)\phi_h(1-\alpha)k_t^{\alpha} l_t^{1-\alpha} + B\gamma\alpha} \right) \cdot \\
&\quad \left(\frac{(1-\theta)\alpha(1+\phi_h)(1-\alpha)k_t^{\alpha} l_t^{-\alpha} + \theta\alpha}{(1+\phi_h)(1-\alpha)k_t^{\alpha} l_t^{-\alpha} + B} \right) \\
&= \frac{\left(\phi_h(1-\alpha)k_t^{\alpha} l_t\right)^{-\alpha)^{\theta}} \left((1+\phi_h)(1-\alpha)k_t^{\alpha} l_t^{-\alpha} + B\right)^{1-\theta}}{D(1+\mu)\left(\gamma\theta\right)^{\theta}(1+\gamma\theta)^{1-\theta}k_t} \cdot \\
&\quad \left(\frac{(1+\gamma\theta)\phi_h(1-\alpha)k_t^{\alpha} l_t^{1-\alpha}}{(1+\gamma\theta)\phi_h(1-\alpha)k_t^{\alpha} l_t^{1-\alpha} + B\gamma\alpha} \right) \cdot \\
&\quad \left(\frac{(1-\theta)\alpha(1+\phi_h)(1-\alpha)k_t^{\alpha} l_t^{-\alpha} + \theta\alpha}{(1+\phi_h)(1-\alpha)k_t^{\alpha} l_t^{-\alpha} + B} \right) > 0 \\
\lim_{k_t \to \infty} \frac{\partial k_{t+1}}{\partial k_t} &= 0
\end{aligned}$$

2. For $\tilde{k} \geq \bar{k}$, k_{t+1}, as given by equation 14, is not continuous.

- When $k_t < \bar{k}$ we have

$$\begin{aligned}
\frac{\partial k_{t+1}}{\partial k_t} &= \frac{(1-\alpha)\alpha\bar{k}_t^{\alpha-1}}{(1+\mu)D} > 0 \\
\frac{\partial^2 k_{t+1}}{\partial k_t^2} &= \frac{-(1-\alpha)^2\alpha\bar{k}_t^{\alpha-2}}{(1+\mu)D} < 0 \\
\lim_{k_t \to 0} \frac{\partial k_{t+1}}{\partial k_t} &= \lim_{k_t \to 0} \frac{(1-\alpha)\alpha\bar{k}_t^{\alpha-1}}{(1+\mu)D} = \infty
\end{aligned}$$

- When $\bar{k} < k_t < \tilde{k}$,

$$\begin{aligned}
\frac{\partial k_{t+1}}{\partial k_t} &= \frac{\left(\phi_l(1-\alpha)k_t^{\alpha} l_t\right)^{-\alpha)^{\theta}} \left((1+\phi_l)(1-\alpha)k_t^{\alpha} l_t^{-\alpha} + B\right)^{1-\theta}}{D(1+\mu)\left(\gamma\theta\right)^{\theta}(1+\gamma\theta)^{1-\theta}k_t} \cdot \\
&\quad \left(\frac{(1+\gamma\theta)\phi_l(1-\alpha)k_t^{\alpha} l_t^{1-\alpha}}{(1+\gamma\theta)\phi_l(1-\alpha)k_t^{\alpha} l_t^{1-\alpha} + B\gamma\alpha} \right) \cdot \\
&\quad \left(\frac{(1-\theta)\alpha(1+\phi_l)(1-\alpha)k_t^{\alpha} l_t^{-\alpha} + \theta\alpha}{(1+\phi_l)(1-\alpha)k_t^{\alpha} l_t^{-\alpha} + B} \right) > 0
\end{aligned}$$

- When $k_t > \tilde{k}$,

$$\begin{aligned}\frac{\partial k_{t+1}}{\partial k_t} &= \frac{\left(\phi_h(1-\alpha)k_t^{\alpha}l_t\right)^{-\alpha}\left((1+\phi_h)(1-\alpha)k_t^{\alpha}l_t^{-\alpha}+B\right)^{1-\theta}}{D(1+\mu)\left(\gamma\theta\right)^{\theta}(1+\gamma\theta)^{1-\theta}k_t}\cdot \\ &\quad \left(\frac{(1+\gamma\theta)\phi_h(1-\alpha)k_t^{\alpha}l_t^{1-\alpha}}{(1+\gamma\theta)\phi_h(1-\alpha)k_t^{\alpha}l_t^{1-\alpha}+B\gamma\alpha}\right)\cdot \\ &\quad \left(\frac{(1-\theta)\alpha(1+\phi_h)(1-\alpha)k_t^{\alpha}l_t^{-\alpha}+\theta\alpha}{(1+\phi_h)(1-\alpha)k_t^{\alpha}l_t^{-\alpha}+B}\right) > 0 \\ \lim_{k_t\to\infty}\frac{\partial k_{t+1}}{\partial k_t} &= 0\end{aligned}$$

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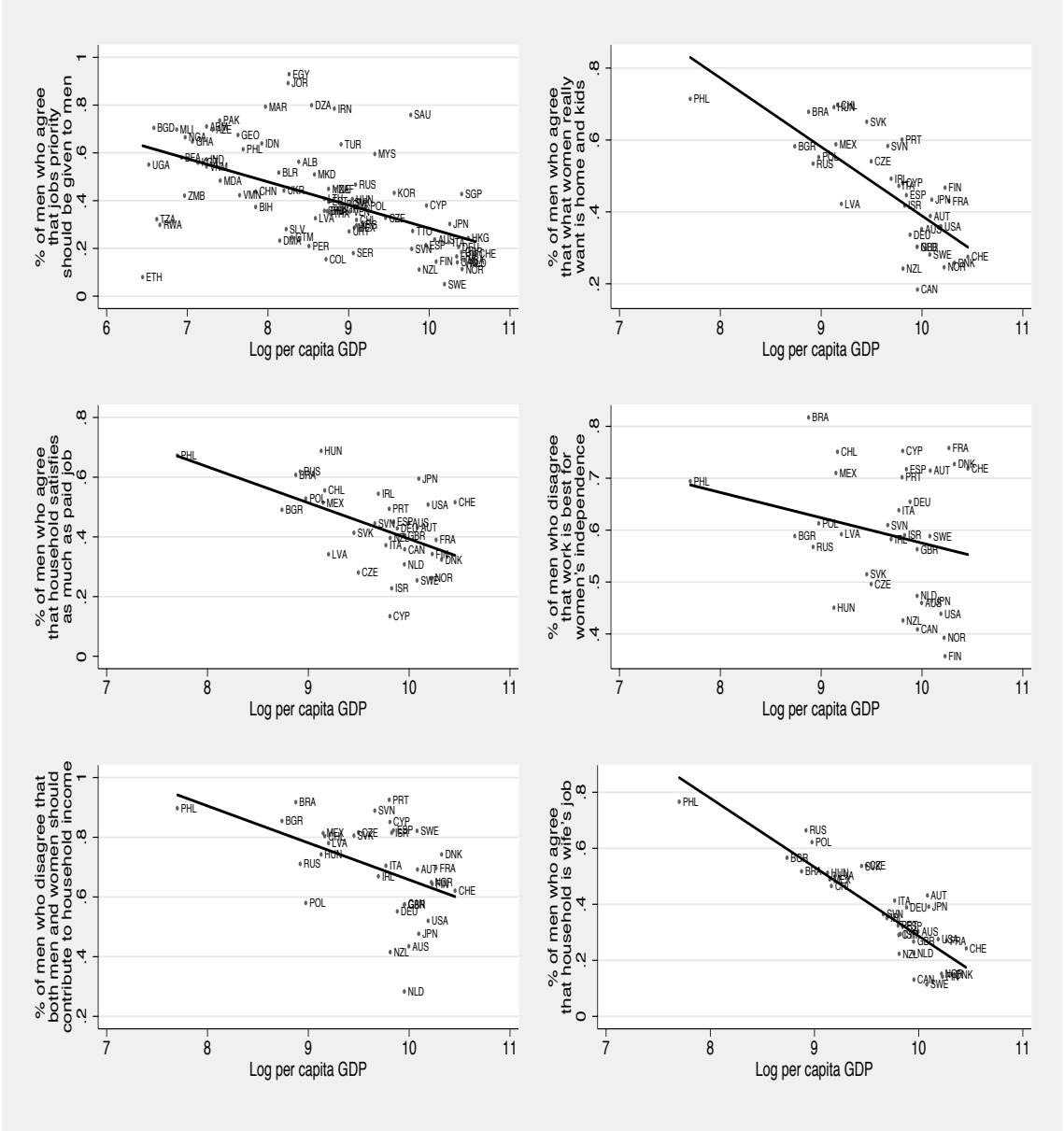


Figure 2: Male preference for discrimination and GDP

	PRIORITY (probit)	PRIORITY (IV)	PRIORITY (probit)	PRIORITY (IV)	PRIORITY (probit)	PRIORITY (IV)
Main Effects:						
LOGGDP	-0.237**	0.251	-0.209**	-0.221*	-0.234**	-0.198
	(0.10)	(0.11)	(0.09)	(0.1)	(0.11)	(0.14)
MALE			0.933***	1.022***	1.005***	0.990***
			(0.12)	(0.20)	(0.1045)	(0.20)
LOGGDP*MALE			-0.072***	-0.072**	-0.076***	-0.073**
			(0.0153)	(0.03)	(0.0126)	(0.03)
Controls:						
MARRIED					-0.016***	-0.016***
					(0.0059)	
AGE					0.005***	0.005***
					(0.0008)	(0.001)
EDUC					-0.060***	-0.060***
					(0.0062)	(0.01)
CHILD					0.010***	0.010***
					(0.0039)	(0.005)
TOWNSIZE					-0.016*	-0.016**
					(0.0070)	(0.02)
RELIGIOSITY					0.092***	0.092***
					(0.0107)	(0.03)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
Cultural dummies	Yes	Yes	Yes	Yes	Yes	Yes
Occupation dummies	Yes	Yes	Yes	Yes	Yes	Yes
LogLikelihood	-141676	-141676	-140448	-140448	-124903	-124903
Obs.	152287	146236	152287	146236	137552	130022

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 1: Ordered probit regressions using four rounds of WVS - 1990, 1995, 2000, 2005 (All respondents). All regressions include a constant. * significance at 10%, ** significance at 5%, *** significance at 1%. Standard errors in parentheses. Standard errors are clustered in country and time dimensions. Instruments used for loggdp are (1) Price Exports / Price Imports (2) Energy Exports / Manufacturing Exports, (3) Energy Imports / Manufacturing Imports.

	HSEWORK (Probit)	HSEWORK (IV)	INDEP (Probit)	INDEP (IV)	BOTHCONTRIB (Probit)	BOTHCONTRIB (IV)
LOGGDP	-0.336***	-0.166***	-0.145***	-0.128***	-0.374***	-0.170***
	(0.0276)	(0.0450)	(0.0279)	(0.0457)	(0.0295)	(0.0396)
MALE	-0.075	-0.078	0.811***	0.255**	0.851***	0.322***
	(0.1555)	(0.1213)	(0.1591)	(0.1157)	(0.1844)	(0.0891)
LOGGDP*MALE	0.017	0.013	-0.072***	-0.021*	-0.076***	-0.028***
	(0.0160)	(0.0124)	(0.0164)	(0.0118)	(0.0189)	(0.0092)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Country effects	Yes	Yes	Yes	Yes	Yes	Yes
Religion effects	Yes	Yes	Yes	Yes	Yes	Yes
N	61793	50530	63032	51653	64116	52217

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

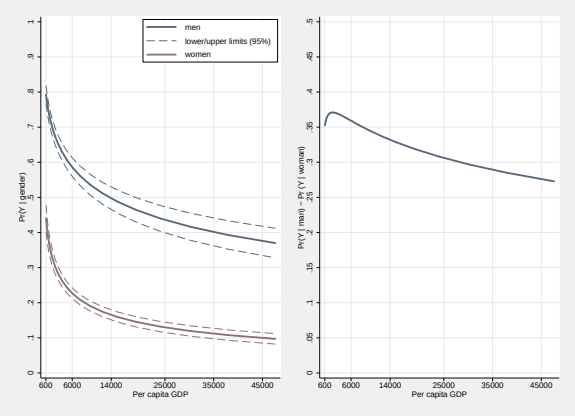
Table 2: Regressions (Ordered Probit for columns HSEWORK, INDEP, BOTHCONTRIB) using three rounds of ISSP - 1988, 1994, 2002. * significance at 10%, ** significance at 5%, *** significance at 1%. Standard errors in parentheses. Standard errors are clustered in country and time dimensions. Instruments used for loggdp are (1) Price Exports / Price Imports (2) Energy Exports / Manufacturing Exports, (3) Energy Imports / Manufacturing Imports.

	PRIORITY	HSEWORK	INDEP	BOTHCONTRIB
LOGGDP	-0.088**	-0.387***	-0.293***	-0.200***
	(0.0399)	(0.0609)	(0.0594)	(0.0516)
MALE		0.000	0.009***	0.015***
		(0.0016)	(0.0015)	(0.0013)
LOGGDP*MALE	-0.031	0.076	0.068	-0.073
	(0.0502)	(0.0862)	(0.0841)	(0.0730)
Controls	Yes	Yes	Yes	Yes
Country effects	Yes	Yes	Yes	Yes
Obs.	4092	1373	1375	1375

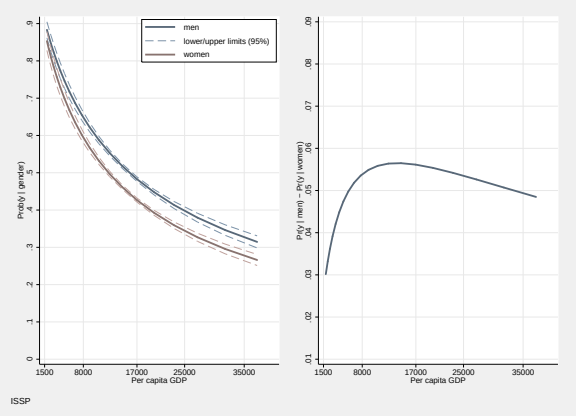
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Fixed Effects (F.E.) and Random Effects (R.E.) regressions using pseudo-panel data. Robust standard errors in parentheses.

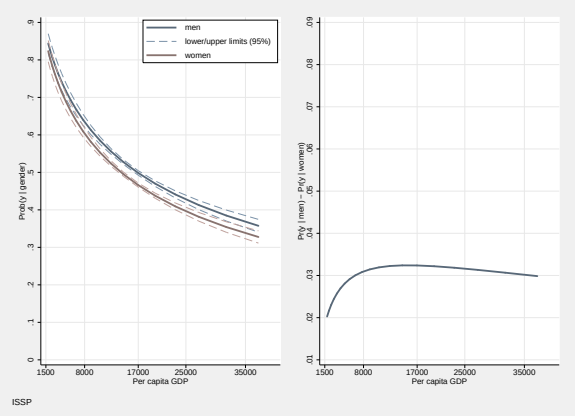
Figure 3: Predicted probabilities by gender



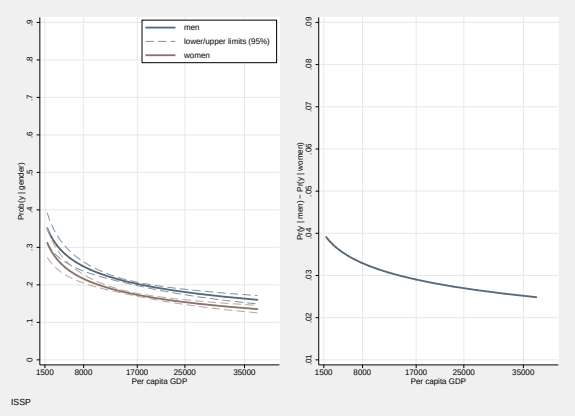
(a) PRIORITY



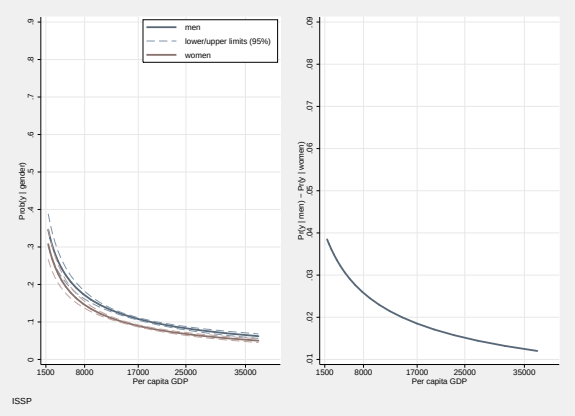
(b) HOMEKIDS



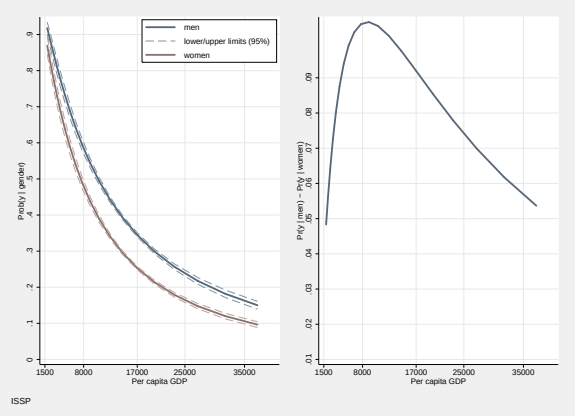
(c) HOUSEWORK



(d) INDEPENDENCE



(e) BOTHCONTRIBUTE



(f) PLACEATHOME

	PLACE HOME		MAN ACHIEVER		HAPPY AT HOME	
1987 → 2004	**Agree**	**Disagree**	**Agree**	**Disagree**	**Agree**	**Disagree**
Agree	256	508	814	1008	859	1060
Disagree	415	5887	964	4153	778	3611

Table 4: Transition from 1987 to 2004

	PLACE HOME Men	PLACE HOME Women	MAN ACHIEVER Men	MAN ACHIEVER Women	HAPPY AT HOME Men	HAPPY AT HOME Women
AGREE to DISAGREE (Comparison group: AGREE - AGREE)						
Age	-0.228	-0.180	-0.037	-0.005	-0.078	-0.066
	(0.16)	(0.23)	(0.08)	(0.10)	(0.07)	(0.11)
Years of Schooling	0.105	0.450***	0.096*	0.141	0.102	0.240***
	(0.11)	(0.16)	(0.06)	(0.09)	(0.06)	(0.08)
Ratio spouse to respondent income	0.700*	0.456*	-0.078	-0.052	0.088	0.054
	(0.38)	(0.27)	(0.16)	(0.13)	(0.14)	(0.14)
Number of sons	0.052	0.044	-0.148	0.202	0.097	-0.158
	(0.27)	(0.42)	(0.17)	(0.24)	(0.15)	(0.28)
Number of daughters	-0.074	0.160	0.072	-0.003	-0.183	-0.333
	(0.38)	(0.49)	(0.18)	(0.21)	(0.19)	(0.23)
Race dummies	Yes	Yes	Yes	Yes	Yes	Yes
Region dummies	Yes	Yes	Yes	Yes	Yes	Yes
PseudoR-square	0.097	0.105	0.071	0.095	0.052	0.086
LogLikelihood	-321	-181	-660	-399	-638	-396
Obs.	674	454	657	441	590	417
DISAGREE to AGREE (Comparison group: DISAGREE - DISAGREE)						
Age	0.231*	0.188	0.074	0.070	0.141**	-0.006
	(0.14)	(0.22)	(0.07)	(0.08)	(0.07)	(0.09)
Years of Schooling	-0.248***	-0.547***	-0.225***	-0.369***	-0.149***	-0.388***
	(0.09)	(0.15)	(0.05)	(0.08)	(0.06)	(0.08)
Ratio spouse to respondent income	-0.928***	-0.313	-0.402***	0.135	-0.397***	-0.068
	(0.34)	(0.25)	(0.14)	(0.12)	(0.13)	(0.14)
Number of sons	0.071	0.184	-0.065	0.090	0.030	0.055
	(0.21)	(0.38)	(0.13)	(0.21)	(0.14)	(0.23)
Number of daughters	-0.070	0.118	-0.140	0.286	0.018	0.246
	(0.31)	(0.43)	(0.15)	(0.18)	(0.16)	(0.19)
Race dummies	Yes	Yes	Yes	Yes	Yes	Yes
Region dummies	Yes	Yes	Yes	Yes	Yes	Yes
PseudoR-square	0.097	0.105	0.071	0.095	0.052	0.086
LogLikelihood	-321	-181	-660	-399	-638	-396
Obs.	674	454	657	441	590	417

Table 5: Multinomial logit using NLSY79 (Married men and women). Robust standard deviation in parenthesis.