Patriarchal Norms, Religion and Female Labor Supply: Evidence from Turkey

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Abstract

Despite significant structural and social change, the share of women working or seeking jobs in Turkey has declined. This paper focuses on the role of social conservatism as a constraint for women's labor force participation using 2008 Demographic and Health Survey data. In analyzing labor supply model, I incorporate cultural constraints, specifically the sexual division of labor in the household and broader gender ideology into the analysis. I find that both patriarchal norms and religiosity are negatively associated with female labor force participation, and that the impact of patriarchal norms is statistically significant after controlling for endogeneity.

Keywords: labor force participation, gender, development, Turkey

JEL Classification Codes: J16, J21, O12

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1. Introduction

Turkey has experienced important structural and social changes that would be expected to facilitate women's participation in market work. Social attitudes toward working women at a job have changed in recent years[1]; women are becoming more educated[2]; they are getting married at a later age[3]; and fertility rates are declining[4]. Despite these factors, the participation of women in the labor force –that is, working or seeking jobs including informal sector jobs—has fallen from more than 50% in the 1960s to 30% today according to household labor force survey statistics.

In the development economics literature, a U-shaped trend in the female labor force participation rate during the course of development is widely accepted as a stylized fact (Goldin, 1994; Schultz, 1990; Psarchapoulos & Tzannatos, 1989; Durand 1975). As the economy moves from an agrarian society in which housework and fieldwork can be handled together to an industrial and service-based formal economy where housework and market work are spatially separated, female labor force participation rates initially fall. But in the later stages of development, as fertility declines and the education level of women increases, their labor force participation rises. The trend in Turkey does not conform to this picture: Turkish women are still at the bottom of

[1] According to 2012 International Social Survey Program data on family and changing gender roles, 67.66 percent of the respondents in Turkey agreed with the statement "both man and woman should contribute to the household income" (30.31 percent strongly agreed, 37.35 percent agreed). Only 6.48 percent of the respondents strongly disagreed and 7.53 percent disagreed with the statement. Although the majority of respondents (61%) thinks that "a job is all right, but what most women really want is a home and children", women are still expected to work at a job and contribute to the family income (ISSP, 2012). The comparable nationally representative data is not available for earlier dates, but smaller scale field studies show that the expectation of women's contribution to the family income was not as widespread. For example, only 16.8% of the respondents defined women's primary role as contributing to the family budget in a study from 1993 (Acar, 1993). The primary role of women is still defined as full-time homemaking (42 percent of the respondents) by 2012; however at the same time there is rising acceptance that sole breadwinner family model is not sustainable under current economic conditions (Carkoglu & Kalaycioglu, 2013).

[2] The adult female literacy rates increased from 45.1% in 1975 to 91.6% in 2012. The primary, secondary, and tertiary gross enrollment rates increased from 89.9%, 14.6%, and 1.9% in 1971 to 99.3%, 83.7%, and 63.7% in 2012 respectively. The data is extracted from World Bank WDI Database on 1/9/2015.

[3] The mean age at first marriage was 19.9 in 2008 in comparison to 18.8 in 1998 among ever-married women in Turkey according to Demographic and Health Surveys (TDHS, 1998; 2008). According to Household Labor Force Surveys, the mean age at first marriage for women increased from 22.2 in 2001 to 23.6 in 2013.

[4] Women in Turkey were expected to give birth to 1.9 children on average in 2008, compared to 5.7 children in 1968 and 3 children in 1988 (World Bank, 2009).

the 'U' despite significant demographic and structural changes in the economy.

Urbanization and agricultural labor shedding are seen as the main factors that result in low female labor force participation in Turkey (World Bank, 2009). One of every three women has become an internal migrant. Most women who have migrated from rural to urban areas formerly worked in the agricultural sector, but many withdrew from the labor force once they moved to the urban areas. Plausible explanations for their withdrawal include lack of affordable childcare, cultural pressures, and lack of necessary skills and education. In surveys, women also cite getting married and not finding the proper jobs as reasons for withdrawal from the labor market (Turkey Demographic and Health Survey, 2003; 2008). Women's reservation wage remains high in the cities given the lack of subsidized childcare and subsidized pre-school education. Moreover, the Turkish labor market has a significant informal sector in which women are disproportionately concentrated.[5] Informal sector does not offer decent pay and working conditions, which further discourages women to enter or stay in the labor force.

Many researchers focusing on the supply-side determinants of women's participation emphasized the importance of education (Kasnakoglu & Dayioglu, 1997; Ozar & Gunluk-Senesen 1998; Tansel, 2002; Baslevent & Onaran 2003; Gündüz-Hoşgör & Smits, 2008; Taymaz, 2010). Others have argued that education cannot explain the Turkish female employment puzzle on its own, since men with similar levels of education do not have low participation rates, instead maintaining that low levels of participation can be better explained by social and cultural values (Guner & Uysal, 2014; Göksel, 2013; Gündüz-Hoşgör & Smits, 2006; Uraz, Aran, Husamoglu, Sanalmis, & Capar, 2010). One important cultural factor influencing

[5] Informal employment rate was 52 percent for women and 30.2 percent for men in 2013 according to Household Labor Force Statistics.

women's labor force participation decision in Turkey may be patriarchy. Turkey is part of what Caldwell (1982) calls the "patriarchal belt" and Kandiyoti (1988) calls the "belt of classic patriarchy" which includes North Africa, the Muslim Middle East (including Turkey and Iran), and South and East Asia (Pakistan, Afghanistan, Northern India and rural China) (Moghadam, 1992). In these countries, there is typically a strict separation between the male and female domains, with men operating in the public sphere and women more restricted to the private sphere. Modernization has challenged this strict public-private division in Turkey, but there are strong remnants of patriarchal relations in society.

This paper focuses on the role of social conservatism as a constraint for women's labor force participation in Turkey. I examine the correlates of women's labor force participation using probit regression analysis with a recent dataset compiled by Hacettepe University based on Turkey Demographic and Health Surveys (TDHS). Different from household labor force survey data, this dataset allows me to analyze social and cultural determinants together with the traditional supply side variables. I include an "internalization of patriarchal norms" variable created out of women's answers to nine opinion questions. These questions capture different aspects of patriarchal relations such as gender division of labor in the household, women's mobility in the public domain, decision making in the family, and control over sexuality. Moreover, I incorporate the role of religion using a religiosity variable based on the frequency of religious practices of women, prayer (*namaz*) and fasting.

This analysis reveals the correlation between gender-role attitudes and labor force participation, however it does not allow me to make causal claims due to potential endogeneity. It is possible that the direction of causation runs from labor force participation to more progressive attitudes, rather than vice versa. Or the direction of causality may run in both directions: from having

progressive values to participation in the labor market, and from working outside the home to being less mindful of patriarchal norms. To address the potential problem of endogeneity, I use instrumental variable estimation. The literature on the long-run effects of family structure on gender-role attitudes emphasizes the importance of pre-adult socialization in the formation of these attitudes. I therefore use a scale of family conservatism as an instrument for patriarchal norms.

2. Historical and Comparative Trends in Women's Labor Force Participation

Women's labor force participation rates in Turkey are very low in comparison to the countries at a similar development stage. Moreover it has been steadily declining since the 1960s, which makes it a matter of concern not only for academics but also for international organizations as a deteriorating development indicator. Women's labor force participation rate declined from 65.4 % in 1960, to 26% in 2009 and showed a slight increase to 30.8 % in 2013. The increase after 2009 global economic crisis was explained by the added worker effect[6] and the incentives given to women's employment.[7] In fact, there has been a decline in men's labor force participation, from 93.6% in 1960 to 70.5% in 2009, during the same period as well (Table 1). By 2013, men's participation rate (71.5%) is still in line with averages in the OECD (69.45%) and Europe and Central Asia (67.3%). However, women's participation rate (30.8%) is substantially lower than the averages in OECD (50.91%) and Europe and Central Asia (50.35%).[8]

[Table 1 about here]

[6] The added worker effect refers to an increase in the labor supply of married women when their husbands become unemployed.
[7] Government introduced an incentive scheme with the 2008 Employment Package that gave social security contribution cuts to employers if they hired women and young men. For the impact of these incentives on women's employment, see Ayhan (2013), Uysal (2013), and Dildar (2015).
[8] World Development Indicators, extracted from World Bank WDI Database on 4/28/2013.

Turkey has the lowest female labor force participation rate among OECD countries in 2010 (Figure 1). However it has one of the lowest GDP per capita among OECD countries as well. A comparison among the income group that Turkey belongs to is more revealing. When we look at the upper-middle income countries, Turkey emerges again as an outlier with a few Middle Eastern countries (Figure 2). It is clear that there are other social, cultural, and institutional determinants of women's labor force participation in addition to the per capita GDP level. OECD or upper-middle income country groups may not be the right benchmark to make comparisons for Turkey. Since Turkey shares some socio-cultural properties of Middle Eastern countries, the MENA region is a better benchmark. When we look at the female labor force participation in Middle Eastern and African countries, Turkey seems to be conforming to the trends in the region (Figure 3). It is not an outlier among MENA countries. However, even in the MENA region the average female labor force participation rate has been increasing in the recent two decades, from 18.2 % in 1990 to 21.14 % in 2011.[9] On the contrary, Turkey has seen a declining trend during the same period, from 34.5% in 1990 to 28.1% in 2011.

[Figure 1 about here]

[Figure 2 about here]

[Figure 3 about here]

The level of education is frequently cited as the main determinant of women's labor force participation in the literature. It is argued that women lack the necessary qualifications to participate in the labor force. Statistics show that this claim is valid only to a certain extent in Turkey. Table 2 presents the labor force participation rates for men and women by education level. It shows that literacy or having a degree below high school does not significantly increase

[9] World Development Indicators, extracted from World Bank WDI Database on 4/28/2013.

women's participation while the highest participation rates for men are seen among primary school graduates. In other words, returns to education differ for men and women. Explaining women's low participation rates by lack of education does not reflect the whole reality.

[Table 2 about here]

Moreover, Turkey did not go through the feminization of the labor force that was seen in many developing countries even though it has adopted an export-oriented growth strategy since 1980. There is an extensive literature on export-oriented industrialization and feminization of employment (Standing, 1989; Seguino, 2000; Joekes, 1999; Wood, 1991; Elson, 1995; Elson & Pearson, 1981; Cagatay & Ozler, 1995; Cagatay & Berik, 1990; Caraway, 2006). The countries in the Middle East and North Africa (MENA) region have not shown a trend of feminization despite the fact that they have gone through similar liberalization experiences as other developing countries. Ilkkaracan (2012) argues that Turkey has conformed to some of the macroeconomic trends of the MENA region that negatively affected women's employment in export sectors such as prolonged import substitution industrialization, relatively high wages based on male-breadwinner norms, and overvalued exchange rates.

3. Literature Survey

3.1 Women's Labor Force Participation in the MENA Region

As an alternative to the conventional labor supply model, economists undertaking gender and development research have identified a number of constraints on women's employment. Moghadam (1998) summarizes these constraints as: (i) household inequalities and traditional sexual division of labor; (ii) the broad gender ideology operating in the society; (iii) the legal system and regulatory framework (iv) social and physical infrastructure; and (v) economic

conditions and policies. Some of these constraints are argued to affect MENA countries more strongly because of the cultural restrictions that Islam imposes on women.

Researchers such as Moghadam (2001) and Karshenas (2001) challenged the view that cultural and religious factors are the main reasons why the feminization of the labor force has not occurred in the MENA region. They point out the importance of industrialization and growth strategies in shaping the context in which cultural and social factors affect women's labor force participation patterns. For instance, Karshenas (2001) explains women's low participation rates by the relatively high manufacturing wages that made the absence of women in paid work affordable by households. Similarly Moghadam (2005) argues that during the oil boom the supply of and demand for female labor remained limited in the region. At the same time, non-economic factors such as the role of state and the cultural understanding of male-female roles reinforced a "patriarchal gender contract". When these countries started to liberalize their economies, they found themselves in an uncompetitive position mainly due to the lack of an educated labor force, especially among women.

In other words, these researchers claim that the patriarchal gender contract in MENA countries has been enforced by the oil economy, relatively high wages for men, and their particular industrialization strategies (import substitution industrialization in most of the MENA countries). Therefore they predicted that economic liberalization and structural change in the post-oil boom era were going to challenge the patriarchal contract and increase women's employment. For instance, in 1998 by looking at the experience of Turkey, the earliest adopter of structural adjustment policies in the region, Moghadam concluded that: "There is much evidence to suggest that Turkey has hit the bottom of the U curve" (1998, p. 92). Contrary to the optimism among

feminist researchers, Turkey has still not seen the upward trend in in female labor force participation.

3.2 Empirical Studies of Labor Force Participation of Women in Turkey

Tansel (2002) examines the U-shaped impact of economic development on female labor force participation in Turkey using times series (for the years 1980, 1985, and 1990) and cross-provincial data. She finds evidence for the U-shaped relationship for total female labor force participation (with a negative coefficient for provincial per capita GDP and positive coefficient for its square). However, for non-agricultural labor force participation, the U-shaped relationship is not observed. The employment share of the agriculture sector has a positive effect while the employment share of industry has a negative effect on female labor force participation.

Cagatay & Berik (1990) analyze whether employment in manufacturing industry is feminized through the shift from import substitution industrialization to export-led growth using establishment level data for two years, 1966 and 1982. Their main finding is that under both industrialization strategies the technological characteristics and export orientation of the establishments explain the gender composition of manufacturing employment. Under both regimes, women's employment is higher if the industry is more export-oriented, more labor intensive and has a high ratio of non-skilled to skilled production workers. The shift to an export-led growth strategy was not accompanied by a feminization of manufacturing employment. Onaran & Baslevent (2004) also analyze the impact of the export-oriented growth strategy on female labor force participation using two rounds of household labor force survey data, 1988 and 1994. They find that long-term growth at the province level has a significant positive impact on participation of both single and married women. However, export-orientation has a positive

impact on the participation of only young and single women. It does not have any influence on married women's participation. This finding is important because it suggests that there are other barriers to the labor force participation of married women.

Taymaz (2009) examines the labor force participation probabilities of men and women in urban areas using a multinomial logistic model. He finds that education improves the participation of women in all types of employment but that the strongest effect is seen in service employment. Household size has a negative impact on the employment of the female parent and a positive impact on the employment of the male parent. He interprets this result as "parent women are either more productive in home production than men, or there are cultural factors that consider home production as feminine activity, so that parent women tend to stay at home in larger households" (p. 13). His main explanation for the low urban female participation is the "under-participation trap". The under-participation trap refers to a situation where imperfectly competitive labor markets lead to under-participation in the labor force (Booth & Coles 2007). Urban women with high homemaking productivity prefer to stay at home because they do not receive the full return to their investment in education if they engage in market work. Being in the under-participation trap, these women further lower their ex-ante investment in education because it is not useful for home production. In terms of policy implications, this analysis suggests that changing the relative prices of market versus home products could partially overcome the under-participation trap. Therefore, Taymaz proposes to subsidize labor market participation of women with state-provided childcare support as a solution. A World Bank study also explains the low participation rates of poorly educated women in urban areas using the idea of the under-participation trap. Urban women with low levels of education are more likely to work in the informal sector. Wages offered by the informal sector are usually lower than what

women would have to pay to hire someone else for housework and childcare. Therefore the labor supply of women who would have a chance to be employed only in the informal sector is likely to be low. Consequently, low wages and returns to education cause families to under-invest in the education of girls (World Bank, 2009).

Dayioglu & Kirdar (2011) examine the labor supply behavior of women using cohort analysis. Controlling for age and time effects they find that younger cohorts of women are more likely to participate in the labor market than older cohorts in urban areas. But it is not clear what drives these results: changing attitudes toward the labor market or the changing composition of the female workforce? When they control for education, they find that participation rates are either stagnant or falling.[10] They conclude that the favorable development in women's participation rates (participation increasing in each younger cohort) mainly stems from compositional shifts towards a more educated workforce who have higher participation rates in urban areas.

Using a Marxist-feminist analytical framework, another group of researchers emphasizes the interactions between two parallel systems, capitalism and patriarchy, and explains the gendered outcomes in Turkish labor market with the inability of the capitalist growth process to undermine patriarchy. For instance, Toksoz (2011) argues that during the import-substituting phase of Turkey's development trajectory, the articulation between patriarchy and capitalism was realized through the exclusion of women from the labor market. Relatively high wages made it possible for male household heads to provide for the family alone and that women could afford to stay at home.

[10] Specifically, when they look at cohort effects for women with less than primary education, they do not find any significant variation among participation rates of older and younger cohorts. For women with primary education, younger cohorts have significantly higher participation rates than the older cohorts. The opposite trend is observed for women with high school education and higher education. Among the high school graduates, the probability of labor force participation decreases for successive cohorts of women. Younger cohorts are also found to have a lower likelihood of participation among women with higher education.

Ilkkaracan (2012) presents a multi-layered analysis based on the interaction between economic growth strategies and the male-breadwinner family under different industrialization strategies. The import-substitution industrialization period (1950-80) and "family wages" reinforced the patriarchal contract and conservative family-oriented care regime[11] based on the male breadwinner model. There was a rise in female employment under the export-oriented industrialization era starting from 1980, however the feminization was weak in comparison to other countries. In the first half of the 1980s, real wages declined but then started to rise again in the beginning of 1990s. Karshenas interprets this quick recovery in the wages despite the neo-liberal policies as the resistance of the patriarchal family to market pressures in Turkey (Ilkkaracan 2012, Karshenas 2001).[12] The financial liberalization of 1990s brought unstable growth and weak labor demand conditions. Moreover, the economy was characterized by jobless growth after the financial crisis of 2001. In other words, weak demand conditions led to the institutionalization of family-based care regime and patriarchal contract to such an extent that marriage and motherhood became constraints independent from demand conditions, which she calls an adverse path dependency (Ilkkaracan, 2012).

As Ilkkaracan states, the care regime in Turkey is dominantly family-oriented based on the patriarchal male breadwinner model. The dual career model supported by institutional care provision is only seen among the university graduates. For example, among the women working at a job and living with a child under age five, only 4.2 percent benefited from institutional care and only 4.3 percent purchased the care services from market using servants or babysitters in

[11] Feminist economists developed care regimes analysis building on the welfare regimes analysis of Esping-Anderson (1990). It is argued that all welfare regimes have a "caring regime"(Lewis, 1992; Sainsburry, 1994; and Jenson, 1997). Three types of care regimes are identified: liberal/market-based, conservative/state supported family-based, and social democrat/public service-based (Razavi, 2007; Ilkkaracan, 2010). The care regime in MENA is predominantly the second type, conservative family-based.

[12] An alternative explanation for rising real wages in the beginning of 1990s in Turkey is democratic transition from military rule (Taymaz, Voyvoda & Yilmaz 2014).

2003. These numbers increased to 6.1 and 5 percent respectively in 2008. The care for the small children is provided by the mother herself (38.7 %, 35.3%), mother-in-law (20.1%, 23.7%), older female children (12.2%, 7.5%), and other relatives among the family (6.4%, 4.9%). It is very rare (2.4%, 2.5%) that small children are taken care by fathers (TDHS, 2003; 2008).

Although everywhere men are usually considered as the primary breadwinner, seeing women's work as optional is more common in MENA. World Value Surveys give an idea about the prevalence of the perception that women take away men's jobs in the case of scarcity rather than being entitled to those jobs. If we compare Turkey with other middle-income countries such as Brazil or Mexico, first we see that the male-breadwinner model is more accepted (Figure 4). The percentages of people agreeing with the statement "When jobs are scarce, men should have more right to a job than women" are higher. Second, while we observe a decline in the acceptance in most other countries, it has increased in Turkey from 49.8 to 59.4 percent from first wave to the fifth wave of the surveys. The growth process in other countries might have eroded the male breadwinner model more successfully. However, we also notice that Turkey had higher acceptance of male breadwinner model than other countries even during the first wave of the surveys.

Moreover, Ilkkaracan (2010) argues that the cultural constraint in Turkey does not affect women's labor market outcomes by excluding them from the public sphere but that it reinforces the gender ideology that defines women's primary role as being good wives and mothers. The significant discrepancies in labor force participation of married versus single women with similar levels of education support this argument. In other words, the lack of family-work reconciliation policies together with gender ideology restricts women's mobility. Empirical studies on the mobility patterns in Turkish labor market also show that low labor force attachment is an

important problem for married women. Tansel & Kan (2012) show that women have higher probability of leaving the labor market independent from their initial jobs (formal or informal sector). Analyzing job-to-job transitions, Tasci (2009) shows that marriage lowers the probability of switching jobs for women. In a case study from Izmir, Eryar & Tekguc (2014) find that gender determines different mobility patterns and being married raises the likelihood of women's transition from a job to non-employment. In this paper, building on Ilkkaracan's (2010; 2012) framework, I incorporate gender ideology in to the analysis of female labor supply in Turkey. In an attempt to quantify the impact of traditional gender roles attitudes on women's preferences, I include a scale of "internalization of patriarchal norms" based on opinion questions from a unique dataset.

Several cross-country studies use Islam as a proxy for patriarchal culture (Tazannatos 1999; Lincove 2008; Boone 1996). Braunstein (2014) criticizes this approach by obscuring the role of patriarchy "as a system of male advantage" that constrains economic development. She argues that "it is not that certain countries or societies are closely wed to their (extremist) religious beliefs that they are willing to pay high economic costs to maintain them, but rather that patriarchal systems benefit the few at the expense of the many" through "patriarchal rent-seeking" (2014, p. 59). I follow a similar approach and focus on the patriarchal norms created and maintained by male dominance separately than the impact of religion. Although I do not attribute distinctively strong gender inequitable attitudes to Islam, I believe religious practice on a personal level might be associated with more traditional attitudes. Therefore I include religiosity as a potential determinant of female labor supply as well.

My paper is part of a growing body of literature that attempts to incorporate culture as a determinant of women's labor force participation in Turkey. Gündüz-Hosgör & Smits (2008)

find that women who are more strongly controlled by their families, as indicated by the fact that brides money was paid at their weddings or that they have only a religious marriage, have a higher probability of being housewives. Göksel (2013) finds that the conservatism variable has a negative effect on women's participation decision in urban areas and a positive effect in rural areas. Her analysis is unique because she uses husband's conservatism as a determinant of the wife's labor market decision. Uraz, et al. (2010) shows that proxies used for traditional family values[13] do not have a significant coefficient in the overall sample but they have a negative effect in the urban sample.

However, these studies suffer from a major drawback: they are not able to make a causal claim about the role of culture on female labor force participation because of potential problems of endogeneity. I address this issue with an instrumental variable estimation, and show that internalizing patriarchal norms has a negative impact on labor force participation decision. Additionally, I am using a new dataset (the 2008 round of Demographic and Health Surveys), which has more information about women's opinions on various aspects of patriarchal culture. I am better able to capture the extent which women internalized patriarchal values.

Guner & Uysal's (2014) work is closest to this study in examining the causal relationship between culture and female labor force participation. Using the epidemiological approach for domestic migration, they focus on only migrant women's labor market behavior. They also use the 2008 Demographic and Health Survey dataset, but limit their analysis to migrant women living in urban areas (1759 observations out of 7405 ever-married women in the dataset).[14] They

[13] Three dummy variables indicating whether (1) or not (0) "marriage was arranged by the family, "brides money was paid" and "woman has a male dominant view of the world"

[14] The original draft of this paper, "Determinants of Female Labor Force Participation in Turkey: Is Social Conservatism an Important Constraint?" was written and presented at the Eastern Economic Association Conference

use female employment rates in 1970 in the migrant's province of origin as a proxy for cultural values of migrant women. They find that female employment rates in the province of origin around the time the migrants were born have a positive impact on female migrants' labor supply behavior. In the epidemiological approach, ideally the previous generation's attitude towards women's work such as the working status of the mother is used to deal with endogeneity, but that information is not available in the dataset. The major problem with making a causal claim about the role of culture based on Guner and Uysal's method is that all women who were born in the same province are assumed to have the same attitude towards women's work outside the home. I estimate the causal impact of patriarchal norms on labor supply with an individual level instrument, using the rich information about women's gender-role attitudes and their family background in the dataset. Moreover, while culture refers to attitudes towards women's paid work outside the home in their analysis, attitudes towards paid work in my analysis is only one among nine aspects of patriarchal culture internalized by women.

This paper makes three important contributions. First, I address the potential problem of endogeneity with an instrumental variable estimation strategy in analyzing the effects of patriarchy on female labor force participation. Second, I use a new dataset containing unique information about patriarchal values. The third contribution of my paper is that I include religion as an important determinant of women's labor force participation.[15] Religion can be a very important obstacle to women's work outside of the home in Turkey because of at least two direct reasons. First, practicing prayer (*namaz*) five times a day is practically impossible with a regular

in May 2013 and in a workshop organized by Gender, Macroeconomics and International Economics Working Group (GEM-IWG) in July 2013, prior to Guner and Uysal's working paper.

[15] Goksel (2013) includes husband's religiosity but not women's own religiosity as a determinant of women's labor supply. Guner and Uysal's paper includes a proxy for religiosity. It is based on electoral votes in the 1973 elections in women's province of origin. Similar to their proxy for culture, it is a province level variable lacking individual level variation. My religiosity variable is based on individual religious practice while theirs is based on electoral success of conservative parties in women's province of origin.

job outside of the home. Second, wearing a headscarf was banned in public institutions such as schools and hospitals until very recently (in 2008). Women who have strong religious beliefs would find it very difficult to reconcile their religious practices with a working life.

4. Empirical Analysis

4.1 Data and Methodology

In order to determine the correlates of labor force participation, I use data from the 2008 Demographic and Health Survey. The Turkey Demographic and Health Survey, 2008 (TDHS-2008) is a nationally representative survey of 10,525 households and 7,405 ever-married women age 15-49. I use the ever-married women module for my analysis. It provides data on women's health, education, fertility, migration history, husband's income and education, household wealth and employment. Moreover, different from household labor force survey data, TDHS-2008 has various opinion questions that provide information about cultural and social values of the women interviewed. Hence, it allows me to analyze social and cultural determinants together with traditional supply-side variables such as age, education, or number of children.

I estimate the following probit regression model for urban and rural samples separately:

$$L_i^* = \beta_0 + \beta_1 Patriarchy_i + \beta_2 Religiosity_i + \beta_3 X_i + \mu + \varepsilon_i \quad (1)$$

Where labor force participation (L_i)[16] is a dummy variable:

$$L_i = \begin{cases} = 1 \; if \; L_i^* > 1 \\ = 0 \; if \; L_i^* <= 0 \end{cases}$$

[16] Labor force participation is defined as: "currently working" and "currently looking for a job if not working".

X_i is a vector of individual and household characteristics (including age, years of schooling, number of children under age five, migration, mother's education, household size, household wealth quintile[17], and husband's schooling), μ represents region dummies and ε_i is an error term.

The variable of *number of children under age five* should be thought of as a constraint for women's mobility based on the sexual division of labor in the household. *Household size* might affect labor force participation either negatively through higher need for household care or positively through need for more income. *Husbands' schooling* is included as a proxy for husbands' conservatism to account for the restrictions they might impose on women. Marital status is not included in the regressions because the vast majority of the women in my sample (ever-married women) are currently married.[18] *Mother's education* is found to be positively associated with non-traditional gender role attitudes in the literature[19]; therefore it is included.

$Religiosity_i$ is a weighted index of intensity of religious practices, prayer (*namaz*) and fast.[20] The majority of the women in the sample reported that they fasted regularly but prayed irregularly (Table B2 in Appendix B). I constructed a weighted religiosity index that puts more weight on

[17] *Wealth Quintile* is a dummy variable that categorizes household wealth in five wealth quintiles. The wealth quintiles are constructed using the Filmer-Pritchett asset index in the DHS surveys. The asset index was already constructed in the raw TDHS dataset using the durable goods in the household and some other characteristics of the household. Specifically, the wealth index was constructed using the information about dwelling and household characteristics (source of drinking water, sanitation facilities, type of flooring material etc.) and access to consumer goods and services (weather the respondent's household owns the following assets/services: fridge, gas/electric oven, microwave oven, blender/mixer, dishwasher, washing machine, iron, vacuum cleaner, air-conditioner, cellphone, computer/laptop, internet, plasma-TV (LCD), cable-TV, satellite antenna, DVD-player, camera, car, taxi/mini-bus, tractor).

[18] Among 7405 women, 7042 of them are currently married, the remaining 363 are "living with a man". This might include co-habiting single couples and couples who have only religious marriages.

[19] More highly educated mothers, whether or not employed outside the home, hold less traditional gender role attitudes and transmit them to their children (Powell and Steelman 1982, Tallichet and Willits 1986, Kiecolt and Acock 1988).

[20] An earlier version of this paper included wearing headscarf in the religiosity index. However, this is problematic because of the ban against headscarf in universities and public institutions. Although the government lifted the ban in 2008, it is argued and there is some anecdotal evidence that private sector discriminates against women wearing headscarf (Cindoglu 2011). Since any negative correlation between headscarf and probability of employment can also be attributed to discrimination rather than reflecting women's labor market preferences, headscarf is taken out of the index. I'm thankful to an anonymous referee for making this point.

less common measure of religious expression (regular praying) and less weight on more common practices (irregular praying and regular fasting).[21] A higher index number is associated with higher religiosity. $Patriarchy_i$ measures the internalization of patriarchal norms by women based on their responses to various statements. They were asked if they agree with the following statements.

- Men should also do the housework like cooking, washing, ironing, and cleaning
- A married woman should work outside the home if she wants to
- A woman may go anywhere she wants without her husband's permission
- Women should be more involved in politics
- The important decisions in the family should be made only by men of the family
- A woman shouldn't argue with her husband even if she disagrees with him
- Men are wiser
- Women should be virgins when they get married
- It is better to educate a son than a daughter

Taking the arithmetic average of these nine opinion dummies creates the patriarchy scale.[22] The higher scale numbers are associated with stronger internalization of patriarchal norms. Some of these questions capture universal aspects of patriarchy such as gendered division of labor while

[21] I use the following weights: $\frac{(1-\mu_i)}{\sum_j(1-\mu_j)}$, μ_i is the mean religiosity variable i. All religiosity variables used in the index are dummy variables taking 0 or 1. See Appendix A for the coding. I followed Gulesci & Meyersson (2014)'s approach of weighting for the religiosity index. I choose this method to avoid assigning random weights to irregular practices.

[22] See Appendix A for coding.

some others are more widespread in the MENA region such as control over sexuality. Table B1 and B2 in the Appendix B provide descriptive statistics in the form of cross tabulations.[23]

Table 3 presents the main reasons for not working. The main three reasons expressed by women for not working are childcare, being a housewife, and husband/family's disapproval in both urban and rural areas. It is interesting to note that there is positive correlation between internalization of patriarchal norms and self-reported status of being a "housewife", the lack of partner/family consent and "do not want/need to work" answers.[24] The negative coefficient between childcare as the main reason and patriarchy suggests that women with less patriarchal values are more likely to report childcare as the main obstacle. This makes sense because in the absence of work-family reconciliation policies, childcare is a concrete obstacle almost independent from women's values except the fertility preferences.

[Table 3 about here]

In TDHS-2008, there is a question about reasons for quitting a job. The data shows that 27 percent of women quit their jobs when they get married. Table 4 presents the percentage distribution of women "who worked for at least 6 months after age 12 and were not working at the time of the survey" according to main reason for quitting and age. Marriage is the main reason for quitting a job for each age group and pregnancy is cited as the second main reason. As expected, leaving the labor market after marriage is more common among young women (56.6 % for the 15-19 age group). In other words, survey data provide further evidence that gender

[23] Table B1 presents percentages of women participating in the labor force according to their age, education, presence of small children in the house, husbands' education, household wealth, and geographical region. Table B2 shows percentages of women in the labor force according to their views on patriarchal norms and religiosity.
[24] Correlations of the reported main reason with patriarchy and religiosity can be found in Table B3 in Appendix B.

ideology that defines women's primary roles as being good wives and mothers exclude women from the labor market.

[Table 4 about here]

4.2 Probit Regression Results

The average marginal effects from the probit regression specified above are shown in Table 5. As expected, education is an important correlate of the labor force participation of urban women. An additional year of schooling increases the probability of being in the labor force by 3.6 percent for urban women and by 6.7 percent for rural women. Having children under the age of five has the expected negative effect. One additional child under age of five decreases the labor force participation probability of urban women by 7.4 percent. It has a smaller effect in rural areas, 3.2 percent. In both urban and rural sub-samples, increased wealth quintiles are associated with less labor force participation among women. For instance, a woman in the highest wealth quintile in urban areas is 14.6 percent less likely to be working in comparison to a woman in the lowest quintile. This might suggest that women in wealthier households can afford not to work.

One interesting result is that the patriarchy and religiosity variables are not significant in the rural sample, while they are both significant in the urban sample. This is understandable because in rural areas women work mostly as unpaid family workers under the control of their husbands or family. The changes in predicted probabilities from minimum to maximum values of patriarchy and religiosity scales are -0.167 and -0.06.[25] In other words, the probability of being in the labor force is 16.7 percent lower for a woman who completely internalizes the patriarchal norms (a woman who answers all nine survey questions in a conservative way) in comparison to

[25] Not presented in the table, calculated with Long and Freese's *prchange* command in STATA.

a progressive woman (a woman who answers all nine survey questions in a progressive way) in the urban areas. Religiosity has a weaker impact. A woman who regularly practices *namaz* and fasts is 6 percent less likely to be in the labor force in comparison to a woman who does not fast or pray at all. To give an economic meaning to these results, a complete internalization of patriarchal norms has a slightly bigger impact (16.7%) than having two children under age five (14.8%) in the urban areas. Practicing *namaz* and fasting regularly has a slightly lower impact (6%) than having one small child (7.4%) or not practicing religion exerts a similar magnitude of positive impact with two additional years of schooling (7.1%)

[Table 5 about here]

Differences in local labor markets and institutions affect the labor force participation decision. To control for the labor market differences across regions, besides the region dummies, I include three different variables in the regressions: share of services in total employment, female unemployment rate and export performance by NUTS2 regions (26 regions). Share of service employment is expected to positively affect women's labor force participation because service jobs tend to be physically less demanding and more "respectable" for women than the typical industry jobs (Goldin, 1995). Female unemployment rate is expected to have a negative effect. Higher export orientation is expected to positively affect female labor force participation.[26] Introducing demand-side control variables does not change the results; patriarchy and religiosity are still significant in the urban sample (Specification 2).

[26] I use two alternative measures of export orientation; only the results with export share of major sectors that employ women (ISIC Rev 2, 15,16,17 and 18) are reported in the Table 5. See Appendix A for discussion and definition of the export orientation variables.

I interpret these preliminary results with caution because correlation does not prove causation. For example, it is possible that the direction of causation runs from labor force participation to more progressive attitudes, rather than vice versa. That is, women may become less conservative once they start to engage in paid work outside of the house. Therefore, I estimate the causal impact of patriarchal norms on labor force participation using instrumental variable estimation. Since patriarchy is significant only in urban areas, I conduct the instrumental variable analysis only for the urban sample. Religiosity is also endogenous but I do not attempt to establish causality for religion in this paper and only focus on the internalization of patriarchal norms.

4.3 Instrumental Variable Estimation and Possible Channels of Causation from Patriarchy to Lower Female Labor Force Participation

The literature on the long-run effects of family structure on gender-role attitudes emphasizes the importance of pre-adult socialization in the formation of these attitudes (Powell & Steelman, 1982; Tallichet & Willits, 1986; Kiecolt & Acock, 1988). Therefore, I use a scale of family conservatism as an instrument for patriarchal norms. I construct the family conservatism variable using six survey questions. It is a scale variable created out of following dummy variables:

- If there is a blood relationship among woman's mother and father
- If the mother is illiterate
- If the father is illiterate
- If there is a blood relationship among her and her husband
- If she has attended Quran course during her childhood
- If she uses headscarf

Turkey has a high rate of consanguineous marriage, especially cousin marriages (21.2 percent in 2011[27]). The preference for this traditional form of marital union in the family can be seen as a sign of having a conservative social environment. The Department of Religious Affairs offers Quran courses to children during the summer months. Since the participation in these courses happens before the age of consent, families usually make the decision for the children, sometimes by motivating them and sometimes by force. The decision to use a headscarf is more complicated. According to Islamic rules, girls should start to use a headscarf when they start puberty. Many women make the decision in their early adolescence years, although there are exceptions. Families play a role in the decision making process, sometimes by forcing girls and sometimes by presenting it as the only socially acceptable way of having a public life. Recent ethnographic research provides anecdotal evidence that the habit of wearing headscarf is related to family background (Dildar, 2015). The family conservatism variable is constructed by taking the average of these six dummy variables. Higher values are associated with a more conservative family.

The presence of a direct effect of an instrumental variable on the outcome is a potential problem in any instrumental variable analysis, and could introduce bias (Angrist & Krueger, 2001). Families might be directly intervening in women's labor market participation decisions. The correlation between family conservatism and labor force participation is quite low at -0.0907. Moreover, the low correlation between family conservatism and the lack of family/partner consent as the main reason not to work (0.0529) gives evidence that families are not directly affecting women's labor market decisions. This is consistent with the traditional patriarchal culture as well. In Turkey, families restrict women until they get married. However, once they

[27] Youth in Statistics, TURKSTAT (2011).

are married the natal family would have less say over their decisions, transferring "the responsibility" for the woman, so to speak, to her husband or husband's family. Therefore, evidence supports the argument that family conservatism is a valid instrument.

After accounting for potential endogeneity, the next step is to investigate the possible channels of causation from internalization of patriarchal norms to lower labor force participation. There is substantial evidence that by shaping cultural norms and behaviors, formal religious institutions have an impact on the rigidity of gender roles and attitudes (Inglehart & Norris, 2003). Using World Value Surveys data, Seguino (2011) finds that religiosity is positively associated with gender inequitable attitudes. In other words, the direction of causality may run from religiosity to patriarchal norms and then to lower labor force participation. In this paper, I argue that patriarchal norms have a separate negative impact on female labor force participation. The correlation between my patriarchy and religiosity variables is 0.1371. It is difficult to precisely identify the direction of causality with the available data, however dividing the sample based on mean religiosity can reveal the relative importance of patriarchal norms for religious versus non-religious women. If the negative impact of patriarchy disappears among less religious women, it can be argued that the causal relationship between patriarchy and labor force participation is driven by religion.

Besides the direct impact, patriarchal norms can affect labor force participation through fertility and education decisions as well. Women with a more traditional mindset may value family more and start a family earlier than others. In other words, internalization of patriarchal norms can affect women's age at first marriage, age at first birth and fertility rate all of which are expected to negatively affect labor force participation. The correlation between fertility (number of living children) and patriarchy is 0.2360. The correlation between fertility preferences (ideal number of

children) and patriarchy is 0.0997. Although determining causality is complicated, the negative association between fertility and female labor force participation is well established in the literature (Bloom, Canning, Fink, & Finlay, 2007). In this paper fertility is not my main variable of interest, therefore I only investigate how the impact of patriarchy changes for women who have different fertility preferences by splitting the sample.

Another channel through which patriarchy can effect women's labor force participation is education. Similar to the fertility preferences, women who have a traditional mindset may not value education and have a preference for family formation instead of having an individual career. Moreover, families play an important role in girls' schooling decisions. My instrument, family conservatism, might be directly affecting women's years of schooling. Based on the results of field research conducted in Ankara, Dildar (2015) shows that for about fifty percent of women interviewed, the schooling decision was taken by their families, mostly by their fathers. Fathers' decisions, on the other hand, to a large extent were shaped by cultural beliefs, concerns about family honor and attempts to monitor daughters. Nationally conducted studies analyzing gender inequalities in education also point out similar problems. Parent education, which can be thought of as a proxy for cultural values, is found to be an important determinant of girls' schooling decision in many studies (Duman, 2010; Tansel, 2002; Rankin & Aytac, 2006). The correlation between years of schooling and patriarchy is -0.4022 while the correlation between years of schooling and family conservatism is -0.4951. To see if patriarchy has a separate effect on labor force participation, I divide the sample according to education levels. If the negative effect of patriarchy on labor force participation disappears among highly educated women, we can argue that patriarchal norms lower participation mostly through their impact on schooling decisions.

4.4 Instrumental Variable Estimation Results

Table 6 shows the summary statistics for the variables used in instrumental variable estimations. The labor force participation rate in the urban sample is 31 percent, while non-agricultural labor force participation[28] is 26 percent. The average year of schooling is 6.2 and the mean age is 34.2. The mean patriarchy, religiosity and family conservatism scales are 0.34, 0.49, and 0.39 respectively. The correlation between patriarchy and family conservatism is 0.2898, not as low as to indicate a problem of a weak instrument. With an F statistic of 41.11 (larger than the rule of thumb value of 10), family conservatism passes the weak instrument test.[29]

[Table 6 about here]

Table 7 presents IV-probit estimates of the impact of patriarchal norms on labor force participation and non-agricultural labor force participation. According to instrumental variable estimation results (specification 1), a 10 percent increase in the patriarchy scale is associated with a decrease of 0.095 in the probability of labor force participation and a decrease of 0.09 in the probability of non-agricultural labor force participation. The signs and marginal effects of other control variables are, to a large extent, similar in probit and IV-probit regression results. The instrumental variable estimation results show that an extra year of schooling increases the probability of labor force participation of a woman by 2.4 percent while an additional child under

[28] Non-agricultural labor force participation rate includes women working in services and industry plus the ones looking for jobs. There were 326 women in urban areas looking for jobs at the time of survey but they were not asked weather they were seeking jobs in agricultural versus non-agricultural sectors. In other words, this variable is an approximation to the standard definition of non-agricultural labor force participation rate and it is expected to slightly overestimate the actual rate.

[29] It is possible to do various diagnostics and tests for weak instruments after linear estimation. Although I use a nonlinear estimation technique with *IV-probit*, I report the diagnostics for linear probability model using *ivregress*:

Variable	R^2	Adjusted R^2	Partial R^2	Robust F (1,5309)	Prob > F
Patriarchy	0.2031	0.1992	0.0077	41.1056	0.0000

The first stage in *ivprobit* is identical to the first stage of *ivregress;* both give a t-statistics of 6.41 for family conservatism.

age five decreases the probability by 6 percent. Addition of regional control variables (specification 2) does not change the results significantly.

[Table 7 about here]

Dividing the sample based on mean religiosity shows that patriarchal norms have a negative impact on labor force participation for both sub-samples (Table 8). The impact on labor force participation is bigger for women who have higher than average religiosity scores, suggesting that religiosity contributes to the internalization of patriarchal norms. However, for non-agricultural labor force participation patriarchal norms seem to matter more than religiosity because the impact of patriarchy is bigger among less religious women. In other words, there is evidence that patriarchy is a separate channel than religion in reducing female labor supply in Turkey.

[Table 8 about here]

To investigate the impact of patriarchy on women with different fertility preferences, I divided the sample according to the ideal number of children. Table 9 presents the regression results. The impact of patriarchy is negative but not significant for women who said zero or one child is ideal. The patriarchy becomes significant for the group who has preference for two children and it exerts the strongest impact on women who have a preference for three or four children. The results for five or more children are not meaningful probably because of the sample size (only 248 observations).[30]

[Table 9 about here]

[30] When I split the sample based on number of living children instead of ideal number of children, I got different results. Interestingly, patriarchy affected the women who have zero or one child most.

I analyze the impact of patriarchal norms on labor force participation for different education groups separately to see if the negative impact still persists among highly educated women. Table 10 presents the regression results for sub-samples divided by completed level of education.

[Table 10 about here]

For women without formal education, internalization of patriarchal norms does not lower labor force participation. On the contrary, I find a positive significant effect. This might be related to the occupations they get. Based on a survival motive, these women might be working at the jobs no one else want. In that case, labor force participation is not a choice but necessity. Unpaid family worker is the main category of employment for women without education (Table B4 in the Appendix B presents women's job status according to education level in the urban sample). These women might be working at small ateliers and local shops owned by family in the urban settings. Patriarchal norms are usually not obstacle for women's work under these conditions; on the contrary women might be encouraged to work since there is full-time monitoring during the work hours and workplaces are usually close to their homes. The second biggest category is "working for her own irregularly" which I believe is mostly piecework from home. For this group of women, patriarchal norms might have led to lack of formal education or family conservatism might have deprived them from getting education. But later in their life, they might need to work and get jobs that do not require formal education. For secondary and higher education categories, I find a significant negative effect. Especially the high negative coefficient of patriarchy among women with higher education proves that patriarchal norms can affect labor force participation even if there is not a problem of insufficient education.

5. Discussion

This paper brings into attention the role of two additional factors, patriarchal norms and religiosity, in explaining female labor force participation puzzle of Turkey using cross-sectional data. It suggests that Turkey's divergence from the trends in upper-middle income countries might be explained by a combination of factors including lower levels of education, lack of work-family reconciliation policies and affordable childcare services, and a more patriarchal culture. Further cross-country research is necessary to make a causal claim about the relative power of patriarchy in relation to other institutional barriers in creating this divergence. The dynamic part of the puzzle, the declining trend in female labor force participation rates during the last fifty years, is explained by rapid structural transformation and urbanization (Figures B1 and B2 in the Appendix B). For various reasons, women who work as unpaid family workers in the rural areas withdraw from the labor force once they migrate to the cities. The lack of decent job opportunities for low skilled, poorly educated women plays an important role in this withdrawal. Women with less than high school degree prefer to stay at home knowing that they would have to spend most of their income on private care if they take up low quality, informal jobs. In other words, the available jobs usually do not offer higher wages than their reservation wage that is pulled up mainly by the cost of private care. The patriarchal norms defining women's primary role as a caregiver contribute to the formation of these preferences. When there is not a satisfactory material reward from paid work, women might prefer the comfort of being "the mistress of their own house" and the emotional relief of taking care of their own children over the potential benefits of having a job and social life.

Moreover, statistics from the World Value Surveys data for Turkey reveals that there is a rise in traditional values in the last three decades. For example, the importance of family in people's lives has increased since 1990 (Table B5). The importance of religion has increased in the same period. The view that "a woman has to have children to be fulfilled" has become more accepted. The approval rate for female-headed households, on the other hand, has decreased. The public support for gender discrimination in the labor market has increased. In other words, patriarchal norms and religiosity do not only explain why female labor force participation in Turkey is lower than other upper-middle income countries but they might also be partially responsible for the declining trends in Turkey. These trends also provide evidence for Ilkkaracan's adverse path dependency argument. Given the lack of demand-side challenge to patriarchal male breadwinner family model, the existing care regime and worsening labor market conditions further strengthen gendered roles and patriarchal culture.

6. Conclusion

My econometric analysis confirms the findings of the previous literature with regard to the positive impact of education and the negative impact of childcare obligations on the labor force participation of women. Both of these effects are stronger for urban women. I find that in both rural and urban areas, women are less likely to work as the wealth status of the household increases. The effect is again stronger among urban women. This suggests that women tend to participate in the labor force only when the household needs a second wage earner. Otherwise, they stay at home.

To the best of my knowledge, this study is the first one that establishes a negative relationship between women's religious practice and labor force participation in Turkey. I find a strong negative association in urban areas. This finding is important in the light of the social

transformation that Turkey has undergone during the last decade under the Justice and Development Party rule. Pursuing an Islam-inspired social conservative agenda, the Justice and Development Party intervened in the secular structure of the country in various ways, especially transforming the education system. Religion has increasingly become a more important aspect of daily life. This transformation should be expected to influence women's labor force participation negatively in the future as well.

Another important finding is the negative association between patriarchal values and labor force participation. It is not surprising to find that conservative values become an obstacle in urban areas rather than rural because in rural areas women work mostly as unpaid family workers under the control of their husband/family. However, this finding presents a serious challenge for increasing urban women's labor force participation because it suggests that urbanization does not automatically weaken the effect of conservatism.

Moreover, this study makes a contribution to the literature by establishing a causal relationship between patriarchal norms and women' labor force participation. In addition to developing a preference against paid employment outside the home, internalization of patriarchal norms can lower women's labor force participation by increasing fertility or reducing years of schooling. I find that the impact of patriarchy is stronger for women who have higher fertility preferences, which might suggest that the causal impact is driven by higher fertility. Among the different educational backgrounds, patriarchal norms exert the highest impact on higher school graduates. In other words, they can be a barrier on labor force participation of even highly educated women suggesting that there is a separate causal relationship between internalization of patriarchal norms and lack of labor force participation.

However, it is important to note that even if a negative causal relationship is identified, one should not take these values as exogenous and constant. Many other case studies from all over the world show that in the presence of demand for women's labor or in the presence of a need for survival, women find ways of reconciling their conservative values with working outside the home. It is a fruitful ground for further research to analyze changes in women's labor market behavior as a response to positive demand shocks, while accounting for their value systems.

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Tables and Figures

Table 1

Labor Force Participation Rates by Gender, 1960—20013

Labor Force Participation Rate by Gender		
Year	**Men**	**Women**
Census of Population		
1960	93.6	65.4
1965	91.8	56.6
1970	79.5	50.3
1975	80.9	47.3
1980	79.8	45.8
1985	78.3	43.6
1990	78.2	42.8
Household Labor Force Surveys		
1988	81.2	34.3
1989	80.6	36.1
1990	79.7	34.1
1991	80.2	34.1
1992	79.6	32.7
1993	78	26.8
1994	78.5	31.3
1995	77.8	30.9
1996	77.1	30.6
1997	76.7	28.8
1998	76.7	29.3
1999	75.8	30
2000	73.7	26.6
2001	72.9	27.1
2002	68.7	27.9
2003	70.4	26.6
2004	70.3	23.3
2005	70.6	23.3
2006	69.9	23.6
2007	69.8	23.6
2008	70.1	23.5
2009	70.5	26
2010	70.8	26.6
2011	70.7	28.2
2012	71	29.5
2013	71.5	30.8

Source: 1960-1990: Census of Population, TURKSTAT, Tansel (2002), p.29, 1988-2008: Household Labor Force Surveys, TURKSTAT, www.tuik.gov.tr

Table 2

Labor Force Participation Rates by Year and Education Level

	1988		**1995**		**2002**		**2013**	
	M	F	M	F	M	F	M	F
Illiterate	70.5	32.3	62.5	28.4	48.1	24.4	33.8	17.4
Literate but no school completed	76.3	31.7	67.6	25	48.5	22.4	58.2	20.8
Primary school	88.9	34.3	86	31.8	78.8	26.7	73.3	29.5
Junior high school or vocational s.	61.4	19.5	59	15.9	68.4	18.4	79.8	27.5
High school	75.5	45.7	73.4	34.9	64.6	28.5	70.1	32.1
Vocational school at high s. level	82.8	52.5	80.9	46.4	77.7	39	81.3	39.3
University and other higher education	89.5	82.5	88	73.8	84.5	71.5	86.1	72.2

Source: TURKSTAT, Household Labor Force Statistics

Table 3

Main Reason not to Work at a Job

	URBAN		RURAL	
Main reason not to work at a job	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Caring for children	1,200	29.20	328	29.42
Housewife	951	23.14	337	30.22
Partner/family does not allow	906	22.04	170	15.25
No job/looking for a job	235	5.72	80	7.17
Does not need to work	331	8.05	65	5.83
Disabled/sick	230	5.60	86	7.71
Caring for elderly	29	0.71	7	0.63
Does not want to work	44	1.07	5	0.45
Retired	57	1.39	4	0.36
About to get married	6	0.15	4	0.36
Just about to start working	16	0.39	1	0.09
Just migrated/left	10	0.24	1	0.09
Other	86	2.09	19	1.70
Total	4,110	100	1,115	100

Source: TDHS-2008

Table 4

Main Reason for Quitting a Job

Main reason for quitting a job according to age							
	15-19	**20-24**	**25-29**	**30-34**	**35-39**	**40-44**	**45-49**
Marriage	56.6	36.9	28	26.3	25.8	22.2	21.2
Pregnant/child care	1.7	10.1	10.3	15	11	9.7	8.1
Did not want to work	9.2	11.2	11.7	11.1	12.6	7.3	7.3
Work related problems	5.2	8.2	13.2	12.1	11	11.4	7.9
To find a better job	2.8	8.6	12.1	12.1	8.4	11.9	7.4
Just moved/migrated	3.9	4.2	2.6	4.5	7.1	8.7	8.7
Opposition of partner/elderly	3.1	7.8	3.4	2.4	2.5	2.2	2.8
Other	17.4	13	18.5	16.4	21.2	26.4	36.5
N	69	417	876	806	653	695	667

Source: TDHS-2008

Notes: Other category in this table includes "housework". "sick/disabled", "appointment of partner", "not need to work", "worked unpaid", "dismissed", "sick/elderly care in the family", "retirement", "seasonal/temporary", and "other". For a more detailed table, see Turkey Demographic and Health Survey 2008 Main Report: http://www.hips.hacettepe.edu.tr/eng/tdhs08/

Table 5

Probit Regression Results: Urban vs. Rural

	Labor Force Participation			
	(1) URBAN	(2) URBAN	(1) RURAL	(2) RURAL
Patriarchy	-0.155***	-0.162***	-0.0394	-0.0603
	-0.0332	-0.0332	-0.0546	-0.0539
Religiosity	-0.0821**	-0.0796**	0.0389	0.0324
	-0.0388	-0.0387	-0.0781	-0.077
Age	0.0441***	0.0447***	0.0513***	0.0514***
	-0.00606	-0.00605	-0.00997	-0.00982
Age squared	-0.000613***	-0.000622***	-0.000638***	-0.000645***
	-8.71E-05	-8.71E-05	-0.000145	-0.000143
Schooling	0.0365***	0.0348***	0.0672***	0.0586***
	-0.00907	-0.00903	-0.02	-0.0199
Schooling squared	-0.00787***	-0.00771***	-0.0180***	-0.0170***
	-0.00155	-0.00154	-0.00484	-0.00478
Schooling cubed	0.000522***	0.000516***	0.00110***	0.00106***
	-7.44E-05	-7.42E-05	-0.000281	-0.000277
Number of children under 5	-0.0736***	-0.0730***	-0.0316**	-0.0289**
	-0.0096	-0.00957	-0.0132	-0.0131
Household size	0.000145	0.000167	0.00891**	0.0121***
	-0.00381	-0.00377	-0.00428	-0.00427
Wealth Quintile 2	-0.0341	-0.0285	-0.0713***	-0.0693***
	-0.0239	-0.024	-0.0261	-0.0258
Wealth Quintile 3	-0.0855***	-0.0788***	-0.130***	-0.124***
	-0.0233	-0.0235	-0.0334	-0.0328
Wealth Quintile 4	-0.111***	-0.104***	-0.170***	-0.171***
	-0.023	-0.0234	-0.0433	-0.0426
Wealth Quintile 5	-0.146***	-0.141***	-0.222***	-0.231***
	-0.0221	-0.0225	-0.068	-0.0656
Husband's schooling	-0.00497**	-0.00461**	-0.00408	-0.0035
	-0.00204	-0.00205	-0.0042	-0.00416
Mother's education	0.0114***	0.0113***	0.00940*	0.00839*
	-0.00225	-0.00224	-0.00515	-0.00505
Migration	-0.00352	-0.00404	-0.0459	-0.0437
	-0.0129	-0.0129	-0.0315	-0.0316
West Marmara	0.0272	0.00176	0.0518	0.0135
	-0.0306	-0.0342	-0.0959	-0.0995
Aegean	0.0831***	0.0657**	0.212**	0.194**
	-0.0301	-0.0305	-0.0892	-0.0933
East Marmara	0.0841***	0.127***	0.200**	0.296***
	-0.0283	-0.0378	-0.0908	-0.0852
West Anatolia	-0.0875***	-0.0675**	-0.125	-0.0179
	-0.0242	-0.0285	-0.0889	-0.0994
Mediterranean	-0.0314	-0.0201	-0.00887	0.141
	-0.0238	-0.0361	-0.0891	-0.0954

Central Anatolia	-0.0812***	-0.0727**	-0.0199	0.0316
	-0.0254	-0.0309	-0.0926	-0.0946
West Black Sea	0.0931***	0.132***	0.0662	0.163
	-0.0293	-0.0461	-0.0929	-0.106
East Black Sea	0.222***	0.154***	0.363***	0.258**
	-0.0352	-0.0461	-0.0772	-0.103
Northeast Anatolia	-0.0971***	-0.0986***	-0.108	-0.197**
	-0.0252	-0.0313	-0.0882	-0.0879
Central East Anatolia	-0.122***	-0.147***	-0.276***	-0.182*
	-0.0252	-0.0309	-0.0734	-0.0949
Southeast Anatolia	-0.0918***	-0.127***	-0.144*	-0.210**
	-0.0242	-0.0271	-0.0872	-0.0817
Female unemployment rate		-0.000775		-0.0133***
		-0.00176		-0.00267
Share of service employment		0.000875		-0.000554
		-0.00105		-0.00196
Export share of ISIC 15-18		0.00196***		0.00426***
		-0.000606		-0.000967
Pseudo R2	0.1441	0.1461	0.1252	0.1407
Observations	5,329	5,329	1,938	1,938

Notes: Average marginal effects are reported. Robust standard errors are shown below the marginal effects. For the second specification, standard errors are clustered at NUTS-2 regional level. The data for regional control variables, female unemployment rate and share of service employment, comes from the household labor force statistics. See Appendix A for the data sources of export share variable. Estimation is performed using STATA 13.0.

* p<0.1.

** p<0.05.

*** p<0.01.

Table 6

Summary Statistics for Variables in the Instrumental Variable Estimations (Urban)

Variable	**Mean**	**S.D.**	**Min.**	**Max.**	**N**
Labor force participation rate	0.31	0.46	0	1	5429
Non-agricultural labor force participation rate[a]	0.26	0.44	0	1	5429
Patriarchy	0.34	0.19	0	1	5429
Religiosity	0.49	0.15	0	0.62	5429
Family conservatism	0.39	0.22	0	1	5409
Age	34.20	8.27	15	49	5429
Schooling	6.20	4.01	0	19	5429
Number of children under age 5	0.59	0.76	0	5	5429
Fertility (number of living children)	2.31	1.60	0	14	5429
Fertility preference (ideal number of children)	2.54	1.16	0	15	5355
Household size	4.74	2.09	1	22	5429
Wealth index	3.33	1.26	1	5	5429
Husband's schooling	8.04	3.81	0	19	5399
Mother's education	2.28	3.00	0	13	5367
Migration	0.34	0.47	0	1	5429
Female unemployment rate	19.91	6.99	9.60	36.10	5429
Share of service employment	46.62	10.31	25.08	72.41	5429
Export orientation	2.53	5.91	0.01	20.81	5429
Export share of ISIC 15-18	32.93	20.14	1.56	79.08	5429

Source: TDHS-2008, Household Labor Force Survey 2008 (female employment share), Foreign Trade Statistics and Annual Manufacturing Industry Surveys (export performance variables).

[a]Non-agricultural labor force participation=non-agricultural employment + people looking for jobs (both agricultural and non-agricultural jobs)

Table 7

Instrumental Variable Estimation Results (Urban)

	Labor Force Participation		Non-Agricultural LFP	
	(1)	(2)	(1)	(2)
Patriarchy	-0.955***	-0.978***	-0.900***	-0.934***
	-0.245	-0.246	-0.255	-0.254
Age	0.0216**	0.0216**	0.0267***	0.0265***
	-0.0105	-0.0106	-0.00974	-0.00994
Age squared	-0.000293**	-0.000295*	-0.000373***	-0.000371***
	-0.000149	-0.000151	-0.000139	-0.000142
Schooling	0.0241**	0.0210**	0.0112	0.00803
	-0.0101	-0.0102	-0.00878	-0.00891
Schooling squared	-0.00727***	-0.00698***	-0.00512***	-0.00481***
	-0.0015	-0.00152	-0.00126	-0.00126
Schooling cubed	0.000472***	0.000460***	0.000352***	0.000339***
	-7.82E-05	-7.92E-05	-5.94E-05	-6.00E-05
Number of children under 5	-0.0597***	-0.0586***	-0.0356***	-0.0347***
	-0.0118	-0.0119	-0.00926	-0.00926
Household size	0.00535	0.00561	-0.00309	-0.00269
	-0.00384	-0.0038	-0.00406	-0.00408
Wealth Quintile 2	-0.0417*	-0.0336	-0.028	-0.0191
	-0.0235	-0.0234	-0.0238	-0.0236
Wealth Quintile 3	-0.0957***	-0.0855***	-0.0319	-0.0208
	-0.0242	-0.0242	-0.0243	-0.024
Wealth Quintile 4	-0.143***	-0.131***	-0.0594**	-0.0470*
	-0.0252	-0.0251	-0.0271	-0.0266
Wealth Quintile 5	-0.205***	-0.194***	-0.0704**	-0.0593*
	-0.0281	-0.0279	-0.0327	-0.0319
Husband's schooling	-0.00620***	-0.00579***	-0.00437**	-0.00406**
	-0.00187	-0.00186	-0.00182	-0.00181
Mother's education	0.00936***	0.00915***	0.00426**	0.00408**
	-0.00236	-0.00238	-0.00193	-0.00194
Migration	-0.00315	-0.00288	0.0164	0.0179*
	-0.0119	-0.0119	-0.0107	-0.0108
West Marmara	0.00589	-0.0398	0.00272	-0.0528*
	-0.0283	-0.0341	-0.0258	-0.0314
Aegean	0.0756***	0.0514*	0.0395*	0.0125
	-0.0259	-0.0271	-0.0235	-0.0244
East Marmara	0.0784***	0.112***	0.0602***	0.0795***
	-0.0244	-0.032	-0.0219	-0.0285
West Anatolia	-0.0590**	-0.028	-0.0451*	-0.0215
	-0.0298	-0.0333	-0.0265	-0.0305
Mediterranean	-0.0118	-0.000773	-0.00527	-0.011
	-0.0244	-0.0343	-0.0227	-0.0325
Central Anatolia	-0.0515*	-0.0463	-0.0595**	-0.0673**

	-0.0313	-0.0345	-0.03	-0.0334
West Black Sea	0.103***	0.122***	0.0770***	0.0752**
	-0.0244	-0.0379	-0.0232	-0.0343
East Black Sea	0.153***	0.0576	-0.0234	-0.128***
	-0.0351	-0.0481	-0.0258	-0.0362
Northeast Anatolia	-0.0731**	-0.0982***	-0.0145	-0.0542*
	-0.0323	-0.0352	-0.027	-0.0319
Central East Anatolia	-0.115***	-0.156***	-0.0671**	-0.124***
	-0.0321	-0.0399	-0.0284	-0.0366
Southeast Anatolia	-0.0743**	-0.142***	-0.00827	-0.0817***
	-0.0292	-0.0316	-0.025	-0.0287
Female unemployment rate		-0.00135		-0.000448
		-0.00161		-0.00155
Share of service employment		-2.40E-05		-0.000683
		-0.00102		-0.00093
Export share of ISIC 15-18		0.00240***		0.00216***
		-0.00056		-0.000525
p-value, Wald test of exogeneity	0.0098	0.0095	0.0034	0.0028
Observations	5,336	5,336	5,336	5,336

Notes: Average marginal effects are reported. Robust standard errors are shown below the marginal effects. For the second specification, standard errors are clustered at NUTS-2 regional level. The data for regional control variables, female unemployment rate and share of service employment, comes from the household labor force statistics. For the data used in export share variable, see Appendix A. Estimation is performed using STATA 13.0.

* p<0.1.

** p<0.05.

*** p<0.01.

Table 8

The IV Estimation Results: The Impact of Patriarchy according to Religiosity (Urban)

	Labor Force Participation		**Non-Agricultural LFP**	
	(1)	(2)	(1)	(2)
	Religiosity<0.49	Religiosity>0.49	Religiosity<0.49	Religiosity>0.49
Patriarchy	-1.025	-0.906**	-1.149*	-1.268***
	-0.723	-0.396	-0.615	-0.222
Age	0.0485	0.0145	0.0338	0.00719
	-0.0384	-0.0137	-0.0339	-0.0121
Age squared	-0.000754	-0.000172	-0.000561	-8.11E-05
	-0.00054	-0.000196	-0.000484	-0.000173
Schooling	-0.00113	0.0299**	-0.0101	0.0144
	-0.035	-0.0127	-0.0319	-0.0108
Schooling squared	-0.00437	-0.00826***	-0.00359	-0.00510***
	-0.00368	-0.00194	-0.00352	-0.00163
Schooling cubed	0.000358**	0.000527***	0.000323*	0.000339***
	-0.000175	-0.000107	-0.000169	-8.92E-05
Number of children under 5	-0.0829***	-0.0539***	-0.0700**	-0.0273**
	-0.0295	-0.0154	-0.0274	-0.0126
Household size	0.00978	0.00478	0.0051	0.0045
	-0.0101	-0.00447	-0.0107	-0.00402
Wealth Quintile 2	-0.0278	-0.0404	0.027	-0.0373
	-0.0544	-0.0264	-0.0639	-0.0251
Wealth Quintile 3	-0.0907*	-0.0967***	0.00112	-0.0637**
	-0.0548	-0.0274	-0.0579	-0.0254
Wealth Quintile 4	-0.0933	-0.159***	0.000439	-0.109***
	-0.0572	-0.0287	-0.0739	-0.0266
Wealth Quintile 5	-0.178***	-0.213***	-0.0743	-0.153***
	-0.0625	-0.0327	-0.0806	-0.0296
Husband's schooling	-0.00868**	-0.00514**	-0.00935**	-0.00512***
	-0.00427	-0.00215	-0.00416	-0.00187
Mother's education	0.00931*	0.00979***	0.00768*	0.00671***
	-0.00497	-0.00287	-0.00466	-0.00258
Migration	-0.00315	-0.00288	0.0164	0.0179*
	-0.0119	-0.0119	-0.0107	-0.0108
Observations	1,205	4,131	1,205	4,131

Notes: Average marginal affects are reported. Robust standard errors are shown below the marginal effects. Region dummies are included. Religiosity measures the intensity of religious practice; fasting and *namaz*. The mean religiosity in the urban sample is 0.49. Estimation is performed using STATA 13.0.
* p<0.1.
** p<0.05.
*** p<0.01.

Table 9

The IV Estimation Results: The Impact of Patriarchy according to Fertility Preferences (Urban)

	Labor Force Participation			
	(1)	(2)	(3)	(4)
Ideal number of children	Zero/One	Two	Three/Four	Five/More
Patriarchy	-0.275	-1.100**	-1.353***	0.15
	-1.111	-0.449	-0.186	-0.85
Age	0.0629**	0.016	0.00442	0.0430*
	-0.0285	-0.0183	-0.0147	-0.0225
Age squared	-0.000863**	-0.000244	-4.56E-05	-0.000665**
	-0.000417	-0.000262	-0.000205	-0.000319
Schooling	-0.00836	0.0209	0.0114	0.0907***
	-0.0357	-0.0139	-0.0132	-0.0279
Schooling squared	-0.00164	-0.00709***	-0.00497**	-0.0154**
	-0.00529	-0.00211	-0.00205	-0.00636
Schooling cubed	0.000293	0.000462***	0.000326***	0.000727**
	-0.000253	-0.000117	-0.000105	-0.000323
Number of children under 5	-0.0926***	-0.0517**	-0.0315**	-0.02
	-0.0327	-0.0213	-0.0158	-0.0313
Household size	0.00803	0.00771	0.00198	-0.00996
	-0.0132	-0.0052	-0.00513	-0.0186
Wealth Quintile 2	0.0236	0.000495	-0.0645**	-0.0764
	-0.106	-0.0377	-0.0319	-0.0759
Wealth Quintile 3	-0.051	-0.0585	-0.0720**	-0.0595
	-0.105	-0.0381	-0.033	-0.0876
Wealth Quintile 4	-0.128	-0.0950**	-0.111***	-0.0963
	-0.134	-0.0393	-0.0346	-0.11
Wealth Quintile 5	-0.0492	-0.155***	-0.202***	0.0306
	-0.163	-0.0437	-0.0384	-0.0963
Husband's schooling	-0.00542	-0.00607**	-0.00406	-0.00837
	-0.00942	-0.00273	-0.00261	-0.00736
Mother's education	0.0173**	0.00980***	0.0022	0.0132
	-0.00787	-0.00364	-0.00299	-0.0113
Migration	-0.0108	-0.0137	0.00882	0.0533
	-0.0524	-0.0167	-0.0171	-0.0467
Observations	517	2,641	1,929	248

Notes: Average marginal affects are reported. Robust standard errors are in parenthesis. Region dummies are included. Estimation is performed using STATA 13.0.

* p<0.1.

** p<0.05.

*** p<0.01.

Table 10

The IV Estimation Results: The Impact of Patriarchy according to Education Level (Urban)

	Labor Force Participation			
	(1) No Education	(2) Primary E.	(3) Secondary E.	(4) Higher E.
Patriarchy	1.097*	-0.605	-1.528***	-1.570***
	-0.653	-0.555	-0.321	-0.225
Age	0.0269**	0.0296*	-0.0107	0.0265
	-0.012	-0.0179	-0.0223	-0.0175
Age squared	-0.000398**	-0.000377	0.000138	-0.000473*
	-0.000157	-0.00026	-0.000314	-0.00025
Schooling	0.0153*	0.0388	0.0184	0.0518***
	-0.00809	-0.0317	-0.0211	-0.0195
Number of children under 5	-0.0676**	-0.0767***	-0.0710**	-0.0493**
	-0.0334	-0.0175	-0.0294	-0.0199
Household size	-0.00108	0.00513	0.0166*	0.0098
	-0.00693	-0.0064	-0.00991	-0.0107
Wealth Quintile 2	-0.00889	-0.0397	-0.227*	0.149
	-0.0369	-0.0376	-0.129	-0.124
Wealth Quintile 3	-0.0432	-0.0897**	-0.247*	0.024
	-0.0745	-0.0386	-0.133	-0.113
Wealth Quintile 4	-0.0103	-0.150***	-0.284**	0.0338
	-0.131	-0.0448	-0.133	-0.111
Wealth Quintile 5	-0.05	-0.234***	-0.381***	-0.0117
	-0.147	-0.0495	-0.135	-0.112
Husband's schooling	0.00206	-0.00396	-0.00106	-0.00604
	-0.00594	-0.00296	-0.00553	-0.00384
Mother's education	-0.00331	0.0116***	0.0118*	0.00265
	-0.00732	-0.00345	-0.00608	-0.00366
Migration	-0.00915	0.00654	-0.0111	-0.029
	-0.0344	-0.0189	-0.0338	-0.0207
Observations	1,007	2,582	502	1,245

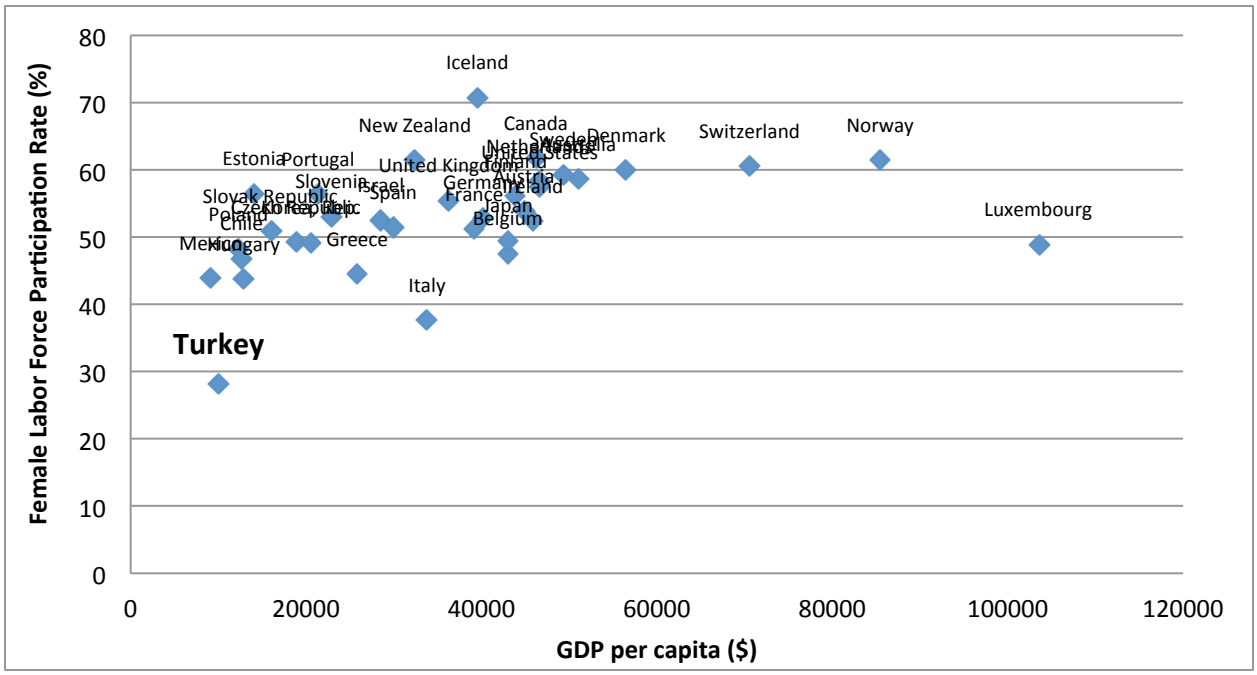
Notes: Average marginal affects are reported. Robust standard errors are in parenthesis. Region dummies are included. Estimation is performed using STATA 13.0. Estimations with non-agricultural labor force participation give similar results except the primary education category. Patriarchy is significant in determining non-agricultural labor force participation among primary school graduates. Regression results can be provided upon request.

* p<0.1.

** p<0.05.

*** p<0.01.

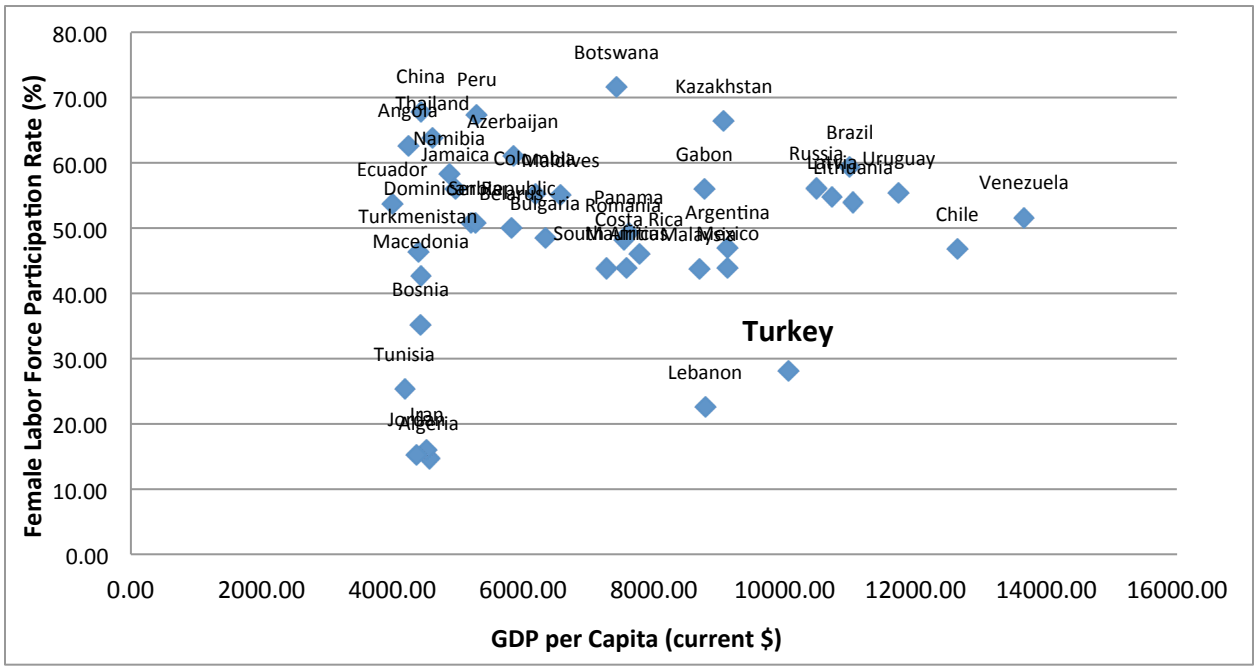
Figure 1



Source: World Bank, World Development Indicators.

Female Labor Force Participation Rate (%), OECD Countries, 2010

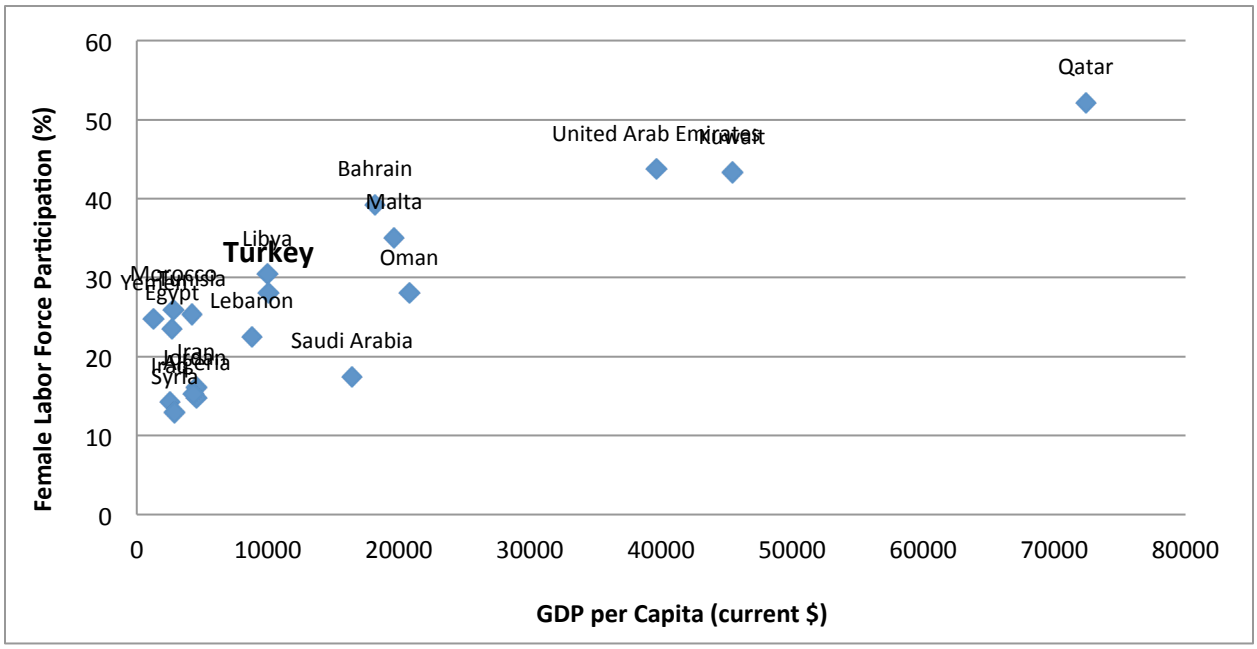
Figure 2



Source: World Bank, World Development Indicators

Female Labor Force Participation Rate (%), Upper-Middle Income Countries, 2010

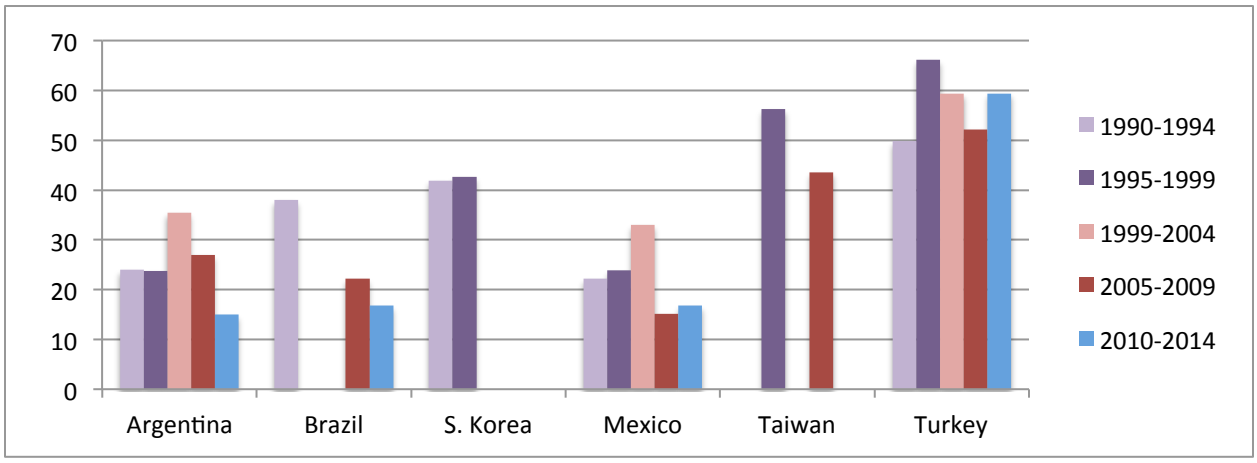
Figure 3



Source: World Bank, World Development Indicators

Female Labor Force Participation Rate (%), MENA Countries, 2010

Figure 4



Source: World Value Surveys, several rounds.

Percentage of Respondents who agree with the Statement "When Jobs are Scarce Men Should Have More Right to a Job than Women"

Appendix A

Table A1

Coding for the Scale Variables; Patriarchy, Religiosity, and Family Conservatism

Patriarchy	
Helphswork: Men should also do the housework like cooking, washing, ironing, and cleaning	Agree=0 Don't know/depends=0.5 Disagree=1
Womenwork: A married woman should work outside the home if she wants to	Agree=0 Don't know/depends=0.5 Disagree=1
Goingout: A woman may go anywhere she wants without her husband's permission	Agree=0 Don't know/depends=0.5 Disagree=1
Womenpolitics: Women should be more involved in politics	Agree=0 Don't know/depends=0.5 Disagree=1
Familydec: The important decisions in the family should be made only by men of the family	Agree=1 Don't know/depends=0.5 Disagree=0
Wifeopinion: A woman shouldn't argue with her husband even if she disagrees with him	Agree=1 Don't know/depends=0.5 Disagree=0
Menwiser: Men are wiser	Agree=1 Don't know/depends=0.5 Disagree=0
Virginity: Women should be virgins when they get married	Agree=1 Don't know/depends=0.5 Disagree=0
Sonprf: It is better to educate a son than a daughter	Agree=1 Don't know/depends=0.5 Disagree=0
Religiosity	
Prays regularly	Yes=1 No=0
Prays irregularly	Yes=1 No=0
Fasts regularly	Yes=1 No=0
Fasts irregularly	Yes=1 No=0
Family conservatism	

There is blood relationship among woman's mother and father	Yes=1 No=0
Woman's mother is illiterate	Yes=1 No=0
Woman's father is illiterate	Yes=1 No=0
There is blood relationship among her and her husband	Yes=1 No=0
She attended Quran course during her childhood	Yes=1 No=0
She wears headscarf when going out	Regularly=1 Irregularly=0.5 Doesn't wear/NA=0

Export Orientation Variables and Data Sources

In contrast to the literature on the feminization of the labor force, a new literature on defeminization emerged in recent years showing that as manufacturing production matured and diversified in developing countries, women's share of manufacturing employment started to fall (Ghosh, 2002; Joekes, 1999; Jomo, 2009; Tejani & Milberg, 2010). According to this literature, it is not *export growth per se* that determines the female intensity of employment. Instead, for both of the feminization and subsequent defeminization periods, the type of manufacturing growth together with the degree of occupation segmentation by gender matter most in determining the female intensity of employment. Therefore, I use two alternative export orientation variables. The first measure, *export orientation*, was first used by Baslevent & Onaran (2004) to capture the effect of trade activity on labor market outcomes. The export orientation variable *(Ej)* is defined as the employment weighted average of export to output (*X/O*) ratios of the two-digit manufacturing industries, denoted by i, in region *j*. *Li* is the employment in sector *i* and *Lj* is the total manufacturing employment in region *j*. Data on exports in the subsectors of manufacturing are obtained from Foreign Trade Statistics. Data on

manufacturing output and employment are drawn from Annual Manufacturing Industry Surveys. The two-digit ISIC Rev 2 classification includes 16 manufacturing sub-sectors.

$$Ej = \Sigma i\ Xi/Oi\ *\ Li\ /\ Lj$$

Export orientation was not significant and not reported in the regression tables. As an alternative measure, I use export share of major sectors that employ women relying on the new defeminization literature. To identify those sectors, I used Annual Manufacturing Industry Surveys. I find that the majority of women (more than 60% in 2009) are employed by four sub-sectors: manufacture of food products and beverages, manufacture of tobacco products, manufacture of textiles, and manufacture of wearing apparel (ISIC Rev 2, 15, 16, 17 and 18). *The export share (15—18)* is defined as the value of exports in these four subsectors as a percentage of the value of total manufacturing exports in a region. *The export share (15—18)* has a positive significant effect on female labor force participation in line with defeminization literature.

Appendix B

Table B1

Cross Tabulations of Determinants of Labor Force Participation of Women in Turkey

	URBAN		RURAL	
	LFP (%)	**# of women[a]**	**LFP (%)**	**# of women**
Age				
15-19	9.23	130	20.51	78
20-24	21.79	638	27.31	260
25-29	31.52	1009	42.63	373
30-34	34.01	1035	47.48	337
35-39	35.79	1006	52.27	331
40-44	34.46	859	52.41	311
45-49	27.79	752	58.39	286
Own Education				
No education	18.90	1,032	39.53	716
Primary school	28.18	2,633	52.57	1,012
Secondary school	25.10	506	29.13	127
High school and higher	49.44	1,258	47.11	121
Husband's education				
No education	20.96	291	34.34	198
Primary school	28.50	2,319	50	1,228
Secondary school	26.68	791	42.11	228
High school and higher	37.01	2,002	40.73	302
Children under age 5				
None	36.22	3,015	54.74	939
One	27.73	1,760	43.09	564
Two	17.09	550	28.01	307
Three and more	11.54	104	39.76	166
Household Wealth				
Quintile 1	22.65	490	44.06	1,039
Quintile 2	25.55	1,045	48.29	497
Quintile 3	28.21	1,315	46.49	271
Quintile 4	31.86	1,362	45.53	123
Quintile 5	41.33	1,217	50	46
Household size				
1	77.78	18	71.43	7
2	43.33	390	51.09	92
3	38.37	1032	45.33	214
4	33.31	1543	53.1	403
5	27.82	1071	51.1	319
5-10	21.74	1265	41.27	756

10-35	18.18	110	38.38	185
Region				
Istanbul	33.60	506	42.31	26
West Marmara	37.90	314	55.96	109
Aegean	43.47	392	69.43	157
East Marmara	42.36	484	67.27	110
West Anatolia	26.13	444	33.63	113
Mediterranean	28.49	709	47.37	304
Central Anatolia	22.25	382	45.39	152
West Black Sea	42.86	455	56.98	179
East Black Sea	57.76	303	84.15	82
Northeast Anatolia	19.37	413	37.57	189
Central East Anatolia	15.02	426	20.10	204
South East Anatolia	17.47	601	34.19	351
TOTAL	**31.06**	**5,429**	**46**	**1,976**

Source: TDHS-2008,

[a] # of women shows the total number of women in the given categories. For instance, in the urban sub-sample there are 1,032 women who have no education. 18.90 percent of these women participate in the labor force.

Table B2

Cross Tabulations of Determinants of Labor Force Participation of Women in Turkey, Cultural Value Proxies

	URBAN		RURAL	
	LFP (%)	**# of women**	**LFP (%)**	**# of women**
Patriarchy				
Helpswork: Men should also do the housework like cooking, washing, ironing and cleaning				
Agree	35.86	3,684	48.75	1,088
Disagree	20.65	1,724	42.65	877
Don't know/Depends	50	16	45.45	11
Familydec: The important decisions in the family should be made only by men of the family				
Agree	21.94	875	45.65	609
Disagree	32.91	4,522	46.36	1,333
Don't know/Depends	18.52	27	37.93	29
Goingout: A women may go anywhere she wants without her husband's permission				
Agree	34.98	1,664	44.80	433
Disagree	29.23	3,715	46.31	1,516
Don't know/Depends	37.21	43	52.38	21
Menwiser: Men are wiser				
Agree	23.45	772	46.79	498
Disagree	32.92	4,490	45.65	1,356
Don't know/Depends	16.34	153	46.9	113
Womenwork: A woman should work outside the home if she wants to				
Agree	36.67	4,958	47.53	1,660
Disagree	14.89	423	38.89	288
Don't know/Depends	2.5	40	30	20
Womenpolitics: Women should be more involved in politics				
Agree	32.65	3,831	45.95	1,271
Disagree	27.58	1,055	46.96	428
Don't know/Depends	26.49	536	46.06	271
Wifeopinion: A woman shouldn't argue with her husband even if she disagrees with him				
Agree	34.28	3,092	47.78	946
Disagree	26.97	2,273	44.31	975
Don't know/Depends	19.23	52	45.83	48
Virginity: Women should be virgins when they get married				
Agree	29.30	4,406	46.27	1,701
Disagree	40.73	874	45.41	218
Don't know/Depends	27.34	139	40.82	49
Sonprf: It is better to educate a son than a daughter				
Agree	22.26	611	47.6	334
Disagree	32.22	4,802	45.88	1,625
Don't know/Depends	20	10	2	10

Religiosity				
Practicing namaz				
Regularly	23.91	2,681	43.90	1,025
Irregularly	37.64	1,602	51.07	562
No/NA	38.57	1,146	44.62	381
Fasting				
Regularly	28.65	4,754	46.01	1,767
Irregularly	44.81	308	47.27	110
No/NA	50.68	367	44.44	99

Source: TDHS-2008

Table B3

Correlations of Main Reason for Not Working with Patriarchy and Religiosity

	Urban		Rural	
Main reason not to work	Patriarchy	Religiosity	Patriarchy	Religiosity
Caring for children	-0.034	0.011	-0.032	-0.079
Housewife	0.130	0.050	0.066	0.055
Partner/family does not allow	0.074	0.045	-0.038	-0.001
No job/looking for job	-0.066	-0.044	-0.043	0.0139
Does not need to work	0.013	0.013	-0.016	-0.005
Disabled/Sick	0.050	-0.011	0.023	-0.027
Caring for elderly	-0.002	0.003	0.001	-0.007
Does not want to work	0.022	0.005	-0.014	-0.116

Source: TDHS-2008

Table B4

Job Status of Working Women according to Education Level (Urban Sample)

	No education		**Primary S.**		**Secondary S.**		**Higher Ed.**	
	N	%	N	%	N	%	N	%
Employer	1	0.1	10	0.38	2	0.4	17	1.35
Waged, worker (regular)	25	2.42	133	5.05	36	7.11	182	14.47
Salaried, government officer (regular)	0	0	0	0	0	0	211	16.77
Daily waged (seasonal, temporary)	37	3.59	67	2.54	5	0.99	3	0.24
For her own (regular)	16	1.55	31	1.18	15	2.96	18	1.43
For her own (irregular)	41	3.97	150	5.7	15	2.96	40	3.18
Unpaid family worker	48	4.65	168	6.38	13	2.57	21	1.67
Other	0	0	3	0.11	0	0	1	0.08
Currently not working	864	83.62	2071	78.66	420	83	765	60.81
Total	1032	100	2633	100	506	100	1258	100

Source: TDHS-2008

Table B5

Change in Cultural Values, 1990-2014

	1990-1994	**1995-1998**	**1999-2004**	**2005-2009**	**2010-2014**
Importance in life[a]: Family-**very important (%)**	87	97	97	98	95
Importance in life: Work-**very important (%)**	54	76	70	56	50
Importance in life: Religion-**very important (%)**	60	83	80	75	68
When jobs are scarce, men should have more right to a job than women-**Agree (%)**	50	66	59	52	59
A woman has to have children to be fulfilled-**Agree (%)**	70	77	77	n.a.	n.a.
Woman as a single parent[b]-**Disapprove (%)**	10	5	89	88	n.a.
Woman as a single parent -**Depends (%)**	83	82	5	2	n.a.
Relationship with working mother[c]-**Disagree (%)**	31	44	23	n.a.	n.a.
Observations	1030	1907	3401	1346	1605

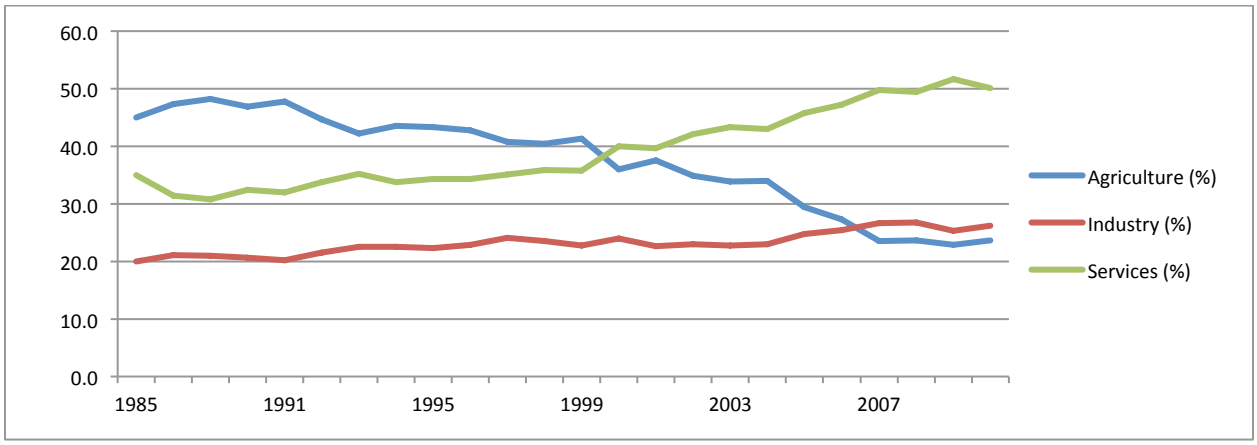
Source: World Value Surveys, several rounds.

[a]For each of the following aspects, indicate how important it is in your life. Would you say it is:

[b]If a woman wants to have a child as a single parent but she doesn't want to have a stable relationship with a man, do you approve or disapprove?

[c]A working mother can establish just as warm and secure a relationship with her children as a mother

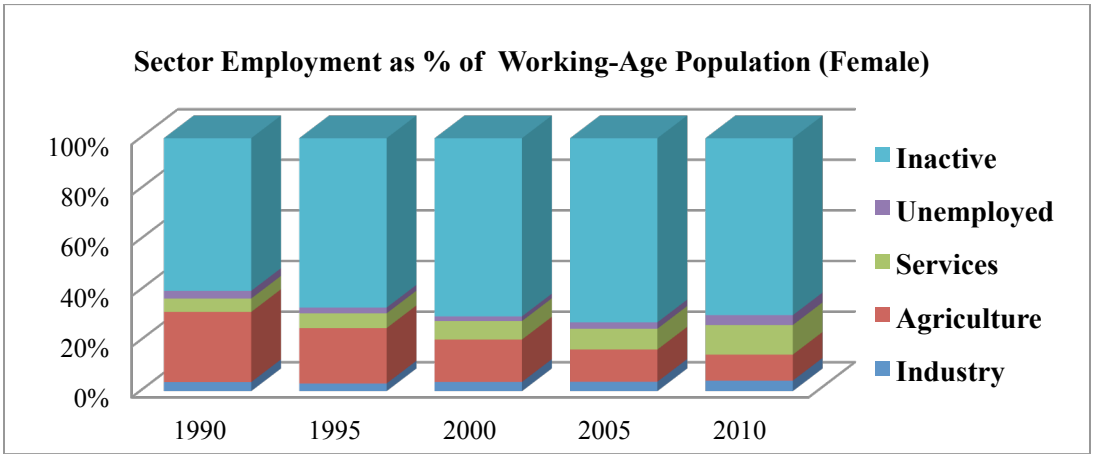
Figure B1



Source: TURKSTAT, Household Labor Force Statistics

Structural Transformation in Turkey: The Share of Employment by the Main Sectors, 1985-2010

Figure B2



Source: TURKSTAT, Household Labor Force Statistics

Unemployment and Inactivity Rates for Women, Turkey, 1990-2010