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# **The Effects of Religious Beliefs on the Working Decisions of Women: Some Evidence from Turkey**

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**ABSTRACT.** This paper examines the decision of Turkish women to participate in the labor force. We administered a original survey questionnaire in 2009 to 518 non-working women. Employing logistic regression, we found that religious belief is a crucial factor that discourages women from participating in the labor market. In particular, the regular performance of religious rituals have the greatest negative effect on labor market participation for educated women, who are the most productive human resource in the economy.

**JEL classification:** J2 O5 Z12

**KEYWORDS.** Women, religious beliefs, labor force, working decisions, Turkey

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In many countries women's labor force participation rates are much lower than men's. Globally, between 1980 and 2008, women's labor force participation rate (LFPR) increased from 50.2 to 51.7 percent while the rate for men decreased slightly from 82.0 to 77.7 percent. As a result, the gender gap in labor force participation rates has narrowed slightly from 32 to 26 percentage points (ILO, 2010). This is due largely to increases in female labor force participation in developed countries.

In most OECD countries over the past few decades, the labor force participation of women has sharply increased. For instance, in Italy, Spain, Greece, Ireland, Luxembourg, Netherlands, Belgium, Austria, Portugal, Germany, and France, the women's labor force participation rates increased significantly between 1981 and 2001 (OECD, 2004). In developed countries, women's labor force participation rates range from anywhere from 43 to 75 percent. However, in sharp contrast, women's labor force participation rates and the percentage of women with paid work are decidedly lower in the developing world (Kardam and Toksoz, 2004). Furthermore, women in developing countries experience a number of disadvantages in their working lives in comparison to their counterparts in more developed countries (Auer and Fortuny, 2000).

In Middle East and North African countries (MENA) in particular, the rates for women are significantly lower than in developed countries (Bilgin and Kilicarslan, 2008). In fact, one of the defining features of labor markets in MENA countries is the extremely low rates of women's labor force participation in non-agricultural activities and in paid work overall (Karshenas, 1997). In the MENA region, class, gender and the state are the principal determinants of women's work and women's lives (Moghadam, 1990).

Undoubtedly, there are many factors that affect the women's labor force participation. For instance, in addition to overall labor market conditions, female education levels, marital

status, and number of children, among others affect women's labor force participation. However, we argue that, in many countries, religion and cultural factors also affect the working decisions of women. As the OECD reports, the differences among countries are to some extent rooted in culture and social norms, as well as reflecting economic incentives (OECD, 2004).

The main purpose of this paper is to investigate the effects of religious beliefs, in this case Islam, and cultural factors (such as married, has children, needs to take care elderly people at home, etc.) on the working decisions of women in Turkey. In this paper, we use survey data collected from more than 500 women in Istanbul to examine whether or not religion and cultural factors exert an influence on Turkish women's decisions to work or not. Based on survey data, the results indicate that religion appears to exert tremendous influence on women's decisions not to work (especially for educated women), at the same time, overall, the women we surveyed overwhelmingly support the idea of women working.

The rest of this paper is organized as follows: literature survey of previous work in economics and religion; data about the women's labor participation rates in Turkey; data and methodology employed in our study and finally conclusions drawn.

### ***RELIGION AND ECONOMICS***

The effects of religion on economic activities have been discussed for decades. There is a growing and extensive literature associating demographic and economic behavior with religion (Foroutan, 2006). In this regard, Mangeloja (2003) presents a comprehensive literature review of the economics of religion. Baro and McCleary (2003) investigate the effects of church attendance and religious beliefs on economic growth. The authors find that economic growth responds positively to the extent of religious beliefs, notably those in hell and heaven, but negatively to church attendance. Specifically, religious activity can affect

economic performance at the level of the individual, group, or nation (Noland, 2003). The differences between entrepreneurs from diverse countries can to a certain extent be explained by social, cultural and religious factors (McLaurin and Kuchta, 2008).

Religion may influence women's work decisions as different religions specify different life styles and cultures for people (Amin and Alam, 2008). The study of Cornwell *et al.* (2005) provides an empirical analysis of the effects of family religious background on labor market outcomes of young, adult women in the United States, using data from the 1993 wave of the NLSY. Their main finding is that, holding family religion or Protestant denomination constant, the intensity of religious participation when young (as measured by frequency of religious-service attendance) increases the labor supply of adult women. Foroutan (2006) examines competing influences of family formation and religious affiliation on women's economic behavior in Australia's multicultural and multi-ethnic setting. His findings show that there is an affect on family formation characteristics and religious affiliation on women's employment status. Moreover, Neuman and Grossbard-Shechtman (1995) examine differences in the labor supply of women of different religions in Israel. They find that "the differential impact of age, number of children, and husband's income on the labor supply of Muslims and Jewish wives all are consistent with the existence of less bargaining within Muslims marriage than within Jewish marriage" (Neuman and Grossbard-Shechtman, 1995).

Amin and Alam (2008) investigate whether religion is a significant determinant of married and single women's paid work and full-time employment in Malaysia by using the Second Malaysian Family Life Survey and a sequential logit approach. Their results suggest that religion influences rural married women's decision to work for pay. Furthermore, their findings show that religion is less influential in urban areas than in rural areas.

In a more abstract vein, Fernandez (2007) examines the effects of culture on female labor supply. In order to separate the effects of market variables and institutions from culture, the

author uses an epidemiological approach, studying second-generation American women. She uses both women's labor force participation and attitudes in the women's country of ancestry as cultural proxies and show that both cultural proxies have quantitatively significant effects on women's work outcomes. Although Fernandez does not address the issue of religion specifically, religion is a constitutive part of most cultures and therefore in line with her findings should be one of the cultural factors influencing women's work choices.

In one of the few articles that focuses on cultural influences in Turkey, Goksel (2010) investigates the affect of conservatism on women's labor force participation. Her results show that social beliefs and behaviors play an important role in women's decisions to work. As the author states, "women are not alone when they are making their decisions and the environments they live in affect their behavior" (Goksel, 2010). Therefore, in conservative and traditional environment, where men have a higher decision power and stronger social norms, women tend to stay at home, as expected by society, and become housewives. As the author points out, urbanization tends to increase conservatism, which often leads to lower female labor force participation (Goksel, 2010). Although Goksel findings prove interesting, she does not address religion directly and we do not feel it is appropriate to assume that conservatism is a synonym or proxy for religion in this case.

Kizilirmak (2005), also studying Turkey, examines the determinants of wives' labor force participation by employing multinomial logit and mixed logit models of labor participation of married women using data from the 2003 Household Budget Survey. Her evidence shows an "added worker effect", in the sense that wives decide to work in order to compensate for the loss of income due to husbands' unemployment. Her findings also show that wives with unemployed husbands tend to get permanent wage employment rather than temporary wage employment or self employment. An additional finding of her study is that fertility reduces and education increases permanent employment possibilities of women. Although

Kizilirmak considers a number of variables affecting women's decisions to enter the work force, interestingly, religion is not one of them. Our research seeks to fill in the space left by Goksel and Kızılırmak by examining the possible impact of religion on Turkish women's choice to work.

### ***WOMEN IN THE TURKISH LABOR MARKET***

Turkey presents a different trend from many other countries regarding women labor force participation. Women's labor force participation rates have increased in the developed countries in recent decades. In fact, in the globalization process, women's labor force participation rates and employment rates have been grown all over the world, however, Turkey differs from most countries with no increase in women's labor force participation (Ince, 2009). Over the last 50 years, women's labor force participation rates in Turkey have been declining (Goksel, 2010). It declined from 72 percent in 1955 to roughly 26 percent in 2000 (Tansel, 2002).

Today, one of the salient features of the labor market in Turkey is the low share of women holding or looking for jobs. As of 2009, this share was 26 percent as compared to an average of 62 percent in OECD countries and to an average of 33 percent in a group of selected comparison countries with similar levels of economic development (SPO and World Bank, 2009). According to the Global Gender Gap Report 2009 (World Economic Forum, 2009), Turkey has the 6th lowest global gender gap index and the 5th lowest rank in economic participation and opportunity for women. The only countries among the 130 in the sample that perform worse than Turkey are Saudi Arabia, Benin, Pakistan, Chad, and Yemen.

In addition to this, there are large differences in women's participation rates in rural and urban areas in Turkey. In rural areas, women generally work as unpaid family workers in the agriculture sector. Yet, large scale rural to urban migration over the last few decades has

negatively impacted women's entry in to the paid labor as growing urbanization decreases the women's labor force participation rates. However, increases in the education levels of women in urban areas increases women's participation rates. Therefore, education is one of the most important determinants of the women's labor force participation rates in urban areas (TUSIAD, 2002).

Despite increases in education for women and an extension of compulsory education through the eighth grade, women still lag behind men in education and employment. While women's labor force participation among urban women has increased in recent years, over the same time period rural rates have continued to decrease and overall women's presence in the paid labor force in Turkey is depressingly low. Nevertheless, women's labor force participation rates in urban areas increase, while in the rural areas decrease in the recent years. The women's labor force participation rates can be seen in from table 1.

***Insert Table 1.***

There are many factors contributing to the low women's labor force participation rates and the declining trend in women's labor force participation rates in Turkey. Women's labor supply has been thoroughly studied in Turkey (see for instance; Dayioglu and Baslevent, 2006; Kardam and Toksoz, 2004; Tansel, 2002; Kizilirmak, 2005). Certainly a large contributor is the changing structure of the economy. With agriculture comprising an ever smaller share of the economy, women, who have traditionally been in agriculture, have been pushed out of the labor market (Dayioglu and Baslevent, 2006). Rural to urban migration has only furthered this trend. Additionally, increasing schooling for women is another important factor reducing the number of women in the paid economy (Baslevent and Onaran, 2003).

At the same time, slow job creation represents a significant part of the problem. While the

availability of part-time work has significantly increased women's labor force participation in other OECD countries, the same has not happened in Turkey. Instead, many women, discouraged by limited opportunities, have dropped out of the labor force altogether. Education also plays a crucial role in encouraging women's labor force participation. In fact, university-educated young women have participation rates close to those of men (World Bank, 2006). However, equality in education is still far from the reality in Turkey, especially in rural areas and in some regions.

Research conducted by the World Bank and Turkey's State Planning Organization shows many women in Turkey would like to work, but there are some economic constraints preventing them such as jobs with high informality and low wages, long working hours, insufficient education, and a lack of affordable childcare (SPO and World Bank, 2009). Aside from economic barriers, most participants indicated that they face complex cultural and social barriers that restrict their participation in the labor force. Cultural barriers mainly relate to women's role as caregivers and to family/social demands for women to remain at home. In fact, family pressure (from husbands, parents, and in-laws) is an important constraint to employment faced by poorly educated women (SPO and World Bank, 2009).

## ***DATA AND ECONOMETRICS MODEL***

### ***Data***

A survey questionnaire was administered to 518 non-working women. The survey was conducted during the summer months of 2009. Although many of the women that we surveyed had worked at one time, at the time we contacted them, they were not employed. In an attempt to gather as diverse a sample as possible the survey was administered in 10 different districts of Istanbul (Bağcılar, Bakırköy, Başakşehir, Beşiktaş, Kadıköy, Pendik, Sultanbeyli, Şişli, Ümraniye, and Zeytinburnu). It is believed that each district has different

income and welfare levels. Moreover, the districts chosen are divided between the European and the Asian side of the city and these neighborhoods are home to various different groups of people.

In our attempt to ascertain whether or not religion prevents women from working, we specifically chose women who were not engaged in paid work at the time of our data collection. At the same time, we excluded women who work as unpaid family workers. We also eliminated from the sample those women who were retired or physically unable to work. As Islam is by far the most prevalent religion in Turkey, our survey focuses exclusively on Muslim women. The women in the sample range in age from 18-55. The majority of the women were married and more than three quarters of them had children.

The survey was administered by two different methods: by telephone and in person. 211 women were given the survey by telephone while the remaining 307 were interviewed face to face. While the sample is not representative it is diverse. Admittedly, the results are limited by the fact that the survey was administered only in Istanbul. Without doubt, further work needs to be done not only outside Istanbul but outside the major metropolitan areas. However, the diversity of the survey still provides some insight in the interplay of religion and work in women's lives. Moreover, we view this research not as a final stopping point but as an attempt to begin a discussion of the role religion plays in women's economic decisions.

### ***Econometrics Models and Results***

The neoclassical work-leisure theory of labor supply curve assumes a diminishing marginal rate of substitution of the utility curve, and the theory postulates that consumer/labor maximize utility from the consumption of goods and leisure, subject to income and time available. In our study, we postulate further that the consumers make decision of whether or not to work under the constraints of: 1) marital status; 2) number of

children; 3) education attainment; 4) years living in Istanbul; 5) family income; 6) religious belief. So, a woman decides whether to work for pay or not after considering the above factors apart from the utility level raised from consumption and leisure. Following the pioneering work of Mincer (1962), Cain (1966), and Becker (1993), the logit model is specified as:

$$P = F(\beta \cdot X)$$

(1)

Where  $F$  represents the logistic distribution function and  $\beta$  is a vector of the model parameters. The vector  $X$  contains six explanatory variables as mentioned. Since the approach is fairly standard in the literature we ignore the details of the technical parts.

### ***Dependent variables***

A woman makes a binary choice about the employment decision. There are three questions with regard to this decision variable. The first one (model 1) is ***“Have you ever worked in a job?” (Question number C9)***. This observed variable captures the actual decision of a woman regarding employment, assuming that she maximized her utility function after considering the constraints mentioned above. This dependent variable takes on the value of 1 if she has never been worked before and 0 otherwise. Table 2 indicates the percentage of women who never worked before is 54.6 percent, which is more than those who had worked before (45.4 percent).

***Insert Table 2.***

The second question (model 2) is ***“Would you work if you were offered a job?” (Question number C10)***. This latent variable captures the willingness of a woman to work,

assuming she were given such an option. This dependent variable takes on the value of 1 if she has never worked before and 0 otherwise. Table 3 indicates the percentage of women who would work if a job was offered is 51.2 percent, which is larger than those who answered no (48.3 percent).

*Insert Table 3.*

The third question (model 3) is “*Would you work if you had to?*” (Question number C11). This latent variable captures the willingness of a woman to work, assuming she felt forced to do so. This dependent variable takes on the value of 1 if she has never been worked before and 0 otherwise. As expected, table 3 indicates the percentage of women who would work if she felt **forced** to do so is 85.5 percent, far outweighing those who said no (14.5 percent).

*Insert Table 4.*

In our study we choose question C9- “*Have you ever worked in a job?*” as our dependent variable, because this variable is observable and it avoids the problem of using a latent variable, such as questions C10 and C11. We created a dummy variable (Work Dummy) which is 1 if the respondent has **never** worked in a job, and 0 otherwise.

*Independent variables*

As stated above, there are six dependent variables overall: marital status, number of children, education level, years of residency in Istanbul, family income, and how often do you perform religious rituals. For the first variable, Martial Status a dummy variable which takes 1 if the respondent was married, and 0 otherwise was created. Our hypothesis regarding

the first variable is that the probability for married women to stay home is higher. For the second variable, number of children, we expected that women who have more children will have a higher probability of staying home and outside the workforce. Similarly, we anticipate that women who have a lower education level will also stay away from the paid labor market. The variable education level consists of six values: 1 = can't read or write, 2=can read and write, 3=primary school, 4=middle school, 5=high school and 6=university or above.

We created an "Istanbul" variable to represent the number of years that a woman has lived in Istanbul. We expected that women who have lived in Istanbul for longer periods of time may have more information about the labor market, and find access to the labor market easier. Additionally, women with higher family incomes may also choose not to enter the labor market because financially they do not need to. The variable family income is comprised of 9 levels 1=family income<500TL, 2= 501 TL>family income <1000 TL; 3=1001 TL>family income <1500 TL; 4=1501 TL>family income <2000 TL; 5=2001 TL>family income <2500 TL; 6=2501 TL>family income <3000 TL; 7=3001 TL>family income <4000 TL; 8=family income >5001 TL.

Apart from the above control variables above, our main focus is the variable concerning religious rituals. Our hypothesis is that women with stronger religious beliefs, as expressed through their performance of religious rituals, are less likely to enter the labor market. For the variable religious rituals we employed a scale ranging from 1 to 4: 1 represents they often perform religious rituals, 2 represents they perform religious rituals, 3 represents they rarely perform religious rituals, 4 represents they never perform religious rituals. Appendix 1 provides statistics on those questions.

## ***EMPIRICAL RESULTS***

Table 5 presents the logit regression relationship between the decision variable, “work dummy” and the six independent variables. All of the variables are found to be statistically significant at 10 percent level except Istanbul. There are several implications derived from the empirical result. Since the variable “Istanbul” is insignificant at the 10% significance level, our final model is therefore based on specification (2). The estimated model is satisfactory in terms of statistical significance, direction of sign, and appropriateness of fit.

**Implication 1:** If a woman is single, the probability of NOT having worked was less than that of married woman, with evidence at the 10 percent significance level. This outcome was expected because married women often remain outside the labor market. Specification (2) in table 5 implies that if people are married, on average, the Log Odds Ratio (L) will increase by 0.4887.

**Implication 2:** If a woman has more children, the probability of NOT having worked increases as compared to woman have fewer. The outcome was expected because with more children often do not have as much time and energy to work as compared with those who have fewer children. Moreover, locating appropriate childcare also proves difficult. Specification (2) in table 5 implies that if women are related to children, on average, the Log Odds Ratio (L) will increase by 0.2843.

**Implication 3:** For women with higher educational attainment, the probability of NOT having worked decreases compared to women with less education. This outcome was expected because women with more education are more likely to find place in the labor market. Specification (2) in table 5 implies that if women obtain additional educational attainment, on average, the Log Odds Ratio (L) will decrease by 0.4626.

**Implication 4:** For women living longer in Istanbul, the probability of NOT having worked is roughly the same as compared to woman living less years in Istanbul. This implies that there is no labor market advantage for those women who have lived longer in the city.

**Implication 5:** If a woman has higher family income, the probability of NOT having worked increases as compared to a woman with less family income. This was expected because women with higher family incomes do not need to work to support their family. Specification (2) in table 5 implies that if women have higher family income, on average, the Log Odds Ratio (L) will increase by 0.1598.

**Implication 6:** If a woman performs religious rituals more frequently, the probability of NOT having worked is higher as compared to woman with less religious belief. This finding implies that religious belief is a crucial factor in women’s decisions regarding labor market participation. Specification (2) in table 5 implies that if women are related to religious rituals, on average, the Log Odds Ratio (L) will decrease by 0.2526.

*Insert Table 5.*

If we take the estimated coefficients of education as an example in specification (2), it implies that if people obtain additional educational attainment, on average, the Log Odds Ratio (L) will decrease by 0.4626. Moreover, assuming the known values for number of Children=4, education level =high school, family income is between 3001-4000 TL and religious rituals=1 (i.e. practicing religious rituals very often), we estimate the probability of a particular woman deciding not to enter the work force through the following:

$$\log[\text{Pi}/(1-\text{Pi})] = \text{Logit} = 1.3083 + 0.4887(1) + 0.2843(4) - 0.4626(4) + 0.1598(7) - 0.2526(1) = 1.9498$$

We can compute the probability of a woman who will decide not to work on the conditions that:

1. she is married,
2. she has 4 children,

3. she possesses the equivalent of a high school diploma,
4. her family income level is between 3001-4000 TL, and
5. she performs religious rituals very often.

This can be found by taking:  $\text{Anti-log}(1.9498) = 7.0273 = [\text{Pi}/(1-\text{Pi})]$ , then  $\text{Pi} = 0.8754$  or 88%. The result is that the above woman will have an 88% chance of not participating in the labor market in Istanbul. Readers can easily find out other scenarios that they are interested in. Our estimation result is consistent to the hypotheses implied by theory.

Finally, we simulate four hypothetical scenarios as characterized by women that:

1. she is married,
2. she has 4 children,
3. she possesses the equivalent of a high school diploma, and
4. her family income level is between 3001 TL-4000 TL.

Table 6 summarizes the effects of religious rituals on women's employment decisions. (probability of not participating in the labor market). We can see from table 6 that the probability of not getting involved in the labor market drops by 11 percent from often to rare performance of religious rituals. This suggests that religious belief is a crucial factor that discourages married women from participating in the labor market.

Lastly, we examine the interactive effect of religious rituals and education attainment on women's participation in labor market. Table 7 shows the interactive effects of religious rituals and education attainment on women's employment decision (probability of not participating in labor market). We can see clearly that religious rituals have the greatest negative effect on labor market participation for educated women, who, at the same time, represent one of the most productive human resources in the economy. In contrast, for woman with the lowest educational levels, the difference between those with strongest religious rituals and no religious rituals in terms of not participating in labor market is only 4%. This

difference increases to 14% for women who have university degree or above.

*Insert Table 6.*

*Insert Table 7.*

## **CONCLUSION**

There are a number of factors affecting women's low labor force participation rates in Turkey. Firstly, low education level should be evaluated as one reason. By using logistic regression we find that women with higher education attainment will have probability of participating in the labor market. Secondly, we observed that women tend to stay at home when the number of children needed care increases. Also, women with higher family incomes may also choose not to enter paid employment. Lastly, our results suggest that religious belief is a crucial factor in discouraging women from participating in the labor market. This finding is supported by the work of Marshall who explored the attitudes of feminist and Islamist women in Turkey toward working (2005). While there is nothing in Islam which forbids women from working, she found that orthodox Islamist women believed that women should not engage in paid work unless it was a necessity (Marshall, 2005). The women Marshall interviewed related their view that men and women each have special abilities that are granted by god and that for women those abilities center on care of children and home (Marshall, 2005). Perhaps most important among our findings was the result that the frequent performance of religious rituals has the greatest negative effect on the labor market participation of educated women, who are the most productive human resource in the economy. This belies the common assumption that education is the most effective solution to countering women's low labor force participation rate in Turkey. Without doubt this is a complicated issue with a number of factors but our hope is that this research has shed light on

what has until now been a largely ignored factor in women's economic decision making.

### **REFERENCES**

- Amin, S., & Alam, I. 2008. "Women's employment decisions in Malaysia: does religion matter?" *The Journal of Socio-Economics* 37(6): 2368-2379.
- Auer, P., & Fortuny, M. 2000. "Ageing of the labour force in OECD countries: economic and social consequences." *Employment Paper 2000/2*, International Labour Office.  
<http://www.globalaging.org/agingwatch/events/agencies/oecd.pdf>
- Barro, R., & McCleary, R. 2003. "Religion and economic growth across countries." *American Sociological Review* 68: 760-781.
- Baslevant, C., & Onaran, O. 2003. "Are married women in Turkey more likely to become added or discouraged Workers?" *Labour* 17(3): 439-458.
- Becker, G. S. 1993. *Human capital: a theoretical and empirical analysis, with special reference to education*. 3rd edition. Chicago: University of Chicago Press.
- Bilgin, M. H., & Kilicarslan, I. N. 2008. "An analysis of the unemployment in selected MENA countries and Turkey." *Journal of Third World Studie*, XXV(2): 189-205 (Fall).
- Cain, G. G. 1966. *Labor Force Participation of Married Women*. Chicago: University of Chicago Press.
- Christopher, M. C., Karen, L. T., & Warren, R. S. 2005. Religious background and the labor supply and wages of young women. Online. Available. HTTP: <http://www.terry.uga.edu/~cornwl/research/ctw.pdf> (accessed 10 July 2010).
- DaVanzo, J., Haaga, J., Starbird, E., & Peterson, C. 1992. *The Second Malaysian Family Life Survey: Appendix A, Survey Instruments*. Santa Monica, CA: RAND, WD-5919-NICHD/NIA
- Dayioglu, M., & Baslevant, C. 2006. "Female employment, earnings inequality and

- household well-being: the case of urban Turkey.” paper presented at *the International conference of the Turkish Economic Association* held in Ankara and the *13th annual conference of the Economic Research Forum* in Kuwait.
- Fernandez, R. 2007. “Women, work, and culture.” *NBER Working Paper No 12888* (February). <http://www.nber.org/papers/w12888.pdf>
- Foroutan, Y. 2006. “Family, religion, and multiculturalism: challenging implications on women's economic behavior.” *Family, Religion, and Multiculturalism*, The 2006 Annual Meeting of Population Association of America. <http://paa2006.princeton.edu/download.aspx?submissionId=60030>
- Goksel, I. 2010. “Conservatism and female labour force participation in Turkey.” *Job Market Paper*. <http://unibocconi.academia.edu/documents/0071/3814/3rdpaper.pdf>
- ILO. 2010. *Women in labour markets: measuring progress and identifying challenges*. International Labour Office, Geneva.
- Ince, M. 2009. “A socio-economic perspective on women entrepreneurs: evidence from Turkey.” *Journal of Economic Studies* XVIII(4): 138-169.
- Kardam, F., & Toksoz, G. 2004. “Gender based discrimination at work in Turkey: a cross-sectoral overview.” *Ankara Universitesi SBF Dergisi* 59(4):151-172.
- Karshenas, M. 1997. Economic liberalization, competitiveness and women’s employment in the Middle East and North Africa. Online. Available. HTTP: <<http://mercury.soas.ac.uk/economics/workpap/adobe/wp79.pdf>> (accessed 10 June 2010).
- Kizilirmak, B. 2005. “Labor market participation decisions of married women: Evidence from Turkey”. *Unpublished working paper*. available at [http://www.policyinnovations.org/ideas/policy\\_library/data/01222/\\_res/id=sa\\_File1/](http://www.policyinnovations.org/ideas/policy_library/data/01222/_res/id=sa_File1/)
- Mangeloja, E. 2003. “Implications of the economics of religion to the empirical economic research.” *EconWPA 0310004*. <http://129.3.20.41/eps/othr/papers/0310/0310004.pdf>

- McLaurin, J. R., & Agnieszka, K. 2008. "Women entrepreneurs of the world: a comparison of women entrepreneurs from Poland, the United Arab Emirates and the United States." *Allied Academies International Conference Proceedings of the Allied Academies*, 15(2): 179-184, Reno.
- Mincer, J. 1962. "Labor force participation of married women." In *Aspects of Labor Economics*, ed. Gregg H. Lewis, pp. 63-105. Princeton: Princeton University Pres.
- Moghadam, V. M. 1990. "Determinants of female labor force participation in the Middle East and North Africa." *WIDER Working Papers WP 85*, (May 1990).  
[http://www.wider.unu.edu/publications/working-papers/previous/en\\_GB/wp-85/\\_files/82530829649776636/default/WP85.pdf](http://www.wider.unu.edu/publications/working-papers/previous/en_GB/wp-85/_files/82530829649776636/default/WP85.pdf)
- Neuman, S., & Grossbard-Shechtman, S. 1995. "An analysis of religion-based differences in Israeli women's labor force participation - implications for religious differences in marriage." presented at *the Meetings of the Population Association of America*, San Francisco, California, April 4-5.
- Noland, M. 2003. "Religion, culture, and economic performance", Online. Available at: <http://www.iie.com/publications/wp/03-8.pdf> (accessed 4 June 2010).
- OECD. 2004. Female labour force participation: past trends and main determinants in OECD countries. OECD Economics Department. Online. Available at: <http://www.oecd.org/dataoecd/25/5/31743836.pdf> (accessed 10 May 2010).
- SPO and World Bank. 2009. *Social and economic benefits of more and better job opportunities for women in Turkey*. Turkey's State Planning Organization (SPO) and the World Bank.  
[http://siteresources.worldbank.org/ECAEXT/Resources/Turkey\\_FemaleReport\\_3\\_pager\\_final\\_final.pdf](http://siteresources.worldbank.org/ECAEXT/Resources/Turkey_FemaleReport_3_pager_final_final.pdf)
- Tansel, A. 2002. "Economic development and female labor force participation in Turkey:

time-series evidence and cross-province estimates.” *ERC Working Papers in Economics* 01/05 (May). <http://www.erc.metu.edu.tr/menu/series01/0105.pdf>

TUSIAD, 2002. *Turkiye’de Isgucu Piyasasi ve Issizlik (Labor Market and Unemployment in Turkey)*. Turkish Industrialists' and Businessmen's Association (TUSIAD) Publication, Publication No. TUSIAD-T/2002/12-354, December, Istanbul, <http://www.tusiad.org.tr/FileArchive/issizlik.pdf>

World Bank. 2006. *Turkey Labor Market Study*. World Bank, Report No. 33254-TR, April 14. [http://siteresources.worldbank.org/INTTURKEY/Resources/361616-1144320150009/Labor\\_Study.pdf](http://siteresources.worldbank.org/INTTURKEY/Resources/361616-1144320150009/Labor_Study.pdf)

World Economic Forum. 2009. *The Global Gender Gap Report 2009*. Geneva, Switzerland: World Economic Forum. <http://www.weforum.org/pdf/gendergap/report2009.pdf>

## APPENDIX

**TABLE 1. Women's Labor Force Participation Rates in Turkey**

Years	Turkey	Urban	Rural
1988	34.3	17.7	50.7
1989	36.1	17.8	55.1
1990	34.1	17.0	52.0
1991	34.1	15.6	55.5
1992	32.7	17.0	51.9
1993	26.8	15.6	40.5
1994	31.3	17.3	49.0
1995	30.9	16.8	49.2
1996	30.5	16.0	49.8
1997	28.8	16.9	45.0
1998	29.2	16.8	46.9
1999	30.0	17.7	47.4
2000	26.6	17.2	40.2
2001	27.1	17.4	41.7
2002	27.9	19.1	41.4
2003	26.6	18.5	39.0
2004	23.3	17.7	36.7
2005	23.3.	18.7	33.9
2006	23.6.	19.5	33.1
2007	23.6.	19.8	32.5
2008	23.5	20.8	32.9
2009	26.0	23.0	34.6

**Source:** The data have been gathered from the Turkish Statistical Institute (TurkStat), <http://www.turkstat.gov.tr/Start.do>

**TABLE 2. Question C9: Have you ever worked in a job?**

	Frequency	Percent
1 yes	235	45.4
2 no	283	54.6
Total	518	100.0

**TABLE 3. Question C10: Would you work if you were offered a job?**

	Frequency	Percent
1.yes	265	51.2
2. No	250	48.3
Don't know	3	.6
Total	518	100.0

**TABLE 4. Question C11: Would you work if you had to?**

	Frequency	Percent
1 yes	443	85.5
2 no	75	14.5
Total	518	100.0

**TABLE 5. Logit Model Empirical Results**

Dependent Variable: <b>Work Dummy</b>	Specification (1)	Specification (2)
<b>Marital Status</b>	0.4945* (0.304)	0.4887* (0.303)
<b>Number of Children</b>	0.2839*** (0.088)	0.2843*** (0.088)
<b>Education level</b>	-0.4572*** (0.102)	-0.4626*** (0.099)
<b>Istanbul</b>	-0.0006 (0.003)	
<b>Family Income</b>	0.1622* (0.085)	0.1598* (0.085)
<b>Religious Rituals</b>	-0.2516** (0.120)	-0.2526** (0.120)
<b>Constant</b>	1.3071*** (0.499)	1.3083*** (0.499)
Log Likelihood	-365.364	-319.348
Durbin-Watson stat.	2.017	2.019
Observations	518	518

Note: Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**TABLE 6. Effects of Religious Rituals on Women's Employment Decision (Probability of Not Participating in Labor Market)**

Frequency of Performing Religious Rituals	Probability of Not Working
Often	88%
Sometimes	85%
Rarely	81%

Never

77%

**TABLE 7. Interactive Effects of Religious Rituals and Education Attainment on Women's Employment Decision (Probability of Not Participating in Labor Market)**

Frequency of Performing Religious Rituals	Education Attainment					
	1	2	3	4	5	6
1	97%	95%	92%	88%	82%	74%
2	96%	93%	90%	85%	77%	68%
3	94%	91%	87%	81%	73%	63%
4	93%	89%	84%	77%	67%	57%
Max-Min	4%	5%	8%	11%	14%	17%

**Note:** For education attainment: 1 = can't read or write, 2=can read and write, 3=primary school, 4=middle school, 5=high school, and 6=university or above. For religious rituals: 1 = often obey to religious rituals, 2 = obey to religious rituals, 3 = rarely obey to religious rituals, 4 = never obey to religious rituals.