Ekonomik Yaklaşım, Cilt : 19, Sayı : 69, ss. 89-106

TÜRKİYE'DE BİREYSEL EMEKLİK SİSTEMİ'NDEKİ CİNSİYET FARKLILIKLARININ ANALİZİ

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Özet

Bu çalışmada Türkiye'de devam eden sosyal güvenlik reformunun önemli bir parçası olarak 2003 yılında oluşturulan Bireysel Emeklilik Sistemi cinsiyetçi bir bakış açısı ile incelemektedir. Toplumsal cinsiyet (gender) sosyal güvenlik sistemleri üzerine yapılan çalışmalarda önemli bir inceleme alanıdır. Bu çerçevede, bu çalışma Türkiye'deki özel emeklilik sistemini inceleyerek bu konudaki çok sınırlı yazına katkıda bulunmaktadır. Çalışmada Emeklilik Gözetim Merkezinin tarafından sunulan ve sistemdeki 1.3 milyonun üzerindeki katılımcının sosyo-ekonomik bilgilerini içeren veri seti kullanılarak erkek ve kadın arasındaki prim miktarındaki farklılığın varlığı ve belirleyicileri ayrıştırma yöntemi ile incelenmiştir. Bu çerçevede, beklendiği üzere, sistemde genel anlamda kadın ve erkek arasında prim üretimi açısından cok belirgin bir farklılığa rastlanmamıştır. Ancak inceleme farklı gelir grupları için derinleştirilerek, eğitim düzeyi ve katılımcıların bölgelerinin sosyo-ekonomik gelişmişlik düzeyi gibi bir takim değişkenlerin etkisi incelenmiştir.

Anahtar Kelimeler: *Sosyal Güvenlik, Özel Emeklilik, Toplumsal Cinsiyet, Ayrıştırma Yöntemi*

An Analysis of Gender Gaps in the Private Pension Scheme in Turkey

Abstract

This study analyzes the Individual Pension System, which was introduced in 2003 as an essential part of the ongoing social security system in Turkey, from

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gendered perspective. Gender is an important analytical category in studies on social security systems. In this context, the study aims to contribute to the literature by analyzing the private pension scheme in Turkey. By using the actual data of over 1.3 million participants in the system provided by the Pension Monitoring Center, the study aims to decompose the determinants of the discrepancy in premiums between men and women. In this context, as expected, there is no remarkable gender gap in terms of payments into the system. However, the analysis is extended to consider different income groups and the effect of some socio-economic variables such as education and human development level of the participant's origin on the within group gender gap.

Keywords: *Social Security, Private Pension, Gender, Decomposition Analysis*

Introduction

Privatization attempts, recommended by the IMF and the World Bank and based on neo-liberal stabilization policies have been considered as a solution to the social security crisis which broke out in the 1970s due to various reasons. Particularly Latin American countries and some others have already reformed their systems ranging from partial privatization to full privatization. Gender has been an important analytical category in sizeable literature on social security reforms.

Turkey, on the other hand, started to change the legal structure of the system based on mentioned policies, particularly in late 1990s. The Individual Pension System (IPS), a privately managed pension scheme which was established in 2003, is a part of the ongoing social security reform.

There are a few studies dealing with gender dimension of IPS showing the gaps in insurance benefits between men and women (Elveren and Hsu, 2007: 32-34; Elveren, 2008b: 50-52) based on some projections and simulations. This study, on the other hand, aims to analyze the gender gap in pension benefits in the IPS by using the data of over one million participants of the system. The main question the paper addresses is how the effects of certain variables on regular contributions (RC) differ in men and women. The main contribution of this study to the literature is to reveal the gender gap and its determinants in payment into the system, which is the major part of the pension benefits in the IPS. Therefore, as a first attempt of analyzing important dimension of individual pension system in Turkey, (i.e. gender dimension) this study is of great importance.

Following this section, we provide a brief literature review on gender and social security. The date and model are presented in section 3. The last section is devoted to results and discussion.

2. Gender and Social Security

Gender has been an important analytical category in analysis of social security systems, which is an essential part of the welfare regime. The feminist approach deepens the analysis of the welfare state. The basic criticism of the mainstream (or "malestream" as referred by some feminists) analysis of the welfare state is that it ignores the women and therefore involves some theoretical and empirical problems (O'Connor, 1993: 515; Orloff, 1996: 74; Lewis, 1992: 161; 1997: 162; Sainsbury, 1996: 6-8).

There is a significant literature on gender inequality in social security system (see Elveren 2008b for a review[3]). In this literature, scholars show that privatized social security systems deepen this gender gap (MacDonald, 1998: 15-16; Williamson and Rix 1999: 48-49; James et al., 2003: 182-184; Estes 2004: 16).

The reasons that deepen the gender inequality can be summarized as following:

- By favoring male breadwinner model, private pension schemes make women more dependent on men's income since pension benefits mostly is based on individual's own contribution,

- Privatized social security systems make women shoulder more burdens (i.e. Caregiving) since social expenditures is cut,

- Shorter working life and low earning worsen financial status of women who are disadvantageous in labor market,

- Having a higher life expectancy decreases the annuities,

- Finally, being more risk-averse than men is another negative factor for women's pension benefit.

In addition to early example of full privatization in Chile, several countries also privatized their social security systems. Argentina, Bolivia, Columbia, Costa Rica, Dominican Republic, El Salvador, Macedonia, Slovak Republic, Mexico, Nicaragua, Peru, Ukraine, Romania, Lithuania, Seychelles, Uruguay, Australia,

[3] To best of our knowledge there is no major work analyzing the determinants of the gender gap in pension benefits across the world. Therefore, our literature review is limited with a general review of gender dimension of private pension schemes in the world.

Hungary, and Kazakhstan "reformed" their systems through a multi pillar system to different extents (Schwarz and Demirguc-Kunt, 1999: 28-29; Andrews, 2006: 15-16). Poland, Latvia, Russia, Sweden, Kyrgyz Republic, Mongolia, and Italy, on the other hand, adopt the "notional defined contribution," a *mixed* system, in which individual accounts are based on the payroll taxes by employee and employers and run by the state (Cichon, 1999: 89; Williamson, 2004: 24). Including most of these countries, many others have reformed the traditional PAYG system to deal with fiscal crisis of their system that have faced with or may face in the future.

Overall observation from across the world shows that privatization of social security systems increases the investment risks due to fluctuations in returns in new system. The private schemes also increases "the governmental costs" in transition period; decreases efficiency of investments due to higher range of investment options and makes participant more vulnerable towards the fluctuations in world economy (Turner, 2005: 19-22)

In Kazakhstan new private pension scheme decreased the scope and amount of minimum guarantee payments for participant. This transformation leads higher gender inequality in pension system. In traditional unfunded public system, retirement benefits for women used to be as high as what men earn even though their average payments are around the half of the men. Since one's benefit is totally based on his/her contribution to the system the gender inequality in retirement payments increased dramatically after the implementation of the new system in Kazakhstan (Hinz et al., 2005: 37). Due to the fact that women have higher life expectancy, earlier retirement for women causes higher poverty rate among old age women compared with men.

Researches on the U.S. pension system show that while the gender gap is very negligible for full time workers, it is still persistent since women are more prone to men to have part time jobs. Also, regardless of whether they have full time or part time job, it is very common for women to quit their jobs to take care of family (Shaw & Hill, 2001: 14).

For the U.K., Chile, and Australia it is shown that in privatized social security system women are more vulnerable to investment risks. Since women undertake more child care and work than men do, private pension schemes provide less security for women than the traditional systems, where the former punish discontinuous career with fewer years of work and longer years in part-time jobs. Therefore, women earn lower retirement income in the defined contribution schemes compared with what they used to have in traditional system (Korczyk 2003: 32).

Creating family-friendly environments and providing child care services would increase the labor force participation of women and help to keep them in full time jobs. This is seen as one of the fundamental steps towards diminishing gender gaps in pension system. However, according to the data of the Central European nations, privatization of social security has indeed decreased the scope of these social services (Fultz & Steinhilber, 2004: 271-272). Also, a decent level of minimum guaranteed returns for low income participants who are mostly women would shrink gender gap among retired people.

In Mexican case, because of decline in guaranteed minimum returns after retirements, transition to the private pension system deepens existing gender inequality (Dion, 2006: 417). Since women are more likely to have part-time jobs or involve in informal sector, they can not fulfill work-hour requirements. Also, in new system, enrollment costs are higher and thereby women in low income jobs can not afford to enroll at first place. Lastly, new system relies on unisex life tables more than the former one which treat men and women in a similar fashion in terms of their retirement benefits. However, women live longer than men but this difference is not taken into account in new system.

In a probit model analysis with regression decomposition for the determinants of gender gap in retirement benefits, it is shown that the gender gap in the case of the U.S. is mostly explained by women's lower wages and less working years due to family care duties (Even & Macpherson, 2003: 19-20). However, the authors project that gender gap will get narrower for next 20 years for the next generation whereas the gender gap still stay firm for current generation as they get older.

Some scholars, on the other hand, argue that privatization of the social system can be more beneficial for participants as long as a central efficient bureaucracy is established to organize it. (Anusic et. al, 2003: 74-75).

As it is observed in El Salvador, in the case of social security privatization, governments under political pressures can create policies for increased pension funds or other benefits which would decrease the efficiency of the system (Acuna, 2005: 47-48). In addition, market concentration in terms of investment options and competing insurance companies can make participants more vulnerable towards global economic fluctuations.

We skip the sizable literature on the social security reform in Turkey (see Elveren (2008a) for a detailed review and Buğra and Keyder (2006) for an excellent discussion of transformation of Turkish welfare regime); rather focus on the gender dimension of welfare regime in general and IPS in particular.

To best of our knowledge there are few studies that address the gender dimension of welfare regime of Turkey. Although many studies recognize the low social security coverage for women mostly because of low labor force participation in formal economy and acknowledge the need for gender sensitive regulations in social security system to alleviate poverty, there is no comprehensive study which focuses on gender biases and study the welfare regime in general or social security system in particular from a gendered perspective.

Topal and Ozbilgin (2001: 20-21), in this context, goes beyond the general discussion on the social security reform and consider the wellbeing of women retirees. They point out that there is a wage inequality between men and women and migration causes higher labor participation in informal economy among women, which makes women suffer from both low wage and lack of social security. They also recognize the dependency of women both in working years and in retirement. They conclude that with lower wage and shorter working life a social security reform that does not recognize disadvantages of women in social and working life is likely to increase gender gap in Turkey.

Dikbayır and Taş (2000: 4), on the other hand, states that gender is omitted in health studies. They argue that the main reason of inequality in accessing the health service is that "health insurance system in operation does not fit to the conditions in Turkey and there are problems arising from misfunctioning."

Considering IPS, there are three studies that deal with gender inequality. Teksoz and Sayan (2002: 34-35), in a stochastic simulation that analyzes the investment strategies under privatized pension schemes, briefly consider gender differences as a part of sensitivity analysis. By doing so, although they show lower return for women due to longevity, they are not able to present the whole picture, in which wage discrimination and shorter working life are also crucial factors.

Elveren (2008b) uses the model introduced by Teksoz and Sayan (2002) in order to show the total effect of some disadvantages of women, namely shorter working life, less earning, longer life expectancy, wage growth, administrative costs, and risk-averseness, on retirement benefits of women in Turkey (Elveren, 2008: 52-53). He showed that women's pension benefit as a percentage of those of men declines up to 30% in rural areas, in the elderly, and in low education levels, whereas the lowest gap, at 79%, is among the youngest individuals in urban areas.

This study, however, by using the data of participants of IPS, aims to show the actual gender gap and its determinants. Therefore, the main contribution of this study is to reveal the gender gap and its determinants in the private pension scheme in Turkey.

3. Data and Model

In this study we use data of actual information of 1,381,172 participants in IPS by 2006. The data is provided by the Pension Monitoring Center, which is an autonomous institution that was established to control and regulate the system and to provide data for participants and the public. The data provides age, gender, occupation, education level, marital status, income, provinces, premium amount, and total capital accumulation of participants. Table 1 summarizes the variables and their operationalization.

Table 1: Definition and Operationalization of Variables

Variables	**Definition**	**Operationalization**
Regular Contribution (RC) (*Dep. Variable)*	Amount of Annual Regular Payments	Continuous variable
Year	Total number of years in the system	With values between 1 & 4
Age	Age of the Participants by 2006	Continuous variable
Occupation	Participants' occupation category	0=Housewife, student, unemployed, 1=retired 2=government officer 3= worker 4=self-employed 5=high status jobs (*In our models, each category is a dummy variable itself, taking values of 0 or 1*).
Income	Participants' income category	0= x<minimum wage 1= min. wage<x< 2 min wage 2= 2 min wage< x<3min wage 3=3 min wage<x<6 min wage 4=6 min wage <x < 10 min wage 5=10 min wage<x
Sex	Participants' sex	0= women 1=men
Marital	Participants' marital status	0= never married 1=married
Education	Participants' education category	0= less than high school degree 1=high school degree 2=college degree or more *(In our models, each category is a dummy variable itself, taking values of 0 or 1)*
Development of Provinces	Development level of participants' provinces according to HDI	0= Medium Level Development 1= High Level Development

In this study, we employed OLS Regression analysis. Regular contribution of participants is regressed on our social variables; age, education level, occupation category, marital status and development level of provinces. Also, to examine how development levels of provinces can affect the explanatory powers of education, we created interaction variables between education and development level.

We performed the same analysis both for men and women to see possible sex differences. However, we only include those participants of 4th income category for mainly two reasons: Firstly, lack of financial resources should not hamper our analyses and findings. Thus, we excluded those with an income under a certain level. Secondly, as shown in following section, only for that category women have more regular contributions than men. This is an interesting finding that we address in this study.

For our OLS regression, we create a random subset of whole population, which has 126,734 participants to make regression analysis easier[4].

In our regression analysis, each category of nominal level variables is included as dummy variables. Plus, categories of education will appear as dummy variables in our models. Categories codified as "0" will be reference categories[5].

4. Results

In Turkish case, among current participants we showed that the gender gap is negligible for Regular Contributions (RCs). It is 1649.4 Turkish Lira for men and 1644.8 for women. However, once we focus on income groups, we see some differences between sexes. In Table 2 we see that, for first 3 income groups, amount of RCs are very similar. In fourth group, women's RCs are almost 10 % higher than the men's. Such an occasion is also found for 6th income group. This interesting point needs to be examined.

4th category is analyzed for several reasons. The reason why we do not analyze 6th category, in which women has also higher averages than men, is that the number of observations are not large enough to yield robust results. Also, it is important to note that 6th income category represents the richest strata of the society;

[4] In our regression analysis, some groups are discarded for certain reasons. Firstly, we drop those whose province of origin was not known. By this way, 12,304 observations were deleted from our sample. Also, 54,524 observations were also deleted because their occupation category was not known. In terms of marital status of our participants, 3,761 of those who were divorced/widowed were deleted because this category had very limited amount of observations when we run our regressions for different sexes of 4th income category.

[5] Please see Table 1

therefore, it would not be accurate to generalize the results of analysis of this category. Moreover, it is appropriate to analyze the 4th category since middle-income groups are more likely than lower income group to participate in IPS.

Table 2: Regular contributions by men and women according their income groups

Income Groups	**Male**	**Female**	**M/F**
Income 1st			
Number	8144	5014	
Regular Contributions	1791.162	1724.761	1.04
Income 2nd			
Number	11600	7451	
Regular Contributions	1472.131	1520.036	0.97
Income 3rd			
Number	14302	9085	
Regular Contributions	1627.698	1631.322	1.00
Income 4th			
Number	3065	2055	
Regular Contributions	1545.983	1708.836	0.90
Income 5th			
Number	2080	1323	
Regular Contributions	2204.257	1951.91	1.13
Income 6th			
Number	948	571	
Regular Contributions	1850.463	2051.641	0.90

Source: Pension Monitoring Center (2006)

Since income is a control variable it can not explain the differentiation between men and women. On the other hand, education levels of people, even after controlling for income, can explain RCs differences between men and women. However, as we seen Table 3, this is not the case.

Table 3: Education levels for men and women of 4th income category

4th Income Category	**Women**	**Men**
Education Level	**%**	**%**
Less Than High School Degree	5.16	4.47
High School Degree	53.19	51.03
College Degree or More	41.65	44.5
Total	100	100

Source: Pension Monitoring Center (2006)

Table 3 shows that in this income category men and women have very similar education levels. The age of the men and women in this income group is also similar, as it is 35.5 and 36.1 for men and women, respectively.

Table 4 shows the results for our OLS regression done for women.

Table 4: OLS Regression results for women (*P<0.1 **P<0.05 ***P<0.001)

4th Income Category – Females	**Dependent Variable: Regular Contributions**					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Age	64.15***	64.86***	63.77***	61.3***	61.7***	60.17***
(Beta)	0.22	0.22	0.22	0.21	0.21	0.21
Categories of Education:						
(Comparing to Less Than High School Degree)						
High School Graduation		-40.08	-66.30	26.02	29.37	-771.6*
(Beta)		-0.01	-0.01	0.00	0.01	0.22
College Degree or More		-144.25	-210.70	-50.85	-23.29	-742.09
(Beta)		-0.02	-0.04	-0.01	0.00	0.20
Categories of Occupation:						
(Comparing to Unemployed, Student, H. Wife)						
Retired			209.41	140.62	134.43	116.95
(Beta)			0.01	0.01	0.01	0.01
Governmental Officer			24.57	-66.62	-70.33	-81.11
(Beta)			0.00	-0.01	-0.01	-0.01
Worker			-478.66	-763.62	-740.67	-893.97
(Beta)			-0.01	-0.01	-0.01	-0.02
Self-Employed			-57.24	-135.38	-116.56	-114.13
(Beta)			-0.01	-0.01	-0.01	-0.01
High Status Occupations			151.66	-15.49	-5.71	-19.01
(Beta)			0.02	0.00	0.00	0.00
Marital Status				-31.23	-37.08	-18.87
(Beta)				0.00	0.00	0.00
Year				981.71***	975.9***	972.87***
(Beta)				0.27	0.27	0.27
High Level of Human Development					-202.35	-1435.3**
(Beta)					-0.03	-0.24
Interaction of Region and Education						
High School Grad. High Level of Devel.*						1356.1**
(Beta)						-0.13
College Degree. High Level of Devel.*						560.177**
(Beta)						-0.13
Coefficient	-575.3**	-519.074	-490.705	-2126.9***	-2015.5***	-1233.4**
N:	2055	2055	2055	2055	2055	2055
R-Square	0.0487	0.049	0.0497	0.1244	0.1255	0.128

The Table 4 reveals that after controlling for income group; education level, occupation categories, living in a province with high level of human development, and marital status have no effect on RCs for women. Only number of years for participants involved in the system has a positive effect on RCs. However, in Model 6 where we have interaction variables between *human development level* and *education level*, we observe a different issue. Not only high level of development for the provinces receives its statistical significance, but also interaction variables turn out to be significant.

How can we explain this? One may expect that human development level of provinces should have positive effect on RCs. It can be assumed that developed regions have more developed financial institutions. However, it should not be forgotten that we controlled for income level. As purchasing power of same amount of income will be higher in less developed parts of Turkey, people with certain income may have higher level of savings to invest in IPS in less developed provinces.

Also, we made interactions. It is understandable that, once controlled for the different affects of education on RCs for provinces with different human development level, human development level has negative effect on RC. That's because this negative effect is the negative effect of human development for those with less than high school degree, comparing to others. In other words, negative effect of the human development level of a province on RC is less for those women with college degree and more and even smaller for those with high school degree.

Same regression analysis is done for men. Table 5 summarizes our findings. We add our interaction variables in Model 6. However, for men, the situation has different aspects. Firstly, education variables are statistically significant this time. Unlike women, for men, more education means less RCs. This can be explained in a few ways. Firstly, we control for income but we do not control for occupation status – whether it is full time and part time or for informal or formal sector. As we saw in our literature review, women are more likely to have part time jobs or jobs in informal sector then men. So, higher education can mean less possibility of informal sector jobs. Thus, once they are covered by public social security system of formal sector jobs, men may feel less need of contribution. Secondly, less educated men more than women may feel insecure without any pension system to cover for retired ages, as they are seen as primary breadwinners in Turkish society.

Table 5: OLS regression results for men

4th Income Category - Males	**Dependent Variable: Regular Contributions**					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Age	84.17***	82.45***	80.45***	79.62***	78.26***	80.02***
(Beta)	0.24	0.23	0.23	0.23	0.22	0.23
Categories of Education:						
(Comparing to Less Than High School Degree)						
High School Graduation		-864.44**	-771.91**	-767.32**	-775.2**	1003.2**
(Beta)		-0.13	-0.12	-0.12	-0.12	0.15
College Degree or More		-953.81**	-771.1**	-761.52**	-796.3**	932.1**
(Beta)		-0.14	-0.12	-0.11	-0.12	0.14
Categories of Occupation:						
(Comparing to Unemployed, Student, H. Wife)						
Retired			43.72	162.37	111.10	20.96
(Beta)			0.00	0.01	0.01	0.00
Governmental Officer			-259.88	-185.62	-212.87	-288.12
(Beta)			-0.04	-0.03	-0.03	-0.04
Worker			-979.44	-1033.31	-1071.49	-1477.94
(Beta)			-0.02	-0.02	-0.02	-0.02
Self-Employed			-328.69	-341.04	-395.04	-500.0*
(Beta)			-0.03	-0.03	-0.04	-0.05
High Status Occupations			-476.43*	-433.2*	-480.8*	-528.1**
(Beta)			-0.06	-0.06	-0.06	-0.07
Marital Status				-197.78	-156.12	-141.48
(Beta)				-0.02	-0.02	-0.01
Year				1020.9***	1020.8***	1029.1***
(Beta)				0.24	0.24	0.25
High Level of Development					265.3**	3261.8***
(Beta)					0.04	0.48
Interaction of Region and Education						
High School Grad. High Level of Devel.*						-3192.18***
(Beta)						-0.43
College Degree. High Level of Devel.*						-3089.3***
(Beta)						-0.44
Coefficient	-1495.2***	-567.453	-328.596	-1911.9***	-2011.5***	-3700.4***
N:	3065	3065	3065	3065	3065	3065
R-Square	0.0567	0.0601	0.0617	0.1218	0.1232	0.1328
*P<0.1 **P<0.05 ***P<0.001						

In Table 5, we see gender differences in terms of the effects between human development level and education. Even before Model 6, high human development level of provinces has small but statistically significant effect on RCs. But this effect is only for those with less educated people. As oppose to case of women, human development level has no negative effect on RC of men, and its effect is only for less educated people which is positive. High status occupations have also statistically significant effect on men's RCs levels. This is parallel with what we said above for education. High status jobs more probably are full time and formal sector jobs where people are already covered by satisfactory public social benefits.

Table 6 covers all differences between men and women in terms of the effects of our independent variables on dependent one. Here, we see that affects of variables on RC depend, at least partly, on gender of the participant. Also, we have regression decomposition results: Column 4 gives us the contribution of each variables to RC difference between men and women, which is 162.9 Turkish Lira. Last column gives us the percentage value of same contribution.

Table 6: Regression Model 6 for men and women

	Men	**Women**	**Difference**	**%**
DKP	1545.9	1708.8	162.9	
	Model 6	*Model 6*		
Age	80.02***	60.17***	-748.89	-459.72
(Beta)	0.23	0.21		
Categories of Education:				
(Comparing to Less Than High School Degree)				
High School Graduation	1003.2**	-771.6*	-922.123	-566.07
(Beta)	0.15	0.22		
College Degree or More	932.1**	-742.09	-414.785	-254.63
(Beta)	0.14	0.20		
Categories of Occupation:				
(Comparing to Unemployed, Student, H. Wife)				
Retired	20.96	116.95		
(Beta)	0.00	0.01		
Governmental Officer	-288.12	-81.11		
(Beta)	-0.04	-0.01		
Worker	-1477.94	-893.97		
(Beta)	-0.02	-0.02		
Self-Empoyed	-500.0*	-114.13	53.5	32.84
(Beta)	-0.05	-0.01		
High Status Occupations	-528.1**	-19.01	130.441	80.07
(Beta)	-0.07	0.00		
Marital Status	-141.48	-18.87		
(Beta)	-0.01	0.00		
Year	1029.1***	972.87***	-17.1991	-10.56

(Beta)	0.25	0.27		
High Level of Development	3261.8***	-1435.3**	-2933.86	-1801.02
(Beta)	0.48	-0.24		
Interaction of Region and Education				
High School Grad. High Level of Devel.*	-3192.18***	1356.1**	1294.74	794.80
(Beta)	-0.43	-0.13		
College Degree. High Level of Devel.*	-3089.3***	560.177**	1158.6	711.23
(Beta)	-0.44	-0.13		
Unexplained Part	-3700.4***	-1233.4**	2467	1514.43
N:	3065	2055		
*P<0.1 **P<0.05 ***P<0.001				

5. Conclusion

Our main findings, in terms of gender differences for the affects of our variables on RCs can be summarized as follows:

- Age as a variable has positive effects on RCs for both men and women, but its effect has stronger for men.

- Higher education has no effect on RCs for women but it has positive effect on RCs for men.

- Occupation categories, comparing to our reference group –housewives, student, and unemployed- have no statistically significant effect on RCs for women, but they do have for men since having a high status job has negative affect for the latter**.**

- Being married compared to being single has no effect on RCs for both sexes**.**

- Number of years of participation has important positive effect on RC for both sexes, but this is slightly bigger for men

- Gender differences are most striking when it comes to interaction effect of education and human development level of the participants' province . For women, living in a province with high level of human development has almost no effect on RCs for high school graduates, and its effect is negative for others – most negative for those with less than high school degree. On the other hand, for men, high human development has no effect on RC for high school or college degrees, but it provides big advantage for men with less than high school degree. So far, we read the interaction from the side of human development level. From education side, we can say that high school or college graduation has only positive effect on RCs for women as long as participant lives in a province with high human development

level. But for men, positive effect of high school or college graduation on RC is valid for those who live in provinces with medium developed level.

We also mentioned regression decomposition. Unfortunately, we do not have enough scope of variables to explain women's higher RCs averages than men. Variables with statistically strong impact on RCs mostly bring advantage to men - like age, year, education categories and human development level of provinces. Only interaction between education and human development level seems like providing to women's higher RCs averages. Thus, the value of this paper should not be searched in our regression decomposition analysis.

All in all, we have two main findings here. Firstly, a financial concept like RCs can at least partly be explained by social variables like age, education level and human development levels of provinces, even after controlled for income which may the most important explanatory variables for many.

Secondly, our findings support the idea that even though there is not much gender gap among men and women in terms of their RCs, we still see that variables' explanatory powers on RCs differ according to sex of the participant.

We have important policy issues here. In order to shrink the gender gap in terms of benefits of the system or ease the negative effect of lack of education or Regionality, this study may give an idea of the nature of the affect of such variables on RCs. For example, we saw that women with less than high school education in developed parts of the Turkey have hardships to afford satisfactory amounts of RC, which will leave them with very small amount of retirement income. Though we controlled for income levels, we did not control for purchasing power of this income or life costs. Also, higher education has positive impacts in less developed parts but not in developed parts of Turkey. Thus, education may be subsidized in provinces with less developed parts of Turkey which can have positive effects on retirement funds of people of these regions.

Our study has some limitations of itself, obviously. Firstly, we need other variables for employment type like full-time and part time employment. By this way, we would see how our findings change according to part-time workers.

Secondly, accumulation of savings in IPS system would make a better dependent variable. However, this system is a rather recent development in Turkey and the data covers only years between 2003 and 2006. In future, a longer term data may provide more significant results.

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