METU Studies in Development, 30 (June), 2003, 1-17

The determinants of earnings differentials in Ankara and İstanbul*

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Abstract

In this study, an attempt is made to compare and contrast the determinants of earnings differentials in Ankara and İstanbul. The determinants of earnings differentials are first examined with semi-logarithmic single equation models based on the basic human capital approach. Secondly, extended models are formed in which all the variables are expressed as dummy variables. In general, the average per hour earnings in İstanbul is higher than in Ankara. It is found that age, gender, education, job status and marital status have significant effects on the explanatory power of the model, whereas the impact of occupation is only modest.

1. Introduction

Starting with the early works in the 1960s, the topic of personal income distribution and its determinants has received extensive attention in the economics literature. These early studies adopted the human capital approach, in which investment in human capital serves as the basic determinant of personal earnings. The main determinants of earnings, according to this approach, are variables such as, education and experience (Becker and Chiswick, 1966; Mincer, 1974). These models were criticized, however, for not taking into account socio-economic

* An earlier version of this paper appeared in the METU Economic Research Center (ERC) Working Paper Series as WP No. 01/02. The authors would like to thank the anonymous referees for helpful comments and suggestions.

factors and physical capital. Therefore, researchers such as Morgenstern (1973) and Behrman and Taubman (1976) extended the basic human capital model by adding variables like occupation, employment status, gender, father's education and occupation. Other researchers went further and developed recursive and simultaneous equation systems to take into consideration the inner linkages between education, occupation and earnings (Psacharopoulos, 1977a; Kasnakoğlu, 1978; Tachibanaki, 1980; Varlıer, 1982).

In this paper we make an attempt to analyze the determinants of earnings differentials in two of the Turkey's largest cities, Ankara and İstanbul. Single equation models are used to explain the variations in personal earnings in these two cities. Another aim is to compare the current findings with the earlier studies for Turkey, by Varlıer (1982), Kasnakoğlu and Kılıç (1983) and Kasnakoğlu and Dayıoğlu (1996).

The remainder of the paper is structured as follows: Section 2 gives the reasoning behind the selection of the two cities, Ankara and İstanbul. Section 3 briefly describes the econometric methodology employed. The source of the data used, definitions and summary statistics are given in the section 4 and in the appendix. The empirical findings are discussed in section 5. Finally section 6 offers some concluding remarks.

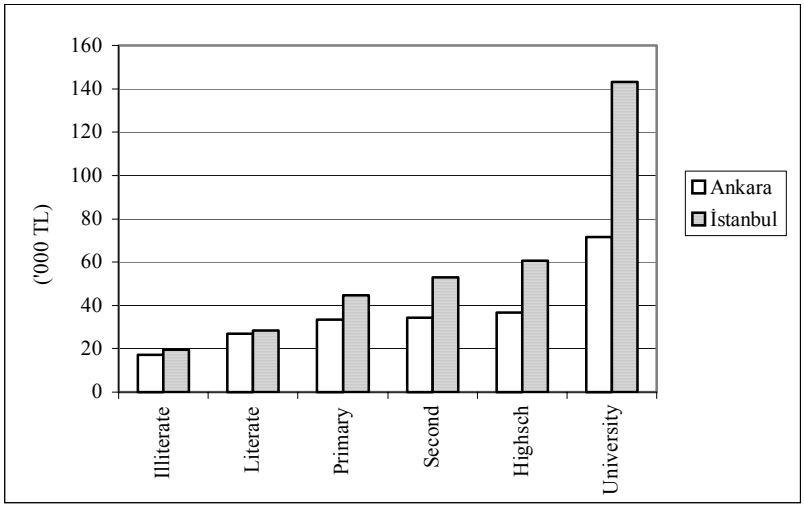
2. Why Ankara and İstanbul?

There are three reasons behind the selection of the cities, Ankara and İstanbul, that may be summarized as follows:

First, comparing two cities with different degrees of income inequality is more illuminating for the purposes of the study. According to the *Household Income Distribution Survey 1994* (SIS, 1997) İstanbul and Adana had the highest Gini coefficients (0.59) and thus were the cities with the most unequal distribution of income. Ankara's Gini coefficient (0.39) is rather low when compared to that of İstanbul, and Ankara was one of the cities with the least unequal distribution of income, although there were smaller cities with slightly lower Gini coefficients: Malatya (0.35), Gaziantep (0.34) and Zonguldak (0.33).

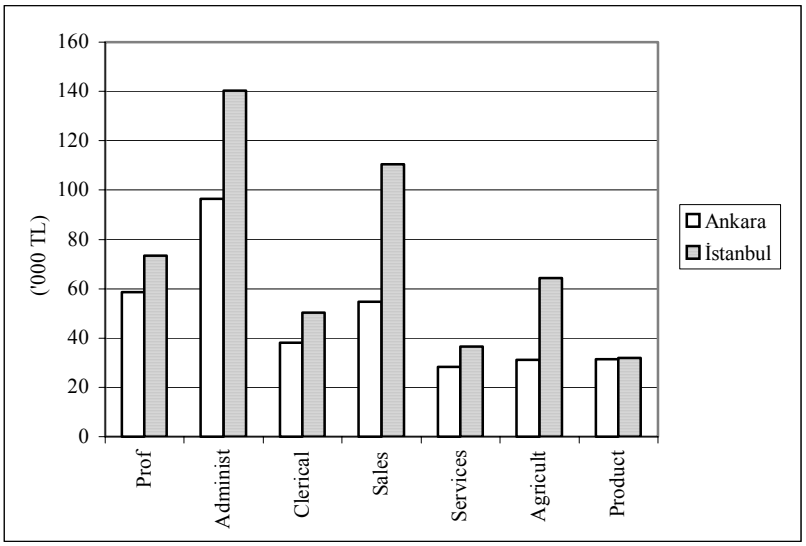
Secondly, since we have a considerable number of independent variables, especially when dummy variables are included, a low number of observations can cause some econometric problems. Therefore, it is logical to choose two cities with a low and a high Gini coefficient and with a high number of observations.

Figure 1
Average hourly earnings by schooling and city



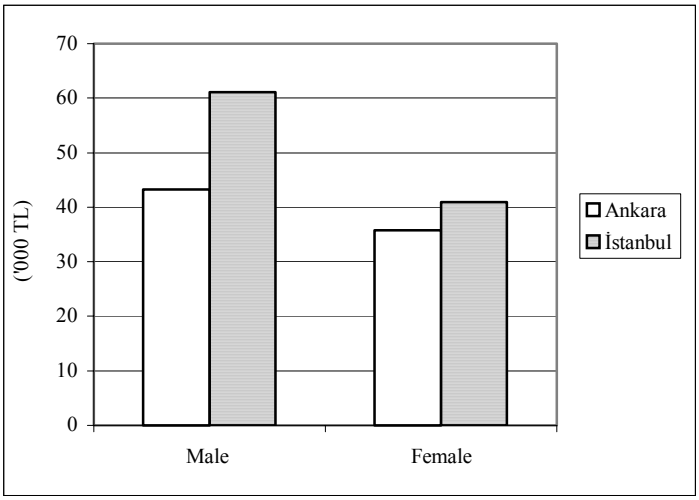
Note: Based on the *Household Income Distribution Survey, 1994* (SIS, 1997).
The data covers the ages 12 to 65.

Figure 2
Average hourly earnings by occupation and city



Note: Based on the *Household Income Distribution Survey, 1994* (SIS, 1997).
The data covers the ages 12 to 65.

Figure 3
Average hourly earnings by gender and city



Note: Based on the *Household Income Distribution Survey, 1994* (SIS, 1997). The data covers the ages 12 to 65.

Finally, the earnings differentials in the two cities show important and interesting differences that are worthy of further investigation. For the purpose of illustrating the differences in earnings differentials between Ankara and İstanbul, we produced three figures based on the data from the *Household Income Distribution Survey, 1994*. In Figure 1, it is clear that the average per hour earnings is higher in İstanbul than in Ankara for every education category. This difference becomes substantial as we move to higher education levels. At the secondary school level, for example, the average per hour earnings in İstanbul is 55% higher than in Ankara; at the university level, on the other hand, this deviation goes up to 100%. From Figure 2, it is again evident that the average per hour earnings of each occupation group is higher in İstanbul. This difference is up to two times as great in some occupation groups, such as sales and agriculture. Lastly, in Figure 3, we consider the average hourly earnings by gender and city. We can see that both females and males, on average, earn more in İstanbul.[1]

[1] The general view is that the price level in İstanbul is higher than in Ankara. So in order to take into account price effects, the nominal figures are deflated by the city consumer price index (CPI). However, it is found that there is only a slight difference in the general price levels between the two cities. In 1994, the CPI for Ankara was 104.4, whereas in İstanbul it was 106.7 (SIS, 1996). It is apparent that these figures will not have an important impact on the average per hour earnings in either Ankara or İstanbul. Therefore, nominal figures are used when calculating the average per hour earnings presented in Figures 1-3.

3. The methodology

In this study, Mincer's (1974) basic human capital model is taken as the starting point. Education and experience are the basic independent variables of the model. The log of earnings is regressed over schooling, experience, and experience squared. The model is the following:

$$\ln Y_t = \beta_0 + \beta_1 D_t + \beta_2 E_t + \beta_3 D_t^2 + u_t \quad (1)$$

where Y_t is earnings, E_t denotes the total years of education, and D_t represents experience. The square of experience is also included in the model in order to take into account the nonlinear relationship between experience and personal earnings.

Finding precise data for experience is not easy. In general, proxies are used to represent experience. In this paper, age is chosen to be a proxy for experience. However, other proxies have been used in earlier works. Varlıer (1982: 90), for example, calculated experience as the difference between the current age and the age when the individual is first employed. Another widely used proxy is defined as 'age minus schooling minus the age of beginning primary education' (Kasnakoğlu and Dayıoğlu, 1996: 10; Kumar and Coates, 1982: 445)[2]. As a result, the model takes the following form:

$$\ln Y_t = \beta_0 + \beta_1 A_t + \beta_2 E_t + \beta_3 A_t^2 + u_t \quad (2)$$

where Y_t is earnings, E_t denotes the total years of education, and A_t represents age. The coefficient, β_2, measures the average rate of return to an additional year of schooling. The marginal contribution of experience to the log of income and income are $\beta_1 + 2\beta_3 A_t$ and $(\beta_1 + 2\beta_3 A_t)*Y_t$, respectively. Finally, u_t is the error term representing all other unmeasured determinants of earnings.

Expressing schooling and age variables as education and age groups is useful for measuring the returns to each level of schooling and to each category of age. The model then takes the following form:

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[2] As mentioned before, we prefered to use *age* directly as a measure of experience, since using other proxies might cause problems. For instance, using a measure such as 'age – schooling – age of beginning primary education' might be misleading in the sense that the *age of beginning primary education* is also measured by another proxy (usually 6 or 7) because the exact data is generally not available. Furthermore, especially in a developing country such as Turkey the range of the *age of beginning primary education* might be large.

$$\ln Y_t = \alpha_0 + \sum_{i=1}^{5} \beta_i A_{ti} + \sum_{j=1}^{5} \delta_j E_{tj} + u_t \tag{3}$$

where education and age are represented by dummy variables.[3]

As we have stated earlier, gender plays a vital role in the determination of personal earnings. So, it will be suitable to add gender as an independent variable to the model. The model then takes the following form:

$$\ln Y_t = \alpha_0 + \sum_{i=1}^{5} \beta_i A_{ti} + \chi G_t + \sum_{j=1}^{5} \delta_j E_{tj} + u_t \tag{4}$$

where G_t denotes gender.

This basic type of model was criticized for not incorporating physical capital and socio-economic variables. Three other variables—occupation, employment status, and marital status—are, therefore, added to the model. With the addition of these new variables, the model takes the following final form:

$$\ln Y_t = \alpha_0 + \sum_{i=1}^{5} \beta_i A_{ti} + \chi G_t + \sum_{j=1}^{5} \delta_j E_{tj} + \sum_{k=1}^{5} \varepsilon_k OC_{tk} + \sum_{l=1}^{2} \varphi_l EMP_{tl} + \gamma MS_t + u_t \tag{5}$$

where OC_t denotes an individual's occupation, EMP_t represents employment status and MS_t denotes marital status.[4] The empirical findings presented in this paper are based on the basic human capital model represented by equation (2) and the extended models represented by equations (4) and (5).

4. The data

Unpublished data provided by the State Institute of Statistics, *Household Income Distribution Survey 1994* are used in the estimations. The survey included 2049 observations for Ankara and 2921 observations for İstanbul. When the data is filtered according to the requirements of

[3] "*i*" indexes the 5 categories of age excluding the base, and *"j"* indexes the 5 categories of education excluding the base. For the categories of each variable, see Table A-2 in the appendix.

[4] "*k*" indexes the 5 categories of occupation excluding the base, and *"l"* indexes the 2 categories of employment status excluding the base. For the categories of each variable, see Table A-2 in the appendix.

the models, the number of observations used in the basic human capital model reduces to 803 for Ankara and 1238 for İstanbul. Similarly, the numbers of observations for the extended models are 766 and 1139 for Ankara and İstanbul, respectively. Selected statistics for the dataset are given in the appendix in Table A-1. The independent variables used in the estimations and their descriptions are given in Table A-2.

5. Empirical results

The empirical estimates of the basic human capital model (equation (2) in Section 3) are given in Table 1. Log of per hourly earnings is the dependent variable. In the human capital model, the signs of the coefficients of age and education are expected to be positive. To capture the nonlinear relationship between earnings and age, the square of age is also added to the model. The sign of coefficient for the square of age is expected to be negative. In the estimated model, the signs of the coefficients are found to be as expected and significant. Many researchers have found similar results (Psacharopoulos, 1977b; Behrman, Wolfe and Blau, 1985; Pierce-Brown, 1998).

Table 1
Human Capital Model Regression Results

Independent Variables	Ankara	İstanbul
Constant	5.818***	6.971***
	(0.2929)	(0.2241)
Age	0.182***	0.133***
	(0.0171)	(0.0141)
Education	0.076***	0.089***
	(0.0071)	(0.0069)
Square of Age	-0.002***	-0.001***
	(0.0002)	(0.0002)
R^2	0.347	0.279
adjusted R^2	0.344	0.277
F-statistic	141.336	159.309
n	803	1238

Note: The values in parentheses are heteroscedasticity-consistent standard errors; The dependent variable is ln(hourly earnings); The model estimated corresponds to equation (2) in section 3.
*** significant at 1% level

It is seen that a one-year increase in the education period has a positive effect of 7.6% on earnings in Ankara, and 8.9% in İstanbul. The marginal effect of experience on earnings diminishes as age increases.

The model explains 34% and 28% of the variations in earnings in Ankara and İstanbul, respectively. These findings more or less coincide with the findings of the earlier studies for Turkey (Varlıer, 1982; Kasnakoğlu and Kılıç, 1983).

There may be two possible reasons for the higher returns to education in İstanbul. Firstly, the general education level in Ankara is higher than in İstanbul, so some people may have to work in jobs that pay relatively less than is justified for their level of education in Ankara. This point is also supported by Kasnakoğlu and Kılıç (1983: 182). Secondly, over 50% of the respondents in Ankara work for the public sector. It is a well-known fact that there is no difference in earnings in the public sector when two people are in the same rank of a permanent job, but have different educational levels. So, the effect of education on earnings is rather low for Ankara. In İstanbul about 85% of the respondents work for the private sector and it is also another well-known fact that the private sector pays differently when there are even small differences in education.[5]

The regression results of the extended models are presented in Tables 2 and 3. In Table 2, model 1 corresponds to equation (4), and model 2 corresponds to equation (5) in section 3. Log of per hourly earnings is again the dependent variable. There are six occupation groups; persons employed in the agricultural sector are excluded. In the estimation process, the variables in the extended models are tested to determine whether they are significant as a group. So F-tests are employed to test whether age, education, occupation, employment status and marital status are significant predictors of earnings as a group. It is found that all of the independent variable groups except occupation are significant at the 5% level of significance in explaining the variations in earnings. Nevertheless, the occupation category is kept in the regression analysis. The model is estimated by adding one group of independent variable at a time to see the effect of each on earnings and on the explanatory power of the model. The results of this exercise show that age, gender, education, employment status and marital status have significant effects on earnings and on the explanatory power of the model, whereas the impact of occupation is only modest.[6]

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[5] The fact that the general education level in Ankara is higher than in İstanbul is evident from Table A-1. The ratios of public sector employees to the total number of employees in each city are also presented in Table A-1.

[6] It should be noted that our regression results could possibly be affected by sample selection bias. The OLS estimators of the coeficients might be biased because the sample on which our analyses is based includes only those employed persons, i.e., the ones with wages above their reservation wage. However, application of more complex estimation techniques could be anticipated in the future with the availability of more comprehensive data.

Table 2
Regression Results for Ankara and İstanbul

		ANKARA		İSTANBUL	
		Model 1	Model 2	Model 1	Model 2
	Constant	9.381***	9.146***	9.333***	9.052***
		(0.254)	(0.278)	(0.2072)	(0.216)
Age	Age 18-29	-0.629***	-0.385***	-0.494***	-0.216*
		(0.119)	(0.127)	(0.123)	(0.117)
	Age 30-34	-0.172	-0.128	0.044	0.153
		(0.124)	(0.130)	(0.129)	(0.113)
	Age 35-39	0.023	0.027	-0.054	0.014
		(0.124)	(0.122)	(0.130)	(0.116)
	Age 40-44	0.120	0.103	0.121	0.184
		(0.124)	(0.117)	(0.136)	(0.119)
	Age 45-49	-0.010	-0.011	0.181	0.192
		(0.155)	(0.151)	(0.149)	(0.133)
Gender	Male	0.361***	0.263***	0.440***	0.325***
		(0.075)	(0.080)	(0.071)	(0.079)
Education	Literate	0.218	0.196	0.340	0.347
		(0.412)	(0.421)	(0.242)	(0.234)
	Primary	0.521**	0.371	0.625***	0.524***
		(0.257)	(0.249)	(0.197)	(0.188)
	Secondary	0.697***	0.544**	0.814***	0.725***
		(0.266)	(0.256)	(0.209)	(0.201)
	High	0.824***	0.688***	0.997***	0.791***
		(0.256)	(0.253)	(0.204)	(0.203)
	University	1.457***	1.250***	1.742***	1.412***
		(0.256)	(0.263)	(0.207)	(0.216)
Occupation	Professional		0.187		0.249**
			(0.116)		(0.115)
	Administration		0.026		0.189
			(0.208)		(0.140)
	Clerical		0.118		0.238**
			(0.093)		(0.105)
	Sales		0.024		0.219***
			(0.108)		(0.083)
	Services		-0.105		0.017
			(0.092)		(0.071)
Employment Status	Employer		0.856***		1.037***
			(0.136)		(0.140)
	Self-employed		0.024		0.135
			(0.144)		(0.093)
Marital Status	Married		0.358***		0.224***
			(0.083)		(0.074)
R^2		0.269	0.354	0.248	0.360
Adjusted R^2		0.258	0.337	0.241	0.349
F-statistic		25.182	21.479	33.871	33.121
n		766	766	1139	1139

Note: The values in parentheses are heteroscedasticity-consistent standard errors;
The dependent variable is ln(hourly earnings);
*** significant at 1%; ** significant at 5%; significant at 10%.
The constant term in model 1 represents a person who is older than 49, female and illiterate. The constant term in model 2 represents a person who is older than 49, female, illiterate, working in the production sector, an employee and not married

From the regression results of the extended models, the following conclusions emerge: First of all, the extended model is able to explain 34% and 35% of the variations in earnings by age, education, gender, occupation, employment status and marital status in Ankara and İstanbul respectively (model 2 in Table 2).

Second, it should be pointed out that in a semi-log model with dummy variables as independent variables, the percentage effect of the independent variables are not equal to the estimated coefficients of the dummy variables. The following formula is thus used to obtain the estimated effects of the dummy independent variables and these are displayed in Table 3:

$$100.g = 100[exp(c) - 1] \quad (6)$$

where the right-hand side of the equation is the percentage effect, and *"c"* is the estimated coefficient of the corresponding dummy variable (Kasnakoğlu, 1982).

Thirdly, among the age groups, only the effect of the 18-29 age category is found to be significant both in Ankara and İstanbul. Everything else held constant, the average earnings of the 18-29 age category is lower by 32% and 19% for Ankara and İstanbul, respectively, than those who are older than 49. So, the persons in this category and living in İstanbul earn relatively more than those living in Ankara[7]. These findings agree with those in the literature (Varlıer, 1982: 130-36; Kasnakoğlu and Kılıç, 1983: 184-88).

Fourthly, as expected and as found by many earlier studies (Blau and Beller, 1988; Rupert and Schweitzer, 1996; Pierce-Brown, 1998), male earnings are greater than females earnings. In Ankara, males earn 30% more than females, while in İstanbul the earnings of males are 38% greater than females.

The next point to be made is about the effects of education. Education, as expected, has a positive effect on earnings. The percentage contribution and significance levels increase as the individual becomes more educated. Lambropoulos and Psacharopoulos (1992) and Rupert and Schweitzer (1996) also report similar results regarding the positive effect of education on earnings increases as education levels increase. In both Ankara and İstanbul, the percentage effect is significant beginning at the primary school level. For all levels of education the percentage contributions are higher in İstanbul than in Ankara. All other things held constant, the average earnings of secondary school graduates, are higher

[7] The model is estimated by also adding a 12-17 age category. The results are not posted here but the estimates of the coefficients show that the effect of 12-17 age category on earnings is negative and significant. It also adds to the explanatory power of the model.

than those who are illiterate, by 72% and 106% in Ankara and İstanbul respectively. This differential increases up to 249% and 310% at the university level, in Ankara and İstanbul respectively (Table 3). Kasnakoğlu and Kılıç (1983: 188-89) and Kasnakoğlu and Dayıoğlu (1996: 11-12) also state similar findings.

Table 3
Percentage Effect of the Independent Variables on Earnings

		ANKARA	İSTANBUL
Age	Age18-29	-31.95*	-19.43*
	Age30-34	-12.01	16.53
	Age35-39	2.74	1.41
	Age40-44	10.85	20.20
	Age45-49	-1.09	21.17
Gender	Male	30.08*	38.40*
Education	Literate	21.65	41.48
	Primary	44.92	68.88*
	Secondary	72.29*	106.47*
	High	98.97*	120.56*
	University	249.03*	310.42*
Occupation	Professional	20.56	28.27*
	Administration	2.63	20.80
	Clerical	12.52	26.87*
	Sales	2.43	24.48*
	Services	-9.97	1.71
Employment Status	Employer	135.37*	182.07*
	Self-employed	2.43	14.45
Marital Status	Married	43.05*	25.11*

Source: The estimated coefficients of model 2 in Table 2.
Note: The values are in percentages; * denotes that the estimated coefficients of model 2 in Table 2 are found to be significant at least at 10 % level of significance.

For a better evaluation of the effect of occupation on earnings, we exclude the agricultural sector from the analysis, for at least two reasons. First, there are an insignificant number of observations in this category, for both Ankara and İstanbul. Secondly, especially in İstanbul, there are some extreme values, which can distort the regression analysis. So the agricultural sector is excluded and the production sector is taken as a base. Generally, researchers have found that those in the 'professional' and the 'administration' categories earn more than the others (Varlıer, 1982; Kasnakoğlu and Dayıoğlu, 1996). However, the results change according to the other independent variables used in the models. For example, when employment status enters the equation, some of the

effects of occupation on earnings, might be captured by employment status.[8] In Ankara and İstanbul respectively, professionals earn 21% and 28% more, on average, than production sector workers. The positive effect of the sales category on earnings, by 24%, seems to be reasonable for İstanbul, especially when we consider the importance of commercial, sales and marketing activities for İstanbul. However, an interesting result is that when all other things are held constant, the average earnings of clerical personnel are 27% higher than those of production workers in İstanbul. Therefore the percentage effect of professionals, sales sector personnel and clerical personnel on earnings, ranges from 24 to 28% in İstanbul, which does not seem to be consistent with what is observed in reality. This finding might be resulting from two limitations in our analysis. Firstly, there may be problems in the aggregation of the different occupations into six or seven categories. For example, a person who is working as a civil servant and another working as a managerial secretary in a big company, who has significantly different earnings, could be pooled together in the clerical category. Secondly, there are important differences in earnings within the private sector in İstanbul and the earnings stated in the survey may not reflect the true earnings of the individuals who are working in the private sector.

The employment status also adds to the explanatory power of the model, in line with the earlier findings (Kasnakoğlu and Dayıoğlu, 1996). As expected, employers are found to be earning more than the employees, by 135% and 182% respectively in Ankara and İstanbul.

The findings in the literature on the effect of marital status on earnings are more or less the same; that is, that married people earn more than unmarried individuals. Some have found this effect to be small and insignificant (Dolton and Makepeace, 1987), while others have found significant effects (Korenman and Neumark, 1991; Kasnakoğlu and Kılıç, 1983). In this study, those who are married are found to earn more, on average, than those who are not married, by 43% and 25% respectively in Ankara and İstanbul (Table 3).

6. Conclusions

In this study, both the traditional and extended human capital models are used to investigate the determinants of personal earnings differentials in Ankara and İstanbul.

[8] In the estimation process, we estimated the model by adding one group of independent variable at a time to see the effect of each on earnings and the explanatory power of the model. It is found that when employment status enters the equation most of the effect of administration category on earnings is captured by the employer category.

The findings of the human capital model indicate that the effects of education and experience on personal earnings are significant in both Ankara and İstanbul. It is also found that the returns to education in İstanbul is higher than in Ankara.

In the second part of the study, the human capital model is extended by adding available socio-economic and physical capital variables to the traditional variables, education and experience. The results of the extended models show that age, gender, education, employment status and marital status have significant effects on earnings and on the explanatory power of the model, whereas the impact of occupation is not as important.

The last point to be made is about the data. It is a fact that in many countries, the availability of datasets places a limitation on the studies that can be carried out. Previous studies on Turkey and on other countries reveal the importance of family background factors on education and occupation. Therefore, a simultaneous model of income determination where education and occupation variables are included as endogenous variables might better explain the income differential mechanism taking into account socio-economic background factors. Unfortunately, data on social and economic background factors such as father's and mother's education levels and incomes are usually unavailable. Another problem is related to the macroeconomic situation of a country during the data collection process. Psacharopoulos and Velez (1996) state that, in general, during recessions earnings differentials flatten, whereas they widen in recoveries. So a simultaneous equation model, which takes notice of the macroeconomic environment in Turkey, might lead to a better assessment of earnings differentials and its determinants.

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Appendix
Data summary statistics and descriptions

Table A.1
Means and Standard Errors of Key Variables

	Ankara	İstanbul		Ankara	İstanbul
Age	35.570 (10.880)	33.560 (11.27)	Professional	0.149 (0.357)	0.086 (0.281)
Weekly working hours	49.310 (15.077)	52.036 (15.645)	Administration	0.046 (0.210)	0.065 (0.246)
Yearly Earnings (1)	101,401,709 (125,002,966)	131,058,569 (272,835,809)	Clerical	0.153 (0.360)	0.076 (0.265)
Education period	8.848 (4.111)	7.235 (3.727)	Sales	0.127 (0.333)	0.162 (0.368)
Hourly Earnings (1)	41,838.684 (48,830.440)	57,313.890 (14,2847.89)	Services	0.177 (0.382)	0.111 (0.314)
Male	0.806 (0.396)	0.813 (0.390)	Agriculture	0.012 (0.111)	0.007 (0.085)
Illiterate	0.010 (0.100)	0.023 (0.1487)	Production	0.335 (0.472)	0.494 (0.500)
Literate	0.021 (0.144)	0.023 (0.151)	Employee	0.818 (0.386)	0.771 (0.421)
Primary	0.382 (0.486)	0.567 (0.495)	Employer	0.076 (0.265)	0.083 (0.276)
Secondary	0.133 (0.340)	0.112 (0.316)	Self-employed	0.106 (0.308)	0.146 (0.354)
High	0.250 (0.434)	0.174 (0.379)	Married	0.771 (0.421)	0.711 (0.454)
University	0.203 (0.403)	0.101 (0.301)	Public (2)	0.510 (0.500)	0.143 (0.350)

Notes: n = 803 for Ankara and n = 1238 for İstanbul. Sample includes aged 12 to 65.

(1) in 1994 Turkish *Lira*

(2) n = 657 for Ankara and n = 954 for İstanbul.

Table A.2
Independent Variables in the Extended Models and Their Descriptions

	Independent Variables	Descriptions
AGE	Age18-29	-
	Age30-34	-
	Age35-39	-
	Age40-44	-
	Age45-49	-
	Age50+	*Age bigger than or equal to 50*
GENDER	Male	-
	Female	-
EDUCATION	*Illiterate*	-
	Literate	No diploma, but can read and write. (2 years of education)
	Primary	Primary school. (5 years of education)
	Secondary	Includes secondary school and vocational school at the secondary school level. (8 years of education)
	High	Includes high school and vocational school at the high school level. (11 years of education)
	University	Higher educational institutions or faculty. (15 years of education)
OCCUPATION	Professional	Scientific and technical workers
	Administration	Entrepreneurs, upper level managers
	Clerical	Clerical and related workers
	Sales	Trade and sales workers
	Services	Service workers
	Production	*Non-agriculture production workers*
EMPLOYMENT STATUS	Employer	A person who employs at least one person in his field of activity
	Self-employed	A person working in his own business. Agents who are working in family work is also classified in this group
	Employee	*Salary or wage earner, daily wage earner (seasonal worker, casual employee)*
MARITAL STATUS	*Unmarried*	*Includes single; widow; divorced; separated categories.*
	Married	-

Source: Some of the descriptions are taken from State Institute of Statistics (1997)
The base categories are in italics.

Özet

Ankara ve İstanbul'da kazanç eşitsizliklerini belirleyen etmenler

Bu çalışmada, Ankara ve İstanbul'da kazanç eşitsizliklerini belirleyen etmenlerin saptanması ve bulguların değerlendirilmesi amaçlanmıştır. Ankara ve İstanbul'da kazanç eşitsizlikleri, önce temel insan sermayesi modeli çerçevesinde yarı-logaritmik tek denklemli modellerle incelenmiştir. Daha sonra diğer değişkenler de eklenerek, tüm değişkenlerin kukla değişken olarak ifade edildiği, genişletilmiş modeller oluşturulmuştur. Elde edilen sonuçlar ışığında, İstanbul'da saat başına ortalama kazancın, bütün eğitim seviyelerinde, meslek gruplarında, kadınlarda ve erkeklerde, Ankara'daki saat başına ortalama kazançtan daha yüksek olduğu görülmektedir. Yaş, eğitim, cinsiyet, iş statüsü ve medenî durum değişkenleri modelin açıklama gücüne önemli katkı sağlarken, meslek değişkeninin modelin açıklama gücü üzerinde ancak sınırlı etkisi olduğu saptanmıştır.