

DO DRAGONS HAVE BETTER FATE? REVISITED USING THE U.S. DATA

Dawit Senbet

Department of Economics, University of Northern Colorado
(Corresponding author)

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Wei-Chiao Huang

Department of Economics, Western Michigan University

Abstract

We investigate the scientific validity of one aspect of the Chinese astrology: individuals born in the year of *Dragon* are believed to have a better fate in their life. While better fate can be manifested in many aspects, one plausible measure is the economic success of the individuals. Following the lead of Wong and Yung (2005), we use the standard earnings function methodology to examine if “*Dragon* kids” indeed have a significant earnings advantage than others. However, using data from a society where such a belief is prevalent may exhibit potential endogeneity bias. The U.S. data would be free from such bias thereby providing an improved test of the existence of the “*Dragon* effect” over Wong and Yung (2005). We find no presence of the “*Dragon* effect”.

Keywords: Chinese Astrology, Dragon, Lunar Calendar, Earnings Function

JEL: J31, J13, J18.

I. Introduction

According to the Chinese astrology, children born in different years of lunar calendar have different opportunities. Some years are considered more auspicious for the birth of a child than others. In particular, there is a belief that a person who is born during the *Dragon* year, which falls every twelfth year, is believed to have the best opportunity for success (Vere, 2004; Wong and Yung, 2005). This belief apparently has motivated many Chinese couples to time the birth of their babies in 2000, the last such year. In 2000, the general fertility rate in China increased by 6.8 percent and in Taiwan it increased by 6.7 percent. Similarly in Hong Kong the number of births rose by almost 6 percent (Vere, 2004). Thus the so-called “*Dragon* kids” are queuing up for kindergarten as well as primary school enrollments at the same time creating an education glut.¹

Historically we can also find the same trend in 1976 and 1988, the *Dragon* years. Sun, Lin and Ronald (1978) reported that there was a jump in fertility in Taiwan during 1976. The crude birth rate rose from 23 to 26 and they could only explain the 21 percent increase (after attributing to changes in Taiwan’s age structure) to the *Dragon* year superstition. This conclusion is also supported by findings of Goodkind (1993). He found that the use of birth controls (contraception) fell dramatically during 1975 (during the conception window for *Dragon* babies) followed by a sharp increase thereafter. Similarly, the number of births in 1988 was 7.8 percent higher than that of 1987 in Hong Kong (Vere, 2004). Goodkind (1991) reported the same surge of fertility in 1976 and 1988 among Chinese population in Singapore, Peninsular Malaysia and other parts of Asia. Generally, whether one finds the Chinese astrology credible or not, considerable

¹ http://www.chinadaily.com.cn/en/doc/2003-08/07/content_252789.htm

number of Chinese (whether they live in China or not) subscribe to that belief and aim to give birth during the *Dragon* years – in order to give their child presumably a head start with an extra “endowment” advantage. Figure 1 shows the total fertility rate for Hong Kong between 1971 and 2000.

[“Place Figure 1 about here”]

In a quest to test the validity of this belief, Wong and Yung (2005) investigated whether people born during the *Dragon* year have a better fate from an economic point of view. Assuming that “better fate” can be translated to mean “higher wage earnings”, they estimated earning equation of employed persons of age 15 to 65 and found that *Dragon* birth has insignificant impact on one’s earnings for Hong Kong data.

However, the very existence and popularity of such a belief could have an endogenous impact (whether positive or negative) on *Dragons* based on different scenarios whether the superstition is true or not. Therefore, analyses using data from a country where such belief is popular (such as Hong Kong, China or Taiwan) could be marred by endogenous behavioral responses or by self-fulfilling beliefs. First, if the parents believe that their *Dragon* kid is unique (or has a better opportunity of success than others) they could invest more in his/her education; second, if the *Dragon* child believes that he/she is better “endowed” he/she could be motivated to work harder (feeling “responsible” of being a *Dragon*), and third, if employers believe that *Dragons* are inherently better (in working hard or success driven), they could be more inclined to hire or pay more for such applicants. All these could give a *Dragon* kid a better

opportunity for success (or better earnings) even if the belief is groundless (or untrue). On the other hand, the boom in birth during the *Dragon* years in these countries would have a negative impact on *Dragons* due to the higher cohort size and hence higher competition for schooling or job openings. Therefore, results using data from Hong Kong (or any other country where such a belief is popular) may not be very reliable and convincing as they are “contaminated” by such endogeneity problems.

An alternative approach to studying this issue is to use data “free” of such potential endogenous behavioral responses. For this reason we used the U.S. data and conducted a similar study as that of Wong and Yung (2005). The result from this study provides a “true” measure of the *Dragon* effect without any complications arising from self-fulfilling behavior of the belief itself. In addition, the data used herein provides a more precise conversion of lunar calendar to the Western calendar, thereby improving the construction of the sample for studying the “*Dragon* effect”. Specifically, we were able to make mappings of lunar calendar to the Western Calendar up to the month, whereas such a mapping was made up to the year in Wong and Yung (2005)²

II. Method and Data

As mentioned earlier, we examine the impact of *Dragon* birth on earnings using the U.S. data. Following Wong and Yung (2005), we interpret fate as economic success measured

² Mapping is necessary because the lunar calendar and Western Calendar do not coincide with each other.

More effort is made in this paper to get a better mapping than in Wong and Yung (2005). For example, consider the year of *Dragon* that covers a period from February 13, 1964 to February 1, 1965. We counted people born between Feb 1964 to Jan 1965 as dragons while Wong and Yung (2005) include all people born in 1964.

by wage earnings. Therefore, we employ the standard earnings equation. Our basic model is represented as follows:

$$LNINC = \beta_0 + \beta_1*EDUC + \beta_2*EDUC^2 + \beta_3*EXPER + \beta_4*EXPER^2 + \beta_5*ASSET + \beta_6*DRAGON + \varepsilon$$

Where: LNINC – Log mean Earnings

EDUC – Years of schooling completed

EDUC² – Years of schooling completed squared

EXPER – Experience calculated as: *Age – Years of schooling – Six*

EXPER² – Experience squared

ASSET – Asset holdings of the individual

DRAGON – Dummy variable which has a value of one for people born during the *Dragon* year and zero otherwise

A positive and robustly significant β_6 implies that *Dragons* earn more after controlling for other variables. Also, as a robustness check we estimated different models. The first model includes only the constant and *Dragon* dummy. Next we include Education, and Education squared along with the *Dragon* dummy. Third, we add Experience and Experience squared to the second model. Finally we add Asset to the third model. In addition, we also estimated the model with other eleven zodiac dummies (taking *Dragons* as a reference or benchmark category) to see if there is any systematic

difference in earnings between *Dragons* and any other zodiac signs due to difference in birth time.

The data for this study are obtained from Panel Study of Income Dynamics (PSID) for the years 1991, 1992 and 1993 for all employed people aged 16 and above.³ However, the important dependent variable (labor earnings) is available for the period of 1991 to 1993 and we are forced to take 1993 as the latest year. We included data for all the three years as a robustness check. The descriptive statistics is given in the Appendix Table A1. From the descriptive statistics we observe that the average earnings, schooling, experience or asset holdings of the *Dragons* are not consistently different from those of the non-*Dragons*.

III. Estimation Results

Table 1 displays the OLS estimation results for males and females for the year 1993. The first model regress log-earnings on the constant and *Dragon* dummy for both sexes. The coefficient of the *Dragon* is insignificant and the R-square and the adjusted R-square are both zero. The standard human capital variables that are subsequently added to the model are significant at one or five percent levels while the *Dragon* dummy remains insignificant.⁴

³ We are limited to those three years because of data availability. The data set contains labor income information only for 1991 – 1993. Other data sets do not have information on birthdates, which is needed for an accurate mapping of lunar calendar to the Western calendar.

⁴ We also re-estimated all the models by dropping out the *Dragon* dummy. The value and significance of all the other variables remained **exactly** the same.

Tables 2 and 3 repeat what we did in Table 1 except for the year: in Table 2, data is taken from 1992 and in Table 3 data is taken from 1991. We did this in order to check whether our results are robust over time or not. In all the three cases the results remained basically the same except that the ASSET variable is not significant at five percent level for 1991. All the other human capital variables are significant and have the expected sign. However, the *Dragon* dummy remained insignificant. Its sign is also not stable as it turns negative in one year and positive in another (see Tables 2 and 3).

["Place Table 1 about here"]

In addition to the standard model discussed above, we estimated the basic model including dummy variables for the rest of eleven zodiac signs. This will allow us to detect if there are any systematic differences in earnings among each of the 11 non-*Dragons* as compared to *Dragons*. The results of this estimation are given in the Appendix Table A2 through Table A4.

["Place Table 2 and 3 about here"]

From these results we observe no evidence of any systematic difference in earnings based on the birth time.

Overall, from the above results we can conclude that the belief that individuals born during the *Dragon* year are destined to be successful is not supported by U.S. data when success is measured by earnings. Therefore, the time of birth is irrelevant to one's success or opportunities as measured by earnings.

IV. Concluding Remarks

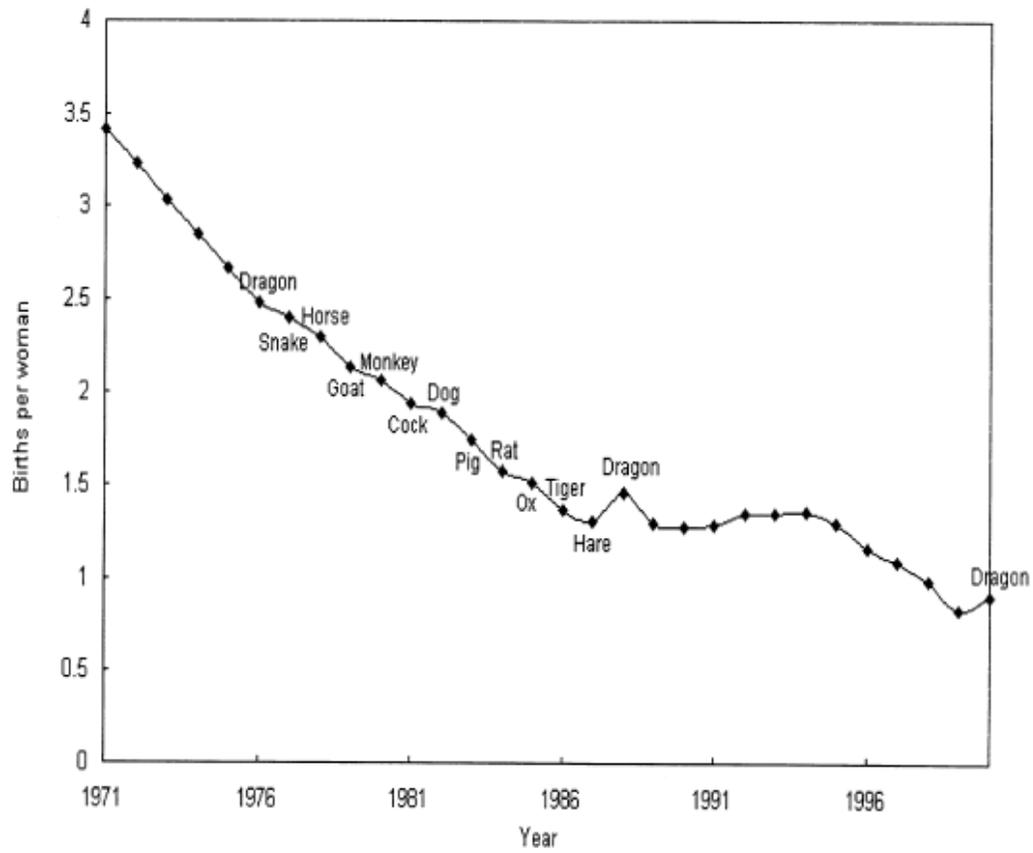
In this study, we conducted an empirical test of the Chinese superstition that individuals born during the *Dragon* year are destined to be more successful or have better opportunities. There are significant numbers of Chinese people that subscribe to this belief, resulting in jumps to births during the *Dragon* years. Indeed, there was a significant increase in births in 1976, 1988, 2000, the so-called *Dragon* years (Wong and Yung, 2005; Vere, 2004; Goodkind, 1991; Sun, Lin and Ronald, 1978). Wong and Yung (2005) conducted the seminal test for Hong Kong and found that *Dragons* are not better off than others because of their birth time. However, data from a country where the belief is popular may suffer from endogenous behavioral responses. If the parents believe in the superstition, they may give extra care for their *Dragon* kids, say, by investing more in his/her education. If the *Dragon* kid believes in the superstition, he/she could be motivated to work harder due to the feelings of “responsibility” of being a *Dragon*. If the employers believe in the superstition, they would favor *Dragon* applicants. All these behaviors could affect *Dragons*’ earnings positively even if the belief is untrue. On the other hand, the boom in births during the year of *Dragon* affects them adversely due to the increased competition for schooling or job openings. Therefore, data from Hong Kong (or any other country where such a belief is popular) may not be the most suitable data for this test as they could be “contaminated” from such endogeneity problems. The more natural way to approach this issue is to use data that are conceivably free from impacts of the belief itself. For this reason we choose to use the U.S. data because presumably the Chinese astrological belief is not as popular in the U.S.

The results from our empirical model showed that individuals born during the *Dragon* year are not different from others by being more successful or enjoying better opportunities when success is measured by earnings. This finding is consistent with the pioneering study by Wong and Yung (2005). Furthermore, we found that birth during a particular lunar calendar year does not bring out any difference on individual's earnings when compared to births during any other lunar calendar years. Therefore, we conclude that being born in the year of *Dragon* or any other zodiac signs is not relevant to one's success when we measure success by earnings.

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Figure 1: The Total Fertility Rate (TFR), Hong Kong, 1971 – 2000



Source: Yip, Joseph and Cheung (2002)

Dependent variable: Log earnings								
Variable	Male				Female			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Const.	9.9136*	9.6470*	8.0893	8.1053*	9.4535*	9.0347*	8.1830*	8.1960*
	(0.0142)	(0.1437)	(0.1582)	(0.1581)	(0.0147)	(0.1872)	(0.1960)	(0.1960)
Educ		-0.1240*	-0.0278	-0.0258		-0.0887*	-0.077**	-0.077**
		(0.0242)	(0.0247)	(0.0247)		(0.0303)	(0.0304)	(0.0304)
Educ2		0.0110*	0.0069*	0.0067*		0.0092*	0.0090*	0.0089*
		(0.0010)	(0.0010)	(0.0010)		(0.0012)	(0.0012)	(0.0012)
Exper			0.0964*	0.0958*			0.0730*	0.0728*
			(0.0035)	(0.0035)			(0.0036)	(0.0036)
Exper2			-0.0016*	-0.0016*			-0.0013*	-0.0013*
			(0.0001)	(0.0001)			(0.0001)	(0.0001)
Asset				0.0046*				0.0129*
				(0.0013)				(0.0045)
Dragon	-0.0287	-0.0266	-0.0722	-0.0754	-0.0287	-0.0382	-0.0602	-0.0621
	(0.0531)	(0.0481)	(0.0424)	(0.0422)	(0.0543)	(0.0491)	(0.0463)	(0.0462)
R2	0.000	0.134	0.286	0.288	0.000	0.108	0.199	0.200
Adj. R2	0.000	0.134	0.285	0.288	0.000	0.108	0.198	0.199
Obs.	5762	5762	5762	5762	4970	4970	4970	4970

Table 1: Estimation result of earnings equation for the year 1993

Note: Values in the parenthesis are standard errors.

* Denotes significance at 1 percent.

** Denotes significance at 5 percent.

Estimates are corrected for Heteroscedasticity.

The coefficients (and the standard errors) of ASSET are multiplied by 1000.

Dependent variable: Log earnings								
Variable	Male				Female			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Const.	9.9084*	9.6896*	8.5063*	8.5276*	9.4161*	8.9367*	8.3343*	8.3404*
	(0.0123)	(0.1036)	(0.1082)	(0.1078)	(0.0139)	(0.1307)	(0.1409)	(0.1409)
Educ		-0.1070*	-0.0518*	-0.0485*		-0.0682*	-0.0702*	-0.0700*
		(0.0180)	(0.0174)	(0.0173)		(0.0218)	(0.0222)	(0.0222)
Educ2		0.0095*	0.0073*	0.0070*		0.0081*	0.0084*	0.0083*
		(0.0008)	(0.0007)	(0.0007)		(0.0009)	(0.0009)	(0.0009)
Exper			0.0798*	0.0787*			0.0574*	0.0571*
			(0.0028)	(0.0028)			(0.0034)	(0.0034)
Exper2			-0.0013*	-0.0013*			-0.0010*	-0.0010*
			(0.0001)	(0.0001)			(0.0001)	(0.0001)
Asset				0.0069*				0.007**
				(0.0009)				(0.0035)
Dragon	0.0788	0.0490	0.0138	0.0119	0.091**	0.0560	0.0343	0.0334
	(0.0420)	(0.0390)	(0.0361)	(0.0359)	(0.0415)	(0.0380)	(0.0382)	(0.0382)
R2	0.001	0.141	0.265	0.272	0.001	0.122	0.180	0.181
Adj. R2	0.000	0.141	0.0265	0.271	0.001	0.121	0.180	0.180
Obs.	5705	5705	5705	5705	4881	4881	4881	4881

Table 2: Estimation result of earnings equation for the year 1992

Note: Values in the parenthesis are standard errors.

* Denotes significance at 1 percent.

** Denotes significance at 5 percent

Estimates are corrected for Heteroscedasticity.

The coefficients (and the standard errors) of ASSET are multiplied by 1000.

Dependent variable: Log earnings								
Variable	Male				Female			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Const.	9.8885*	9.7342*	8.4600*	8.4639*	9.3598*	8.9727*	8.4701*	8.4717*
	(0.0125)	(0.0841)	(0.0957)	(0.0956)	(0.0140)	(0.1282)	(0.1345)	(0.1346)
Educ		-0.1253*	-0.0531*	-0.0528*		-0.0947*	-0.1001*	-0.0999*
		(0.0154)	(0.0153)	(0.0153)		(0.0216)	(0.0213)	(0.0213)
Educ2		0.0105*	0.0076*	0.0076*		0.0096*	0.0099*	0.0099*
		(0.0007)	(0.0007)	(0.0007)		(0.0009)	(0.0009)	(0.0009)
Exper			0.0793*	0.0791*			0.0543*	0.0542*
			(0.0033)	(0.0033)			(0.0034)	(0.0034)
Exper2			-0.0013*	-0.0013*			-0.0010*	-0.0010*
			(0.0001)	(0.0001)			(0.0001)	(0.0001)
Asset				0.0011				0.0024
				(0.0030)				(0.0038)
Dragon	0.0227	0.0262	-0.0059	-0.0054	0.0807	0.0419	0.0357	0.0351
	(0.0377)	(0.0341)	(0.0330)	(0.0330)	(0.0454)	(0.0409)	(0.0402)	(0.0402)
R2	0.000	0.158	0.289	0.290	0.001	0.138	0.190	0.190
Adj. R2	0.000	0.157	0.289	0.289	0.000	0.137	0.189	0.189
Obs.	5590	5590	5590	5590	4777	4777	4777	4777

Table 3: Estimation result of earnings equation for the year 1991

Note: Values in the parenthesis are standard errors.

* Denotes significance at 1 percent.

Estimates are corrected for Heteroscedasticity.

The coefficients (and the standard errors) of ASSET are multiplied by 1000.

Appendix
Table A1: Descriptive Statistics

	MALES								
	Dragons					Non Dragons			
	Obs.	Mean	Median	SD	Obs.	Mean	Median	SD	
1993	LNINC	485	9.88	10.17	1.13	5277	9.91	10.09	1.03
	EDUC	485	12.58	12.00	2.79	5277	12.62	12.00	2.71
	EXPER	485	19.48	20.00	11.62	5277	18.49	17	11.91
	ASSET	485	2812.13	0.00	15272.26	5277	1991.82	0.00	11196.84
	FEMALES								
	Dragons					Non Dragons			
	LNINC	447	9.42	9.68	1.11	4523	9.45	9.65	0.99
	EDUC	447	12.83	12.00	2.51	4523	12.79	12.00	2.43
EXPER	447	19.36	20.00	11.95	4523	18.54	17.00	11.99	
ASSET	447	689.82	0.00	4501.67	4523	508.73	0.00	3052.09	
1992	MALES								
	Dragons					Non Dragons			
	LNINC	491	9.99	10.09	0.81	5214	9.91	10.04	0.9
	EDUC	491	12.75	12.00	2.80	5214	12.49	12.00	2.88
	EXPER	491	19.65	19.00	11.51	5214	17.00	17.00	11.65
	ASSET	491	2697.86	0.00	12917.87	5214	2091.99	0.00	10500.98
	FEMALES								
	Dragons					Non Dragons			
LNINC	453	9.51	9.62	0.83	4428	9.42	9.60	0.92	
EDUC	453	12.87	12.00	2.69	4428	12.66	12.00	2.56	
EXPER	453	20.41	19.00	12.31	4428	18.71	17.00	11.91	
ASSET	453	629.96	0.00	3614.96	4428	426.17	0.00	2927.32	
1991	MALES								
	Dragons					Non Dragons			
	LNINC	498	9.91	10.00	0.79	5092	9.89	10.00	0.89
	EDUC	498	12.44	12.00	2.91	5092	12.49	12.00	2.87
	EXPER	498	19.80	19.00	12.16	5092	18.18	16.00	11.60
	ASSET	498	2026.76	0.00	9693.09	5092	2197.91	0.00	12685.56
	FEMALES								
	Dragons					Non Dragons			
LNINC	453	9.44	9.62	0.92	4424	9.36	9.52	0.92	
EDUC	453	12.85	12.00	2.63	4424	12.37	12.00	2.54	
EXPER	453	19.03	18.00	12.30	4424	18.37	17.00	12.04	
ASSET	453	775.91	0.00	6090.23	4424	458.10	0.00	2729.56	

Table A2: Effects of different zodiac signs on Earnings for the year 1993

Dependent variable: Log earnings								
Variable	Male				Female			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Const.	9.8844*	9.6182*	8.0271*	8.0396*	9.4239*	8.9532*	8.0965*	8.1081*
	(0.0511)	(0.1517)	(0.1654)	(0.1651)	(0.0523)	(0.1961)	(0.2058)	(0.2056)
Educ		-0.1230*	-0.0272	-0.0251		-0.0810*	-0.071**	-0.071**
		(0.0243)	(0.0248)	(0.0247)		(0.0304)	(0.0304)	(0.0304)
Educ2		0.0109*	0.0069*	0.0067*		0.0088*	0.0088*	0.0087*
		(0.0010)	(0.0010)	(0.0010)		(0.0012)	(0.0012)	(0.0012)
Exper			0.0954*	0.0948*			0.0727*	0.0725*
			(0.0035)	(0.0035)			(0.0036)	(0.0036)
Exper2			-0.0016*	-0.0016*			-0.0013*	-0.0013*
			(0.0001)	(0.0001)			(0.0001)	(0.0001)
Asset				0.0046*				0.0130*
				(0.0013)				(0.0046)
Rat	0.0075	-0.0173	0.0464	0.0517	0.0194	0.0362	0.0679	0.0680
	(0.6928)	(0.0630)	(0.0564)	(0.0563)	(0.0713)	(0.0657)	(0.0617)	(0.0616)
Ox	-0.0699	-0.0693	0.0013	0.0070	-0.0398	-0.0467	-0.0218	-0.0177
	(0.0732)	(0.0672)	(0.0589)	(0.0587)	(0.0726)	(0.0668)	(0.0620)	(0.0618)
Tiger	-0.176**	-0.137**	-0.0439	-0.0434	-0.1244	-0.0801	-0.0420	-0.0376
	(0.0741)	(0.0679)	(0.0588)	(0.0586)	(0.0742)	(0.0683)	(0.0621)	(0.0621)
Rabbit	-0.0663	-0.0612	0.0089	0.0050	-0.0584	-0.0442	-0.0415	-0.0420
	(0.0741)	(0.0671)	(0.0580)	(0.0577)	(0.0750)	(0.0700)	(0.0656)	(0.0656)
Snake	0.160**	0.138**	0.118**	0.120**	0.0894	0.0832	0.0803	0.0842
	(0.0660)	(0.0608)	(0.0561)	(0.0559)	(0.0707)	(0.0643)	(0.0615)	(0.0615)
Horse	0.166**	0.171**	0.1443*	0.1505*	0.1164	0.1018	0.0751	0.0776
	(0.0659)	(0.0605)	(0.0560)	(0.0559)	(0.0683)	(0.0639)	(0.0619)	(0.0619)
Goat	0.0739	0.0657	0.0864	0.0904	0.143**	0.162**	0.151**	0.151**
	(0.0687)	(0.0629)	(0.0566)	(0.0563)	(0.0718)	(0.0664)	(0.0637)	(0.0637)
Monkey	0.0916	0.1173	0.1516*	0.1518*	0.136**	0.137**	0.1599*	0.1634*
	(0.0693)	(0.0640)	(0.0583)	(0.0580)	(0.0691)	(0.0631)	(0.0612)	(0.0612)
Rooster	0.0307	0.0179	0.0556	0.0612	0.0733	0.0821	0.1164	0.120**
	(0.0651)	(0.0604)	(0.0542)	(0.0541)	(0.0685)	(0.0629)	(0.0605)	(0.0604)
Dog	0.0646	0.0477	0.121**	0.123**	-0.0230	-0.0328	0.0156	0.0134
	(0.0690)	(0.0632)	(0.0566)	(0.0565)	(0.0721)	(0.0677)	(0.0639)	(0.0638)
Pig	0.0657	0.0453	0.0907	0.0963	0.0091	0.0308	0.0697	0.0700
	(0.0672)	(0.0620)	(0.0571)	(0.0570)	(0.0715)	(0.0661)	(0.0630)	(0.0630)
R2	0.008	0.141	0.289	0.291	0.006	0.114	0.203	0.204
Adj. R2	0.006	0.139	0.287	0.289	0.004	0.111	0.200	0.202
Obs.	5762	5762	5762	5762	4970	4970	4970	4970

Note: Values in the parenthesis are standard errors.

* Denotes significance at 1 percent and ** denotes significance at 5 percent.

Estimates are corrected for Heteroscedasticity.

The coefficients (and the standard errors) of ASSET are multiplied by 1000.

Table A3: Effects of different zodiac signs on Earnings for the year 1992

Dependent variable: Log earnings								
Variable	Male				Female			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Const.	9.9872*	9.7410*	8.5224*	8.5412*	9.5074*	8.9916*	8.3694*	8.3742*
	(0.0365)	(0.1019)	(0.1066)	(0.1064)	(0.0392)	(0.1345)	(0.1453)	(0.1453)
Educ		-0.1077*	-0.0523*	-0.0489*		-0.0675*	-0.0697*	-0.0695*
		(0.0172)	(0.0165)	(0.0164)		(0.0219)	(0.0223)	(0.0223)
Educ2		0.0095*	0.0073*	0.0070*		0.0080*	0.0083*	0.0083*
		(0.0008)	(0.0007)	(0.0007)		(0.0009)	(0.0009)	(0.0009)
Exper			0.0798*	0.0787*			0.0573*	0.0571*
			(0.0032)	(0.0032)			(0.0034)	(0.0034)
Exper2			-0.0013*	-0.0013*			-0.0010*	-0.0010*
			(0.0001)	(0.0001)			(0.0001)	(0.0001)
Asset				0.0069*				0.007**
				(0.0007)				(0.0037)
Rat	-0.0746	-0.0654	-0.0151	-0.0084	-0.2039*	-0.145**	-0.131**	-0.130**
	(0.0560)	(0.0512)	(0.0472)	(0.0470)	(0.0637)	(0.0587)	(0.0568)	(0.0568)
Ox	-0.0712	-0.0413	-0.0165	-0.0143	-0.0923	-0.0724	-0.0650	-0.0634
	(0.0566)	(0.0511)	(0.0475)	(0.0471)	(0.0623)	(0.0568)	(0.0553)	(0.0553)
Tiger	-0.0957	-0.0512	-0.0388	-0.0360	-0.1125	-0.0558	-0.0433	-0.0409
	(0.0595)	(0.0553)	(0.0522)	(0.0520)	(0.0637)	(0.0583)	(0.0566)	(0.0567)
Rabbit	-0.0490	-0.0288	-0.0257	-0.0321	-0.0504	-0.0197	-0.0295	-0.0298
	(0.0552)	(0.0499)	(0.0481)	(0.0473)	(0.0593)	(0.0556)	(0.0553)	(0.0553)
Snake	-0.0168	-0.0055	-0.0016	0.0004	0.0952	0.0965	0.120**	0.119**
	(0.0534)	(0.0502)	(0.0490)	(0.0486)	(0.0538)	(0.0501)	(0.0506)	(0.0505)
Horse	-0.0482	0.0062	0.0240	0.0257	-0.133**	-0.129**	-0.114**	-0.114**
	(0.0528)	(0.0497)	(0.0477)	(0.0474)	(0.0617)	(0.0579)	(0.0576)	(0.0577)
Goat	-0.109**	-0.0805	-0.0397	-0.0367	0.0141	0.0600	0.0755	0.0774
	(0.0549)	(0.0507)	(0.0485)	(0.0482)	(0.0579)	(0.0536)	(0.0533)	(0.0534)
Monkey	-0.0981	-0.0388	0.0197	0.0197	-0.121**	-0.0886	-0.0400	-0.0380
	(0.0526)	(0.0495)	(0.0468)	(0.0465)	(0.0599)	(0.0559)	(0.0565)	(0.0565)
Rooster	-0.0572	-0.0316	0.0167	0.0191	-0.0878	-0.0304	-0.0025	-0.0013
	(0.0505)	(0.0473)	(0.0448)	(0.0445)	(0.0593)	(0.0557)	(0.0544)	(0.0544)
Dog	-0.0890	-0.0600	-0.0070	-0.0078	-0.1246	-0.0988	-0.0675	-0.0687
	(0.0572)	(0.0523)	(0.0489)	(0.0487)	(0.0621)	(0.0583)	(0.0562)	(0.0561)
Pig	-0.1585*	-0.1416*	-0.0766	-0.0704	-0.1783*	-0.126**	-0.0760	-0.0743
	(0.0573)	(0.0531)	(0.0497)	(0.0495)	(0.0591)	(0.0546)	(0.0534)	(0.0534)
R2	0.002	0.143	0.266	0.273	0.008	0.128	0.186	0.187
Adj. R2	0.000	0.141	0.264	0.271	0.006	0.125	0.184	0.184
Obs.	5705	5705	5705	5705	4881	4881	4881	4881

Note: Values in the parenthesis are standard errors.

* Denotes significance at 1 percent and ** denotes significance at 5 percent.

Estimates are corrected for Heteroscedasticity.

The coefficients (and the standard errors) of ASSET are multiplied by 1000.

Table A4: Effects of different zodiac signs on Earnings for the year 1991

Dependent variable: Log earnings								
Variable	Male				Female			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Const.	9.9112*	9.7641*	8.4578*	8.4620*	9.4405*	9.0044*	8.5082*	8.5092*
	(0.0356)	(0.0904)	(0.1009)	(0.1008)	(0.0432)	(0.1331)	(0.1388)	(0.1389)
Educ		-0.1264*	-0.0542*	-0.0540*		-0.0936*	-0.1003*	-0.1001
		(0.0154)	(0.0153)	(0.0154)		(0.0216)	(0.0213)	(0.0213)
Educ2		0.0105*	0.0077*	0.0076*		0.0095*	0.0099*	0.0099*
		(0.0007)	(0.0007)	(0.0007)		(0.0009)	(0.0009)	(0.0009)
Exper			0.0794*	0.0792*			0.0541*	0.0540*
			(0.0033)	(0.0033)			(0.0034)	(0.0034)
Exper2			-0.0013*	-0.0013			-0.0010*	-0.0010
			(0.0001)	(0.0001)			(0.0001)	(0.0001)
Asset				0.0011				0.0024
				(0.0030)				(0.0037)
Rat	-0.0403	-0.0634	-0.0195	-0.0193	-0.1133	-0.0465	-0.0550	-0.0540
	(0.0568)	(0.0517)	(0.0466)	(0.0465)	(0.0656)	(0.0592)	(0.0567)	(0.0567)
Ox	-0.0073	-0.0188	-0.0083	-0.0088	-0.0472	-0.0323	-0.0381	-0.0375
	(0.0585)	(0.0524)	(0.0480)	(0.0480)	(0.0654)	(0.0584)	(0.0555)	(0.0555)
Tiger	-0.0416	-0.0268	-0.0070	-0.0070	-0.0513	0.0051	-0.0135	-0.0129
	(0.0579)	(0.0529)	(0.0500)	(0.0500)	(0.0637)	(0.0572)	(0.0556)	(0.0556)
Rabbit	0.0259	0.0021	0.0107	0.0106	-0.0656	-0.0480	-0.0541	-0.0537
	(0.0546)	(0.0493)	(0.0478)	(0.0477)	(0.0649)	(0.0603)	(0.0598)	(0.0597)
Snake	0.0192	0.0105	0.0306	0.0299	-0.0154	0.0049	0.0179	0.0186
	(0.0510)	(0.0472)	(0.0453)	(0.0454)	(0.0607)	(0.0561)	(0.0558)	(0.0558)
Horse	-0.0049	0.0164	0.0461	0.0458	-0.1016	-0.0860	-0.0893	-0.0886
	(0.0507)	(0.0466)	(0.0450)	(0.0450)	(0.0654)	(0.0613)	(0.0607)	(0.0607)
Goat	-0.0343	-0.0222	0.0162	0.0160	-0.0415	0.0188	0.0148	0.0157
	(0.0537)	(0.0491)	(0.0472)	(0.0471)	(0.0607)	(0.0561)	(0.0551)	(0.0551)
Monkey	-0.0024	0.0138	0.0585	0.0582	-0.1095	-0.0932	-0.0558	-0.0553
	(0.0522)	(0.0479)	(0.0450)	(0.0450)	(0.0642)	(0.0604)	(0.0597)	(0.0597)
Rooster	-0.0374	-0.0412	0.0018	0.0001	-0.0614	0.0019	0.0166	0.0170
	(0.0521)	(0.0483)	(0.0465)	(0.0460)	(0.0618)	(0.0566)	(0.0556)	(0.0556)
Dog	-0.0267	-0.0343	0.0037	0.0028	-0.137**	-0.0935	-0.0721	-0.0721
	(0.0577)	(0.0519)	(0.0480)	(0.0480)	(0.0638)	(0.0590)	(0.0568)	(0.0568)
Pig	-0.0953	-0.120**	-0.0721	-0.0717	-0.147**	-0.0940	-0.0677	-0.0669
	(0.0566)	(0.0516)	(0.0474)	(0.0474)	(0.0623)	(0.0560)	(0.0539)	(0.0539)
R2	0.001	0.159	0.291	0.291	0.002	0.140	0.192	0.192
Adj. R2	0.000	0.157	0.289	0.289	0.000	0.138	0.190	0.190
Obs.	5590	5590	5590	5590	4777	4777	4777	4777

Note: Values in the parenthesis are standard errors.

* Denotes significance at 1 percent and ** denotes significance at 5 percent.

Estimates are corrected for Heteroscedasticity.

The coefficients (and the standard errors) of ASSET are multiplied by 1000.