



Center for Research in Economics, Management and the Arts

**IT IS ABOUT BELIEVING:
SUPERSTITION AND RELIGIOSITY**

Benno Torgler

Working Paper No. 2003 - 10

IT IS ABOUT BELIEVING: SUPERSTITION AND RELIGIOSITY

by

Benno Torgler*

Abstract: This paper has a novel framework analysing what shapes superstition in a multivariate analysis. The results indicate that socio-demographic and socio-economic variables matter. The results also indicate that there is a certain concurrence between churches and superstitious beliefs. In most of the cases we observe a negative correlation between superstition and attendance of church and other religious activities. Closeness to the churches goes in line with lower superstition. On the other hand, a generally higher perceived religiosity increases superstition. Furthermore, there is the tendency that people without a religious denomination have the lowest belief in superstition. Finally, the results indicate that there is a strong variety in superstition among countries. Especially people from formerly Communist countries have a higher degree of superstition than others.

JEL classification: K420

Keywords: Superstition; Religiosity; Culture

* Andrew Young School of Policy Studies, International Studies Program, 35 Broad Str., suite 605, Atlanta, GA 30303, USA; University of Basel, Wirtschaftswissenschaftliches Zentrum (WWZ), Basel (Switzerland) and CREMA Center for Research in Economics, Management and the Arts (Switzerland); e-mail: ecobtx@langate.gsu.edu, benno.torgler@unibas.ch. For advice and suggestions thanks are due to Doris Aebi.

I. INTRODUCTION

Superstition is quite common in human society. For example, a huge number of newspapers and magazines carry regularly horoscopes, which indicate the high demand for reading horoscopes. Ankerberg and Weldon (1999) survey the literature about the influence of astrology, stressing that its impact has increased strongly in the last decades (e.g., huge number of enterprises have astrologers in the staff, influencing the U.S. government during the Reagan administration, possibilities of writing a Ph.D. in some universities, teaching classes of astrology in high school and college campuses). Some survey studies report a high degree of belief, interest and involvement in superstition (see, e.g., Gallup and Newport 1991, Ross and Joshi 1992).

However, surprisingly, there is hardly any empirical evidence about what shapes an individual's superstition, especially in the economic literature. One reason might be that astrology has been criticized as a non-academic field, as it lacks reliability. However, nothing speaks against analysing individuals' beliefs, if we see economics as a social science that goes beyond the analysis of human behaviour. The economic explanation of non-economic phenomena has strongly increased in the last few years. The expansion of economics to other spheres of life, including sociology, politics, warfare, crime, religion was according to Hirshleifer (2002) 'like a breath of fresh air' (p. ix). With the help of standard economic analysis new insights in these "non-market topics" have been developed. Researchers as, e.g., Becker (1968, 1971, 1976, 1981), Buchanan (1975), North (1981) and Tullock (1965, 1987) have penetrated with an economic analysis into social sciences as political science, sociology or history. Several Nobel Prizes indicate that economists have successfully entered other territories.

Thus, this paper tries to shed light into the topic of superstition, presenting empirical evidence from 17 countries with different cultural backgrounds, working with the International Social Survey Programme 1998 (Religion II). We are going to analyse what shapes an individual's belief *that star sign at birth, or horoscope can affect the course of the future*, that *fortune tellers can foresee the future* and the belief in *good luck charms*. We will see to which extent socio-demographic and socio-economic factors matter. We are also going to check whether there is a correlation between the superstition variables and religion variables. Furthermore, controlling for the different countries will allow to see whether there is a variance in different cultures.

The paper starts with presenting a descriptive analysis of the degree of superstition in the 17 countries. In a next step we analyse superstition as a dependent variable and search for factors that affect individuals' superstition.

II. THE DEGREE OF SUPERSTITION

Empirical evidence about superstition is rare in economics. Kolb and Rodriguez (1987) analysed whether superstition plays a role in the behaviour of investors. They evaluated the daily returns from the CRSP value- and equally weighted indices (with and without dividends). The empirical evidence indicates that the market may be affected by superstition, showing lower mean returns for "Friday the Thirteenth". However, Dyl and Maberly (1988) did not find a Friday the Thirteenth effect, using another data set (Standard and Poor's Index) from all Fridays from 1940 through 1987 (see also Chamberlain, Cheung and Kwan). Similarly, Coutts (1999) did not find a Friday the 13th effect employing daily returns from the Financial Times Industrial Ordinary Sahres Index (FT 30) for the period July 1935 through December 1994. Woo and Kwok (1994) try to quantify of superstition on the price of products. For example, an apartment on the thirteenth floor may have a lower price than other apartments in the same building. They analyse license plates auctioned in Hong Kong during 1989 and 1991. They found that superstition affects the price of a product (e.g., higher prices for plates with 8, a sign of prosperity in Cantonese-speaking societies, and lower prices for 4, a sign for death). Their results also suggest that the superstition effect is culture dependent. They point out: "What is considered to be unlucky in Western society is dismissed by the people in Hong Kong" (p. 395). These results indicate the relevance to control for culture differences in our analysis.

Our analysis can be seen as an extension of the work done by Barro and McCleary (2002). In a subchapter they shortly analyse the same variables we are going to use, and check in a bivariate analysis the correlation between superstition and religiosity. They observe a negative correlation between various religious beliefs and superstition. In our study we are going to use the superstition variables as dependent variables to search for factors that have an impact on superstition.

We first start with a descriptive analysis of the degree of superstition in our data set. The general questions to assess the level of superstition in a society are:

Now please think about something different. Please tick one box on each line below to show whether you think each statement is true or false.

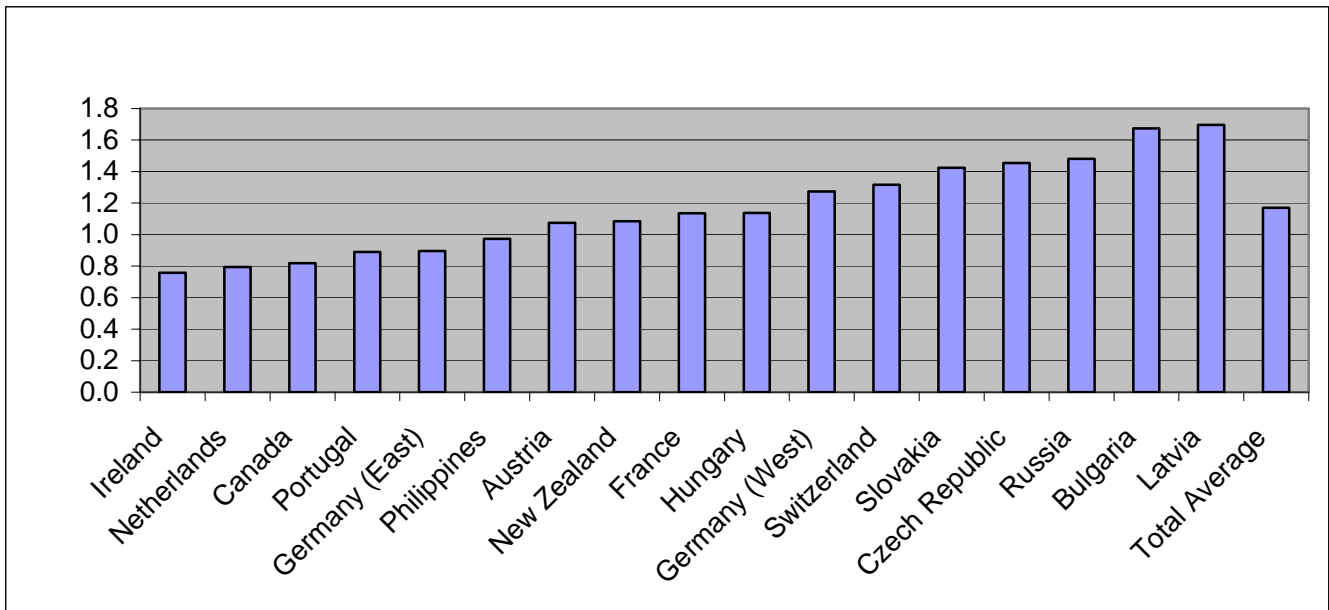
1. STAR SIGN AND HOROSCOPE: A person's star sign at birth, or horoscope, can affect the course of their future (3= definitely true, 2=probably true, 1=probably not true, 0=definitely not true).

2. FORTUNE TELLERS: Some fortune tellers really can foresee the future (3= definitely true, 2=probably true, 1=probably not true, 0=definitely not true).

3. GOOD LUCK CHARMS: Good luck charms sometimes do bring good luck (3= definitely true, 2=probably true, 1=probably not true, 0=definitely not true).

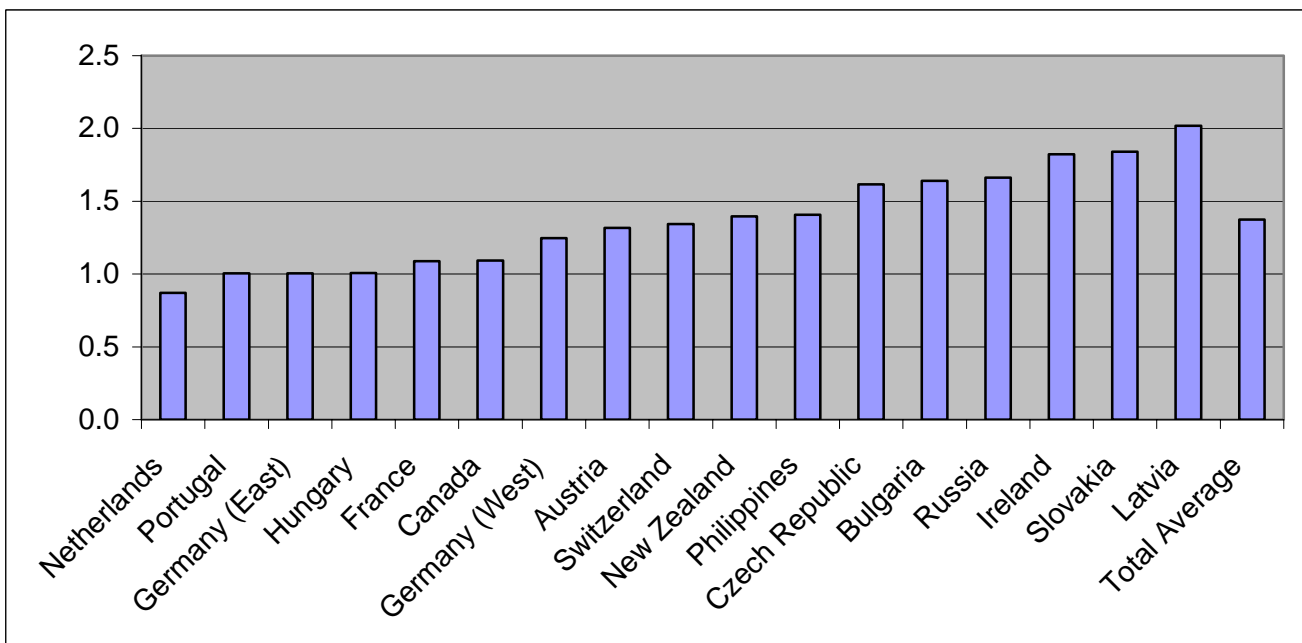
Figure 1 to 3 present the mean values for all countries and superstition variables based on a scale from 0 to 3. The observed tendencies are similar to each other. Former Soviet Union countries and Central Eastern European countries such as Latvia, Bulgaria, Russia, Slovakia, Czech Republic show the highest superstition values among the countries. The only exception is East Germany. Hungary shows a value close to the average regarding the belief in the personal star sign and the horoscope and relatively low values for the variables FORTUNE TELLERS and GOOD LUCK CHARMS. East Germany always indicates values below the average. In general, low values can be found for the countries France, Canada, Ireland, and Portugal. Interestingly, wealthy countries as Switzerland, Germany, and Austria show relatively high values.

Figure 1
Belief in the Personal Star Sign and Horoscope



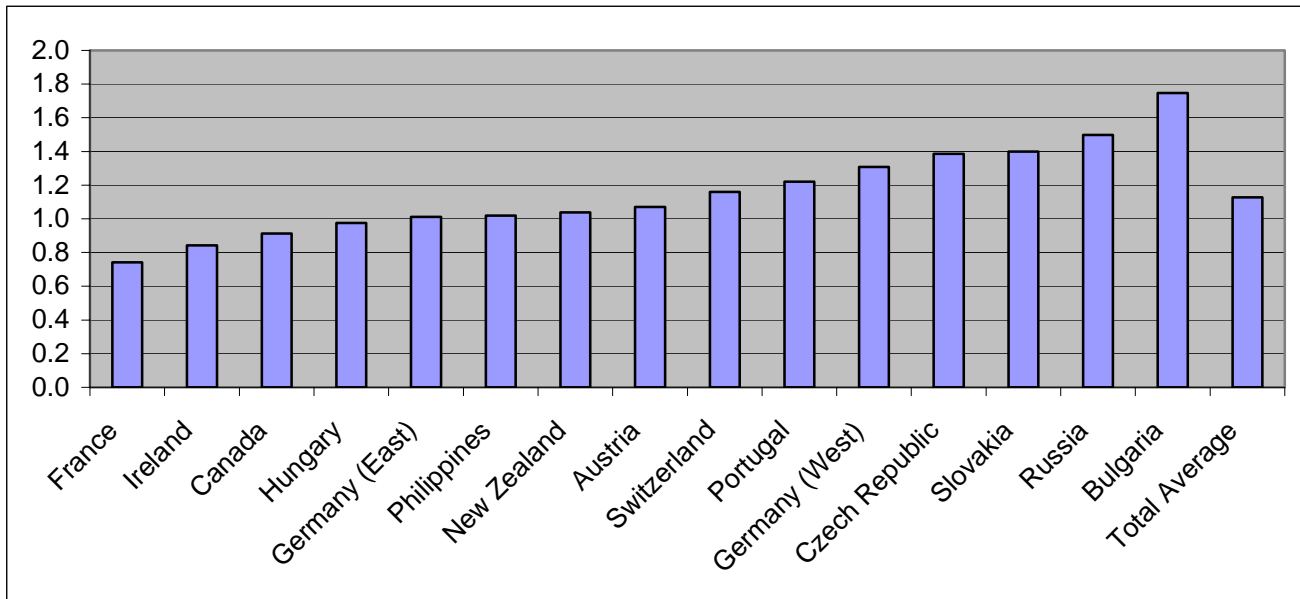
Note: Mean country values (scale from 0 to 3)

Figure 2
Belief in Fortune Tellers



Note: Mean country values (scale from 0 to 3)

Figure 3
Belief in Good Luck Charms



Note: Mean country values (scale from 0 to 3)

III. WHAT SHAPES SUPERSTITION?

The ISSP 1998 (RELIGION II) allows to analyse many factors, such as personality, demographic and attitudinal factors. In our multiple regression analysis we will use STAR SIGN AND HOROSCOPE, FORTUNE TELLERS and GOOD LUCK CHARMS as dependent variables. This research framework is novel, as to the author's knowledge there are no studies that use superstition as a dependent variable and search for factors that systematically influence superstition. Regressions help isolate the effects of different factors from each other and thus to get the correlation of a single factor with the superstitious notions when all other factors are constant.

Socio-demographic variables appear to be important determinants of beliefs. We are going to test whether higher educated people are less likely to be superstitious. It can be supposed that individuals are more critical towards superstition if they are more knowledgeable and probably also more scientific and thus more inclined to reject superstitious beliefs (see Barro and McCleary 2002). Peltzer (2003) found based on a questionnaire study done in South Africa that secondary school students showed higher scores on superstition than university students. As superstition is not connected to salvation like religiosity, a higher age

might not be positively correlated with a higher superstition.¹ On the contrary, it can be supposed that younger people might be more strongly influenced by superstition, as they have less social stakes and experiences and are more easily influenced. Tobacyk, Pritchett and Mitchell (1988), for example, found that paranormal beliefs² tend to be lower in late-adulthood (see also Irwin 1993). Furthermore, we will also see whether we observe a significant difference between men and women and among different age groups. Irwin (1993) points out that women are stronger paranormal believers than men (for empirical evidence see Randall and Desroisiers 1980, Tobacyk and Milford 1983).

Regarding the income variable, the standard economic argument would be that people with a higher income have higher opportunity costs of spending time reading the horoscope or being advised by a fortune teller. The predictions would be that a higher income leads to a lower belief in superstition. However, superstitious beliefs are not time intensive. Church attendance, e.g., would be much more time intensive. Furthermore, according to Maslow (1970) there is a general pattern of needs recognition and satisfaction that people follow. The next level can only be reached until the current level is satisfactorily completed. As we compare different countries in a multivariate analysis it is not appropriate to take income as a proxy, but rather the perceived economic class someone belongs to (subjective social class; lower class till upper class). Lower classes might be more concerned regarding their security, stability and less able to fulfil their potentials and wishes. The Maslow pyramid is insofar interesting as we compare different cultures with a certain variety of economic wealth. If we considered only OECD countries, it can be assumed that there is a lack of variance in the lowest pyramid levels. Taking into consideration the idea of Maslow's hierarchy of need, it could be argued that people in the higher social class have, *ceteris paribus*, lower restrictions to engage in the personal "spiritual capital", which might have an impact on the beliefs in the star sign and the horoscope or fortune tellers. On the other hand, our reference class (LOWEST CLASS) might be more focused on the general needs.

Does the occupation status influence superstitious beliefs? Such a belief might depend on how integrated somebody is in the society. It could be supposed that unemployed people have a stronger belief in superstition than employees, seeing superstition as a help to overcome or accept their current situation. If superstition can be seen as a sort of „spiritual

¹ The argument is that people become more religious when getting closer to death. If salvation depends on cumulated religious efforts, and there is the incentive to postpone "outlays" until later in life, people get more active at the end of their life (see Barro and McCleary 2002)

² In psychology the term *paranormal* describes "phenomena which, if authentic, violate basic limiting principles of science" (Peltzer 2003, p. 1419). It includes phenomena such as superstition, witchcraft, extraordinary powers, spiritualism and also traditional religious beliefs.

help“ in difficult life situations, we would also expect differences for different marital status. Thus, widowed, divorced or separated people might be more superstitious than singles or married people.

Superstition notions might compete with other belief systems that rely on super-natural forces. For example, churches might be in competition with superstition. Thus, a higher degree of superstition might be correlated with a less active role in a church. We will use different measurements to get an idea of such a possible correlation:

CHURCH ATTENDANCE: How often do you attend religious services³?

1. Never
2. Less frequently
3. Several times a year
4. Once a month
5. 2-3 times a month
6. Once a week or more, nearly every week

CHURCH ACTIVITIES: How often do you take part in the activities or organisations of a church or a place of worship, other than attending services?

1. Never
2. Less than once a year
3. About once or twice a year
4. Several times a year
5. About once a month
6. 2-3 times a month
7. Nearly every week
8. Every week
9. Several times a week

RELIGIOUS: Would you describe yourself as:

1. Extremely non-religious
2. Very non-religious
3. Somewhat non-religious
4. Neither religious nor non-religious
5. Somewhat religious
6. Very religious
7. Extremely religious

VOLUNTEER WORK: RELIGIOUS ACTIVITIES:

Have you done any voluntary activity in the past 12 months in any of the following area? Voluntary activity is unpaid work, not just belonging to an organisation or group. It should be of service or benefit to other people or the community and not only to one's family or personal friends. (If the same voluntary activity falls under two or more of the categories listed above, please report it only once

³ For some differences in the way the question was asked in different countries see Appendix Table 1

under whichever relevant category appears first. For example, if you were involved in political campaigning for a candidate endorsed by a church or religious group, you would report it under a. Political activities not under c. Religious and church-related activities.) During the last 12 months did you do volunteer work in any of the following areas:

Religious and church-related activities (helping churches and religious groups)

1. No
2. Yes, once or twice
3. Yes, 3-5 times
4. Yes, 6 or more times

Churches have an incentive to suppress superstition and thus competition (see Barro and McCleary 2002). Closeness to the churches goes in line with lower superstition. Thus, we suppose that especially the variable that measures the voluntary work in religious church-related activities has the strongest negative impact on belief in superstition. On the other hand, religiosity can be seen as a spiritual act, not connected to a specific church or religious organisation. Thus, in this case competition might not work. On the contrary, spirituality might be linked to beliefs that reflect superstition *and* the reliance on super-natural forces. Thus, we could even observe a positive correlation between the two variables.

The ISSP offers the possibility to integrate 17 countries into the empirical study. We will build country dummy variables as superstition might be strongly influenced by cultural variety. We use a *weighted* ordered probit estimation to correct the samples and thus to get a reflection of the national distribution. The ordered probit models are relevant in such an analysis insofar as they help analyse the ranking information of the scaled dependent variables. However, as in the ordered probit estimation, the equation has a non-linear form, only the sign of the coefficient can be directly interpreted and not its size. Calculating the marginal effects is therefore a method to find the quantitative effect a variable has on the dependent variable. In all estimations we present only the marginal effect for the highest superstition value “definitely true”. In all estimations we use robust standard errors. *Table 1 to 3* present the results. The first estimation takes all countries together without using country dummy variables. In all further estimations country dummy variables have been used, taking West Germany as the reference group. The multivariate analysis indicates that the descriptive picture is robust. There is the tendency for all variables that formerly Communist countries have a significantly higher degree of superstition than other countries. These findings fit into the argumentation of Barro and McCleary (2002) that Communist countries tried to eradicate organized religion, regarding it as “competitive with the Communist quasi-religion” (p. 13). This leads to the tendency that superstition substituted religious beliefs and activities.

Interestingly, *Table 1* shows that Germany (West) and Switzerland have relatively high beliefs in star sign and horoscope relative to other developed countries. Switzerland also shows a high belief in fortune tellers. In general the tendency in the countries is very similar for all three dependent variables (especially for the dependent variables in *Table 1* and 3). A switch is observed for some countries regarding the dependent variable FORTUNE TELLERS. For example, people in New Zealand, Canada, and Hungary have now statistically significantly higher belief in superstition than West Germans. One of our main hypotheses cannot be rejected. For all three dependent variables there is the tendency that a higher education leads to a significantly lower superstition. Education has the strongest negative impact for the variable GOOD LUCK CHARMS. Thus, the findings supports the arguments that more educated people are more inclined to reject beliefs that reflect superstition.

Among all the estimations a higher age is correlated with a lower degree of superstition. Interestingly, in most of the estimations we observe that the marginal effects increase from a lower age group to a higher one. In all estimations in *Table 1* to 3 we can see that women are significantly more superstitious than men. Being a woman rather than a man increases the probability of a person stating that star sign and horoscope definitely affect the course of the future and fortune tellers can definitely foresee the future by around 3.7, respectively 4.5 percentage points. In line with these results, the marginal effects for the variable GOOD LUCK CHARMS are around 3 percentage points. Thus, the findings suggest a big difference between women and men. For all three dependent variables there is the tendency that widowed, divorced and separated people have a higher belief in superstition than singles.

Looking at the social classes we observe the robust tendency that the lowest class has also the lowest superstition values. An increase in the marginal effects from the lowest to the highest is observed for the variables FORTUNE TELLERS and GOOD LUCK CHARMS, but not for the variable STAR SIGN AND HOROSCOPE. One reason might be that the first two variables are more costly to obtain than horoscopes (available in many newspapers and magazines) and the star sign, which is fixed after birth. In general, in our cases it seems that the theoretical argumentation based on the Maslow pyramid is empirically better founded than the individuals' opportunity costs.

There is also the tendency that unemployed individuals are more superstitious than full-time employees. However, in many estimations the coefficient is not statistically significant. Disabled or sick people are especially more superstitious regarding FORTUNE

TELLERS. In general, based on these results, the argumentation that superstition can be seen as a sort of „spiritual help“ in difficult life situations.

In a next step we are going to see the correlation between religiosity and superstition. The results are in line with the hypothesis stressing the concurrent situation between churches and superstition. In most of the cases we observe a negative correlation between religiosity and superstition. Only the coefficients for the dependent variable FORTUNE TELLERS are mostly not significant showing a reverse coefficient sign for one variable. It should be noticed that the marginal effects for all estimations are not so high throughout all estimations; only the coefficient for the variable VOLUNTARY RELIGIOUS ORGANIZATION has a statistically significant negative coefficient. It indicates that an increase in voluntary participation by one unit reduces the share of persons indicating the highest superstition between 0.3 (FORTUNE TELLERS) and 1.4 percentage points (STARS AND HOROSCOPE). In general, the voluntary participation in church and religious organisations has the strongest negative impact on superstition, showing the highest marginal effects. What about being religious? The findings are in line with our theoretical argumentation that religiosity is not negatively correlated with superstition. In all estimations we even observe a positive relationship, being statistically significant for all three dependent variables with marginal effects between 0.9 (GOOD LUCK CHARMS) and 1.5 percentage points (FORTUNE TELLERS). Being religious reflects spirituality that is connected to the reliance on super-natural forces, which also reflects a part of superstition.

The culture variety in the ISSP data allows to analyse the degree of superstition in a huge number of different religions. As reference group we take NO RELIGIOUS DENOMINATION. *Table 4* presents the results. Although catholic countries such as Portugal or France have a low superstition rate, our findings with the religion dummy show a different picture. The coefficient CATHOLIC is statistically significant with a positive sign. On the other hand, there is the tendency that PROTESTANTS are less superstitious than the reference group (no religious denomination). However, on the other hand, LUTHERANS are more superstitious. Barro and McCleary (2002) point out that the Catholic church contrary to the Lutheran church tried to compete with superstition influences

“incorporating magical practices into its own ceremonies, notably the Eucharist in which a wafer and wine are identified with the body and blood of Christ” (p. 34).

However, our results indicate that such a strategy might not be relevant. Furthermore, anti-superstition campaigns done in catholic countries might only influence those individuals who

are actively participating in the church and the religious organizations and not Catholics per se. What about other major religious denominations? MUSLIMS, HINDUS, and BUDDHISTS have the tendency to be more superstitious than people without a religious denomination. The coefficient for JEWISH is not statistically significant. On the other hand, being ORTHODOX is strongly correlated with superstition, which is in line with the high values in former Communist countries. In general, in most of the cases, having a religious denomination leads to a higher belief in superstition (exceptions, e.g., BAPTISTS, OTHER PROTESTANTS, OTHER NON CLASSIFIED RELIGIONS). Thus, competition only works when individuals get very active in church and religious organizations.

IV. CONCLUSIONS

This paper is a contribution to the work done in economics to expand economics to other spheres of life, such as politics, warfare, crime or religion. However, to the author's knowledge there is hardly any empirical study that analyses superstition as a dependent variable. Thus, it is novel in literature to study systematically what shapes superstition in a multivariate analysis.

We used three proxies to measure superstition: individual's belief that i) *star sign at birth, or horoscope can affect the course of the future*, ii) *fortune tellers can foresee the future* and iii) *good luck charms sometimes do bring good luck*. We have analysed to which extent socio-demographic and socio-economic factors matter. The results indicate the tendency that a higher education leads to a significantly lower superstition. A higher age is correlated with a lower degree of superstition and women are more superstitious than men. Interestingly, the lowest social classes have also the lowest superstition values. Furthermore, there is also the tendency that unemployed individuals have a stronger belief in superstition than full-time employees, and widowed, divorced and separated people a stronger one than singles. Thus, it might be that superstition is a sort of "spiritual help" in more difficult life situations.

We have also analysed whether there is a correlation between the superstition variables and religion variables. The results indicate that there is a certain concurrence between churches and superstition beliefs. In most of the cases we observe a negative correlation between church attendance and the attendance of religious activities. Closeness to the churches goes in line with lower superstition. The highest effect can be found for people working voluntarily in the church and for religious organisations. However, people who are

defined themselves as religious have also the tendency to a higher belief in superstition. Being religious in general might reflect spirituality that is connected to the reliance on super-natural forces, which also reflects a part of superstition. Looking at the different religions we observe the tendency that having a religious denomination goes in line with a stronger belief in superstition.

We have also checked whether there is a variance between cultures. Interestingly, there is the tendency for all variables that formerly Communist countries have a higher degree of superstition than other countries. Thus, it looks as if the superstition substitutes religious beliefs and activities which were eradicated during the Communist era. Furthermore, it is interesting to observe that wealthy countries such as Germany (West) and Switzerland have relatively high beliefs in superstition.

REFERENCES

- Ankerberg, J. and J. Weldon (1999). *Encyclopedia of Cults and New Religions*. Eugene: Harvest House Publishers.
- Barro, R. J. and R. M. McCleary (2002). Religion and Political Economy in an International Panel. NBER Working Paper Series, No 8931, Cambridge, MA.
- Becker, G. S. (1968). Crime and Punishment: An Economic Approach, *Journal of Political Economy*. 76: 169-217.
- Becker, G. S. (1971). *The Economics of Discrimination*. Chicago: Chicago University Press.
- Becker, G. S. (1976). *The Economic Approach to Human Behavior*. Chicago: Chicago University Press.
- Becker, G. S. (1981). *A Treatise on the Family*. Cambridge, MA: Harvard University Press.
- Buchanan, J. M. (1975), *The Limits of Liberty*. Between Anarchy and Leviathan, Chicago: Chicago University Press.
- Chamberlain, T. W., C. S. Cheung and C. C. Y. Kwan (1991). The Friday the Thirteenth Effect: Myth or Reality?, *Quarterly Journal of Economics and Business*. 30: 111-117.
- Coutts, J. A. (1999). Friday the Thirteenth and the Financial Times Industrial Ordinary Shares Index 1935-94, *Applied Economics Letter*. 6: 35-37.
- Dyl, E. A. and E. D. Maberly (1988). The Anomaly That Isn't There: A Comment on Friday the Thirteenth, *Journal of Finance*. 18: 1285-1286.
- Gallup, G. H. and F. Newport, Jr (1991). Belief in the Paranormal Among Adult Americans, *Skeptical Inquirer*. 15: 137-147.
- Kolb, R. W. and R. J. Rodriguez (1987). Friday the Thirteenth: 'Part VII' – A Note, *Journal of Finance*. 17: 1385-1387.
- Hirshleifer, J. (2002). Introduction, in S. Grossbard-Shechtman and C. Clague (eds.), *The Expansion of Economics*. Towards a More Inclusive Social Science. New York: M. E. Sharpe.
- Irwin, H. J. (2000). Age and Sex Differences in Paranormal Belief: A Response to Vituli, Tipton, and Rowe (1999), *Psychological Reports*. 86: 595-596.
- Maslow, A. H. (1970). *Motivation and Personality*. New York: Harper and Row
- North, D. C. (1981) *Structure and Change in Economic History*. New York: Norton.
- Peltzer, K. (2003). Magical Thinking and Paranormal Belief Among Secondary and University Students in South Africa, *Personality and Individual Differences*. 35: 1419-1426.
- Ranndall, T. M. and M. Desrosiers (1980). Measurement of Supernatural Belief: Sex Differences and Locus of Control, *Journal of Personality Assessment*. 44: 493-498.
- Ross, C. A. and S. Joshi (1992). Paranormal experiences in the general population, *Journal of Nervous and Mental Disease*. 180: 357-361.

- Tobacyk, J. and G. Milford (1983). Belief in Paranormal Phenomena: Assessment Instrument Development and Implications for Personality Functioning, *Journal of Personality and Social Psychology*. 44: 1029-1037.
- Tobacyk, J. J., G. Pritchett and T. Mitchell (1988). Paranormal beliefs in late-adulthood, *Psychological Reports*. 62: 965-966.
- Tullock, G. (1965). *The Politics of Bureaucracy*. Washington, DC: Public Affairs Press.
- Tullock, G. (1987). *Autocracy*. Dordrecht: Kluwer.
- Woo, C-K. and R. H. F. Kwok (1994). Vanity, Superstition and Auction Price, *Economics Letters*. 44: 389-395.

Table 1

Determinants of the Belief in Personal Star Sign and Horoscope

weighted ordered probit	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.
a) Demographic Factors															
AGE 30-39	-0.027	-0.910	-0.004	-0.012	-0.380	-0.002	-0.001	-0.040	0.000	-0.025	-0.820	-0.003	-0.025	-0.800	-0.003
AGE 40-49	-0.129***	-3.940	-0.018	-0.110***	-3.260	-0.014	-0.100***	-2.750	-0.012	-0.131***	-3.780	-0.017	-0.124***	-3.630	-0.016
AGE 50-59	-0.123***	-3.610	-0.017	-0.107***	-3.060	-0.014	-0.099***	-2.680	-0.012	-0.138***	-3.890	-0.017	-0.117***	-3.350	-0.015
AGE 60-69	-0.163***	-3.820	-0.022	-0.128***	-2.950	-0.016	-0.092**	-2.010	-0.011	-0.171***	-3.900	-0.021	-0.125***	-2.840	-0.016
AGE 70-79	-0.269***	-5.230	-0.034	-0.199***	-3.750	-0.024	-0.176***	-3.130	-0.020	-0.251***	-4.680	-0.029	-0.199***	-3.710	-0.024
AGE 80 +	-0.359***	-4.350	-0.042	-0.232***	-2.770	-0.026	-0.302***	-3.410	-0.031	-0.296***	-3.510	-0.032	-0.257***	-3.000	-0.029
WOMAN	0.284***	14.640	0.042	0.277***	14.080	0.037	0.282***	13.250	0.036	0.246***	12.280	0.033	0.275***	13.900	0.037
EDUCATION	-0.029***	-4.020	-0.004	-0.062***	-7.720	-0.008	-0.067***	-7.650	-0.009	-0.059***	-7.280	-0.008	-0.058***	-7.180	-0.008
b) Marital Status															
MARRIED/LIVING T.	-0.001	-0.020	0.000	-0.047*	-1.650	-0.006	-0.052*	-1.670	-0.007	-0.062**	-2.070	-0.008	-0.043	-1.470	-0.006
WIDOWED	0.109**	2.460	0.017	-0.011	-0.240	-0.001	-0.033	-0.680	-0.004	-0.026	-0.560	-0.003	-0.008	-0.160	-0.001
DIVORCED	0.169***	4.080	0.028	0.069	1.590	0.010	0.051	1.080	0.007	0.088**	1.980	0.012	0.084*	1.930	0.012
SEPARATED	0.175**	2.570	0.029	0.136**	1.990	0.020	0.129*	1.780	0.018	0.139**	1.970	0.020	0.147**	2.110	0.022
d) Economic Status															
UPPER CLASS	0.219***	8.160	0.036	0.042	1.340	0.006	0.022	0.640	0.003	0.030	0.950	0.004	0.050	1.560	0.007
UPPER MIDDLE CLASS	0.182***	6.030	0.030	0.077**	2.190	0.011	0.055	1.420	0.007	0.071**	1.990	0.010	0.079**	2.230	0.011
MIDDLE CLASS	0.187***	8.040	0.029	0.080***	2.770	0.011	0.060*	1.910	0.008	0.066**	2.240	0.009	0.078***	2.660	0.011
LOWER MIDDLE CLASS	0.229***	5.840	0.039	0.131***	2.970	0.019	0.102**	2.190	0.014	0.118***	2.620	0.017	0.136***	3.050	0.020
WORKING CLASS	0.268**	2.570	0.048	0.103	0.970	0.015	0.080	0.750	0.011	0.096	0.890	0.014	0.071	0.660	0.010
c) Employment Status															
PART TIME EMPLOYED	-0.018	-0.530	-0.003	0.064*	1.810	0.009	0.062*	1.680	0.008	0.070*	1.950	0.010	0.064*	1.780	0.009
LESS THEN PART TIME	-0.139***	-2.670	-0.019	-0.086	-1.600	-0.011	-0.085	-1.550	-0.010	-0.098*	-1.800	-0.012	-0.069	-1.270	-0.009
AT HOME	-0.213***	-6.600	-0.028	-0.094***	-2.870	-0.012	-0.091***	-2.660	-0.011	-0.120***	-3.590	-0.015	-0.106***	-3.180	-0.013
UNEMPLOYED	0.101**	2.510	0.016	0.004	0.090	0.001	0.030	0.630	0.004	-0.004	-0.100	-0.001	-0.002	-0.050	0.000
STUDENT	-0.014	-0.340	-0.002	-0.115***	-2.650	-0.014	-0.111**	-2.440	-0.013	-0.115***	-2.620	-0.014	-0.110**	-2.530	-0.014

RETIRED	-0.038	-1.020	-0.006	-0.099**	-2.560	-0.013	-0.112***	-2.680	-0.014	-0.117***	-3.010	-0.015	-0.118***	-3.020	-0.015
DISABLED	0.078	1.210	0.012	0.068	0.950	0.010	0.065	0.890	0.009	0.037	0.520	0.005	0.066	0.930	0.009
OTHER	-0.029	-0.350	-0.004	-0.017	-0.200	-0.002	-0.011	-0.110	-0.001	-0.042	-0.480	-0.005	-0.024	-0.290	-0.003
d) RELIGIOSITY															
CHURCH ATTEND.				-0.029***	-5.660	-0.004									
CHURCH ACTIVITIES							-0.052***	-8.640	-0.007						
RELIGIOUS										0.067***	9.880	0.009			
VOLUNTARY REL.															
ORGANIZ.													-0.104***	-7.870	-0.014
e) Countries															
GERMANY (EAST)				-0.458***	-8.780	-0.045	-0.202***	-2.600	-0.023	-0.343***	-6.490	-0.036	-0.446***	-8.570	-0.045
AUSTRIA				-0.228***	-3.900	-0.026	-0.212***	-3.510	-0.024	-0.258***	-4.340	-0.029	-0.219***	-3.710	-0.026
HUNGARY				-0.119**	-2.100	-0.015	-0.095	-1.620	-0.012	-0.096*	-1.720	-0.012	-0.093	-1.640	-0.012
IRELAND				-0.520***	-9.630	-0.050	-0.413***	-7.070	-0.041	-0.568***	-10.390	-0.052	-0.515***	-9.470	-0.049
NETHERLAND				-0.492***	-9.360	-0.050	-0.515***	-9.220	-0.050	-0.515***	-9.670	-0.051	-0.469***	-8.870	-0.048
CZECH REPUBLIC				0.161**	2.910	0.024	0.160***	2.760	0.023	0.187***	3.260	0.028	0.171***	3.080	0.026
BULGARIA				0.550***	9.830	0.104				0.528***	9.490	0.098	0.531***	9.480	0.100
RUSSIA				0.181***	3.330	0.027	0.184***	3.240	0.027	0.216***	3.980	0.033	0.217***	4.040	0.034
NEW ZEALAND				-0.162***	-3.160	-0.020	-0.166***	-3.110	-0.019	-0.173***	-3.360	-0.021	-0.129**	-2.500	-0.016
CANADA				-0.394***	-7.210	-0.041	-0.414***	-6.820	-0.040	-0.423***	-7.620	-0.043	-0.372***	-6.750	-0.039
PHILIPPINES				-0.265***	-4.880	-0.030	-0.225***	-3.910	-0.025	-0.398***	-7.190	-0.041	-0.254***	-4.680	-0.029
LATVIA				0.486***	9.750	0.089	0.500***	9.510	0.089	0.480***	9.660	0.086	0.505***	10.190	0.093
SLOVAKIA				0.207***	4.420	0.032	0.235***	4.720	0.035	0.137***	2.890	0.020	0.205***	4.360	0.031
FRANCE				-0.054	-0.990	-0.007	-0.065	-1.150	-0.008	-0.039	-0.710	-0.005	-0.041	-0.760	-0.005
PORTUGAL				-0.555***	-9.780	-0.052	-0.500***	-8.280	-0.047	-0.617***	-10.850	-0.055	-0.549***	-9.730	-0.052
SWITZERLAND				0.082*	1.650	0.012	0.077	1.480	0.010	0.064	1.270	0.009	0.064	1.260	0.009
Number of observations	17867			17705			15787			17418			17497		
Prob(LM-statistic)	0.000			0.000			0.000			0.000			0.000		

Notes: Dependent variable: Belief in the personal star sign and horoscope on a four point scale (0 to 3). In the reference group are AGE 16-29, MAN, SINGLE, LOWER CLASS FULL TIME EMPLOYED, GERMANY (WEST). Significance levels: * 0.05 < p < 0.10, ** 0.01 < p < 0.05, *** p < 0.01.

Table 2
Determinants of the Belief in Fortune Tellers

weighted ordered probit	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.
a) Demographic Factors															
AGE 30-39	-0.132***	-4.480	-0.021	-0.095***	-3.110	-0.013	-0.105***	-3.230	-0.015	-0.107***	-3.450	-0.015	-0.104***	-3.410	-0.015
AGE 40-49	-0.242***	-7.710	-0.037	-0.213***	-6.590	-0.028	-0.226***	-6.560	-0.030	-0.235***	-7.160	-0.030	-0.224***	-6.910	-0.030
AGE 50-59	-0.308***	-9.120	-0.045	-0.297***	-8.490	-0.037	-0.315***	-8.440	-0.039	-0.346***	-9.790	-0.042	-0.306***	-8.720	-0.039
AGE 60-69	-0.368***	-8.610	-0.051	-0.358***	-8.010	-0.043	-0.368***	-7.800	-0.044	-0.419***	-9.310	-0.048	-0.360***	-7.990	-0.044
AGE 70-79	-0.473***	-9.010	-0.060	-0.433***	-7.850	-0.049	-0.449***	-7.640	-0.050	-0.497***	-8.900	-0.052	-0.428***	-7.710	-0.048
AGE 80 +	-0.455***	-5.380	-0.056	-0.330***	-3.810	-0.038	-0.438***	-4.790	-0.047	-0.411***	-4.730	-0.044	-0.331***	-3.830	-0.039
WOMAN	0.326***	17.310	0.054	0.309***	16.080	0.045	0.308***	14.910	0.044	0.268***	13.750	0.038	0.308***	16.000	0.045
EDUCATION	0.010	1.400	0.002	-0.054***	-7.110	-0.008	-0.057***	-6.810	-0.008	-0.052***	-6.820	-0.007	-0.052***	-6.770	-0.008
b) Marital Status															
MARRIED/LIVING T.	0.051*	1.930	0.008	-0.030	-1.070	-0.004	-0.029	-0.970	-0.004	-0.042	-1.510	-0.006	-0.026	-0.930	-0.004
WIDOWED	0.168**	3.870	0.031	0.012	0.270	0.002	0.008	0.170	0.001	-0.017	-0.370	-0.002	0.012	0.270	0.002
DIVORCED	0.185***	4.490	0.034	0.074*	1.710	0.011	0.081*	1.740	0.012	0.090**	2.070	0.014	0.074*	1.720	0.011
SEPARATED	0.277***	3.900	0.055	0.200***	2.700	0.034	0.188**	2.390	0.031	0.192**	2.550	0.031	0.200***	2.690	0.034
d) Economic Status															
UPPER CLASS	0.320***	12.250	0.060	0.066**	2.140	0.010	0.043	1.260	0.006	0.060*	1.950	0.009	0.068**	2.200	0.010
UPPER MIDDLE CLASS	0.170***	5.930	0.031	0.058*	1.720	0.009	0.036	0.970	0.005	0.051	1.500	0.007	0.054	1.600	0.008
MIDDLE CLASS	0.105***	4.550	0.018	0.017	0.600	0.003	-0.006	-0.190	-0.001	0.015	0.520	0.002	0.014	0.480	0.002
LOWER MIDDLE CLASS	0.051	1.290	0.009	-0.030	-0.670	-0.004	-0.072	-1.530	-0.010	-0.035	-0.760	-0.005	-0.031	-0.680	-0.004
WORKING CLASS	0.025	0.290	0.004	-0.127	-1.400	-0.017	-0.133	-1.420	-0.018	-0.131	-1.400	-0.017	-0.153*	-1.660	-0.020
c) Employment Status															
PART TIME EMPLOYED	-0.062*	-1.870	-0.010	0.067*	1.900	0.010	0.062*	1.670	0.009	0.080**	2.220	0.012	0.066*	1.840	0.010
LESS THEN PART TIME	-0.139***	-2.630	-0.021	-0.045	-0.840	-0.006	-0.066	-1.190	-0.009	-0.053	-0.960	-0.007	-0.038	-0.700	-0.006
AT HOME	-0.194***	-5.980	-0.029	-0.042	-1.250	-0.006	-0.057	-1.640	-0.008	-0.052	-1.510	-0.007	-0.043	-1.250	-0.006

UNEMPLOYED	0.150***	3.930	0.027	0.059	1.480	0.009	0.112**	2.450	0.018	0.054	1.360	0.008	0.060	1.500	0.009
STUDENT	0.079*	1.890	0.014	-0.027	-0.630	-0.004	-0.036	-0.790	-0.005	-0.023	-0.540	-0.003	-0.020	-0.460	-0.003
RETIRED	-0.037	-1.000	-0.006	-0.063	-1.600	-0.009	-0.092**	-2.190	-0.013	-0.071*	-1.800	-0.010	-0.064	-1.630	-0.009
DISABLED	0.156**	2.350	0.029	0.106	1.580	0.017	0.097	1.430	0.015	0.060	0.870	0.009	0.114*	1.690	0.018
OTHER	-0.042	-0.590	-0.007	0.047	0.640	0.007	0.069	0.830	0.011	0.034	0.470	0.005	0.060	0.820	0.009
d) RELIGIOSITY															
CHURCH ATTEND.				0.002	0.400	0.000									
CHURCH ACTIVITIES							0.002	0.300	0.000						
RELIGIOUS										0.103***	15.470	0.015			
VOLUNTARY REL.															
ORGANIZ.													-0.023*	-1.750	-0.003
e) Countries															
GERMANY (EAST)				-0.364***	-6.610	-0.042	-0.146*	-1.790	-0.019	-0.226***	-4.000	-0.028	-0.369***	-6.690	-0.043
AUSTRIA				-0.161***	-2.770	-0.021	-0.168***	-2.780	-0.022	-0.217***	-3.630	-0.027	-0.143**	-2.430	-0.019
HUNGARY				0.216***	3.750	0.036	0.206***	3.460	0.034	0.195***	3.390	0.032	0.212***	3.710	0.036
IRELAND				-0.034	-0.600	-0.005	-0.047	-0.760	-0.007	-0.123**	-2.160	-0.016	-0.029	-0.510	-0.004
NETHERLAND				-0.227***	-4.210	-0.029	-0.254***	-4.390	-0.032	-0.284***	-5.180	-0.034	-0.226***	-4.160	-0.029
CZECH REPUBLIC				0.717***	14.320	0.157	0.709***	13.440	0.153	0.742***	14.660	0.162	0.719***	14.350	0.158
BULGARIA				0.723***	13.270	0.159				0.693***	12.600	0.148	0.715***	13.050	0.157
RUSSIA				0.654***	11.710	0.137	0.637***	10.930	0.131	0.627***	11.290	0.128	0.659***	11.950	0.139
NEW ZEALAND				0.337***	6.410	0.061	0.337***	6.080	0.060	0.313***	5.870	0.055	0.353***	6.650	0.064
CANADA				0.118**	2.040	0.019	0.122*	1.870	0.019	0.070	1.190	0.011	0.118**	2.030	0.019
PHILIPPINES				-0.080	-1.450	-0.011	-0.099*	-1.680	-0.014	-0.231***	-4.060	-0.029	-0.066	-1.190	-0.009
LATVIA				0.974***	19.290	0.238	0.962***	17.940	0.232	0.936***	18.350	0.222	0.969***	19.210	0.237
SLOVAKIA				0.753***	15.790	0.167	0.737***	14.430	0.160	0.676***	13.930	0.142	0.755***	15.740	0.168
FRANCE				0.129**	2.320	0.020	0.118**	2.030	0.018	0.131**	2.330	0.020	0.135**	2.410	0.022
PORTUGAL				-0.332***	-5.640	-0.039	-0.338***	-5.380	-0.040	-0.440***	-7.460	-0.048	-0.328***	-5.620	-0.039
SWITZERLAND				0.157***	2.990	0.025	0.149***	2.710	0.024	0.138**	2.580	0.021	0.155***	2.890	0.025
Number of observations	18541			18364			16347			18063			18171		
Prob(LM-statistic)	0.000			0.000			0.000			0.000			0.000		

Notes: Dependent variable: Belief fortune tellers on a four point scale (0 to 3). In the reference group are AGE 16-29, MAN, SINGLE, LOWER CLASS FULL TIME EMPLOYED, GERMANY (WEST). Significance levels: * 0.05 < p < 0.10, ** 0.01 < p < 0.05, *** p < 0.01.

Table 3

Determinants of the Belief in Good Luck Charms

weighted ordered probit	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.
a) Demographic Factors															
AGE 30-39	-0.167***	-5.450	-0.021	-0.159***	-5.090	-0.018	-0.161***	-4.820	-0.018	-0.165***	-5.170	-0.019	-0.154***	-4.880	-0.018
AGE 40-49	-0.312***	-9.300	-0.037	-0.295***	-8.530	-0.032	-0.303***	-8.160	-0.031	-0.312***	-8.740	-0.033	-0.291***	-8.270	-0.032
AGE 50-59	-0.412***	-11.870	-0.046	-0.408***	-11.510	-0.041	-0.409***	-10.820	-0.039	-0.437***	-12.130	-0.042	-0.404***	-11.290	-0.041
AGE 60-69	-0.477***	-11.010	-0.051	-0.459***	-10.260	-0.044	-0.447***	-9.470	-0.042	-0.507***	-11.230	-0.047	-0.453***	-10.030	-0.044
AGE 70-79	-0.536***	-10.090	-0.053	-0.479***	-8.740	-0.043	-0.450***	-7.720	-0.040	-0.521***	-9.430	-0.045	-0.472***	-8.550	-0.043
AGE 80 +	-0.534***	-6.020	-0.050	-0.397***	-4.470	-0.036	-0.479***	-4.990	-0.040	-0.458***	-5.170	-0.040	-0.393***	-4.350	-0.037
WOMAN	0.250***	12.500	0.034	0.238***	11.710	0.029	0.237***	10.770	0.028	0.207***	10.030	0.025	0.237***	11.610	0.029
EDUCATION	-0.100***	-13.860	-0.014	-0.094***	-11.800	-0.012	-0.104***	-11.920	-0.012	-0.090***	-11.170	-0.011	-0.091***	-11.300	-0.011
b) Marital Status															
MARRIED/LIVING T.	0.068**	2.400	0.009	0.014	0.460	0.002	0.027	0.840	0.003	-0.005	-0.160	-0.001	0.011	0.370	0.001
WIDOWED	0.171***	3.730	0.026	0.073	1.530	0.009	0.056	1.080	0.007	0.034	0.700	0.004	0.057	1.200	0.007
DIVORCED	0.138***	3.140	0.021	0.061	1.340	0.008	0.058	1.160	0.007	0.072	1.550	0.009	0.055	1.180	0.007
SEPARATED	0.072	0.970	0.010	0.095	1.290	0.013	0.131*	1.670	0.017	0.051	0.680	0.006	0.063	0.830	0.008
d) Economic Status															
UPPER CLASS	0.269***	9.760	0.041	0.047	1.450	0.006	0.013	0.360	0.002	0.037	1.130	0.005	0.055*	1.670	0.007
UPPER MIDDLE CLASS	0.144***	4.770	0.021	-0.026	-0.740	-0.003	-0.043	-1.100	-0.005	-0.036	-1.000	-0.004	-0.029	-0.820	-0.004
MIDDLE CLASS	0.182***	7.660	0.026	0.014	0.470	0.002	0.001	0.040	0.000	0.000	0.000	0.000	0.017	0.580	0.002
LOWER MIDDLE CLASS	0.160***	3.960	0.025	-0.001	-0.010	0.000	-0.012	-0.250	-0.001	-0.014	-0.300	-0.002	0.007	0.150	0.001
WORKING CLASS	0.072	0.680	0.010	-0.108	-1.020	-0.012	-0.102	-0.930	-0.011	-0.125	-1.130	-0.014	-0.140	-1.310	-0.016
c) Employment Status															
PART TIME EMPLOYED	-0.073**	-2.120	-0.010	0.040	1.090	0.005	0.051	1.340	0.006	0.037	1.000	0.005	0.048	1.300	0.006
LESS THEN PART TIME	-0.175***	-3.160	-0.021	-0.041	-0.710	-0.005	-0.045	-0.790	-0.005	-0.057	-0.980	-0.007	-0.011	-0.190	-0.001
AT HOME	-0.135***	-4.130	-0.017	-0.024	-0.720	-0.003	-0.041	-1.150	-0.005	-0.047	-1.380	-0.006	-0.023	-0.670	-0.003
UNEMPLOYED	0.152***	3.760	0.023	0.032	0.760	0.004	0.086*	1.700	0.011	0.026	0.600	0.003	0.028	0.640	0.004
STUDENT	0.076*	1.750	0.011	-0.019	-0.440	-0.002	-0.025	-0.550	-0.003	-0.019	-0.440	-0.002	-0.009	-0.200	-0.001

RETIRED	-0.080**	-2.060	-0.011	-0.116***	-2.900	-0.014	-0.147***	-3.410	-0.016	-0.125***	-3.100	-0.014	-0.109***	-2.700	-0.013
DISABLED	-0.043	-0.630	-0.006	-0.060	-0.840	-0.007	-0.047	-0.670	-0.005	-0.099	-1.360	-0.011	-0.047	-0.650	-0.006
OTHER	0.033	0.430	0.005	0.015	0.180	0.002	0.048	0.510	0.006	-0.005	-0.060	-0.001	0.031	0.390	0.004
d) RELIGIOSITY															
CHURCH ATTEND.				-0.022***	-4.350	-0.003									
CHURCH ACTIVITIES							-0.031***	-4.960	-0.004						
RELIGIOUS										0.076***	11.190	0.009			
VOLUNTARY REL.															
ORGANIZ.													-0.103***	-7.740	-0.013
e) Countries															
GERMANY (EAST)				-0.344***	-6.560	-0.034	-0.114	-1.520	-0.013	-0.227***	-4.230	-0.024	-0.330***	-6.310	-0.033
AUSTRIA				-0.251***	-4.430	-0.026	-0.244***	-4.160	-0.025	-0.289***	-5.010	-0.029	-0.236***	-4.150	-0.025
HUNGARY				-0.356***	-6.500	-0.034	-0.330***	-5.840	-0.032	-0.353***	-6.420	-0.034	-0.334***	-6.100	-0.033
IRELAND				-0.533***	-9.890	-0.046	-0.465***	-7.940	-0.041	-0.590***	-10.830	-0.048	-0.510***	-9.450	-0.045
NETHERLAND				-0.701***	-13.090	-0.057	-0.704***	-12.370	-0.057	-0.735***	-13.560	-0.058	-0.671***	-12.490	-0.057
CZECH REPUBLIC				0.095*	1.770	0.013	0.103*	1.830	0.013	0.117**	2.130	0.016	0.112**	2.080	0.015
BULGARIA				0.561***	10.500	0.099				0.538***	10.030	0.093	0.550***	10.310	0.098
RUSSIA				0.163***	2.940	0.022	0.174***	3.030	0.023	0.184***	3.340	0.025	0.199***	3.650	0.028
NEW ZEALAND				-0.230***	-4.470	-0.024	-0.228***	-4.230	-0.023	-0.248***	-4.760	-0.026	-0.181***	-3.480	-0.020
CANADA				-0.346***	-6.050	-0.034	-0.340***	-5.470	-0.032	-0.382***	-6.590	-0.036	-0.306***	-5.280	-0.031
PHILIPPINES				-0.328***	-6.010	-0.033	-0.310***	-5.360	-0.030	-0.467***	-8.380	-0.042	-0.300***	-5.490	-0.031
SLOVAKIA				0.096**	2.020	0.013	0.114**	2.250	0.015	0.023	0.470	0.003	0.101**	2.120	0.014
FRANCE				-0.591***	-10.890	-0.049	-0.584***	-10.320	-0.047	-0.573***	-10.450	-0.047	-0.560***	-10.250	-0.048
PORTUGAL				-0.176***	-3.100	-0.019	-0.096	-1.600	-0.011	-0.246***	-4.320	-0.026	-0.156***	-2.770	-0.018
SWITZERLAND				-0.116**	-2.280	-0.013	-0.117**	-2.210	-0.013	-0.126**	-2.440	-0.014	-0.116**	-2.220	-0.013
Number of observations	17277			17103			15129			16830			16889		
Prob(LM-statistic)	0.000			0.000			0.000			0.000			0.000		

Notes: Dependent variable: Belief in good luck charms on a four point scale (0 to 3). No observations for Latvia. In the reference group are AGE 16-29, MAN, SINGLE, LOWER CLASS FULL TIME EMPLOYED, GERMANY (WEST). Significance levels: * 0.05 < p < 0.10, ** 0.01 < p < 0.05, *** p < 0.01.

Table 4
Superstition and Religion

weighted ordered probit	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.	Coeff.	t-ratio	Marg.
	Personal Star Sign and Horoscope			Furtune Tellers			Good luck Charmes		
<i>a) Demographic Factors</i>	included			included			included		
<i>b) Marital Status</i>	included			included			included		
<i>d) Economic Status</i>	included			included			included		
<i>c) Employment Status</i>	included			included			included		
<i>d) Countries</i>	included			included			included		
e) RELIGION									
CATHOLIC	0.094***	3.670	0.013	0.148***	5.860	0.022	0.209***	7.860	0.026
GREEK CATHOLIC	0.107	0.500	0.015	0.118	0.460	0.019	0.295	1.170	0.044
AGLIPAYAN	0.791***	3.680	0.175	1.050***	9.310	0.277	0.749***	2.990	0.152
JEWISH	0.356	1.330	0.061	0.449	1.220	0.088	0.026	0.090	0.003
MUSLIM, ISLAM	0.177*	1.770	0.027	0.153	1.620	0.025	0.153	1.490	0.021
BAPTIST	-0.524***	-3.310	-0.047	-0.311**	-2.040	-0.036	-0.810***	-4.280	-0.052
METHODIST	0.256	1.570	0.041	0.251	1.510	0.043	0.347**	2.010	0.054
LUTHERAN	0.119**	2.520	0.017	0.207***	4.270	0.034	0.199***	4.360	0.028
PRESBYTERIAN/CHURCH OF SCOTLAND	0.102	1.030	0.015	0.074	0.750	0.011	0.253***	2.790	0.037
CHURCH OF ENGLAND/IRELAND/ANGLICAN	0.284***	4.000	0.046	0.147*	1.970	0.024	0.305***	4.230	0.046
UNITING CHURCH	0.611***	6.070	0.122	0.521	0.850	0.106	0.347	1.450	0.054
PROTESTANTS	-0.026	-0.600	-0.003	-0.030	-0.700	-0.004	-0.133***	-2.670	-0.015
OTHER PROTESTANTS	-0.621***	-6.480	-0.052	-0.170*	-1.760	-0.022	-0.740***	-7.070	-0.051
HINDU	1.498***	7.130	0.437	1.046***	3.270	0.276	1.292***	13.310	0.339
BUDDHISTS	0.421**	2.350	0.075	0.604**	2.510	0.129	0.722***	2.820	0.144
SIKH	1.297***	16.530	0.357	1.051***	11.510	0.278	0.428***	5.060	0.071
ORTHODOX	0.497***	9.690	0.088	0.459***	9.160	0.086	0.487***	8.160	0.080
UNITED CHURCH	0.087	0.570	0.012	0.235*	1.670	0.040	0.160	1.130	0.022
BRETHREN	0.358*	1.650	0.061	-0.026	-0.200	-0.004	-0.011	-0.070	-0.001
PENTECOSTAL	-0.713***	-3.090	-0.055	0.371	1.390	0.069	-0.366	-1.190	-0.033
MORMON	0.199	0.360	0.031	0.612	1.540	0.131	-0.080	-0.170	-0.009
SALVATION ARMY/ASSEMBLIES OF GOD	1.045***	10.580	0.261	0.992***	7.890	0.256	0.940***	8.200	0.212
SEVENTH DAY ADVENTISTS	-0.227	-0.920	-0.025	-0.161	-0.510	-0.021	-0.620**	-2.260	-0.046
RATANA	0.135	0.450	0.020	0.062	0.210	0.009	0.289	0.720	0.043
HUSSITES	0.507**	2.550	0.095	0.462***	2.730	0.091	0.140	0.800	0.019
OTHER CHRISTIAN RELIGION	-0.380***	-3.280	-0.038	0.133	1.440	0.021	-0.350***	-3.080	-0.032
OTHER NON-CHRISTIAN RELIGION	0.171	1.040	0.026	0.275*	1.870	0.048	0.403**	2.040	0.066
OTHER NOT CLASSIFIED	-0.211**	-2.180	-0.024	0.016	0.160	0.002	-0.337***	-3.430	-0.032
Number of observations	17867			18541			17277		
Prob(LM-statistic)	0.000			0.000			0.000		

Notes: Dependent variable: All three superstition variables. In the reference group are AGE 16-29, MAN, SINGLE, LOWER CLASS, FULL TIME EMPLOYED, GERMANY (WEST), NO RELIGIOUS DENOMINATION. Significance levels: * 0.05 < p < 0.10, ** 0.01 < p < 0.05, *** p < 0.01.

APPENDIX

TABLE A1:

Additional Information about the variable CHURCH ATTENDANCE

CHURCH ATTENDANCE	<p>How often do you attend religious services?</p> <ol style="list-style-type: none"> 1. Never 2. Less frequently (Netherland, less often than once a year, Hungary, Italy, New Zealand, Slovenia, Russia, Philippines, France: 1-2 times a year, less than once a year. 3. Several times a year (Netherland, Czech Republic: Once or twice a year) 4. Once a month 5. 2-3 times a month (Austria: 1-3 times a month, Slovenia: 2-3 times a month, nearly every week) 6. Once a week or more, nearly every week (Philippines: several times a day, once a day, several times a week, every week)
-------------------	--