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**PROTESTANT WORK ETHIC
AMONG THE MUSLIMS:
CHANGEABLE EMPIRICAL
EVIDENCE**

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**PROTESTANT WORK ETHIC AMONG THE MUSLIMS:
CHANGEABLE EMPIRICAL EVIDENCE²³**

This paper deals with the recently revealed paradox that contemporary Muslims demonstrate a stronger Protestant work ethic (PWE) than contemporary Protestants do. I test whether this paradox is supported in a multilevel analysis on internationally comparative WVS data. According to Inglehart's theory of post-materialist shift, work ethic should be stronger in the developing societies that do not have enough existential security. Following the debate on the Protestant work ethic I test another hypothesis saying that the effects of PWE extend beyond the religious population of Protestant countries. On waves four and five of the World Values Survey, I compare the strength of work ethic between the Muslims and Protestants in multilevel ordinal outcome models. The models built on 26,156 respondents in 56 countries show no significance in work ethic between Muslims and Protestants, all else being equal. Living in a historically Protestant society does not increase work ethic by itself, but being religious in a Protestant society does. In all developed countries, work ethic is likely to decrease. Overall, the evidence of a stronger work ethic among the Muslims is changeable; in some models, Muslims are likely to have a stronger work ethic than Protestants, but in other models Muslims are not significantly different from Protestants. This poses further research questions about the universal features of different religious ethics and on the non-religious factors explaining the progress linked with the Protestant work ethic.

JEL Classification: Z12

Keywords: work ethic, Islam, Protestantism, religion, ML, WVS

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Introduction

The concept of work ethic refers to the “commitment to the value and importance of hard work” (Miller, Woehr & Hudspeth 2001:2). Work ethic can also be defined as a sum of “beliefs about the moral superiority of hard work over leisure or idleness, craft pride over carelessness, sacrifice over profligacy, earned over unearned income and positives over negatives towards work” (Andrisani & Parnes 1983: 104, quoted in Ahmad & Owoyemi 2012:118), which reaches “the complete and relentless devotion to one’s economic role on earth” (Lessnoff 1994, quoted in Miller, Woehr & Hudspeth 2001:4). In sociology, work ethic has a long history of research headed by Weber’s ground-breaking work on the “Protestant work ethic” (PWE) understood as a driving force for industrialization, economic growth and capitalism development in North-Western Europe and Northern America (Weber 1958). For Weber, the relation in question was that between the ethic and economic success, but it included other important elements such as literacy. This research explores the link between religion and work ethic among contemporary Muslims and Protestants.

Since 1904/1905 when “The Protestant Ethic and the Spirit of Capitalism” came out, the PWE hypothesis has been widely popularized and tested in “endless exegesis” (Delacroix & Nielsen 2001:509) by many authors against national, cross-national and subnational samples (Becker & Woessmann 2009; Hayward & Kimmelmeier 2011; etc). The results were mixed, with many studies supporting the hypothesis and many others rejecting it (Arslan 2001:324; Hayward & Kimmelmeier 2011:1417). However, as time passed, the PWE started to be used in the literature to explain the economic success of the United States, the United Kingdom, the Netherlands, and Protestant German lands solely by the religious affiliation of their citizens.

To this day, there are doubts whether the PWE is indeed a genuinely Protestant phenomenon or whether it has become something universally shared (Modrack 2008:7). Originally, Weber theorized Protestants’ religious ethic as different from the Catholic ethic. In Chapter 3 of the “Protestant Ethic” he refers to Lutheranism and the idea of work as a calling predetermined by God, which was first introduced by Luther. Then, Weber focuses his argument on the ascetic Protestantism of Calvinists, Pietists, Methodists, Quakers, and Mennonites, who went further to adopt the doctrine of predestination, according to which only a small minority is elected to be saved and the only way to know whether one is chosen is “a life of good works” and limited consumption (“to the glory of God”, not “one’s own enjoyment”), which results in the systematic pursuit of wealth (Weber 1958, quoted in Sukidi 2006:199; Dülmer 2011:313). In this manner Weber explains how the traditional cultural constraint on wealth accumulation was

overcome and how a religious dimension penetrating the workaday life could have produced the economic results leading to capitalism.

However, despite this focus on the Calvinist doctrine, Weber's general argument goes under the umbrella of "Protestant ethic", which later grew into a "Common Interpretation" of the PWE thesis which says that "the rise of industrial capitalism was facilitated in predominantly Protestant countries and occurred earlier there as a consequence"; moreover, this interpretation has allegedly taken on "a life of its own" (Delacroix & Nielsen 2001:510).

Some later authors like Ernst Troeltsch argued with Weber that Lutheranism was already much more secular than Catholicism, having freed much labor and capital from church control (Troeltsch 1931; cited in Cantoni 2013:5). Moreover, some scholars have argued that the Calvinist doctrine could not be linked with the mundane "workaday world" (MacKinnon 1988:143) and pointed out at the inconsistencies in Weber's interpretation of both Protestant and Catholic doctrines (Becker & Woessmann 2009:538, note 8). Weber himself believed "a critique from the theological sphere to be the most competent" (Weber 1958, cited in Lehmann & Roth 1995:27).

In the empirical research on the PWE, the "Common Interpretation" of the religious influence of Protestantism mentioned above is not the only part of analysis; moreover, it is not the one best supported by data. Alternative explanations for the economic success of Western Europe and North America include the rise of literacy and education levels among Protestants (Becker & Woessmann 2009) or the rise of cities (Cantoni 2013) as a key factor of economic growth built on increasing social capital. In Weber's theory, literacy and the PWE are linked. Today, in empirical research there is a debate concerning the priority of factors and the relations between those parts of the PWE hypothesis that can be operationalized. However, even in the more methodologically rigorous empirical studies, Protestants are taken into consideration as one religious group as compared to Catholics, and not divided into smaller religious communities (cf. Becker & Woessmann 2009; Cantoni 2013).

Several authors follow Weber in saying that work ethic has "escaped from the cage" of Protestantism (Weber 1958, quoted in Modrack 2008:6), meaning it is "no longer Protestant" in the religious sense but common to the societies influenced by Protestantism (Ray 1982:135; Norris & Inglehart 2004:169). According to them, Protestantism may foster economic values associated with capitalism not as "individual piety, churchgoing habits, and adherence to the Protestant work ethic" but as cultural ethos affecting believers and non-believers alike (Norris & Inglehart 2004:161). This point is supported by studies reporting a significant effect of

Protestantism as a cultural system (“historically Protestant societies”) on the economic well-being of individuals, but no effect of being a religious Protestant (Hayward & Kimmelmeier 2011).

Along these lines, Weber notes that the cultural consequences of Protestantism were to a great extent unforeseen and that they could stand in contradiction to the initial aims of church reformers (Weber 1958:27), even though the ideas at the heart of the PWE focused on “earning more and more money, combined with the strict avoidance of all spontaneous enjoyment of life” (Weber 1958:53). Thus, in theory, high level of work ethic does not by itself translate into economic prosperity. This corresponds to the fact that work ethic is strong in many developing countries with lower levels of economic development (McCleary & Barro 2006). In order to facilitate economic growth, work ethic should encourage both the search for profit and other socially important factors (Becker & Woessmann 2009:582).

In practice, there is no agreement about the theory of PWE. Some studies show that “when values are measured properly, the Weber thesis is confirmed by the data” (Hoorn & Maseland 2008:4) and that historically Protestant societies have a significant effect on work ethic today (Hayward & Kimmelmeier 2011:1412). Other studies demonstrate that, in history, Protestantism produced no advantage in economic growth as compared to Catholicism (Cantoni 2013). A number of other studies have shown that today, people in Protestant countries have lower PWE (belief that hard work brings success in life) than in non-Protestant and non-Christian countries (Furnham et al. 1993; Arslan 2001). In this group of studies, the conclusion is that contemporary Protestant societies put much less value on work ethic compared with contemporary Muslim societies – “[A]ny historical legacy, if it did exist in earlier eras, appears to have been dissipated by processes of development” (Norris & Inglehart 2004: 169).

The research problem is whether contemporary Muslims embody the “Protestant work ethic” more than contemporary Protestants do. On the one hand, the influential study on the WVS data by Norris and Inglehart (2004) came to a positive answer to this question, but their analysis was based on ordinary least square regressions, which as a method may exaggerate the impact of social factors over individual factors (Dülmer 2011:312; Raudenbush and Bryk 2002:137-138). On the other hand, a later multilevel study on waves 2-5 of the WVS showed that respondents in Protestant countries still tended to support pro-capitalist growth values (Hayward & Kimmelmeier 2011:1417), despite the decreased religiosity and post-materialist value shift in historically Protestant nations which made individuals’ subjective well-being and the desire for meaningful work crucial in developed societies (Dülmer 2011:311).

While the original PWE hypothesis compared the ideas of the Reformation and the Catholic tradition (Weber 1958; Delacroix & Nielsen 2001:512), in this paper I underline a less explored aspect – a comparison between the Muslims and Protestants.

One reason for this is the extension of Weber's ideas in its Islamic analogue which was conceptualized in order to account for the economic behavior in Islamic countries (Ali 1988; Ahmad & Owoyemi 2012; Awan & Akram 2012; Delacroix & Nielsen 2001:512). Islamic work ethic (IWE) is in many ways similar to PWE, focusing on hard work and commitment to it (Modrack 2008:8). However, there are substantial differences as well. For one thing, IWE emphasizes cooperation in work and stresses not the individual achievement, but the intended good to the community and societal welfare (Ali 1988:577; Ali & Al-Owaihyan 2008:14; Modrack 2008:8). If going further to the core of PWE, the differences are more striking – according to Weber's views on Islam put together by Sukidi, "Calvinism and Islam could be considered as two opposing approaches to predestination" (Sukidi 2006:197). In Chapter 4 of the "Protestant Ethic", Weber notes that Islam is characterized by the belief in predetermination, not predestination, which made the doctrine of predestination not evident among Muslims, so that "the most important thing, the proof of the believer in predestination, played no part in Islam" (Weber 1958:227, quoted in Sukidi 2006:197). Likewise, "the quest of salvation was actually alien to Islam" (Weber 1978:625, quoted in Sukidi 2006:198). Also in terms of asceticism, despite the existence of ascetic Muslim sects, in Islam, there has been no rational inner-worldly asceticism which presumably led Calvinists to capitalism (Sukidi 2006:198). Thus, IWE as depicted in the literature, shares a number of features similar to the PWE, but it is also different in many aspects.

Another reason for comparing Protestants and Muslims is the post-materialist value shift and its effect on work ethic. In the literature, the alleged decline of the PWE in North-Western Europe and North America is linked with the growing economic security of living achieved in highly developed countries and a growing demand for non-materialist qualities in work there (Inglehart 1997:28). Once the individual's survival is guaranteed by the welfare state, post-materialist values gain strength, promoting the individual's self-realization and subjective well-being (Inglehart 1997:76). In developing countries, by contrast, the impact of traditional work ethic remains high as it should serve directly to boost the individual's wealth and living conditions.

The rest of this paper goes as follows. First, common and specific features of Islamic and Protestant work ethic are outlined, so that empirical results could be interpreted on the background of some substantial principles of religious ethic. Second, I present the research

hypotheses. Third, the sample, variables, method and models are explained. In the last two parts, I present the results and discuss them with reference to individual and social work ethic factors of socio-economic and religious nature.

Islamic and Protestant Work Ethic

Historically, the PWE was compared with the Catholic work ethic, not Islamic, even though Weber developed some comparative views on Islam as compared to Calvinism in his works (see Sukidi 2006). The purpose of this part is to compare the concepts of PWE and IWE as presented in the literature, in order to shed light on what is implied by work ethic in two religions.

The following components of Protestant work ethic have been defined by scholars: hard work, careful use of time, leisure avoidance, asceticism, personal honesty, and faith in the reward of a just God after life (Furnham 1990; Jones 1997). After a correlation and factor analysis of seven available scales, Furnham came to the conclusion that the PWE consisted of five dimensions: belief in hard work, leisure avoidance (neglecting pleasures), religious and moral beliefs, independence from others, and asceticism, i.e. investing instead of saving or spending money (Furnham 1990). Later these dimensions were criticized for the inclusion of “moral and religious beliefs” as departing from Weber’s original thesis (Modrack 2008:5); as a result, four basic dimensions of the PWE were left:

- belief in hard work,
- leisure avoidance,
- independence from others, and
- asceticism.

The dimension of moral beliefs partly overlaps with the Islamic work ethic. Similar parts of the PWE and IWE contain values that could be claimed universal to any work ethic, such as praising hard work and honesty, or blaming laziness (Modrack 2008:7; Rice 1999:349).

The concept of IWE was originally proposed to explain the spiritual roots of economic behavior and values of Muslim believers (Ali 1988; Ahmad & Owoyemi 2012; Awan & Akram 2012) – along with Confucian ethic (Geren 2010; Lim & Lay 2003), Christian Orthodox ethic (Zabaev 2007/2008), and other versions of religious ethic, for those specific religious groups.

The Islamic work ethic may be particularly instructive for investigation. On the one hand, the importance of work is high in modernizing economies among which many countries are

predominantly Islamic. On the other hand, Islam is popular across the world in regions with a varying degree of prosperity. For many years, economists have been trying to understand why Islamic countries have not rapidly modernized in the last fifty years, given that the Islamic doctrine as such is not opposed to economic progress (Kuran 1997:58; McCleary & Barro 2006:69-70; Kumar & Rose 2009; Wang & Yang 2011). Other popular concepts proposed to explain the economic trajectories of Islamic countries by the religion-driven “moral filter” (Rice 1999:346) are the “Islamic finance” which prohibits interest rates, sharing risks, gambling, etc. (Iqbal 1997; Warde 2000), and “Islamic marketing” which is a form of ethno-consumerism (Sandikci 2011). Some authors explicitly liken Islamic ethos to Protestant ethic (Warde 2000:45-46). The concept of IWE has been tested so far on several samples in Iran (Chanzanagh & Akbarnejad 2011), Malaysia (Ahmad & Owoyemi 2012), Kuwait, and the UAE (Ali & Al-Owaihan 2008; Yousef 2000).

The principles of Islamic work ethic are based on the Qur’an and Sunnah. Unlike Protestantism, Islam is an “ortho-praxic” rather than “ortho-doxic” religion, which means that it focuses on religious practice and community life, but gives less attention to the abstract moral principles of work ethic (Susokolov 2009:38-41). An original scale of the IWE was proposed by Ali (1988). The IWE principles have been summarized by several authors (Ali 1988; Ali & Al-Owaihan 2008; Ahmad & Owoyemi 2012) along a few domains (Table 1).

Table 1. Domains of Islamic Work Ethic

IWE principles (Ahmad & Owoyemi 2012)	Empirical measurements (Ali 1988)
1. Work is a worship	<ul style="list-style-type: none"> • Good work benefits both one’s self and others • Society would benefit if everyone commits to work • One must participate in economic activities • Work should be done with sufficient effort • Work is an obligatory activity • Life has no meaning without work • One should work hard to meet responsibilities
2. Earthly effort is aimed at higher reward	<ul style="list-style-type: none"> • Adherence to work values guarantees success in life • A person can overcome difficulties by good work • Any man who works is likely to get ahead in life • Hard work guarantees success
3. Work without detriment to religious and social obligations	<ul style="list-style-type: none"> • Work is not an end in itself, but a means to foster personal growth and social relations • One should not spend most of the time working • Work for its own sake stifles an individual’s life • Hard work fulfills the needs and balances one’s individual and social life
4. Wealth is admissible if “purified”	<ul style="list-style-type: none"> • Money earned through gambling, selling intoxicants, bribery are harmful to society

	<ul style="list-style-type: none"> • One should take community affairs into consideration in his work • Producing more than enough contributes to the prosperity of society
5. Time is precious	<ul style="list-style-type: none"> • More leisure time is bad for society • More leisure time is bad for individual and society • A successful man meets deadlines at work

Sources: Ahmad & Owoyemi (2012); Ali (1988).

Like in the Protestant ethic, time is highly valued in the IWE, and believers should not waste it in vain. However, in contrast to Protestantism, leisure is considered good if it is earned by hard work (Ahmad & Owoyemi 2012:121). Positive personal qualities praised in the IWE are honesty, diligence, sincerity, perfection and patience. Negative qualities are laziness and work for the sake of pride or boasting. Work is cherished as a source of self-respect, creativity, and independence.

An original feature of Islamic work ethic as compared to the PWE is the relative position of work along other responsibilities: “a third of their day [should be devoted] to work, a third to sleep and rest and a third to prayer, leisure and family and social activities” (Ahmad & Owoyemi 2012:122). Thus, workaholics are not welcomed. Wealth is approved given that social obligations are fulfilled, i.e. the solidarity tax is paid, no moral rules have been broken, and the circulation of wealth is not stopped once acquired (Rice 1999:348). This means that living on rent is not allowed and the money should be either spent or reinvested, not accumulated. In contrast to the PWE, Islamic business ethic includes the demand of cooperation and collaboration at work (Rice 1999:350-351). In addition, work intentions are very important, i.e. being just to other members of religious community (Chanzanagh & Akbarnejad 2011:918-919).

In general, Islam, like Protestantism, promotes hard work as a form of religious worship which should lead to a greater reward after life. Both religions explain poverty as “almost disbelief” (Islam) or “lack of mercy” (Protestantism). However, the accumulation of wealth is condemned in the IWE if it is not purified by social commitment. Work should not be an “end in itself”, which contrasts with the Protestant idea of vocation. In the PWE, hard work is the only means of attaining *certitudo salutis* – certainty of grace (Weber 1958, cited in Dülmer 2011:313). In Islam, IWE promotes hard work as a means to fulfill the individual’s needs and to benefit the community, and it is not a special instrument of predestination.

Hypotheses

My general hypothesis is based on the theory of post-materialist value shift (Inglehart 1997). Post-materialist values imply the priority of self-realization and participating in public life over

security and economic growth. They reflect the transition from industrial to postindustrial society, whereby individuals go beyond the emphasis on economic growth toward valuing the quality of life (Inglehart 1997:223-224, quoted in Dülmer 2011). Conservative values of hard work associated with work ethic are more likely to be supported in developing countries where religion gives a feeling of security and where economic security is key to survival. Above and beyond the differences in economic development, today's Islam is more conservative in social issues than Christianity (Furnham et al. 1993:193; Alexander & Welzel 2011). Therefore, we might expect, first, that on the individual level Muslims would value work ethic higher than Protestants and, second, that, controlling for the level of development, work ethic would be stronger among Muslims than among Protestants. The level of country development can be conveniently measured by the Human Development Index, which incorporates gross national income (GNI) but also includes education and life expectancy. Thus, two hypotheses can be proposed:

H1: Muslims are more likely to demonstrate a higher work ethic than Protestants;

H2: Muslims' work ethic would be higher (than Protestants'), controlling for the level of country development.

An alternative hypothesis comes from Weber's idea that capitalism was facilitated by the contextual, cultural effect of Protestantism; while, individually, both church reformists might not have foreseen or even wished for such consequences (Weber 1958:89) and the successful pursuit of wealth was getting "to become associated with purely mundane passions" (Weber 1958:182). The long-term effect of cultural Protestantism has been supported by several previous studies. Therefore:

H3: In historically Protestant societies, both religious and non-religious people would demonstrate higher work ethic than in other societies.

Data and Methods

Data and Sample

This study uses the data from waves 4 and 5 (1999/2000 and 2005/2008) of the World Values Survey (WVS), a 5-wave aggregated data file (World... 2009). This file contains the data of 144,054 respondents and 75 countries (all continents), from the poorest to the richest. In addition to mainly Christian European countries, otherwise represented in the European Values Study or the European Social Survey, this survey covers many Islamic countries as well.

The data in the WVS are gathered from representative national samples for population over 18 years old and collected in standardized face-to-face interviews. The questionnaire is developed in English and then translated into other languages. The interviews are carried out in one or more national languages of the country. The WVS data are widely used for cross-cultural comparison. The WVS network has produced over 1,000 publications based on the data from 1981 onwards. The WVS database is available free of charge on the project's website.

Two waves of the WVS were used in this study because, on the one hand, work ethic is believed to be a stable set of attitudes which do not change significantly over a decade. On the other hand, two waves instead of one provide additional data, which increases the robustness of the obtained results. Wave 3 (1994-1999), which covered many post-communist countries, could not be used in this analysis since it did not include the question on work ethic used as a dependent variable here.

Respondents were picked for analysis according to two criteria. First, their religious denomination was either Muslim or Protestant. Second, respondents had to have answered the question about work as a duty to society (c039 in the WVS root questionnaire) – a key variable for measuring work ethic in this study.

Every person who declared their identification as Muslim or Protestant was included in the sample regardless of being religious or not (this was a separate control question). No types of religious behavior were included because they vary across religions and lie out of the focus of this paper. Due to the lack of necessary control questions in the national surveys, some countries had to be excluded from the sample (see Appendix for the full list of included and excluded countries). If there were two rival indicators (i.e. education level or the age when education was finished; income level or social class), I chose the variables which had fewer missing values and would produce a larger outcome sample (education level, social class).

The output sample includes 28,693 respondents from 56 countries; 30 per cent of the outcome data come from wave 4 and 70 per cent from wave 5. Among the respondents, 61 per cent were Muslim and 39 per cent Protestant. General and group-specified descriptive statistics of the sample are provided in Table 2.

Table 2. Descriptive Statistics of the Outcome Sample

Variable	<i>LABEL</i>	All	Protestants	Muslims
Religious denomination: Protestant (reference) or Muslim (1)	<i>MUSL</i>	28,693 respondents	39.3%	60.7%
Religiosity: non-religious person (reference) or religious person (1)	<i>PERS</i>	13% (0) 87% (1)	17% 83%	10% 90%
Class: lower (reference) – working – lower middle – upper middle – upper	<i>CLASS</i>	1.66 (mean) 1.05 (SD)	1.65 1.09	1.67 1.02
Education: lower (reference) – middle (1) – upper (2)	<i>EDU</i>	41% (0) 41% (1) 18% (2)	30% 49% 21%	48% 36% 16%
Gender (0=male, 1=female)	<i>FEM</i>	48% (0) 52% (1)	47% 53%	50% 50%
Age groups by decades 15-24 (reference)		20% (0)	19%	21%
25-34		26% (1)	22%	29%
35-44		21% (2)	19%	22%
45-54		15% (3)	15%	15%
55-64		10% (4)	12%	9%
65+	<i>AGE</i>	8% (5)	13%	5%

Source: WVS waves 4-5 (World... 2009).

A certain limitation of this sample is that both Protestants and Muslims are not monolithic religious groups. Most Muslims are Sunni (87 per cent) but 13 per cent are Shia (Hackett et al. 2012). Historical Protestants also divided into various groups.

In the WVS waves 4-5 sample, there were single representatives of religious groups identified by Weber such as Baptists, Methodists, Presbyterians/Calvinists, and Mennonites. However, each of these groups in the sample counted less than 40 people. Other Protestant groups in the sample were Evangelical Protestants (about 3,000), and small groups of Anglicans, Lutherans, etc. The group of respondents in the sample who identified as Protestants counted 11,394 people. Among the Muslims, 18,119 respondents identified themselves as “Muslims”, more than 1,000 as “Sunni” and more than 500 as “Shia”. In this analysis, however, the denominations were treated as provided in the sample – here, “Muslim” did not include separate categories “Shia” or “Sunni” coded in the questionnaire, while “Protestant” did not include neither Evangelical nor Lutheran or Anglican respondents.

Variables and Methodology

The research hypotheses have determined the choice of variables for this study. The dependent variable is a measure of work ethic.

The indicators of work ethic in the World Values Survey were initially designed to measure the PWE (Norris & Inglehart 2012). In this paper, the dependent variable is “Work is a duty to society”, which has been shown in multilevel structural equation modeling to be the most important, “core” component among the WVS questions on work ethic (Dülmer 2011).

The “work as a duty” variable is a 5-point scale measure ranging from 1 “Agree completely” to 5 – “Completely disagree”. I reverted and rescaled the answers from 0 to 4, where 4 was “Agree completely”. The variable was non-normally distributed, with a skew to the left (mean = 3.09, SD = 0.96). To overcome the problems of non-normal distribution, I recoded it as a dichotomy 0 meaning “Disagree or Don’t know” and 1 meaning “Agree”. However, the result was 19 per cent belonging to the first category and 81 per cent to the second one. A majority of respondents was distributed between the options “Agree” and “Agree completely”, which is why in the end I recoded the variable into 0-2 scale where 0 meant “Disagree or Don’t know”, 1 meant “Agree”, and 2 meant “Agree completely” (Fig. 1). On this scale, 19 per cent get into category 0; 42 per cent in category 1 (cumulative per cent = 61%); and 39 per cent in category 2 (cumulative per cent = 100%). The threshold from 0 to 1 is treated as a step from low to high work ethic, and from 1 to 2 as a step to very high work ethic of the respondent.

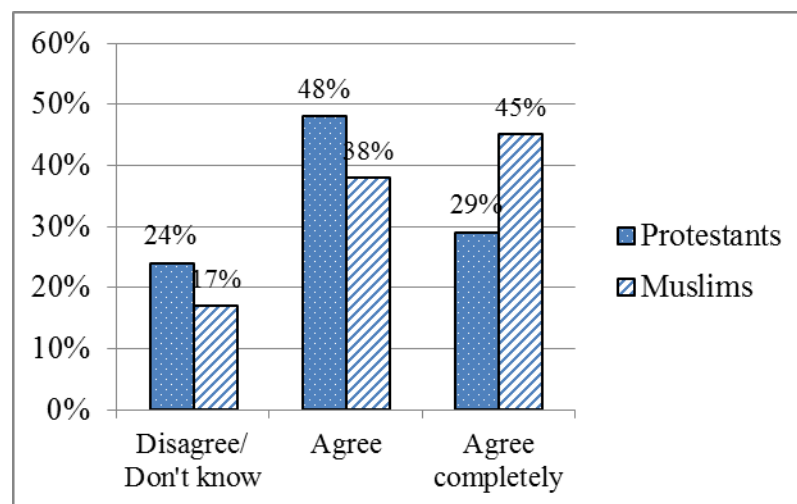


Figure 1. Work is a duty to society, recoded, among Protestants and Muslims

Source: WVS waves 4-5 (World... 2009).

Key independent variables in this research are defined both on the individual and country levels. First, there is the religious denomination of the respondent. Since our main hypotheses refer to a comparison between Protestants and Muslims, only these two categories were important. I recoded religious denomination into a dummy variable, with Protestants as a reference category, from the survey question on religious denomination with multiple categories.

Another level-1 independent variable, which was necessary for testing Hypothesis 3, is personal religiosity. Following previous research where work ethic was analyzed on the WVS questionnaire (Dülmer 2011), I picked the self-categorization variable as an informative indicator of the religiosity of the respondent. Initially, the answers included three categories: “[I consider myself] A religious person” (87 per cent), “A non-religious person” (12 per cent), and “A convinced atheist” (<1 per cent). Those were recoded into a dichotomous variable where 0 meant “A non-religious person or atheist” and 1 meant “A religious person” (see Table 2 above).

On the country level, two variables were important. First, the type of religious culture as it was defined by Norris and Inglehart (2004; 2012). The authors distinguish between five types – Protestant, Catholic, Orthodox, Muslim, and Eastern. All the countries are classified according to this typology (see Appendix for the information on each country). This variable should account for the “cultural”, contextual effect of religion on society affecting not only the followers of specific confessions but all the people inhabiting the country.

Second, the Human Development Index was introduced on level 2 in order to account for the development of the country. According to the theory of post-materialist shift (Inglehart 1997), people in developing countries are most interested in securing their existence; hence, work is a very important source of security. In developed, or post-industrial societies (loosely defined as those having HDI equal to .900 or higher (Dülmer 2011:321)), work is treated more as a source of self-realization; thus, it is less important as a social duty. The Human Development Index takes into account not only income, but also other factors contributing to economic growth, which is why it is more informative than other traditional measures, such as GDP or GNI per capita. HDI levels are strongly correlated across years; hence, I used the latest figures available from the UN for 2012 (see Appendix for detail). To control for the linearity of effect, HDI-squared is also included into the models.

Control variables used here are traditional in the work ethic research (Becker & Woessmann 2009; Dülmer 2011; Hayward & Kimmelmeier 2011; Norris & Inglehart 2012). They include gender, age group, individual’s social class, and education (measured on a 3-level scale). The interaction effects of these variables with level-2 variable may be significant and interpretable, but they lie out of the scope of this paper.

Since both individual and societal factors affect an individual’s work ethic, it would be incorrect to apply an ordinary least squares (OLS) regression, which may estimate too small standard errors and lead to the erroneous rejection of the null-hypothesis (Dülmer 2011:337). In OLS regressions there are not enough degrees of freedom to account for the upper-level effects.

Statistically, a possible way out could be to calculate separate regressions for each country, but countries are not independent of each other, so this would not be satisfactory. The effects of national-level variables may be uniform across the countries. But if we spend a degree of freedom on the national-level effect, then individuals would have to be treated as completely independent, which is not true either. In such a situation, multilevel analysis offers a viable alternative to OLS regressions. In a multilevel analysis, it is possible to test the effect of group-level effects on individual dependent variables. For two levels, the basic model looks as follows:

$$\text{Level 1 } y_{ij} = \beta_{oj} + r_{ij} \quad (1)$$

$$\text{Level 2 } \beta_{oj} = \gamma_{00} + u_{oj} \quad (2), \text{ where}$$

r_{ij} is the respondent-specific error term, i.e. individual deviation from the country mean;

γ_{00} is the grand mean between the countries;

u_{oj} is the country-specific error term, i.e. country deviation from the grand mean.

For the ordinal response variable of K categories, logistic regression was used and the model has $K-1$ thresholds (δ 's). In the ordinal response variable model, estimated are the logit predictions (η) for the $K-1$ comparative probabilities (k) of the response being at or below a given category for specific individuals (i) in specific groups (j) (O'Connell 2010).

Fixed effects in logistic regression estimate the logit of probability that the individual's work ethic would be below or equal to each category ("Agree", "Agree strongly", or strong and very strong work ethic). A logit of zero corresponds to the odds ratio of 1 (no effect); a positive logit means a higher probability of work ethic below or equal to a given level; a negative logit means a higher likelihood of going beyond a given level, i.e. having stronger work ethic. The K^{th} probability is always equal to 1.0 since all responses are below or equal to the highest category. To get from logit to the predicted probability π_{kij} , we use the following formula:

π_{kij} (given level-1 and level-2 predictors) = $\exp(\mathbf{R}_{ij} \leq k / \mathbf{R}_{ij} > k)$] (O'Connell 2010). In the ordinal response models, most often assumed are proportional odds – for each level-2 group there is a constant slope and a unique intercept at each threshold (O'Connell 2010).

To account for how similar respondents are between the countries (intraclass correlation, ICC), level-2 variance was used (τ_{00}). When ICC equals 0, all countries have the same variance, the national-level effect is the same for all the countries and the differences between the countries are negligible (OLS regression would be sufficient in such case). When ICC is 1, individuals behave in perfect agreement with their specific countries. In the empty model, level-1

residuals are assumed to follow the standard logistic distribution which has a mean of 0 and a variance of $\pi^2/3 = 3.29$ (O'Connell 2010; Sniders & Bosker 1999), thus:

$$\text{ICC} = \tau_{00} / \tau_{00} + 3.29 \quad (4).$$

To eliminate the possibility of several factors affecting the target variable in different directions, I first checked the main effects and then interaction effects. If the chi-squares for the main and interaction effects were insignificant, I dropped the non-significant variance components. If the chi-square for the country-specific error term were insignificant, the intercept had to be fixed and the model tested again.

The default for the multilevel analysis was restricted maximum likelihood (REML). It particularly suits models with a small number of level-2 units (Bryk & Raudenbush 1992:53). Due to non-linearity, ML estimations could not be applied to ordinal outcome regressions. For ordinal response models, restricted penalized quasi-likelihood (RPQL) was used, which is the most commonly implemented estimation procedure for hierarchical generalized linear models (O'Connell 2010).

To test the impact of individual religious identification and the effect of cultural religious tradition, after describing the theoretical framework of IWE and PWE, first, I fit the analysis of variance, the “empty model” which shows the size of between-country variance and serves as a benchmark for comparison with multilevel models. Then, hypothesis 1 was tested by adding the religious affiliation of respondents. The result was checked against known controls. After that, hypothesis 2 was tested by looking at the interaction of the effects of religion and country development. Lastly, I compared the effect of cultural Protestantism depending on the religious/non-religious self-identification of the respondent.

The models in this research were run with the HLM7 software. HLM deletes missing values list-wise before fitting models; therefore, the sample size used in the models shrank from 29,513 to 26,156 individuals across 56 countries.

Findings

First, I computed the analysis of variance of “work as a duty” (empty model), which served as a benchmark for comparison with multilevel models. Then, I added independent variables and controls with random coefficients. If the slopes were insignificant, the variables were fixed in the following models. After that, the types of religious culture were introduced, both as independent variables and in interaction with the individual's personal religiosity (for the types of religious culture by country, see Appendix). The results of this analysis are provided in Table 3.

Table 3. Work Ethic among Muslims and Protestants (multilevel analysis)

Dependent Variable: Work as a duty to society (3-point scale)								
26,156 respondents 56 countries	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>	
<i>Fixed effects</i>	<i>Coeff (SE)</i>	<i>OR</i>	<i>Coeff (SE)</i>	<i>OR</i>	<i>Coeff (SE)</i>	<i>OR</i>	<i>Coeff (SE)</i>	<i>OR</i>
Model for the intercepts (β_0)								
Intercept (γ_{00})	-1.41 (.13)	.24***	-3.23 (.57)	.04***	-4.09 (1.58)	.02*	-3.25 (.56)	.04***
HDI			3.19 (.67)	24.2***	6.00 (4.82)	402.1	3.20 (.66)	24.6***
HDI-squared					-2.11 (3.56)	.12		
RELCULT:M			-.14 (.31)	0.87	-.16 (.31)	.85	-.11 (.31)	.90
RELCULT:O			.33 (.34)	1.40	.30 (.34)	1.34	.26 (.34)	1.30
RELCULT:E			-.13 (.25)	.87	-.15 (.26)	.86	.11 (.26)	1.12
RELCULT:C			-.49 (.25)	.61 (.051)	-.51 (.24)	.60*	-.71 (.25)	.49**
Model for MUSL Slopes (β_1)								
Intercept (γ_{10})			-.21 (.11)	.81 (.056)	-.21 (.11)	.81*	-.21 (.11)	.81(.056)
Model for PERS Slopes (β_2)								
Intercept (γ_{20})			-.21 (.06)	.81***	-.21 (.11)	.81***	-.21 (.08)	.81**
RELCULT:M							-.03 (.13)	.97
RELCULT:O							.08 (.11)	1.08
RELCULT:E							-.29 (.11)	.75**
RELCULT:C							.26 (.12)	1.30*
Model for FEM Slopes (β_3)								
Intercept (γ_{30})			.14 (.05)	1.15**	.14 (.05)	1.15**	.14 (.05)	1.15**
Model for AGE Slopes (β_4)								
Intercept (γ_{40})			-.09 (.02)	.92***	-.09 (.02)	.92***	-.09 (.02)	.92***
For threshold:								
δ_1	2.19 (.06)	8.96***	2.21 (.06)	9.16***	2.21 (.07)	9.16***	2.21 (.07)	9.17***
Random effects (Var. Components)								
Var. in intercepts (τ_{00})	.71***		.48***		.50***		.49***	
Var. in MUSL Slopes (τ_{11})			.22***		.22***		.22***	
Var. in FEM Slopes (τ_{32})			.06***		.06***		.06***	
Var. in AGE Slopes (τ_{43})			.01***		.01***		.01***	

Notes: RPQL estimation; ***p<=.000, **p<=.01, *p<=.05; p-values <=.06 are provided in numbers; Coeff = coefficient; SE = standard errors; OR = odds ratio; Var. = variance; RELCULT – religious culture; C – Catholic, M – Muslim, O – Orthodox, E – Eastern.

Source: WVS waves 4-5 (World... 2009).

According to Equation 4, the ICC for Model 1, the empty model, is equal to $ICC = \tau_{00} / \tau_{00} + 3.29 = .71 / .71+3.29 = 18 \%$, which means that 18 per cent of variability in work ethic lies between countries.

Fixed effects in Model 1 can be used to estimate probability predictions that a respondent would score at or below level 1 (all responses will be necessarily at or below level 2 = “Agree strongly”). A negative logit of -1.41 corresponds to a smaller probability of being at or below the cut-point between “Disagree” and “Agree” and, thus, to a bigger probability of having strong or very strong work ethic. With no explanatory variables in the model, the cumulative logit prediction on average across countries for $R_{ij} \leq 0$ is -1.41 and it increases across the threshold (cut-point) to .78 ($-1.41 + \delta_1 = -1.41 + 2.19 = .78$) for $R_{ij} \leq 1$. Transforming these predicted cumulative logits to odds and then cumulative probabilities along Equation 3, we get $P(R_{ij} \leq 0) = .20$ and $P(R_{ij} \leq 1) = .69$. There is substantial variance between the countries in the logits estimated from this model ($\tau_{00} = .71, p < .000$).

Model 2 includes individual-level predictor “MUSL” (Muslim denomination), HDI, religious culture and controls on level 1 and level 2. The fixed effect of being Muslim and the fixed effects of religious cultures were not statistically significant. As HDI increases, the likelihood of being at or below the cut-point increases as well; so the higher the development of a country, the less likely its inhabitant will have strong work ethic. Personal religiosity does not vary significantly between countries, so variance in PERS was fixed to zero in subsequent models. Education level and social class were not statistically significant both in variance and in fixed effects and, thus, are not shown. Other level-1 variables vary significantly between countries.

In Model 3 HDI-squared is added to the equation. Its effect is not significant and the effect of HDI becomes non-significant. The relation between HDI and work ethic is negative. The effect of being Muslim (as opposed to being Protestant) and the effect of Catholic religious culture (as opposed to Protestant religious culture) become significant. It means that Muslims and individuals living in historically Catholic countries are more likely to have stronger work ethic, all else being equal.

Model 4 presents the results of modeling the interaction between being religious and living in various religious cultures. (I also tested the interaction between religious denomination and the effect of HDI, but this was not statistically significant.) The main effect of being religious remains significant when interaction is added. This means that in historically Protestant societies (reference category for religious culture) religious people are more likely to believe in hard work. The interaction effects are statistically significant for being religious in Eastern religious cultures (this includes Buddhism, Confucianism, Hinduism, etc.) and in Catholic cultures.

However, if religious people in Eastern cultures are more likely to believe in hard work, religious Muslims and religious Protestants in Catholic cultures are likely to have weaker work ethic (+.26) than non-religious inhabitants of Catholic countries (-.71+.26= -.45).

In Model 2 the ICC decreases to 12 per cent, in Models 3 and 4 it decreases to 13 per cent from the initial 18 per cent of variance between countries. Model 3 demonstrates the significant direct effect of being Muslim and living in Catholic religious culture for work ethic. The effect of Catholic culture remains significant when interacting with being religious; the effect of being Muslim becomes statistically non-significant when taking into account religious culture, with p-value approaching the .5 cut-point from above.

Discussion

This paper aimed at explaining the recently discovered paradox that nowadays historical Protestants have a lower work ethic than Muslims. Given the decades-long discussion of the Protestant work ethic, this and similar findings are likely to spur inexhaustible interest in the issue.

From previous studies, it was unclear whether modern-day believers have a higher work ethic because of their religious beliefs or because of their insecure economic conditions. This study tested three hypotheses on the work ethic of modern Muslims and Protestants in 56 countries.

The first hypothesis said that, everything else being equal, Muslims were more likely to have a higher work ethic than Protestants. From the models presented above we can see that the effect of being Muslim (or living in a historically Muslim society), although directed towards higher probability of strong work ethic, does not reach statistical significance in most cases. Thus, there is some evidence of a stronger work ethic among Muslims but it is not conclusive. More data are required to further test this hypothesis.

The second hypothesis supposed that Muslims' work ethic would be higher than Protestants', controlling for the HDI. Models 2-4 show that this is partly true; both for Muslims and Protestants, higher HDI leads to a lower probability of demonstrating very strong work ethic. The interaction between being Muslim and HDI level was not statistically significant. This means that for any average Muslim or Protestant, living in a developed country is likely to result in a weaker work ethic "as a duty to society."

The third hypothesis linked historically Protestant societies with the idea of PWE "escaping the cage" and spreading its influence on both religious and non-religious people.

Contrary to the theoretical expectations, religious people in historically Protestant societies are more likely to have a stronger work ethic. Moreover, non-religious Protestants are not statistically significant from religious Muslims or Orthodox individuals in their probability of having a strong work ethic. Additional findings, which may help in further analysis of the link between being religious and believing in hard work, are that Catholic culture is positively linked with stronger work ethic, everything else being equal, but religious Muslims and Protestants are likely to have a weaker work ethic in Catholic cultures and a stronger work ethic in Eastern religious cultures. Partly this interaction can be explained by the regional variety of countries in the sample, among which there are cases that fit the theory very well. For instance, in Tanzania, a Protestant society with a low HDI, the average work ethic in the national sample is above 1.70 (on a scale of 0-2); in Australia, a Protestant society with a high HDI, the average work ethic is about .75 on the same scale. However, in Zimbabwe or Uganda, also classified as Protestant societies with a low HDI, the average work ethic in the national samples is around 1.00. Thus, the effect of Protestant culture varies.

Theoretically, there are plentiful interpretations for these findings. On the one hand, hard work bears a religious value for Muslims supported by such principles as “Work hard for earning a living and survival” or “earning bread through honest means is equivalent to jihad”, i.e. it is the holy way (Ahmad & Owoyemi 2012:120). In Islam, good work is believed to be rewarded “in the Hereafter.” McCleary and Barro point out that, compared to Christianity, the pleasure of heaven and suffering of hell are given more graphic detail in Islam, which makes them “quite real for the believer” (McCleary & Barro 2006:53). All of this works as a motivation for religious Muslims to work hard. On the other hand, lower work ethic among contemporary Protestants could be explained not only as a result of post-materialist values and the importance of self-realization in work (Inglehart 1997), but also as a lower marginal preference of working even harder as compared to the present state (Hoorn & Maseland 2008:8).

Religious belief increases the feeling of security by stressing the importance of hard work as a source of well-being under unstable economic conditions. In modernized societies where security is provided by social care and the welfare state, the role of religion is less important. Life in secure conditions is likely to cause secularization of part of the population. Thus, in traditional and modernized societies the relation between religion and work ethic can be different. The role of work ethic and work in general are changing nowadays. Even though the more traditional societies, where religious beliefs are strong, may further excel in traditional work ethic, new values that come naturally with physical security are now more widely shared,

especially among the youth, whatever their religion. In developed societies, work is losing its appeal as a duty to society, a measure that has a “clear collectivist imprint” (Dülmer 2011:337).

Does the Islamic work ethic as a concept affect the work ethic attitudes of Muslim respondents? As noted by Kuran, proponents of the view that the Islamic ethic bears no relation to economic success would refer to the fact that “widely held Islamic precepts were often circumvented” and that it is a “well-documented divergence between word and deed” (Kuran 1997:67). Sandikci also points out that “while ethical and religious principles seem to be articulated loudly by Muslim business owners, to what extent words and deeds correspond needs to be empirically assessed” (Sandikci 2011:254). Likewise, Warde indicates there are numerous “moral hazards” to Islamic finance rules (Warde 2000:156-157). In other words, various scholars admit that the gap between the discourse about the Islamic ethic and individual economic behavior can be spacious enough, so that individuals can circumvent rigorous ethical demands and follow not only the Islamic ethic in their work behavior.

This paper did not compare specifically the treatment of leisure, the other side of work ethic. There is evidence that modern-day Muslims more often than Protestants say that work, not leisure, is what makes life worth living (Arslan 2001:333). This finding contradicts the idea of balancing work with social and religious duties among religious Muslims (Ahmad & Owoyemi 2012:122). However, Inglehart’s revised modernization theory explains the high importance of leisure in modernized countries: when physical security is guaranteed, self-realization and a balance between good pay and interest in work are more important.

In this paper I have investigated whether we can find evidence of stronger Protestant work ethic among contemporary Muslims by modeling the data on individual- and country-levels with an ordinal outcome. The results show that the likelihood of having a low work ethic is statistically the same among contemporary Muslims and Protestants, all else being equal. On average, country development measured by the HDI affects work ethic much stronger than any type of religious culture or individual Muslim/Protestant identity. However, being religious still matters for work ethic in our times, and the effect of religiosity significantly increases the work ethic of Protestants as compared to Muslims.

The prospects for further research lie in different directions. First, since religiosity is still positively linked with work ethic, other determinants can be studied in detail for major denominations, taking into account the level of country development and common religious behavior of individuals in different religious groups. Second, the analysis presented here could be replicated on a larger sample comparing more categories of Protestants (e.g. Lutherans,

Anglicans, etc). Third, research on the determinants of work ethic would benefit greatly from a more representative sample of countries across the world. Although the sample of this study covered 56 countries, a more balanced representation of world regions would definitely contribute to obtaining reliable results, taking into account relevant contextual variables.

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APPENDIX

1. Included Countries (and Year of Fieldwork)

The information in brackets refers, first, to the HDI 2012 (www.hdr.undp.org/en/data) except for Puerto Rico (estimate of 2009, <http://www.unescap.org/>) and Serbia and Montenegro 2001 (HDI 2012 is provided for Montenegro); and, second, to a country's type of religious culture. "P" refers to Protestant countries, "C" to Catholic countries, "O" to Orthodox countries, "M" to Muslim countries and "E" to Eastern countries (cf. Norris & Inglehart 2004:46-47; Dülmer 2011:321), whereby Israel is classified as "E"; and Tanzania as "P".

Albania 2002 (0.714, M); Andorra 2005 (0.830, C); Argentina 1999, 2006 (C, 0.806); Australia 2005 (P, 0.931); Bangladesh 2002 (M, 0.554); Bosnia and Herzegovina 2001 (M, 0.729); Brazil 2006 (C, 0.742); Bulgaria 2006 (O, 0.776); Burkina Faso 2007 (M, 0.385); Canada 2000, 2006 (C, 0.901); Chile 2000, 2005 (C, 0.819); China 2001, 2007 (E, 0.715); Cyprus 2006 (O, 0.848); Egypt 2000, 2008 (M, 0.681); Ethiopia 2007 (O, 0.429); Finland 2005 (P, 0.879); Georgia 2008 (O, 0.741); Germany 2006 (P, 0.911); Ghana 2007 (P, 0.571); Guatemala 2005 (C, 0.626); Hong Kong 2005 (E, 0.889); India 2001, 2006 (E, 0.583); Indonesia 2001, 2006 (M, 0.681); Japan 2000, 2005 (E, 0.888); Jordan 2001, 2007 (M, 0.744); Kyrgyzstan 2003 (M, 0.621); Macedonia

2001 (O, 0.730); Malaysia 2006 (M, 0.770); Mali 2007 (M, 0.406); Mexico 2000, 2005 (M, 0.755); Moldova 2002, 2006 (O, 0.657); Morocco 2001, 2007 (M, 0.614); Norway 2008 (P, 0.943); Peru 2001, 2008 (C, 0.734); Philippines 2001 (C, 0.656); Poland 2005 (C, 0.833); Puerto Rico 2001 (C, 0.905); Romania 2005 (O, 0.782); Rwanda 2007 (C, 0.502); Serbia 2006 (O, 0.743); Serbia and Montenegro 2001 (O, 0.787); Slovenia 2005 (C, 0.874); South Africa 2001, 2007 (P, 0.654); South Korea 2001, 2005 (E, 0.888); Spain 2000, 2007 (C, 0.869); Sweden 1999, 2006 (P, 0.897); Switzerland 2007 (P, 0.916); Tanzania 2001 (P, 0.484); Thailand 2007 (E, 0.720); Trinidad and Tobago 2006 (P, 0.765); Turkey 2001, 2007 (M, 0.756); Uganda 2001 (P, 0.480); Ukraine 2006 (O, 0.733); United States 1999, 2006 (P, 0.912); Uruguay 2006 (C, 0.787); Viet Nam 2001, 2006 (E, 0.635); Zambia 2007 (P, 0.554); Zimbabwe 2001 (P, 0.481).

2. Excluded Countries (the Year of Fieldwork and Reasons for Exclusion)

Algeria 2002 (no questions on religious denomination, on work ethic), Colombia 2005 (no question on work ethic), France 2006 (no question on work ethic); Iran 2000, 2007 (no question on work ethic); Iraq 2004, 2006 (no question on work ethic); Israel 2001 (no question on personal religiosity); Italy 2005 (no Protestants and Muslims in the sample); Jordan 2001, 2007 (no question on income); Netherlands 2006 (no question on work ethic), New Zealand 2004 (no question on work ethic), Nigeria 2000 (no question on work ethic), Russian Federation 2006 (no question on work ethic), Saudi Arabia 2003 (no question on work ethic), Singapore 2002 (no question on personal religiosity); Taiwan 2006 (no question on work ethic), United Kingdom 2006 (no question on work ethic), Venezuela 2000 (no question on work ethic).

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