A Comparison of the Multidimensional Work Ethic Profile across Two Countries

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Abstract

The present study represents an extension of previous research examining the measurement equivalence of the Multidimensional Work Ethic Profile (MWEP; Miller, Woehr, & Hudspeth, 2002) across groups. To date, research has supported the measurement equivalence of the MWEP between its English, Spanish, and Korean language versions (Woehr et al., 2007), between male and female respondents (Meriac et al., 2009), and across generational cohorts (Meriac et al., 2010). The present study extends this research by reporting the development of a Polish language version of the MWEP as well as through an examination of the equivalence of the MWEP across U.S. and Polish respondents.

Keywords: work ethics, measurement equivalence, Poland, Multidimensional Work Ethic Profile (MWEP)

Introduction

Work ethic is a hot topic in the context of today's organizations. Companies have invested time and money to increase awareness around this topic but unethical behaviour in business is still widespread. This is the case mainly because companies see decisions only as purely business decisions and not as ethical decisions too (HBR, 2011). Therefore we believe that more solid research is needed to understand the subtleties of work ethic behaviour.

Modern formulations of the work ethic construct stem from the work of Max Weber. In 1904 and 1905 Weber wrote the now classic two-part essay entitled "The Protestant Ethic and the Spirit of Capitalism". In this essay Weber advanced the thesis that the introduction and rapid expansion of capitalism and the resulting industrialization in Western Europe and North America was *in part* the result of the Puritan value of asceticism and the belief in a calling from God (Byrne, 1990; Furnham, 1990a; Green, 1968; Lehmann, 1993; Maccoby, 1983; Nord, Brief, Atieh, & Doherty, 1988). It was the application of these values that Weber believed led to the 'work ethic' – the complete and relentless devotion to one's economic role on earth (Lessnoff, 1994).

Owing to the fact the cultures of the east and the west clash in Poland, as well as the fact it is a post-communist country (although capitalistic patterns are not entirely unfamiliar), Poland may be recognized as a culturally specific country. The Polish language version of the MWEP was developed and evaluated relative to the original English version. The equivalence of the tool was verified for all the dimensions of the work ethic construct.

Recent literature has suggested that one of the primary factors limiting the work ethic research is the lack of common conceptualizations and measurement systems for the work ethic construct. In an attempt to address this limitation, Miller, Woehr, and Hudspeth (2002) developed the Multidimensional Work Ethic Profile (MWEP). The MWEP is a multidimensional inventory assessing conceptually and empirically distinct components of work ethic. Our goal in the present study is to extend the work of Miller et al. (2002) by further examining the construct validity of the MWEP. Specifically, we: a) report on the development of a Polish language version of the MWEP; b) provide an assessment of the degree of measurement equivalence between the original English and the new Polish language versions with a multinational sample; and, c) explore potential substantive differences with respect to work ethic as measured with the MWEP between Polish and U.S. samples.

The Multidimensional Work Ethic Profile

Miller et al. (2002) present a historical and conceptual review of the work ethic construct. Drawing on the large body of literature stemming from Weber's original work, they posit that work ethic is not a single unitary construct but a constellation of attitudes and beliefs pertaining to work behaviour. They suggest that the work ethic construct: (a) is multidimensional; (b) pertains to work and work-related activity in general, not specifically to any particular job (yet may generalize to domains other than work - school, hobbies, etc.); (c) is learned; (d) refers to attitudes and beliefs (not necessarily behaviour); (e) is a motivational construct reflected in behaviour; and (e) is secular, not necessarily tied to any one set of religious beliefs. Based on previous literature as well as original empirical research, Miller et al. (2002) identify seven components or dimensions that they argue comprise the work ethic construct. The dimensions posited are centrality of work, self-reliance, hard work, leisure, morality/ethics, delay of gratification, and wasted time.

Miller et al. (2002) also argue that previous measures of work ethic have been deficient to the extent that they did not sufficiently assess and/or differentiate among the various facets of work ethic. Consequently, they developed and provided initial support for a multidimensional work ethic inventory - the Multidimensional Work Ethic Profile (MWEP). The MWEP purports to measure seven conceptually and empirically distinct (i.e., divergent) facets of work ethic. While, Miller et al. provide a great deal of evidence pertaining to the psychometric evaluation of the MWEP, they provide little or no evidence with respect to the appropriateness of the MWEP as a measurement tool across cultures (i.e., cross-cultural measurement invariance). This question of measurement invariance is a particularly critical one as several authors (Furnham, 1990b; Jones, 1997; Miller et al., 2002) have argued that previous measures of work ethic are inadequate both conceptually and psychometrically.

Assessing Measurement Equivalence/Invariance

Establishing the measurement equivalence/invariance (ME/I) of an instrument is a logical prerequisite to conducting any meaningful substantive cross-group and/or cross-cultural

comparisons. This is especially true for complex constructs such as work and organizational values, and when the cultures or groups compared are quite different (e.g. language, predominant religion, economic growth, educational system, etc.). In a recent review and integration of the literature on measurement equivalence in organizational research, Vandenberg and Lance (2000) state: "violations of measurement equivalence assumptions are as threatening to substantive interpretations as is an inability to demonstrate reliability and validity" (p. 6). Specifically, a lack of equivalence between groups indicates that a measure is not functioning the same across the groups and any substantive interpretation of similarities or differences is suspect at best.

The importance of providing evidence for ME/I across countries should not be underestimated. Nevertheless, it appears to be a prevailing notion among cross-cultural researchers that the replicability of factorial structure across countries represents adequate evidence of ME/I (Paunonen & Ashton, 1998). Such evidence, however, is not sufficient. Although the factorial structure of a measuring instrument may yield a similar pattern when tested *within* each of two or more countries, such findings represent no guarantee that the instrument will operate equivalently *across* these countries (Byrne & Watkins, 2003). The results indicate that Polish MWEP was equivalent, and there are both substantive differences and similarities between the U.S. and Polish participants with respect to work ethic. These results should be considered preliminary, but they surely represent a step forward in the cross-cultural literature pertaining to work ethic.

When comparing measures, varying levels or degrees of measurement equivalence are possible (Cheung, 1999; Cheung & Rensvold, 1999). Conceptual equivalence refers to the extent to which individuals respond to a measurement instrument from a common conceptual frame of reference. That is, are the various items that comprise a measure seen as tapping the same construct(s) (i.e., configural invariance) and do the items relate to the construct(s) in the same way across groups (i.e., metric invariance). From a measurement perspective, configural invariance is reflected in the extent to which there is a common factor structure (i.e., items load on the same factors) across groups. Similarly, metric invariance is reflected in the extent to which items are interpreted similarly across groups (i.e., factor loadings for like items are the same across groups). Both configural and metric invariance have been identified as necessary conditions for measurement equivalence (Cheung, 1999; Steenkamp & Baumgartner, 1998; Vandenburg & Lance, 2000). That is, these tests provide a basis for ascertaining whether measures are conceptually equivalent across groups.

Although a number of approaches have been used to evaluate measurement equivalence (cf. Hui & Triandis, 1985; Vandenberg & Lance, 2000), there is general agreement that the multi-group confirmatory factor analytic (CFA) model (Jøreskog, 1971) provides the most powerful and versatile technique for testing cross-group measurement invariance. Based on their review, Vandenberg and Lance (2000) call for an increased application of measurement equivalence techniques before substantive comparisons are considered. Given the limitations of classical test theory approaches for assessing measurement equivalence, they also recommend the use of multi-group CFA techniques.

To test the ME/I of the MWEP we used a multi-group confirmatory factor analytic (MGCFA) application of AMOS 16.0 and tested two models representing configural and metric invariance. All models were operationalized as seven-factor models (corresponding to the seven MWEP dimensions) with the factors allowed to correlate and uncorrelated errors.

Present Study

The present study represents an extension of previous research examining the measurement equivalence of the MWEP across groups. To date, research has supported the measurement equivalence of the MWEP between its English, Spanish, and Korean language versions (Woehr et al., 2007), between male and female respondents (Meriac et al., 2009) and across generational cohorts (Meriac et al., 2010). The present study extends this research by reporting the development of a Polish language version of the MWEP as well as through an examination of the equivalence of the MWEP across U.S. and Polish respondents.

Poland is a country which has experienced significant economic, cultural, and political changes during the last century. Biernacka (2009, p.183) states that "Foreigners who represent foreign capital and the corporation standards of professional engagement have been heard saying for two decades 'There is no work ethic in Poland!' " It is argued that this may be the case because Poland has not gone through a system of transformations typical of capitalistic economy. Development of capitalism was stopped in Poland by the 2nd World War and by communism or real socialism, when hard work and one's own initiative was of very little value. At the end of the 20th century Poland became a capitalist country again. Meanwhile, the western European countries had already become fully developed capitalist economies.

Yet such contentions are based on little if any empirical data. Thus, the development and evaluation of a Polish language version of the MWEP serves as an important step toward the empirical study of work values in Poland.

Participants

The U.S. sample consisted of 236 employees and 203 students. The employee sample was recruited from several private, non-military organizations. The mean age was 34.94 (SD = 9.73 years, range = 18 to 76). The student sample was recruited from a large Southeastern University, and the mean age was 22.07 (SD = 3.85 years, range = 20 to 56, with 95% of the sample below 27 years). No gender information was available for these samples. Participants voluntarily and anonymously completed the original English-language version of the 65-item MWEP.

The Polish sample consisted of 236 employees and of 298 students living in the Upper Silesia region, the most industrialized part of Poland. The Polish sample of employees consisted of 148 (63%) female and 88 (37%) male participants from different organizations in the Upper Silesia region. The mean age was 34.35 years (SD=10.80, range = 19 to 56). The Polish sample of students consisted of 123 (41%) female and 175 (59%) male participants from the University of Silesia and the Silesian University of Technology. The mean age was 20.90 years (SD=2.79, range = 18 to 31). Participants voluntarily and anonymously completed the Polish-language version of the 65-item MWEP.

Measure

The MWEP (Miller et al., 2002) is a 65-item self-report scale that measures seven dimensions of work ethic. Self-reliance, morality/ethics, leisure, hard work, and centrality of work are each measured with 10 items and wasted time and delay of gratification with 8 and 7 items respectively. A five-point Likert scale was used ranging from "*strongly disagree*" (1) to "*strongly agree*" (5).

Translation

The Polish translation of the MWEP followed the same procedure as the one used by Woehr et al. (2007), namely the translation - back-translation process (Brislin, 1986). Three Polish native speakers with advanced English proficiency (an English translator and two university lecturers) have independently translated the questionnaire into Polish. They used simple language and terminology that would be understood by teenagers. As a result, two versions of the measure were made. In the next step a dozen or so psychology students, also with a good command of English, worked with the lecturers in two independent groups to compare the two versions and choose the best statements. In this way two primary Polish versions of the measure were made. The methods devised in this manner were back-translated into English by two experienced translators. Then the researchers together with the students compared the translation with the original, analyzed, corrected and chose the best-sounding statements. As the last step, ten undergraduate students matched the items based on their contents with the seven dimensions measured by the MWEP.

Data Analysis

To test ME/I of the MWEP across the four samples, we used a multi-group CFA (MGCFA) application of AMOS 16.0 and tested two models representing configural, and metric invariance. All models were operationalized as seven-factor models (corresponding to the seven MWEP dimensions) with the factors allowed to correlate and uncorrelated errors.

The global goodness-of-fit of the model was assessed via the root mean square error of approximation (RMSEA), and the comparative fit index (CFI), (Steenkampand & Baumgartner, 1998; Cheung & Rensvold, 2002). The RMSEA provides an overall test of model fit that compensates for the effect of model complexity. Browne and Cudeck (1993) suggested that an RMSEA value of .05 or less indicates a close fit and that values up to .08 represent reasonable errors of approximation in a population. In addition, CFI is an incremental (comparative) measure of fit providing an indication of fit relative to a null model, ranging from 0 to 1, with higher values indicating better fit and values of .90 or greater typically interpreted as indicating acceptable levels of fit. More important, Cheung and Rensvold demonstrated that when testing across two groups, a change in the value of CFI smaller than or equal to .01 indicates that the null hypothesis of invariance should not be rejected (i.e., measurement equivalence).

Given the relatively small sample sizes for each of the groups, the large number of scale items, and the difficulties inherent in factor analyzing categorical item-level data (for detailed discussions of these problems, see Bernstein & Teng, 1989; Nunnally & Bernstein, 1994), we did not analyze item-level responses. Rather, we constructed three “item parcels” (composites based on subsets of items) to serve as manifest indicators for each of the seven work-ethic factors. The rationale for this approach was to avoid the difficulties associated with categorical item level data and to achieve a higher level of reliability for each of the scores on which the confirmatory factor analyses were based than would be realized from responses on each of the 65 individual items. The literature provides support for this approach and suggests that the use of composite-level indicators leads to far more interpretable and meaningful results than an analytic approach based on large numbers of individual items (e.g., Gibbons & Hocevar, 1998; Landis, Beal, & Tesluk, 2000; Paik & Michael, 1999, Woehr et al., 2007). In the present study, we formed the item parcels by summing 2 to 4 randomly selected items from each of the dimension scales. Specifically, for each scale containing 10 items, three parcels were formed as one set of 4 items and two sets of 3 items. If the scale contained 8 items, three parcels were formed as two sets of 3

items and one set of 2 items. If the scale contained 7 items, three parcels were formed as one set of 3 items and two sets of 2 items. Although the set of items comprising each of the indicators was randomly selected within dimensions, the same sets of items were used to form indicators across samples. Previous research has demonstrated that this random approach to parceling items is appropriate to the extent that all items are equivalent measures of the focal construct (Landis et al., 2000). Miller et al. (2002) provided evidence supporting the unidimensionality of each of the MWEP dimensions as well as the equivalence of items corresponding to each dimension. Thus, this random-item-parceling approach is appropriate with respect to the MWEP items.

Results

Before proceeding to interpret the MGCFA results, we checked the normality of the data. First we performed the analysis for the multivariate outliers using Mahalanobis distance (1936) on the U.S. and Poland samples. According to Byrne (2010), a case is considered an outlier if its Mahalanobis distance is well separated from other Mahalanobis distances. Based on this rule, we identified and deleted six outliers in the U.S. dataset and four outliers in the Poland dataset. The deleted cases were places at a considerable distance ahead of the others. Further, the skewness and kurtosis analysis indicated that the Morality dimension did not behave normally (above +/- 2) in both the U.S. and Poland samples. Also Mardia's coefficient (1972) for multivariate kurtosis exceeded critical standards.

This preliminary analysis indicates that there is a problem with the Morality dimension. The following analysis will take this information into account.

We ran five MGCFA (Table 1): 1) U.S. and Poland sample; 2) U.S. and Poland student samples; 3) U.S. and Poland employee samples; 4) Poland student and employee samples; and 5) U.S. student and employee samples.

The first model looked at the ME/I across the overall U.S. and Poland samples. According to the indices (CFI= .94, RMSEA = .044) all loadings of the latent variables were statistically significant across countries and exhibited a similar pattern of loadings. Therefore configural equivalence was reached. This allowed us to check the next levels of equivalence. The indices of metric invariance indicated good fit (CFI = .93, RMSEA = .046). Furthermore, comparison of nested models, Model 1 (configural invariance) and Model 2 (metric invariance), revealed a ΔCFI = .01, which corresponds with the Cheung and Rensvold (2002) recommendations. Equivalence at configural and metric levels allows us to say that the MWEP measure reached the baseline for further cross-country comparisons.

The second set of analyses broke down the samples by student vs. employee inside the same country. In the case of the Poland student vs. Poland employee samples, both configural and metric equivalence were reached (configural - CFI= .91, RMSEA = .053; metric - CFI= .90, RMSEA = .053; ΔCFI: .01). The same results were found regarding the U.S. student vs. employee samples (configural - CFI= .94, RMSEA = .046; metric - CFI= .93, RMSEA = .047; ΔCFI: .01).

Table 1. ME/I tests for MWEP

	df	χ2*	Δχ2[a]	RMSEA	CFI	ΔCFI[a]	NCI	ΔNCI	Gamma Hat	ΔGamma Hat
Poland and U.S.										
Configural invariance	336	967.33	---	.044	.94	---	.72	---	.994	---
Metric invariance	350	1049.68	82.35	.046	.93	.01	.70	.03	.990	.004
Poland student and employee										
Configural invariance	336	832.19	---	.053	.91	---	.63	---	.980	---
Metric invariance	350	862.04	29.85	.053	.90	.01	.62	.01	.973	.007
U.S. student and employee										
Configural invariance	336	642.21	---	.046	.94	---	.71	---	.985	---
Metric invariance	350	693.31	51.10	.047	.93	.01	.68	.03	.978	.007
Poland and U.S. student										
Configural invariance	336	555.44	---	.036	.96	---	0.80	---	.996	---
Metric invariance	350	621.57	66.13	.040	.95	.01	0.76	.04	.993	.003
Poland and U.S. employee										
1										
Configural invariance	336	918.89	---	.061	.89	---	.54	---	.989	---
Metric invariance	350	985.12	66.23	.062	.88	.01	.51	.03	.982	.006
2										
Configural invariance	332	876.48	---	.059	.89	---	.56	---	.989	---
Metric invariance	346	947.11	70.63	.061	.88	.01	.53	.03	.983	.006
3										
Configural invariance	240	640.74	---	.060	.91	---	.65	---	.992	---
Metric invariance	252	708.40	67.66	.062	.90	.01	.62	.04	.987	.005
4										
Configural invariance	234	565.49	---	.055	.93	---	.70	---	.994	---
Metric invariance	246	639.75	74.26	.059	.92	.01	.66	.04	.989	.005

Legend: χ2 = chi-square; RMSEA = root mean square error of approximation; CFI = comparative fit index, NCI = non-centrality index,* p =. 000, a. Difference for each model is relative to the previous one, 1 - full model, 2 - errors correlated, 3 – without Morality dimension, 4 – without Morality dimension and errors correlated.

The third set of analyses looked at the student vs. employee samples across countries. For the U.S. student vs. Poland student samples, both configural and metric equivalence were reached (configural - CFI= .96, RMSEA = .036; metric - CFI= .95, RMSEA = .040; ΔCFI: .01). However in the case of U.S. employee vs. Poland employee samples neither configural nor metric equivalence was reached (configural - CFI= .89, RMSEA = .061; metric - CFI= .88, RMSEA = .062; ΔCFI: .01).

Post-hoc analysis

The above analyses indicate that the ME/I was not reached for the U.S. employee vs. Poland employee samples. When full ME/I is not achieved, one solution might be to use the

modification indices (M.I.) and allow for some error terms to correlate. However in our case, after correlating two error terms pairs (e5 - e10 and e10 - e14) the overall fit did not improve.

Another strategy is to eliminate from the measure the dimension that is problematic and attempt to reach partial ME/I. Due to the fact the Morality dimension showed lack of normality, we reran the analysis without this dimension. In this scenario the ME/I between the U.S. employee vs. Poland employee samples reached both configural and metric equivalence (configural - CFI= .91, RMSEA = .060; metric - CFI= .90, RMSEA = .062; ΔCFI: .01). As a follow-up step, using the modification indices (M.I.), we allowed for some error terms to correlate (e12 = e16, e10 - e14, e14 - e15) and the model slightly improved (configural - CFI= .93, RMSEA = .055; metric - CFI= .92, RMSEA = .059; ΔCFI: .01). This set of analyses, excluding the Morality dimension, did improve the overall fit and helped reach configural and metric equivalence for the U.S. employee vs. Poland employee samples.

At this point, the results suggest that the full MWEP measure was conceptually equivalent across four of the five groups analyzed, and in the case of employee samples the ME/I was reached after eliminating one dimension (Morality). With this difference in mind, we next examined the potential differences across groups with respect to the actual scores on each dimension.

First, the internal consistency reliability estimates for each of the seven MWEP dimension scores are presented in Table 2. Examination of the estimates indicated that reliabilities were generally acceptable for all scale scores across samples (i.e., range .67 to .90). More specifically, all but two of the reliabilities were higher than the value of .70 often cited as indicative of a reasonable level of reliability (Nunnally & Bernstein, 1994). The remaining two reliability estimates were not significantly different from .70 (Delay of Gratification was.69 and .67 in the overall Poland sample and the Poland employee sample).

Table 2. Coefficient *a* reliability by sample

Dimensions	Poland N = 534	U.S. N = 439	Poland Employee N = 236	Poland Student N = 298	U.S. Employee N = 236	U.S. Student N = 203
Self-Reliance	.84	.86	.82	.85	.85	.86
Morality/Ethics	.79	.77	.74	.79	.80	.79
Leisure	.89	.88	.87	.90	.88	.86
Hard Work	.84	.87	.87	.77	.88	.85
Centrality of Work	.81	.81	.78	.83	.79	.83
Wasted Time	.73	.77	.72	.72	.76	.77
Delay of Gratification	.69	.80	.67	.73	.81	.78

Legend: *a*=Cronbach reliability coefficient, N=number of participants.

Second, given the demonstrated level of measurement equivalence between the English, and Polish versions of the MWEP, we next examined potential differences across groups with respect to the actual scores on the dimension subscales. Mean scores by sample for each of the MWEP dimensions and each pair of samples are presented in Table 3. In the case of the overall U.S. vs. Poland sample only one dimension was not statistically significant (i.e., Self-Reliance). Regarding the sub-samples, the most similar were the U.S. student vs. U.S. employee samples (with three not significant dimensions: Hard Work, Centrality of Work, Delay of Gratification), and the U.S. students and Poland students (with two not significant dimensions: Self-reliance, Delay of Gratification). The Polish student vs. Polish employee sample had one not significant

dimension (i.e., Morality), and this also was the case for the U.S. employee vs. Poland employee samples (i.e., Self-reliance).

Discussion

In summary, our results suggest that the newly developed Polish language versions of the MWEP demonstrate measurement equivalence with the original English version. Specifically, a seven-factor measurement model corresponding to the seven MWEP dimensions with three manifest indicators (based on three summed-item composites) and factor pattern coefficients constrained to be equal across groups, provided a good representation of the MWEP data across four of the five pairs of samples. In addition, scale score reliability estimates were generally high and consistent across versions. Finally, we found several statistically non-significant differences on the work ethic dimensions across samples, which match in a certain extent the findings of Woehr et al. (2007). For example, in Woehr et al. (2007) Hard Work and Delay of Gratification indicate no statistically significant differences across U.S., Mexican, and Korean samples. In our research Delay of Gratification was not statically significant for the U.S. vs. Poland student samples and U.S. students vs. U.S. employee samples. Moreover Hard Work was not significant between the U.S. student and U.S. employee samples. But there are also differences, the main one being that in the present research Self Reliance was the dimension that indicate no statically significant difference across the overall U.S. and Polish samples (and also for the U.S. students vs. Poland students, and U.S. vs. Poland employees).

The samples that showed more similarities were the two U.S. samples (students and employees) and the two student samples (U.S. and Poland). Probably the most different samples were the U.S. employees vs. Poland employees. In this case the full ME/I was not reached, but just partial ME/I, with the Morality dimension dropped out.

The present study compared two cultures, the U.S. and the Polish, and we highlighted both similarities and difference between them. Future research should extend the range of the countries and cultures and take a deeper look into what is similar and what is different between them. A step in this direction was made by Zhang, Liu and Liu (2012) who found a significant interaction effect between a similar work ethic scale as the MWEP (the Protestant Work Ethic scale– PWE) and Confucian Dynamism scale in a Chinese setting. The findings appeared to support the notion that these two work ethics are not culturally specific. Also although Weber emphasizes hard work as one of Protestant Work Ethic's distinctive characteristics, Islam's view on work ethic is not much different than Protestant and Catholic views. Zulfikar (2012) examined the work ethic characteristics of Protestant, Catholic, and Muslim workers who are living in the U.S. to find similarities and differences among these people in terms of business ethics. One interesting result of their study was that the Turkish Muslim population of the U.S. workforce contributes more positively to the U.S. business ethics values than the other groups surveyed.

Our goal in the present study was to extend the work of Miller et al. (2002) and Woehr et al. (2007) by developing and evaluating a new version of Miller et al.'s measure of work ethic. In addition, we applied a detailed CFA approach to the assessment of the ME/I of the measure of work ethic across Polish and U.S. samples. The importance of providing evidence for ME/I across countries should not be underestimated. Nevertheless, it appears to be a prevailing notion among cross-cultural researchers that the replicability of factorial structure across countries represents adequate evidence of ME/I (Paunonen & Ashton, 1998). Such evidence, however, is

not sufficient. Although the factorial structure of a measuring instrument may yield a similar pattern when tested *within* each of two or more countries, such findings represent no guarantee that the instrument will operate equivalently *across* these countries (Byrne & Watkins, 2003). Our results indicate that Polish MWEP was equivalent, and there are both substantive differences and similarities between the U.S. and Polish participants with respect to work ethic. These results should be considered preliminary, but they surely represent a step forward in the cross-cultural literature pertaining to work ethic.

Table 3. Means and Standard Deviations for MWEP Scales – U.S. vs. Poland

	U.S. (N= 439)		**Poland (N= 534)**		**U.S. student (N= 203)**		**U.S. employee (N= 236)**		**Poland student (N= 298)**		**Poland employee (N= 236)**	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Self-Reliance	3.48^{A}	.65	3.48^{A}	.60	3.35^{A}	.61	3.60^{B}	.67	3.41^{A}	.62	3.58^{B}	.57
Morality / Ethics	4.43^{A}	.45	4.25^{B}	.53	4.36^{A}	.43	4.48^{B}	.48	4.23^{A}	.53	4.30^{A}	.48
Leisure	3.14^{A}	.66	3.36^{B}	.67	3.30^{A}	.57	3.00^{B}	.71	3.42^{A}	.67	3.29^{B}	.64
Hard Work	3.86^{A}	.60	3.33^{B}	.58	3.85^{A}	.55	3.87^{A}	.66	3.43^{A}	.50	3.22^{B}	.64
Centrality of Work	3.73^{A}	.57	3.31^{B}	.60	3.69^{A}	.56	3.77^{A}	.58	3.27^{A}	.62	3.37^{B}	.56
Wasted Time	3.72^{A}	.57	3.46^{B}	.58	3.59^{A}	.57	3.82^{B}	.57	3.36^{A}	.58	3.60^{B}	.55
Delay of Gratification	3.50^{A}	.67	3.39^{B}	.63	3.51^{A}	.64	3.50^{A}	.71	3.46^{A}	.64	3.31^{B}	.62

	U.S. student (N=203)		**Poland student (N=298)**		**U.S. employee (N=236)**		**Poland employee (N=236)**	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Self-Reliance	3.35^{A}	.61	3.41^{A}	.62	3.60^{A}	.67	3.58^{A}	.57
Morality / Ethics	4.36^{A}	.43	4.23^{B}	.53	-	-	-	-
Leisure	3.30^{A}	.57	3.42^{B}	.67	3.00^{A}	.71	3.29^{B}	.64
Hard Work	3.85^{A}	.55	3.43^{B}	.50	3.87^{A}	.66	3.22^{B}	.64
Centrality of Work	3.69^{A}	.56	3.27^{B}	.62	3.77^{A}	.58	3.37^{B}	.56
Wasted Time	3.59^{A}	.57	3.36^{B}	.58	3.82^{A}	.57	3.60^{B}	.55
Delay of Gratification	3.51^{A}	.64	3.46^{A}	.64	3.50^{A}	.71	3.31^{B}	.62

Legend: Means within the same row with different superscripts are significantly different ($p < .01$).

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A Comparison of the Multidimensional Work Ethic Profile across Two Countries

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Abstract

The present study represents an extension of previous research examining the measurement equivalence of the Multidimensional Work Ethic Profile (MWEP; Miller, Woehr, & Hudspeth, 2002) across groups. To date, research has supported the measurement equivalence of the MWEP between its English, Spanish, and Korean language versions (Woehr et al., 2007), between male and female respondents (Meriac et al., 2009), and across generational cohorts (Meriac et al., 2010). The present study extends this research by reporting the development of a Polish language version of the MWEP as well as through an examination of the equivalence of the MWEP across U.S. and Polish respondents.

Keywords: work ethics, measurement equivalence, Poland, Multidimensional Work Ethic Profile (MWEP)

French version*

A Comparison of the Multidimensional Work Ethic Profile across Two Countries

Une comparaison du profil éthique du travail multidimensionnel dans deux pays

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Résumé

La présente étude constitue un prolongement de recherches antérieures, examinant équivalence de la mesure du profil éthique du travail multidimensionnel (Miller, Woehr, et Hudspeth, 2002) entre groupes. À ce jour, la recherche a pris en charge la mesure de l'équivalence de la mesure du profil éthique du travail, entre ses versions en anglais, en espagnol et en coréen (Woehr et al., 2007), entre les répondants masculins et féminins (Meriac et al., 2009), et les cohortes générationnelles (Meriac et al., 2010). La présente étude étend cette recherche à une version en langue polonaise la mesure du profil éthique du travail multidimensionnel ainsi qu'à un examen de son équivalence comparant des répondants américains et polonais.

Mots-clés: éthique du travail, mesure d'équivalence, Pologne, profil éthique du travail multidimensionnel (MWEP)

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German version*

A Comparison of the Multidimensional Work Ethic Profile across Two Countries

Vergleich des multidimensionalen Arbeitsethikprofils (MWEP) zwischen zwei Ländern

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Zusammenfassung

Die vorliegende Untersuchung erweitert existierende Untersuchungen zur Messäquivalenz des multidimensionalen Arbeitsethikprofils (Multidimensional Work Ethik Profile, MWEP; Miller, Woehr & Hudspeth, 2002) zwischen unterschiedlichen Gruppen. Bis heute zeigt die Forschung eine Messäquivalenz zwischen englischen, spanischen und koreanischen Sprachversionen (Woehr et al., 2007), zwischen männlichen und weiblichen Teilnehmern (Meriac et al., 2009) und zwischen Generationen (Meriac et al., 2010). Die vorliegende Studie erweitert diese Forschung durch eine polnisch-sprachige MWEP-Version und zudem durch die Untersuchung der Äquivalenz der MWEP zwischen polnischen und U.S-amerikanischen Versuchsteilnehmern.

Keywords: Arbeitsethik, Polen, multidimensionale Arbeitsethikprofile, Messäquivalenz

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Spanish version*

A Comparison of the Multidimensional Work Ethic Profile across Two Countries

Comparación del Perfil Multidimensional de la Ética en el Trabajo entre Dos Países

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Resumen

El presente trabajo representa una extensión de las investigaciones previas y examina la equivalencia de la medida del Perfil Multidimensional de Ética en el trabajo (MWEP) (Miller, Woehr, y Hudspeth, 2002) entre grupos.

Hasta la fecha, la investigación ha apoyado la equivalencia de la medida del Perfil Multidimensional de Ética en el trabajo (MWEP) entre sus versiones en inglés, español y coreano (Woehr et al., 2007), entre hombres y mujeres (Meriac et al., 2009), y entre generaciones (Meriac et al., 2010). El presente estudio extiende la investigación al presentar el desarrollo de una versión en polaco de la MWEP, y un examen de la equivalencia de la MWEP entre los encuestados estadounidenses y polacos.

Palabras clave: ética del trabajo, equivalencia en la medición, Polonia, Perfil Multidimensional de Ética en el trabajo (MWEP)

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Arabic version*

A Comparison of the Multidimensional Work Ethic Profile across Two Countries\

دراسة مقارنة لملف أخلاقيات العمل متعدد الابعاد بين دولتين

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ملخص

تعد هذه الدراسة امتدادا للدراسات و الأبحاث السابقة التي درست مدى تكافئ و تساوي مقياس ملف أخلاقيات العمل متعدد الابعاد بين المجموعات. (MWEP; Miller, Woehr, & Hudspeth, 2002) .لغاية الوقت الحالي، دعمت الابحاث تكافئ مقايس لأخلاقيات العمل في اصدارات اللغة الانجليزية ، الاسبانية ، و الكورية (Woehr et al., 2007) ، بين الذكور و الاناث (Meriac et al., 2009) و بين الأجيال (Meriac et al., 2010). تكمل الدراسة الحالية هذه الدراسات من خلال تطوير النسخة البولندية لتكافئ صفات مقياس ملف أخلاقيات العمل متعدد الابعاد بالاضافة الى دراسة تكافئ و تساوي المقياس بين الولايات المتحدة الأميركية و بولندا.

الكلمات الدالة: أخلاقيات العمل ، مقياس التكافئ ، بولندا ، ملف أخلاقيات العمل متعدد الابعاد.

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Italian version*

A Comparison of the Multidimensional Work Ethic Profile across Two Countries

Una comparazione del profilo di etica lavorativa fra due Paesi

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Abstract

Questo studio rappresenta una estensione di una precedente ricerca che esaminava l'equivalenza del Profilo Multidimensionale di Etica Lavorativa (MWEP; Miller, Woehr, & Hudspeth, 2002) fra gruppi. Fino ad oggi, la ricerca si è concentrata sulla misurazione di equivalenza del MWEP fra le versioni linguistiche Inglese, Spanola e Coreana (Woehr et al., 2007), e attraverso gruppi generazionali (Meriac et al., 2010). Il presente studio estende questa ricerca evidenziando gli sviluppi riguardanti la versione in lingua Polacca del MWEP, così come attraverso l'esame dell'equivalenza del MWEP tra Statunitensi e Polacchi coinvolti.

Keywords: etica del lavoro, misurazione di equivalenza, Polonia, Profilo Multidimensionale di Etica Lavorativa (MWEP)

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Chinese version*

A Comparison of the Multidimensional Work Ethic Profile across Two Countries

多维工作伦理剖面图：两个国家的比较

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摘 要

本研究推进了关于多维工作伦理剖面图（MWEP; Miller, Woehr, & Hudspeth, 2002）在不同群体间测量等值性的研究。到目前为止，已有的研究支持了MWEP在英语、西班牙语和韩语版本间的测量等值性（ Woehr et al., 2007）、在不同性别间的测量等值性（ Meriac et al., 2009），以及代际间的测量等值性（ Meriac et al., 2010）。本研究开发了MWEP的波兰语版本，并检验了MWEP在美国和波兰研究对象之间的等值性，从而拓展了该方面的研究。

关键词：工作伦理；测量等价性；波兰；工作伦理剖面图（MWEP）

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Polish version*

A Comparison of the Multidimensional Work Ethic Profile across Two Countries

Porównanie amerykańskiej i polskiej wersji Wielowymiarowego Profilu Etyki Pracy

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Abstract

Prezentowane badania stanowią kontynuację badań porównawczych prowadzonych w różnych populacjach nad równoważnością kulturową Wielowymiarowego Profilu Etyki Pracy (Multidimensional Work Ethic Profile, MWEP; Miller, Woehr, & Hudspeth, 2002), narzędzia służącego do pomiaru etyki pracy. Dotychczasowe badania wykazały równoważność angielskiej, hiszpańskiej i koreańskiej wersji metody (Woehr et al., 2007). Na równoważność wskazują także porównania między wynikami badanych grup kobiet i mężczyzn (Meriac et al., 2009) oraz wynikami osób w różnych przedziałach wiekowych (Meriac et al., 2010). W artykule omówiono wyniki badania, które stanowi pogłębienie wcześniejszych dociekań empirycznych dodatkowo o polską wersję językową Wielowymiarowego Profilu Etyki Pracy (MWEP). Przedstawiono tu porównanie równoważności amerykańskiej i polskiej wersji MWEP.

Kewords: etyka pracy, pomiar równoważności, Polska, Wielowymiarowy Profil Etyki Pracy

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