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Differences in work values: understanding the role of intra- versus inter-country variation

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Differences in work values: understanding the role of intra- versus inter-country variation

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A growing literature emphasizes the need for studies taking a contingency perspective to international HRM to move beyond mean country differences in work values and begin considering intra-country variation (ICV). We use individual-level data on Hofstedeian values – not hitherto available – to infuse this literature with systematic quantitative evidence regarding the importance of ICV vis-à-vis inter- or between-country variation. We begin by estimating various random effects models, discovering that ICV accounts for the bulk, approximately 85%, of total variation in work values. To add a much-lacking comparative dimension and because ICV only has real-life relevance if we know its sources and can observe them, a three-level multilevel analysis provides a novel disentanglement of the importance of country relative to region and socioeconomic stratum as readily observable within-country sources of variation in values. Results show the value for practitioners and scholars of not only focusing on country differences strictly but also considering subnational categorizations when seeking to understand differences in work values. Key contribution of this paper is to take the debate on ICV out of the theoretical and into the practical realm. Implications of our findings are discussed.

Keywords: cross-cultural management; cultural contingency; Hofstede; intra-cultural diversity; values

Introduction

Values are key drivers of human behavior (Fishbein and Ajzen 1975), making them essential constructs in the study of HRM practices and other aspects of organizational behavior (e.g. McClelland 1985; Brief 1998; Meglino and Ravlin 1998). Values are particularly much used in comparative research seeking to understand different features of organizational behavior as an outgrowth of national culture with cultural differences between countries measured as differences in the mean values scores of the citizens of these countries (for examples of the latter, see, for instance, Schwartz 1994; Inglehart and Baker 2000; House, Hanges, Javidan, Dorfman and Gupta 2004).¹ Parallel to this literature, values figure prominently in classic single country work such as that on work motivation (see Latham and Pinder (2005) for an overview) and psychographic market segmentation (Mitchell 1983).

Conceptually, values and, especially, cultural differences therein are often seen as a constraint for which firms need to find a fit. The managing of firms is culturally contingent so that performance depends on a firm's ability to successfully adapt its managerial practices, particularly changing HRM policies for a local subsidiary to make them congruent with the reigning values context (e.g. Aycan 2005). Hofstede's (1980) influential work measuring differences in work values in four dimensions has provided important impetus to the study of the values of countries and how cross-national differences in values matter for firms.

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However, over the last decade, numerous scholars have articulated the need for international HRM and cross-cultural management to move beyond differences in country averages and begin paying more attention to intra-country variation (ICV). Typically, this literature argues the importance of ICV as an independent construct (Au 1999; Gelfand, Nishii and Raver 2006) or raises a fundamental concern toward fallacious homogeneity assumptions that neglect subnational values heterogeneity (Au 1997; Gerhart and Fang 2005; McSweeney 2009; Keleş and Aycan 2011). The latter critique mostly concerns indexes meant to measure the cultural distance between a home and a host country, which would be invalidated by failing to incorporate ICV (Tung 2008; Tung and Verbeke 2010; Shenkar 2012).² Practically, organizations may end up suffering lower performance when ICV is substantial but underappreciated by managers.

The idea that heterogeneity within countries can be interesting in and of itself is readily accepted and, as an independent construct, ICV has been extensively researched (Au 1999; Schwartz and Sagie 2000; Duclos, Esteban and Ray 2004). Analyses of the fallacy of focusing narrowly on mean country differences under the assumption of cultural homogeneity, on the other hand, remain abstract. There is insightful work in international HRM and cross-cultural management demonstrating that individual-level factors such as age and gender are statistically significant determinants of work values (Hitlin and Piliavin (2004) survey the values literature; see Lin and Ho (2009), Tung and Baumann (2009), and Woldu and Budhwar (2011) for recent studies). There is even some evidence that between-country variation (BCV) is much smaller than ICV. Notably, Gerhart and Fang (2005, p. 977) draw on meta-analyses to estimate that only 2–4% of total variation in values is between countries.

What these bodies of evidence do not yet show, however – and what is not explicitly considered in the theoretical literature either – is the actual practical relevance of a given level of ICV for managers and scholars. While 2–4% may not seem considerable, country may be the largest source of variation in work values by far and much more important than gender or age, for instance. Moreover, as country is so clearly observable, it is a very convenient information source for firms. We should not readily dismiss BCV just because it is minimal compared to ICV. Certainly, we should not dismiss BCV before we actually have evidence on the quantitative importance of comparable, equally observable within-country sources of variation in values. What the literature requires, therefore, is a benchmark or a comparative perspective where we have evidence on the quantitative importance of other sources of variation in work values in addition to evidence on the importance of BCV vis-à-vis ICV. Only through comparison can we obtain any real increase of our understanding of ICV and determine whether ICV is, indeed, the fundamental challenge to international and cross-cultural management research some scholars find it to be or whether it is mostly a theoretical issue.³ This paper, then, addresses the lack of comparative evidence in the literature.

Key contribution of the paper and the evidence presented herein is that they take the debate on ICV out of the theoretical into the practical realm. We do so in an especially prominent and pressing area, namely in regard to the most widely used measures of work values, those of Hofstede (1980, 2001; see also Hofstede, Hofstede and Minkov 2010). Utilizing individual-level data not previously available, we estimate random effects models for samples encompassing up to 98 countries and almost 345,000 individuals. We find that country is an important predictor of values but that ICV accounts for the bulk, approximately 85%, of variation in values. To obtain the much-needed benchmark, we further estimate three-level multilevel models, allowing us to gauge the importance of BCV relative to readily observable subnational categorizations as sources of values

differences. We focus on within-country region and socioeconomic stratum, though the statistical approach is general and can be straightforwardly extended to assess a variety of other within-country sources of value differences. Results indicate the practical value of ICV and of considering subnational categorizations as a way to increase comprehension of individuals' work values.

Supporting prior theoretical arguments as to the importance of ICV, we find the results of our analyses have important implications for HRM practices and a range of other managerial issues, as well as scholarly work. Most fundamentally, heterogeneity within countries has implications for the manner in which we interpret values differences between countries and, particularly, the construct of cultural distance that is so popular in international and cross-cultural management research. Mean country differences obscure the fact that, across countries, people can be strikingly similar. A given group of individuals from one country often shares more in terms of values with many people from another country than with their fellow citizens. The story here is not one of distance but of similarities or overlap, and international HRM and cross-cultural management would benefit a great deal from moving beyond the country means that hide much of the values differences that vitally shape the environment for business.

Background and hypotheses

Values and cultural values dimensions in international management

Aggregate-level research seeking to understand international HRM practices and other aspects of cross-cultural organizational behavior from an attitudinal perspective can draw on numerous approaches to the measurement of values and variation therein. The best-known framework is that of Geert Hofstede, first outlined in Hofstede (1980). This work has been tremendously influential in culture research and, since its appearance, Hofstede's framework has been at the center of international and cross-cultural management studies (Tung and Verbeke 2010).

An important area of research that applies frameworks of national differences in values is cross-cultural organizational behavior research that studies such phenomena as reward allocation, leadership behavior, psychological contracts and work motivation (Gelfand, Erez and Aycan 2007; Tsui, Nifadkar and Ou 2007). Theoretical reflections on the fallaciousness of cultural homogeneity assumptions and the importance of ICV (e.g. Tung and Verbeke 2010), on the other hand, often target the measures of cultural distance already mentioned in the introduction. Focusing on mean country differences, such measures wrongly assume that within-country heterogeneity is either absent or largely irrelevant compared to between-country heterogeneity – or so it is argued by a growing number of researchers.

Hofstede's framework – old and new

Foundations for Hofstede's (1980) assessment of country differences in work values in four dimensions date back to the late 1960s and early 1970s. Between 1967 and 1973, computer company IBM embarked on a program to survey its employees worldwide about their attitudes and Hofstede derived his original indexes of national culture from the responses provided to survey items employed in this program. Eliminating countries with less than 50 respondents and questionnaire items deemed of poor quality, Hofstede (1980) applied data reduction techniques to individual responses aggregated at the country level. In the end, he was left with four country indexes, which he labeled Power Distance,

Uncertainty Avoidance, Individualism/Collectivism and Masculinity/Femininity. Follow-up research by a group of Chinese researchers uncovered a fifth values dimension called Confucian Dynamism which Hofstede (1991) included in the first edition of *Cultures and organizations: Software of the mind*, relabeling it Long-Term Orientation (LTO). For the third edition of this book, Hofstede, in cooperation with Michael Minkov, created a revised index for this fifth dimension and added a completely new work values dimension called Indulgence versus Restraint (IVR) (Hofstede et al. 2010; see also Hofstede and Minkov 2010).⁴ For both the fifth and this sixth dimension, he drew on the long-standing World Values Survey (WVS).

The approach of Hofstede et al. (2010) was to aggregate scores for a large set of WVS questionnaire items and examine how these correlated both among themselves and with the existing, old dimensions of Hofstede. The revised measure of LTO in Hofstede et al. (2010), labeled LTO-WVS, derives from a principal component analysis of three WVS items that Hofstede and coauthors (Hofstede et al. 2010; Hofstede and Minkov 2010) discovered as correlating strongly with the existing measure of LTO. These three items concern (i) thrift as a desirable trait for children, (ii) national pride and (iii) the importance of service to others (see Appendix for the exact phrasing of these items).

The IVR dimension was derived in a slightly different way. As described in Hofstede et al. (2010, pp. 98, 280), the IVR dimension first surfaced in an early analysis of WVS items by Minkov. Focusing on avowed happiness, Minkov found two items that correlated with self-assessed happiness over anything else, namely the importance of leisure and the freedom of choice and control people report (again see Appendix for details). Limited correlations of all three items (happiness, importance of leisure and freedom of choice and control) with any of Hofstede's (2001) five dimensions further suggested the existence of a sixth, until then unknown, values dimension. Hofstede et al. (2010) then applied factor analysis to obtain an index. A description of the IVR dimension is that '[i]ndulgence stands for a tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun', and that '[i]ts opposite pole, restraint, reflects a conviction that such gratification needs to be curbed and regulated by strict social norms'. (Hofstede et al. 2010, p. 281, italics dropped).

In total, the recent revision and extension of Hofstede's framework by Hofstede and coauthors (Hofstede et al. 2010; Hofstede and Minkov 2010) provides us with six value items that can be utilized to quantify the importance of ICV relative to BCV for this leading framework of cultural differences in work values. Famously, Hofstede's original data (Hofstede 1980) have been destroyed, but now, for the first time, it is possible to provide information about individuals in relation to Hofstede's (1980, 2001) framework of national values differences. Throughout, we follow Hofstede's (1980) lead in applying the term values to refer to scores on the selected WVS items.

Inter- and intra-country variation: theory and empirics

The issue of ICV (as opposed to BCV) has been long discussed. Historical roots go back to early writings on the ecological fallacy: the mistaken assumption that individuals belonging to a particular group somehow possess the average characteristics of this group (Robinson 1950). Much discussion of within-group and between-group variation can further be found in the anthropological literature. Notably, Pelto and Pelto (1975) provide a thorough review of the issue, discussing, among others, factors that have made the homogeneity assumption so attractive in studying human collectives and the implications that ICV has for theories of human behavior.

International HRM and cross-cultural management have a much shorter history of discussing ICV than many other disciplines. This appears to be partly the result of the dominance of Hofstede's framework. Hofstede (1980) obtained his cultural values dimensions by aggregating individual responses at the country level and then applying factor analysis (see above). By measuring national differences in values in this manner, Hofstede's (1980) framework is devoid of ICV by construction.

Hofstede has always defended his particular approach to measuring cultural values (see, for example, Hofstede 2001, pp. 16, 413–414). The discussion is ongoing, however (e.g. Fiske 2002), whereby ICV surfaces as a possible threat to the aggregability of individual value scores (Gerhart and Fang 2005; Javidan, House, Dorfman, Hanges and Sully de Luque 2006). More generally, over the last decade, a watershed appears to be taking place and the issue of ICV is increasingly taken up in international and cross-cultural management studies. A first line of research is thereby concerned with ICV as a separate societal measure that complements mean-based measures of differences in values between countries. Au (1999), for example, finds that average job satisfaction in a country correlates negatively with within-country variation in job satisfaction. A second line of research fits more with Pelto and Pelto's (1975) review, reflecting on the fallaciousness of the cultural homogeneity assumption and its neglect of individual-level heterogeneity (e.g. Au 1997; Tung 2008).

Lagging these latter, theoretical discussions is empirical investigation of the practical relevance of ICV as a source of variation in values. There is an established literature on the statistical significance of individual-level determinants of values differences (e.g. Hitlin and Piliavin 2004; Woldu and Budhwar 2011) and even some evidence on the importance of ICV vis-à-vis BCV (Gerhart and Fang 2005). What is missing, however, is a systematic comparative analysis of the real-life significance of ICV vis-à-vis BCV for the general population. This paper fills this gap, providing the first quantitative evidence that compares country as a source of variation in work values with equally easily observable within-country sources. Only by examining comparable sources of variation, we contend, is it possible to obtain any real understanding of ICV and its importance for managers and researchers alike.

Closely related to the above point, it must be explicitly mentioned that this paper also addresses a fundamental technical problem that, thus far, has been neglected in the few studies that consider ICV in opposition to BCV. The issue is that simply comparing the contribution that ICV and BCV make to total variation in values neglects plain measurement error. Measurement error tends to occur at the individual level (i.e. between individuals) and adds a substantial amount of invalid variance to both the variance that is within countries (i.e. variation that is between individuals within countries) and to total variance. Individuals state their values; however, for unsubstantive reasons their responses can differ from their true values. By mathematical necessity, this measurement error deflates the share of total variation in values that is between countries and, of course, inflates the share of total variation that is within countries.⁵ Simply comparing ICV and BCV and drawing inferences regarding their relative importance is, therefore, highly inappropriate. Instead, a valid and meaningful comparison of the importance of sources of variation in values requires that we compare sources whose percentage contribution to total variation is similarly affected (i.e. deflated) by measurement error. We achieve such a comparison of equals by comparing the importance of variation that is within countries to variation that is between subnational categories. For both of these sources of variation, measurement error deflates their share in total variation (as just explained), thus ensuring their comparability. Practically, this means that, in our empirical analysis, we examine the

sources of variation in values not only of individuals nested in countries but also of individuals nested in other higher-order units, specifically individuals nested in within-country regions and in within-country social strata.

We describe our method and the data that we use, including the within-country sources of values differences that we consider, in detail in the next section. First, however, we formulate the exact hypotheses that we test in our empirical section.

Hypotheses

We can summarize the essence of our discussion thus far in a set of two hypotheses that capture current thinking on ICV and BCV, and a third hypothesis that relates directly to the issue motivating the present research, namely the practical relevance of ICV as a source of variation in values. To begin, frameworks of national differences in values such as those of Hofstede (1980, 2001) and Schwartz (1994) teach us that there is a substantial amount of variation in values between countries. Our first hypothesis (H1) correspondingly reads:

Hypothesis 1: Country is a significant source of values differences.

The second hypothesis is similarly derived from the above discussion of inter- and intra-country variation. We expect, in line with Au (1997, 1999), Pelto and Pelto (1975) and Tung (2008), among others, that a substantial amount of variation in values does not occur between countries but occurs between individuals from the same country, meaning it occurs within a country. Our second hypothesis (H2) thus reads:

Hypothesis 2: There is a significant amount of variation in values between individuals within a country.

Together, H1 and H2 summarize the current state of affairs in the literature. However, as stated, simply comparing the quantitative contribution of BCV and ICV to total variation is uninformative at best and, at worst, misleading due to the role of measurement error. Hence, for our third hypothesis we seek to move beyond simply comparing ICV with BCV. Rather, we seek to assess the contribution to total variation in values that is made by BCV as compared to other sources that are comparable to BCV, specifically within-country sources of values differences that, just like country, are easily observable. We are particularly interested in examining whether there are subnational categorizations that we can utilize to classify individuals and that make a contribution to total variation in values that is of the same order of magnitude as the contribution made by BCV. Such work as Lin and Ho (2009), Tung and Baumann (2009) or Woldu and Budhwar (2011), studying age and gender differences in values, and the literature on (individual) values differences more broadly (e.g. Hitlin and Piliavin 2004) lead us to expect that such subnational categorizations indeed exist. Hence, our third hypothesis (H3):

Hypothesis 3: There exist easily observable subnational categorizations of which the quantitative importance as a source of variation in values is of the same order of magnitude as the quantitative importance of BCV.

H3 is cast in general terms. For the actual analysis, we select two variables by which to operationalize the concept of easily observable subnational categorizations. Details are depicted in the next section in which we describe our empirical approach, specifically the data and method that we employ. To be complete, we follow the standard definition of the concept of order of magnitude, meaning that the largest number is less than 10 times greater than the smallest number.

Empirical approach

Data

The WVS data set

Our empirical assessment of ICV and BCV in Hofstede's framework draws on the same WVS items that Hofstede et al. (2010) used to update and extend Hofstede's (1980, 2001) original framework (see above). Since its inception in 1981, the WVS has evolved into a global project encompassing almost 100 countries. It consists of a large array of questions probing respondents not only on their values, but also on sociodemographic background and other characteristics. Importantly, the WVS data are available in raw, unaggregated format. This makes the WVS a highly valuable resource for international HRM and cross-cultural management research, making possible, among others, the type of multilevel culture studies that are the subject of this paper. Further information on the data set and the questionnaire items included in the survey can be found on the project's website, <http://www.worldvaluessurvey.org>.

Dependent variables

Out of the six WVS items Hofstede et al. (2010) drew on for the update and extension of Hofstede's (1980, 2001) influential framework, five lend themselves for empirical analysis of ICV and BCV; the item on thrift as a desirable trait for children cannot be included because it does not use a Likert-type answer scale (see Appendix). These values items are used not only by Hofstede et al. (2010) but also by numerous other researchers, across disciplines (e.g. economics, sociology and psychology) (e.g. Guiso, Sapienza and Zingales 2003, 2006; Lindbeck and Nyberg 2006; Hopcroft and Bradley 2007; Kay, Gaucher and Napier 2008; Aghion, Algan, Cahuc and Shleifer 2010; Tabellini 2010). Using all available data, coverage of the five value items varies from 39 to 98 countries. After omitting individuals with missing responses, the total number of observations ranges from approximately 55,000 to almost 345,000. Table 1 presents descriptive statistics for the samples as a whole and for the means of the countries for which data are available.

Table 1. Descriptive statistics.

Value	Whole sample			Country means		
	Mean	Standard deviation	Number of individuals	Mean	Standard deviation	Number of countries
LTO-WVS						
Proud of nationality	1.59	0.778	337,398	1.57	0.321	98
Service to others important	1.72	0.769	55,353	1.76	0.356	39
IVR						
Happiness	1.97	0.740	344,363	1.96	0.269	98
Leisure time important	1.93	0.818	314,343	1.91	0.259	96
Freedom of choice and control	6.74	2.42	333,363	6.74	0.730	97

Note: Descriptives are for the items as originally coded; see Appendix.

Independent variables

The independent variables in our analyses are the sources of variation in values that we consider. Most prominent of these is an individual's country of residence which has been coded for all respondents in the WVS. The two specific subnational categorizations that we consider are within-country region, hereafter indicated as country region, and so-called country social stratum. We select these subnational categorizations for two main reasons. The first is that these categorizations are comparable to country in the sense of being readily observable and, therefore, are equally convenient to draw on for anyone interested in obtaining a better understanding of values differences, for instance a manager or an HR officer. The second reason is that these two categorizations are known to be associated with differences in values.⁶ We base the two categorizations on two items available in the WVS.

As part of the standard set of sociodemographic details, for most respondents, the WVS has also coded the country region in which a respondent was interviewed. We use this variable, which is available in all five waves of the WVS, as a proxy for respondents' within-country regional backgrounds. Depending on which value item we consider, we have data on up to 1572 regions nested in 94 countries. On average, we are able to consider about 16 regions per country.

The specific item in the WVS that we use to measure the socioeconomic class to which a person belongs classifies individuals into four possible strata: (i) upper class and upper middle class; (ii) middle class, no manual workers; (iii) middle class, manual workers; and (iv) lower class, unskilled, manual workers and unemployed individuals. We have combined these four categories with information regarding the respondents' country to obtain unique country socioeconomic strata. The item coding respondents' socioeconomic class has been included infrequently in the WVS so that we can only consider country socioeconomic stratum as a source of variation for values belonging to the IVR values dimension. The data that are available encompass up to 34 countries and 136 ($= 4 \times 34$) country socioeconomic strata.

Hierarchical structure of the data

The idea of country and subnational categorizations as independent variables reflects the unique structure of the data that we consider and deserves some elaboration. In essence, we are interested in understanding the values of individuals and the sources of values differences. Our data, then, are structured hierarchically and we utilize the independent variables described above to assign individuals to higher-order units. Practically, we distinguish up to three levels of analysis with individuals (Level 1), hierarchically nested in subnational units (Level 2), hierarchically nested in countries (Level 3). [Figure 1a and b](#) depicts the exact structure of our data for the two subnational categorizations that we consider.

We do not use our independent variables as explanatory variables in a multiple regression model. Rather, we are interested in these variables as sources of values differences. The hierarchical structure of the data and our interest in assessing ICV and BCV as sources of values differences requires a special empirical method. We describe this method in detail below, while the next section presents our empirical results.

Method

The method that we employ is variance components analysis. The idea behind a variance components or random effects model is that part of the variation in a dependent variable

Figure 1. (a) Hierarchical structure of the data: individuals nested in country regions nested in countries. (b) Hierarchical structure of the data: individuals nested in country socioeconomic strata nested in countries.

is associated with one or more random effects variables, specifically the higher-order unit to which an observation belongs. In the case of Hofstede's original framework and the LTO and IVR dimensions, some of the variation in respondents' work values scores is attributable to their country of residence, the between-countries component, with the remainder occurring within countries, the intra-country component. In our empirical analysis, we estimate both of these variance components. In formal terms, a variance components model can be depicted as a multilevel model (Raudenbush and Bryk 2002; Snijders and Bosker 2012) without predictors and only a random intercept. Below, we state such a model for the case of a two-level model that allows one to decompose total variation in a between-country component (BCV) and a within-country component (ICV). For the analyses that consider subnational categorizations as a source of values differences (see above), we extend this two-level model to a three-level multilevel model.

For the two-level model, we have values V of individual i (Level 1) residing in country j (Level 2): $V_{ij} = \beta_{0j} + e_{ij}$, where e_{ij} is a random, individual-level disturbance term and β_{0j} is random at the societal level. We can describe β_{0j} in more detail as $\beta_{0j} = \gamma_{00} + u_{0j}$, where γ_{00} is a fixed mean over all countries and u_{0j} is a random, country-level disturbance

term. The complete empirical model, therefore, reads as follows:

$$V_{ij} = \gamma_{00} + u_{0j} + e_{ij}. \quad (1)$$

The variance for this model is indicated as $\text{var}(V_{ij}) = \text{var}(\gamma_{00} + u_{0j} + e_{ij})$, and since γ_{00} is fixed this yields:

$$\text{var}(V_{ij}) = \text{var}(u_{0j} + e_{ij}) = \text{var}(u_{0j}) + \text{var}(e_{ij}) = \sigma_{u0}^2 + \sigma_e^2. \quad (2)$$

Equation (2) decomposes total variance in individuals' work values in a between-country component σ_{u0}^2 and a within-country component σ_e^2 that is due to individual heterogeneity. For additional insight, we calculate the percentage of total variance that is between countries, which is equal to the intra-class correlation: $\sigma_{u0}^2 / (\sigma_{u0}^2 + \sigma_e^2)$. The intra-class correlation captures how strongly observations in the same unit resemble each other and the two extreme cases therefore have clear meaning. An intra-class correlation of 100% means that all respondents from the same country have reported identical values (there is no within-country variation), while an intra-class correlation of 0% indicates that values from respondents from the same country do not share anything. We estimate the models using maximum likelihood with sandwich estimators. The software used is MLwiN.

For the three-level model, we follow the same procedure of attributing variation in values to its components. The difference is that we consider individuals nested in a subnational category nested in a country. As described above, the subnational categories that we consider are country region and country socioeconomic stratum. We thus have variation that is within regions, i.e. individual heterogeneity (Level 1), variation that is between regions within a single country (Level 2) and variation that is between countries (Level 3) for the first empirical model. For the second empirical model, we similarly have variation that is within socioeconomic strata (Level 1), variation that is between socioeconomic strata within a single country (Level 2) and variation that is between countries (Level 3) for the second empirical model. However, as stated, the idea underlying the three-level model is universal and can be used with any type of subnational categorization. As before, we calculate percentage scores (intra-class correlations) to determine how much of total variation occurs between higher-order units and how much within higher-order units. To assess the validity of H3, we simply compare the various intra-class correlations.

Results

Intra- versus inter-country variation in work values

Descriptive statistics (Table 1) reveal considerable cross-national variation in mean scores for all five value measures. Consistent with such sizeable societal differences in mean values, results show that BCV is a statistically highly significant component of total variation in values (Table 2). This finding confirms H1, which states that a person's country predicts his or her values. As expected, results further show that ICV is also a highly statistically significant source of values differences, which confirms H2. In fact, ICV is a substantially more important source of variation in work values than are systematic differences between countries. For the IVR items, we find an intra-class correlation of 9–13%. The intra-class correlation for the LTO items is higher, between almost 17% and more than 20%. Hence, a first conclusion is that the importance of ICV

Table 2. Intra- and inter-country variation as sources of differences in values.

Value	Variance components		Intra-class correlation (%)
	Within countries	Between countries	
Proud of nationality	0.503*** (0.022)	0.101*** (0.012)	16.7
Service to others important	0.490*** (0.025)	0.125*** (0.026)	20.3
Happiness	0.475*** (0.016)	0.071*** (0.008)	13.0
Leisure time important	0.602*** (0.017)	0.066*** (0.010)	9.9
Freedom of choice and control	5.32*** (0.210)	0.526*** (0.066)	9.0

Note: See Table 1. Individual observations are weighted by sample weights. Robust standard errors are given in parentheses. *** Denote statistical significance at the 0.1% level.

and BCV varies across values. More importantly, these findings provide some preliminary evidence that ICV is not merely of theoretical significance. Given that approximately 85% of total variation in values is within countries, there is much in terms of values vitally shaping the environment for organizations that gets overlooked if we only consider country means.

Within- and between-country sources of variation in work values: evidence from three-level multilevel models

The next step in our analysis is to delve beyond ICV and consider the two within-country sources of variation in values that we selected because they are comparable to country, particularly in terms of observability. Table 3 provides the results for country region.

As we consider a (slightly) different sample than for Table 2, we first assess the amount of variation that is between countries. We find that BCV accounts for a similar share of total variation in values as before, between 9% and 17% (Column 5 in Table 3). More important is the finding that country region statistically significantly predicts people's values. The percentage of total variation that is between regions within a country varies per value item, but can be as high as 8.6% (Column 3 in Table 3). The lowest percentage equals 3.8%. As we would expect, BCV accounts for a greater portion of total variation, but within-country regional location nevertheless carries a significant amount of information on people's values and differences therein. Moreover, in all cases, variation between country regions is of the same order of magnitude as BCV, sometimes accounting for as much as 50% of the amount of variation in values accounted for by BCV (Column 6 in Table 3). We, therefore, have strong confirmation for H3.

Table 4 presents the results for country socioeconomic stratum as a subnational source of values differences. Compared to earlier results (Tables 2 and 3), country is a less important source of variation in values in this sample, which encompasses maximum 34 countries (Column 5 in Table 4). In line with expectations, country socioeconomic stratum accounts for a statistically significant part of variation, amounting to a maximum of 3.9% of total variation (Column 3 in Table 4). In general, socioeconomic stratum is 25–45% as important as country in accounting for differences in IVR values. With regard to H3, in all

Table 3. Variation in values within country regions, between country regions and between countries.

<i>Value</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
	<i>Between country regions</i>			<i>Between countries</i>		
	<i>Intra-regional variance component</i>	<i>Inter-regional variance component</i>	<i>Percentage of total variation (%)</i>	<i>Inter-country variance component</i>	<i>Percentage of total variation (%)</i>	<i>Intra-class correlations of same order of magnitude (Column 5/Column 3 < 10)?</i>
Proud of nationality [287,875/94] {1560}	0.477*** (0.024)	0.035*** (0.006)	5.7	0.098*** (0.011)	16.1	Yes
Service to others important [48,100/33] {329}	0.466*** (0.026)	0.054** (0.019)	8.6	0.106*** (0.030)	16.9	Yes
Happiness [297,782/94] {1572}	0.464*** (0.013)	0.020*** (0.004)	3.6	0.069*** (0.009)	12.5	Yes
Leisure time important [276,913/91] {1457}	0.585*** (0.016)	0.026*** (0.004)	3.8	0.065*** (0.010)	9.6	Yes
Freedom of choice and control [288,241/93] {1509}	5.02*** (0.158)	0.282*** (0.044)	4.8	0.528*** (0.071)	9.1	Yes

Note: See Table 2. Number of individual observations/countries in square brackets. Number of within-country regions in accolades. **, *** Denotes statistical significance at the 1% and 0.1% level, respectively.

Table 4. Variation in values within country socioeconomic strata, between country socioeconomic strata and between countries.

<i>Value</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
	<i>Between country socioeconomic strata</i>			<i>Between countries</i>		
	<i>Intra-country-strata variance component</i>	<i>Inter-country-strata variance component</i>	<i>Percentage of total variation (%)</i>	<i>Inter-country variance component</i>	<i>Percentage of total variation (%)</i>	<i>Intra-class correlations of same order of magnitude (Column 5/Column 3 < 10)?</i>
Happiness [74,623 / 34] {136}	0.446*** (0.022)	0.020*** (0.004)	3.9	0.047*** (0.014)	9.2	Yes
Leisure time important [63,135/31] {124}	0.560*** (0.017)	0.010*** (0.002)	1.6	0.041*** (0.014)	6.7	Yes
Freedom of choice and control [74,368 / 34] {136}	4.85*** (0.192)	0.144*** (0.028)	2.7	0.301*** (0.087)	5.7	Yes

Note: See Table 3. Number of country socioeconomic strata in accolades. *** Denotes statistical significance at the 0.1% level.

cases variation between country socioeconomic strata is of the same order of magnitude as BCV (Column 6 in Table 4), thus confirming H3.

Returning to the key issue of the practical significance of ICV, we find that the results on country region and socioeconomic stratum (as readily observable within-country sources of values differences) show that ICV indeed matters. BCV does not suddenly become meaningless because it is so much smaller than ICV – 15% versus 85% – but neither is country somehow a unique source of values differences. By bringing forward novel evidence from a three-level multilevel analysis, we are able to demonstrate that there are subnational categorizations that are comparable to country in terms of their observability and their quantitative importance as sources of values differences. Practically, the results not just are the first clear evidence on the real-life relevance of ICV but also highlight the payoff to managers and researchers of moving beyond mean country differences to tap more directly into the bulk of variation in values.

Conclusion and implications

Many studies find that values and, particularly, cultural differences therein matter for a range of managerial issues. Increasingly, however, scholars are challenging the narrow focus on mean country differences, i.e. on BCV, in both these studies and the value measures employed in this literature. The mainstay of their critique is that this work wrongly assumes intra-country homogeneity at the expense of neglecting heterogeneity within countries. So far, the debate has not moved beyond the abstract notion that ICV is important, however, and lacks systematic evidence by which to assess the practical relevance of ICV as a source of differences in values.

We have drawn on recent extensions and updates of Geert Hofstede's seminal framework by Hofstede and coauthors to quantify the significance of ICV for Hofstede's widely used measures of work values. Basic results demonstrate that the values of individuals from the same country have a strong resemblance but that ICV is substantially more important than BCV, accounting for the bulk of total variation in values, about 85%. To further assess the importance of ICV vis-à-vis BCV, a benchmark is indispensable and, for this purpose, we have estimated three-level multilevel models, disentangling the importance of country relative to within-country sources that are more or less equal to country in terms of their observability. Using region and socioeconomic stratum as actual within-country sources of values differences, we find that country is not a unique source of values differences but that equally useful and important sources exist at the subnational level as well. In short, ICV matters.

The key contribution of this paper and the empirical evidence presented in it is that they take the debate on ICV out of the theoretical into the practical realm. Theoretically oriented work has reflected on how managers of MNEs should not assume within-country homogeneity or suffer the consequences of this fallacy. This paper demonstrates that these earlier, theoretical reflections on the importance of ICV have real-life relevance. Most concrete managerial implications derive from our demonstration of the existence of significant, easily observable within-country sources of variation in values. It is not hard to see how managers may use understanding of subnational sources of differences in values – including regional and socioeconomic variation as studied by us –, notably to select employees that best fit a company's culture. In general, practitioners and researchers alike should pay more attention to factors such as social class. If mean country differences are relevant for managing an organization, differences within countries are even more so. Hence, neglecting ICV or, worse, assuming it is absent or too small to bother, is likely to

have costs in terms of opportunities forgone, or, for firms, may downright hurt performance, both in the home country and abroad.

The main theoretical implications of our findings are closely related to the above, practical features of ICV. Indeed, the idea of subnational categorizations as significant sources of variation in values calls for an extension of (standard) models in international HRM and cross-cultural management involving values and values differences. Cross-cultural models of selection, compensation or other HRM practices, for example, can be extended to include an explicit role for individuals' backgrounds and the implications these have for their values.

At a deeper level, ICV has consequences for the way we interpret values differences between countries and, particularly, the popular concept of cultural distance between a home and a host country. A different way of saying that there is ICV is to state that the values of a country's citizens are not all the same but are distributed around the mean value score for the country. As such, there can be (substantial) overlap between the values of individuals from different countries even though there is cultural distance between the countries and the countries themselves clearly differ with regard to the mean value scores of their citizens. Indeed, it could happen that a (small) part of, for instance, the American population entertains values that are closer to the values of, say, the 'average' Japanese person than to the 'average' American. To illustrate this point, let us calculate Cohen's u , an indicator of the overlap between two statistical distributions (Cohen 1988), for the USA and Japan, supposed cultural opposites.⁷ Results indicate that, while LTO and IVR values are indeed statistically highly significantly different between the USA and Japan, there is also approximately 60% overlap between these two countries, simply because of the large amount of variation in values between individuals in the USA and individuals in Japan. The general lesson to be learned here is that, because of the importance of ICV vis-à-vis BCV, it would actually be more appropriate to speak of cultural similarities or overlap than of differences or distance. There is already an extensive debate on how ICV threatens the validity of cultural distance measures (e.g. Tung 2008; Tung and Verbeke 2010; Shenkar 2012). An important next step in international and cross-cultural management, subsequently, is to begin considering measures of cultural similarity or cultural overlap as alternatives to traditional cultural distance measures, as these former measures do much more justice to the variation in values that we actually observe.

Finally, our results highlight the need for, as well as the benefits of, applying multilevel techniques in international HRM and cross-cultural management research, whenever possible. Approaching issues with a multilevel perspective does justice to the importance of both ICV and BCV, and we would consider it good practice if empirical analyses containing nested observations would report intra-class correlations as a matter of course. In addition, a multilevel perspective is bound to help researchers and readers in keeping track of sources of variation operating at different levels. This is in addition to the actual statistical advantages offered by multilevel models, which include avoiding throwing together predictors at different levels and taking into account the different degrees of freedom at the various levels in the analysis, e.g. 345,000 individuals but 'only' 98 countries.

Notes

1. Taras, Roney and Steel (2009) review 50 years of measuring culture. They find that self-report questionnaires are virtually the only tool used for quantitative culture measurement (Taras et al. 2009, p. 364). Culture frameworks differ in the post-collection processing of individuals' responses. All the key frameworks (e.g. Hofstede 1980; Schwartz 1994; Inglehart and Baker 2000; House et al. 2004) ask individuals about their values, however, with aggregated responses

subjected to further post-collection processing such as principal components analysis and index construction.

2. Measures of cultural distance, including the famous index developed by Kogut and Singh (1988), aim to capture the extent to which countries differ from each other in terms of their culture, notably their values.
3. Gerhart and Fang (2005) report that there is more variation in values between organizations than between countries, which goes some way to address the issue of the real-life relevance of ICV. We are interested in the work values of the whole population, however, and knowing how much variation in values occurs between organizations is information that is too specific to offer much practical guidance for the general issue firms face, namely the contingency of their practices and strategies, notably HRM policies, to the values held by the general population.
4. Over the years, Geert Hofstede (born in 1928) has added coauthors to various editions of his book *Cultures and organizations: Software of the mind*, first published in 1991 (Hofstede 1991). The second edition that updated the first edition was written jointly with his son (Hofstede and Hofstede 2005). The third edition, updating the second edition, added Minkov as a third author (Hofstede et al. 2010). There is a great deal of overlap between the three editions and Geert Hofstede remains the main author of all editions.
5. To elaborate, measurement error adds as much to within-country variation as it does to total variation. In calculating the proportion of total variation that is within countries, the denominator thus increases by exactly as much as the numerator, leading to an inflation of ICV as a percentage of total variation. For calculating the proportion of total variation that is between countries, measurement error does not affect the numerator but increases the denominator, thus leading to a deflation of BCV as a percentage of total variation.
6. Concerning the relation between socioeconomic class and values, see for example Kohn's (1969) classic work. Côté (2011) surveys the work on social class in relation to organizational behavior. We focus on only two within-country sources of values differences. The reason is that the idea of considering such sources is general, while considering additional within-country sources would lengthen the manuscript considerably without generating much additional insight. We leave it to future research to extend the analysis in the present paper and assess the importance of other easily observable subnational categorizations that could be important sources of values differences, e.g. age and gender.
7. Many different measures of overlap exist (see Deza and Deza (2009) for a survey). Beugelsdijk, van Hoorn, Maseland, Onrust and Slangen (2012) calculate an index of percentage overlap, comparing countries' fraction of yes/no scores on 0/1 questionnaire items on values, and use this index to explain foreign sales by US multinationals.

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Appendix

WVS items for LTO-WVS

- How proud are you to be [Nationality]?
1, Very proud (873/874) – 2, Quite proud – 3, Not very proud – 4, Not at all proud.
- For each of the following aspects, indicate how important it is in your life.
Service to others (875/876).
Would you say it is (876/877): 1, Very important – 2, Rather important – 3, Not very important – 4, Not at all important.
Note (877/878): European countries have been sampled using a different question: Please say, for each of the following, how important it is in your life. Service to others.
- Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five.
Thrift saving (881) money and things
0, Not mentioned (882) – 1, Important.

WVS items for IVR

- Taking all things together, would you say you are:
1, Very happy (885) – 2, Quite happy – 3, Not very happy – 4, Not at all happy.
- Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means 'none at all' and 10 means 'a great deal' to indicate how much freedom of choice and control you feel you have over the way your life turns out.
1 (None at all) (889/890) – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10 (A great deal).
- For each of the following aspects, indicate how important it is in your life.
Leisure time (891).
Would you say it is (892): 1, Very important – 2, Rather important – 3, Not very important – 4, Not at all important.
Note: Again, European countries have been sampled using a different question: Please say, for each of the following, how important it is in your life. Leisure time.