



Cross Cultural & Strategic Management

A Revision of Hofstede's Individualism-Collectivism Dimension: A New National Index from a 56-Country Study

Michael Minkov, Pinaki Dutt, Michael Schachner, Oswaldo Morales, Carlos Sanchez, Janar Jandosova, Yerlan Khassenbekov, Ben Mudd,

Article information:

To cite this document:

Michael Minkov, Pinaki Dutt, Michael Schachner, Oswaldo Morales, Carlos Sanchez, Janar Jandosova, Yerlan Khassenbekov, Ben Mudd, "A Revision of Hofstede's Individualism-Collectivism Dimension: A New National Index from a 56-Country Study", Cross Cultural & Strategic Management, <https://doi.org/10.1108/CCSM-11-2016-0197>

Permanent link to this document:

<https://doi.org/10.1108/CCSM-11-2016-0197>

Downloaded on: 05 July 2017, At: 05:44 (PT)

References: this document contains references to 0 other documents.

To copy this document: permissions@emeraldinsight.com

The fulltext of this document has been downloaded 7 times since 2017*

Access to this document was granted through an Emerald subscription provided by emerald-srm:333301 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

A Revision of Hofstede's Individualism-Collectivism Dimension: A New National Index from a 56-Country Study

Abstract

Purpose

The goal of this study is to re-examine the concept of individualism-collectivism (IDV-COLL) as a dimension of national culture, first proposed by Geert Hofstede, and provide an updated and reliable measure of that dimension.

Design/methodology/approach

We first reviewed the main nation-level studies of IDV-COLL and related constructs to identify the core of that cultural syndrome. We then analyzed self-construal items targeting that core in a survey of 52,974 respondents selected probabilistically from all main regions, ethnic and linguistic groups, age groups, and occupations in 56 countries, adequately representing the national cultures of all inhabited continents.

Findings

Our seven-item item selection yielded a single nation-level IDV-COLL factor, strongly correlated with previous measures of that dimension or closely associated constructs.

Originality/value

Compared to previous measures of IDV-COLL or related constructs, our new index is in most cases a better predictor of most important external variables that are associated with IDV-COLL. It can be used as a reliable, up-to-date benchmark for validation purposes in cross-cultural studies.

A Revision of Hofstede's Individualism-Collectivism Dimension: A New National Index from a 56-Country Study

The subject of this study and its importance

In 1980, Dutch organizational psychologist Geert Hofstede published a book in which he reduced national culture to four dimensions (Hofstede, 1980). One of these was individualism versus collectivism (IDV-COLL), a dimension of national culture that is strongly correlated with national wealth and, therefore, highlights cultural differences between economically advanced nations and those with less advanced economies. It is important to note that IDV-COLL is a continuum, not a dichotomy, meaning that each nation occupies a position on a scale rather than being placed in a box-like category. Besides, like all dimensions of national culture, IDV-COLL does not take into account intra-societal differences. Many nations have enormous cultural diversity. For instance, Brazil and Venezuela still have uncontacted tribes whose members live by hunting-gathering and may not even know that they are Brazilians or Venezuelans. Yet, this does not mean that there is no mainstream Brazilian or Venezuelan national culture that accounts for some cultural similarities shared by most elements (such as regional populations or religious groups) in those nations or any other modern nation (Minkov & Hofstede, 2012, 2104a, 2104b).

Since Hofstede's (1980) publication, IDV-COLL has received enormous attention in cross-cultural psychology and cross-cultural management studies. Kagitcibasi (1997) stressed the salience of this topic at international forums and in major publications, whereas Smith, Dugan, and Trompenaars (1996) called it "the most important yield of cross-cultural psychology to date" (p. 237).

The IDV-COLL dimension has generated debates and controversies (Oyserman, Coon, & Kemmelmeier, 2002; Schimmack, Oishi, & Diener, 2005; Voronov, & Singer, 2002) that have not been completely resolved. The goal of this article is to provide a brief overview of IDV-COLL as a dimension of national culture (rather than as an individual-level dimension), as well as a new valid measure of that dimension based on new data from 52,974 probabilistically selected respondents aggregated to the level of their 56 nations. In this way, we respond to a concern formulated by van Witteloostuijn (2016): there is a strong anti-Popperian trend in social science, which involves a scarcity of replication studies. We agree with that author and believe that a reconceptualization and replication of IDV-COLL as a dimension of national culture has been long overdue.

Background

Hofstede's (1980) study was the first to propose a national IDV-COLL index. He started out with a vague definition of IDV-COLL in that book

but elaborated it over the years, arriving at this latest variant (Hofstede, 2011):

Individualism on the one side versus its opposite, Collectivism, as a societal, not an individual characteristic, is the degree to which people in a society are integrated into groups. On the individualist side we find cultures in which the ties between individuals are loose: everyone is expected to look after him/herself and his/her immediate family. On the collectivist side we find cultures in which people from birth onwards are integrated into strong, cohesive in-groups, often extended families (with uncles, aunts and grandparents) that continue protecting them in exchange for unquestioning loyalty, and oppose other ingroups". (p. 11)

Given this definition, Hofstede's (1980) operationalization of IDV-COLL is controversial. He analyzed work goals measured at the national subsidiaries of the IBM corporation around 1970. The items at the IDV pole asked about the importance of personal (free) time, freedom, and challenge. Those at the COLL pole were about the importance of training, physical conditions, use of skills, and benefits. Of these, only two items (importance of personal time and training) produced

factor loadings greater than $\pm .70$, so only these two shared more than 50 percent of variance with the IDV-COLL factor. Three items had loadings lower than $\pm .50$ and therefore shared less than 25 percent of variance with the IDV-COLL factor. This means that Hofstede's IDV-COLL scale has relatively weak internal reliability.

It has been pointed out that the lack of face validity of some of Hofstede's items is another limitation. Commenting on three of the items that define the collectivist pole of Hofstede's IDV-COLL dimension, Bond (2002) made this observation: "How the last three work goals described anything resembling collectivism was, however, a mystery to many" (p. 74). Kagitcibasi (1997) and Gelfand, Bhawuk, Nishii, and Bechtold (2004) are some of the many authors who have noted the lack of connection between Hofstede's definition of IDV-COLL and his operationalization of it. Hofstede (2001) defended the validity of his construct by means of providing a rich and convincing nomological network, yet many authors have remained unconvinced.

Taras, Steel, and Kirkman (2012) pointed out the need for updating Hofstede's measures as they have been losing their predictive powers over the years, becoming obsolete. Other authors leveled other criticisms at Hofstede's construct. Voronov and Singer (2002) noted some discrepancies between Hofstede's IDV-COLL scores and measures of related constructs by other authors. Indeed, the US scored at the top of Hofstede's (1980, 2001) IDV index but this peculiar result has never been replicated in any subsequent study, measuring anything related to

IDV-COLL, be it values, beliefs, norms and ideologies, or societal practices, such as transparency versus corruption.

Schwartz (1990) criticized the IDV-COLL construct for being too narrow and disregarding important values that are not part of the IDV-COLL dichotomy. Oyserman, Coon, and Kemmelmeier (2002) reviewed and meta-analyzed a large number of IDV-COLL studies, noting the "broad and diffuse way researchers define and assess these constructs" (p. 44). Those studies had been done at the individual level of analysis, unlike Hofstede's study. Work at that level had often been inspired by Markus and Kitayama's (1991) theorizing about Western independent selves and East Asian interdependent selves, without much regard for Hofstede's (1980; 2001) warnings that different levels of analysis may produce entirely different constructs and should therefore not be confused [1]. Oyserman et al. (2002) acknowledged the fact that the studies in their meta-analysis had been done at the individual level, unlike Hofstede's. Nevertheless, they believed that their collection of individual-level studies was an appropriate database for cross-national comparisons. They concluded that European Americans are not less COLL than Japanese or Koreans and that the US and South America do not differ in IDV. Oyserman et al.'s (2002) work became one of the most influential publications taking a critical approach to Hofstede's IDV-COLL dimension as well as the numerous individual-level constructs under the same heading.

Finally, we must dwell on an additional controversy caused by Hofstede's (1980, 2001) decision to propose a dimension of national culture called "power distance", strongly correlated with IDV-COLL. Differences in power distance reflect differences in social hierarchies and the privileges that the hierarchically superior classes enjoy. Hofstede has always advocated the separation of IDV-COLL and power distance as two distinct dimensions of national culture but not all scholars have been convinced (for instance Gelfand et al., 2004) as there is too much statistical overlap between COLL countries and high-power-distance ones to consider IDV-COLL and power distance separate dimensions of national culture. There is a conceptual overlap, too. Among other characteristics, IDV-COLL can be seen as reflecting differences in the way that people in a particular society treat other people: as individuals or based on the group that they belong to. Power distance is a facet of this differential treatment of people based on the power of the group that they are affiliated with.

Individualism-Collectivism and Related Constructs in Large Cross-Cultural Studies

Despite all controversies surrounding the IDV-COLL dimension, mostly at the individual level, a few large-scale cross-cultural studies seem to have replicated it more or less convincingly at the national level, at least from a statistical perspective, if not in terms of face validity and other criteria. Other studies, which did not specifically

target IDV-COLL and did not use these labels, also produced statistically and conceptually related dimensions and helped elucidate cultural differences along the affluence-poverty continuum. Still, each of these studies is characterized by its own issues that challenge its eligibility as an ultimate measure of IDV-COLL across nations.

The best-known replication of IDV-COLL is Project GLOBE's "in-group collectivism" in its "as is" version (Gelfand et al., 2004). GLOBE's measure of IDV-COLL is strongly correlated with Hofstede's original and with national wealth (gross domestic product) per person. Besides, it has some face validity as a measure of IDV-COLL as GLOBE's items target in-group cohesion. However, GLOBE measured IDV-COLL "as is" by asking respondents to summarize the behaviors and feelings of their fellow countrymen and women, in the hope that the responses would adequately depict the actual situation in each country. McCrae, Terracciano, Realo, and Allik (2008) criticized GLOBE's "as is" scales, showing that they are highly correlated with measures of national character auto-stereotypes which often do not contain any truth. Minkov and Blagoev (2012) provided further evidence that some of GLOBE's "as is" dimensions are unconvincing as they do not predict what they are supposed to. For this reason, GLOBE's measures are controversial. Also, GLOBE collected its data in the 1990s, which makes its IDV-COLL measure about 20 years old by now.

Minkov (2011) reported a dimension of national culture called "universalism" versus "exclusionism". The first of these terms was borrowed from the work of Schwartz (2007), whereas the second was Minkov's (2011) own invention. He acknowledged that he chose these terms as another name for IDV-COLL since the latter had been misused and misinterpreted. He saw a contrast between the cultures of the economically wealthy nations and developing ones that had not received much attention. The former favor a universal application of laws and rules whereas the latter have cohesive in-groups but exclude out-group members from the distribution of privileges and tend to practice various degrees of nepotism, sexism, corruption, power distance, and disregard for the interests of out-groups. Minkov's (2011) definition of exclusionism and universalism is:

Exclusionism is the cultural tendency to treat people on the basis of their group affiliation and reserve favors, privileges, and sacrifices for friends, relatives, or other groups that one identifies with, while excluding outsiders from the circle of those who deserve such privileged treatment. While members of exclusionist cultures often strive to achieve harmony and good relationships within their own group, they may be indifferent or even inconsiderate and rude toward members of other groups. Universalism is the opposite cultural tendency: treating people

primarily on the basis of who they are as individuals and disregarding their group affiliation (p. 221).

Minkov's conceptualization of exclusionism is echoed in earlier idiographic descriptions of collectivist societies by insiders. Cross-cultural psychologist Harry Triandis, a Greek by birth, concludes on the basis of his observations that people in collectivist cultures are nice to in-group members and strive to maintain harmony with them, but they can be quite rude to outsiders and have no concern about displaying hostility, exploitation, or avoidance of out-group members (Triandis, 1989). Japanese author Chie Nakane provides the following account of Japanese society before the 1980s, when Japanese culture was still quite collectivist and exclusionist (Nakane, 1986).

The consciousness of "them" and "us" is strengthened and aggravated to the point that extreme contrasts in human behavior can develop in the same society, and anyone outside "our" people ceases to be considered human. Ridiculous situations occur, such as that of the man who will shove a stranger out of the way to take an empty seat, but will then, no matter how tired he is, give up the seat to someone he knows, particularly if that someone is a superior in his company (p. 186).

This idiographic description is interesting because, among other things, it illustrates the close relationship between collectivism and power distance. In the same society, inconsiderate behavior toward out-group members tends to co-exist with servitude toward the powerful.

For his measure of exclusionism, Minkov relied on national statistics reflecting differences in percentages of adults who live with their parents, corruption versus transparency, and road death tolls. The first of these was conceptualized as a proxy for in-group cohesion, just like in Project GLOBE's study. The second and third variables were conceptualized as measures of neglect of the rights and interests of out-group members. The main issue with Minkov's construct is that the universalism versus exclusionism that it is supposed to reflect can be seen as a somewhat subjective interpretation of national statistics rather than a summary of respondents' self-descriptions.

On the basis of their analysis of nationally representative World Values Survey data, Inglehart and Baker (2000) proposed two dimensions of national culture: traditional versus secular values and survival versus self-expression values. Each of these is highly correlated with GDP per person and bears some conceptual resemblance to IDV-COLL as known from the vast literature on this topic. The world's wealthiest countries score high on secular values and self-expression, whereas the economically disadvantaged ones score low on both. Thus, a

diagonal drawn from the lower left to the upper right part on the famous Inglehart-Welzel cultural map of the world (www.worldvaluessurvey.org) would represent an IDV-COLL axis. According to the World Values Survey data used by Inglehart and Baker (2000), nations in the upper right corner (North European countries), are characterized by relatively low religiousness and conservatism, high gender egalitarianism, high life satisfaction, high tolerance of sexual and ethnic minorities, and high personal freedom. Those in the lower left corner (Africa, Middle East) are characterized by the opposite characteristics. Inglehart and Baker's analysis is convincing, yet the decomposition of IDV-COLL into two independent dimensions of culture creates a dilemma for those who study IDV-COLL: which of the two provides a clearer image of IDV-COLL? Or, if Inglehart and Baker's two dimensions are to be merged into a single index to obtain a valid IDV-COLL measure, how exactly should that be done? Another issue, from the viewpoint of cross-cultural psychology, is that Inglehart's measures are defined by heterogeneous elements: values, beliefs, attitudes, behaviors, and more. Merging these into single dimensions has proven its utility in political science, yet psychologists have always preferred homogeneous constructs.

Schwartz (1994) published a seminal treatise on values titled "Beyond individualism-collectivism; New dimensions of values". Despite that title, Hofstede (2001) showed that most of Schwartz's measures were closely related to his IDV-COLL. Schwartz defends theoretically this fractionalization of IDV-COLL into multiple measures but, from an

empirical viewpoint, some of his measures correlate so strongly as to be statistically indistinguishable and obviously measure the same cultural syndrome from different angles. One can therefore ask if it is not preferable to look at this syndrome from a vantage point that provides a single perspective. Further, Schwartz (2011) admits that, from an empirical viewpoint, there is some arbitrariness in his selection of domain boundaries. In other words, the items that define a particular construct are selected theoretically and do not necessarily yield a high Cronbach alpha or a strong single factor with high factor loadings. Schwartz (2011) explicitly distances himself from researchers who expect scales with high internal reliability. This stance has its theoretical logic but has not gained wide acceptance in the cross-cultural field.

Minkov, Blagoev, and Hofstede (2013) analyzed World Values Survey items asking the respondents to judge the justifiability of various morally controversial behaviors, such as suicide, euthanasia, divorce, abortion, homosexuality, and prostitution. They found that these items form a single factor, called "personal-sexual norms", strongly correlated with national wealth and previous measures of IDV-COLL. The wealthy IDV countries scored higher on the justifiability of these behaviors, suggesting that IDV is associated with freedom of personal choice in crucially important matters, such as sexual behavior and creation and termination of life. Despite the convincing findings, that was a tunnel-vision study, focused on a very narrow facet of IDV-COLL differences.

Conclusions from the available large-scale studies of IDV-COLL and related constructs

The strong correlations between most of the measures of IDV-COLL and related constructs discussed in the previous section suggest that some of the core differences along the IDV-COLL continuum are freedom-versus-restriction differences. The strength of religion and religious norms in a particular society is an especially important indicator as organized religion has always restricted people's choices not only in matters related to the creation and termination of life but also with respect to what is appropriate to eat and wear, what entertainment is acceptable or reprehensible, what business activities are permissible or sinful (for instance usury), and what jobs pertain to men or women.

Thus, a key element of IDV-COLL differences is general societal freedom versus general societal restriction or restrictiveness for the sake of conformism. In IDV societies, people are allowed "to do their own thing" (Triandis, 1993, p. 159) but in COLL ones, individuals' choices - such as selection of a spouse or a professional career - are often made for them by others, usually senior family members or community elders. Individuals often have no other choice than to conform to the societal rule that dictates obedience and avoid engaging in a costly conflict.

Obedience and conformism may sound like alarming societal characteristics. Conflict avoidance also seems reprehensible from an IDV perspective if it involves submission and acceptance of a lose-win solution: "lose" for the individual, "win" for society. But these COLL characteristics do not exist for their own sake. COLL communities would have difficulty surviving without conformism and submission. Libertarians whose views and behaviors are not aligned with those of the mainstream could have a devastating effect on in-group cohesion. COLL societies cannot allow too much individual freedom, conflict, and divergence from tradition lest they lose their cohesiveness and harmony, and fall apart. In an economically poor environment, if individuals were left to their own devices, many would not survive.

For the same reason, COLL societies emphasize hierarchy and power distance. The social fabric must be preserved in its tightly-knit original, either voluntarily or by force. Somebody must have unchallengeable authority to quell dissent. Naturally, many ordinary people in this type of society are not satisfied with their lives. Low-income (COLL) nations score lower on life satisfaction than high-income (IDV) nations (Helliwell, Layard, & Sachs, 2015) and the citizens of the former are more likely than those of the latter to aspire for a change of social status. Schwartz (2008) has found that achievement of social power is a prominent value in hierarchical (low-income, COLL) societies but not in egalitarian (high-income, IDV) societies. Higher social status and social power give people more freedom (Triandis, 1993).

Finally, we need to dwell on the topic of self-reliance and interdependence. Vignoles, Owe, Becker, Smith, Gonzalez, Didier, et al. (2016) studied various aspects of interdependence across a rich sample of nations as well as various sub-national groups. They obtained seven individual-level factors and provided aggregated scores for each of their cultural groups. We examined the nation-level nomological networks of those measures[2]. We found that "self-reliance versus dependence" and "consistency versus variability" are not related to national measures of IDV-COLL or closely related constructs, whereas "self-containment versus connection to others" is unrelated to most of them and weakly correlated with GLOBE's in-group COLL "as is" ($r = -.47$, $p = 0.31$) across a small and unreliable sample of overlapping countries ($n = 21$). "Self-interest versus commitment to others" is related to most IDV-COLL indices but it is the COLL countries that score higher on self-interest, not the IDV countries. The items with the highest loadings on self-interest measure importance of personal achievement and success. Therefore, this construct is similar to what we, further in this study, call importance of social ascendancy. Then, it is only logical that COLL societies are more likely to score higher on "self-interest". "Differences versus similarity" is related to IDV-COLL but it measures what the name of the construct suggests: how unique the respondent feels, not the extent to which he or she depends on others.

"Self-direction versus reception to influence" and "self-expression versus harmony" are each reasonably highly correlated (r between $\pm .60$ and $\pm .70$) with several of the core measures of IDV-COLL that we have reviewed. These constructs inter-correlate at $.60$ ($p < .001$, $n = 31$) at the national level. Both tap aspects of conformism and conflict avoidance for the sake of maintenance of harmony.

This means that COLL societies do emphasize interdependence, but in a very specific sense: conformist reliance on others for clues about what is socially acceptable and what is not. Thus, if interdependence is conceptualized as conformism, it is fair to say that COLL societies are certainly more likely than IDV societies to emphasize interdependence.

Another potential IDV-COLL difference is also worth mentioning. IDV has been associated with time punctuality (Morales, Gaviria, Molero, Arias, & Paez, 2000). Levine and Norenzayan's (1999) 31-country pace-of-life study (based on walking speed, accuracy of public clocks, and public clerks' work speed) demonstrates stricter time management in wealthier IDV countries than in economically less developed COLL countries. One way to explain time punctuality and time management is to view it through the prism of universalism-exclusionism (Minkov, 2011, 2013). A society that tolerates lateness for meetings, inaccurate public clocks, or slow-working public clerks is a society that shows little concern for out-group interests, as it wastes people's time and misleads them. Also, lateness often involves evasion

of individual responsibility and blaming others for one's late arrival.

Concept of the current study

The current study is a search for an adequate operationalization of IDV-COLL at the national level, reflecting the main traits of IDV and COLL highlighted in the previous section. Nevertheless, we tested the structure of IDV-COLL, as conceptualized in this study, also at the individual level of analysis. Those tests should allow us to address the vexing question of isomorphism, or a lack thereof, at the two levels.

We expected national IDV-COLL to be a single factor, defined by items that have some face validity as measures of IDV-COLL, based on previous nation-level theoretical definitions and empirical replications of that construct or other, closely related, constructs. Namely, the IDV-COLL factor should reflect national differences in conformism and conflict-avoidance, desire for social ascendancy, and differential treatment of in-groups and out-groups. The final IDV-COLL index should be highly correlated with other similar constructs and various other external variables that IDV-COLL can be expected to predict.

Method

Background

The data used in this study come from a partnership between MediaCom, a multinational media agency, and the Hofstede Center at Itim International, an international consultancy specializing in cross-cultural management and organizational culture, licensed by Geert Hofstede. In 2014-2016, the two organizations and associated institutions ran a study of culture and personality across some 44,496 respondents in 55 countries. A project sponsored by the Government of the Republic of Kazakhstan used parts of the same questionnaire and provided data from another 8,478 respondents from Kazakhstan. The total number of respondents available for the analyses in this study is 52,974.

Samples

With the exception of a few countries, the samples are consumer panels used by Lightspeed GMI, an international market research agency. All samples were chosen probabilistically in diverse large and small towns in each country. In wealthy countries, the samples approximate the national census in terms of geographic origin, racial and ethnic composition, gender, age, and education. However, in developing countries this probabilistic selection was made predominantly from well-educated segments of the population, holding college and university degrees. Nevertheless, our comparisons of findings from analyses of national samples with and without higher education did not

reveal substantial differences at the national level. Country rankings on key dimensions of national culture were essentially the same, no matter what samples were used, and national indices based on different samples - with and without higher education - correlated at .95 or higher. For the sake of consistency (since the percentages of the two types of respondents are quite different across the 56 nations), our main analyses are based on samples of respondents without higher education.

In all but three countries, the questionnaires were filled out online in the respondents' home countries, whereas the data were collected at a Hofstede Center office in Finland. In Kazakhstan, the data were gathered face to face. In Puerto Rico and the Dominican Republic, the data were obtained by phone. Myanmar was the only country where no effort was made at probabilistic data collection. Instead, a convenience sample of 500 respondents was recruited through Facebook. Of these, 300 yielded reliable data. A file with details about the sample composition is available from Itim International (info@itim.org) and the corresponding author.

Questionnaire

The MediaCom-Itim questionnaire consists of several sections originally written by the first author of this article. The items target a wide range of constructs: Hofstede's dimensions, some aspects of Schwartz's value domains, the Big-Five factors of personality, and

more. The current study is based on a 52-item section asking the participants to provide self-descriptions, similar in linguistic structure to those in Vignoles, et al. (2016), always containing the word "I", and revealing what kind of person the respondent is. Such self-descriptions can be variously interpreted as personality traits (for instance when they refer to feelings such as anxiety) or values and attitudes (when they target what the respondents usually try to do, or like or hate to do). In some cases, the most appropriate term for these self-descriptions may be "self-construals", for instance when the participants tell us if they always feel like the same person or like different persons, depending on the situation.

To avoid issues with Likert scales (Heine, Lehman, Peng, & Greenholtz, 2002), the questionnaire was written in a categorical format, borrowed from some sections of the World Values Survey (www.worldvaluessurvey.com). Respondents are presented with two opposites (for example "religious person" and "atheist" in the World Values Survey) and asked to identify with either of the two. Additionally, respondents have an evasive middle option that places them in between the two categorical answers.

The original English language questionnaire was tested by Lightspeed GMI among respondents in the US and Singapore. Tests were also run by some of the authors of this study and associates in Eastern and Western Europe and Latin America. The questionnaire was also discussed with Indian and Kazakh social scientists, as well as respondents from

Sudan, Congo, and China. All these tests revealed a number of weaknesses, such as ambiguous or culturally unacceptable items in some societies. After a number of interventions, a final version of the questionnaire was deemed acceptable for research in all modern nations. It was translated into the respondents' national languages and the translations were either back-translated into English or examined by experienced linguists and sociologists for sociolinguistic equivalence. Respondents in countries where English is not the native language of the majority but is nevertheless an official language and educated respondents have a very good command of it (India, Kenya, Nigeria, South Africa, Singapore) filled out the English language version.

Item selection

We conceptualized IDV-COLL as a multifaceted dimension of national culture, incorporating the following main facets: conflict avoidance and conformism, desire for social ascendancy, and in-group favoritism versus out-group exclusionism. We attempted to construct a short scale that would capture these concepts.

We measured conflict avoidance with the following two items:

- 1. I usually try to avoid conflicts.**
- 2. I am somewhere here, in between these two.**
- 3. If necessary, I will argue with people of my rank even if that can lead to a conflict.**

1. I am an obedient person. I think it is right for me to obey people who have power. 2. I am somewhere here, in between these two. 3. I dislike obeying anybody. I like to be my own boss.

Conformism was measured with the following two items:

1. I usually respect all rules and norms of my society, even those that I do not like. 2. I am somewhere here, in between these two. 3. I decide myself which social rules to respect.

1. If I could, I would make all people in our society follow all our laws and rules very strictly. 2. I am somewhere here, in between these two. 3. If I could, I would allow people to break useless or meaningless laws and rules.

Desire for social ascendancy was measured with the following two items:

1. I like to tell people what to do and be their boss. 2. I am somewhere here, in between these two. 3. I hate to be a boss. I prefer to mind my own life and leave other people alone.

1. I would like to achieve fame and glory. 2. I am somewhere here, in between these two. 3. I see fame and glory as useless to me.

Ingehart and Baker's (2000) work suggests that, at the societal level, general social conformism (obedience) is associated with religious conformism (religiousness). Therefore, we considered the following item:

1. I am a very religious person. I follow the rules of my religion very strictly. 2. I am somewhere here, in between these two. **3. I rarely observe any religious rules.**

We realized that in-group favoritism and out-group exclusionism would be difficult to measure as these notions may carry negative connotations in most societies, even those with COLL cultures. Instead of asking direct questions about them, which may generate politically correct responses, a more subtle approach is needed, sacrificing face validity. We selected the following items:

1. I can do big and expensive favors to my friends just to see them happy. 2. I am somewhere here, in between these two. **3. I am ready to do favors only to people who also do me favors.**

1. I arrive exactly on time for meetings or other events. I am hardly ever late. 2. I am somewhere here, in between these two. **3. I am often at least 5-10 minutes late for meetings or other events.**

Results of the first analysis, at the individual level

Although our main goal was to produce a valid national IDV-COLL index, we believed that we should also examine the structures that our item selection produces at the individual level in view of the enormous interest in IDV-COLL at that level. We started with a pancultural analysis, across the 44,496 respondents in the MediaCom-Itim file, leaving out the Kazakhstan data file as its 8,478 respondents could tip the pancultural solution toward something typical of Kazakhstan. We also left out Myanmar in this particular analysis as the sample from that country is not probabilistic.

We ran principal component analyses and factor analyses in the strict sense of the term: analyses that exclude the items' non-shared variance[3]. A principal component analysis yielded three factors (principal components) with eigenvalues over 1.00. However, the third factor had an eigenvalue of only 1.002 and was defined only by the favors-for-friends item. The time punctuality item did not load high ($> \pm .40$) on any of the factors. Varimax rotation did not bring about significant improvement. We dropped these two items and repeated the analysis. We obtained the solution shown in Table 1.

Table 1 here

It is quite clear that conformism and conflict avoidance form a single factor, which we can call "conformism" for short, whereas social ascendancy defines another factor. Religiousness is weakly correlated

with the former. Factor analyses with varimax rotation confirmed the results of the principal components analyses.

As a pancultural solution can be affected by nation-level variance, we also ran analyses within each large national sample[4] ($n > 1,000$). We started with the US sample ($n = 2,467$), the largest available sample for individual-level analyses, adequately representing the structure of the US population in terms of geographic origin, race, gender, age, and education. Essentially, the US solution replicated the pancultural solution, except that religiousness loaded .49 on the conformism factor and the "I avoid conflicts" item cross-loaded .45 on conformism and -.42 on social ascendancy. In the US, people who wish to be bosses tend to report that they are somewhat more likely than other people to engage in arguments. This pattern was replicated in the Indonesian sample.

The pancultural solution was replicated albeit with slight variation in almost all other large country samples ($n > 1000$). The religiousness item never loaded high (r always below .60) on either of the two factors and showed some vagrancy. It cross-loaded more or less equally on the two factors in India, but was more closely associated with social ascendancy in a number of wealthy countries (UK, Germany, Japan), and with conformism in developing countries (Nigeria, Brazil, Mexico, Philippines, Vietnam). Italy and China were two interesting exceptions. Those samples produced three clearly interpretable factors with eigenvalues greater than 1.00: religiousness-obedience, rule-

orientation ("I follow all rules", "I would make people follow all rules"), and social ascendancy.

Results of the second analysis, at the national level

Despite the best efforts of the MediaCom-Itim team to ensure adequate translations, we found belatedly that the item about a tendency to argue was translated quite imaginatively in Turkey. We dropped that country from the factor analysis but later obtained a predicted IDV-COLL score for it, using the remaining items. We also dropped the countries where the data collection did not follow the strict Lightspeed GMI protocol: Egypt, Dominican Republic, Myanmar, and Puerto Rico[5], but we later predicted scores through linear regression for those countries as well.

Using only samples without higher education, we performed a series of nation-level factor analyses, using the unweighted least squares method. Step by step, this method produced fairly unambiguous findings and allowed us to arrive at a clear final solution.

A factor analysis of the nine items produced three factors with eigenvalues over 1.00. However, the second unrotated factor was defined only by "I respect all rules", whereas all loadings on the third one were below $\pm .45$. Varimax rotation did not yield an

unambiguous solution as four of the nine items cross-loaded highly on two factors.

As the first factor explained 52.1 percent of variance on its own, we attempted a single-factor solution. All items loaded higher than $\pm .60$, except "I respect all rules" and "I am an obedient person". We examined country scores on these two items and found that some countries in Eastern Europe and the Middle East have the lowest scores on them. We concluded that, at the national level, these items may not measure pure culture in some countries but are probably contaminated with current political attitudes: a negative reaction to perceived authoritarian rule and power. After dropping these two items, we obtained a single factor with an eigenvalue of 4.2, explaining 60.6 percent of variance. Its structure is presented in Table 2.

Table 2 here

Factor scores on this IDV-COLL, multiplied by 100 to avoid decimals, are presented in Table 3. Scores for Egypt, the Dominican Republic, Myanmar, Puerto Rico, and Turkey were predicted by means of linear regression after the factor analysis and should be viewed with caution.

Table 3 here

Following the same procedure, we calculated a national IDV-COLL index using only samples of respondents with higher education. The two national indices correlated at .96. Evidently, national differences in IDV-COLL are not affected at all by the nature of the samples that are studied: with or without university education.

Table 4 provides validation for our national IDV-COLL index through correlations with other measures of the same construct or similar constructs. As any cultural index that is closely correlated with national wealth per person will produce a huge nomological network, we focus only on correlations of $\pm .60$ or higher.

Any measure of national culture is useless unless it yields high correlations with, and thus explains, relevant national indicators measured independently. Besides, a new measure of culture should outperform previously proposed measures. This is a somewhat neglected criterion in the cross-cultural field, yet we are strongly committed to it. Table 5 provides the results of a quick test of some important predictive properties of our new IDV-COLL measure compared to those of previous measures of IDV-COLL and related constructs. We have chosen four important national indicators as benchmarks:

1. A rule-of-law index from the International Bank for Reconstruction and Development / The World Bank (2007). Rule of law is a salient characteristic of wealthy countries and a facet of universalism-exclusionism: a tendency to apply laws universally versus a tendency

to afford privileges to powerful individuals or those who pay bribes (Minkov, 2011). Therefore, national differences in IDV-COLL should be associated with national differences in rule of law.

2. A political freedom index provided by Freedom House (2016).

Political freedom is strongly associated with rule of law. Hence, national differences in IDV-COLL should be associated with national differences in political freedom.

3. A "societal accident-proneness index" from Minkov (2016). It was derived from national statistics about occupational fatalities and road death tolls, and assessments of national airline safety. Minkov (2016) finds that this index is strongly correlated with national rule-of-law differences and reveals another facet of his universalism-exclusionisms dimension: the degree to which national authorities, and society at large, show concern for the fate of citizens and enforce, or fail to enforce, safety measures. Therefore, national differences in IDV-COLL should be associated with this index.

4. A "coefficient of human inequality" from the United Nation's Development Program (Jahan & Jespersen, 2015). This is a complex measure of national income inequality, gender inequality, and inequality in access to health. It reflects another aspect of universalism versus exclusionism as it is underpinned by differences in discrimination. Thus, national differences in IDV-COLL should be associated with this index.

5. The "cool water condition index" developed by Welzel (2014). It is a national environmental variable. According to Welzel (2014), differences in access to water resources after the Middle Ages were at the root of many of today's cultural differences between economically advanced and developing nations, especially differences in emancipation and freedom. For this reason, national differences in IDV-COLL should be associated with this index.

These dependent variables are from diverse years, just like the independent ones (measures of national culture) whose predictive properties we wish to compare. Thus, none of the independent variables has a salient time advantage, although Hofstede's IDV-COLL index is at some disadvantage, being the oldest of all measures and most remote temporality from them. Yet, this is precisely one of the goals of our exercise: to establish whether Hofstede's IDV-COLL is still a valid predictor of relevant modern societal indicators.

Table 5 provides correlations between these five indices and measures of IDV-COLL or related constructs, including Welzel's (2014) "emancipative values index", which reflects national differences in values, beliefs, and attitudes related to freedom and emancipation, measured by the World Values Survey. Minkov's (2011) universalism-exclusionism index is not included in Table 5 as some of the variables in the columns of that table are not extraneous to it. Higher

correlations in Table 5 mean better predictive properties for the corresponding independent variable.

Table 5 here

The results in Table 5 reveal the superior performance of our new IDV-COLL measure in most domains, and hence highlight its utility.

Discussion

We studied IDV-COLL with new data from large probabilistic samples from 56 countries, adequately representing the national cultures of all inhabited continents. We found that at the individual level of analysis, our approach yielded at least two independent dimensions: conformism and social ascendancy. A more comprehensive approach will certainly generate more individual-level dimensions, conceptually associated with IDV-COLL. Yet, as the study by Vignoles et al. (2016) demonstrates, aggregation of scores on such dimensions to the national level will not necessarily produce something closely associated with established measures of national IDV-COLL or dependent variables that IDV-COLL is supposed to explain.

Our approach to the study of IDV-COLL, focusing on conformism and social ascendancy, results in a single dimension of national culture

that is an unambiguous and highly reliable measure of IDV-COLL. Its conformism facet incorporates conflict avoidance, restrictiveness, and a lack of personal discretion to decide which societal rules are sensible or obsolete. The social ascendancy facet is a natural outcome of social restrictiveness as social ascendancy has a liberating effect. By highlighting these crucial differences between economically advanced countries and developing ones, our study confirms the conclusions that can be drawn from the work of Schwartz (2008) and Welzel (2013): some of the most important cultural differences in the modern world are differences in conformity, restrictiveness, and power-seeking versus emancipation, freedom, and autonomy.

Arguably, our societal measure of IDV-COLL also incorporates another important facet: in-group favoritism and out-group exclusionism. We admit that our operationalization of these two concepts is not strongly convincing. We relied on self-construals but it is unlikely that respondents will consciously construe their selves in terms of in-group favoritism and neglect for out-groups. Nevertheless, at the very least our study shows convincingly that COLL societies are characterized by a strong focus on in-group cohesion as well as neglect for time punctuality and the damage that lateness may cause to other people's interests.

The exceptionally strong correlations that our IDV-COLL measure yields with relevant external variables shows that IDV-COLL differences are

closely associated with differences in societal freedom: higher in IDV cultures, lower in collectivist ones. Also, IDV-COLL differences map closely on universalism-exclusionism differences (Minkov, 2011), since IDV societies are characterized by greater rule of law, which means universal application of rules and laws rather than discriminatory treatment of in-groups and out-groups. The fact that IDV societies have stronger enforcement of safety measures, and hence lower fatality rates in industrial and transportation accidents, reinforces this point: IDV societies have a greater concern for the rights and interests of all individuals, whereas COLL societies show various degrees of neglect. The greater concern for punctuality in IDV society is also part of the same syndrome.

The strengths of our new measure of IDV-COLL, and hence the contribution of our study, can be assessed by comparing our measure and the main earlier measures of IDV-COLL or related constructs:

1. Compared to Hofstede's measure of IDV-COLL, our IDV-COLL measure has better face validity, relies on probabilistic samples, is much more recent, and has better predictive properties.
2. Compared to GLOBE's measure of in-group collectivism "as is", our IDV-COLL measure relies on probabilistic samples and self-descriptions (rather than national auto-stereotypes), is considerably more recent, and has better predictive properties.

3. Compared to Schwartz's measures of values related to IDV-COLL, our IDV-COLL measure relies on probabilistic samples and is a statistically unitary measure, consisting of a strong factor with high item loadings.

4. Compared to Inglehart's measures of dimensions of national culture related to IDV-COLL, our IDV-COLL measure is a conceptually unitary construct, derived solely from self-construals, whereas Inglehart's dimensions are amalgamations of values, beliefs, attitudes, feelings, and behavioral self-reports.

As we see from Table 5, our IDV-COLL measure outperforms all other related independent variables in four of the five comparisons, political freedom being the only one of which it is not the best predictor. Although our IDV-COLL index yields a very high correlation with that variable, too, Schwartz's embeddedness outperforms it. It is noteworthy that Hofstede's IDV-COLL index is not the best predictor of any of our dependent variables, which should not be surprising considering its age. Of course, predictive properties are best compared in regression models but that would be impossible in our case because of the extremely high correlations between all independent variables, which would result in exceptionally high collinearity.

Curiously, Schwartz's "egalitarianism" and "hierarchy" are not particularly strong predictors of human (in)equality or freedom as one might expect. It is also interesting that our seven-item index is a

better overall predictor than other indexes, composed of far more items. This parsimony of our IDV-COLL scale is another advantage as it makes it easy to use in future studies.

Our study confirms that the US is not a particularly IDV country. This is not merely a questionnaire artifact. US society is still far more religious than Northwestern Europe. It has a much weaker welfare system, suggesting lower concern for out-groups. For the same reason, the US and Japan spend a lower percentage of their national wealth on foreign aid than the Scandinavian countries and the Netherlands, and have higher corruption rates. The US still practices the death penalty, which is more typical of developing countries than those with highly advanced economies. Gay rights are still hotly debated. Abortion is also a permanent hot topic, which makes the US different not only from Northwestern Europe but also from most East European countries.

We need to address some paradoxes. COLL cultures emphasize conflict avoidance, at least within in-groups, but that does not mean that COLL cultures are conflict-free. For instance, the World Values Survey demonstrates that wife-beating is condoned in COLL societies to a far greater extent than in IDV societies. In rural areas of India, Pakistan, and Bangladesh, girls and wives are expected to conform to social norms of obedience, submissiveness, and chastity. Those who violate these norms are viewed as a social threat and generators of conflict. The conflict may be quelled by means of a brutal ordeal,

sometimes involving facial disfiguration. In rural Turkey and other parts of the Middle East, the penalty may be a so-called honor killing. Paradoxically, COLL societies may use one type of conflict to suppress another type.

We must acknowledge two limitations of our study. First, although 56 countries is an impressive number, it is lower than the number of countries in other studies, such as Schwartz's. Also, we have only one Arab country in our sample - Egypt.

In this study, we do not address the origins of IDV-COLL differences. Although the association between IDV-COLL and national wealth is clear, a purely economic explanation would be too simplistic. This issue needs a special study in its own right, taking a variety of perspectives, including Welzel's (2014) cool water condition theory. What our study does show however is that IDV-COLL differences are remarkably stable as our measure is strongly correlated with measures that are several decades old.

In conclusion, by measuring IDV-COLL Hofstede provided the cross-cultural research field with a theme that has fascinated scholars across the world, including Project GLOBE's huge team and the authors of this article. Despite the lack of strong face validity and internal reliability of his IDV-COLL index, Hofstede correctly identified many of the important facets of IDV-COLL, which is a remarkable achievement. In the absence of a better IDV-COLL measure, his original

index, based on data from around 1970, has been used for almost half a century, despite its obsolescence. We have provided a modern, highly reliable IDV-COLL index, based on probabilistic samples from 56 countries, possessing good face validity, internal reliability, and predictive properties. We hope however that it will not take another half century for somebody to update it. Like other change, cultural transformation in the modern world is probably faster than ever. Therefore, we need constantly to reconsider our cultural models and update our measures.

Acknowledgements

The data collection for this study was funded by MediaCom Ltd. whereas Itim International provided administrative support. MediaCom Ltd. has not influenced the study design in any way, other than requesting a study that would provide broad coverage of important cultural differences across the globe. MediaCom has not influenced the data analysis in any way. Itim International has not influenced the study design or the analysis in any way.

References

Ashkanasy, N. M., Gupta, V., Mayfield, M. S., & Trevor-Roberts, E. (2004). Future orientation. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and*

organizations: The GLOBE study of 62 societies (pp. 282-342). Thousand Oaks, CA: Sage.

Bond, M. H. (2002). Reclaiming the individual from Hofstede's ecological analysis—A 20-year odyssey: Comment on Oyserman et al. (2002). *Psychological Bulletin*, 128(1), 73-77.

Freedom House (2016). Freedom in the World 2016. Internet publication. <https://freedomhouse.org/report/freedom-world-2016/table-scores>.

Gelfand, M., Bhawuk, D., Nishii, L. H., & Bechtold, D. (2004). Individualism and collectivism. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies* (pp. 437-512). Thousand Oaks, CA: Sage.

Heine, S. J., Lehman, D. R., Peng, K., & Greenholtz, J. (2002). What is wrong with cross-cultural comparisons of subjective Likert scales: The reference-group effect. *Journal of Personality and Social Psychology*, 82(6), 903-918.

Helliwell, J. F., Layard, R., & Sachs, J. (Eds.) (2015). *World Happiness Report 2015*. New York: Sustainable Development Solutions Network.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks, CA: Sage.

Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*.
<http://scholarworks.gvsu.edu/orpc/>.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (Eds.). (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.

Inglehart, R. (2009). *National-level value scores by country*. Retrieved 9 August 2010, from
http://www.worldvaluessurvey.org/wvs/articles/folder_published/article_base_111.

Inglehart, R., & Baker, W. E. (2000). Modernization, cultural change, and the persistence of traditional values. *American Sociological Review*, 65(1), 19-51.

Inglehart, R., & Baker, W. E. (2000). Modernization, cultural change, and the persistence of traditional values. *American Sociological Review*, 65(1), 19-51.

International Bank for Reconstruction and Development / The World Bank. (2007). *Global monitoring report 2007; Millennium development goals; Confronting the challenges of gender equality and fragile states*. Washington, DC: The World Bank.

Jahan, S., & Jespersen, E. (2015). *Human development report 2015*. New York: United Nations Development Program.

Kagitcibasi, C, (1997). In J. W. Berry, M. H. Segall, & C. Kagitcibasi (Eds.). *Handbook of cross-cultural psychology* (vol. 3, pp. 1-52), Boston: Allyn and Bacon.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224-253.

McCrae, R. R., Terracciano, A., Realo, A., & Allik, J. (2008). Interpreting GLOBE societal practices scales. *Journal of Cross-Cultural Psychology*, 39(6), 805-810.

Morales, J.F., Gaviria, E., Molero, F., Arias, A., & Paez, D. (2000). Individualism: One or many? *Psicothema*, 12, supl., 34-44.

Minkov, M. (2011). *Cultural differences in a globalizing world*. Bingley, UK: Emerald.

Minkov, M. (2016). Predictors of societal accident proneness across 92 countries. *Cross-Cultural Research*, 50(2), 103-122.

Minkov, M. (2013). *Cross-cultural analysis; The science and art of comparing the world's modern societies and their cultures*. With contributions by Geert Hofstede. Thousand Oaks, CA/US: Sage.

Minkov, M., & Blagoev, V. (2012). What do Project GLOBE's cultural dimensions reflect? An empirical perspective. *Asia Pacific Business Review*, 18 (1), 27-43.

Minkov, M., Blagoev, V., & Hofstede, G. (2013). The boundaries of culture; Do questions about societal norms reveal cultural differences? *Journal of Cross-Cultural Psychology*, 44 (7), 1084-1106.

Minkov, M. & Hofstede, G. (2012). Is national culture a meaningful concept? Cultural values delineate homogeneous national clusters of in-country regions. *Cross-Cultural Research*, 46(2), 133-159.

Minkov, M., & Hofstede, G. (2014a). Clustering of 316 European regions on measures of values: Do Europe's countries have national cultures? *Cross-Cultural Research*, 48(2), 144-176.

Minkov, M., & Hofstede, G. (2014b). Nations versus religions. Which has a stronger effect on societal values? *Management International Review*, 54(6), 801-824.

Nakane, C. (1986). Criteria of group formation. In: T. Sugiyama Lebra & W. P. Lebra (Eds), *Japanese culture and behavior. Selected readings.* (pp. 171-187) Hawaii: University of Hawaii Press.

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin*, 128(1), 3-72.

Schwartz, S.H. (1990). Individualism-collectivism: Critique and proposed refinements. *Journal of Cross-Cultural Psychology*, 21 (2), 139-157.

Schwartz, S. H. (1994). Beyond individualism /collectivism: New cultural dimensions of values. In U. Kim, C. Kagitcibasi, H. C. Triandis, S. C. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method, and application* (pp. 85-119). Thousand Oaks, CA: Sage.

Schwartz, S. H. (2007). Universalism values and the inclusiveness of our moral universe. *Journal of Cross-Cultural Psychology*, 38(6), 711-728.

Schwartz, S. H. (2008) *Cultural value orientations: Nature and implications of national differences*. Moscow: State University-Higher School of Economics Press.

Schwartz, S. H. (2011). Studying values: Personal adventure, future directions. *Journal of Cross-Cultural Psychology*, 42(2) 307-319.

Singelis, T.M., Triandis, H.C., Dharm, P.S., Bhawuk, & Gelfand, M. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-Cultural Research*, 29, 240-275.

Sully de Luque, M., & Javidan, M. (2004). Uncertainty avoidance. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies* (pp. 602-653). Thousand Oaks, CA: Sage.

Taras, V., Steel, P., & Kirkman, B.L. (2012). Improving national cultural indices using a longitudinal meta-analysis of Hofstede's dimensions. *Journal of World Business*, 47, 329-341.

Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review*, 96(3), 506-520.

Triandis, H. C. (1993). Collectivism and individualism as cultural syndromes. *Cross-Cultural Research*, 27, 155-180.

Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, 54(2), 323-338.

van Witteloostuijn, A. (2016). What happened to Popperian falsification? Publishing neutral and negative findings: Moving away from biased publication practices. *Cross Cultural & Strategic Management*, 23 (3), 481-508.

Vignoles, V.L., Owe, E. Becker, M., Smith, P.B., Gonzalez, R., Didier, N., et al. (2016). Beyond the 'East-West' Dichotomy: Global Variation in Cultural Models of Selfhood. *Journal of Experimental Psychology: General*, 145(8), 966-1000.

Voronov, M., & Singer, J.A. (2002). The myth of individualism-collectivism: A critical review. *Journal of Social Psychology*, 142(4), 461-480.

Welzel, C. (2014). *Freedom rising; Human empowerment and the quest for emancipation*. Cambridge, UK: Cambridge University Press

Online appendix.

https://www.researchgate.net/profile/Christian_Welzel2/publication/269992832_Online_Appendix_to_Welzel's_CUP_monograph_Freedom_Rising/links/549d31de0cf2fedbc31013c6.pdf

Endnotes

1. For the purpose of disambiguation, Triandis, Bontempo, Villareal, Asai, and Lucca (1988) advocated the use of IDV-COLL for the ecological (national or ethnic) level of analysis but idiocentrism-allocentrism for the individual level. Bond (2002) also explicitly warned researchers that "Individualism-collectivism at the level of nations is not the same as individualism-collectivism at the level of individuals, either conceptually or operationally" (p. 76).

2. Vignoles et al. (2016) often do not provide average national scores, but scores for sub-national groups, such as Georgia Orthodox and Georgia Baptists, or China East and China West. For our nation-level analyses we used the sub-national group that seems to be closest to its nation's majority or mainstream culture, such as "Georgia Orthodox" and "China East".

3. The theoretical strengths and weaknesses of the two methods are a topic in its own right. From a purely practical perspective however, principal components produce higher loadings and, in the absence of cross-loadings, give the components clearer identities. This is important at the individual level of analysis where loadings are lower than at the national level.

4. Another approach is described by Vignoles et al. (2016): a transformation that removes differences in national means on all items. However, those authors admit that this transformation can also obliterate substantial cultural differences. It is also questionable from a theoretical viewpoint. Partialing out national means can be

viewed as partialing out cultural differences in an attempt to create cultureless individuals, which is illogical and impossible.

5. In the Dominican Republic, Egypt, and Myanmar, there were too few respondents without higher education. The data in the Dominican Republic and Puerto Rico were not gathered online but by phone. This seems to have had a significant effect on some items, producing unusual response patterns. Egypt's data were collected online. Yet the Egyptian respondents also exhibited an unusual response pattern. They scored like respondents in COLL countries on all items, except those about obeying people in power and willingness to make people follow all laws. This discrepancy may be associated with the unusual political situation in Egypt or simply with the fact that the Egyptian sample consists almost entirely of liberally-minded university-educated respondents. To correct for this discrepancy, we excluded the items about obedience and making people follow laws when we predicted scores for Egypt. The "I avoid conflicts" item was dropped when Turkey's score was predicted because of its inappropriate translation into Turkish.

**Table 1: Varimax Rotated Principal Component Structure Across
44,496 Respondents from 54 countries**

Items	Component	
	1 Conformism	2 Social Ascendancy
I respect all rules of my society - I decide which rules to respect	.697	-.025
I would make people follow all laws - I would let people break useless laws	.689	.126
I am obedient - I dislike obeying	.674	.155
I avoid conflicts - I will argue	.544	-.188
I am very religious - I rarely observe religious rules	.441	.370
I would like to be a boss - I prefer to mind my own life	.020	.785
I would like to achieve fame - I see fame as useless	-.001	.756

**Table 2: Factor Structure of the Individualism-Collectivism
Dimension at the National Level**

I am very religious - I rarely observe religious rules	.879
I would like to achieve fame - Fame and glory are useless to me	.750
I arrive on time - I am often late	-.750
I avoid conflicts - I will argue	.713
I would like to be a boss - I prefer to mind my own life	.706
I would make people follow all laws - I would let people break useless laws	.702
I can do favors just to see friends happy - I do favors only for favors	.637

Table 3: Scores on the Individualism-Collectivism Dimension**(Factor Scores x 100)**

Country	Score	Country	Score	Country	Score	Country	Score
1. Netherlands	182	15. Czech R.	70	29. Hong Kong	-5	43. Vietnam	-78
2. Denmark	140	16. New Zealand	68	30. Chile	-8	44. Colombia	-81
3. Sweden	133	17. Spain	58	31. Poland	-15	45. Malaysia	-89
4. Norway	112	18. Serbia	58	32. Turkey	-18	46. Venezuela	-95
5. Belgium	110	19. Japan	42	33. Romania	-19	47. India	-101
6. Switzerland	105	20. US	33	34. Russia	-21	48. South Africa	-105
7. Germany	102	21. Greece	30	35. Puerto Rico	-29	49. Kazakhstan	-106
8. Austria	95	22. Portugal	30	36. Singapore	-29	50. Peru	-117
9. UK	93	23. Ireland	27	37. China	-31	51. Thailand	-121
10. Finland	88	24. South Korea	25	38. Taiwan	-43	52. Philippines	-126
11. France	86	25. Israel	16	39. Dominican R.	-49	53. Egypt	-141
12. Australia	83	26. Ukraine	14	40. Brazil	-56	54. Indonesia	-171
13. Canada	78	27. Italy	5	41. Mexico	-63	55. Kenya	-177
14. Hungary	72	28. Argentina	-5	42. Myanmar	-73	56. Nigeria	-291

Table 4: Correlates of the Individualism-Collectivism Dimension in This Study

Variable	<i>r</i>	<i>n</i> (countries)
Embeddedness (Schwartz, personally provided scores, 2016)	-.89	50
Exclusionism (Minkov, 2011)	-.88	47
Personal-sexual (Minkov, Blagoev, & Hofstede, 2012)	.86	34
Intellectual autonomy (Schwartz, personally provided scores, 2016)	.82	50
Affective autonomy (Schwartz, personally provided scores, 2016)	.80	50
In-group individualism "as is" (Gelfand et al., 2004)	.73	43
Individualism (Hofstede, 2001)	.73	43
Power distance (Hofstede, 2001)	-.68	43
Secular versus traditional values, around 2005 (Inglehart, 2009)	.64	36
Self-expression values, around 2005 (Inglehart, 2009)	.62	36

Note: All correlations are significant at the .001 level.

Table 5: Predictive Properties of the Individualism-Collectivism Measure in This Studies and Previous Measures of That Dimension or Related Constructs

Individualism-Collectivism Measures and Other Related Constructs	r with Rule of Law Index	r with Political Freedom Index	r with Societal Accident Proneness Index	r with Coefficient of Human Inequality	r with Cool Water Condition Index
Individualism-collectivism (this study)	.79** n = 56	.69** n = 56	-.87** n = 49	-.86** n = 47	.80** n = 52
Individualism-collectivism (Hofstede, 2001)	.72** n = 66	.51** n = 64	-.66** n = 53	-.65** n = 65	.73** n = 43
Power distance (Hofstede, 2001)	-.66** n = 66	-.61** n = 64	.54** n = 54	.55** n = 65	-.47** n = 65
In-group collectivism "as is" (Gelfand, Bhawuk, Nishii, & Bechtold, 2004)	-.72** n = 57	-.58** n = 58	.65** n = 47	.52** n = 49	-.60** n = 57
Secular values, World Values Survey 2005-2008 (Inglehart, 2009)	.55** n = 51	.43** n = 54	-.48** n = 43	-.74** n = 47	.67** n = 51
Self-expression values, World Values Survey 2005-2008 (Inglehart, 2009)	.71** n = 51	.64** n = 54	-.56** n = 43	-.43** n = 47	.57** n = 51
Embeddedness (Schwartz, personal communication, 2016)	.72** n = 74	-.74** n = 72	.75** n = 63	.74** n = 65	-.69** n = 73
Hierarchy (Schwartz, personal communication, 2016)	-.43** n = 74	-.54** n = 72	.39** n = 63	.60** n = 65	-.58** n = 73

Affective autonomy (Schwartz, personal communication, 2016)	.67** n = 74	.63** n = 72	-.68** n = 63	-.72** n = 65	.67** n = 73
Intellectual autonomy (Schwartz, personal communication, 2016)	.65** n = 74	.70 n = 72	-.63** n = 63	-.77** n = 65	.71** n = 73
Egalitarianism (Schwartz, personal communication, 2016)	.46** n = 64	.53 n = 72	-.37** n = 63	-.26* n = 65	.29* n = 73
Personal-sexual norms (Minkov, Blagoev, & Hofstede, 2013)	.78** n = 46	.73** n = 49	-.72** n = 47	-.54** n = 42	.71** n = 47
Emancipative values index (Welzel, 2014)	.72** n = 97	.71** n = 103	-.57** n = 79	-.62** n = 88	.70** n = 102

** Correlation significant at the .01 level

* Correlation significant at the .05 level