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RESEARCH NOTE

# Corruption revisited: the influence of national personality, culture, and wealth

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**Abstract**

Corruption is often seen as one of the root causes of pressing national and global challenges. The persisting stark national differences in corruption levels and their potential causes have thus attracted growing interest from international business scholars. The objective of this study was to re-examine key factors that predict levels of national corruption. Drawing on comprehensive personality data from over 5 million respondents across 87 nations, and numerous dimensions of national culture, the study examines the relative importance of national personality versus national culture and wealth as predictors of national corruption. Regression analysis found that collectivism (particularly societal practices pertaining to collectivism) and wealth were robust predictors of corruption. In contrast, there was no consistent support for the effects of the Big Five personality traits aggregated to the national level, above and beyond the effects of national culture and wealth. These findings highlight and specify the important role played by national culture, and call into question previous research on national personality and corruption. More broadly, our study further highlights the need to exert caution when examining the influence of national-level personality, and the need for cross-national personality researchers to improve the validity, interpretability, and replicability of their work.

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**Keywords:** corruption; cross-cultural research; personality; national culture; regression analysis

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## INTRODUCTION

National corruption is the “extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as ‘capture’ of the state by elites and private interests” (Kaufmann, Kraay & Mastruzzi, 2010: 4). Corruption in the form of bribes and stolen money costs the world economy US\$3.6 trillion annually (Johnson, 2018). In recent years, national differences in corruption levels have become a renewed focus in the scholarly and public debate, driven, in part, not only by the increased awareness of humanity’s grand challenges, but also by the increased interaction and competition between nations resulting from globalization, and by attempts to assist reformers in curbing corruption (Gelbrich, Stedham, & Gäthke, 2016; Montiel, Cuervo-Cazurra, Park, Antolín-López, & Husted, 2021).

Prior work has highlighted personality, culture, and wealth as predictors of national corruption (e.g., Husted, 1999; Pellegrini & Gerlagh, 2008). Personality has been a focus within geographical psychology (Allik, Church, Ortiz, Rossier, Hřebíčková, Fruyt De, Realo, & McCrae, 2017; Rentfrow & Jokela, 2016). Prior research points to factors such as genetic homology within nations (e.g., Minkov, van de Vijver, & Schachner, 2019) and selective migration (e.g., Obschonka, Stuetzer, Rentfrow, Shaw-Taylor, Satchell, Silbereisen, & Gosling, 2018) in shaping national personality, which in turn is argued to affect societal norms pertaining to corruption (McCrae, 2004). An exploratory study (Connelly & Ones, 2008) found that national-level aggregation of individual personality predicted corruption; however, only 23 countries within a limited geography were included, while the national-level scores were based on relatively small and unrepresentative samples.

In addition to personality, research in IB has examined national culture as a predictor of corruption, typically drawing on Hofstede's (2001) four cultural value orientations of power distance, collectivism, masculinity/femininity, and uncertainty avoidance. Numerous studies have found a relationship between these four dimensions and corruption, after controlling for national wealth (Davis & Ruhe, 2003; Husted, 1999), but the findings on the effects of national culture remain somewhat inconsistent (Getz & Volkema, 2001; Seleim & Bontis, 2009), and many new conceptualizations and measures of culture have been developed in recent years, suggesting a need for an updated investigation.

To address these issues, we examined relationships between personality, culture, and corruption, drawing upon the largest, most representative personality dataset available, and a range of cultural measures. Our analysis makes an important contribution to debates in the corruption literature on the robustness and nature of the effects of personality and culture (Davis & Ruhe, 2003; Getz & Volkema, 2001).

## THEORETICAL FOUNDATIONS

### Personality and Corruption

#### *Individual level*

Research investigating personality and corruption focuses on the Big Five personality traits (i.e., openness, agreeableness, neuroticism, extraversion,

and conscientiousness), considered to be relatively stable "broad individual differences in behavior, thought, and feeling that account for general consistencies across situations and over time" (McAdams & Pals, 2006: 212), which have been validated across nations (e.g., Minkov et al., 2019). Openness refers to actively seeking out new experiences and being reflective and thoughtful about new things encountered (McCrae & Costa, 1997). Individuals with high levels of openness to experience are likely to question the status quo and debate moral issues. Agreeableness refers to being cooperative, helpful, friendly, trusting, and concerned with the welfare of others (McCrae & Costa, 1997), avoiding behaviors that are condemned by others and valuing behaviors that benefit society as a whole. Extraversion refers to being social, outgoing, and dominant in social settings (McCrae, 2001), and thus less submissive (Hofstede & McCrae, 2004). Conscientiousness refers to a tendency to be dutiful, self-disciplined, achievement striving, organized, and mindful of details (Roberts, Jackson, Fayard, Edmonds, & Meints, 2009). People high in conscientiousness plan carefully, are performance goal-oriented, and adhere to deadlines. Neuroticism refers to having a tendency to be anxious, insecure, emotional, and overwhelmed by work and social demands (McCrae & Costa, 1997), thus possibly being more likely to take shortcuts to achieve their goals.

Given these tendencies, scholars have argued links between personality and behavior related to corruption, and, indeed, meta-analyses at the individual level show openness to experience, agreeableness, extraversion, and conscientiousness are negatively related to unethical, counterproductive, and deviant behavior in the workplace, while neuroticism is positively related to these behaviors (Pletzer, Bentvelzen, Oostrom, & Vries de, 2019; Koodamara, Prabhu, Suhan, & Narayanan, 2020).

#### *National level*

The study of national personality examines the origins and effects of population-wide personality differences between countries – typically assessed by aggregating individual-level personality scores to the country level (Allik, 2012; Church, 2016). Several mechanisms have been proposed to explain how such national personality differences emerge and persist. 'Genetic founder effects' suggest geographic personality differences emerge due to immigrants selectively migrating to areas that satisfy and reinforce their psychological and

physical needs. If so, then restricted gene pools of non-random samples of personality traits may emerge, which cause certain regions to develop disproportionate numbers of individuals with particular personality traits (Rentfrow, Gosling, & Potter, 2008). ‘Social founder effects’ suggest that intellectual histories, customs, lifestyles, and daily practices of early settlers established social norms and influenced the prevalence of behavioral tendencies within regions (Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006). Personality is thus perpetuated and becomes similar within a nation through folk descriptions of personality, myths and written narratives, and proverbs (Cheung, van de Vijver, & Leong, 2011). As time goes on, people choose to live near similar group members because they are more likely to understand and share the same languages, cultures, and ways of life (Rentfrow et al., 2008). Dynamic social impact theory suggests that local clustering of attitudes and beliefs can occur when individuals engage in repeated social interactions with others (Bourgeois & Bowen, 2001). Even if someone is comparatively low on a trait initially, through ongoing interactions, the psychological and behavioral tendencies demonstrated by others could influence the thoughts, feelings, and behaviors of people in that region, resulting in a personality shift (Bourgeois & Bowen, 2001). Finally, a psychoanalytic view sees personality as emanating from early life experiences and unconscious motives, with core psychological characteristics developing through early child-rearing practices, which are in turn shaped by larger societal institutions (see Rentfrow et al., 2008 for a review).

Research documents links between national personality and characteristics, such as stereotypes, gender differences, political orientation, health, psychological well-being, and economic outcomes (Costa, Terracciano, & McCrae, 2001; McCrae & Terracciano, 2008; Obschonka, Stuetzer, Rentfrow, Potter, & Gosling, 2017; Schmitt, Realo, Voracek, & Allik, 2008; Terracciano, Abdel-Khalek, Adam, Adamovova, Ahn, Ahn, & Avia, 2005). Past research has found that regional- and individual-level analyses tend to converge (e.g., Fritsch, Obschonka & Wyrwich, 2019; Obschonka, Schmitt-Rodermund, Silbereisen, Gosling, & Potter, 2013; Rentfrow, Jokela, & Lamb, 2015).

The pioneering study by Connelly and Ones (2008) cued successive interest in the role of personality in predicting corruption, in part because they found several non-homologous effects

at the individual and national level. In particular, the authors were perplexed by a positive relationship between national conscientiousness and corruption, given that findings at the individual level had consistently documented a negative relationship, suggesting a “conscientiousness paradox” (Möttus, Allik, & Realo, 2010). One possible explanation is that highly conscientious societies place a greater focus on achievement striving and status recognition than do societies low on conscientiousness (Barrick, Stewart, & Piotrowski, 2002), resulting in a culture of rivalry, willingness to engage in unethical behavior (Kilduff, Galinsky, Gallo, & Reade, 2016; Lee, Schwarz, Newman, & Legood, 2019), and collective endorsement of corruption to meet such goals. Thus, a competing set of logics might suggest non-homologous relationships occur at the individual and national level between personality and corruption.

### Culture and Corruption

A growing number of studies have examined whether culture predicts corruption. Definitions of culture range from beliefs, behaviors, values, and cognitive patterns that people in a society or culture share (i.e., the psychological view of culture, in which culture resides within individuals) to a normative value system that underlies the functioning of societal institutions (i.e., the contextual view of culture, in which culture resides outside individuals) (Schwartz, 2014; see also Dau, Chacar, Lyles, & Li, 2022). As mentioned, numerous studies have found a positive relationship between the cultural dimensions of power distance, collectivism, masculinity/femininity, uncertainty avoidance, and corruption, after controlling for national wealth (Davis & Ruhe, 2003; Husted, 1999; Seleim & Bontis, 2009).

These studies reason, for example, that, in societies with high power distance, there is a greater dependence of subordinates on their supervisors’ paternalism, and decisions are not always made on the basis of merit, but on the basis of favors and loyalty. This leaves room for corruption in the form of favoritism and nepotism (Takyi-Asiedu, 1993). In collective societies, decisions about a person’s life are often determined by the ingroup – family, friends, or coworkers. This form of familism has been associated with less tendency to rate a practice as ethical (Cohen, Pant, & Sharp, 1996) and greater tendency of public officers to accept bribes (Gonzalez-Fabre, 1996). Societies high in masculinity tend to focus more on material success than on

quality of life, and such a tendency has been associated with corruption (Husted, 1999). Finally, individuals in societies high in uncertainty avoidance tend to feel threatened by unknown situations, and research has shown corruption serves to deliver more secure results in situations where outcomes are uncertain (Alam, 1995; Husted, 1999; Davis & Ruhe, 2003).

Other studies have examined dimensions developed in the Global Leadership and Organizational Effectiveness (GLOBE) study (2004). For each of nine dimensions, respondents were asked the extent to which they felt that the value operated in society ('societal practices') and the extent to which they felt society should hold the value ('societal values') (Peterson, 2004). Using this approach, Seleim and Bontis (2009) found several differential relationships for practices versus values in their association with corruption. For example, collectivism practices were negatively related to corruption, and the authors reasoned that this is because such practices result in cooperative norms and priority on the group goals, hence less engagement in corrupt behavior; but collectivism values were positively related to corruption (Seleim & Bontis, 2009). Hence, existing results regarding culture and corruption are somewhat inconclusive (Beugelsdijk & Welzel, 2018). Given these open questions, we operated in exploratory mode to investigate relationships between both national personality and culture and corruption in a comprehensive cross-national field study.

## METHOD

### Sample

The sample consisted of 87 countries for which we obtained national-level estimates of personality and corruption. Data on cultural variables was available for 67 of these countries.

### Measures

#### National corruption

We used the Control of Corruption Index (CCI) 2016 produced by the World Bank, an index across measures of perceived corruption standardized across countries. For example, it includes Gallup opinion surveys where respondents are asked how common corruption is in their country and surveys in which company executives were asked to estimate the percentage of company revenues that are

spent on bribes. We reversed the index prior to data analysis so that high scores reflect high levels of corruption.

#### Personality traits

We drew from the Gosling–Potter Internet Personality Project (GPIPP), collected by a non-commercial website ([www.outofoffice.com](http://www.outofoffice.com)) accessed via several channels (e.g., search engines, unsolicited links on other webpages, newspaper articles on previous studies, or word of mouth). The project provides individuals with an opportunity to voluntarily complete a questionnaire on socio-demographic variables and personality traits in return for a personality evaluation based on their responses.

The initial GPIPP sample contained data from 11,272,142 respondents collected in the years 1998–2015. Responses were then excluded based on several criteria (see Online Appendix A), resulting in a final sample size consisting of 5,569,401 responses. Based on a threshold of 1,000 observations per country, we retained data for 87 countries (with an average 64,016 responses per country).

Personality traits of Openness (O), Conscientiousness (C), Extraversion (E), Agreeableness (A), and Neuroticism (N) were assessed using the Big Five Inventory (John & Srivastava, 1999), which consists of 44 items self-rated by participants on a five-point Likert scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). The scales showed strong internal consistency at the individual level (Cronbach alphas for E = 0.86, O = 0.78, A = 0.79, N = 0.84, C = 0.84). To avoid measurement biases due to diverging response patterns on these variables across nations based on age, gender, and education differences, we weighted the individual participants by their age, gender, and education, using the joint distribution of these variables provided in Barro and Lee (2013). To test the comparability of the personality assessments across nations, we conducted comprehensive psychometric analyses: invariance tests, assessment of factorial structures (Minkov et al., 2019), and a procrustes EFA analysis (McCrae, 1996). These indicate that the GPIPP data has acceptable psychometric properties and satisfies the criterion of scalar equivalence (see Online Appendix A).

#### National culture

We included the scores on the nine societal practices and nine societal values dimensions reported in the GLOBE study (House, Hanges, Javidan, Dorfman, & Gupta, 2004). We also included



Collectivism–Individualism, Duty–Joy, Distrust–Trust cultural dimensions reported in Beugelsdijk and Welzel (2018). Higher scores on these variables indicate stronger national-level individualism, joy, and trust, respectively. Third, we included Minkov's new individualism–collectivism scores (Minkov, Dutt, Schachner, Morales, Sanchez, Jandosova, Khassebekov, & Mudd, 2017). Finally, as a final robustness check, we included scores on Schwartz's (2008) seven cultural dimensions: Harmony, Embeddedness, Hierarchy, Mastery, Affective Autonomy, Intellectual Autonomy, and Egalitarianism.

### National wealth

Following others, we controlled for national wealth via GDP per capita (e.g., Connelly & Ones, 2008; Gelbrich et al., 2016; Seleim & Bontis, 2009). Data were taken from the International Monetary Fund database. Given skewness in the data, we used a log function of wealth.

## ANALYSIS AND RESULTS

### Descriptive Statistics

The distribution of the study variables and their correlations with corruption are shown in Table A19 (see Online Appendix Section B). Among the (weighted) Big Five traits, extraversion and conscientiousness were negatively and neuroticism positively correlated with corruption. Among the cultural factors, collectivism defined by Beugelsdijk and Welzel (2018) as well as by Minkov et al. (2017), in-group collectivism (social practices), and uncertainty avoidance (social values) exhibited the strongest positive correlations with corruption.

### Main Analysis

Figure 1 shows the standardized regression coefficients of the personality traits based on OLS multiple regression across models, controlling for national wealth (first row) and for national culture (rows 2–6) (see Table A20 in the Online Appendix). We found no robust support for a relationship between national-level openness to experience, agreeableness, conscientious, or extraversion and national corruption. We did find that national-level neuroticism was positively related to national corruption in some but not all models, and that the relationship became non-significant when controlling for wealth, Beugelsdijk and Welzel's (2018) cultural dimensions, Minkov et al.'s (2017)

collectivism-individualism scale, or GLOBE societal level practices.

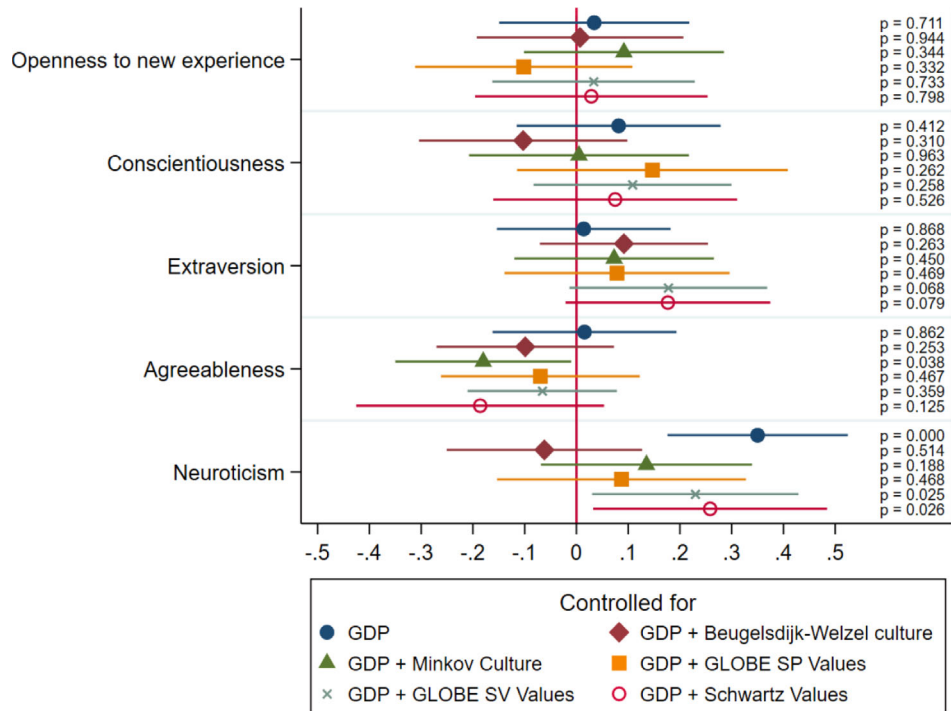
In Figure 2, we present the relationship of national culture with corruption (controlling for wealth and national personality). We found a strong and robust positive relationship of collectivism defined by Beugelsdijk and Welzel (2018) as well as by Minkov et al. (2017), and the GLOBE in-group collectivism (societal practices). Other significant findings were a positive and robust association between distrust, as defined by Beugelsdijk and Welzel (2018), and corruption, and, from the GLOBE study, a positive relationship between both uncertainty avoidance (societal values) and future orientation (societal values) and corruption, and a negative relationship between performance orientation (societal level practices) and corruption.

### Robustness Checks

We conducted the following robustness checks: (1) we repeated our main analysis for the more homogenous set of OECD countries (see Online Appendix B, Table A21), (2) for the smaller set of countries included in Connelly and Ones (2008) (Table A24), (3) tested for potential econometric issues based on the number of countries represented (Tables A22, A23), (4) considered four alternative data sources for national-level personality (Allik et al., 2017; Bartram, 2013; Lu & Cui, 2022; Schmitt, Allik, McCrae, & Benet-Martínez, 2007) (Tables A25, A26), (5) checked whether results hinge on the use of the CCI index for a single year (2016) (Tables A27–A30), and (6) utilized an alternative measure of corruption, the Corruption Perception Index (CPI, 2016) produced by Transparency International (Table A31). A similar pattern of results was obtained.

## DISCUSSION

Our study provides a comprehensive analysis that delivers important new insights into research on the link between personality, culture, and national corruption. Findings suggest that earlier research on national-level personality and corruption likely underestimated significant method bias and lack of cross-national equivalence (e.g., Connelly & Ones, 2008). Instead, we find a robust relationship between collectivism and culture, even after controlling for wealth and national personality, in a large and diverse sample with multiple measures. Below, we discuss the three major theoretical contributions of this study.



Note: The figure presents point estimates and 95% confidence intervals for standardized OLS regressions coefficients. P-values at the right side of the figure. Dependent variable in all models is the reversed corruption index (CCI). Effects either controlled for wealth, or for wealth and culture indicators.

**Figure 1** Regression results of national personality (weighted) on national corruption.

## Theoretical Implications

### Personality and corruption

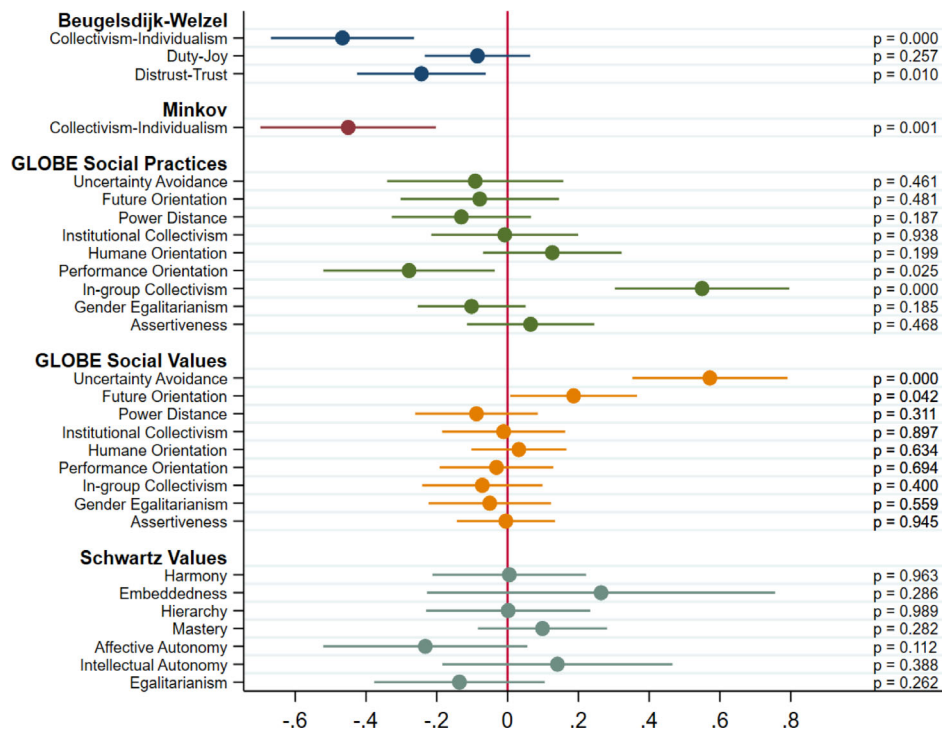
Our study did not reveal consistent associations between any national personality characteristic and national corruption. In a subset of our regression models that controlled for wealth and culture, neuroticism was positively associated with corruption. However, this was not true across all datasets and measures. Of particular note, despite many robustness tests, we did not replicate the positive association between conscientiousness and corruption reported by Connelly and Ones (2008). In contrast, conscientiousness correlated *negatively* with national corruption, and this disappeared after controlling for culture and national wealth.

Our findings demonstrate that researchers examining the role of national-level personality need to be cautious. Debate continues regarding cross-cultural universality of the Big Five (e.g., Gurven, 2018; Lukaszewski, Gurven, Rueden von, & Smaldino, 2020). Sample bias, response style bias, reference group

effects, and measurement invariance must be considered, and doing so is a complex, challenging endeavor. Indeed, this analysis was revealing because, in our validity checks of the cross-national personality data, we found the least consistent patterns for conscientiousness. Cross-national comparisons of conscientiousness collected from small, highly skewed samples can lead to substantially biased results (Möttus, Allik, Realo, Rossier, Zecca, Ah-Kion, & Bhowon, 2012; Van de Vijver & He, 2017). Our analysis attempted to address these issues by drawing from larger and more diverse and representative national samples, and by using weighted national personality scores. Taken together, we have to conclude that national personality is not predictive of national corruption when controlling for culture and wealth.

### Culture and corruption

Perhaps the most striking finding is the significant relationship between some cultural dimensions and corruption, even when controlling for personality and wealth. In particular, our results inform our



Note: The figure presents point estimates and 95% confidence intervals for standardized OLS regressions coefficients. P-values at the right side of the figure. Dependent variable in all models is the reversed corruption index (CCI) and all effects are controlled for wealth and national personality.

**Figure 2** Regression results of national culture on national corruption.

understanding of the link between collectivism and corruption (Davis & Ruhe, 2003), given that we captured general collectivism, institutional collectivism, and in-group collectivism in the same study. We find a strong positive relationship of general collectivism with corruption (Beugelsdijk & Welzel, 2018; Minkov et al., 2017). When we segment into in-group and institutional collectivism as defined in the GLOBE study (House et al., 2004), we find that it is in-group collectivism that is positively associated with corruption, and that this relationship only applies to societal practices (how the society operates) and not to societal values (beliefs about what should be valued). These results extend earlier analyses (Gelbrich et al., 2016), and highlight the important role of societal practices promoting cohesiveness within groups as a predictor of national corruption (Pinto, Leana, & Pil, 2008).

#### Personality–culture debate

Finally, we also contribute to the broader personality–culture debate, which is concerned with the question of which is the more important driver of national-level outcomes – personality or culture

(e.g., Hofstede & McCrae, 2004; Van de Vijver & He, 2017). Our results extend prior research by testing personality and culture side by side, showing an effect of culture (but not personality) on national corruption. Future research should also consider an integrative perspective (see Cheung, van de Vijver, & Leong, 2011), given that theory building from multiple paradigms can deliver important insights into complex mechanisms driving and maintaining corruption. Such a theoretical lens is consistent with Leung, Bhagat, Buchan, Erez and Gibson's (2011) call for an integration of diverse perspectives on culture as a theoretical innovation in IB research.

#### Limitations and Future Research

Several limitations should be noted. First, our weighting procedures may not have fully addressed the overrepresentation of respondents with high education, especially in developing countries. Internet samples are less vulnerable to some facets of selection bias than other methods, and our primary dataset has been shown to be relatively free of problems with its factor structure (Laajaj,



Macours, Hernandez, Arias, Gosling, Potter, Rubio-Codina, & Vakis, 2019), but recruiting less-selective large-scale samples in developing countries should remain a priority. Future studies might also consider how variations in population structures and age hierarchies across cultures (e.g., aging societies) relate to corruption. For example, future research should contextualize the age dependency of personality and implications for the personality–corruption relationship.

Second, the positive relationship between neuroticism and corruption became non-significant when controlling for Beugelsdijk and Welzel's cultural dimensions or for GLOBE societal practices. Examining various levels of neuroticism, along with various levels of specific cultural dimensions (i.e., uncertainty avoidance), might reveal particular combinations yielding greater corruption. We view configurational research that considers interactions between multiple potential predictors as a useful next step. It will also be important to capture fine-grained mediating mechanisms for the potential relationship of personality and culture, using longitudinal research.

Third, reference group and language effects are biases likely to be particularly powerful at cross-national levels, compared to regional within-country comparisons. We encourage future research to explore this. Perhaps regional personality characteristics interact with the cultural values of a particular nation, such that regional differences play a stronger role in certain national contexts, as has been suggested by work on when culture matters (Gibson, Maznevski, & Kirkman, 2009; Zellmer-Bruhn & Gibson, 2014). For example, cultural tightness–looseness (Gelfand, Raver, Nishii, Leslie, Lun, Lim, & Aycan, 2011) may interact with regional personality characteristics, such that the relationship with corruption is

weaker when specific dimensions of national culture are tight (i.e., homogenous within the region).

More broadly, our findings imply that future cross-national personality studies face major methodological and conceptual challenges, and that, until these are addressed, researchers must remain cautious in their conclusions about the relationships involving national personality differences. Cross-cultural research methods offer a suite of procedural remedies pertaining to research design, data collection, and statistical analysis (Van de Vijver & He, 2017; Kirkman, Lowe, & Gibson, 2017), including new methods and new types of data (e.g., vignettes, Möttus et al., 2012; think-aloud protocols, Church, 2016; or revealed preference methodology, Costello, Wood, & Tov, 2018).

## CONCLUSIONS

We have revisited the fundamental question of whether national personality and/or culture predict national-level corruption. We did not find consistent evidence for effects of personality, after controlling for culture and wealth. We did find links between numerous cultural dimensions and national-level corruption, suggesting for example, that in-group collectivism (societal practices) predicted corruption. Methodologically, our work points to the need for cross-national personality research to increase the validity, interpretability, and replicability of cross-national personality studies.

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