

Detrimental Effects of Corruption and Subjective Well-Being: Whether, How, and When

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Louis Tay¹, Mitchel N. Herian², and Ed Diener^{3,4}

Abstract

Both corruption and subjective well-being (SWB) are of concern to academics, governments, and policy makers. Although intuition suggests that corruption deteriorates SWB, some evidence suggests that corruption can enhance the economy, which may in turn improve SWB. We seek to explore whether, how, and when corruption is related to SWB using representative data from 150 nations. Surprisingly, we find that perceptions of national corruption are high across many nations. Mediation analyses and longitudinal modeling show some support that national corruption lowers national income and institutional trust, which in turn lowers SWB, particularly for life satisfaction. Moderators were found such that national corruption and individual perceptions of corruption enhance the effect of income for SWB; further, the detrimental effect of national corruption was more pronounced in Western as compared to non-Western nations. Overall, the results provide robust evidence that both individual and societal perceptions of corruption are detrimental to SWB.

Keywords

applied social psychology, well-being, emotion, hierarchical linear modeling/multilevel modeling, social justice

Neither the wisest constitution nor the wisest laws will secure the liberty and happiness of a people whose manners are universally corrupt

Samuel Adams

Academics, governments, and policy makers are increasingly interested in the goal of societal happiness, or subjective well-being (SWB) as a benchmark for societal progress (Diener, Lucas, Schimmack, & Helliwell, 2009; Diener & Seligman, 2004). In a growing effort to understand the determinants of societal well-being, conventional approaches have focused heavily on economic factors such as national wealth (Easterlin, 1974). More recent research strongly suggests that sociopolitical factors may be more proximal to SWB (Inglehart, 2000; Inglehart, Foa, Peterson, & Welzel, 2008). By many accounts, corruption may be an important sociopolitical dimension to study in this domain, given its potential to reduce SWB by stalling economic progress and eroding confidence in public and private institutions.

According to the *Oxford English Dictionary*, corruption is defined as the “perversion or destruction of integrity in the discharge of public duties by bribery or favor.” The lead organization on the measurement of corruption, Transparency International, operationally defines corruption as perceptions of corruption by residents within a country or by third-party experts. The term corruption, throughout this article, will thus reflect perceptions of corruption. Interest in the topic of

corruption has heightened with the anticorruption movement sparked by international organizations such as the International Monetary Fund (Tanzi, 1998). Yet, whether corruption is harmful or helpful to economic and societal progress is controversial (Huntington, 1968; Leff, 1964; Mauro, 1995). To our knowledge, little to no research has examined the economic and social mechanisms by which corruption can erode or enhance societal SWB. Further, globalization has highlighted ethical questions regarding the acceptance of corruption across cultures. Western cultures, as compared to other cultures, may be more likely to be negatively affected by the presence of corruption, given historical norms against corruption in those societies (Dunfee & Warren, 2001; Fan, 2002). In view of these issues, assessing the link between corruption and societal happiness is necessary to determine whether, how, and when corruption is detrimental to societal SWB.

¹ Purdue University, West Lafayette, IN, USA

² University of Nebraska, Lincoln, NE, USA

³ University of Illinois, Champaign, IL

⁴ The Gallup Organization, Omaha, NE

Corresponding Author:

Louis Tay, Purdue University, 703 Third Street, West Lafayette, IN 47907, USA.

Email: stay@purdue.edu

We propose that there may be economic and social channels through which corruption influences SWB. Economic theories posit that corruption at the macro-economic level may serve as a boon or bane to economic progress which in turn can affect SWB. Boon theorists propose that corruption serves to overcome institutional inefficiencies, thereby promoting economic growth (Huntington, 1968; Leff, 1964), whereas bane theorists counter that corruption itself generates inefficiencies and inappropriate incentives that impede growth (Lambdsdorff, 2003; Mauro, 1995). With regard to SWB, however, we propose that the net effect of corruption occurs to reduce economic resources to societal members at large (León, Araña, & de León, 2013) leading to lowered SWB (Sirgy, Yu, Lee, Wei, & Huang, 2012). Specifically, we expect that corruption in part yields negative societal SWB because it lowers national wealth (Diener, Tay, & Oishi, 2013). At the individual level, individuals can also experience the negative impact of corruption which may reduce their personal wealth in general.

Aside from economic mechanisms, we propose that there are also social mechanisms by which corruption can affect SWB. In particular, we propose that corruption erodes institutional trust which in turn lowers SWB. Recent research has demonstrated that institutional trust plays a significant role in societal SWB (Helliwell, 2006; Hudson, 2006; Subramanian, Kim, & Kawachi, 2002). Institutional trust serves to maintain relationships and enable necessary interpersonal and economic transactions (Blau, 1964; Fukuyama, 1995; Hirsch, 1978). When institutional trust degrades, necessary transactions with public institutions are avoided and alternatives will be inconveniencing. Under such conditions, transactions with institutions will also involve higher psychological and physical costs. For example, a lack of confidence in the judicial process would encourage the payment of bribes or lead to insecurity and uncertainty regarding outcomes. We posit that the presence of corruption—at both the national and individual level—would lower institutional trust and in turn lower SWB.

Corruption may also directly impact societal SWB. A cardinal component of corruption is a violation of integrity. Moral and ethical violations can induce strong negative emotions such as disgust (Schnall, Haidt, Clore, & Jordan, 2008). Further, experiencing the injustice of corruption can generate negative SWB. Although at the individual level those who reap positive outcomes from engaging in corruption may have higher SWB (Krehbiel & Cropanzano, 2000), at the aggregate, we propose that the majority of individuals within a society experiencing the perceived injustices of corruption would have lower SWB. This leads us to posit that direct effects of corruption are negative on SWB, but they are stronger at the national level compared to the individual level. In other words, the net effect of corruption in a nation, indexed by perceived corruption, may lower the SWB of individuals even beyond their own experiences of corruption.

Additional evidence bolstering the view that corruption has negative effects on SWB can be gleaned from understanding how corruption changes the role of income on SWB. We propose that high levels of national corruption would create a

climate, whereby income is weighted more heavily in determinations of SWB. This is because corruption benefits those who are able to pay for bribes and favors. As a result, residents who are better off financially within a nation would experience relatively higher SWB from high national corruption. Therefore, we expect to see a stronger income–SWB link in nations that have high national levels of corruption compared to ones with low levels of national corruption.

Although we expect negative effects of corruption on SWB and propose specific mechanisms by which this occurs, the literature suggests that corruption effects may not be uniformly detrimental. Some scholars have suggested that perceptions of corruption are culturally specific and Western cultures historically may be more affected by corruption (Dunfee & Warren, 2001; Fan, 2002). It is plausible that moderating effects of culture may exist such that non-Western nations that have less established traditions and laws about corruption may suffer smaller negative effects from corruption than Western nations. We seek to explore this possibility in the current study.

Current Study

Past studies have been limited by the number of nations sampled and a reliable measure of national corruption for tracking corruption levels over time (Tavits, 2008; Welsch, 2008). To overcome these limitations, we use the Gallup World Poll (GWP) data that employed a nationally representative sampling of 150 nations from years 2005 to 2011. A total of 838,151 residents across the different countries were polled on perceptions of corruption within the government and businesses using the same scale items across the years. Because the GWP-perceived corruption scale is a new measure, we first establish its convergent and divergent validity with two well-known measures corruption from Transparency International: the Corruption Perceptions Index (CPI) and Global Corruption Barometer (GCB).

Using the GWP data, we can assess both cross-national and longitudinal estimates of national corruption and SWB association, including potential mediators and moderators. Although the key corruption variable is the GWP-perceived corruption measure, we also examine the relation between national corruption and SWB using the CPI, which primarily represents third-party assessments of corruption, to overcome possible common source bias.

Finally, recent research on SWB distinguishes between evaluations of well-being (i.e., life satisfaction [LS]) and daily experiences of well-being (i.e., daily emotions; Kahneman, 1999; Kahneman & Deaton, 2010), showing that life circumstances have differential effects on different aspects of SWB. We seek to examine which aspects of SWB are more closely linked to corruption.

Summary

To summarize, the present task is to examine the effect of corruption on SWB, including tests of potential mechanisms and

moderators. We propose that corruption negatively affects SWB via economic and social channels, and it also has direct effects on SWB at both the national and individual levels. In more corrupt societies, the role of individual income on SWB may be enhanced. Furthermore, there may be cultural differences such that individual experiences of corruption affect SWB more in Western nations as compared to non-Western nations. Finally, the effects of corruption on SWB may depend on whether SWB is conceptualized as evaluations or daily affect.

Method

Data

Across 2005–2011, the GWP surveyed nationally representative random samples aimed at representing 95% of the world's adult population. A sampling frame was utilized to ensure that both urban and rural areas within a country were covered. Telephone surveys were used in countries where telephone coverage represents at least 80% of the population, otherwise face-to-face interviewing was conducted.

Measures

The GWP-perceived corruption scale was based on 2 items (*yes/no*), assessing whether corruption is widespread (1) in businesses and (2) in government. These two variables were averaged to indicate whether or not respondents perceive corruption to exist across these two sets of institutions. Multilevel reliability estimates show that the measure is reliable ($\alpha_{\text{individual}} = .70$; $\alpha_{\text{country}} = .97$; Geldhof, Preacher, & Zyphur, 2013).

Additional corruption measures—the CPI and the GCB—were obtained from Transparency International (<http://www.transparency.org/>). For the CPI, there were data across 152 nations from the years 2005 to 2011. The 2011 CPI was scored on a 0–10 scale, whereas in years 2005 to 2010, the CPI was on a 0–1 scale. For uniformity, all scores were transformed to a 0–10 scale. Further, the CPI was recoded, so that higher scores indicated higher levels of corruption. The GCB surveys residents on different aspects of corruption and its effects. The GCB survey was conducted in the years 2005, 2007, 2009, and 2010/2011 across the time period of interest. Pertaining to the current study, one question asks residents the extent to which they “perceive the following sectors in this country/territory to be affected by corruption” on a 1 (*not at all corrupt*) to 5 (*extremely corrupt*) scale. Sectors that were consistently measured across the 4 years included political parties, parliament/legislature, business/private sector, legal system/judiciary, and media. For assessing convergent validity, the first four sectors were averaged to match the content of the GWP corruption in business and government ($\alpha_{\text{country}} = .83$). The extent to which media were corrupt was used as a test for divergent validity of the GWP measure because the domain of corruption is distinct from corruption in business and government. There were a total of 43 nations that had GCB data across all years.

SWB was indexed by three components: LS, positive feelings (PF), and negative feelings (NF). LS was measured using Cantril's ladder of past, present, and future LS from 0 (*worst possible life*) to 10 (*best possible life*; LS; $\alpha_{\text{individual}} = .70$; $\alpha_{\text{country}} = .85$). Daily experiences of SWB corresponded to PF and NF using emotion indicators—whether participants experienced particular emotions a lot the previous day. PF was indexed by “smile” and “enjoyment” (PF; $\alpha_{\text{individual}} = .60$; $\alpha_{\text{country}} = .82$); NF was indexed by “worry,” “sadness,” “depression,” and “anger” (NF; $\alpha_{\text{individual}} = .67$; $\alpha_{\text{country}} = .77$).

Household income was measured by the Gallup organization which was converted to international dollars based on World Bank purchasing power parities. Gross domestic product (GDP) per capita across the years 2005 to 2011 was obtained from the World Bank. For the analysis, both household income and GDP per capita were log transformed to conform to regression modeling assumptions of linearity.

Institutional trust was measured using three questions (*yes/no*): whether individuals trust in (1) governments, (2) judicial systems, and (3) the honesty of elections ($\alpha_{\text{individual}} = .66$; $\alpha_{\text{country}} = .87$).

Culture was assessed via the dichotomous coding of Western and non-Western nations (*Western* = 1, *non-Western* = 0). Following the unofficial regional demarcation according to the United Nations, United States and all permanent members of the Western European and Others Group were coded as Western. All other nations were coded as non-Western.

Analysis

To examine whether corruption predicts SWB directly and indirectly via institutional trust and income, we used multilevel structural equation modeling (MSEM; Preacher, Zhang, & Zyphur, 2010) in Mplus 5.21 (Muthén & Muthén, 2007). Using MSEM allows us to partition the direct and indirect effects to the individual and national level and to estimate the confidence intervals of the effects at each level. The intraclass correlations that reflect the ratio of between nation to total score variability were non-negligible (GWP-perceived corruption [.24], LS [.18], PF [.06], NF [.05], household Income [.60], and trust [.18]), implying that multilevel modeling was appropriate. When the GWP-perceived corruption measure was used, the direct and indirect effects of corruption on SWB at the individual and national levels can be estimated. When the CPI measure was used, only nation-level effects could be estimated.

To determine the association between corruption and SWB over time, we used multilevel modeling of national corruption scores over a period of 7 years from 2005 to 2011 with a first-order autoregressive model (Raudenbush & Bryk, 2002) using the software Hierarchical Linear Modeling (HLM 7.0; Raudenbush, Bryk, & Congdon, 2013). This allowed us to estimate the temporal association accounting for temporal correlations and for between-nation differences on corruption and SWB. The autocorrelations were significant ($p < .05$) and the autoregressive model fit better than the homogeneous error model, which specifies uncorrelated errors over time ($p < .05$) across all the

outcomes examined. The model was generally specified as follows:

$$\text{Level 1: } SWB_i = \pi_0 + \pi_1(\text{Corruption}_i - \overline{\text{Corruption}_i}) + e, \quad (1)$$

$$\text{Level 2: } \pi_0 = \beta_{00} + \beta_{00}\overline{\text{Corruption}_i} + r_0, \quad (2)$$

$$\pi_1 = \beta_{10}, \quad (3)$$

where SWB_i represents the national SWB at time i , Corruption_i represents the national corruption score for time i , and $\overline{\text{Corruption}_i}$ represents the average national corruption score across the time points. We used group-mean centering at Level 1 to disentangle the average national corruption score across time and national changes in corruption scores over time. The general form of this model was applied to examining the effects of income and trust on SWB over time. The within-nation variance for all the outcomes of interest was significant ($ps < .05$) and accounted for a small to moderate amount of the total variance (LS [41.7%], PF [12.9%], NF [26.7%], household Income [5.1%], trust [31.3%]), indicating that modeling changes over time was suitable. We note that GDP per capita did not exhibit significant variability over time and so household income was used as a measure of national income.

Finally, to examine moderators, analyses were conducted using HLM 7.0 with random coefficients hierarchical linear modeling. Household income was group-mean centered to allow us to disentangle the effects of individual and country wealth. Further, we included grand-centered age and gender at the individual level to account for demographic effects. All random coefficients were significant in our analyses ($p < .05$) and were retained in the models. The model was specified as follows:

$$\begin{aligned} \text{Level 1: } SWB_{ij} = & \beta_0 + \beta_1 \text{Age} + \beta_2 \text{Gender} \\ & + \beta_3 (\text{Corruption}_{ij} - \overline{\text{Corruption}_{ij}}) \\ & + \beta_4 (\text{Income}_{ij} - \overline{\text{Income}_{ij}}) \\ & + \beta_5 (\text{Income}_{ij} - \overline{\text{Income}_{ij}}) \\ & \times (\text{Corruption}_{ij} - \overline{\text{Corruption}_{ij}}) + e, \end{aligned} \quad (4)$$

$$\text{Level 2: } \beta_0 = \gamma_{00} + \gamma_{01}\overline{\text{Corruption}_j} + \gamma_{02}\overline{\text{Income}_j} + \gamma_{03}\text{Western} + r_{00}, \quad (5)$$

$$\beta_1 = \gamma_{10} + r_{10}, \quad (6)$$

$$\beta_2 = \gamma_{20} + r_{20}, \quad (7)$$

$$\beta_3 = \gamma_{30} + \gamma_{30}(\text{Western}) + r_{30}, \quad (8)$$

$$\beta_4 = \gamma_{40} + \gamma_{40}(\overline{\text{Corruption}_j}) + r_{40}, \quad (9)$$

$$\beta_5 = \gamma_{50} + r_{50}. \quad (10)$$

At the individual level, β_3 , β_4 , and β_5 represent the effects of perceived corruption, income, and the interaction of perceived corruption and income, respectively. At the national level, γ_{01} , γ_{02} , and γ_{03} represent the national effects of corruption,

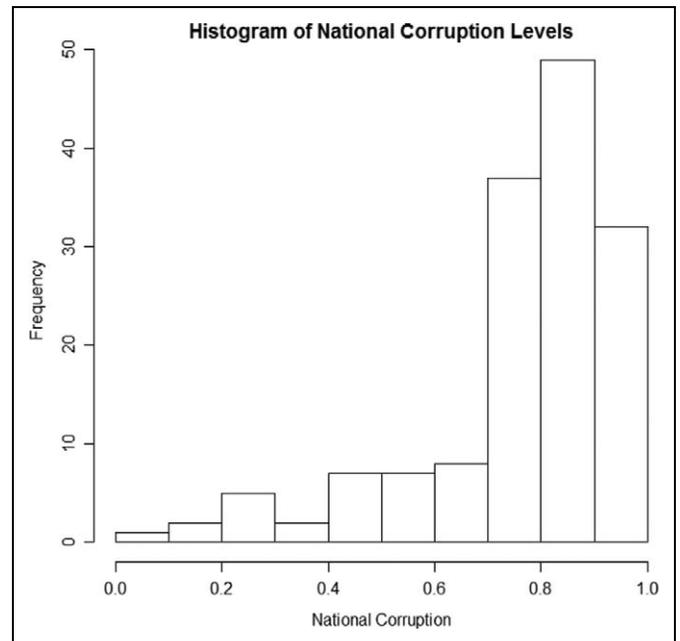


Figure 1. National corruption levels across 150 nations.

income, and culture (1 = *Western*, 0 = *non-Western*), respectively. Further, γ_{30} represents the moderating effect of culture on perceived corruption and SWB; γ_{40} represents the moderating effect of national corruption on income and SWB. For national income, we analyzed the use of GDP per capita and national household income. Both are interchangeable, as they are highly correlated ($r = .93$) and yielded the same results. We chose to present the results for GDP per capita, as data from different sources strengthen the appearance of the findings.

When using CPI as a measure of corruption, we replaced the Gallup perceived corruption aggregate (i.e., $\overline{\text{Corruption}_j}$) with the CPI in Equations 5 and 9, while retaining the GWP-perceived corruption at the individual level to control for individual perceptions of corruption.

Results

GWP Perceived Corruption Across the World

Descriptive statistics and correlations are presented for all study variables in Supplemental Table S1 (see Online Supplemental Material found at <http://spps.sagepub.com/supplemental>). A cross-national comparison of GWP corruption levels found that there are some exemplar nations with low corruption scores: Singapore (.06), Qatar (.14), Denmark (.20), Hong Kong (.25), and Finland (.26; full list in Table S2 in the supplementary materials found at <http://spps.sagepub.com/supplemental>). However, the average national corruption score is high at .76 ($SD = .19$) of the 1.00. As seen in Figure 1, the distribution of corruption across nations is skewed—many nations have high scores on corruption—indicative that many nations had a majority of residents that perceive businesses and governments as being corrupt.

Table 1. Means, Standard Deviations, and Zero-Order Correlations of Corruption Measures.

		# Nations	M	SD	Skewness	1	2	3
1	GWP-Perceived Corruption	150	0.76	0.19	-1.67	(.97)		
2	CPI	152	5.88	2.16	-1.09	.67**		
3	GCB—Political, Parliament, Judiciary, Business	43	3.56	0.46	-1.12	.86**	.80**	(.85)
4	GCB—Media	43	3.09	0.36	-0.45	.12	.00	.37*

Note. SD = standard deviation; GWP = Gallup World Poll; CPI = Corruption Perceptions Index; GCB = Global Corruption Barometer.

Table 2. Results for Multilevel Mediation Analysis: Direct and Indirect Effects of Corruption on SWB at the Individual and National Level.

Predictor	Mediator	Outcome	Level	Estimated Direct Effect	95% CI for Direct Effect	Estimated Indirect Effect	95% CI for Indirect Effect
GWP-perceived corruption	Household income	LS	Individual	-0.314***	[-0.358, -0.270]	-0.045***	[-0.063, -0.026]
			National	-1.264***	[-1.903, -0.626]	-1.144***	[-1.594, -0.694]
		PF	Individual	-0.031***	[-0.039, -0.022]	-0.004***	[-0.006, -0.003]
			National	-0.125**	[-0.221, -0.029]	-0.043*	[-0.080, -0.005]
		NF	Individual	0.048***	[0.041, 0.054]	0.003***	[0.002, 0.004]
			National	0.132***	[0.092, 0.172]	-0.021	[-0.044, 0.001]
	Trust	LS	Individual	-0.220***	[-0.257, -0.182]	-0.113***	[-0.130, -0.095]
			National	-2.850***	[-3.675, -2.024]	0.489	[-0.039, 1.018]
		PF	Individual	-0.005	[-0.011, 0.001]	-0.027***	[-0.030, -0.024]
			National	-0.145*	[-0.257, -0.033]	-0.018	[-0.092, 0.055]
		NF	Individual	0.028***	[0.023, 0.033]	0.020***	[0.018, 0.023]
			National	0.074**	[0.020, 0.127]	0.037	[-0.006, 0.080]
Corruption Perceptions Index (CPI)	Household income	LS	National	-0.117**	[-0.183, -0.051]	-0.153***	[-0.206, -0.100]
			PF	National	-0.019***	[-0.029, -0.009]	0.000
		NF	National	0.012**	[0.004, 0.019]	-0.007*	[-0.013, -0.001]
			Trust	LS	National	-0.285***	[-0.330, -0.241]
	Trust	PF	National	-0.017***	[-0.023, -0.011]	-0.002	[-0.005, 0.001]
			NF	National	0.004	[0.000, 0.008]	0.003**

Note. LS = life satisfaction; PF = positive feelings; NF = negative feelings; CI = confidence interval; SWB = subjective well-being. * $p < .05$. ** $p < .01$. *** $p < .001$.

Validation of the GWP-Perceived Corruption Measure

Convergent and discriminant validity information is presented in Table 1. We find that the GWP-perceived corruption measure is strongly related to the GCB measure of corruption in the government and business ($r = .86$) and the CPI ($r = .67$). The GWP is more closely related to the GCB measure of corruption in government and business because both rely on opinion polls, whereas the CPI relies on third-party assessments of national corruption. As expected, the GWP is unrelated to the GCB measure of corruption in media ($r = .12$). Similar to the GWP-perceived corruption measure, all other measures of corruption are negatively skewed confirming the trend that many nations have high corruption scores.

Aside from cross-national correspondence, we examined the extent to which the CPI predicts the GWP-perceived corruption over time using HLM Equations 1–3. We found that CPI significantly predicts GWP over time ($\beta = .03, p < .01$) and accounted for within-nation changes of 9.4% (estimated $r = .31$). This shows that there is moderate correspondence between the CPI and GWP over time.

Cross-National Effects of Corruption on SWB

To what extent is there evidence that corruption affects SWB via economic and social mechanisms? When using GWP-perceived corruption as an operational definition of corruption, the indirect effects of corruption on SWB at the national level—particularly for LS and PF—were only significant for income as a mediator but not trust, which implies that national levels of corruption do not affect SWB via average levels of societal trust. The indirect effects were however significant at the individual level for both mediators income and trust. This implies that individual perceptions of corruption, likely stemming from individual experiences of corruption, may negatively impinge on their personal levels of trust and income, and in turn affect SWB. When using the CPI as an index of national corruption, we found that corruption was significantly and negatively associated only with LS via income, while corruption was positively related to NF via trust.

At the national level, the most consistent mediating mechanism for how corruption affects SWB is an economic one. National corruption lowers national income which in turn lowers life evaluations. At the individual level, both

Table 3. Predicting SWB Over Time With First-Order Autoregressive Multilevel Modeling.

Outcome	GWP-perceived corruption		Corruption Perceptions Index (CPI)		National Household Income		Trust	
	Coefficient	VAF (%)	Coefficient	VAF (%)	Coefficient	VAF (%)	Coefficient	VAF (%)
LS	−1.33***	13.26	−0.16**	13.72	.60**	21.78	0.72***	16.09
PF	−0.14***	7.33	−0.01 ⁺	2.67	.06*	2.67	0.12***	3.33
NF	0.02	—	−0.01**	0.00	−.07***	3.33	−0.03	—
National Household Income	−0.15*	1.10	−0.00	—				
Trust	−0.67***	34.56	−0.01	—				

Note. LS = life satisfaction; PF = positive feelings; NF = negative feelings; SWB = subjective well-being. VAF represents variance accounted for in the outcome variable over time controlling for between nation differences.

⁺ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4. Random Coefficients Multilevel Modeling: Effects of GWP-Perceived Corruption on SWB.

Level		LS		PF		NF	
		β	p	β	p	β	p
Individual	Intercept	2.833	<.001	.494	<.001	.192	<.001
	Age	−.013	<.001	−.002	<.001	.001	<.001
	Gender (0 = male, 1 = female)	.093	<.001	.006	.007	.027	<.001
	Perceived Corruption	−.292	<.001	−.029	<.001	.042	<.001
Nation	Household Income	.853	<.001	.077	.002	−.022	.131
	GDP per capita	.967	<.001	.055	<.001	−.008	.305
	National Corruption	−.742	.008	.008	.858	.082	<.001
	Western Culture	.154	.315	−.009	.715	.030	.035
Individual level Interaction	Perceived Corruption × Household Income	.106	.004	.003	.712	−.088	<.001
Cross-level Interaction	National Corruption × Household Income	.556	<.001	.062	.042	−.020	<.001
	Western Culture × Perceived Corruption	−.193	<.001	.000	.976	.010	.106

Note. LS = life satisfaction; PF = positive feelings; NF = negative feelings; GWP = Gallup World Poll; SWB = subjective well-being.

mechanisms appear to be important in that perceived corruption, which may reflect exposure to corruption, can affect SWB via income and trust.

To what extent does corruption affect SWB directly? As shown in Table 2, using the GWP-perceived corruption measure, we found that direct effects of corruption were significant for all three forms of SWB. This suggests that perceptions of corruption can directly affect individual and national SWB. Furthermore, overall corruption in society—operationally defined as average perceived levels of corruption—predicts SWB over and above individual-level perceptions of corruption because national level coefficients are consistently larger than individual-level coefficients. When using the CPI to index national corruption, we found that the direct effects of corruption on SWB significantly predicted all three forms of SWB. The only exception was when NF was being predicted and trust was included. This was likely because there was full mediation via trust.

Overall, the consistent direct effects found provide evidence that corruption impacts the different components of SWB directly. Nation-level corruption effects were stronger than individual-level effects, which reflects how national corruption can be detrimental to SWB even beyond individual perceptions of corruption.

Effects of Corruption on SWB Over Time

Table 3 shows significant associations over time between measures of national corruption (GWP and CPI) and two of the three dimensions of SWB: LS and PF. Corruption accounted for more variance in LS (around 13%) as compared to PF (from 2 to 7%). Some evidence alluding to income and trust as potential mediating mechanisms was found. Corruption was significantly linked to lower national household income ($\pi = -.15$, $p < .05$; Variance accounted for (VAF) over time = 1.1%) and trust ($\pi = -.67$, $p < .001$; VAF over time = 34.6%) over time. In turn, income and trust are also significantly linked to LS and PF over time.

This trend corresponds with the cross-national analysis and provides evidence that corruption is not only associated with SWB in the cross-section but is also associated with SWB over time. Further, there is tentative evidence that this association over time may be in part mediated by income and trust.

Moderating Effects of Corruption on Income and SWB

Using random coefficients multilevel modeling controlling for age, gender, and national income, we found that the cross-level interaction terms for corruption—as indexed by the GWP-perceived corruption measure—on income and SWB were

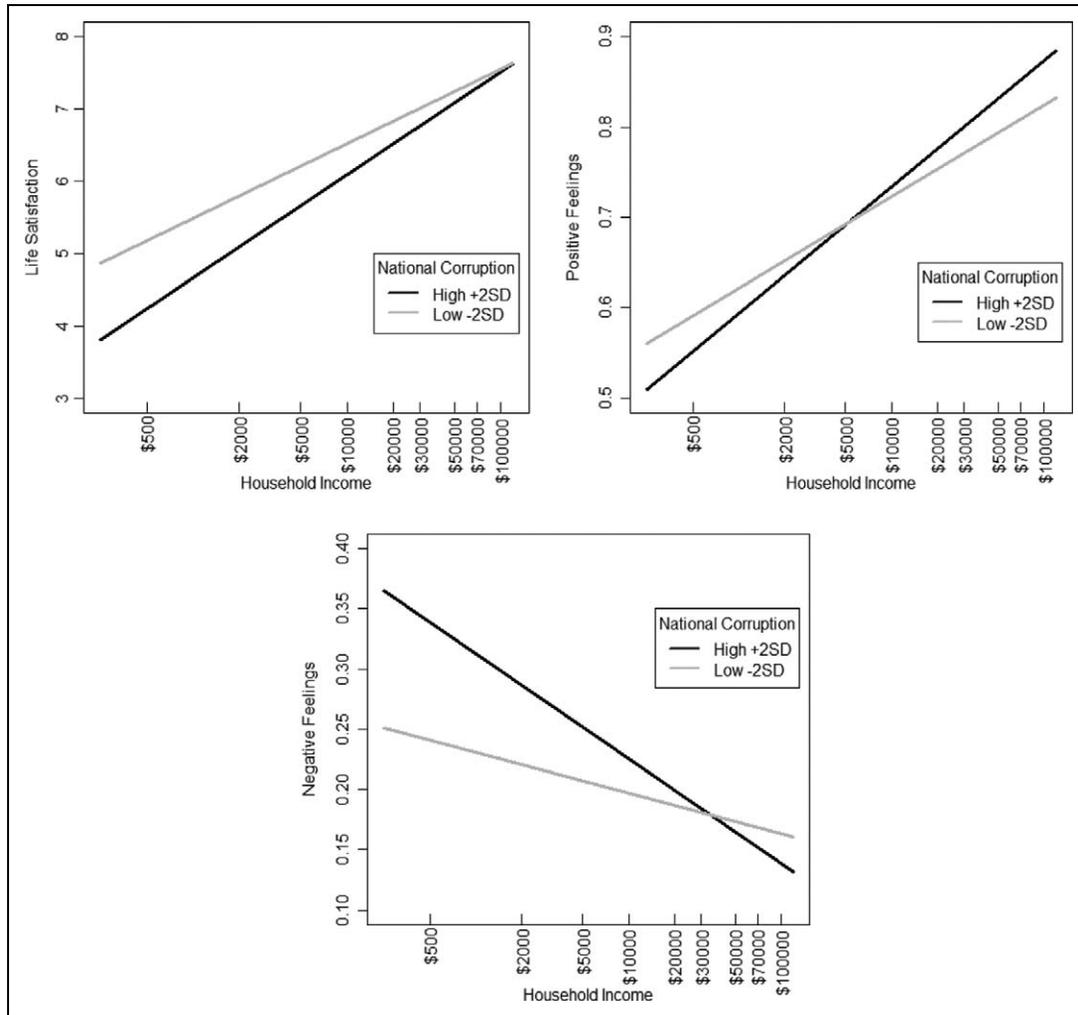


Figure 2. Corruption and subjective well-being: Household income is more important for happiness in corrupt societies.

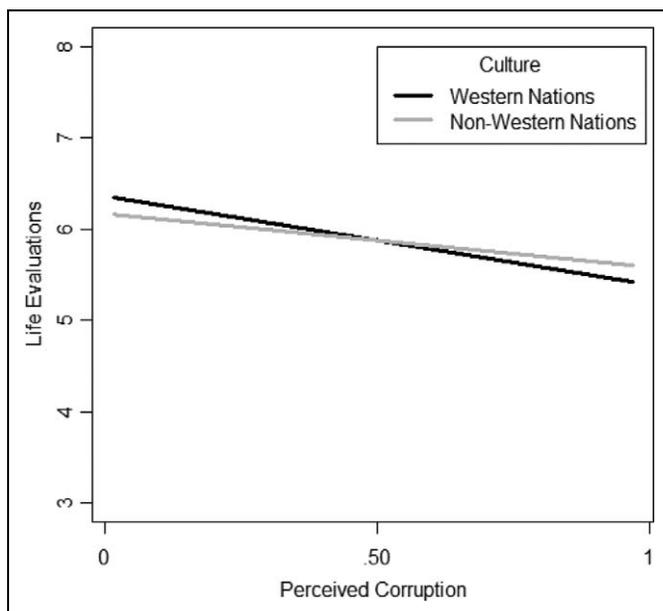


Figure 3. Culture moderating the effects of perceived corruption on subjective well-being.

significant (see Table 4). As Figure 2 illustrates, nations that had substantially higher national corruption had significantly steeper slopes between household income and all three dimensions of SWB. At the individual level, perceptions of corruption also led to steeper slopes between household income and SWB for LS and NF. This generally confirms the notion that corruption strengthens the income–SWB relation because corruption is more beneficial to the financially able.

When we used CPI as a measure of national corruption, we did not find significant moderating effects of national corruption moderating the relation between household income and SWB ($ps > .05$). This suggests that corruption as measured by third-party experts, while sensitive to main effects on SWB, may not be as sensitive to moderating effects.

Culture

As shown in Table 4, we found that culture moderated the link between corruption and SWB, only for LS, but not daily affective experiences. The relationship between perceptions of corruption and SWB with non-Western countries

is shown in Figure 3. The graph shows that cultural effects hold, but the effect in the context of the entire range of LS scores may not be large.

Discussion

One of the key findings in our study is that corruption negatively impacts SWB, particularly for the evaluative domain, or LS. This finding held across nations and over time. Residents who have higher perceptions of corruption—likely due to perceived injustices and experiences of corruption—have lower LS. Moreover, living in more corrupt societies lowers LS even above individual perceptions of corruption. By contrast, national corruption and individual perceptions of corruption were only linked to daily experiences of SWB cross-sectionally; national corruption was not necessarily linked to nationally aggregated daily experiences of SWB over time. This implies that despite higher levels of national corruption, residents in a nation may not always experience lowered affective SWB through the passing of time. This harkens to research on adaptation theory of SWB, where individuals can become habituated to their contexts and resume dispositional levels of affective SWB (Diener, Lucas, & Scollon, 2006). In contrast to context effects, individual-level corruption perceptions appear to have negative effects on daily affect, at least in the cross section.

There was some support for the proposed economic and social mediating mechanisms. At the individual level, we found that indirect effects of corruption on SWB via national income and institutional trust held. At the national level, only the indirect effect via income was consistently significant. When examining the data over time, there is some tentative evidence that national corruption can affect income and institutional trust. Further, income and institutional trust are also linked to SWB and account for more variance than national corruption. Given the strength of the data, we propose that corruption ultimately has a negative influence on SWB—particularly LS—via economic channels, despite some initial evidence suggesting that corruption can serve to enhance the economy at the macro level (Huntington, 1968; Leff, 1964). There appears to be some evidence over time that national corruption will erode trust which can in turn lower LS.

We also found that in corrupt societies, income matters more for SWB than in societies that are less corrupt. National corruption may signal to societal members that their income is more intrinsically valuable for happiness. This is because in a corrupt system, residents who are wealthy will have greater latitude in their behaviors and decisions than the poor because income can serve to purchase freedoms and conveniences. Conversely, those who are poor are likely to be oppressed and constrained by their lack of income. In such a society, income would be tightly bound to SWB.

Although the effect of corruption is universally negative, the negativity of the effects appears to be attenuated by culture. Western nations may be especially susceptible to the detrimental impacts of corruption, as it appears that residents of these countries are most likely to report lower

levels of SWB in the face of high levels of perceived corruption. This is likely because there are more established laws and norms against corruption in Western nations as compared to non-Western ones (Dunfee & Warren, 2001; Fan, 2002).

One practical implication from this study is that business and governmental corruption should be a matter of concern to academics, governments, and policy makers, as it lowers SWB among individuals and nations. In countries with a history of corruption and where gaps between the rich and poor are great, the need to mitigate the psychological effects of corruption may be especially great. Continued research may also serve to refine and further validate measures of corruption and ultimately contribute to interventions designed to combat the detrimental impacts of corruption.

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References

- Blau, P. M. (1964). *Exchange and power in social life*. New York, NY: John Wiley.
- Diener, E., Lucas, R. E., Schimmack, U., & Helliwell, J. (2009). *Well-being for public policy*. Oxford, England: Oxford University Press.
- Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist, 61*, 305–314.
- Diener, E., & Seligman, M. E. P. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest, 5*, 1–31.
- Diener, E., Tay, L., & Oishi, S. (2013). Rising income and subjective well-being of nations. *Journal of Personality and Social Psychology, 104*, 267–276.
- Dunfee, T. W., & Warren, D. E. (2001). Is Guanxi ethical? A normative analysis of doing business in China. *Journal of Business Ethics, 32*, 191–204.
- Easterlin, R. A. (1974). Does economic growth improve the human lot? In P. A. David & M. W. Reder (Eds.), *Nations and households in economic growth* (pp. 89–125). New York, NY: Academic Press.
- Fan, Y. (2002). Guanxi's consequences: Personal gains at social cost. *Journal of Business Ethics, 38*, 371–380.
- Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. New York, NY: Free Press.
- Geldhof, G. J., Preacher, K. J., & Zyphur, M. J. (2013). Reliability estimation in a multilevel confirmatory factor analysis framework. *Psychological Methods*. Advance online publication. doi: 10.1037/a0032138
- Helliwell, J. (2006). Well-being, social capital and public policy: What's new? *The Economic Journal, 116*, C34–C45.

- Hirsch, F. (1978). *Social limits to growth*. Cambridge, MA: Harvard University Press.
- Hudson, J. (2006). Institutional trust and subjective well-being across the EU. *KYKLOS*, *59*, 43–62.
- Huntington, S. P. (1968). *Political order in changing societies*. New Haven, CT: Yale University Press.
- Inglehart, R. (2000). Culture and democracy. In L. E. Harrison & S. P. Huntington (Eds.), *Culture matters: How values shape human progress* (pp. 80–97). New York, NY: Basic Books.
- Inglehart, R., Foa, R., Peterson, C., & Welzel, C. (2008). Development, freedom, and rising happiness: A global perspective (1981–2007). *Perspectives on Psychological Science*, *3*, 264–285.
- Kahneman, D. (1999). Objective happiness. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 3–25). New York, NY: Russell Sage Foundation.
- Kahneman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. *Proceedings of National Academy of Sciences*, *107*, 16489–16493.
- Krehbiel, P., & Cropanzano, R. (2000). Procedural justice, outcome favorability, and emotion. *Social Justice Research*, *13*, 339–360.
- Lambsdorff, J. G. (2003). How corruption affects productivity. *KYKLOS*, *56*, 457–474.
- Leff, N. (1964). Economic development through bureaucratic corruption. *American Behavioral Scientist*, *8*, 8–14.
- León, C. J., Araña, J. E., & de León, J. (2013). Valuing the social cost of corruption using subjective well being data and the technique of vignettes. *Applied Economics*, *45*, 3863–3870.
- Mauro, P. (1995). Corruption and growth. *Quarterly Journal of Economics*, *110*, 681–712.
- Muthén, B., & Muthén, L. K. (2007). *Mplus version 5.2* [Computer Program]. Los Angeles, CA: Author.
- Preacher, K. J., Zhang, Z., & Zyphur, M. J. (2010). A general multi-level SEM framework for assessing multilevel mediation. *Psychological Methods*, *15*, 209–233.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Raudenbush, S. W., Bryk, A. S., & Congdon, R. (2013). *HLM 7 for Windows* [Computer software]. Skokie, IL: Scientific Software International.
- Schnall, S., Haidt, J., Clore, G. L., & Jordan, A. H. (2008). Disgust as embodied moral judgment. *Personality and Social Psychology Bulletin*, *34*, 1096–1109.
- Sirgy, M. J., Yu, G. B., Lee, D.-J., Wei, S., & Huang, M.-W. (2012). Does marketing activity contribute to a society's well-being? The role of economic efficiency. *Journal of Business Ethics*, *107*, 91–102.
- Subramanian, S. V., Kim, D. J., & Kawachi, I. (2002). Social trust and self-rated health in US communities: A multilevel analysis. *Journal of Urban Health*, *79*, 21–34.
- Tanzi, V. (1998). Corruption around the world: Causes, consequences, scopes, and cures. *IMF Staff Papers*, *45*, 559–593.
- Tavits, M. (2008). Representation, corruption, and subjective well-being. *Comparative Political Studies*, *41*, 1607–1630.
- Welsch, H. (2008). The welfare costs of corruption. *Applied Economics*, *40*, 1839–1849.

Author Biographies

Louis Tay is an assistant professor in psychology at Purdue University. His research interests include subjective well-being and methodology.

Dr. Mitchel N. Herian is a Faculty Fellow with the University of Nebraska Public Policy Center. His research focuses on the determinants and effects of interpersonal and institutional trust.

Ed Diener is a professor emeritus of psychology at the University of Illinois. He has conducted research on subjective well-being since 1981 and is one of the leading experts in the field. Diener has over 325 publications, most of which are on well-being, and over 80,000 citations of his work.

Corrigendum

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