ELSEVIER
www.elsevier.com/locate/worlddev

CrossMark

World Development Vol. 68, pp. 136–148, 2015
0305-750X/

http://dx.doi.org/10.1016/j.worlddev.2014.11.017

Aspects of Moral Change in India, 1990–2006: Evidence from Public Attitudes toward Tax Evasion and Bribery

M. NAJEEB SHAFIQ*
University of Pittsburgh, USA

Summary. — Observers have asserted that India's economic rise coincides with moral change. This study assesses some notable aspects of this claim by using public attitudes toward tax evasion and bribery as indicators of moral values. Using repeated cross-sectional data from the World Values Surveys, I find that tolerance for tax evasion and bribery grew relatively slightly from 1991 to 1996, and then increased rapidly from 2001 to 2006. Double-interaction regression models show tolerance converging by gender and religion, and tolerance diverging between the poor and non-poor. However, the regional patterns are complex. Finally, university educational attainment is associated with decreasing tolerance.

Key words — corruption, moral change, public attitudes, South Asia, India

1. INTRODUCTION

India's spectacular economic rise has been well documented and debated (e.g., Bhagwati & Panagariya, 2013; Datt & Ravallion, 2011; Dreze & Sen, 2013; Kohli, 1989; Kotwal, Ramaswami, & Wadhwa, 2011). From 1991 to 2006, India averaged a real GDP per capita growth rate of 6%. Despite the population count surpassing the 1 billion mark over this period, national poverty shares decreased from approximately one-third to one-quarter of the population. But has India's economic rise coincided with moral change? At a 2010 conference, the former President of the Indian Congress Party, Sonia Gandhi, remarked:

> The country's economy may increasingly be dynamic, but our moral universe seems to be shrinking... The principles on which Independent India was founded, for which a generation of great leaders fought and sacrificed their all, are in danger of being negated.

Numerous journalists, politicians, and businesspeople have made similar conjectures, referring to such moral change as "moral decay," "growing moral obtuseness," and "ethical deficit" (Economics & Political Weekly, 2009; KPMG, 2011; Mishra, 2010). As evidence, they cite the increasing frequency and visibility of corruption in both business and politics. [1]

From a methodological standpoint, anecdotes and journalistic accounts are inappropriate for drawing inferences about moral change at a national level. Indeed, it could be that democratic advancement—which has created greater opportunity for dissent, a freer press, and the expansion of social media—has made it easier to detect corruption. During this process, the morals of the larger Indian population—most of whom are not politicians or major businesspeople—may have remained unchanged. Friedman (2005) has even argued that if economic growth is enjoyed equitably, a society should experience moral improvements. Thus the main point is that, despite the assertions it is unclear whether India has really experienced moral change or whether such change is correlated with or caused by economic growth. In this study, I investigate sweeping claims of moral change by documenting the attitudes of Indian men and women toward corruption from 1990 to 2006. I analyze four waves of cross-sectional data from the *World Values Surveys* (WVS) and follow Ostling (2009) in using public attitudes toward tax evasion and bribery as indicators of certain aspects of moral values.

Public attitudes toward corruption are important for several reasons. As mentioned earlier, Indian politicians, journalists, and businesspeople have frequently used corruption as a barometer for moral values. In addition, a recent study by Transparency International (Hardoon & Heinrich, 2011) found a close link between attitudes toward and actual participation in corruption among ordinary Indians. This finding makes sense because the general public are not only the victims, but also the enablers, of corruption; for example, they facilitate corruption by voting for crooked politicians, consuming the goods and services from shady businesses, and relaxing the social stigma attached to corruption.

Tolerance for tax evasion and bribery are only two of the many aspects of moral values, but they are of special public concern in India and elsewhere because of implications on economic development (Bardhan, 2006; Olken & Pande, 2012). As a free rider problem, tax evasion reduces the public funds available for the development of public goods such as law and order, infrastructure, transportation, education, and health. Bribery causes shirking (if bribes are not offered) and consequently diminishes the efficiency of the sectors producing public goods; furthermore, bribery undermines private sector efficiency by raising the cost of doing business (Freund, Hallward-Driemeier, & Rijkers, 2014).

This study provides evidence of considerable moral change in India during the 1990–2006 period. Descriptive statistics confirm that during this period, tolerance for tax evasion and bribery increased from under 2% in 1990 to nearly one-quarter of men and women in 2006. This rapid moral change coincided with purchasing power adjusted per-capita incomes

* I am very grateful to Barry Bull, Sean Kelly, Margaret Hannan, and two anonymous referees for extraordinarily helpful and detailed comments on earlier drafts. My thanks also to the editor Arun Agrawal, Toke Aidt, Shafiqul Alam, Daniel Berkowitz, Steven Finkel, Henry Levin, Walter McMahon, Robert Toutkoushian, Anna Vignoles, and session participants at the 2013 Comparative and International Education Society's Northeast Regional Meetings, Pittsburgh for suggestions and encouragement. Final revision accepted: November 25, 2014.

surpassing $1,500 (constant 2005 international $) and economic growth rates exceeding 5%. Time-interaction regression models show convergence between men and women. During the same period, however, rich and non-rich individuals' tolerance for tax evasion and bribery diverged, as did the opinions of those residing in leading and lagging economic states. In addition, higher educational attainment is associated with growing resistance to or distaste for corruption.

This study makes several contributions. First, it contributes to the broader literature on societal moral change. Bloom (2010) noted that a complete theory of moral change has yet to emerge, and that studies typically focus on industrialized societies. In the spirit of Abramson and Inglehart (1995), the results of this study may be used to test the completeness or generalizability of theories across different economic, political, and cultural settings. For example, this Indian case study can be used to test the common hypothesis that the rates of moral change and economic growth are highly correlated (Friedman, 2005). The 16-year span of WVS-India is unusual for a developing country, and permits a study of moral change that can distinguish between long-term, systematic change and short-term noise.

This study also contributes to the large literature on corruption by explicitly considering moral values. Typically, modern empirical studies on corruption avoid or merely allude to moral values and instead focus on the consequences of moral values, which include outcomes such as bribery paid, taxes evaded, and waiting queue avoidance. Sen (2009) has argued that such "consequentialist" approaches are useful but do not capture the "importance of the character of the actions themselves and the motivation behind undertaking them—not just what happens at the very end." [2]

Lastly, this study contributes to the growing body of research on the nuances of India's recent economic rise. For example, Deaton and Kozel (2005) analyzed income data over the 1993–2000 period and concluded that official rates of poverty reduction are exaggerated. Similarly, the United Nations Human Development Report (2013) noted India's stagnation in several key areas, and ranked Pakistan ahead of India on gender equality. If we accept that increasingly tolerant attitudes toward corruption is objectionable on at least economic grounds, then establishing and analyzing the facts of moral change in India (as indicated by popular beliefs) provides a foundation for further research on the causes, consequences, and remedies for Indian moral change. [3]

2. LITERATURE REVIEW

There exists some literature on the complex relationship between aspects of moral change and economic growth (Bloom, 2010). Though not explored in this study, other aspects of moral values may include attitudes or empathy toward slavery, women, child labor, minorities, homosexuality, the environment, animals, and violence (Bloom, 2010). For the purposes of a short survey of the literature, I focus on corruption-related aspects of moral values, and divide the literature into three categories: the effect of individual moral values on individual acts of corruption; the effect of collective moral values on large-scale corruption and economic growth; and the effect of economic growth on individual moral values.

(a) *Individual moral values and individual acts of corruption*

Economic theories of individual moral values have typically used a rational choice framework (Becker, 1993). A simple framework may consider the case of two people who are confronted with a public official's bribery request. A key assumption is that the two people are identical in all aspects except moral values. Notably, the moral person incurs psychic disutility (or guilt) from paying the bribe; the less moral person may be either amoral (i.e., indifferent about bribery) and not incur psychic disutility, or immoral and gain psychic utility (or joy) from paying the bribe. Therefore, holding all else constant, the moral person will not offer a bribe if the psychic disutility of paying the bribe is larger than the monetary utility from paying the bribe. In contrast, the amoral/immoral person will always prefer to pay a bribe because the monetary utility always outweighs the psychic disutility. In short, moral values determine a person's psychic disutility of engaging in a corrupt act; in turn, the psychic disutility determines whether a person ultimately engages in a corrupt act. There are notable extensions of this basic framework (e.g., Frank, 2004).

Empirical tests of individual moral values and actions are usually conducted using laboratory and field experiments (e.g., Brodbeck, Kugler, Reig, & Maier, 2013; Bertrand, Djankov, Hanna, & Mullainathan, 2007; Mazar, Amir, & Ariely, 2008). Other empirical studies have examined the correlations between moral values and individual characteristics such as education (e.g., Justesen & Bjørnskov, 2014; Truex, 2011). This study will consider differences in individual moral values such as gender, education, and regional development over the 1990–2006 period.

(b) *Collective moral values, large-scale corruption, and economic growth*

Some theoretical research has addressed the effect of growing shares of people with amoral/immoral values on economic growth (Etzioni, 1988). In a review, Aidt (2009) suggested that declining moral values and rising large-scale corruption may either inhibit economic growth (the "sanding the wheels" argument), or facilitate economic growth (the "greasing the wheels" argument), or both. Theoretically, therefore, the net effect of collective moral change on economic growth is ambiguous.

There is scarce empirical literature on the effect of collective moral values on economic growth. Rather, researchers typically adopt the consequentialist approach by examining corruption levels and economics growth. This study makes a contribution by explicitly considering mean collective moral values and economic growth rates over time.

(c) *Economic growth and individual moral values*

Theories that examine the link between economic growth and individual moral values typically draw from evolutionary perspectives, and propose that individuals must revise moral values in order to cope with the inflation, industrialization, urbanization, and migration that accompany economic growth (e.g., Ostling, 2009; Rothstein & Uslaner, 2005). In particular, theories predict that such dramatic life changes lead to fewer relationships (with extended family and neighbors) and thereby diminish the social stigma (in this case, the psychic cost) of engaging in corrupt acts.

The empirical literature in economics is limited and generally presents correlations between economic growth and changes in moral values (e.g., Ostling, 2009). This study contributes to this literature by examining economic growth and changes in individual moral values over a duration that is unusually long for a developing country case-study.

(d) *Connecting the literature*

Theories attempting to present a comprehensive theory of moral change and economic growth must connect the three categories of literature. As a simple illustration of a comprehensive theory, I propose a three-stage cyclical theory. In stage one, individual moral values affect individual tastes and engagement in corrupt acts. In stage two, a society's collective moral values affect national-level corruption and economic growth. In stage three, economic growth affects individual moral values. This leads to the first stage again, as the revised individual moral values have different effects on tastes and engagement in corrupt acts. Therefore, the stages are connected in a cyclical manner. Despite the relative simplicity of this theory, there are numerous methodological challenges for establishing causal relationships within and between stages.

3. THE INDIAN CONTEXT

> [H]istory has to a stage when the moral man, the complete man, is more and more giving away, almost without knowing it, to make room for the... commercial man, the man of limited purpose. This process, aided by the wonderful progress in science, is assuming gigantic proportion and power, causing the upset of man's moral balance, obscuring his human side under the shadow of soul-less organization.

Surprisingly, no current journalist or politician or businessperson made this prediction—it is from Indian Nobel laureate Rabindranath Tagore's 1917 essay, *Nationalism*. Over half a century later, Goheen, Srinivas, Karve, and Singer (1958) raised similar concerns. As discussed earlier, observers still make conjectures about moral decline in India. This section discusses the likely changes in moral values during three key periods of economic change: the British Raj period (1858–1947), the License Raj period (1948–90), and post-economic liberalization period (1991 onward). Before proceeding, it is important to acknowledge that in a large and complex country such as India, there are rarely simple explanations for moral change and economic growth.

The "British Raj" period began in 1858 and ended after India gained independence in 1947. The British governed by dividing the country into provincial governments controlled by commissioners, small executive, and legislative bodies. Governance was characterized by secrecy and lack of transparency and accountability. Moreover, Indian citizens were excluded from the governing function and had little opportunities to pay bribes. Thus, Tagore may have been correct about the elite Indians entrepreneurs who interacted with the British. For the overwhelming share of Indians during the British Raj period, however, moral values are unlikely to have significantly changed.

The "License Raj" period begin in 1948 with the adoption of socialism, involving unprecedented levels of governmental oversight, regulation, and ownership of national resources. Yet India had private property and the private sector remained the main mode of production (Basu & Maertens, 2007). To bypass red tape and confusion, public officials sought favors in return for performing their official duties; many observers noted the rise in "crony capitalism" (Guha, 2007). In addition, low-ranked and -salaried public servants accepted bribes for favors or turning a blind eye toward corruption. Consequently, larger shares of Indians were confronted with the decision to pay bribes. However, less than 1% of income earners were faced with income tax decisions (Banerjee & Piketty, 2005); this is because the vast majority of Indian workers were employed in the informal sector. The average annual 1% economic growth rate during the License Raj period (Basu & Maertens, 2007) also suggests that most Indians did not experience profound social and economic change. Overall, the myriad events during the License Raj period make it difficult to speculate on moral change at the national level.

In 1991, India's Congress party-led economic liberalization marked the end of India's experiment with socialism. In addition to trade liberalization, Kotwal *et al.* (2011) cited fiscal expansion, changing government attitudes toward private business, access to credit, and technological advancement in agriculture as drivers of economic growth. As mentioned earlier, various observers have argued that the increased rates of privatization and governmental deregulation caused increases in bribery as entrepreneurs sought favorable decisions. The growth in formal sector employment is also likely to have increased the shares of Indians confronted with the decision to pay or evade income taxes. Furthermore, mass urbanization and migration (World Bank, 2013) likely led to changing values among families. Given the large-scale and rapid rates of economic and social change, there are reasons to suspect that more Indians experienced moral change after trade liberalization than the British Raj and License Raj periods.

4. DATA

As mentioned in the Introduction, the data for this study come from the World Values Survey (WVS). The WVS is conducted by a network of social scientists at leading universities all around the world; they describe the WVS as a "worldwide investigation of socio-cultural and political change," including public attitudes toward corruption, the environment, gender, politics, religion, work, and tolerance of other groups. In addition, the WVS collects basic information on respondents' personal and family characteristics. The first wave of the WVS was conducted in 1981 and covered mainly European countries. The second wave was conducted in 1989–93 and had considerable global representation. The WVS is not a panel because different people are interviewed each year.

For India, WVS data are available for the years 1990, 1996, 2001, and 2006; India was not included in the 2010 wave. The sample sizes are as follows: 2,500 people in 1990, 2,000 people in 1996, 2,002 people in 2001, and 2,001 people in 2006. These sample sizes are twice the typical size of those in other WVS country surveys, indicating that WVS gave consideration to India's vast population and geographic size. WVS social scientists collected data from the following states: Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal. There are differences in regional coverage over time: Assam and Jharkhand were excluded in 1990 and 1996, Punjab was excluded in 1990, and Chhattisgarh was excluded in 1996. Furthermore, the WVS for India is a national sample but is not nationally representative. Indeed, there has been much debate about the lack of probabilistic samples on Indians that would permit researchers to make inferences about the general public (Datt & Ravallion, 2011; Deaton & Kozel, 2005). Nevertheless, the WVS sample of Indians is the only source of data conducive to an analysis of moral values during India's period of rapid economic rise. As a corrective to the limited coverage of Indian states, I will analyze groups of states in terms of economic development.

(a) *Dependent variable*

To create the outcome variables for measuring moral change, I use responses to the two WVS statements on corruption:

(a) "Cheating on taxes if you have a chance"
(b) "Someone accepting a bribe in the course of their duties"

For each statement, respondents chose a number ranging from 1 ("never justified") to 10 ("always justified") to indicate their attitude toward each statement. I convert the responses to a binary variable: 1 ("justified") for those giving responses between 1 and 5, and 0 ("not justified") to responses between 6 and 10. The collapsing of the variance in the dependent variable is common (e.g., Glaeser, Laibson, Scheinkman, & Soutter, 2000): the ten category numbering is challenging because responses are not labeled, and it is highly unlikely that ten different orders of responses can be reliably distinguished. In addition, the binary variable approach in regression analysis is easier to interpret using marginal effects. I address this coding issue in the Extensions section.

The simplest way of testing the moral change claim is to consider the mean level of tolerance for each of the corrupt activities over time. Table 1 confirms that moral values declined in India from 1990 to 2006 in that the number of individuals tolerating tax evasion and bribery sharply increased from a small minority to nearly one-quarter of adults. Overall tolerance for these corrupt activities increased slightly from 1990 to 1996, and then increased rapidly from 2001 to 2006, revealing an important pattern. Public tolerance for cheating on taxes changed from 1.92% in 1990 to 3.25% in 1996, and then increased to 11.52% in 2001 and 23.97% in 2006. Similarly, tolerance for bribery increased modestly from 1.98% in 1991 to 2.52% in 1996, before rising from 8.61% in 2001 to 22.90% in 2006.

But are the WVS-India figures on tolerance for corruption consistent with actual participation in corruption? Although the WVS data are some of the best available to gauge tolerance for corruption, respondents might answer such survey questions strategically out of concern that divulging their preferences could make them vulnerable to persecution (Azfar & Murrell, 2009; Fisman & Miguel, 2008, p. 18). As mentioned in the Introduction, a 2010–11 survey by Transparency International (Hardoon & Heinrich, 2011) provides suggestive evidence: 54% of urban Indians reported paying a bribe in the previous year, and their participation were consistent with their tolerance for bribery. This provides suggestive evidence that WVS-India respondents who tolerate corruption are also likely to engage in corruption. [4]

Table 1. *Descriptive statistics: tolerance for tax evasion and bribery, WVS-India, 1990–2006*

Year	Cheating on taxes is justified (%)	Accepting a bribe is justified (%)
1990	1.92	1.98
1996	3.25	2.52
2001	11.52	8.61
2006	23.97	22.90

Source: World Values Survey for India for years 1991, 1996, 2001, and 2006.
Notes: (1) The outcome variables are the sample means for dummy variables (=0 is not justified,=1 if justified). (2) The sub-sample sizes for tolerance for tax evasion are as follows: (1990, $n = 2{,}451$), (1996, $n = 1{,}968$), (2001, $n = 1{,}677$). The sub-sample sizes for tolerance for bribery are as follows: (1990, $n = 2{,}476$), (1996, $n = 1{,}986$), (2001, $n = 1{,}917$), (2006, $n = 1{,}716$).

Figure 1 plots attitudes with purchasing power adjusted per-capita income (constant 2005 international $) and tolerance for bribery and tax evasion. Tolerance for corruption rises rapidly after per-capita income surpasses $1,500, and then rises at an even faster rate in the mid 2000s after per-capita income reaches $1,750. Hence Figure 1 shows that these aspects of moral change parallel economic development.

5. METHODOLOGY

Given the binary nature of the tolerance variables, the model to explain tolerance for corruption is given by:

$$P(y = 1|x) = \phi(\beta_0 + \beta x)$$

where the dependent variable y is equal to 1 if the respondent tolerates the corrupt activity, and 0 if the respondent does not tolerate the corrupt activity. β_0 represents the coefficient on the constant term. The explanatory variables are represented by x including time (which = 0 if year = 1990, =6 if year = 1996, =11 if year = 2001, =16 if year = 2006) and several variables that are commonly used in social science research on the determinants of social, cultural, and political attitudes; β represent the explanatory variable coefficients. Appendix Table 4 presents the means of the dependent and explanatory variables by year.

Much has been written about the social benefits, or externalities, of education (McMahon, 2009). To investigate whether education may be an antidote to declining moral values in India, I include a series of educational attainment dummy variables. This approach is consistent with international evidence from psychology and economics that links educational attainment to better moral values (Rest & Thoma, 1985; Truex, 2011). Philosophers of education have further articulated that certain curricula, such as civic and moral education, are associated with improved moral values (Dewey, 1994). If greater educational attainment increases exposure to civic and moral education, we should observe a negative relationship between educational attainment and tolerance for corruption. In India, however, there has been a steady removal of civic and moral education from school curricula. In response to this phenomenon, the spiritual leader Sri Sri Ravi Shankar has argued that, "Corruption starts when there is a lack of moral education. There is a need to understand humanity through education. This will curb the habit of taking bribes." If Shankar is right, we may not find a relationship between educational attainment and tolerance for tax evasion and bribery.

The literature on the expected relationship between income and tolerance for corruption is ambiguous. According to an argument based on an opportunity cost effect, a richer person incurs larger opportunity costs from being moral. For example, by refusing to bribe, a richer person gives up more earnings during the additional hours spent on securing a driving license (Bertrand et al., 2007). In contrast, Shleifer (2004) proposed an income effect argument such that higher income makes it affordable to behave morally. Since the relative sizes of these (opposing) effects will vary from person to person, the net effect of income may be positive, negative, or zero. Further complicating the conceptual relationship is that income may affect the likelihood of encountering corruption. Using micro-level data from sub-Saharan Africa, Justesen and Bjørnskov (2014) showed that the poor are far more prone to experience having to pay bribes to government officials.

The literature portrays gender, likewise, as having complex relationships with tolerance for corruption. Males may be more tolerant of corruption because, as traditional breadwinners, they have more exposure to government officials; existing

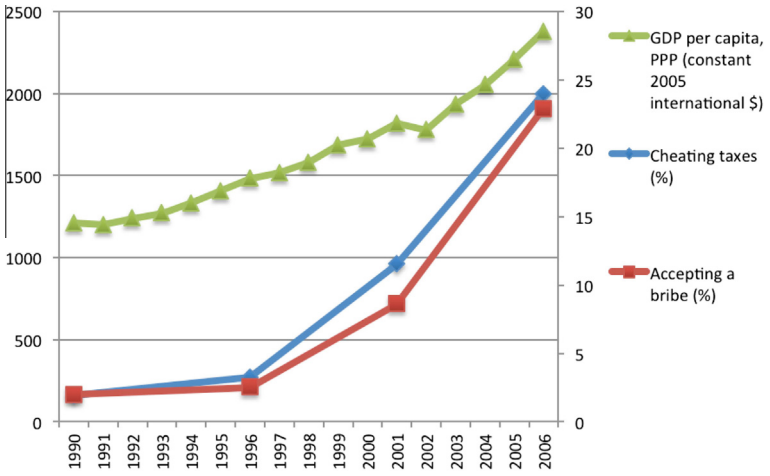

Figure 1. *Indicators of economic development and moral change in India, 1990–2006. Sources: GDP per capita and GDP growth figures obtained from World Development Indicators. Figures for "cheating taxes" and "accepting a bribe" are based on author's calculations using the World Values Survey data for India, years 1990, 1996, 2001, and 2006*

research indicates that males typically have a higher likelihood of engaging in crime or to having tolerance for illegal activity (Swamy, Knack, Lee, & Azfar, 2001). Research from behavioral science literature suggests that females behave more morally than men because of greater oxytocin—termed the "moral molecule" (Zak, 2012). I also include the age and age-squared to capture non-linear differences in attitudes. Thus, the expected relationship between age and tolerance for corruption is unclear.

Religion is a central issue in Indian life and identity (Banerjee & Duflo, 2007; Clothey, 2007). The WVS provided choices for Hindus (82.7%), Muslims (9.4%), Roman Catholic (1.9%), Sikh (1.5), Buddhists (1.2%), Jain (1.0%), Protestants (0.6%), Jews (0.2%), and others (Zoroastrians, atheists, agnostics are likely to be included here). Since religions tend to reject corrupt and immoral behavior, it is unclear if we should observe differences in attitudes between religions. A person's level of religiosity, in contrast, is likely to be negatively associated with tolerance for corruption because of fear of karma—punishment in this life, or the afterlife, or both (Marquette, 2012).

Beyond personal characteristics, there are regional characteristics that may be associated with moral change in India. For example, stark urban–rural differences could contribute to disparities in tolerance for corruption. Indian activists have argued that economic development and growth have been overwhelmingly urban phenomena (Mukherjee & Zhang, 2007), pointing to declining rates of educational outcomes and farmer suicides (Annual Status of Education Report, 2013; Gruère & Sengupta, 2011). Since we expect moral change to coincide with economic development, we would expect the urban–rural gap in tolerance for tax evasion and bribery to grow wider over time.

To consider the economic performance of the respondent's state of residence, I use the labels assigned by Kochhar, Kumar, Rajan, Subramanian, & Tokatlidis, 2006. In that study, each state was categorized as a leading state (Delhi, Tamil Nadu, Kerala, Maharashtra, Gujarat, Punjab, and Karnataka), middle state (Andhra Pradesh, Himachal Pradesh, Haryana, Uttaranchal, West Bengal, Jammu and Kashmir, and Rajasthan), or lagging state (Madhya Pradesh, Assam, Chhattisgarh, Uttar Pradesh, Orissa, Jharkhand, and Bihar) based on an index of scores for investment climate, infrastructure penetration, financial sector strength, mass media penetration, primary schooling in English, adult literacy rate, and colonial land tenure. Friedman (2005) argued that the relationship between regional economic growth and moral change is determined by the nature of growth: if a broad cross-section of a region is experiencing improving material standards of living (that is, growth is equitably enjoyed), then we should see moral positives such as tolerance (racial, religious, and attitudes toward immigrants) and the strengthening of democratic institutions (as in opportunities to ask questions about free press and viable political opposition). However, a conjecture for the Indian case is complicated because of unequal improvements in material standards within leading, middle, and lagging states (Deaton & Kozel, 2005).

6. RESULTS

The shortcoming of the descriptive analysis in Table 1 is its neglect of changes in the Indian population during this period. These changes may be responsible for shifts in moral values; in particular, it is possible that the share of the population who are particularly likely to strongly tolerate corruption has increased rather than there has been an increase of tolerance for corruption among all groups. Multivariate regression models permit us to focus on changes over time and hold certain characteristics constant. For now, I use the binary dependent variables and binomial probit regression models.

Table 2 shows the average marginal effects across all time points (e.g., education and income), plus the overall time trend adjusting for changing marginal levels of education, income, and other background variables from year to year. Table 3 presents an interaction model in which I relax the assumption that marginal effects were the same in each survey year; the top panel of results shows the marginal effects in 1990, and the bottom panel reports the linear time trend for each effect.

(a) *Results: binomial probit*

The marginal effects presented in Table 2 are obtained from binomial regression using the pooled sample for the four WVS rounds. The overall results provide suggestive evidence of moral decline, since these differences are not attributable to observable changes in the education, income, gender, age, religious, or regional composition of the respondents. Columns 1

Table 2. *Results on tolerance for corruption in India: Pooled binomial probit regression results, 1990–2006*

	Cheating on taxes is justified		Accepting a bribe is justified	
	Marg. effect	(SE)	Marg. effect	(SE)
Time	.0104**	(.0005)	.0089**	(.0005)
Below primary education	Reference		Reference	
Primary education	−.0097	(.0064)	−.0026	(.0059)
Secondary education	−.0178**	(.0065)	−.0089	(.0062)
Higher education	−.0146*	(.0075)	−.0143**	(.0067)
Income quintile 1	Reference		Reference	
Income quintile 2	−.0005	(.0061)	−.0144**	(.0051)
Income quintile 3	−.0017	(.0078)	−.0144	(.0065)
Income quintile 4	−.0265**	(.0129)	−.0081	(.0100)
Income quintile 5	.1226**	(.0336)	.0043*	(.0300)
Age	−.0002	(.0009)	−.0006	(.0008)
Age squared × 100	.0005	(.0010)	.0009	(.0010)
Male	−.0140**	(.0051)	−.0004	(.0046)
Hindu	Reference			
Muslim	−.0116	(.0095)	.0039	(.0082)
Other religion	−.0287**	(.0093)	.0025**	(.0082)
Religiosity	−.0072	(.0061)	−.0214**	(.0060)
Large town or city	.0083	(.0072)	−.0001	(.0067)
Leading economic growth state	Reference			
Middle economic growth state	−.0368**	(.0059)	−.0453**	(.0046)
Lagging economic growth state	.0177**	(.0064)	.0131**	(.0054)
Predicted probability of tolerance	.0572		.0475	
N	7,992		8,087	
Pseudo *R* squared	.1603		.1711	
Log likelihood	−2047		−1884	

Source: World Values Survey for India for years 1990, 1996, 2001, and 2006.
Notes: (1) The outcome variables is *Tolerance* (=0 is not justified, =1 if justified); (2) ** and * indicate statistical significance at the 10% and 5% level, respectively.

and 2 indicate positive and statistically significant coefficients for tolerance for corruption after holding observable personal and regional characteristics constant over time. Tolerance for tax evasion increased by an average 1.04 percentage points each year during 1990–2006; accordingly, tolerance for tax evasion would increase by a total of 16.61 percentage points in those 16 years (that is, 1.04 × 16), holding other observable characteristics constant over time. Similarly, the tolerance for bribery increased by an average of 0.89 points each year during 1990–2006; this translates to a 14.27 percentage point increase over the 16 years after holding other observable factors constant.

Consistent with the arguments on the social benefits of education, educational attainment at the secondary and university levels are associated with better moral values. The statistically insignificant coefficients for primary education indicate that for any given year, a person with primary education is as likely as a person with less than primary education to tolerate tax evasion and bribery, respectively. But there is statistical evidence that someone who has attained secondary education is 1.78% less likely to tolerate tax evasion than a counterpart with less than primary education; however, there is no statistical association between secondary educational attainment and tolerance for bribery. Regarding higher education, there is statistical evidence that an individual who has completed university is 1.46% and 1.43% less likely to tolerate tax evasion and bribery than someone with less than primary education, holding other factors constant.

As suggested by the literature, the relationship between income and moral values is complicated. Furthermore, the results in Table 2 indicate that the relationship depends on whether we are considering tax evasion or bribery. In the case of tolerance for tax evasion, there is no statistical difference between a poor person (income quintile 1), a lower middle-income person (quintile 2), and a middle-income person (quintile 3). Tolerance for tax evasion is lowest among upper middle-income persons (quintile 4); notably, compared to a poor person, an upper middle-income person (quintile 4) is 2.65% less likely to tolerate tax evasion in any given year, holding personal and regional characteristics constant. However, a rich person is 12.26% and 0.43% more likely to support tax evasion and bribery than a poor person, holding education and other factors constant. Thus the middle-income are less tolerant of tax evasion and bribery than the poor and rich. In other words, the statistical significance, direction, and magnitude of the coefficients indicate that there is a U-shaped relationship between income status and tolerance for corruption such that the middle classes are least tolerant.

The findings on gender difference in moral values are mixed. Men and women are equally tolerant of bribery but women are more tolerant of tax evasion, holding time and other factors constant. Both findings raise questions about the universality of Western claims and findings that women are more moral; of course, it is also possible that Indian women are more honest and less likely to underreport tolerance for corruption than Indian men. The statistically insignificant coefficients for age and age-squared suggest that attitudes toward tax evasion and bribery do not vary by age in India, holding other characteristics constant.

The results suggest that the moral values of Hindus and Muslims are comparable, but other religions have weaker moral values. In particular, the results in Table 2 show that there are no statistically significant differences in tolerance for tax evasion and bribery between Hindus and Muslims. Compared to a Hindu, a person of a religion other than Islam (such as a Christian, Sikh, or Buddhist) is 2.87% and 0.25%

Table 3. *Results on tolerance for corruption in India: pooled binomial probit regression with interactions, 1990–2006*

	Cheating on taxes is justified		Accepting a bribe is justified	
	Marg. effect	(SE)	Marg. effect	(SE)
Time	.0040	(.0041)	.0007	(.0035)
Below primary education	Reference		Reference	
Primary education	−.0147	(.0167)	.0070	(.0165)
Secondary education	−.0144	(.0178)	.0217	(.0200)
Higher education	−.0307	(.0225)	.0339	(.0216)
Income quintile 1	Reference		Reference	
Income quintile 2	.0044	(.0143)	−.0117	(.0113)
Income quintile 3	−.0243*	(.0140)	−.0325**	(.0101)
Income quintile 4	.0007	(.0197)	−.02311*	(.0121)
Income quintile 5	.0730	(.0600)	−.0367**	(.0148)
Age	−.0032	(.0023)	−.0042**	(.0019)
Age squared × 100	.0029	(.0030)	.0047**	(.0002)
Male	−.0161	(.0116)	−.0541**	(.0110)
Hindu	Reference		Reference	
Muslim	−.0365**	(.0137)	−.0661**	(.0062)
Other religion	−.0059	(.0204)	.0100	(.0187)
Religiosity	−.0082*	(.0143)	−.0077	(.0127)
Large town or city	.0013	(.0122)	−.0003	(.0107)
Leading economic growth state	Reference		Reference	
Middle economic growth state	.0304	(.0187)	.0062	(.0143)
Lagging economic growth state	.0070	(.0141)	−.0097	(.0114)
Interaction variables:				
Below primary education × Time	Reference		Reference	
Primary education × Time	−.0005	(.0015)	−.0008	(.0013)
Secondary education × Time	−.0038	(.0016)	−.0028**	(.0014)
Higher education × Time	−.0048**	(.0016)	−.0047**	(.0014)
Income quintile 1 × Time	Reference		Reference	
Income quintile 2 × Time	.0004	(.0018)	.0001	(.0010)
Income quintile 3 × Time	.0029**	(.0014)	.0035**	(.0012)
Income quintile 4 × Time	.0023	(.0016)	.0035**	(.0015)
Income quintile 5 × Time	.0023**	(.0027)	.0079**	(.0035)
Age × Time	.0003	(.0002)	.0003**	(.0001)
Age squared × 100 × Time	.0003	(.0000)	.0004**	(.0000)
Male × Time	.0001	(.0010)	.0032**	(.0009)
Hindu × Time	Reference		Reference	
Muslim × Time	.0054**	(.0020)	.0095**	(.0022)
Other religion × Time	.0018	(.0015)	.0017	(.0013)
Religiosity × Time	.0003	(.0011)	−.0010	(.0010)
Large town or city × Time	−.0009	(.0013)	.0003	(.0011)
Leading economic growth state × Time	Reference		Reference	
Middle economic growth state × Time	−.0057**	(.0013)	−.0059**	(.0012)
Lagging economic growth state × Time	.0020*	(.0011)	.0023**	(.0010)
Predicted probability of tolerance	.0565		.0462	
N	7,972		8,087	
Pseudo *R* squared	.1770		.1977	
Log likelihood	−2006		−1824	

Source: World Values Survey for India for years 1990, 1996, 2001, and 2006.
Notes: (1) The outcome variables for 'cheating taxes' are 0 if "not justified" and 1 if "justified"; (2) ** and * indicate statistical significance at the 10% and 5% level, respectively.

more likely to tolerate cheating on taxes and accepting a bribe, holding other factors constant. Regardless of the specific religion, a religious person is 2.14% less likely to tolerate bribery than a non-religious person, after controlling for time and other observable characteristics. This statistically significant finding is consistent with the idea that a religious person expects karma or costs in the present life and hereafter for immoral attitudes and behavior. However, the results should be cautiously interpreted because there may be interaction effects between religion and religiosity; in other words, some religiosity in some religions may be associated with greater support for corruption.

Similar to findings on personal economic status and tolerance, the economic growth performance of a state has a U-shaped relationship with moral values. A person in a middle growth state is 3.68% and 4.53% less likely to tolerate tax evasion and bribery than a person in a leading growth state, holding other factors constant. However, a person in a lagging state is 1.77% and 1.31% more likely to tolerate tax evasion and bribery than a person in leading growth state. Finally, despite the large urban–rural gap in economic development, there is no statistically significant difference in the tolerance for corruption between a rural and an urban person, holding constant time and other characteristics.

(b) *Results: binomial probit with interactions*

To what extent are these changing observable characteristics associated with moral change? Empirically, this would involve interacting the *Time* variable with each of the explanatory variables that have been considered so far. Table 3 presents marginal effect results that have been obtained from the binomial regression model with explanatory variables and double-interaction terms. The discussion in this section focuses on the marginal effects of the interaction terms. When compared to the coefficient without a time interaction in Table 2 (e.g., *Male*), the time interaction variable (e.g., *Male* × *Time*) indicates whether there has been a convergence, divergence, or no change in the attitude gap with the reference group (e.g., females), holding other factors and time-patterns constant.

As mentioned in the Introduction, educational attainment is associated with growing resistance to or distaste for corruption in India and that education may be an antidote to moral decline. Secondary educational attainment is associated with decreasing tolerance for bribery such that for each year, a person with secondary education becomes 0.28% less tolerant of bribery than a person with less than primary education; over the 1990–2006 period, this translates to a total of 4.48% points (that is, 16 × 0.28) divergence in tolerance compared to someone with less than primary education. These results are especially impressive considering that there has been less emphasis on moral education in school curricula. Regarding higher or university education, there is divergence in tolerance between someone with university education and someone with less than primary education—for each additional year, a university educated person is 0.48 percentage points and 0.47 percentage points less likely to tolerate tax evasion and bribery; this implies that tolerance for tax evasion and bribery between university educated and below-primary educated persons diverges 7.68 percentage points and 7.52% points from 1990 to 2006.

Table 3 shows statistical evidence that the middle-class and rich experienced higher rates of moral decline. Over time, there has been no change in the gap between a poor (quintile 1) person and lower middle-income (quintile 2) person over the 1990–2006 period, holding other factors constant. Relative to a poor person, however, the middle-income (quintile 3) and rich (quintile 5) people have become 0.29 percentage points and 0.23 percentage points more tolerant of tax evasion for each additional year; this indicates that the non-poor have become 3.68–4.64 percentage points more tolerant of tax evasion over the 1990–2006 period. The divergence range between the poor and non-poor for the tolerance for bribery is even higher: 5.60–12.64 percentage points for the 1990–2006 period, holding other characteristics constant. Overall, the interaction terms involving income show that there has been considerable divergence in the tolerance for corruption between the poor and non-poor.

The results in Table 3 suggest that Indian men have experienced slightly higher rates of moral decline than women, after holding constant other observable characteristics. For each additional year, and compared to a woman, a man is 0.32 percentage points more likely to tolerate bribery. Considering that Table 3 also shows that males are 5.41% less likely to tolerate bribery, it appears that the gender gap in tolerance for bribery narrowed by 5.12 percentage points over the 1990–2006 period; this explains why the basic regression in Table 2 did not detect a gender gap in tolerance for bribery. In contrast, the (lack of) gender gap on tolerance for tax evasion is unchanged over time.

In terms of religion, Table 3 shows that for any given year, Muslims are 3.65% and 6.61% less tolerant of tax evasion and bribery than Hindus. However, Muslims have experienced greater moral decline than Hindus, holding other factors constant. Compared to a Hindu, a Muslim's tolerance for tax evasion and bribery increased by 0.54 percentage points and 0.95 percentage points with each additional year; this suggests that Hindu–Muslim gap in tolerance diverged by a total of 8.64 percentage points and 15.20 percentage points over the 1990–2006 period. In short, over the 1990–2006 period, Muslims overtook Hindus in terms of tolerance for tax evasion and bribery. In contrast, the gaps between Hindus and those belonging to other religions (that is, Christians, Buddhists, Sikhs, and others) did not change over the 1990–2006 period. Furthermore, gaps in attitudes between the more religious, the less religious, and the non-religious did not change over the same period.

The regional patterns are, once again, complex. There is statistical evidence of a convergence in moral values between leading growth states and middle growth states; for each additional year and holding other factors constant, a person in a middle growth state is 0.57 percentage points and 0.59 percentage points less likely than a person in leading growth state to tolerate tax evasion and bribery; this implies that the gap in tolerance for tax evasion and bribery between leading and middle growth states narrowed by 9.12 percentage points and 9.44 percentage points from 1990 to 2006. In contrast, moral values diverge in leading and lagging growth states; for each additional year, a person residing in a lagging growth state is 0.20 percentage points and 0.23 percentage points more likely to tolerate tax evasion and bribery than a person residing in a leading growth state; this implies that this gap widened by 3.20 percentage points and 3.68 percentage points over the 1990–2006 period. Urban–rural differences in tolerance for tax evasion and bribery, however, remained unchanged over the same period.

(c) *Extensions: ordered probit*

As mentioned, I now return to the issue of the outcomes variables. So far, I have used binary outcome variables (1 if "tolerate" and 0 "do not tolerate"). The rationales for this approach are its wide use in social science research, and ease of interpretation (specifically, the use of marginal effects to interpret correlation sizes). But do the findings hold if instead of a binary value, the original WVS-assigned ordinal values are used? As robustness checks, I conduct ordered probit regression analysis by using the original ordinal values (that is, a number ranging from 1 for "never justified" to 10 for "always justified"). Appendix Table 5 presents the ordered probit regressions results without time interactions. Appendix Table 6 shows the ordered probit regression results with time interactions. Marginal effects are not shown because they vary by each outcome.

A comparison of the statistical significance and signs of coefficients reveals that the ordered probit regression results are quite similar to the binomial probit regression results. There are two notable exceptions, however. There is no longer any statistical evidence that those with secondary education become more opposed to corruption over time. In addition, the interpretation of a divergence between the poor (quintiles 1 and 2) and non-poor (quintiles 3, 4 and 5) no longer holds. Instead, the ordered probit results show statistical evidence of divergence between the non-rich (quintiles 1, 2, 3, and 4) and rich (quintile 5), such that only the rich have become more tolerant of corruption while the attitudes of the non-rich have not changed over the 1991–2006 period. It seems fitting that the rich, who experienced the most economic change during the period (Banerjee & Duflo, 2007), also experienced the largest moral change.

7. DISCUSSION AND FUTURE RESEARCH

Concerns about moral change in India have been raised since the early 1900s. As my findings show, it was only in the 2000s that tolerance for tax evasion and bribery increased. Why did tolerance for moral decline accelerate during economic liberalization? Is the rate of moral decline attached to some threshold level of per-capita income, or growth level, or both? This section presents some of the factors that may be tested in quantitative or qualitative research projects.

Labor market patterns, which reflect a significant and recent shift in Indian culture, may explain corruption attitude convergence between males and females, and Hindus and Muslims. A growing share of formal sector workers in the private sector, some of which function under international standards of non-discrimination on the basis of gender, caste, and religion. The resulting workplace interactions among traditionally isolated groups may be a source of common cultural values concerning tax evasion and bribery.

The divergence in tolerance for tax evasion and bribery between the rich and non-rich also needs to be explored. Broadly, the pattern is symptomatic of the rising income inequality between the rich and non-rich in India (Deaton & Tarozzi, 2005, chap. 16). For example, it may be that the rich have engaged in greater levels of tax evasion and bribery as means of ascending in the economic ranks or that being rich makes such behavior lucrative, and tolerance levels have changed in light of this experience. Furthermore, the rich may work and reside in more exclusive areas; the resulting reduction in social interaction with the non-poor could exacerbate this tolerance gap.

The regional patterns suggest that Indians in middle growth states are least tolerant of tax evasion and bribery (thus, revealing a U-shaped pattern of regional development), their attitudes diverging over time from those in leading and lagging states. This finding reflects the ambiguous link between moral change and economic development: in lagging states, tax evasion and bribery may be inhibiting economic progress (the "sanding the wheels" argument); in contrast, tax evasion and bribery could be facilitating growth in leading states (the "greasing the wheels" argument). There are some parallels between this finding and the cross-country study of Rock and Bonnett (2004), which found support for the East Asian paradox of high corruption and high economic growth. Again, the applicability of the high-corruption and high-growth explanation for Indian states deserves closer inspection. Further causal inquiry could examine the relationship between moral change and one or more of the state-level growth determinants identified in Kotwal *et al.* (2011): trade liberalization, fiscal expansion, changing government attitudes toward private business, access to credit, and technological advancement in agriculture and perhaps expanding the indicators of moral change. Several observers (e.g., Poirson, 2006), however, have noted the difficulty of obtaining such rich and sensitive data that span multiple Indian states and years.

Though an assessment of the policy antidotes is beyond the scope of this article, the results suggest that the continued rise of Indians with university education may decelerate moral decline. The results are encouraging because recent research from other developing countries concludes that education may not always be associated with moral values toward suicide bombing and war (Shafiq & Ross, 2010; Shafiq & Sinno, 2010). Further research on the extent, effectiveness, and prospects of moral education as a corrective to moral decline in India is encouraged.

The findings provide context and raise questions about subsequent events that were heavily based on anti-corruption platforms, including the Anna Hazare-led 2011 national protests, Arvind Kejriwal's one year old Aam Aadmi (Common Man) party winning state elections in Delhi in 2013, and Narendra Modi and his Bharatiya Janata Party's (BJP) resounding victory in the 2014 national elections. Are these signs of a reversal in moral values? Though the latest rounds of the WVS do not include India, other recent and ongoing public opinion surveys (e.g., the Gallup Poll) may provide some answers.

Finally, for a more complete understanding of moral change, studies of moral values should be complemented by studies of moral actions (i.e., the consequentialist approach). Future studies of moral change in Indian can potentially combine data on attitudes with data on actions such as income taxes paid or collected; again, this approach is not feasible for the 1990–2006 period because nearly 99% of Indian earners were exempt from taxation.

8. CONCLUSION

This study addresses the assertion of prominent politicians, journalists, and businesspeople that India's economic development has coincided with a decline in moral values. Using data from the WVS for 1990–2006, I examined aspects of moral change by presenting statistical patterns in public attitudes toward tax evasion and bribery. The descriptive statistics suggest that tolerance for tax evasion increased from 1.92% to 23.97%, while tolerance for bribery increased from 1.98% to 22.90%. This rapid moral change corresponded with per-capita incomes surpassing $1,500 (real 2005 US$).

The results from basic regression analyses show that after controlling for personal and regional characteristics over time, tolerance for tax evasion and bribery among Indian adults increased annually by 1.04 percentage points and 0.89 percentage points. Time-interaction regression models reveal patterns in various groups. Tolerance for tax evasion, or bribery, or both converge between males and females but diverge between the rich and the non-rich, and those residing in leading and lagging economic states. Notably, educational attainment at the university level is associated with falling tolerance for tax evasion and bribery.

These findings raise several questions for future research: Why did such aspects of moral change occur and accelerate at the turn of the century? Did the expansion of private sector employment and anti-discrimination laws contribute to the convergence in moral values? What explains the divergence in moral values between rich and poor individuals and regions? Is education an antidote for moral decline in India? Finally, are the post-2006 anti-corruption movements and election victories indicative of improvements in moral values?

NOTES

1. As an example of the journalistic attention directed to Indian corruption, an entire webpage of The Huffington Post is dedicated to corruption issues in India: http://www.huffingtonpost.com/news/india-corruption (Last accessed: 9 July 2013). A recent and typical incident notes that 120 of India's 523 parliament members have been accused of such crimes such as accepting bribes from businesses or private citizens.

2. Continuing with the earlier statement on ordinary people being both victims and enablers, moral values or character can have major implications on economic development. For example, people who are disgusted by their own engagement in corrupt acts may go on to elect candidates with strong anti-corruption platforms. In contrast, people who are indifferent or enjoy their own engagement in corruption may choose corrupt politicians and parties.

3. Despite the concerns, India's corruption rankings are not alarming. Transparency International (2010) ranked India as the 87th most corrupt economy (out of 178) in its *Corruption Perceptions Index 2010*. The Index gave India an integrity score of only 3.3 on a 0–10 scale. Compared to BRIC counterparts, India fared worse than Brazil (69th with a score of 3.7) and China (78th with a score of 3.5) but better than Russia (154th with a score of 2.1).

4. Alternatively, the higher figures in 2010 may reflect a rising trend in support for corruption after 2006. Details from the report are as follows: In a section on "bribery by institutions," respondents who came into contact with nine service providers reported that they had paid a bribe to a particular institution in the past 12 months at the following rates: police: 64%, land services: 63%, registry and permit services: 62%, tax revenue: 51%, judiciary: 45%, customs: 41%, utilities: 47%, medical services: 26%, and education system: 23%. Approximately 40% of the people reported that, "the bribe was paid to speed things up"; the remaining 60% was split between, "the bribe was paid to avoid a problem with the authorities" and "the bribe was paid to receive a service I was entitled to". Therefore, there are grounds to believe that attitudes and participation in corruption are comparable and linked.

REFERENCES

Abramson, P., & Inglehart, R. (1995). *Value change in global perspective*. Ann Arbor: University of Michigan Press.

Aidt, T. (2009). Corruption, institutions and economic development. *Oxford Review of Economic Policy, 25*(2), 271–292.

Annual Status of Education Report. (2013). *Annual status of education report (Rural) 2012*. Facilitated by PRATHAM. New Delhi, India: ASER Centre.

Azfar, O., & Murrell, P. (2009). Identifying reticent responses: Assessing the quality of survey data on corruption and values. *Economic Development and Cultural Change, 57*(2), 387–411.

Banerjee, A., & Duflo, E. (2007). The economic lives of the poor. *Journal of Economic Perspectives, 21*(1), 141–168.

Banerjee, A., & Piketty, T. (2005). Top Indian incomes, 1922–2000. *The World Bank Economic Review, 19*(1), 1–20.

Bardhan, P. (2006). The economist's approach to the problem of corruption. *World Development, 34*(2), 341–348.

Basu, K., & Maertens, A. (2007). The pattern and causes of economic growth in India. *Oxford Review of Economic Policy, 23*(2), 143–167.

Becker, G. (1993). Nobel lecture: The economic way of looking at behavior. *Journal of Political Economy, 101*(3), 385–409.

Bertrand, M., Djankov, S., Hanna, R., & Mullainathan, S. (2007). Obtaining a driver's license in India: An experimental approach to studying corruption. *The Quarterly Journal of Economics, 122*(4), 1639–1676.

Bhagwati, J., & Panagariya, A. (2013). *Why growth matters: How economic growth in India reduced poverty and the lessons for other developing countries*. New York: Council of Foreign Affairs and Public Affairs.

Bloom, P. (2010). How do morals change? *Nature, 464*(25), 490.

Brodbeck, F., Kugler, K., Reig, J., & Maier, M. (2013). Morals matter in economics games. *PLoS One, 8*(12), e8158. http://dx.doi.org/10.137/journal.pone.0081558.

Clothey, F. (2007). *Religion in India: A historical introduction*. New York: Routledge.

Datt, G., & Ravallion, M. (2011). Has India's economic growth become more pro-poor in the wake of economic reforms? *World Bank Economic Review, 25*(2), 157–189.

Deaton, A., & Kozel, V. (2005). Data and dogma: The great India poverty debate. *World Bank Research Observer, 20*(2), 177–199.

Deaton, A., & Tarozzi, A. (2005). Prices and poverty in India. In *The great Indian poverty debate* (pp. 381–411). New Delhi: MacMillan India.

Dewey, J. (1994). In J. Gouinlock (Ed.), *The moral writings of John Dewey*. Buffalo, NY: Prometheus Books.

Economics and Political Weekly. (2009). Editorial: Acceptance of corruption. *Economics and Political Weekly, 44*(5), [January 31–February 06].

Dreze, J., & Sen, A. (2013). *An uncertain glory: India and its contradictions*. Princeton: Princeton University Press.

Etzioni, A. (1988). *The moral dimension: Toward a new economics*. New York: The Free Press.

Fisman, R., & Miguel, E. (2008). *Economic gangsters*. Princeton, NJ: Princeton University Press.

Frank, R. (2004). *What price the moral high ground? Ethical dilemmas in competitive environments*. Princeton, NJ: Princeton University Press.

Freund, C., Hallward-Driemeier, M., & Rijkers, B. (2014). Deals and delays: Firm-level evidence on corruption and policy implementation times. *Policy Research Working Paper 6949*. Washington, DC: World Bank Group.

Friedman, B. (2005). *The moral consequences of economic growth*. New York: Vintage.

Glaeser, E., Laibson, D., Scheinkman, J., & Soutter, C. (2000). Measuring trust. *Quarterly Journal of Economics, 115*(3), 811–846.

Goheen, J., Srinivas, M., Karve, D., & Singer, S. (1958). India's cultural values and economic development: A discussion. *Economic Development and Cultural Change, 7*(1), 1–12.

Gruère, G., & Sengupta, D. (2011). Bt cotton and farmer suicides in India: An evidence-based assessment. *Journal of Development Studies, 47*(1), 316–337.

Guha, R. (2007). *India after Gandhi: The history of the world's largest democracy*. New York: Harper Collins.

Hardoon, D., & Heinrich, F. (2011). *Daily lives and corruption: Public opinion in South Asia*. Berlin: Transparency International.

Justesen, M., & Bjørnskov, C. (2014). Exploiting the poor: Bureaucratic corruption and poverty in Africa. *World Development, 58*, 106–115.

Kochhar, K., Kumar, U., Rajan, R., Subramanian, A., & Tokatlidis, I. (2006). India's pattern of development: What happened, what follows? *Journal of Monetary Economics, 53*(5), 981–1019.

KPMG. (2011). *Survey on bribery and corruption: Impact on economy and business environment*. India and Switzerland: KPMG.

Kohli, A. (1989). Politics of economic liberalization in India. *World Development, 17*(3), 305–328.

Kotwal, A., Ramaswami, B., & Wadhwa, W. (2011). Economic liberalization and Indian economic growth: What's the evidence? *Journal of Economic Literature, XLIX*(4), 1152–1199.

Marquette, H. (2012). 'Finding god' or 'moral disengagement' in the fight against corruption in developing countries? Evidence from India and Nigeria. *Public Administration and Development, 32*(1), 11–26.

Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research, XLV*, 633–644.

McMahon, W. (2009). *Higher learning, greater good: The private and social benefits of higher education*. Baltimore: Johns Hopkins University Press.

Mishra, P. (2010). *The rotting of new India*. The Guardian, December 1. Available at: <http://www.guardian.co.uk/commentisfree/2010/dec/01/rotting-new-india-scandal>. Last accessed on 15 March 2013.

Mukherjee, A., & Zhang, X. (2007). Rural Industrialization in China and India: Role of policies and institutions. *World Development, 35*(10), 1621–1634.

Olken, B., & Pande, R. (2012). Corruption in developing countries. *Annual Review of Economics, 4*, 479–505.

Ostling, R. (2009). Economic influences on moral values. *The B.E. Journal of Economic Analysis & Policy: Advances, 9*(1), [article 2].
Poirson, H. (2006). The tax system in India: Could reform spur growth? *IMF Working Paper 06/93*.
Rest, J., & Thoma, S. (1985). Relation of moral judgment to formal education. *Developmental Psychology, 21*(4), 709–714.
Rock, M., & Bonnett, H. (2004). The comparative politics of corruption: Accounting for the East Asian Paradox in empirical studies of corruption, growth and investment. *World Development, 32*(6), 999–1017.
Rothstein, B., & Uslaner, E. (2005). All for all: Equality, corruption, and social trust. *World Politics, 58*, 41–72.
Sen, A. K. (2009). Introduction. In A. Smith (Ed.), *The theory of moral sentiments* (pp. vii–xxvi). New York: Penguin.
Shafiq, M. N., & Ross, K. (2010). Educational attainment and attitudes toward war in Muslim countries contemplating war. *Journal of Development Studies, 46*(8), 1424–1441.
Shafiq, M. N., & Sinno, A. K. (2010). Education, income, and attitudes toward suicide bombing: Evidence from six Muslim countries. *Journal of Conflict Resolution, 54*(1), 146–178.
Shleifer, A. (2004). Does competition destroy ethical behavior? *American Economic Review, 94*(2), 414–418.
Swamy, A., Knack, S., Lee, Y., & Azfar, O. (2001). Gender and corruption. *Journal of Development Economics, 64*(1), 25–55.
Transparency International. (2010). *Corruption perceptions index 2010*. Berlin: Transparency International Secretariat.
Truex, R. (2011). Corruption, attitudes, and education: Survey evidence from Nepal. *World Development, 39*(4), 631–646.
World Bank. (2013). Urbanization beyond municipal boundaries. *Direction in Development Series 75734*. Washington, DC: The World Bank.
Zak, P. (2012). *The moral molecule: The source of love and prosperity*. New York: Dutton.

APPENDIX.

Table 4. *Mean of dependent and explanatory variables by year*

Variable name	Variable type	1990 Mean	1996 Mean	2001 Mean	2006 Mean	Pooled Mean
Dependent variables:						
Tax evasion	Dummy	.019	.033	.115	.240	.091
Accepting bribe	Dummy	.020	.025	.085	.229	.081
Explanatory variables:						
Time	Years	0	6	11	16	7.8
Below primary education	Dummy	.100	.313	.397	.380	.286
Primary education	Dummy	.306	.269	.251	.249	.271
Secondary education	Dummy	.231	.226	.211	.242	.228
Higher education	Dummy	.363	.183	.136	.119	.210
Income quintile 1	Dummy	.297	.172	.207	.329	.254
Income quintile 2	Dummy	.338	.248	.533	.367	.369
Income quintile 3	Dummy	.200	.218	.211	.176	.201
Income quintile 4	Dummy	.120	.088	.019	.096	.083
Income quintile 5	Dummy	.016	.017	.020	.030	.020
Age	Years	35.9	35.9	40.2	41.4	38.2
Age squared × 100	Years-squared	14.77	14.30	18.27	19.27	16.53
Male	Dummy	.535	.549	.568	.569	.554
Hindu	Dummy	.882	.774	.722	.756	.789
Muslim	Dummy	.055	.120	.108	.081	.089
Other religion	Dummy	.062	.106	.169	.163	.121
Religiosity	Dummy	.820	.724	.750	.728	.759
Large town or city	Dummy	.549	.262	.112	.078	.268
Leading state	Dummy	.420	.417	.415	.412	.416
Middle state	Dummy	.220	.233	.239	.227	.229
Lagging state	Dummy	.360	.350	.347	.360	.355
N		2,500	2,040	1,995	1,542	8,533

Source: World Values Survey for India for years 1990, 1996, 2001, and 2006.
Notes: Sample sizes for dependent variables are smaller than the *N* indicated. For tax evasion, these figures are 2,451 for 1990, 1,968 for 1996, 1,877 for 2001, and 1,676 for 2006; for bribery, the sample sizes are 2,476 for 1990, 1,986 for 1996, 1,910 for 2006, and 1,715 for 2006.

Table 5. *Results on tolerance for corruption in India: pooled ordered probit regression results, 1991–2006*

	Cheating on taxes is justified		Accepting a bribe is justified	
	Coeff.	(SE)	Coeff.	(SE)
Time	.0407**	(.0029)	.0434**	(.0030)
Below primary education	Reference		Reference	
Primary education	−.1258**	(.0417)	−.0663	(.0424)
Secondary education	−.2222**	(.0462)	−.1812**	(.0477)
Higher education	−.2488**	(.0502)	−.2383**	(.0522)
Income quintile 1	Reference		Reference	
Income quintile 2	−.0354**	(.0370)	−.1617**	(.0378)
Income quintile 3	.0053	(.0448)	−.0757	(.0462)
Income quintile 4	.1444**	(.0594)	.0270	(.0619)
Income quintile 5	.4690**	(.1037)	.2027*	(.1092)
Age	−.0119**	(.0057)	−.0090	(.0058)
Age squared × 100	.0116*	(.0063)	.0102	(.0064)
Male	.1323**	(.1323)	.0445	(.0445)
Hindu	Reference		Reference	
Muslim	−.0152	(.0534)	−.0475	(.0321)
Other religion	.1467**	(.0465)	.1730**	(.0558)
Religiosity	−.1260**	(.0349)	−.1442**	(.0358)
Large town or city	.0378	(.0396)	.0270	(.0410)
Leading economic growth state	Reference		Reference	
Middle economic growth state	−.2565**	(.0424)	−.3609**	(.0442)
Lagging economic growth state	.1182**	(.0355)	.0300	(.0364)
/cut 1	.6420	(.1318)	.6831	(.1348)
/cut 2	.7667	(.1319)	.8129	(.1349)
/cut 3	.9452	(.1320)	.9862	(.1351)
/cut 4	1.1695	(.1324)	1.2057	(.1354)
/cut 5	1.3033	(.1327)	1.3224	(.1356)
/cut 6	1.5000	(.1332)	1.5141	(.1360)
/cut 7	1.6080	(.1335)	1.5717	(.1362)
/cut 8	1.7300	(.1339)	1.7233	(.1368)
/cut 9	1.7657	(.1340)	1.7459	(.1369)
N	7,972		8,087	
Pseudo *R* squared	.0296		.0352	
Log likelihood	−7921		−7213	

Source: World Values Survey for India for years 1991, 1996, 2001, and 2006.
Notes: (1) The outcome variables are quantitative and discrete, ranging from 1 ("never justified") to 10 ("always justified"); (2) ** and * indicate statistical significance at the 10% and 5% level, respectively.

Table 6. *Results on tolerance for corruption in India: pooled ordered probit regression with interactions, 1991–2006*

	Cheating on taxes is justified		Accepting a bribe is justified	
	Coeff.	(SE)	Coeff.	(SE)
Time	−.0005	(.0221)	−.0001	(.0227)
Below primary education	Reference		Reference	
Primary education	−.1595*	(.0829)	−.0148	(.0849)
Secondary education	−.1855**	(.0909)	−.0014	(.0943)
Higher education	−.1130	(.0878)	.0005	(.0916)
Income quintile 1	Reference		Reference	
Income quintile 2	−.0395	(.0646)	−.1778**	(.0668)
Income quintile 3	.0292	(.0736)	−.1518**	(.0774)
Income quintile 4	.0931	(.0906)	−.1874*	(.0989)
Income quintile 5	.0586	(.1985)	−.4153*	(.2372)
Age	−.0247**	(.0100)	−.0147	(.0107)
Age squared × 100	.0265**	(.0116)	.0144	(.0125)
Male	.1802**	(.0535)	−.0660	(.0554)
Hindu	Reference		Reference	
Muslim	−.2390**	(.1076)	−.3514**	(.1176)
Other religion	.1420	(.0906)	.1909**	(.0932)
Religiosity	−.1242**	(.0617)	−.1212*	(.0647)
Large town or city	.2040**	(.0536)	.1061*	(.0563)

(*continued on next page*)

Table 6 (*continued*)

	Cheating on taxes is justified		Accepting a bribe is justified	
	Coeff.	(SE)	Coeff.	(SE)
Leading economic growth state	Reference		Reference	
Middle economic growth state	−.1033	(.0685)	−.1094	(.0708)
Lagging economic growth state	−.2395**	(.0606)	−.4384**	(.0641)
Interaction variables:				
Below primary education × Time	Reference		Reference	
Primary education × Time	.0064	(.0077)	−.0028	(.0079)
Secondary education × Time	−.0010	(.0084)	−.0079	(.0087)
Higher education × Time	−.0204**	(.0090)	−.0318	(.0094)
Income quintile 1 × Time	Reference		Reference	
Income quintile 2 × Time	−.0005	(.0063)	.0016	(.0065)
Income quintile 3 × Time	−.0004	(.0075)	.0125	(.0078)
Income quintile 4 × Time	.0120	(.0093)	.0338	(.0097)
Income quintile 5 × Time	.0489**	(.0175)	.0662**	(.0198)
Age × Time	.0017*	(.0009)	.0011**	(.0098)
Age squared × 100 × Time	−.0020*	(.0001)	.0009	(.0011)
Male × Time	−.0046	(.0053	.0152**	(.0054)
Hindu × Time	Reference		Reference	
Muslim × Time	.0279**	(.0101)	.0366**	(.0109)
Other religion × Time	.0072	(.0082)	.0039	(.0084)
Religiosity × Time	.0034	(.0059)	−.0002	(.0061)
Large town or city × Time	−.0389**	(.0072)	−.0229**	(.0074)
Leading economic growth state × Time	Reference		Reference	
Middle economic growth state × Time	−.0154**	(.0070)	−.0294**	(.0073)
Lagging economic growth state × Time	.0446**	(.0059)	.0558**	(.0062)
/cut 1	.4079	(.2243)	.4534	(.2362)
/cut 2	.5350	(.2244)	.5873	(.2363)
/cut 3	.7172	(.2245)	.7661	(.2364)
/cut 4	.9465	(.2248)	.9934	(.2366)
/cut 5	1.0832	(.2249)	1.1140	(.2367)
/cut 6	1.2847	(.2252)	1.3122	(.2370)
/cut 7	1.3954	(.2254)	1.3716	(.2371)
/cut 8	1.5212	(.2256)	1.5287	(.2374)
/cut 9	1.5581	(.2257)	1.5522	(.2374)
N	7972		8087	
Pseudo *R* squared	.0409		.0515	
Log likelihood	−7829		−7092	

Source: World Values Survey for India for years 1991, 1996, 2001, and 2006.
Notes: (1) The outcome variables are quantitative and discrete, ranging from 1 ("never justified") to 10 ("always justified"); (2) ** and * indicate statistical significance at the 10% and 5% level, respectively.