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Change in Subjective Well-Being, Affluence and Trust in Politicians¹

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Abstract

Using nationally-representative household panel data in the India Human Development Surveys for 2005-6 and 2011-12, we examine the *causal* relationship between trust in politicians and the change in SWB between 2005 and 2012 where the politicians comprise Members of State Legislative Assemblies, Members of Parliament and other political aspirants. Our analysis is unique as it takes account of the loss of public trust in politicians due to the scourge of criminality among the elected members. More specifically, we test (i) whether criminality among the politicians influences trust in them, and (ii) whether the trust in politicians influences perceived well-being, drawing upon instrumental variable (IV) and Lewbel IV estimators. We discuss the policy challenges in mitigating this scourge and enhancing perceived well-being in light of a recent surge in the share of criminal politicians.

Key words: Well-being, Affluence, Trust in Politicians, Criminality, Corruption, India

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1. Introduction

Serious questioning of measures of well-being, based on per capita income/expenditure, is closely associated with a surge of interest in measures of subjective well-being during the last few decades. Among those who have given strong conceptual and empirical support, some prominent contributions include Clark (2003), Blanchflower and Oswald (2004, 2007), Easterlin (2006), Kahneman and Krueger (2006), Kahneman and Deaton (2010), Diener et al. (2013), Akay et al. (2017), and Deaton (2011, 2018).

Subjective well-being (SWB) or life evaluation refers to the quality or goodness of lives, overall life satisfaction, or sometimes happiness. Measurement is usually based on the Cantril ladder (1965), wherein individuals are asked to place themselves on an 11-step ladder with the worst possible life representing the lowest rung and the best possible life representing the top rung.

The measurement of SWB, however, has been controversial. Ravallion et al. (2016), for example, are sceptical but not dismissive of such measures. Their scepticism rests on scale heterogeneity - the standard deviation of utility over different choice situations. Yet subjective measures of poverty are not just similar to those obtained from income/expenditure thresholds but sometimes unavoidable². Deaton (2018), for example, offers robust support to self-reported measures of well-being, as such measures capture aspects of welfare beyond real income, which is what economists typically use to proxy utility. He uses cross-country and country-specific comparisons to validate measures of SWB and draws out their policy significance.

Here we aim to build on our recent companion study (Kulkarni et al., 2021a) that has compared the determinants of the change in SWB confined to economic well-being and those of the change in objective well beings based on per capita household consumption in India between 2005 and 2012. A significant point of departure of the present study is the examination of the causal relationship between trust in politicians and the change in SWB between 2005 and 2012. The politicians include members of parliament (MPs), members of state legislative assemblies (MLAs) and others who have contested elections without winning. To the best of our knowledge, not only analytical studies of SWB at the all-India level are scanty but also there is none that explores the relationship between SWB and trust in public institutions. Here we examine who trusts politicians and why and whether this trust is associated with well-being. Besides, we experiment with IV estimation of trust in these institutions -including 2SLS and IV Lewbel estimations - to address the endogeneity concerns and robustness checks.

²In another contribution, Ravallion (2014) conjectures that different people are likely to have different ideas about what it means to be “rich” or “poor,” or “satisfied” or not with one’s life, leading them to interpret survey questions on subjective welfare differently.

2. Scheme

In Section 3, we offer a selective review of the literature on SWB and its covariates. As the extant literature on the links between SWB and trust in public institutions is paltry and notional, we confine ourselves to the relationship between SWB and trust in politicians. Section 4 is devoted to a brief review of salient features of the two rounds of the only all-India panel survey in *India Human Development Survey*, conducted by the National Council of Applied Economics Research, and University of Maryland, and a few cross-tabulations of SWB and trust in public institutions. Section 5 discusses model specifications and their estimation. This is followed by an interpretation of the results in Section 6. Discussion from a broad policy perspective is done in Section 7. Policy challenges are delineated in Section 8.

3. Literature Review

As a detailed literature review is available in Kulkarni et al. (2021a), a selective review is given below. In addition, we sketch the mechanisms between well-being and trust in politicians.

(i) *Studies of Subjective Well-Being (SWB)*³

One important empirical issue is whether the measures of SWB are reliable (e.g., Kahneman and Krueger, 2006; Kahneman and Deaton, 2010; Diener et al., 2013; Akay et al., 2017, and Deaton, 2011, 2018). Kahneman and Krueger (2006) argue that one way of partially assessing the validity of SWB measures is to examine their correlation with various individual traits. They argue that (i) recent positive changes in circumstances, as well as demographic variables including education and health, are likely to be positively correlated with happiness or satisfaction; (ii) variables that are associated with low life satisfaction and happiness include: *recent* negative changes of circumstances; chronic pain; and unemployment, especially if only the individual concerned was laid off; (iii) gender is uncorrelated with life satisfaction and happiness; (iv) the effects of age are complex - the lowest life satisfaction is apparently experienced by those who have teenagers at home, and reported satisfaction improves thereafter. They resolve the puzzle of the relatively small and short-lived effect of changes in most life circumstances on reported life satisfaction by invoking evidence on adaptability. They conclude that despite their limitations, subjective measures of well-being enable welfare analysis in a more direct way that could be a preferred alternative to traditional welfare analysis.

Another important study by Diener et al. (2013) scrutinises the life satisfaction scales in the global context, based on their critical review of relevant studies and verification of the reliability of the scales used and validity of judgments made in SWB measures. They find that the stability of life satisfaction scores across time and situations suggests that consistent psychological processes are involved and

³This sub-section draws upon Kulkarni et al. (2021a) that shows the importance of using SWB as a welfare metric.

similar information is used when people report their scores, while single-item scales are less stable than multi-item life satisfaction scales. Societal-level mean life satisfaction also shows robust consistency. In brief, reliability and validity of life satisfaction scales reflect authentic differences in the ways people evaluate their lives, and the scores move in expected ways to changes in people's circumstances.

Among those who have emphatically endorsed SWB measures is Deaton (2018). He argues that SWB measures do not need to be related to behaviour. 'If decision utility differs from welfare utility, and if people sometimes behave against their best interests, the direct measurement of well-being might still give an accurate measure, and might even enable people to do better, either through paternalistic government policies, or incentives, but more simply by providing information on the circumstances and choices that promote well-being ...' (*ibid.*, 2018, p. 18). Deaton elaborates that direct measures may also capture aspects of welfare beyond real income, which is what economists typically use to proxy utility. Health is a case in point; education, civil liberties, civic participation, respect, dignity, and freedom are others.

Deaton (2018), based on the Gallup World Poll, uses an evaluative measure of well-being that asks people to report, on an eleven-point scale, from 0 to 10, how their life is going (originally due to Cantril, 1965). His main findings are: average ladder values vary greatly around the world, from around 4 in Africa, to between 7 and 8 in the rich countries of Europe and the English-speaking world; differences between men and women within regions are smaller than differences between regions; women tend to evaluate their lives somewhat more highly than men, except in Africa, and sometimes among those over 60; age patterns are apparent, but neither universal, nor very pronounced, at least compared with those associated with international differences in incomes; the (unconditional) U-shape appears in the English speaking countries (U.K., U.S., Canada, Ireland, New Zealand and Australia), to a lesser extent in East and in South Asia and perhaps in Latin America and the Caribbean - though only in the last age group (65-74), and in Europe—more for men than women—but not elsewhere. In the two poorest regions, Africa and South Asia, life evaluation is low throughout life and, in Africa, it falls with age. However, Deaton is puzzled by the U-shape of well-being, where it exists, since SWB rises after middle-age, when people are losing their spouses, and when both morbidity and mortality are rising. In contrast, other components of psychological well-being may improve with age, less stress, and the negative side-effects (e.g., physical pain) of work diminish with retirement.

In a highly cited study, Blanchflower and Oswald (2007) analyse data on a large sample of Americans and Europeans. It draws two main conclusions. First, psychological well-being depends in a curvilinear way upon age. Second, there are important differences in the reported happiness levels of different birth cohorts. The authors suggest that reported well-being is U-shaped in age and that the convex structure of the curve is similar across different parts of the Western world.

In an admirably clear and comprehensive review of factors associated with SWB, Dolan et al. (2008) draw attention to ambiguities, inconsistencies and causality in the interpretation of the results. The results generally show positive but diminishing returns to income. Some of this positive association is likely to be due to reverse causation, as indicated by the studies which show higher well-being leading to higher future incomes (Clark, Frijters and Shields, 2008).

Some studies find a positive relationship between SWB and each additional level of schooling, while others find that the middle level of schooling is related to the highest life satisfaction (e.g., Blanchflower and Oswald, 2004; Stutzer, 2004). However, there is some evidence that schooling has more of a positive impact in low-income countries. In addition, the coefficient on education is often responsive to the inclusion of other variables within the model. Schooling is likely to be positively correlated with income and health, and, if these are not controlled for, the schooling coefficient is likely to be more strongly positive (Fahey and Smyth, 2004; Ferrer-i-Carbonell, 2005).

In India's context, an important question is: Do *Dalits* and Other Backward Classes (OBC) in rural North India report lower life satisfaction than higher caste people, and if so, is it merely because they are poorer? Spears (2016) addresses this question, using the Sanitation Quality, Use, Access and Trends (SQUAT) survey data collected in rural Bihar, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh in 2013-14 by a team of researchers, including the author. Two specific issues are: (i) Do Dalits and Other Backward Classes (OBC) in rural north India report lower life satisfaction than higher caste people, and, if so, (ii) is it merely because they are poorer? The findings are: lower caste people in rural North India evaluate their lives to be worse than higher caste people, and this difference is not explained by income poverty. Spears (2016) is only among a few studies on SWB in the context of India and, to our knowledge, there have not been any rigorous national-level studies on SWB in India.

(ii) Studies on Trust in Politicians and their Criminality in India

Trust is based on perceptions and its measurement is difficult. This, however, has not deterred researchers from measuring it by perception surveys, asking citizens, businesses or experts whether they trust (or have confidence) in government, leadership, and/or specific government institutions (e.g. local authorities or the justice system).

Although India is considered one of the most democratic countries in developing countries as it is ranked 53rd in a democracy index in the world due to transparent electoral process and pluralism (*Economist Intelligence Unit* 2021)⁴, trust in politicians in India has been eroding since 2009 (WEF, Global Competitiveness Report 2013-14), coinciding with United Progressive Alliance's (UPA) second

⁴ Neighbouring countries are ranked lower than India (Sri Lanka 68th, Bangladesh 76th, Nepal, 92nd, Pakistan, 105th) in the democracy index in 2020, but it should be noted that India's world ranking fell from 27th to 53rd from 2014 to 2020 (*Economist Intelligence Unit* 2021).

election victory in May, 2009. Among 148 countries surveyed, India ranked 115th, an all-time low. The gap between the democracy index and trust in politicians may reflect the fact that the loss of public trust can be large if the democratically elected members do not fulfil the election manifesto commitment and/or are corrupt.

Trust is a relational concept that links the subject (who trusts) to the object (that is trusted). Trust is conditional on an object between two individuals, A and B. Trust is thus expressed as A trusts B to do X (Hardin, 2000)⁵. Fehr (2009) argued that trust should be defined in relation with people's behavioural and social preferences and beliefs and found that the survey-based measure of trust is correlated with low levels in betrayal aversion and in risk aversion. Given that preferences are exogenous and beliefs are endogenous in the short run, trust is partly exogenous and partly endogenous, which has led the author to argue that how trust was endogenously formed should be taken into account in the empirical analysis.

Political trust encompasses politicians and government. Following Hardin (2006), trustworthiness is not about the moral standing of the actor or institution that is trusted or not. Rather, trustworthiness is driven by a sense on the part of the citizen that the politician or government agency (the focus of their trust) has their interests at heart and will take them into account in their decisions.

Trust judgments do not require a great deal of information to be obtained by the citizen. Cues, hints, scraps of insight can be enough. A common shortcut used by citizens is to focus on individuals rather than institutions.

Our review is confined mainly to studies focused on India. Among the most comprehensive and insightful is Vaishnav (2017) who develops and illustrates a model of the electoral marketplace. He analyses data on politicians including members of state legislative assemblies (MLAs), members of parliament (MPs), winners and losers in these elections, their criminal background, assets, ethnicity, their re-election prospects, and implications for the sustenance of democracy.

In an electoral market, there are buyers (voters) and sellers (parties and politicians). Supply and demand factors are at work. Supply is disaggregated into two components: the individual choice to contest an election, and the selection of candidates by political parties. The demand comes from voters who express their preferences through the ballot box. Elections determine the precise location where supply and demand meet (Vaishnav, 2017).

⁵ Addition of time to Hardin's definition indicates that trust may change over time — "A trusts B to do X at T" (Bauer and Freitag, 2017).

This model is used to explain the share of politicians with a criminal background and *crorepatis* (a crore equals 10 million), their intersection, their chances of winning an election and re-election and huge financial gains. The analyses are based on data pertaining to state and general elections, made available by Association of Democratic Reform (ADR) and a supplementary survey carried out by Vaishnav and others in 2013.

All parties are attracted to candidates with a dubious reputation as they are enormously wealthy and help finance huge and rising election costs. Candidates willing to violate the law have a clear advantage: they have access to liquid cash and are willing to use it for election campaigns. Often, money comes from illicit, rent-seeking business activities and simple extortion. Hence the preference for “muscle” (or serious criminality) (Vaishnav, 2017).

Politically savvy criminals, strengthened by their belief that they had accumulated enough local notoriety, were prepared to switch from supporting politicians to contesting elections directly. Besides, they had acquired considerable social capital through their ethnic bona fides, their reputation as fixers, their access to resources and their roots in local communities. They were thus more than willing to reap greater benefits in the political realm (Vaishnav, 2017).

Politics is a highly lucrative option and thus the cost of winning an election-including buying of party tickets- is a promising investment. Legislators enjoy considerable discretion in the awarding of government contracts and licenses, especially in sectors that are highly regulated, and thus prone to bribe-taking.

Illustrative evidence is striking. The average wealth of sitting legislators rose by 222 percent during one term in office. The average declared wealth of recontesting candidates (including both winners and losers) rose by 134 percent between 2004 and 2013. Thus, winners benefited more. Moreover, legislators with a criminal background fared much better than “clean” candidates (Vaishnav, 2017)⁶.

As parties become more competitive, the marginal benefit of nominating a criminal politician increases and more get nominated. This is not so for relatively dominant parties as the benefit of a few seats is relatively small and unlikely to swing the election (Tiwari, 2013; Vaishnav, 2017). A related point emphasised by several researchers is that the benefits of a criminal politician are local (notably, Tewari, 2013; Vaishnav, 2017; Bardhan, 2021).

Wealth provides an electoral advantage. Evidence suggests that the magnitude of this advantage has grown over time. The share of *crorepati* MPs in Lok Sabha in 2004 was 29%, in 2009 it rose to 58 % and in 2014 it shot up to 82%. Using another data set on candidates for state assembly elections between

⁶Other important contributions using rigorous econometric methodologies arrive at similar conclusions. (notably, Fisman et al. 2014, 2019). An innovative feature of Fisman et al. (2019) is that it combines the effects of asset disclosure and demonetization on the probability of reelection and asset accumulation.

2003 and 2009, it is found that a candidate's financial assets are strongly and positively correlated with his/her criminal status. In fact, the probability of facing a serious criminal charge (eg, rape, murder) increases by 12 % when the wealth of a candidate increases from the mean to the maximum in the sample. A similar association is observed for candidates in the national or Lok Sabha elections (Vaishnav, 2017)⁷.

As stated earlier, the demand for criminal politicians comes from voters. If voters are rational and well-informed, why do they vote for criminal politicians? There are several reasons, and some are mentioned here.

In a context of a weak law-and-order system, extreme corruption in the delivery of public services, and sharp social division, there are valid grounds for preferring criminal politicians. A few illustrative examples suffice here⁸.

If the police are corrupt and the judiciary is slow and inefficient, resolution of disputes could take years to resolve or remain unresolved with risk of violence. Criminal politicians get such disputes resolved through their muscle power.

If local bureaucracy is corrupt and highly inefficient in, say, payment of pensions, MGNREGA wages, disability benefits, among other social safety net provisions, powerful criminal politicians and their goons intimidate the corrupt officials to take immediate corrective action.

When social divisions are rampant and there is a weak rule of law, voters tend to reward politicians whose bona fides signal their enhanced capacity and willingness to protect the interests of their supporters. Indeed, ethnic identity serves as a commitment device-voters deem promises made by their co-ethnic politicians as credible, and politicians expect their voters to reciprocally honour their end of the bargain (Banerjee and Pande, 2007; Vaishnav, 2017).

A recent contribution by Gehring et al. (2021) examines various measures of efforts made by criminal MPs, based on data for the 2004 Lok Sabha election and for the period between 2004-2009. It throws new light on efforts made by criminal MPs for local development. We confine our comments to the use of an important local development fund for their constituency (Member of Parliament Local Area Development Scheme (MPLADS)). Criminal MPs are divided into two categories: those charged with a single crime (Criminal a), and those charged with more crimes (Criminal b). The regression coefficient is not significant for Criminal (a) while statistically significant and negative for Criminal (b). This suggests that not all MPs with criminal charges are a homogenous group. There are some individuals, who are only accused of one crime, and others who repeatedly break the law. For the latter, it is much

⁷Also see Fisman et al. (2014, 2019).

⁸These are not imaginary examples but excerpted from a set of case studies in Vaishnav (2017).

more likely that they continue to engage in criminal activities and can, for example, use bribes or voter intimidation to secure their re-election. This of course does not rule out targeted transfers to those in need and their co-ethnic supporters.

In another contribution, Prakash et al. (2019) focus on the *aggregate* economic outcomes associated with criminality in state politics. They examine the causal relationship between aggregate economic activity in a constituency-reflected in night-time lights data-and criminal MLAs elected to State Legislative Assemblies (Vidhan Sabhas) in elections held during the 2004 - 2008 period. Drawing upon a regression discontinuity design which compares at the margin the constituencies where a criminally accused candidate narrowly won and those narrowly won by non-accused candidates, Prakash et al. (2019) found that electing criminally accused politicians lowered the GDP growth by 2.4 percent. Besides, these effects are larger for candidates accused of multiple criminal accusations (including financial and serious crimes as opposed to a single criminal charge).Furthermore, the negative effect shows up after a lag. Variation of the negative effect across states is large. In particular, the economic costs are more pronounced in states with high corruption levels, lower levels of development or plausibly weaker institutions (so-called ‘BIMAROU’ states: Bihar, Madhya Pradesh, Rajasthan, Odisha and Uttar Pradesh).

Despite the potential economic cost of criminality of politicians, the probabilities of winning an election are high for candidates with a criminal background. Across the three general elections (2004, 2009, and 2014), if one were to pick a candidate randomly, he or she would have - on average - a 6 percent chance of coming out on top (Vaishnav, 2017). Compare this with a candidate with at least one criminal case: he or she has a nearly 18 percent chance of winning. The differences in state elections are slightly smaller but still stark: “clean” candidates (e.g., those who do not face pending criminal cases) have a 9.5 percent probability of winning whereas candidates with criminal cases have a roughly 22 percent chance—more than twice as large (*ibid.*2017).

Vaishnav (2017) claims that the market is in a state of equilibrium with a large share of criminal politicians. Even if we accept this characterisation (without confirming the existence, uniqueness and stability of the equilibrium), questions arise - ‘Why the share of criminal politicians is not higher?’; ‘Are there forces that tend to limit this share?’. Vaishnav (2017) believes that there are limits to this share. A large share of respondents to a survey, conducted by him and his collaborators were for various reasons not in favour of supporting criminal or tainted politicians, since they cared more about the integrity of politicians than their self-interest. Another reason is that political parties are averse to nominating more than a certain share of such politicians for fear of loss of their reputation and credibility. Often criminal politicians get thrown out of office for non-performance. Despite their substantial advantages, such politicians were denied an indefinite hold on power.

Yet we find that over the period 2004 to 2019 the share of criminal politicians in Lok Sabha elections has sharply risen—especially between 2014 and 2019. ADR estimates show that 24% of the winners in the 2004 Lok Sabha election had a criminal background; it rose to 30% in the 2009 general election, 34% in the 2014 elections, and 43% in the 2019 elections. Worse, 29% of those elected in 2019 had reported serious crimes including rape, murder, and culpable homicide. It is conjectured that the share of criminal politicians may continue to rise. Another related issue is that even two dominant parties continue to have considerably high shares of criminal politicians. Between the two national parties, out of 303 winners from the Bharatiya Janata Party (BJP) in the 2019 election, 116 (39%) had a criminal record as against 29 (56%) out of 52 winners from the Indian National Congress (INC). An implication is that non-dominant but competitive parties worry more about winning a seat in a closely contested election than dominant parties for whom the marginal benefit of winning a seat is relatively small is hard to reconcile with their high shares of criminal MPs/MLAs. We are inclined to the view that, as both national and state elections have become more competitive with a steep rise in the number of political parties in the fray, it is difficult to rule out the possibility that tainted politicians with huge resources will continue to be attractive to dominant parties as well.

The electoral marketplace analogy and the associated equilibrium are cast in a static framework. Huge increases in election costs and grand corruption (such as the coal mining scandal, the 2G spectrum, both under the UPA, and the Rafale deal controversy under the NDA) overtaking petty corruption imply shifts in the supply of criminal candidates. Even if the demand for criminal politicians remained unchanged, the market equilibrium will shift. If, on the other hand, social cleavages increase and the rule of law further deteriorates, a more appropriate characterisation would involve both shifting supply and demand curves for criminal politicians.

To assert, therefore, as Vaishnav (2017) and others do, that rising criminality does not pose a threat to the survival of democracy is somewhat presumptuous. There are of course grounds on which criminalisation of politics and widespread corruption could pose a threat. If transparency and accountability of the present and subsequent regimes deteriorate, the foundation of the government could develop serious cracks.

This review sets the stage for our study of the relationship between change in SWB and trust in politicians. As this is the first study of its kind, it is likely to illuminate areas of public policy to enhance trust in politicians and well-being.

4. Data and Descriptive Analysis

(a) Data

Our analysis draws upon the two rounds of the nationally-representative *India Human Development Survey* (IHDS) data for 2005 and 2012, collected jointly by the University of Maryland and the National Council of Applied Economic Research, New Delhi. The first round (IHDS-1) is a survey of 41,554 households in 2004-5. The second round (IHDS-II) involves re-interviews with 83% of the original households as well as split households residing within the same locality, along with an additional sample of 2,134 households in 2012⁹. The total for IHDS-II is therefore 42,152 households. The sample is spread across 33 (now 34) states and union territories, and covers rural as well as urban areas. Repeated interviewing of the same households at two points in time facilitates a richer understanding of which households are able to partake in the fruits of growth, what allows them to move forward, and the process through which they are incorporated into or left out of a growing economy.

Topics covered by the IHDS relevant in the present context include perceived changes in subjective economic well-being (SWB), expenditure, income, employment, health insurance, castes, religion, assets, trust in institutions, and demographic characteristics (e.g. gender, age, marital status)¹⁰.

An important feature of IHDS is that it collected data on SWB changes. The question asked is: “Compared to 7 years ago, would you say your household is *economically* doing the same, better or worse today?”. So the focus of this SWB is narrow and it has only three scales corresponding to *the perceived change* in the SWB (denoted as Δ SWB hereafter), not its level. It should also be noted that the measure is at the household level, not the individual level. While the focus of this variable is narrow, it has a few advantages. First, as reviewed in detail in the previous section, there exists a life-cycle effect on SWB, that is, perceived well-being changes at the point of life-cycle or age of the respondent as well as his/her spouse or other household members. While the survey question asks about the change in SWB compared to that 7 years ago, it can be different from the time-series comparison of the level in SWB because of the stronger effect of more recent experience of negative shocks (e.g., death of a breadwinner) on SWB. In this sense, our proxy is likely to be more closely associated with SWB at the time of the survey (2012) rather than 7 years ago (2004-05), although given that this is a longitudinal survey, the individuals are expected to retain some memories of the last survey as a reference point. Second, by asking specifically about economic well-being, the respondents will perceive the same

⁹An additional sample of 2134 households was added to the urban sample of IHDS-II to reduce the impact of attrition on the standard errors of a few key variables. The simulations estimated that the attrition would increase standard errors to unacceptable levels if 8 out of 15 households were unreachable in each urban cluster. Hence, the interviewers were asked to report to NCAER supervisors if they were unable to recontact 5 or more households in a cluster. The supervisor verified the losses and randomly assigned households to the right, the left, or at the original location based on the original locations of the households which were not observed in 2012 using a predefined rule. A similar addition to the rural sample was not attempted because of much lower attrition rates (Personal communication with Sonalde Desai who led both rounds of IHDS).

¹⁰It is noted that IHDS-1 in 2005 does not allow identification of the respondent, while IHDS-II in 2012 does. As the respondents reported SWB changes in 2005-12 at the household level in IHDS-II, we have matched SWB changes, a dependent variable, to household head’s characteristics, and other explanatory variables, by restricting the sample only to the case where the household head served as a respondent.

aspect in well-being. This will minimise the heterogeneity in the respondent's perceptions or focus on well-being compared with the variable based on more general questions about happiness or 'the best possible life'. Third, while most of the earlier studies asked about the individual SWB, our measure captures Δ SWB at the household level. Since the life-cycle effect is somewhat diluted, this has the advantage that it allows analysis of the household-level determinants of Δ SWB.

Detailed expenditure data are collected based on 52 questions about household expenditure. Location of households is classified into rural, urban (net of slums) and slums. Five caste categories are considered: Brahmins, High Castes, Other Backward Classes (OBCs), Scheduled Castes (SCs/*Dalits*), Scheduled Tribes (STs/*Adivasis*) and a residual "Other" category.

Marital status is disaggregated into unmarried, married, and widowed/separated.

IHDS obtains labour force participation data as part of its detailed income questions. Work participation includes farm, business, and wages/salary. Within each income section, IHDS asks who in the household participated in this activity and what their level of participation was. Detailed demographic data are collected including gender, age, schooling and marital status. At the household level, the highest schooling attainment of adult women and adult men are taken from individual education records. Adults are defined as individuals 21 years or older. Based on the number of years of schooling, individuals are classified into illiterates, those with primary schooling, middle-level schooling, matriculates and graduates, based on their years of education.

Net state domestic product (NSDP) per capita at constant prices is obtained from state economic surveys. We use its log transformation as an explanatory variable.

A unique feature of IHDS is that it asks a question on trust in public institutions such as state government, judiciary, police and politicians. Trust is measured in *ordinal* levels of confidence: a great deal of confidence, only some confidence and hardly any confidence. Our focus here is confined to the relationship between changes in SWB and trust in politicians. Although not exactly synonymous with the political trust which includes not just trust in politicians but also the government, we often use the latter as synonymous with trust in politicians. As IHDS does not disaggregate them, we use it as an all-inclusive category comprising MLAs, MPs and others who contested elections but lost.

In order to instrument political trust, we use two variables: the proportion of politicians who reported a criminal background in 6 months preceding an election and its square. The data are taken from Association of Democratic Reform (ADR) which provides data on all MLAs and MPs. In 2003 India's Supreme Court issued a ruling that requires all candidates for public office to file an affidavit disclosing, among other things, whether they have ever been charged with committing a crime, the statute

number(s) they are accused of violating, and the value of their financial assets and liabilities. Hence there are no misreporting or sample selection issues on this variable.

(b) Descriptive Analysis

Descriptive statistics of variables used are given in Table 1.

Table 1: Summary Statistics

Variables	Mean	SD	Min	Max
State Proportion - Trust in Politicians - 2012	0.105	0.047	0.047	0.337
Proportion of MPs with Pending criminal Cases	0.311	0.143	0.080	0.570
Square of Prop MP with pending Crime Cases	0.117	0.096	0.006	0.325
Age	45.9	12.4	16	97
Age Square	2265	1219	256	9409
Log per capita expenditure	6.485	0.664	1.386	10.578
Gender				
Female	0.101	0.302	0	1
Marital Status				
Married	0.865	0.342	0	1
Unmarried	0.010	0.098	0	1
Widowed/Divorced	0.125	0.330	0	1
Sector				
Rural	0.717	0.450	0	1
Urban	0.267	0.442	0	1
Urban Slum	0.018	0.134	0	1
Education				
Illiterate	0.357	0.479	0	1
1-4	0.116	0.321	0	1
5-8	0.232	0.422	0	1
9-10	0.166	0.372	0	1
>10	0.124	0.330	0	1
Religion				
Hindu	0.831	0.374	0	1
Muslim	0.109	0.312	0	1
Christian	0.020	0.140	0	1
Others	0.036	0.186	0	1
Caste				
Brahmin	0.048	0.214	0	1
High Caste	0.151	0.358	0	1
OBC	0.366	0.481	0	1
Dalit	0.223	0.416	0	1
Adivasi	0.078	0.267	0	1
Others	0.131	0.338	0	1
Log Net State Domestic Product	9.978	0.432	8.976	11.064

A broad-brush treatment of changes in SWB and their associations with selected covariates is given below.

In 2012 relative to 2005, 9.71% of the respondents expressed that they were worse off, 50.34% reported that they were just the same, and 39.95% were better off. Hence the people who felt just the same made up the highest share.

The sample was disaggregated into five age groups: 15–30 years, 31–50 years, 51–60 years, 61–70 years, and >70 years. Three striking features are that in all the age groups, the proportion of individuals who felt that their position was just the same was highest and varied little; the proportion of better-off group was well below that of just the same group, but there was a decline across age groups and the proportion of worse off group was low but rose among older people.

The outcomes vary across asset quartiles: the proportion of better off rose across quartiles and was highest among the wealthiest, while the shares of just the same group and worse off declined as asset ownership increased. This is expected given our economic focus, but well-being is associated with several other factors that are not economic in nature (for example, marital status).

Caste hierarchies reflect socio-economic status. The Brahmins are at the top, followed by the high castes, OBCs, and the SCs/*Dalits* and STs/*Adivasis*. The residual category of “Others” is considered a close proxy for the upper castes. Among the Brahmins, the majority are better-off, as also among the high castes; there is, however, a reversal among the OBCs, as the majority are just the same; among the Dalits, a larger majority feel just the same; still larger is the share of the Adivasis who feel just the same; and among ‘Others’, the share of those who feel just the same is highest.

Among people who are married, the majority feel that their perceived economic condition has remained just the same, as also among those unmarried; and among those who are widowed/divorced, the share of those reporting unchanged economic condition is highest. An important point to bear in mind is that married women are often subject to intimate partner violence and discrimination in food and healthcare resources, undermining their sense of well-being.

Schooling is a form of human capital as it enhances people’s awareness of remunerative employment opportunities, healthcare services, a healthy diet, and the potential benefits of participating in local institutions. It is striking that the proportion of household respondents who believe that they are better off rises with years of schooling.

In rural areas, the highest proportion is of those who report that their well-being is just the same (about 55 %) while that of the better-off is much lower (well under 35 %). In sharp contrast, in urban areas, the highest proportion is of the better-off. Urban slums, however, are similar to rural areas, as the proportions of just the same are highest and of the same magnitude, and that of the better-off is slightly higher in the former.

Barely about 11 % of the households report a great deal of trust in the politicians, about 34 % show some trust, and a majority (over 56 %) report hardly any trust.

However, if we cross-classify changes in SWB between 2005-2012 by trust in politicians, a clear-cut pattern does not emerge. While the proportion of better-off is slightly higher among those with a great

deal of confidence in the politicians, relative to those with hardly any, that of worse-off is about the same.

But when we cross-classify politicians with a criminal background in 2004 elections by well-being measures between 2005-2012 a striking pattern is revealed. Shares of MPs with a criminal background in total MPs are classified into 4 ranges: 0-15 %, 16-25 %, 26-40 % and > 40 %. To illustrate, we confine our comparison to the lowest range and the highest (>40 %). In the lowest range, the maximum share is of those who remain just the same (over 60 %), followed by a considerably lower share of the better-off (under 32 %), and then the lowest of the worse-off (over 8 %). In the highest range of criminality, the largest share is just the same but considerably lower than in the lowest range (under 47 % as compared with over 60 %); followed by a slightly lower share of better-off but much higher than in the lowest range of criminality (well over 43 % as compared with just under 32 %); and a slightly higher share of worse-off (over 10 % as compared with over 8 %). While the much higher share of better-off in the highest range of criminality may seem surprising, important research by (Vaishnav, 2017) offers a plausible explanation. His analysis establishes that MPs and MLAs with criminal backgrounds are often preferred in regions where legal enforcement is weak and the polity is fragmented simply because they get things done. Indeed, the probability of re-election of such candidates is often 2-3 times higher than that of those without a criminal record.

5. Methods

(a) Model Specifications

To serve as the basis for more refined models, we begin with a multiple regression model where the dependent variable, ΔSWB (0, 1, 2), corresponding to ‘worse-off’, ‘just the same’ or ‘better-off’ - is estimated by a set of explanatory variables using OLS.¹¹ Because ΔSWB is the perceived change of economic well-being during the last 7 years, based on the household head’s perception in 2012, all the explanatory variables are based on the survey questions in 2005 to partially address the issue of reverse causation from ΔSWB to, for instance, income/expenditure.

A multiple regression model is expressed as:

$$y_i = \beta_0 + \beta_1 T_i + X_i \beta_2 + \varepsilon_i \quad (1)$$

¹¹See Angrist and Pischke (2008) for a detailed argument in favour of the Linear Probability Model (LPM) over the probit model where OLS is used for a binary choice model, against the standard textbook recommendation for the use of probit or logit models for the binary variable. The use of OLS for the discrete variable (0, 1, 2) can be justified on the same grounds. OLS with robust clustered standard errors is used to address possible correlations between individuals within a household as well as heteroscedasticity.

where y_i is a vector, ΔSWB , the change in subjective well-being between 2005-2012 and i stands for an individual where the household head was a respondent in 2012 (where i takes 1, ..., 27,958). β_0 is a constant term. ε_i is a vector of error terms assumed to be independent and identically distributed.

Our main explanatory variable is denoted as T_i , whether a household head had trust in a public institution. Here we construct a variable on trust in politicians, broadly defined as MPs, MLAs, and others who contested elections at the state or national level. Our main question is whether trust in politicians is associated with improvement in perceived well-being, tested by examining the sign and the statistical significance of β_1 .

X_i denotes a vector containing a number of other explanatory variables and β_2 is a vector of coefficients to be estimated. X_i include the age of the household head and its squared term, log per capita expenditure, caste, religion, marital status, gender, location-rural, urban and slums, schooling years, and state domestic product per capita, all in 2005.

Given that a variable on trust, T_i , may be endogenous, we instrument it by using a 2SLS (two-stage least squares) estimation. In the first stage, we estimate T_i by two instruments, $\alpha_1 Z_{1i}$ and $\alpha_2 Z_{2i}$ (Equation 2) and in the second we estimate Equation (1) based on the estimate of Equation (2) in the first stage.

$$y_i = \beta_0 + \beta_1 T_i + X_i \beta_2 + \varepsilon_{1i} \quad (1)$$

$$T_i = \alpha_0 + \alpha_1 Z_{1i} + \alpha_2 Z_{2i} + X_i \alpha_3 + \varepsilon_{2i} \quad (2)$$

In the main specification based on 2SLS, we use the share of criminals elected as MPs (Z_i) and its square as instruments (Z_{2i}) for T_i , trust in politicians.¹² It is plausible to argue that the higher the share of criminal MPs in total MPs elected in a national election, the lower will be the trust in them. Though the actual relationship between trust in politicians and the share of criminality can be more complex, closely scrutinised by Vaishnav (2017), an overall association between the two is likely to be positive. However, the initial disclosure of politician's crimes of no or little criminality in the constituency will have larger damage to trust in politicians than subsequent disclosures where voters get accustomed to politician's crimes and thus the relationship between the share of criminals in the politicians and T_i is likely to be non-linear. Even if people would recognise a positive benefit that influential politicians with criminal records may bring through, for instance, better public services or infrastructure, it is

¹²Because y_i is the change in SWB between 2005-2012, T_i , trust in politicians in 2005 should be ideally defined in 2005. However, this yielded counter-intuitive results in the first stage regression (Equation (1)') where the instruments, share of criminal MPs and its square yielded positive coefficients, implying that the greater the share of criminal MPs and its square, the greater would be the trust in the politicians. For 2SLS and Lewbel IV estimations, we regress trust in politicians in 2012 on the instruments and other explanatory variables in 2005 in the first stage regression.

unlikely that people would trust more politicians directly linking crimes and better public services. So any direct positive effect of criminality on trust in politicians could be larger than its negative effect where there are few criminal MPs in the constituency, but as the share of criminal MPs becomes high, the negative effect of criminality will soon become much larger than any positive effect (Fehr 2009).

This argument is related to the question on whether Z_{1i} , the share of criminals in the elected politicians and its square, Z_{2i} , will satisfy the exclusion restriction, that is, they do not directly influence the SWB change and affect the SWB change only through the loss of trust in politicians. Although the criminality of politicians is public information and the research has shown that it can damage economic growth (Prakash et al., 2019), the association between criminality and SWB is far from direct. First, even if people may feel an improvement in objective well-being, such as consumption, they are unlikely to relate it with the increased share of criminality in their constituency. Second, as shown by Kulkarni et al. (2021a), an improvement in objective well-being and that in SWB are related but distinct because the latter is based on people's perceptions about the economic improvement, while the former is related to the objective improvement in monetary measures. It would be thus natural to assume that the share of criminals in the politicians influences the trust in politicians, but does not directly influence any change in SWB.

However, it is not easy to verify the validity of the instruments, Z_{1i} and Z_{2i} , in terms of exclusion restrictions even if the instruments are carefully selected, as discussed above. Therefore, we also apply the Lewbel IV estimator which has been proposed as an alternative method of estimating Equations (1) and (2) (Lewbel, 2012; Baum and Lewbel, 2019). The Lewbel IV draws upon the two-step estimation where (i) in the first step it estimates α_0 , α_1 , and α_2 by OLS where T_i , the trust variable, is estimated by the instruments, Z_{1i} , Z_{2i} , and X_i and the estimated residuals, $\hat{\epsilon}_{2i}$; and (ii) in the second step it estimates β_1 and β_2 by 2SLS of y_i (ΔSBW) by X_i and T_i using Z_{1i} , Z_{2i} and additional instruments created by the estimation (i) or $(X_i - \bar{X}_i)\hat{\epsilon}_{2i}$ where \bar{X}_i is the sample mean of X_i (Baum and Lewbel, 2019 p. 758). This procedure ensures that internally-created instruments are uncorrelated with the product of heteroscedastic errors (Lewbel, 2012). We use Lewbel IV as our attempt to strengthen the instruments and as a robustness check of 2SLS. The result will be discussed in detail in the next section.

6. Results

(i) 2SLS/IV Results

This sub-section will discuss in detail the 2SLS results which are shown in Tables 2 and 3.¹³The results of the first stage of the 2SLS estimation are given in Column 2 of Table 2. As we discussed in the last section, the dependent variable, trust in politicians in 2012, is instrumented by the proportion of criminal MPs (with pending criminal cases) and its square in 2005 in the first stage. The proportion of criminal MPs is positively and statistically significantly associated with trust in politicians. However, the positive and significant association implied by the coefficient estimate of 0.376 is more than offset by the large and significant coefficient estimate of the squared term, -0.526, of the share of criminal MPs at a certain threshold. These estimates together imply that trust in politicians increases as the share of criminal MPs increase, but after the turning point where 35.7% of MPs are with criminal records and 10.6% of respondents trust in politicians, the relationship between the two turns negative.¹⁴ If we set other explanatory variables in the first stage at their means, we can infer that, for instance, when the share of criminal MPs increase from 31.1% (sample mean) to 60%, the trust in politicians first marginally increase from 10.5% to 10.6% and then decreases to 7.5%. The F test of excluded instruments, shown at the bottom of Table 2, is 649.09, much greater than the Stock-Yogo critical value, 19.93, implying that the maximum relative bias of 2SLS estimates (compared with OLS) is less than 10%, leading us to conclude that there is no weak instrument problem (Stock and Yogo, 2005). The Hansen J statistic (Chi-square (1)=44.051) is statistically significant, implying that one of the external instruments is not excluded from the model. However, Hansen (2021) is cautious and suggests that the Hansen J test should not be used as a definitive test for validating or invalidating the IV model given the ambiguous nature of the test. He notes that ‘...it seems reasonable to require strong evidence to lead to the conclusion “Let’s reject this model”’. The recommendation is that mild rejections (p-values between 1% and 5%) should be viewed as mildly worrisome but not critical evidence against a model. The results of an over identification test should be integrated with other information before making a strong decision.’ (Hansen, 2021, p. 378). As we have the two correlated variables (the level and the squared value of the share of criminal MPs) and it is a joint test of the hypothesis that at least one of the two instruments is excluded from the model, the rejection of the over-identification test may not necessarily cast doubt on the validity of the instruments particularly because they are strong in the Stock-Yogo test. Unfortunately, another IV uncorrelated with the criminal share and still excluded from

¹³ The OLS results are broadly similar to the IV results but have been omitted to make the presentation concise. These are available upon request.

¹⁴ 35.7% is derived by the first order condition where the partial derivative of the first stage equation is set to be 0 with respect to the share of criminal MPs (that is, $\partial T_i / \partial Z_i = \hat{\alpha}_1 + 2\hat{\alpha}_2 Z_i = 0$ or $Z_i = -\hat{\alpha}_1 / 2\hat{\alpha}_2 = -0.376 / (-1.052) \cong 0.357$).

the model is unavailable. So the result will have to be interpreted with caution, but this does not necessarily invalidate our estimates.

Table 2: The First Stage Results of IV Estimation on the Effect of Trust in Politicians on SWB

Dependent Variable (Instrumented): State Proportion - Trust in Politicians - 2012				
Explanatory Variables	2SLS		Lewbel IV ^{*2}	
	Coeff	SE	Coeff	SE
Proportion of MPs with Pending criminal Cases (External IV)	0.376***	(0.0117)	0.24513***	(0.00925)
Square of Prop MP with pending Crime Cases (External IV)	-0.526***	(0.0152)	-0.30692***	(0.01337)
Age	0.000595***	(0.000167)	0.00077***	(0.00011)
Age Squared	-4.94e-06***	(1.68e-06)	-0.00001***	(0.00000)
Log per capita expenditure	-0.00108*	(0.000586)	-0.00137***	(0.00038)
Gender				
Female	-0.000646	(0.00152)	-0.00022	(0.00144)
Marital Status				
Unmarried	0.0200***	(0.00646)	0.01055***	(0.00161)
Widowed/Divorced	0.00160	(0.00138)	0.00266**	(0.00131)
Sector				
Urban	0.000414	(0.000630)	0.00324***	(0.00050)
Urban Slum	-0.0210***	(0.00165)	-0.00814***	(0.00142)
Education				
1-4	0.00971***	(0.00136)	0.00759***	(0.00074)
5-8	0.00623***	(0.000948)	0.00559***	(0.00061)
9-10	0.0105***	(0.00129)	0.00779***	(0.00068)
>10	0.00749***	(0.00117)	0.00699***	(0.00078)
Religion				
Muslim	0.00317	(0.00209)	0.01163***	(0.00356)
Christian	-0.0110***	(0.00224)	0.00549	(0.00350)
Others	-0.00998***	(0.00159)	-0.01042***	(0.00160)
Caste				
Brahmin	0.00267*	(0.00146)	0.00014	(0.00086)
High Caste	-0.000391	(0.000969)	-0.00347***	(0.00068)
Dalit	0.000675	(0.000800)	-0.00031	(0.00064)
Adivasi	0.0129***	(0.00260)	0.00612***	(0.00075)
Others	0.00826***	(0.00188)	-0.00484	(0.00347)
Log - Net State Domestic Product	-0.0397***	(0.000710)	-0.03877***	(0.00047)
Constant	0.429	(0.00830)	0.43195	(0.00571)
Observations	27,895		27,895	
F test of excluded instruments	F(2, 27871) = 649.09***		F(23, 27850) = 1331.04***	
	Prob> F = 0.0000		Prob> F = 0.0000	
	10% maximal IV size 19.93		10% maximal IV size 69.46	

*1 Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

*2 The results on the internal instruments generated from the error terms in the first stage regressions are not shown in the columns of Lewbel IV. They are jointly statistically significant.

We will first consider the demographic variables to examine the correlates of trust in politicians in the second column in Table 2 as the statistically significant correlates of trust in politicians carry important policy implications. While age is significantly and positively related to trust in politicians, its square is significantly and negatively related to it with a small coefficient. The estimated coefficient of age implies that on average a one year increase in the age of the respondents (mostly the household heads)

is associated with a 0.06% increase in the share of those who trust politicians but at a slightly diminishing rate, as implied by the negatively significant and small coefficient estimate of age squared. The gender of the respondent is unrelated to trust in politicians. Relative to the married (i.e., the omitted/default category), the unmarried display a significantly positive relationship with trust in politicians. Here the unmarried on average tend to have a 2% higher share of trust than the married. This is unsurprising given conclusive evidence of violence against married women and discrimination against them in the intra-household allocation of food and healthcare (e.g., Sen, 1988, Behrman, 1988).

Respondents living in urban slums display a significantly lower trust in politicians, on average 2.1% lower than those in rural areas, the omitted category. This is not surprising as both living conditions and civic amenities are abysmal in urban slums (e.g., lack of hygiene, sanitation, supply of potable water and electricity and paved roads). Schooling years are significantly positively associated with trust in politicians, relative to the illiterates. This is not self-evident, as those with higher levels of schooling are not expected to be easily swayed by election rhetoric and are supposedly better informed about the non-delivery of promises made at elections. The trust does not necessarily increase linearly with schooling years. Those with schooling years 9-11 years trust politicians most (on average its share is 1.05% higher than the illiterates (the default category)') to be followed by those with 1-4 years of schooling (0.97% higher), 10 years or more (0.75% higher) and 5-8 years (0.62% higher).

Let us now turn to a few socio-economic variables. Relative to the Hindus, the Christians and 'Others (other than the Hindus, the Christians and the Muslims)' display lower trust in politicians. Trust in politicians among the Christians or 'Others' is 1.0%-1.1% lower than the trust among the Hindu's. That the minorities are discriminated against cannot be ruled out. It is rather surprising to find that the coefficient estimate for the Muslims is not significant. Although communal riots occurred under the UPA regime (e.g., the 2011 Bharatpur riots between Gujjars and Meo Muslims), their frequency and casualties were low. Arguably, these episodes did not negatively influence their overall sense of safety at the national level as remedial response by the state government was swift.

The salience of the caste hierarchy has persisted. Various scholars (e.g., Banerjee and Pande, 2007; Vaishnav 2017) have argued that low-quality politicians (such as criminals) provide targeted benefits to voters, based on caste, ethnicity or class. These segments are in turn expected to support such politicians in elections. Our results are consistent with this view, as the Brahmins, *Advivasis* (Scheduled Tribes) and 'Others' display higher trust in politicians, relative to the Other Backward Classes (OBCs), the default category. On average, the share of respondents who trusted politicians is 0.27% higher for the Brahmins and 1.29% higher for *Advivasis* than that of OBCs.

We find that the log of expenditure is negatively and significantly associated with trust in politicians, since a 1 % increase in per capita expenditure is associated with a 0.11% decrease in trust in

politicians¹⁵. Although more affluent sections are better networked with politicians and they not only contribute more to their election campaigns but also reciprocally expect to benefit more if they get elected-especially as Ministers- their disappointment when promises are not delivered more than offsets their confidence in politicians.

Table 3: The Second Stage Results of IV Estimation on the Effect of Trust in Politicians on Δ SWB

Dependent Variable: Δ SWB				
Independent Variables	2SLS		Lewbel IV ^{*2}	
	Coeff	SE	Coeff	SE
State proportion - Trust in Politicians 2012	1.348***	(0.413)	0.364**	(0.159)
Age	0.00621**	(0.00248)	0.00671***	(0.00247)
Age Squared	-7.40e-05***	(2.55e-05)	-7.81e-05***	(2.54e-05)
Log per capita expenditure	0.0704***	(0.00924)	0.0707***	(0.00923)
Gender				
Female	-0.00453	(0.0299)	-0.00436	(0.0298)
Marital Status				
Unmarried	-0.0816*	(0.0491)	-0.0639	(0.0496)
Widowed/Divorced	-0.0284	(0.0274)	-0.0263	(0.0273)
Sector				
Urban	0.0711***	(0.0109)	0.0708***	(0.0109)
Urban Slum	0.00916	(0.0315)	-0.0132	(0.0304)
Education				
1-4	0.0438**	(0.0189)	0.0537***	(0.0183)
5-8	0.0889***	(0.0146)	0.0948***	(0.0144)
9-10	0.155***	(0.0177)	0.166***	(0.0171)
>10	0.176***	(0.0191)	0.183***	(0.0189)
Religion				
Muslim	0.0432	(0.0425)	0.0464	(0.0422)
Christian	0.0921**	(0.0422)	0.0885**	(0.0421)
Others	0.139***	(0.0316)	0.122***	(0.0304)
Caste				
Brahmin	-0.00485	(0.0228)	-0.00578	(0.0228)
High Caste	-0.00506	(0.0154)	-0.00811	(0.0154)
Dalit	-0.0759***	(0.0151)	-0.0766***	(0.0150)
Adivasi	0.0241	(0.0219)	0.0309	(0.0211)
Others	-0.0813**	(0.0411)	-0.0750*	(0.0407)
Log - Net State Domestic Product	0.130***	(0.0211)	0.0881***	(0.0158)
Constant	-0.801	(0.243)	-0.301	(0.168)
Observations	27,895		27,895	
Hansen J statistic (overidentification test of all instruments)		: Chi-sq(1)=44.914 P-val = 0.0000		Chi-sq(22)=126.164 P-val = 0.0000

Notes: ^{*1}Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

¹⁵As Kahneman and Deaton (2010) point out, psychologists and sociologists often plot measures of subjective well-being against income in dollars, but a strong argument can be made for the logarithm of income as the preferred scale. The logarithmic transformation represents a basic fact of perception known as Weber's Law, which applies generally to quantitative dimensions of perception and judgment (e.g., the intensity of sounds and lights). The rule is that the effective stimulus for the detection and evaluation of changes or differences in such dimensions is the percentage change, not its absolute amount.

A somewhat intriguing result is that net state domestic product per capita (log NSDP) is negatively associated with trust in politicians where a 1% increase in NSDP is associated with a 4% decrease in trust. If we go by the literature review, criminal politicians abound in states where social cleavages are sharp and law-and-order is weak. That these features are typical of the so-called BIMAROU/sick states (Bihar, Madhya Pradesh, Odisha and Uttar Pradesh/UP), which continue to be backward, lends credibility to the overall negative association driven by the rest of the country.

In the second stage regression with change in SWB (Δ SWB) as the dependent variable, trust in politicians, which has been corrected for its endogeneity, is significantly positively related to the change in SWB, as shown in Column 2 of Table 3. As discussed earlier, Δ SWB (0, 1, 2) is defined as ‘worse-off’, ‘just the same’ or ‘better-off’ and so the estimated coefficient denotes the probability of shifting to or moving up one step in the ladder in response to a unit change in each of explanatory variables, other things being equal. Hence the estimated coefficient, 1.348, implies that a 1% increase in the share of people trusting politicians is associated with an increase in the probability of shifting to the upper step by 1.35%. This is a key result in the present analysis. Since elected politicians are responsible for the design of policies, especially those in the ruling party, supposedly in line with their party ideology and promises made before the election, the high importance of trust in these politicians in shaping changes in SWB is credible.

As before, we will now consider the relationship between Δ SWB and demographic variables. While age is significantly and positively related with Δ SWB (where a year increase is associated with a 0.62 % increase in shifting to the upper category), the square of age is significantly and negatively related to it. Whether there is an underlying life-cycle effect is not self-evident but likely. Gender is unrelated to the change in well-being. Relative to the married, the unmarried show a significantly lower Δ SWB where the latter are 8.2% more likely to move down to the lower category of Δ SWB. Marriage, however, is a double-edged sword for women. While it provides social and economic security to them, there is discrimination in the allocation of food and resources for medical care. So it seems likely that the lower Δ SWB is largely a manifestation of a lack of social and economic security among unmarried women. Location matters too. Relative to rural households, urban households display significantly higher Δ SWB with a 7.1% higher probability of shifting to the upper category or perceiving an increase in economic well-being. This is not surprising as access to safe drinking water, electricity, sanitary living conditions, and medical services is considerably easier. Living in slums, however, in terms of our measure of well-being is significantly not different from living in rural areas. Schooling years, relative to no schooling, are all significantly and positively related to our measure of well-being. What is indeed striking is that the marginal effect rises with years of schooling. For instance, those with 1-4 years (5-8) of schooling have a 4.4% (8.9%) higher probability of moving to the higher category of Δ SWB, while those with 9-10 or 10 + years of schooling have an even higher probability of perceiving a positive increase in

economic well-being by 15.5%-17.6%. Apart from more remunerative employment prospects, schooling enhances awareness of healthy living, social awareness and civic engagement. It is not surprising to find that better-educated individuals perceived better economic well-being through positive externalities.

Let us now turn to the role of socioeconomic variables. Caste hierarchy still persists. Relative to the OBCs, the Dalits exhibit a significantly lower probability (by 7.6%) of moving to a lower category of Δ SWB, as also Others (by 8.1%). Despite affirmative action (e.g., quotas for them in schooling and public employment), they are far from fully integrated into the society - they are, for instance, discriminated against in housing and employment that are closely associated with perceived changes in economic well-being. So the deep-seated resentment against upper castes is largely intact and lowers their Δ SWB. It is somewhat intriguing that the residual category, 'Others', also has a lower Δ SWB - especially because they are likened to upper castes (Mosse, 2018). Although they are economically better-off than the OBCs, based on the consumption expenditure measures, their perception of being less well-off (Δ SWB) is presumably influenced by the community not viewing them as upper castes (Kulkarni et al., 2021a).

Relative to the Hindus, as expected, the Muslims are not significantly better-off, given the discrimination in housing, education and employment. However, the Christians and other minorities are better-off (with a 9.2% higher probability of perceiving better economic well-being) *despite* their lower trust in the politicians. Hence, it is not implausible that state policies contribute in small measure to the well-being of a segment of the minorities.

As expected, there is a significant positive association of per capita expenditure with their Δ SWB where a 1% increase in per capita expenditure is associated with a 7% increase in economic well-being by moving to the upper category of Δ SWB. As income is integral to changes in perceived economic well-being-to be able to do this or that (e.g., choosing where to live, where to educate their children, mode of transportation) - it is not surprising that the marginal effect is more than moderate. So individual household affluence promotes perceived well-being.

State affluence matters too. Given the proportionality of tax revenues to state domestic product, it follows that larger amounts are available for public expenditure on social safety nets (e.g., public expenditure on healthcare, Public Distribution of Food (PDS), midday-meals scheme, MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Scheme), among others). However, we find that a higher state domestic product is not necessarily correlated with a higher Δ SWB as the estimated coefficient is negative and significant. It is conjectured that the states with low GDPs target public support to the deprived better, and thus show higher Δ SWB. A case in point is Kerala.

(ii) Lewbel IV with External Instruments

Here we examine the results based on Lewbel instruments and external instruments. The first stage results are given in Column 4 of Table 2. The dependent variable is trust in politicians. The Lewbel instruments are the ‘internal’ instruments which are created based on the heteroscedasticity in the first stage and are uncorrelated with the product of heteroscedastic errors (Lewbel, 2012). In addition to the Lewbel IVs¹⁶, two external instruments, the proportion of criminal MPs and its square, are used in the first-stage regression. All other explanatory variables are the same as in the IV regression used earlier.

While trust in politicians is significantly and positively related to the proportion of criminal MPs, it is significantly and negatively related to its square. As in the previous case, the positive and significant association implied by the coefficient estimate of 0.245 is mostly offset by the large and significant coefficient estimate of the squared term, -0.307, of the share of criminal MPs. These estimates suggest an inverted U shaped relationship between the two variables where trust in politicians marginally increases first and then decreases after the turning point where 39.9% of MPs are with criminal records and 10.7% of respondents trust politicians. If we set other explanatory variables in the first stage at their means, we can infer that, for instance, when the share of criminal MPs increase from 31.1% (sample mean) to 60%, trust in politicians first marginally increases from 10.5% to 10.7% and then decreases to 9.5%. The F test of excluded instruments, shown at the bottom of column 3 of Table 2 is 1331.04, much greater than the critical value, 69.64, given the hypothesis that the maximum relative bias is at least 10% (Stock and Yogo, 2005). That is, compared with the OLS, the bias of 2SLS is less than 10% in terms of the size of the estimate, which implies that the instruments are strong and the specification is valid.¹⁷

The coefficients of the external IVs are mostly similar to those in Column 2 of Table 2. Turning to the demographic variables, we find a significant positive causal relationship between trust in politicians and age, and a negative relationship with its square. These are similar to the results reported under IV regression (2SLS). An important point to note is that in both cases trust rises with age (where a one-year increase is associated with a 0.08% increase in the share of trust) but the incremental effect of older age is negligible.

Gender (females relative to males) is unrelated to trust in politicians in both specifications.

Relative to the married, the unmarried show a significant positive effect on trust in politicians. This result is similar in both specifications except that in Lewbel IV with instruments the marginal effect is smaller. As observed earlier, this finding is plausible for married women as they are more likely to be

¹⁶ The regression results based on the internal IVs will be provided on request.

¹⁷ The Hansen J statistic (Chi-square (22) =126.164) is statistically significant, implying that some of the instruments - external and internally-created instruments - are not entirely excluded from the model. As discussed earlier, the rejection does not automatically invalidate the specification.

discriminated against in the intra-household allocation of food and resources for medical care, and also vulnerable to intimate partner violence.

Location matters too between the two specifications. Relative to rural households, those living in urban slums display lower trust in politicians (by 0.81%). This is not surprising given the neglect of slums and their uncontrolled growth and deterioration of already abysmal living conditions.

Schooling years are significantly related to trust in politicians in both the specifications with similar patterns, relative to no schooling (5.6%-7.8% higher depending on schooling years). This is somewhat surprising as more schooling enables individuals to see through political rhetoric at the time of the national election, better awareness of their criminal background and corruption. However, this must be set against the respect for politicians who campaign for social good through better schooling, medical care and safety nets.

In contrast, marginal effects of castes vary between the IV (2SLS) and LewbelIV+instruments. While the Brahmins are significantly related to trust in politicians in the second column of Table 2, this is not confirmed by the result in column 4. While High Castes are negatively related to trust in politicians in Column 4 (where their share of trust in politicians is 0.35% lower than that of the default category, (OBCs), these are not significantly related in Column 2. Although the *Adivasis* are far from fully integrated into the society, they have been beneficiaries of affirmative policies (e.g., quotas in schooling and public employment), which explains the positive association with their trust in politicians (0.61% higher than OBCs'). The residual caste group, 'Others', does not show a significant marginal effect on trust in politicians in the present specification, while it shows a significant negative effect in IV (2SLS). We have no plausible explanation of this inconsistency.

The marginal effects of religion differ between the two specifications. While the Muslims have a significant and positive effect in Column 4 with their share of trust in politicians 1.2% higher than that of the Hindus, the default category, the group does not possess a significant effect in the 2SLS estimation. Another contrast relates to the Christians who do not show a significant effect in the present specification but have a significant and negative effect in 2SLS. However, 'Others', comprising minorities (Jains, Sikhs and Buddhists, among others) possess significant negative coefficients in both specifications but the absolute value of the marginal effect is slightly larger in Column 4 of Table 2 (1.04).

A household's affluence is measured in the logarithm of per capita expenditure. Contrary to the expectation, in both specifications, the marginal effects are significant and negative and almost equal. That is, a 1% increase in per capita household expenditure is associated with a decrease in trust in politicians by 0.14% in Lewbel IV+ instruments (and 0.11% in 2SLS).

State affluence is measured in terms of the log of state domestic product per capita. Both specifications yield significant negative marginal effects which are also nearly equal. A 1% increase in GDP at the state level is associated with a 3.8% decrease in the share of respondents who trust politicians. Again, if politicians/policymakers are held responsible for widening the gap between aspirations and achievements with greater affluence, negative marginal effects are not unlikely.

Let us now examine the effects of (instrumented) trust in politicians and other covariates on Δ SWB given in Table 3.

Both specifications yield significant positive marginal effects of (instrumented) trust in politicians on Δ SWB. However, the effect is much smaller in Column 4 relative to Column 2 in Table 3. It is highly likely that the (instrumented) trust in politicians still has some endogeneity that is purged in the Lewbel IV+ instruments specification. This may be a reason for the smaller marginal effect in Column 4.

Turning to the demographic explanatory variables, we find that while age has a statistically significant and positive effect on Δ SWB in both specifications, age squared has a significant negative effect. The values are similar but the marginal effects of the latter are small in magnitude. These findings suggest that Δ SWB rises with age but with an almost negligible diminution at older ages.

Gender (females relative to males) is unrelated to changes in well-being. While the unmarried, relative to the married, are significantly negatively related to Δ SWB in 2SLS, the former do not possess a significant coefficient in the Lewbel IV+ instruments estimation. It seems plausible that unmarried women are often stigmatized and shunned, and encounter hostility, lowering their well-being. But if there is some endogeneity in this variable- whether they live in north or south India-it may explain the difference in the two marginal effects.

Relative to rural households, those living in urban areas show significantly higher well-being (with the probability of moving up to the higher category of Δ SWB (7.1% higher on average)), presumably because the latter have easier access to healthcare, schooling and other civic amenities.

Schooling years in both specifications yield significant positive marginal effects on changes in well-being, with those in Column 4 slightly exceeding those in Column 2 of Table 3. Another striking feature is that the marginal effect rises with years of schooling in both cases. Since schooling years open up more remunerative employment opportunities, add to the general awareness of healthy living, and benefits of contributing to the communities they belong to, it is not surprising that more schooling has larger marginal effects on perceived changes in economic well-being.

As noted earlier, among socio-economic explanatory variables, caste occupies a central place simply because *despite* considerable progress the caste hierarchy is largely intact. However, the results in both specifications are somewhat patchy. Relative to the OBCs, the Dalits display significant effects on

changes in well-being in both specifications with a nearly equal (absolute) value of the marginal effect: a 7.66% (7.59%) increase in the probability of a better economic well-being in Lewbel IV+ instruments (2SLS). Although they have benefited from affirmative action (eg, quotas in education and public employment), they are not fully integrated into the community. Barriers in housing, their participation in community events, and general resentment against their economic advancement are still pervasive. Their perception of well-being has not improved as it has deep roots in their social and economic exclusion. The residual caste group, 'Others', also displays a significant negative marginal effect on Δ SWB (7.5% lower). As they are likened to upper castes and are denied quotas in schooling and public employment, they are arguably resentful of lower castes benefiting from such affirmative action. This may manifest in lower Δ SWB. What is intriguing is that upper castes-especially the Brahmins-do not show significant marginal effects on their perceived well-being relative to the OBCs. It may be the case that as long as their social superiority is not threatened, they are satisfied with being just the same.

Religious affiliations make a difference to a perceived change in economic well-being. The Christians show a significant positive marginal effect on well-being (with the probability of perceiving an increase in their economic well-being 8.9% higher than that of the Hindus, the default group), as also the motley group of 'Others' comprising Sikhs and Buddhists (12.2% higher than that of the Hindus on average). That some minorities enjoyed greater protection under the United Progressive Alliance (UPA) rule is probably an important reason for the positive effects on the perceived change in well-being. Although the Muslims enjoyed better protection under the UPA, the corresponding coefficient is statistically not significant.

As a measure of individual household affluence, we find a strong positive marginal effect of the log of per capita expenditure on the perceived well-being change. As the latter focuses on changes in economic well-being, this is not surprising. Notably, in both specifications, the absolute value of the marginal effects are nearly equal, that is, a 7.0% increase and a 7.1% increase in 2SLS and Lewbel IV+ instruments, respectively. It does not need any elaboration that higher-income enables households to do this or that - especially deal better with medical and other contingencies, choose better quality schooling for their children and housing.

Finally, state affluence is measured in terms of the log of net state domestic product. In both specifications, the marginal effects of state affluence are significant and positive. However, the marginal effect in Lewbel IV+ instruments (8.8%) is smaller than in 2SLS (13.0%). Why state affluence has a positive effect on well-being does not require elaboration as remunerative employment opportunities are greater, public provision of schooling and healthcare is better, and law and order are better maintained.

Two limitations of this analysis are emphasized.

Since IHDS data comprise two waves of a panel survey, it is not feasible to use fixed or random effects at the household level. As fixed effects could correct for omitted variable bias, measurement errors and unobservable personality traits, this is a limitation that will be overcome only when the third wave of the IHDS becomes available¹⁸. So the results may change.

Another important limitation is that the IV specifications show the rejection in the Hansen J statistic (for over-identification test of all excluded instruments), implying that one of the two external instruments (in the case of 2SLS) or some of the external and internally-created instruments (in the case of Lewbel IV+ instruments) are not excluded from the model. So the results may have to be interpreted with caution, but as we have discussed earlier, this will not necessarily invalidate the specification because the instruments are strong (Hansen, 2021). So we argue that causal inference can be still made with some caution.

7. Discussion

Here we make an attempt to view our analysis from a broader policy perspective. There are two major relationships that we have subjected to rigorous empirical validation. One is the relationship between trust in politicians (including state MLAs, MPs and other political aspirants) and criminality, and other demographic, socio-economic variables, and household and state affluence; and another is the relationship between (predicted) trust in politicians and changes in perceived changes in well-being or Δ SWB.

First, it must be emphasized that we have used rigorous econometric specifications to correct trust in politicians for its endogeneity and use its (predicted) value in examining its influence on perceived changes in well-being during the period 2005-2012, based on a unique all-India panel survey (IHDS). The methods used comprise 2SLS and Lewbel IV+ instruments. The proximity between key results obtained from the two specifications indicates that the econometric analysis is largely robust.

Second, an important issue in the current discourse (as summarized in the literature review, notably Vaishnav, 2017; Fisman et al., 2019; Bardhan, 2021) is the rising share of MLAs and MPs with criminal backgrounds and their growing affluence (measured in terms of MLAs and MPs whose assets are valued in crores of rupees/10 million make a crore). A related concern is that their probability of reelection is much higher than that of “clean” politicians.

Third, the marketplace analogy for politicians in which there is a supply curve of criminal politicians and a demand curve for them, due to Vaishnav (2017), and the associated equilibrium is insightful but overly simple. As argued earlier, the analytical framework is static with no allowance for shifts in the

¹⁸In a personal conversation with Sonal Desai, who is leading the third round of IHDS data collection, she mentioned that the third round data are likely to be available in 2023.

supply and demand curves. To illustrate, how rising costs of election campaigns have affected the supply curve of criminal politicians is not considered. Nor how greater transparency and accountability of criminal politicians through digitization of their criminal and asset growth records have impacted demand for them through the voters and parties that nominate them.

Fourth, several scholars are dismissive of the perils to democracy through rising shares of criminal and corrupt politicians-especially Vaishnav (2017)-on the grounds that there is a limit to these shares. The reasons include a large segment of voters who will not be guided by their selfish interest by voting for criminal and corrupt politicians; and political parties' worry about loss of their credibility and reputation by nominating tainted politicians. While criminal and corrupt politicians are backed by voters - especially in areas/constituencies where the law and order system is broken or extremely weak, say, in BIMAROU states-as these politicians when elected to office have not just legal authority but also muscle power to resolve land and other disputes that have persisted for years. But their failure to deliver justice to the poor and deprived and co-ethnic constituents causes disillusionment among these voters and the parties that nominated them withdraw their support.

Our analysis, however, shows that while rising share of criminal MPs positively influences confidence in politicians, its square more than offsets the positive effect. If our analysis has any validity, on certain assumptions, we are close to the threshold at which trust in politicians is likely to turn negative.

The second important result is that higher political trust causes a perceived change in well-being to rise. So depending on when trust in politicians becomes negative, there will be a loss of well-being. To better understand this inference, some illustrative evidence is given below.

Political developments since UPA was replaced by NDA in 2014 have been drastic. Apart from excessive centralization and relentless pursuit of Hindutva, the share of criminal politicians has spiked.

According to the Association for Democratic Reforms (ADR), 24% of the winners in the 2004 Lok Sabha election had a criminal background; it rose to 30% in the 2009 general election, 34% in the 2014 elections, and 43% in the 2019 elections. Worse, 29% of those elected in 2019 had reported serious crimes including rape, murder, and culpable homicide. Between the two national parties, out of 303 winners from the Bharatiya Janata Party (BJP) in the 2019 election, 116 (39%) had a criminal record as against 29 (56%) out of 52 winners from the Indian National Congress (INC). What is indeed alarming is that the probability of Members of Parliament and Members of Legislative Assemblies winning elections is about three times higher, relative to those without a criminal background (Kulkarni et al., 2021b).

Vaishnav (2017) and other scholarly contributions argue that when the victory of margin is narrow non-dominant parties are more likely to nominate criminal and corrupt politicians as the marginal value of

winning a seat in national and state elections is far greater for them relative to dominant parties such as the BJP and the INC. This is contradicted by our finding that both INC and BJP have very high shares of criminal MPs. This implies that the affliction is far more pervasive than argued earlier. We are inclined to the view that, as both national and state elections have become more competitive with a sharp increase in the number of political parties, they are chipping away the dominance of national parties and enhancing the marginal value of winning an extra seat in both national and state elections.

These pieces of evidence suggest that criminality in politics is rising at an alarming rate and may soon reach the threshold at which trust in politicians is reversed.

What is also important is the growing disaffection among the minorities (e.g., the Muslims, Christians) and lower castes (e.g., the Dalits and Adivasis) during the period 2014-2019 through a relentless and often brutal pursuit of Hindutva. While the UPA regime offered some protection to these groups, the NDA persecuted them and militant Hindus killed many based on fake rumours (Kulkarni et al., 2021b). Our present analysis shows that the Christians and Others enjoyed higher perceived change in well-being during 2005-12, presumably because they were protected well under the UPA. So religious harmony makes a difference to perceived well-being. However, even without persecution of lower castes, and affirmative action, the Dalits displayed lower well-being (relative to OBCs). The gap between aspiration and achievement may have reduced somewhat but not significantly. But blatant attempts to disrupt social and religious harmony are bound to be antithetical to perceived well-being.

In brief, therefore, the rising share of criminality in politics and large-scale alienation of religious minorities and lower castes could cause substantial loss of well-being and eventually pose a threat to democracy.

Another important insight is corroboration of the contributory role of schooling to perceived well-being. A related finding is that the significant contribution of schooling rises with the number of years of schooling. That schooling enables access to more rewarding employment opportunities is unexceptionable; that it broadens vision to encompass social concerns (e.g., sensitisation to poverty, inequality and superstition blocking progress) is largely true; and that it induces social and political engagement is hard to deny.

Uncontrolled urbanisation triggered by large-scale rural-urban migration of not just agricultural and other labourers but also highly skilled youth in search of more rewarding employment opportunities and better lives for themselves and their children puts pressure on limited public provision of schooling, healthcare and other civic amenities (such as sanitation, supply of potable water, and electricity). Not only rural areas are deprived of manpower but concomitantly there is overcrowding of slums. So relative to rural residents, while urban residents continue to experience higher perceived well-being, its erosion in the near future is not unlikely. Although slums are already overcrowded and congested with appalling

living conditions, not unequivocally superior to living conditions in rural areas, they are more vulnerable to a sharp deterioration in their living standards if the migration continues unabated.

Individual household affluence has a significant effect on perceived well-being. This is hardly surprising as our measure is narrowly focused on a *perceived* change in economic well-being. Essentially, greater affluence allows a household to do this or that-more specifically, it could engage in leisurely pursuits, ensure better quality schooling for the children and healthcare for household members. For example, private schooling is better in quality than public schooling but the former is more expensive. So an affluent household may choose private schooling as it is affordable.

So does state affluence. It offers more remunerative employment opportunities, better schooling and healthcare facilities, and a more efficient law and order system¹⁹.

8. Policy Challenges

If trust in politicians eventually erodes due to higher levels of criminality and corruption but both voters and parties - driven by their value system and fear of loss of reputation and credibility, respectively - begin to resist criminality, then perceived increase in well-being could be prevented from collapsing. However, the policy challenges involved in stemming the tide of criminality across the political spectrum are formidable.

One barrier is the Government itself - specifically, its inaction. The Supreme Court of India had ordered political parties to publish the entire criminal history of their candidates for Assembly and Lok Sabha elections along with the reasons that goaded them to field suspected criminals over decent people. Further, the information should be published in local and national newspapers as well as the parties' social media handles. Indeed, it is mandatory to publish such information either within 48 hours of the selection of candidates or less than two weeks before the first date for filing of nominations, whichever is earlier. Failure to comply with this order would risk contempt of court action. However, the Ministry of Law, Government of India, filed an affidavit in the Supreme Court in December, 2020, arguing against the order. More recently, the Supreme court asked the Centre whether it was "willing" to favour a lifetime ban on contesting elections for people convicted of offences (November, 2021). The Additional Solicitor-General, appearing on behalf of the Centre, requested more time as he had just been appointed to this position (Rajagopal, 2020, 2021).

The media have an important role in this process through detailed investigations of criminal and corrupt practices. However, under the NDA, the freedom of the press and other media (e.g., visual) have been sharply curtailed. Any critical comment on the discriminatory policies of the present regime (e.g., the

¹⁹There is a two-way relationship between state/nation affluence and the quality of public institutions. Following the important contribution of Acemoglu et al. (2001), see Imai et al. (2010) for extensions.

lynching of cattle traders, desecration of places of worships such as mosques and churches) frequently has draconian consequences for the reporters (e.g., unlawful arrests, long spells of custody without any trial). In effect, the mass media and dissent have been muzzled. Another serious consequence is the abundance of “fake” news that exaggerates, if not misleads, the public. There are no easy solutions to unshackle the media from the iron hand of the present regime.

Nor have protests by the minorities and lower castes yielded results as the protesters are either dealt with brutally or just locked up. However, farmers’ protests over liberalisation of markets (or, more specifically, the passage of three farm bills) lasted nearly 16 months, with thousands experiencing starvation, no shelter or protection against the bitter cold, and many deaths. The cost of human lives was compounded by the loss of potential farm income and a sharp rise in their indebtedness. Upcoming elections forced the central government to withdraw the law in November 2021, but a great deal of damage had already been done.

Our analysis also forewarns that uncontrolled urbanisation may result in the rapid growth of slums with deterioration of already abysmal living conditions and potential loss of well-being. Regulating rural-urban migration without expanding rural non-farm activities and small and medium enterprises in urban areas is unlikely to work. The latter could not withstand the shock of the Covid-19 pandemic and consequent immiseration of a vast workforce. Millions tried to return to their villages without state support, with tens of thousands forced to walk back hundreds of km and many perished in the process.

Another policy imperative is greater public investment in schooling and enhancement of its quality. Government schools and colleges suffer from large-scale absenteeism of teachers, lack of textbooks, and high dropout rates at higher levels of schooling-especially of females in rural areas-raise a serious concern²⁰. Lack of accountability of school and college teachers and financial constraints on students-especially female students-are major contributory factors to the abysmal quality of school and college education. Private institutions offer better quality education but charge exorbitant fees, pricing the economically disadvantaged children out. Little has changed since Dreze and Sen (2002) drew pointed attention to these problems.

From a macro perspective, the economy contracted by 7.3% in 2020-21. It was partly due to the slowing of growth in 2019, mainly due to mishandling of the Covid pandemic, and ill-advised and often inconsistent policies pursued by the NDA. A few examples suffice.

²⁰The dropout rate among boys is quite high at the secondary level, as compared to the primary level. According to the latest Unified District Information System for Education Plus or UDISE+ 2019-20 report, about 30 percent of students do not make the transition from secondary to senior secondary level.

Drawing upon Subramanian and Felman (2022), the government has launched a three-pronged strategy, called *Atmanirbhar Bharat* (Self-Reliant India), relying on targeted subsidies, a return to protectionism, and nonparticipation in regional trade agreements.

The subsidies are a form of production-linked incentives (PLIs) for manufacturers in specific sectors, including makers of cell phones, electronics, and pharmaceuticals. Available to both domestic and foreign-owned companies, the PLIs may add up to about one percent of GDP over five years. Apart from the huge fiscal burden, these are not labour-intensive sectors.

The Government has begun raising import tariffs. Since 2014, there have been some 3,200 tariff increases, affecting about 70 percent of total imports. As a result, the average tariff rate has increased from 13 percent to nearly 18 percent, pushing India's trade barriers well above those of its East Asian counterparts. Higher tariffs will discourage firms from accessing the inexpensive, high-quality imported inputs on which modern production depends. And India's decision to stay out of Asia's most comprehensive trade agreement (i.e., Regional Comprehensive Economic Partnership) means that the country's exports will face a disadvantage in many of the world's most dynamic markets (Subramanian and Felman, 2022)

Self-reliant India harks back to the industrial strategy of post-independence economic policy, which was abandoned in 1991 after India had fallen far behind its more market-oriented Asian competitors. The new approach, the "subsidy raj," carries all the risks of the old "license raj," namely that it is hard to enforce, is driven by arbitrary decision-making, and creates a system of entitlements from which it will be difficult to exit (Subramanian and Felman, 2022).

The main point of this foray into macro-economic growth is that recovery to pre-pandemic growth is likely to be stalled. As demonstrated by our analysis, slowing of affluence could result in lower improvement of perceived well-being.

In conclusion, while our unravelling of the relationships between trust in politicians and criminality, and between change in perceived well-being and trust in politicians offers many useful policy insights, the challenges in reducing the scourge of criminality and enhancing well-being are daunting.

References

- Acemoglu, D., S. Johnson and J.A. Robinson (2001) “The Colonial Origins of Comparative Development: An Empirical Investigation”, *American Economic Review*, Vol. 91, No. 5, pp. 1369-1401.
- Akay, A. O. B. Bargain, and H. X. Jara (2017) “Back to Bentham, Should We? Large-Scale Comparison of Experienced versus Decision Utility”, IZA DP No. 10907, Bonn. Angrist, J. D., and J. S. Pischke (2008). *Mostly harmless econometrics: An empiricist's companion*. Princeton University press, Princeton, NJ.
- Banerjee A. and R. Pande (2007) “Parochial Politics: Ethnic Preferences and Politician Corruption”, [Working Paper Series](#) rwp07-031, Harvard University, John F. Kennedy School of Government, MA: Cambridge..
- Bardhan, P (2021) “Clientelism and governance”, WIDER Working Paper 2021/116, Helsinki.
- Bauer, P. and M. Freitag (2017) “Measuring Trust”, Ed. E. M. Uslaner, [The Oxford Handbook of Social and Political Trust](#), New York and Oxford.
- [Baum](#), C.F. and A. Lewbel (2019) “Advice on using heteroscedasticity-based identification”, *The Stata Journal: Promoting communications on statistics and Stata*, December 18, <https://doi.org/10.1177/1536867X19893614>
- Behrman, J.R. (1988) “Intrahousehold Allocation of Nutrients in Rural India: Are Boys Favoured? Do Parents Exhibit Inequality Aversion?”, *Oxford Economic Papers*, [New Series, Vol. 40, No. 1](#), pp. 32-54.
- Blanchflower, D. G., and Oswald, A. J. (2004). “Well-being over time in Britain and the USA”. *Journal of Public Economics*, 88, 1359–1386.
- Blanchflower, D.G., and A. Oswald (2007) “Is Well-Being U-Shaped Over The Life Cycle?”, NBER Working Paper Series, Working Paper 12935, Cambridge, MA.
- Cantril, H (1965). *The pattern of human concerns*. New Brunswick, NJ: Rutgers University Press.
- Clark, A. (2003). “Unemployment as a social norm: Psychological evidence from panel data”. *Journal of Labor Economics*, 21(2), 323–351.
- Clark, A., Frijters, P., and Shields, M. A. (2008). “A survey of the income happiness gradient”. *Journal of Economic Literature*.

- Deaton, A. (2011) “Aging, Religion, and Health”, D. A. Wise (ed.) *Explorations in the Economics of Aging*, University of Chicago Press.
- Deaton, A. (2018) “What do self-reports of wellbeing say about life-cycle theory and policy?”, *Journal of Public Economics*, 162, 18-25.
- Diener, E. R. Inglehart, L. T. (2013) “Theory and Validity of Life Satisfaction Scales”, *Soc Indic Res*, 112:497–527. Dolan, P., T. Peasgood, and M. White (2008) “Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being”. *Journal of Economic Psychology* 29, 94–122.
- Drèze, J.P., and Sen, A.K. (2002), *India: Development and Participation* (New Delhi: Oxford University Press).
- Easterlin, R. A. (2006). “Life cycle happiness and its sources: Intersections of psychology, economics, and demography”, *Journal of Economic Psychology*, 27(4), 463-482.
- Economist Intelligence Unit (2021), *Democracy Index 2020: In sickness and in health?: A report by* (London, The Economist Intelligence Unit).
- Fahey, T., and E. Smyth (2004). “Do subjective indicators measure welfare? Evidence from 33 European societies”. *European Societies*, 6(1), 5–27.
- Fehr, E. (2009). “On the economics and biology of trust”. *Journal of the European Economic Association*, 7(2-3), 235-266.
- Ferrer-i-Carbonell, A. (2005). “Income and well-being: An empirical analysis of the comparison income effect”. *Journal of Public Economics*, 89, 997–1019.
- Fisman, R., F. Schulz, and V. Vig (2014). “Private Returns to Public Office.” *Journal of Political Economy*, 122, (4): 806-862.
- Fisman, R., F. Schulz and V. Vig (2019) “Financial disclosure and political selection: Evidence from India”, mimeo, Boston University.
- Gehring, K., T. F. Kauffeldt and K. C. Vadlamannati (2019) “Crime, incentives and political effort: Evidence from India”, [European Journal of Political Economy](#), Volume 59, September, 1-20.
- Hansen, B.E., 2021. *Econometrics Revised version*: <https://www.ssc.wisc.edu/~bhansen/econometrics/> (accessed on 1 February 2022).
- Hardin, R. (2000) *Trust and Trustworthiness*, Russell Sage Foundation, New York.

- Hardin, R. (2006) *Trust*, Polity Press, Cambridge, United Kingdom.
- Imai, K.S., R. Gaiha and G. Thapa (2010) “Is the Millennium development goal on poverty still achievable? The role of institutions, finance and openness”, *Oxford Development Studies*, vol. 38/3, 09-337.
- Kahneman, D., and A. B. Krueger (2006) “Developments in the Measurement of Subjective Well-Being”, *Journal of Economic Perspectives—Volume 20, Number 1—Winter—3-2*.
- Kahneman, D., and A. Deaton (2010) “High income improves evaluation of life but not emotional well-being”, *PNAS* | September 21 | vol. 107 | no. 38 | 16489–16493.
- Kulkarni, Vani, S. Veena S. Kulkarni, K. Imai, and R. Gaiha. (2021a). "Changes in Subjective versus Objective Well-Being in India." University of Pennsylvania Population Centre Working Paper PSC/PARC), 2021-71. https://repository.upenn.edu/psc_publications/71.
- Kulkarni, Veena S., Vani S. Kulkarni and R. Gaiha (2021b) “The pertinent issue of trust and the Indian politician”, *The Hindu*, 29 December.
- Mosse, D. (2018) “Caste and development: Contemporary perspectives on a structure of discrimination and advantage”, *World Development*, vol. 110, October, pp. 422-436.
- NCAER and University of Maryland (2015) India Human Development Survey, <https://doi.org/10.3886/ICPSR22626.v12> and <https://doi.org/10.3886/ICPSR36151.v6>.
- Prakash, N., M. Rockmore and Y. Uppal (2019) “Do criminally accused politicians affect economic outcomes? Evidence from India”, [Journal of Development Economics](https://doi.org/10.1016/j.jdeveco.2019.07.001) 141(1).
- Rajagopal, K. (2020) “Supreme Court orders parties to publish criminal history of Lok Sabha, Assembly candidates”, *The Hindu*, February 13.
- Rajagopal, K. (2021) “Will you ban convicts from polls, Supreme Court asks government”, *The Hindu*, November 24.
- Ravallion, M. (2014) “Poor, or Just Feeling Poor? On Using Subjective Data in Measuring Poverty”, In *Happiness and Economic Growth*, A. Clark and C. Senik (eds.) Oxford: Oxford University Press.
- Ravallion, M., K. Himelein and K. Beegle (2016) “Can Subjective Questions on Economic Welfare Be Trusted?”, *Economic Development and Cultural Change*, volume 64, no. 4.
- Sen, Amartya (1988). “Family and food: sex bias in poverty” In: Bardhan P, Srinivasan T, editors. *Rural Poverty in South Asia*. New York: Columbia University Press; pp. 453–72.

Spears, D. (2016) “Caste and Life Satisfaction in Rural North India”, *Economic and Political Weekly*, January 23.

Stock, J. H. and M. Yogo (2005):“Testing for Weak Instruments in Linear IV Regression,” in *Identification and Inference for Econometric Models: A Festschrift in Honour of Thomas J. Rothenberg*, D. W. K. Andrews and J. H. Stock (eds.). Cambridge, UK: Cambridge University Press.

Stutzer, A. (2004) “The role of income aspirations in individual happiness”, *Journal of Economic Behavior and Organization*, vol. 54, issue 1, 89-109. Subramanian, A. and J. Felman (2022) “India’s Stalled Rise: How the State has Stifled Growth?”, *Foreign Affairs*, January/February.

Tiwari, D. (2014). “Quality is in the Eye of the Beholder: Electoral Competition and Candidate Quality in India .”Unpublished Manuscript.

Vaishnav, M. (2017) *When Crime Pays: Money and Muscle in Indian Politics*, Yale University Press, New Haven.