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Good Governance and National Well-being: What Are the Linkages?

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GOOD GOVERNANCE AND NATIONAL WELL-BEING: WHAT ARE THE LINKAGES?

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WORKING PAPER

"GOOD GOVERNANCE AND NATIONAL WELL-BEING: WHAT ARE THE LINKAGES?"

John F. Helliwell, Haifang Huang, Shawn Grover and Shun Wang in collaboration with Mario Marcel, Martin Forst and Tatyana Teplova

ABSTRACT

The paper was prepared by John F. Helliwell, Haifang Huang, Shawn Grover and Shun Wang in collaboration with Mario Marcel, Martin Forst and Tatyana Teplova.*

This paper has three main objectives. The first is to review existing studies of the links between good governance and subjective well-being. The second is to bring together the largest available sets of national-level measures of the quality of governance, and to assess the extent to which they contribute to explaining the levels and changes in life evaluations in 157 countries over the years 2005-2012, using data from the Gallup World Poll already analysed in some detail in the World Happiness Report 2013. The third objective is to use subjective well-being research to suggest ways in which governance can be changed so as to improve lives in all countries, as measured by peoples' own evaluations.

The paper starts with a summary of the evidence and policy implications. There follow the four main sections of the paper, a statistical appendix containing a broad range of data and results, and an extensive annotated bibliography of empirical literature linking good governance and subjective well-being.

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SUMMARY AND POLICY IMPLICATIONS[1]

This paper first sets the stage by making an evidence-based case that people's own evaluations of the quality of their lives provide reliable and inexpensive new ways to show how, and how much, good governance matters. These well-being measures complement and encompass more established indicators of economic and social progress. Their encompassing capacity is based on their focus on life as a whole, thereby permitting economics, health, trust, freedom and social relations to be consistently taken into account, using survey-based life evaluations as the research base to establish what matters most.

The paper then brings together the largest available sets of national-level measures of the quality of governance, and assesses the extent to which they contribute to explaining the levels and changes in life evaluations in 157 countries over the years 2005-2012, using data from the Gallup World Poll already analysed in some detail in the *World Happiness Report 2013*.

The results confirm earlier findings that the delivery quality[2] of government services dominates democratic quality in supporting better lives. There is, however, some difference in relative importance as development proceeds, with democratic quality having a positive influence among countries that have already achieved reasonably high per capita incomes.

The new results are able to show not just that people are more satisfied with their lives in countries having better governance quality, but also that actual changes in governance quality since 2005 have led to large changes in the quality of life. This provides much stronger evidence that governance quality can be changed, and that these changes have much larger effects than those flowing simply through a more productive economy. For example, the ten-most-improved countries, in terms of delivery quality changes between 2005 and 2012, when compared to the ten countries with most worsened delivery quality, are estimated to have thereby increased average life evaluations by as much as would be produced by a 40% increase in per capita incomes. When we explain changes in average life evaluations over the 2005 to 2012 period, just as much was explained by changes in governance quality as by changes in GDP, even though some of the well-being benefits of better governance are delivered through increases in economic efficiency and hence GDP per capita. Our new results thus confirm that quality of governance affects lives via many channels beyond those captured by GDP per capita, and also that important improvements can be achieved within policy-relevant time horizons.

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[2] Delivery quality is represented by the average of separate measures for government effectives, regulatory quality, rule of law and control of corruption. Democratic quality is an average of two measures, one for voice and accountability and the other for political stability and absence of violence. Further definitions and sources are reported in Part I, and the results in Part II and the Statistical Appendix.

Additional well-being benefits can arise where nations have stronger social fabrics that enable them to better weather economic or other crises. These benefits lie above and beyond those already found to flow from more traditional measures of governance quality. Thus while four Eurozone countries had drops of life evaluations much larger than could be explained by their large income losses and increases in unemployment (see Table 2.2 in *World Happiness Report 2013*), there were other countries severely damaged by the global financial crisis – Ireland and Iceland- where despite severe damage to their banking systems and economic performance, average life evaluations fell only slightly. In the Gallup World Poll data, Ireland and Iceland rank right at the top in terms of social support, as measured by the proportion of respondents who feel they have someone to count on in times of trouble. The well-being benefits of these social connections become more obvious, and they are probably appreciated more, when crises arise to give them a chance to show their value.

Trust in others has been repeatedly found to be a vital support for happier lives. This trust takes many forms, ranging from the comforting thought that friends and relatives are ready to help in times of need, to belief in the generosity of strangers willing to pick up and return a lost wallet, and the belief that the word of a colleague or business associate can be relied upon, to broader trust in public institutions and governments. While the evidence shows that all these forms of trust are important, trust in one's local environment of friends, neighbours and workmates matters most of all. This is important information for policy-makers, who can help to design policies that both build and make use of the constructive capacities of community-level connections and engagement.

Trust in the quality, completeness and fairness of broader public institutions is also an important part of the overall support for better lives. Thus our new results show that changes in public confidence in national institutions are important sources of changes in life evaluations even after account has been taken of the effects of changes in delivery quality, GDP per capita and social support. That confidence in public institutions has importance even beyond the conventional measures of the delivery quality of their services suggests that some important ingredients are missed by the conventional measures. Our view, based on a variety of findings in well-being research, is that more attention needs to be paid to the 'how' as well as the 'what' of public services. This aspect of the linkage between governance and well-being is the subject of Part III of the paper.

Part III extends our analysis beyond the current governance quality data to suggest ways in which governance can be changed so as to improve lives in all countries. The focus goes beyond the standard measures of governmental effectiveness to consider specific changes in the ways that public services are designed and delivered. We consider a variety of relevant examples, including prison reforms in Singapore, the delivery of elder care and how to design and deliver on-the-job training in more collaborative and effective ways. But these are only examples drawn from a much larger set of possibilities; there is no element of governance that would not look different from a well-being perspective.

What are the specific policy suggestions that flow from our analysis? First, we judge that the currently available evidence on the links between good governance and subjective well-being is strong enough to justify building a sufficient national research base to permit the measurement and unpacking of life evaluations in all parts of the country, and among all demographic and other subgroups of the population. It is not enough simply to collect good data on how people assess their lives; it is equally important to collect these evaluations jointly with information about the key variables supporting better lives, with special attention to those measures of trust, belonging and social connections that have been too long ignored in official statistical surveys.

Second, the great importance attached to deliver quality, relative to the electoral aspects of governance, especially among those countries still struggling to build or rebuild the honesty and efficiency of their public services, suggest a parallel ordering of policy priorities.

Third, we surveyed evidence showing people value living where there is less inequality in the distribution of well-being, and where the government's social insurance and income-support systems are complete. Attention to the latter aspect of policy design would also tend to reduce inequality in the distribution of well-being, as

would attempts to enable those worst off to participate directly in the design and delivery of services to themselves and especially others.

Fourth, the emerging importance of the 'how' of public service delivery, and the value of enabling individuals and communities to help each other develop better lives, suggest that each public service deserves fundamental review of how services should be designed and delivered. In our view, this would be done best not by expert panels or commissions, but by encouraging innovation and experimentation at the local level, thereby finding out at low cost, on a step-by-step basis, which innovations are most deserving of broader application.

We were also asked to make suggestions about which governance-related measures should be included in the suite of indicators published as part of the OECD's *'How's Life?'* publication. For specific indicators, we recommend a general measure of delivery quality and a broad measure of confidence in government, because we have found them both to be independently and consistently important in explaining national levels and changes of people's life evaluations. For inclusion in a report entitled *'How's Life?'*, what could be more appropriate than the two governance variables that have been found to underlie happier answers to that question? On the broader focus of OECD well-being reporting, we suggest that life evaluation should not simply be considered one among many indicators but should instead be used as an overarching measure if and when there is a need to present a single indicator to reflect average well-being.

Looking ahead, we see much need and many opportunities for learning exactly how the design and operation of public and private institutions affect the quality of peoples' lives, as seen by them. This knowledge can be best acquired by a collaborative combination of four types of innovation: broader official collection of well-being data, local experimentation with alternative ways of doing things, broader sharing of information about what works best to improve well-being, and field trials of the most promising options.

PART I: SETTING THE STAGE

In this paper we summarize and extend the available evidence linking good government and well-being. In this first part we start by setting out what we shall cover by way of measures of well-being, then describe our selected measures of the quality of government, and finally consider different ways of measuring the theoretical and empirical linkages between good government and well-being. Subsequent parts of the paper will review and expand the available evidence at the national level, and then consider a range of more specific case studies showing how government policies can be designed and delivered in ways that improve well-being.

Measures of well-being

Our primary interest is in measures of subjective well-being, and especially in how people value their own lives. Within the general term 'subjective well-being' there are three main categories: life evaluations, measures of positive affect (or emotion) and measures of negative affect (or emotion). The most widely available comparison of these three types of subjective well-being is provided by the Gallup World Poll, and summarized in the *World Happiness Report* and the *World Happiness Report 2013*. The Gallup World Poll life evaluation asks respondents to think of their lives as a ladder, with the worst possible life for them as 0, and the best possible life as 10. They are then asked to use this scale to evaluate their current lives. The other major life evaluation questions also use scales with 10 as the highest score, and ask about each respondent's life satisfaction, or, alternatively, about how happy they are with their life as a whole. It was at one time thought, on the basis of comparing data drawn from different samples of respondents, that these alternative forms of life evaluation gave significantly different results, with income (and possibly other life circumstances) being most closely linked to the Gallup ladder, less so with life satisfaction, and least with general happiness[3]. However, it has since been found that all three types of life evaluation give structurally comparable answers when asked of the same respondents. This has been shown by comparing Cantril ladder and life satisfaction responses in the Gallup World Poll, and by comparing life satisfaction and happiness responses in the European Social Survey. Although these different questions give rise to unequal means and different distribution shapes for within-country responses, they tell the same structural story, both within and across countries, so much so that more precise estimates can be obtained by using the averages of two different measures[4].

Although different life evaluations are similar to one another, as a group they differ markedly from measures of positive and negative affect[5]. There is also a difference between positive and negative affect, with the former having a much stronger link to life evaluations than is true for negative affect[6]. In the health sciences, measures of affect, and especially of depression and other measures of negative affect, have been used much more widely than life evaluations. This is partly because only in recent decades has research accumulated showing that future health and life circumstances are more closely linked to positive than to negative emotions[7]. Life evaluations are now being considered, along with positive emotions, and the more usually monitored negative emotions, as part of baseline patient monitoring by family doctors.

[3] See Diener et al (2010) Table 1.2.

[4] This is reported in Helliwell et al (2010) Table 10.1 for the ladder and life satisfaction in the Gallup World Poll, and in Helliwell & Wang (2012, p. 16) for life satisfaction and overall happiness in the ESS.

[5] See Helliwell & Wang (2013a).

[6] See Helliwell & Wang (2013b) Table 2.1.

[7] See De Neve et al (2013).

Measures of affect are more widely used than are life evaluations in the context of studies of time-use, since moods are more sensitive to changes in the hourly and daily patterns of life[8].

The OECD has recently issued guidelines for the collection of subjective well-being data by national statistical offices. The guidelines advise collecting all three types of subjective well-being data, along with a range of variables important for their understanding, within each country's established systems of population-based individual and household surveys[9]. If there can only be a single measure, preference is given for a life evaluation, in the form of a life satisfaction question on a 0 to 10 scale. The reasons for concentrating on a life evaluation are the same as those presented in the first *World Happiness Report*, where a whole range of national-level life evaluations and affect measures were assembled and compared. The first reason is that while emotions vary a lot among individuals, variations are relatively smaller at the national level[10]. Second, and even more importantly, a much higher proportion of the international variation in life evaluations, compared to either positive or negative affect, is explained by differences in established measures of the quality of life[11].

Although the collection and use of subjective well-being data as central measures of the quality of life have become increasingly accepted over the past two decades, there remains some uncertainty, and occasionally controversy, about how these data should augment, complement or even supplant other national-level outcomes often taken to capture how well a nation is doing. The two main alternative types of well-being measure are GDP per capita and some weighted combination of a broader range of measures of human development. Per capita incomes have been held to be insufficient because they fail to account for important aspects of the economy, fail to cover a variety of non-economic features of life, and neglect sustainability[12].

The UNDP has championed a broader human development approach, under the intellectual leadership of Amartya Sen, with the UNDP's Human Development Index (HDI) as the primary measure. Jon Hall has argued that the human development approach and the HDI are complementary with subjective life evaluations, since the latter are influenced by the key underlying supports for the human development approach, while also providing an umbrella measure that avoids the need for experts to choose weights on the components of the HDI or any alternative well-being index[13]. The HDI and subjective well-being measures share the benefit of broadening government and private discussions of national objectives and the policies best able to support better lives. A side benefit of these broader discussions may be the development of cross-government discussions and increasing trust and collaboration among departments.[14]

Subjective well-being, and especially the notion of happiness as a sufficient measure of well-being, has been criticized as being too subject to adaptation, peer effects, survey context[15], and to lack due attention to the

[8] See Krueger (2009).
[9] See OECD (2013c) and Durand & Smith (2013).
[10] Thus of all the global variation among individuals in their responses to the Cantril ladder life evaluation, 22% was among countries (and hence 78% among individuals in the same country), compared to 7% among countries for positive affect and 4% for negative affect. See Table 2.1 in the first *World Happiness Report*.
[11] For a sample of 732 national observations, comprising several annual average observations from each of 149 countries, three-quarters of the pooled variance of the Cantril ladder is explained by six key variables. This is to be compared with less than one-half for positive affect and less than one-quarter for negative affect. See Table 2.1 of *World Happiness Report 2013*. Table 3.1 of the first *World Happiness Report* shows a similar result for cross-sections of national averages.
[12] All three of these points are made in Stiglitz, Sen & Fitoussi (2009).
[13] In Hall (2013).
[14] This point is made more fully in Hall & Rickard (2013, p.16).

[15] Deaton (2012) emphasizes the potentially swamping effect of these effects by reference to whether life evaluations in the Gallup Daily Poll were asked after a set of political questions that sharply reduced life evaluations. Similarly, Bonikowska et al (2013) show a variety of contextual effects on answers to the life satisfaction question in several large Canadian surveys. However, the paper also shows how it is relatively easy to measure and adjust for these contextual effect, and thus to effectively combine data from different surveys and survey contexts.

basics of a good life. These are all important points, but recent research tends to suggest that none of these problems are fundamental[16].

Amartya Sen has argued that happiness as an emotion is likely to be too narrow and short-term to be an adequate reflection of a good life. For that, he argues, a broader notion of happiness is needed- as a judgment about life as a whole. There are now sufficiently broad samples of both sorts of happiness measure to support the linguistic distinction made by Sen[17]. When people are asked about happiness yesterday, or right now, they take it as a question about emotions, and answer accordingly[18]. Conversely, when they are asked how happy they are with their lives as a whole, they make a cognitive judgment and answer appropriately[19]. Thus, as we have already noted, life evaluations, whether expressed in terms of happiness or satisfaction with life, do reflect the broader aspect of human development, while reports about happiness yesterday are emotional reports that are less reflective of longer-term life circumstances.

Thus for the purposes of assessing the links between good governance and well-being, we rely, as has most earlier research, on life evaluations as the preferred measure of well-being. However, since much previous research has looked at links between good governance and some other variables that might be presumed to improve well-being, we shall do the same where it rounds out the available evidence in a helpful way. We shall not attempt to survey the vast literature linking various types of institutions, including especially government ones, to either the levels or rates of change of GDP per capita[20]. We shall, however, when explaining the correlations between governance and subjective well-being, try to assess the extent to which economic growth is a mediating factor.

Measures of government quality

For the national-level statistical analysis we need government quality measures that have been collected in comparable ways for many years and covering the largest number of countries. The most important of these are the six composite measures proposed and reported as part of the World Bank Worldwide Governance Indicators (WGI) Project[21]. There are six measures, which we divide into two groups[22]. The first group contains four measures primarily concerned with the quality of the delivery of government services: government effectiveness, regulatory quality, rule of law, and the control of corruption. The second group of two indicators measures the state of democracy: the first covering voice and accountability, and the second political stability and absence of violence. As we shall see, this aggregation of the six indicators into two gives us one variable capturing the quality of the delivery of government services, and the other more closely capturing aspects of the electoral process. Previous studies have found the former to be more closely linked to subjective well-being than the latter, to an extent that differs for countries at different stages of development. We shall in the following sections

[16] For a summary of the evidence on each of these issues, see Helliwell & Wang (2012). See also Diener et al (2009), especially Chapter 5.

[17] In his keynote address (*www.auditorium.com/eventi/5495077*) to the January 2013 Rome Science Congress, his primary reference was to the later Wittgenstein (1953), with roots attributed to Gramsci via Sraffa, as described in Sen (2003).

[18] The UK Office for National Statistics happiness question is of this form.

[19] Thus, as already noted, the life satisfaction and overall happiness answers in the European Social Survey are both determined, in consistent patterns, by the same life circumstances.

[20] For a wide-ranging review of that literature, see Acemoglu & Robinson (2012).

[21] The Worldwide Governance Indicators (WGI) are a research dataset summarizing views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms. See Kaufmann, Kraay & Mastruzzi (2009).
http://info.worldbank.org/governance/wgi/index.aspx#home

[22] Langbein & Knack (2010) argue that these six measures of government quality draw heavily from overlapping and connected sources of data, and are hence hard to distinguish as six separate factors. They present principal components analysis (2010, Table 2) showing that the first principal component has equal weights on the four variables we have used to comprise delivery, while the second and third components give weight instead to the two measures we combine to represent democratic quality. Hence their analysis supports our division.

summarize these and other past results, and see to what extent they are supported by the larger samples of global data now available. We shall also assess the theory and evidence supporting linkages between well-being and other more specific aspects of governance.

The other main variables we test at the national level include some widely used measures of democratic quality[23], freedom of the press and economic freedom. Where necessary, we have rescaled the original data so that in all cases a larger value indicates better governance. These alternative indicators are used in part because they have been considered in earlier research, and partly because they, like the WGI indicators, cover most if not all of the countries for which we have good samples of well-being data.

We shall pay special attention to various measures of trust, including measures of social and domain-specific trust, which have been shown to be strong supporters of well-being, as well as selected measures of trust in government, which is in its own right an important measure of the quality of governance.

When we turn from our national-level data analysis to a variety of case studies illustrating the well-being importance of how governance is designed and delivered, we make use of a wider range of measures of well-being, and of the quality of governance. We shall sometimes focus on more conventional outcome measures, rather than on measures of subjective well-being, because subjective well-being measures have not yet been widely collected during tests of alternative delivery methods, and sometimes the case studies were not experimental in nature. We shall nonetheless focus on methods and outcomes that have been shown in other research to improve well-being.

What connects good government to well-being?

Does good government improve well-being directly, or does it act mainly or entirely indirectly, because of what it can achieve by way of other outcomes? Or, more plausibly, does it work in both ways? Examples of both possibilities may be found. Consider education, as a particular example of a service typically delivered or assured to children, and often to adults, by local or national governments. Across countries there is a strong positive correlation between average education levels and subjective evaluations of life. Yet when allowance is made for each respondent's income, health and social trust, the remaining positive link between education and subjective well-being usually disappears, and sometimes turns negative. The theoretical interpretation of this sort of result is that education plays primarily an instrumental role in improving happiness.

For an alternative example, consider the control of corruption, which has been shown to affect well-being both directly and indirectly. Absence of corruption has often been shown to increase the efficiency of public and private enterprise, but there is also lots of evidence that the higher levels of general and specific trust make people happier above and beyond the higher incomes and better health that may be achieved in a high-trust environment[24].

To help to distinguish direct from indirect linkages between good governance and well-being at the national level, we shall consider two main types of correlational evidence, first the simple relations and then models that attempt to sort out the likely channels of influence. Both types of comparison are sometimes difficult because measures of governance and of national well-being are often relatively slow-moving, and governance and well-being are both likely to be influenced by some of the same factors. Thus the global evidence may show a whole range of good and bad things tending to go together, with plausible reasons why that should be so. In these circumstances, it is difficult to establish clearly the direction and size of causal forces. From time to time, of

[23] Here we use the Freedom House data for two separate indicators: political rights and civil liberties. *www.freedomhouse.org/report/freedom-world-aggregate-and-subcategory-scores*

[24] See Helliwell & Putnam (2004) Table 1 for results showing that several types of trust have positive impacts on life evaluations even after allowing for their possible instrumental roles acting through education, health, social connections and income. The evidence includes multicountry modelling based on the World Values Survey, and national modelling based on U.S. and Canadian surveys.

course, extraneous events or structural changes can be treated as natural experiments, thus increasing confidence about the direction and scale of influence.

In our attempts to disentangle the links between good governance and well-being, we shall pay special attention to models that use changes in the quality of governance to explain changes in well-being. Analysis of changes enables us to abstract from a whole range of country-specific histories that may have led some countries to have high quality governance and high levels of well-being. It also provides a greater degree of policy relevance, as it can potentially reveal where improvements of governance have been made, and perhaps to establish the extent to which they provide useful lessons for others.

Earlier studies often used only economic outcomes to link good governance and well-being

Before broader measures of well-being were sufficiently widely measured and understood, the effects of good governance were usually assessed by searching for linkages between governance and economic outcomes, and treating these economic outcomes as proxies for well-being more generally. Traditionally, there have been two models used to describe how good governance could improve economic well-being. The first is a market-enhancing governance approach viewing governance as effective if it helps to foster strong property and contract rights and a stable rule of law. This is presumed to keep transaction costs low to permit private individuals and entities to increase their own utility and economic potential, and hence to improve general well-being. The second traditional model is a growth-enhancing governance approach. It viewed good government as that which fostered economic growth by managing incentives to enhance productivity and help shift activity to more economically productive endeavours with the underlying assumption that such productivity would lead to increased well-being.

However, both of these approaches assume economic outcomes to be the sole intermediate links between good governance and improved well-being. This assumption has increasingly been argued to be unduly restrictive. The existence of some connection between income and well-being is well established. It would therefore seem intuitive that economic growth would improve well-being. This has been questioned in two quite different ways, one emphasizing the uncertainty of the links between income and well-being, and the second arguing that other factors than income cannot be ignored, since together they might be more important than income. Especially relevant to our study of governance and well-being, governance may affect income and these other factors in quite different ways.

First, there is the proposition most famously presented by Richard Easterlin and known as part of the Easterlin Paradox[25], that as countries become richer, they might not become happier, because increased incomes cause associated increased material norms. Other scholars have found little strong evidence of a direct connection between growth and SWB in middle-income countries and theorized that this could be because increased income also is associated with "negative indicators of life quality such as increased pollution, the social costs of economic transformation, the importance of positional goods and the dominance of country- or locally-based relative income concerns."[26] While the Easterlin Paradox has been qualified by a variety of studies showing that when income differences are represented in proportionate terms they are frequently found to have quite comparable effects in and among countries at all stages of development[27], whether national-level average

[25] See Easterlin (1974).

[26] See Kenny (2005).

[27] The Gallup World Poll data for more than 150 countries have been found to show income effects that are quite similar for countries at different levels of development (Deaton 2007, Sacks, Stevenson et al 2012, and Helliwell & Barrington-Leigh 2010). This stands in contrast to earlier findings based on the World Values Survey that suggested income effects to be smaller in OECD than in non-OECD countries (Helliwell 2003).

incomes and happiness move in the same or different directions depends a great deal on the countries and time periods chosen for comparison[28].

Second, the evidence and arguments supporting the use of subjective well-being do not rest on the size or constancy of the link between income and happiness, even if much literature has been directed to that issue. The primary reason for looking beyond economic outcomes is not that the linkage between incomes and happiness is insecure and variable, but that it excludes too many other things that are fundamentally important for better lives.

Another way of putting this second point is that the most fundamental explanation for the Easterlin paradox - if this paradox is represented by cases where income has risen a great deal yet average happiness has declined - is not that the effects of income on happiness are absent, or even differ among countries, but because other things critical to happiness have changed in the opposite direction. Thus it has been argued that Easterlin's widely quoted example showing much post-1970 economic growth in the United States without any increases in average happiness can be well explained by a model in which income has significant positive impacts of happiness that have been offset by declines in other key supports for well-being, including especially the declines in social trust and the quality of social connections[29]. In the same vein, when average changes in life evaluations from 2005-07 to 2010-12 are examined for 130 countries, three-quarters of the explained changes in average life evaluations were due to factors other than income, with one-quarter due to income. And this period spans the largest (and unevenly distributed) economic recession in the past seventy-five years. Income changes were indeed a significant part of the story, as would be expected in such circumstances, but nonetheless other factors together played a much larger part[30].

Additionally, as will be discussed later in this report, better governance improves well-being beyond any impacts it has on income or transaction costs. For example, lives are happier in communities where people feel that they can trust others, including police, neighbours, work colleagues and strangers, above and beyond the happiness that may flow from higher incomes that may be facilitated by high trust[31]. Furthermore there is substantial evidence that international differences in the quality of governance play directly into these well-being consequences, as suggested by the fact that when people are asked about the chances of a lost wallet being returned intact if found by a police officer, there is a much bigger difference in answers across nations for this variable than there is about the likelihood of a lost wallet being returned if found by a stranger or a neighbor[32]. Furthermore, differences of social trust have been found to also play a significant role in explaining other outcomes that affect well-being through a variety of non-income channels. For example, differences across countries in social trust are significantly correlated with differences in both traffic fatalities and suicide rates[33]. Finally, in the third part of the paper we shall discuss experimental and case-study evidence supporting our thesis

[28] See for example, Easterlin & Sawangfa (2010) and Sacks et al (2012).

[29] See Bartolini et al (2013). Their analysis divides the negative influences equally between declines in trust and social connections, on the one hand, and relative income effects of the sort emphasized by Easterlin.

[30] The changes from 2005-07 to 2010-12 in national average life evaluations are shown in Figures 2.5 and 2.6 of Helliwell & Wang (2013). When these changes are explained by changes in the six factors used in Table 2.1 of the same chapter, 25% of the variance is predicted by the model, with one-quarter of that coming from changes in income and the other three-quarters coming from the combined effects of changes in the other five factors. A similar model is used later in this paper to provide an updated assessment of the linkages between governance and well-being.

[31] See Helliwell & Wang (2011).

[32] Table 1 of Helliwell & Wang (2011) shows the international share of the variance to be about twice as high for answers about the police as it is for the parallel question relating to neighbours and strangers.

[33] See Helliwell & Wang (2011, p. 50-51). Traffic fatalities and suicide are roughly tied as the tenth leading cause of deaths around the world, and effects of international trust differences are substantial. For both suicide and traffic fatalities, a change in social trust of 0.1 on a scale running from 0 to 1.0 is associated with a 10% change in both death rates.

that the ways in which governance is designed and delivered can influence subjective well-being as much as the formal content of the policies[34].

Models for the relationship between good governance and well-being

There are several types of theory that have been used to underlie linkages between good governance and well-being. In this section, and for most of the rest of this paper, we shall use life satisfaction or equivalent self-assessments of the quality of life as our primary overarching measures of well-being. Good governance may improve life evaluations either directly, because people are happier living in a context of good government, or indirectly, because good governance permits people to achieve higher levels of something else that is directly important to their well-being. Mixed cases are likely, as the implicit definition of good government is likely to include the capacity to provide instrumental support should the need arises. Hence an identified direct effect may reflect the respondent's expectation that help would be there if and when it was needed- that the fire department would turn up and douse the flames if there were to be a fire.

One complication needs to be addressed at the outset. While much of the literature argues or assumes that causal forces run from the quality of governance to levels or changes in subjective well-being, there is the possibility of causal arrows running also in the other direction. For example, there is a large literature showing that those who are happier tend thereafter to have longer, healthier, better-connected and generally more successful lives[35]. If these feedbacks are always positive, then the total effects of a policy improvement may exceed the initial direct effects, although there is a related risk of over-estimating these direct effects while underestimating the combined direct and indirect effects.

Another theoretical complication is posed by the variety of individual tastes about what constitutes good government. Citizens and voters may differ a lot amongst themselves about the purposes of government, and about how well any given government is doing its job. It has been shown that people in OECD countries are happier when and if the government in power is one that matches their own political preferences[36], presumably because the views of those voters and their governments are more likely to be closely aligned. Theory would suggest that average happiness is likely to be higher where different groups of citizens have fairly consistent views about what sort of government they want. There will likely also be differences across nations and cultures in what constitutes good government, and hence some ambiguity in measures of government quality that are internationally comparable, and that have similar effects on well-being in all countries. This increases the value of finding links between changes in governance and changes in well-being, but it will remain true that we are measuring the average size of the effect. It will be therefore useful to see how these linkages differ among groups of countries at different stages of development, and among different income groupings within nations. Some assurance of cross-cultural comparability of life evaluations and their determinants has been provided by individual-level estimation of well-being relationships in each of more than 150 countries showing a high degree of consistency on what determines subjective well-being across the world[37]. We present in the Statistical Appendix tests of whether and how relationships differ across income classes within countries.

[34] Frey & Stutzer (2000, 2005) describe these well-being impacts as 'procedural utility'.

[35] See the recent survey by De Neve et al (2013).

[36] See Di Tella & MacCullough (2005).

[37] Helliwell et al (2010) Figure 10.3 shows the cross-country distributions of the estimates of the life-evaluation effects of key variables.

PART II: THEORIES, MODELS AND EVIDENCE

In this section we turn to consider the well-being effects of governance in more specific and quantitative terms. We start by reviewing and updating the evidence relating to aggregate measures of governance quality and levels of subjective well-being. We emphasize comparative analysis covering the largest feasible range of countries, but will also make reference to studies within individual countries or groups of countries, since these are common in the literature and are often able to make use of higher levels of detail. We shall use two ways to get evidence on the key relationships between changes in governance and changes in well-being. The first is to allow for two-way fixed effects using our full panel of countries and years. Allowing for country fixed effects means that our estimates are based on the within-country relations between changes in governance and changes in life evaluations. The second way, similar to that adopted in *World Happiness Report 2013*, is to measure the difference in average life evaluations in each country from before the global financial crisis (based on average evaluations in the years 2005-07) until the most recent period (based on averages from the years 2010-12), and then do a cross-country analysis to see to what extent improvements and losses in the quality of governance were matched by changes in average life evaluations. Both types of evidence suggest that governance changes are correlated with changes in well-being, above and beyond any effects flowing through economic channels. We shall then consider more detailed theories and evidence about a range of specific governance issues.

What are the key empirical linkages between the quality of governance and subjective well-being?

At the aggregate level, several studies have compared the well-being links between two major sets of government characteristics and average life evaluations. The first set of characteristics relates to the reliability and responsiveness of governments in their design and delivery of services, referred to here as the quality of delivery. The second set of characteristics relate to the presence and pervasiveness of key features of democratic electoral elections and representation. This we refer to as democratic quality.

The first multi-country evidence was from three waves of the World Values Survey, based on 46 countries with a heavy representation from OECD industrial countries. The key results, using a model that included both individual-level and national-level variables were that cross-country differences in life satisfaction were very strongly linked to international differences in an average of the six World Bank governance quality measures[38]. In these fully specified models, this significant effect of government quality suggested an importance beyond that channelled through other outcomes. By contrast, per capita GDP and education levels, although significantly correlated to life satisfaction in simple terms, dropped out of the more complete models, suggesting that their impact was mostly instrumental. These initial results were, however, based on relatively few countries, and the model also included significant regional effects that were possibly also indirectly picking up some of the effects of differences in income and other factors[39].

Subsequent work extended the number of countries and years being considered, and split the six World Bank governance measures into two separate quality measures. The quality of delivery was measured as the average of four measures[40]: government effectiveness, regulatory quality, rule of law, and the control of

[38] These include the four measures now included in our variable called delivery quality (government effectiveness, regulatory quality, rule of law, and the control of corruption) and the two that comprise the democratic quality variable (voice and accountability, and political stability and absence of violence).

[39] See Helliwell (2003) Table 6.

[40] From Kaufmann, Kraay & Mastruzzi (2009) and Helliwell &Huang (2008).

corruption. The quality of a country's democratic processes was based on the average of the remaining two World Bank measures: voice and accountability, and political stability and absence of violence. The results showed that for all countries taken together the quality of delivery mattered more for well-being than did the presence or absence of democracy. The quality of delivery was strongly important for all groups of countries, while the democracy variable had a zero effect for all countries as a group, with a positive effect among richer countries offset by a negative effect among the poorer countries.

Subsequent studies using ever-larger country samples, and a variety of survey sources and life evaluations, have generally supported this ranking of the relative effects of the delivery and democratic aspects of government quality[41]. One thing that has changed over the past decade, as country samples have embraced more countries and more years, is that GDP per capita has become a stronger element of the full model than it was in the results based on the first three rounds of the World Values Survey. Since the more recent work has been based on the Gallup World Poll, which uses the Cantril ladder form of life evaluation, it was first thought that this difference was because the ladder form of life evaluation was responsible for the higher weight found for per capita incomes, when compared to the life satisfaction responses in the World Values Survey[42]. However, inclusion of both forms of evaluation in the same Gallup surveys has revealed that both attach the same weight to income[43]. Thus the larger role given to income differences in more recent studies must instead be attributed to the greater number of countries involved, which has correspondingly broadened the range of national income differences under review.

To confirm and extend these earlier results, we make use of a larger set of years and countries than has previously been available. This involves data from 157 countries, with each country represented by as many observations as there were Gallup World Poll surveys conducted in that country between 2005 and 2012. By combining time series and cross-country evidence for a large number of countries and a reasonable number of years, we have a real chance of identifying linkages between changes in the quality of governance and changes in subjective well-being. We present results from four different types of model, each of which is estimated in three versions. These versions go from simpler to more complicated structures. The first explains differences in well-being, whether across countries or over time, in terms of the corresponding values for our two key variables, one for the quality of delivery and the second for the extent of democratic processes. The second version adds GDP per capita for each country-year, while the third version adds the remaining variables used in the *World Happiness Report 2013* to explain differences across countries and over time in the same life evaluations used here[44].

The four different models include a pooled OLS model with fixed effects for years and regions, a panel model with fixed effects for both years and countries, a pure cross-section explaining an all-year average of life evaluations in each country, and finally a cross-section comprising changes in national-average life evaluations from their 2005-07 values to their averages for 2010-12. We pay most attention to the second and fourth models, since they are entirely based on changes in governance and well-being within each country, and are therefore more likely to illustrate what can be achieved by feasible changes in the quality of government. The underlying data and models, along with a full range of results, are reported in our estimation appendix. We shall outline here only the main features of our results, and then turn to a more detailed set of questions about specific types of linkage between governance and well-being.

[41] See, for example, Ott (2009, 2011) and Bjørnskov et al (2010).

[42] See Diener et al (2010).

[43] See Helliwell et al (2010), Tables 10.1 and 10.3 for the matched analysis. Indeed, even though the means and distribution shapes of the answers to the two forms of question (the life ladder and life satisfaction) differ significantly (Helliwell et al 2010, Figures 10.1 and 10.2), the determinants are so similar that stronger models are obtained by averaging the answers to the two questions (as shown in Tables 10.1 and 10.3).

[44] The key difference is that here we do not use the corruption perceptions variable employed in the WHR 2013, since control of corruption is already a key component of the delivery quality variable. An additional advantage of this procedure is that it permits a slightly larger sample of countries to be used.

Our key results are to be found in Table 9, which contains three blocks of three equations each. The first block shows pooled OLS regressions including fixed effects for each year. The second is same as the first but adding regional effects, while the third block shows regressions with fixed effects for years and countries. Since the third block is both empirically stronger and more theoretically convincing, we shall concentrate here on those results. The results in the third block are theoretically preferable because the use of country fixed effects means that the estimated effects are driven by changes over time in governance, life evaluations, income, and other variables.

The first equation in the third block (column 7 of Table 9) shows that changes in delivery quality, but not democratic quality, are significantly correlated with changes in well-being for the Gallup World Poll sample of 157 countries over the 2005 to 2012 period. This confirms, in a larger and more current sample, and with full allowance for country fixed effects, the same pattern of results found using smaller samples of earlier data from the World Values Survey. The estimated effects of delivery quality are very substantial. The governance variables are in standardized form, with a mean of zero and a standard deviation of 1.0. So the coefficient on delivery quality of 0.84 in column 7 of Table 9 suggests that an improvement in delivery quality equal to one standard deviation would lead to an increase in average life evaluations of 0.84, which corresponds to a change of about three-quarters of a standard deviation of the distribution of national averages of life evaluations[45]. This estimate is from a regression with two-way fixed effects (country-fixed effects and year-fixed effects), so the sources of variations behind the estimate are within-country changes in governance and life evaluations relative to changes in other countries. As shown in Table 14, the ten countries with the largest increases in delivery quality are Peru, Brazil, Macedonia, Taiwan, Paraguay, Poland, Myanmar, Georgia, Rwanda and Palestinian Territories; the average increase is 0.3. Life evaluations rose in eight of the ten countries (except Myanmar and Rwanda), the average increase for the entire group of ten is 0.15. On the opposite end, the countries with the largest declines in delivery quality are Madagascar, Greece, Venezuela, Yemen, Austria, Kuwait, Tanzania, Nepal, South Africa and Hungary. All except for Venezuela, Austria and Kuwait saw declines in life evaluations. The average changes are -0.26 for delivery and -0.18 for life evaluation. When we compare the ten-most-improved countries with the ten most worsened, in terms of delivery quality, the associated well-being difference is equivalent to that from a 40% change in per capita incomes[46].

Column 8 adds GDP per capita to the equation, permitting us to estimate the extent to which the quality of government is influencing happiness by improving the material efficiency and productivity of the economy. The coefficient on delivery quality drops from 0.84 to 0.74, suggesting that some, but only a fraction, of the life-improving effects of better governance are flowing through its effects on GDP per capita. Of course, better governance will affect the structure as well as the size of the economy, and thus enable increases in the amount of well-being provided by a given level of GDP. For example, if levels of corruption are lower, streets and communities safer, and trust levels higher, people are more likely to get the goods and services they want, and the required levels of defensive expenditures will be lower[47]. The equation shows changes in GDP per capita and governance to have contributed significantly to changes in national-average life evaluations over the 2005-2012 period, with delivery quality being slightly the more important contributor, since changes in delivery quality have slightly greater variance than changes in GDP (0.14 to 0.12 in terms of standard deviations of changes from 2005-07 to 2010-12) and the former have a larger estimated coefficient (0.74 to 0.65). Furthermore, the delivery effect is, in principle, net of the effects flowing to well-being indirectly through changes in GDP per capita.

[45] The distributions of the variables are shown in Table 1 of the Statistical Appendix.

[46] The calculation is based on the average of the high and low estimates of the relative effects of per capita incomes and delivery quality from Table 9, as described and shown for each country in Table 14.

[47] The utility-wasting effects of defensive expenditures have been central to many influential complaints about using GDP to represent levels of welfare. See especially Stiglitz et al (2009). If the quality of government has a large and systematic effect on the amount of life satisfaction provided by any given level of GDP per capita, then we might expect to find an interaction term between GDP per capita and delivery quality. To test for this, we added a second GDP variable for observations where delivery quality was above average. The estimated coefficient was small and negative, suggesting no significant interaction effect between the quality of delivery and the life satisfaction benefits of measured GDP.

The last column of Table 9 extends the list of explanatory variables, and therefore adds to the number of channels through which good governance might be influencing life evaluations. The variables added are those that were used to explain a similar set of Gallup World Poll life evaluations in *World Happiness Report 2013*[48]. The most significant changes appear to have been in perceived freedom to make life choices, and in the proportion of respondents who report having someone they can count on in times of trouble. When these variables are added, there is a decrease in the direct governance effect, and an increase in that for GDP, suggesting that changes in perceived freedom and social support were more likely to be positively correlated with changes in delivery quality than with changes in GDP per capita[49].

In Table 10 we extend the analysis by adding a measure of confidence in government, derived from survey responses in the Gallup World Poll, to see to what extent it supplements or substitutes for the independent estimates of the actual quality of delivery. More specifically, the confidence measure is the percentage of respondents who answered positively to the question "Do you have confidence in each of the following, or not? How about the national government?" Although the samples are slightly different, the two effects contribute independently to life evaluations[50]. We shall return later to consider these results in the context of specific analysis of trust in government.

In Table 11, we divide the sample into two parts: the poor and the rich countries. "Poor" countries are those with a per-capita GDP that is less than a quarter of the US level in our sample years. "Rich" countries are those above that level, including the US itself. Within each subsample, we repeat Table 9's panel regression with country and year fixed effects that also has the fullest set of explanatory variables (*i.e.* the last column of Table 9). Table 11's first two columns report the split-sample estimates. A stark but expected contrast emerges. For the rich countries, it is democratic quality that has a positive and significant effect on life evaluations; the effect of delivery quality is essentially zero and statistically insignificant. The exact opposite is true for the poor countries: the effect of delivery is positive and significant, while the effect of democratic quality is zero. This is consistent with findings reported in Helliwell and Huang (2008), but based on a many more countries using a different survey source and covering a more recent time period[51]. This difference in source, scope and years covered makes the new results strongly confirming of the pattern that had been appearing in earlier studies based on the World Values Survey. The next two columns of Table 11 repeat the split-sample regressions, except that they replace the measures of democratic and delivery quality with the confidence in government measure from the Gallup World Poll. Here the rich-poor difference is smaller. For both groups, confidence in government has a positive effect on life evaluations and does so with comparable effect sizes. Presumably the implicit coverage of the confidence measure embraces some elements of both delivery and democratic quality, perhaps with weights that shift as one goal is achieved and attentions turns to the other. The confidence in government measure must

[48] We exclude the perceived corruption variable because control of corruption is already one of the key components of the delivery quality variable.

[49] It is also worth noting that the variables measuring freedom and having someone to count on are drawn from the same survey respondents as the life evaluations, while GDP per capita and delivery quality are drawn from different sources. Thus any changes from year to year in the representativeness of the population samples may lead to an upward bias in the size of the effects estimated for freedom and social support, although not for GDP per capita and delivery quality.

[50] In principle we would expect that the two measures would be correlated, and hence that the coefficient on the delivery variable would fall when the confidence variable was added. However, over the 886 cases where both variables are measured, the correlation is essentially zero (-0.02).

[51] In Helliwell and Huang (2008), the split between richer and poorer countries was set at a value of real GDP per capita equal to half of that in the United States. In the work reported in this paper, our usual split is at a GDP per capita equal to one-quarter of that in the United States. In both cases the splits were done so as to give reasonably equal sample sizes to the two groups of countries.

cover more than what is in the delivery and democracy variables, as it has an importance above and beyond their effects[52].

Table 13 presents findings from two additional statistical specifications, and demonstrates that the positive effect of good governance on life evaluations exists both across countries and over time, thus greatly increasing the likelihood that changes in governance quality are leading to changes in well-being. The table's first two columns are from "pure" cross-sectional regressions, in which each country appears once; the observations are average levels by country covering all surveys during the 2005-2012 period. From this it is seen that delivery quality has a significant effect after allowing for regional fixed effects. Column (3) is from a regression based on changes from 2005-07 to 2010-12. Again a country appears only once; but the observations are changes instead of levels. So the regression utilizes an entirely different source of variation compared to column (2). But again, delivery quality is found to have a positive and significant effect on life evaluations, with an estimated magnitude that is greater than the one found in the level regression. It thus appears that, while both levels and changes contribute to the estimated effect, the contribution from the longitudinal variation is greater.

Relationships between some features of governance and well-being

In this section we consider a number of specific aspects of governance that theory and evidence have suggested to be important parts of the general linkage between good government and well-being. We deal with seven aspects, while realizing that even such a long list must be incomplete, and that there are many alternative ways of digging into the details. We have divided our literature review table according to these same seven features of governance to provide easy access to a broad range of results. Here we summarize only some of the main strands of evidence.

Inclusive institutions and inclusive law-making and policy-making processes

Providing the public with a voice in policy-making and the governance of institutions could impact well-being in several ways. Assuming that people are the best judges of their needs and preferences, allowing the public to have a bigger say in the direction of government should create a government that better suits their needs.

However, the SWB benefits of inclusive institutions and policy-making could extend beyond just improved government policies. In addition to better outcomes, well-being can be improved if people feel that the procedures[53] that led to the policy were fair and inclusive. Such procedures could deliver enhanced well-being through an improved feeling of self-determination. In contrast, policies made through procedures that exclude the public could alienate the public and reduce well-being, even if the outcomes are fair and desirable.

As discussed in greater depth below, there is a strong negative connection between corruption and well-being and a strong positive connection between trust and well-being. It is possible that improving the inclusiveness of government decreases corruption if citizens who are directly involved are better able to discover and stop improper behaviour. Beyond that, it has been shown that people are inclined, in the absence of their own direct experience, to underestimate the goodwill of others and overestimate the likelihood of criminal activity[54]. In the same vein, it has been shown that face-to-face meetings sharply increase the likelihood that the

[52] See columns 3 and 4 of Table 10, showing the impact of confidence in government to be strong even when the other two variables are included.

[53] Frey & Stutzer (2000).

[54] Helliwell & Wang (2011) combine survey and experimental evidence to show that people underestimate the chances of their lost wallets being returned, and survey evidence showing that they over-estimate the likelihood of being subject to criminal activity.

best solutions will be found to the sorts of common-property problems that governments are often asked to solve[55].

Voting and political participation

Voting and political participation also provide routes to inclusive law-making, so long as voters feel that the processes are trustworthy, and they are being offered meaningful choices at the ballot-box. Most of the theoretical and empirical work on this issue has made use of measures of the extent and quality of voting procedures, as well as on the availability of the information required for informed voting. One of the general results reported above is that the empirical linkages between political participation and life evaluations are generally weak, and sometime perverse. For example, one early study based on the World Values Survey found that for the global sample as a whole, there was no positive effect from the existence of democratic processes, once account was taken of the responsiveness and reliability of government. Yet when the sample was split into two, either by average income levels or some other measures of the stage of development, the right to vote was found to have a positive well-being effect in countries with established and effective institutions, but to have a negative effect in the rest of the sample[56]. One theory used to explain the negative effect is that unless the overall institutions of government are of sufficiently high quality, the voting process may well involve a choice of kleptocracies, and to be considered inferior to some possibly more efficient autocratic alternatives. That democracy should have greater positive effects for more developed countries follows from the fact that as the provision of health, education and other public services becomes a larger part of what governments do, there will arise a parallel citizen interest in having more say in how these services are provided, and by whom[57].

But even in the largest global samples, and especially at earlier stages of economic development, the estimated effects of democracy are often absent or small, when compared to delivery quality. This general pattern of findings is generally supported by our own results shown in Tables 9 and thereafter. However, in Table 11, where we split our sample between the richer and poorer countries, and examine within-country changes in democratic quality, we find a significant effect, within the richer countries, linking democratic quality improvements to higher subjective well-being.

Fair playing field

Philosophers over millennia, with Aristotle and Buddha as notable examples, have argued that true happiness involves a middle path where the needs and desires of the self are meshed with the interests of others for the benefit of all[58]. If these philosophers are accurate in their perceptions of human nature, then we should expect to find that people often act against their own selfish interests to achieve fairness, and that they are happier when they can live within a fair system. Thus it is no surprise that experimental evidence consistently shows systematic departures from narrow self-interest, even where the experiments are set up to remove any prospects of reciprocity[59]. Likewise, experimental evidence shows that people are prepared to pay to punish others who do not behave fairly. Experimental and survey evidence have both been used to show that those who

[55] For a meta-analysis of fifty years of such studies, see Balliet (2010).

[56] See Helliwell & Huang (2008).

[57] This is the core of the argument made by Ott (2010) for the finding that democratic quality adds to the positive effects of technical quality once technical quality has reached some minimal level.

[58] For reviews and references, see Bok (2010) and Sachs (2013).

[59] See, for example, Fehr & Schmidt (1999) and Clark & D'Ambrosio (2013).

are generous to others are happier than those who are not, and are happier living where generosity is the norm[60], and where they and others do not attempt to cheat the tax system[61].

Corruption is another aspect of fairness, since it is inherently unfair in its application, and more likely to affect those less able to protect themselves[62].

There is also cross-country evidence showing that people are happier living in countries with more complete social insurance and income-support systems[63]. This may in part be based on the increased assurance this gives to individual citizens, but is likely to be linked also to other findings that average life evaluations are higher in countries where there is less inequality in the distribution of well-being[64]. There is also evidence that inequality in the distribution of well-being is less where the delivery quality of governance is higher[65]. Our new results support earlier findings that subjective well-being is significantly lower where there is more corruption. Beyond its negative direct effects of well-being corruption also lowers the likelihood that foreign aid will improve subjective well-being in the recipient countries[66].

Trust and the rule of law

As shown by the previous examples relating to corruption and the tax system, fairness and the rule of law are closely related. Does living under the rule of law generally make people happier? Presumably this depends both on the nature of the law and on people's general views on the extent to which good behaviour should be internally motivated or externally governed. Some studies have suggested that trust and the rule of law are substitutes, with the rule of law, and the expenditures required to enforce it, being increasingly relied upon as the scope of business and other dealings extends beyond the network size governed by personal trust networks, or where the norms of social trust have become frayed. Thus Robert Putnam has argued for a causal link between the post-1970 declines in social trust in the United States and the corresponding increase in the number of lawyers, judges and police as shares of the employed civilian population[67].

With respect to trust, there is less ambiguity: people are happier living where trust levels are high. There is an important distinction to be made between trust, which is the belief that others will behave appropriately, and trustworthy behaviour, which is behaviour that justifies the trust of others. Across communities and countries, trust and trustworthiness go hand in hand, as shown by the finding that international differences in the likelihood of dropped wallets being returned is correlated with differences in the extent to which people think that others can be trusted[68].

Most early studies of the effects of trust on well-being made use of the general question on social trust. Its importance naturally led to attempts to measure and assess the consequences of trust in many specific domains, as well as survey questions of a more behavioural sort, asking people about the likelihood of their lost wallets

[60] See Aknin et al (2013) for both experimental and survey evidence that givers are happier than non-givers, and note the effects of generosity in Table 9 of the statistical appendix of this paper.

[61] See Verme (2009) and Helliwell (2003) for results, based on the World Values Survey, showing that people who think that it is wrong for people to cheat on taxes are happier than those who do not mind.

[62] See Kaufmann et al (2008).

[63] See Radcliff (2013) Chapter 5, Boarini et al (2013), and Pacek & Radcliff (2008).

[64] See Bolle et al (2009).

[65] See Ott (2011).

[66] See Arvin & Lew (2012).

[67] See Putnam (2000, p. 141)

[68] See Knack (2001).

being returned if found, alternatively, by neighbours, police, and strangers[69]. Across domains, people were asked general questions about their trust, or sometimes confidence, in neighbours, police, employers, work colleagues, and various parts of the political system, ranging from municipal administration to the courts, legislature, and national governments. In general, as we have already noted, the estimated well-being effects of having trust in nearby networks- the workplace and neighbourhood especially – are stronger than those based on trust or confidence in higher-level institutions. Presumably this is because the more local forms of trust are more likely to be based on direct experience rather than hearsay. Probably of even greater importance is that life is built on local contacts and experiences, and life evaluations are based on the happiness given, shared, and remembered on those occasions. If these experiences are positive, they lead to a sense of belonging. Research has shown that such a sense of belonging, or social identity, is a strong support for well-being. The preponderance of the immediate and local over the abstract and distant shows up in the relative importance of different senses of belonging. The effects of trust on happiness appear to be mediated in good part through a sense of belonging to the relevant community, and belonging to one's local community has a stronger effect than belonging to one's province or to the nation as a whole, although all are important and none appears to exclude the others[70].

Decentralization

If it is generally true, as the foregoing seems to suggest, that local circumstances matter most, then it might be expected that decentralization would be associated with higher levels of happiness. This assumes that equivalent or better levels of delivery effectiveness could be achieved, and that the services delivered would, by dint of their decentralized administration, be equally or better adapted to local tastes and needs, by providing voters closer access to and influence on decision-makers. Neither of the elements of this reasoning are sure bets, so that empirical evidence is needed to confirm or deny the possibility. Most of the related evidence is derived from the range of different degrees of decentralization among or within OECD countries. The general tenor of the evidence supports the idea that people are on average happier living in jurisdictions with more decentralization[71].

Reliability, responsiveness and effectiveness

The bulk of the old and new evidence assembled in this paper shows clearly that people are happier when they have governments that efficiently and reliably deliver what is needed, when it is needed. Is there any evidence about which aspects of reliability and responsiveness are most important, and if there are trade-offs among different aspects? One interesting UK study found that when unpacking complaints about the long time taken for police to answer complaints, what mattered most was whether police would come when they said they would come (reliability) rather than how soon they came (responsiveness)[72]. The purpose of unpacking the different aspects of delivery quality was, and should be, to permit services to be reconfigured so as to respond to what people feel to be important, in ways that match their priorities.

It is useful to consider whether all groups in the population attach the same values to governmental qualities. Earlier research using the World Values Survey found that delivery quality was on average more important for poor countries than in richer countries[73], and also that within countries low governmental quality was more damaging for the poor than for the rich[74]. Using our new and much larger country sample of data from

[69] For evidence that these measures are different, and that they are each important to well-being, see Helliwell & Wang (2011) and Helliwell & Putnam (2004).

[70] See Helliwell & Wang (2011) for Canadian evidence on both these issues.

[71] See Tomaney et al (2011), Frey & Stutzer (2005), Diaz-Serrano & Rodríguez-Pose (2011), and Rodríguez-Pose & Maslauskaite (2012).

[72] See Halpern (2010, p. 209).

[73] See Helliwell & Huang (2008), Table 2.

[74] See Helliwell & Huang (2008, p. 612).

the Gallup World Poll, we have seen that improvements in delivery quality matter much more for poorer than for richer countries[75]. It is also useful to test if there is a similar pattern among income classes within countries. As shown in the Statistical Appendix, there is no evidence that delivery quality matters differently for rich and poor respondents. Only when we look more specifically at corruption, and especially when we account for the fact that the poor are likely to face corruption[76], do we find larger impacts of government quality among poorer respondents.

Freedom

We have already seen that people are happier when they feel that they are free to make key life decisions, and that this impact is above and beyond the effects of the better health and higher incomes that greater freedom may enable them to achieve. Earlier research has found, in the context of the World Values Survey, where the freedom question combines freedom and control, that this combined variable is a stronger and more consistent predictor of life satisfaction than any other variable[77]. How are the various aspects of perceived freedom influenced by governments? Although there are positive correlations across countries in the prevalence of different aspects of freedom- freedom to vote, freedom of the press, economic freedom, and civil liberties, there are enough differences to permit some judgments to be made about what counts most. It would appear that the core freedom relates to the freedom to make key life choices, especially coupled with a sense of control. Beyond that, there appears to be only slight further contributions from the institutional freedom measures listed above. Equations shown in Table 12 of the statistical appendix add various institutional freedom measures in turn to the equation already including perceived individual freedom to make life choices, delivery quality, income, healthy life expectancy, generosity and social support. The results show that life evaluations are slightly higher where civil rights are greater, where press freedom is greater, and where economic freedoms are more constrained[78].

Freedom of choice needs to be sufficient, but there can be too much of a good thing, when choices and brands multiply, making decisions harder and post-decision regret more likely[79]. Other experiments with more direct relevance to governance have shown that some range of trusted choices plus a guided path including sensible default options can help individuals to choose and be satisfied with pension[80] or health plans.

Do the relationships differ by stage of development?

The previous sections have shown a range of situations where the links between governance and well-being differ by stage of development. The traditional hierarchy of needs emphasized by Maslow (1943) puts existential needs at the base of a pyramid, with emphasis shifting to higher-order needs as life becomes more secure and comfortable. With respect to the importance of differ characteristics of governance, this might be expected to

[75] See Table 11 in the Statistical Appendix. Note that this Table includes fixed effects for countries and years, and hence shows the within-country effects of changes in governance quality.

[76] 78.4% (se=0.6%) of those expressing opinions in the bottom income quintile see corruption as a problem in government and business, compared to 75.0% (se=0.8%) in the top quintile. While not very large, this difference is significant, and is buttressed by a comparable trend across all income quintiles. This is consistent with earlier micro evidence from Peru (Kaufmann et al 2008).

[77] See Verme (2009).

[78] As can be seen in Table 12, the significance of these additional effects is modest. The positive impacts from civil liberties and press freedom are at the 10% significance levels, while the negative effects of greater economic freedoms are significant at the 5% level. It is important to note that the economic freedom variable is as defined by the Heritage Foundation rather than by the perceptions of the survey respondents. Some of its components are already reflected in the delivery quality variable. It differs by adding large government and more regulation of business as constraints on economic freedom. The civil liberties index is from Freedom House, and the press freedom measure from Reporters Without Borders. The index of political rights from Freedom House showed a positive but insignificant effect.

[79] See Iyengar & Lepper (2000) for experiments showing both of these outcomes in an experimental shopping context.

[80] See Sethi-Iyengar et al (2004).

reveal the relative importance of the basic efficiency of government to fall as development proceeds, or at least to be accompanied by greater need for, and appreciation of, political processes that are designed to give individuals a more direct say in how they are governed. This is indeed the pattern of the evidence we have reviewed, although we have been struck by the relatively low importance, in well-being terms, attached to the formal aspects of democratic representation when compared to the importance of delivery quality. Research comparing the effects of freedom on life satisfaction has shown these effects to systematically differ by stage of development, becoming larger as development proceeds[81].

[81] See Verme (2009) for freedom effects estimated within selected countries, and Helliwell and Barrington-Leigh (2010) for a comparison of freedom effects in OECD and non-OECD countries.

PART III: LESSONS FROM WELL-BEING RESEARCH FOR BETTER WAYS OF GOVERNING

In this section we ask how governance might be designed and delivered differently if the methods and content were inspired or at least influenced by the findings of well-being research. As we have seen, people are happier when they feel they are free to make their own key decisions, when they have the possibility to work with and for others in whom they place trust, and when they feel a sense of belonging in their communities and nations. Are there some practical lessons for those who design the spaces and institutions within which daily lives are lived, friendships made and people are fed, taught, cured and employed? We think there are many such lessons for governance broadly defined, ranging across workplaces, school, hospitals, prisons, villages and modern cities.

We have reviewed evidence suggesting the people are happier have governance structures that are more decentralized. The further argument we suggest here is that the principal reason for this goes beyond the traditional view[82] that decentralization permits local tastes to be more easily understood and filled. Perhaps the more important happiness benefits come from the friendships and shared identities.

Happiness-inspired urban design or redesign in cities as different as Bogotá, Copenhagen, Portland, Paris and New York has been intended to facilitate the kinds of social interactions that research has shown to support happiness, to build trust, and create shared social identities. These characteristics in turn lead to communities with greater physical and psychological wellbeing, whatever may be the formal structures of their governance[83]. One of the reasons why in general life is happier in smaller towns than in larger cities is that these fundamental principles of social interaction have not yet led to design and governance at the urban level that can compensate adequately for the bustle and irritations of fast-paced lives in crowds of strangers. Applying these principles to modern cities requires changes not just in urban design, but also in the management of public and private spaces. If pedestrians are to be made central actors in public spaces, then the same care needs to be devoted to their flows and interactions as was previously devoted to vehicle traffic[84]. And in the daily management and use of these spaces, individuals and communities need the freedom of access and opportunities for innovations in use that are crucial for building happiness.

Moving beyond urban management and design, often seen as the province of utopian planners, can the same principles be equally well applied in the toughest areas of public administration? Could they even have traction within the prison system, long seen as seen as the least happy part of government? Prisons have long been seen as inherently conflictual and have even provided the setting for famous psychology experiments designed to show the extent to which social identities can be manipulated to produce extremely inhumane behaviour[85]. Later research, much less well-known, provided a more hopeful view of the possibilities for developing social identities within a prison context[86]. These experiments showed that regimes involving more mutual engagement and individuality for prisoners and guards led to significantly better results for both prisoners and guards.

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[82] See Tiebout (1956).

[83] For a wide-ranging review of the links between happiness research and urban management and design, with examples drawn from these cities, and more, see Montgomery (2013).

[84] For the application of this care to the Strøget in Copenhagen, see Gehl (2006) and Montgomery (2013, p. 151).

[85] The Stanford prison experiments have become staple fare in the teaching of social psychology, starting from Haney et al (1973).

[86] See Lovibond et al (1979).

The Singapore prison system launched in 1998 a set of reforms that was not inspired by well-being research or objectives, but nonetheless embodied all of the key principles that appear to produce higher well-being for all participants. The Singapore reforms go much further than any experiments, not only by being undertaken within prison realities but also extending the participation beyond prison walls and into the community at large.

At the outset of the Singapore reforms, all staff members were together involved in re-thinking their objectives, and were collectively encouraged and supported in a wide range of efforts designed to enable inmates to become captains of their own lives[87]. Eventually, the reforms embodied the collaboration of prisoners, guards, and the community to convert the prison system from a school for crime into a source of newly productive lives. The recidivism rate dropped by one-third from its pre-reform level, and ex-prisoners who previously would have returned as inmates are returning instead as volunteers to help current prisoners. Staff morale and retention grew significantly, the system was chosen as a top employer, and by 2007 a majority (70%) of survey respondents in the community were prepared to welcome ex-prisoners as friends and colleagues[88]. Perhaps more importantly, "the case illustrates the impact that could result when a government agency beyond acting alone starts involving other stakeholders and members of society; tapping on their aspirations to co-create the change agenda, collective wisdom and strengths to design interventions and implement them, so that the sum of the whole is more than its parts."[89]

What about the possibilities for new approaches to elder care, sometimes treated as a more gentle form of prison for those nearing the end of their lives? Well-being research would suggest that facilities that provide freedom to connect, to grow, and to contribute will increase happiness for caregivers and receivers alike. The Lotte care home in Copenhagen has provided a long-standing example of how far this can be carried, to great effect, even for those with severe mental and physical limitations. That the happiness benefits are felt by staff as well as residents is obvious from hearing the voices and laughter in a recent radio documentary[90]. Studies in a more fully experimental context have shown that UK elder-care residents who were assigned to work together to design their own social spaces in a new facility were thereafter significantly happier and healthier, and used their self-designed social spaces 50% more, than residents whose social spaces were professionally designed without their involvement[91].

Why are these inspirational examples of governance that improves well-being not more widely understood and applied? One standard reason is the Einstellung effect, whereby the existence of established methods dramatically limits the search for better approaches[92]. Interviews of those in the relevant positions in public administration suggest that this effect has been magnified in recent times by increasing risk aversion. This shows up through a variety of new regulations that constrain service delivery and stand in the way of even experimental innovations, especially those that empower patients and students to help each other in ways that improve their lives but disrupt normal professional delivery patterns. These limits are in turn made more binding by fear that should anything by chance go wrong in the course of informal care the organization or department opens itself up to the risk of lawsuits. Possible solutions might include some risk-assuring comfort from higher levels more able to shoulder and spread these risks. To break the Einstellung effect sufficiently to convert ideas into practice may require experimental field trials of sufficient scale and realism as to force take-up of proven successes.

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[87] See Leong (2011) and Helliwell (2011).

[88] These results are provided in more detail in Helliwell (2011).

[89] The quote is from Leong (2011).

[90] The program may be found at: *www.cbc.ca/player/Radio/The+Sunday+Edition/ID/2304600853/*

[91] See Haslam et al (2010).

[92] See Nickerson (1998). Even chess masters unconsciously stop looking effectively for better strategies once they have something plausible in hand, thereby dragging the quality of their play down by three standard deviations in the skill distribution (Bilalić et al 2008, p. 654).

We have two examples of field trials experimenting with new ways of governance that promise to improve well-being by changing the ways in which people collaborate in their communities and workplaces. The first is the National Citizen Service in the United Kingdom, and the second a Canadian programme that is bringing together firms, industry associations, and workers to deliver on-the-job training in essential skills. They illustrate different aspects of service delivery, and use different methodologies to show their results.

The UK volunteers programme is a universally available programme for 16 and 17-years olds to undertake voluntary service, and has been evaluated through the use of large pilot programmes[93] in 2011 and 2012. The programme recruits participants for two weeks of residential training, one focused on the home community and another on a more distant community, followed by the shared design and delivery of a social action project. The primary benefits of the scheme were estimated to flow from likely increases in the educational achievements and earning potential of the participants. The analysis was in this sense traditional, with no direct measurement of community-level outcomes[94].

The Canadian Upskill programme established willing panels of eligible firms and workers in the hospitality industry, and used random assignment to choose the groups who received training in workplace-relevant essential skills[95]. The programme is of special interest to us because of its collaborative nature, its controlled experimental setting, and its focus on providing essential communication, literacy, and numeracy skills within a workplace environment that really needs them. The programme achieved its positive returns by increasing performance in workplace-relevant outcomes. Since many of the experimental outcomes were central to job performance in the hospitality industry- (e.g. service quality, customer satisfaction, job task efficiency, staff turnover, all measured by industry-certified assessors) - it was possible to translate these into benefits and costs measured in terms of traditional enterprise revenues and costs. What is even more notable about the programme is its collaborative nature, which means that all parties were involved from the outset in the design and delivery of training. More specifically, each firm participated in an organizational needs analysis (ONA) to determine the scope and direction for the training. The ONA is a collaborative exercise between literacy trainers, firm management, union representatives, and workers, whose results are used to customize the training solution in order to best align it with the shared objectives of all parties. The explanatory analysis revealed, among other critical success factors, that the extent of engagement of stakeholders in the design and delivery of the training influenced the size of performance impacts. Most interestingly, while one can achieve a degree of skill gain when employer engagement is lacking, these gains will not necessarily translate into improved job performance. Only where employers were fully engaged did the training translate into improved performance in the workplace. One of the keys to this collaboration is the alignment that it helps to generate between job-relevant training, workers' needs, and the business-relevant performance needs of firms, enabling the delivery of a programme that provided lots of positive spillovers- e.g. employees received basic literacy and numeracy skills that had values much beyond their current jobs- while still achieving high direct returns for employers. More fundamentally, it was found that several benefits of the collaborative approach - increased engagement, improved teamwork, and higher workplace trust - were all associated with increases in life satisfaction.

[93] There were 10,000 places available in 2011, and 27,000 in 2012. Actual participation was approximately 9,000 in 2011 and 26,000 in 2012, about 85% in the summer programme and the rest in the autumn.

[94] By contrast, when an extended benefit/cost analysis was done for an experimental employment-based community engagement programme in Canada, the increases in community-level social trust were estimated to add greatly to the individual-level income and employment gains. See Gyarmati et al (2008).

[95] See Gyarmati et al (2014).

PART IV: POSSIBLE IMPLICATIONS FOR MEASUREMENT AND POLICY

We have summarized the available evidence linking various aspects of governance to subjective well-being, as measured by the life evaluations of survey respondents in countries all over the world. We have found some significant positive linkages, most strongly for delivery quality. Implicit in this search is the idea that subjective well-being is something that governments should take seriously. Now that significant linkages have been established, it is time to consider how subjective well-being should enter the policy-making process.

Should happiness, as measured by high levels of life evaluations, be a government objective? Arguments have been advanced on both sides.

On the positive side, it is possible to note some of the key features that research has shown to characterize a happy life:

To care and be cared for;
To be healthy, and to live in a healthy community;
To share time and much more with family and friends;
To feel a sense of freedom when making key life choices, among others with similar freedom;
To be free of hunger and material needs, in a community, and a world, where the needs of others are also met;
To trust and be trusted, and to live in trustworthy communities;
To have a life of purpose, working and playing with others with compatible purposes;
To have a sense of belonging, ideally in several overlapping communities;

These all seem to be just the sorts of lives and activities that governments should be expected to enable.

On the other side, a whole range of points have been made by way of objection or qualification:

- Although the idea of living better lives cannot be faulted, the objective is too broad and too vague to provide a clear policy agenda.

- For some, even the idea of well-being as a policy objective invites the notion of a nanny state, or fears of the prospect of instructions from an Orwellian big brother.

- Others remain skeptical for some combination of reasons relating to uncertainty about the use of subjective measures, lack of familiarity with the body of available research, and the daunting range of changes in governance that might be thought necessary to implement a well-being agenda.

While the big-picture debate is still being played out, it is worth listing some of the particular areas where there is almost universal acceptance of the use of well-being data and analysis to improve governance.

The first example is to augment conventional benefit/cost analysis by using well-being research to attach values to changes in variables that important determinants of subjective well-being but do not normally find a place in calculated benefit/cost analysis[96]. If there are credible estimates available for the relative well-being effects of income and some other variable, then these estimates can be used to calculate income-equivalent

[96] See O'Donnell (2013) and O'Donnell et al (2014).

values for changes that can be combined with conventional monetary measures to calculate an extended benefit/cost ratio.

If projects are accompanied by pre- and post-project assessments of the subjective well-being of participants, then it is possible add these to the benefit/cost analysis, thereby confirming and/or extending the scope of the analysis based on changes in some of the factors calculated to affect subjective well-being.

What are the plausible implications for improving the broader institutions of governance? Perhaps the most important of these relates to the importance of building and maintaining the delivery quality of governance. This importance can be measured in two ways – first by the direct impacts of delivery quality on subjective well-being, and second by the contrast between these large effects and the general lack of importance estimated for the political aspects of democratic governance.

Table 14 in the Statistical Appendix shows for each country its change in governance delivery quality between 2005-07 and 2010-12, matched by high and low estimates of the change in GDP per capita that would have an equivalent effect on subjective well-being. These estimates reflect well-being gains from improved governance, or well-being losses from worse delivery quality, above and beyond those flowing through GDP per capita. The ten countries with the most-improved delivery had increases in delivery quality of a size equal to about a 20% increase in per capita incomes. The ten countries with the greatest decreases in delivery quality had decreases averaging about the same size. When we compare the ten-most-improved with the ten most worsened, in terms of delivery quality, the associated well-being difference is equivalent to that from a 40% change in per capita incomes. These large effects may be contrasted to generally small and sometimes perverse effects estimated for the influence of political aspects of governance.

From Part III of the paper, we conclude that there are immediate opportunities for improving the ways of designing and delivering all sorts of services, both public and private. These alternatives would enable providers and recipients of services to collaborate in both design and delivery, a mixing of paid and unpaid, professional and amateur givers and receivers, in many ways that have been shown to deliver better lives for all.

What recommendations could we make for communicating performance of governance to Ministers, the public and businesses? Perhaps the first step is also the most important- to implement regular satisfaction and suggestion surveys to establish where there are problems and expand the range of new methods and services to consider. Second, every new programme should have a related research and evaluation phase in which overall well-being, as well as specific evaluations of the programme, are collected from all participants, whether service providers or recipients, before, during and after the programme is undertaken. Third, consideration should be given to developing for different ministries a relevant catalogue of the usual positive and negative outcome indicators, accompanied by some overall measure designed to reflect the value of the package as a support for well-being. This is not something for which there is yet any established research base, but such a project would sharpen departmental thinking and data collection in ways likely to lead to improved well-being.

The first OECD '*How's Life?'* report included considerable discussion of the Gallup World Poll variable measuring confidence in the national government, and established links between that confidence measure and measures of corruption, which form an important part of our delivery quality variable[97]. We have found in our analysis that the government confidence variable has a significant correlation with life evaluations, both across countries and over time[98]. What is more, this correlation appears significant even when separate account is taken of the even stronger relation between delivery quality and subjective well-being. However, when it came time to select 'headline indicators' comprising the civic engagement and governance segment of the Better Life Index,

[97] See OECD (2011).

[98] This is the same variable analyzed in the recent OECD trust report (OECD 2013a,b) and also found to be important in Tables 10 and 11 of our statistical appendix.

the chosen measures were voter turnout and a measure of the degree of public consultation on rule-making, both of which relate more to the political decision-making process than to the demonstrated quality of delivery.

In our view, the indicators selected for special attention in the Better Life Index should be ones that have demonstrated an independent capacity to explain, or at least to be associated with, higher life evaluations. Hence we would argue that the delivery quality index and the confidence in government measure should both be given central positions in the civic engagement and governance section of the index. '*How's Life 2013*' includes the same two 'headline measures' for governance used in the first report[99], both of which relate mainly to the political process[100]. We think that both delivery quality and confidence in government have greater claims to be treated as headline measures, given their tighter links to life evaluations. We would therefore recommend that in future they be granted that attention, to either supplement or replace the existing headline items.

Furthermore, and reflecting our view that subjective life evaluations are central measures of well-being, the presentation of the Better Life Index could perhaps be restructured to make that central role more apparent. For example, in cases where the Report wishes to use a single measure rather than a simple average of the dashboard, or to show the relative importance of the different aspects of life in explaining changes from one period to another, they might consider using more fully the evidence available from their measure of life satisfaction. This could be done by using regression weights to estimate the contributions from each dashboard item in explaining history, just as we have done in this report. '*How's Life?*' could also use the measure of life satisfaction anywhere in the report where a single measure is desired to reflect well-being more generally. It has the simplicity of being a single measure, while avoiding the difficulties of averaging measures of differing meaning and importance.

Finally, we note that although the quantity and quality of information about the links between good governance and well-being is much greater than even a few years ago, there is still much to learn. The existing sources of comparable data are still quite limited, both in terms of geographic and demographic detail, and in the frequency of measurement. Even more important, it will be necessary to spend more time and effort learning how the processes of governance, and the operation of all public and private institutions, affect the quality of peoples' lives, as seen by them. This knowledge will be accumulated most efficiently by a collaborative combination of broader official collection of well-being data, much local experimentation with alternative ways of doing things, broader sharing of information about what works best to improve well-being, and field trials of the most promising options.

[99] See OECD (2013d).

[100] As already noted, these relate to consultation on rule-making and voter turnout. See OECD (2013d, p. 28).

ANNEXES

Table of Empirical Literature on Governance and Well-Being

Divided by Aspect of Governance

Paper	**Evidence**
Inclusive Institutions and Inclusive Law-Making and Policy-Making Processes	
Bjornskov, Dreher and Fischer (2010): Formal institutions and subjective well-being: Revisiting the cross-country evidence (p.427)	Analyzing the World Values Survey, the authors found that in countries where majority of population is non-poor, citizens may derive SWB from democratic institutions. In majority poor countries, only institutions "protecting life, ensuring property rights and providing economic opportunities" http://www.sciencedirect.com/science/article/pii/S0176268010000078
Voting and Political Participation	
Dorn et al (2007): Is It Culture or Democracy? The Impact of Democracy and Culture on Happiness	Cross-country data from 28 International Social Survey Programme countries indicates that higher levels of democracy are associated with higher SWB, even controlling for socioeconomic and cultural variables; however, in analysing the Swiss Cantons, no robust relationship between direct democracy and SWB is observed. http://ideas.repec.org/p/usg/dp2005/2005-12.html
Graham (2001): Happiness, Markets, and Democracy: Latin America in Comparative Perspective	Data from 17 Latin American countries indicates that "satisfaction with democracy was correlated with higher levels of happiness, while preferring democracy to other forms of government had no significance" http://link.springer.com/article/10.1023/A:1011860027447
Inglehart and Klingeman (2000): Genes, Culture Democracy and Happiness	Data from the World Values Survey indicates that democracy is correlated with SWB, but once other factors such as number of years of communist rule and the society's level of economic development are included, the correlation is insignificant http://www2000.wzb.eu/alt/iw/pdf/genecult.pdf

Orviska, Caplanova, Hudson (2011): The Impact of Democracy on Well-being	Cross-country analysis using the World Values Survey indicates regional democratic satisfaction boosts happiness of those regions, but this effect is less significant for women, rich people and those in rich countries. http://link.springer.com/article/10.1007/s11205-012-9997-8#page-1
Ott (2010): Good Governance and Happiness in Nations: Technical Quality Precedes Democracy and Quality Beats Size (p.362)	A comparison of 127 total countries shows there is a significant correlation between democratic quality and happiness in rich nations and the correlation between democracy and happiness in poor nations is positive but insignificant and small. http://link.springer.com/article/10.1007/s10902-009-9144-7#page-1
Weitz-Shapiro and Winters (2011): The Link Between Voting and Life Satisfaction in Latin America	A significant positive relationship between voting behavior and life satisfaction was found in data from 18 Latin American countries, although there is some evidence that the causation runs from happiness to voting. The difference in life satisfaction between a voter and a nonvoter is the same as that between individuals who are otherwise similar but 3.5 categories apart on the 11-unit income scale. "The relationship between voting and life satisfaction is weaker, though still positive, in those countries with enforced compulsory voting." http://onlinelibrary.wiley.com/doi/10.1111/j.1548-2456.2011.00135.x/abstract
Frey and Stutzer (2000): Happiness, Economy and Institutions	Direct democratic rights in Swiss cantons have a significant positive effect on happiness. The authors argued that since institutional conditions in the cantons have been stable over several decades, democratic rights cause life satisfaction. http://carnegieendowment.org/pdf/files/stutzer.pdf
Frey and Stutzer (2000) 2: Happiness Prospers in Democracy	Data from Switzerland indicates that "the more developed the institutions of direct democracy, the happier the individuals are" and "people derive procedural utility from the possibility of participating in the direct democratic process over and above a more favourable political outcome" http://link.springer.com/article/10.1023%2FA%3A1010028211269?LI=true#page-1
Frey and Stutzer (2006): Political Participation and Procedural Utility: an Empirical Study	In Swiss cantons, there is a positive effect of participation rights on reported satisfaction with life. There is a negative coefficient of the interaction term between foreigners and participation rights indicating that foreigners gain less from stronger participation rights than citizens. http://onlinelibrary.wiley.com/doi/10.1111/j.1475-6765.2006.00303.x/abstract

Owen, Videras and Willemsen (2008): Democracy, Participation, and Life Satisfaction	Data from 46 countries shows that "democracy relates to life satisfaction, independent of economic well-being, cultural predispositions, and individual characteristics" and "individuals in countries with greater access to institutional structures that allow political expression have higher levels of life satisfaction." http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6237.2008.00595.x/abstract
Stadelmann-Steffen and Vatter (2012): Does Satisfaction with Democracy Really Increase Happiness? Direct Democracy and Individual Satisfaction in Switzerland	Based on an analysis of Swiss cantons, there is "very little evidence for a robust relationship between satisfaction with democracy and life satisfaction. Furthermore, we do not find a substantive positive effect of direct democracy on happiness. However, with respect to satisfaction with democracy, our analysis shows some evidence for a procedural effect of direct democracy, i.e. positive effects related to using direct democratic rights, rather than these rights per se." http://link.springer.com/article/10.1007%2Fs11109-011-9164-y
Blume, Muller and Voigt (2009): The Economic Effects of Direct Democracy—a First Global Assessment	No significant correlation between direct democracy indices and national average life satisfaction in cross-country data from 88 countries. http://link.springer.com/article/10.1007%2Fs11127-009-9429-8#page-1
Altindag and Xu (2011): The Impact of Institutions and Development on Happiness	Democracy has a positive significant impact on life satisfaction in rich countries but not in poor countries. http://cla.auburn.edu/econwp/Archives/2011/2011-08.pdf
Pacheco and Lange (2010): Political Participation and Life Satisfaction: a Cross-European Analysis	Political participation had an insignificant effect on life satisfaction in data from twenty European countries. However, when correcting for endogeneity by including parliamentary trust in the model, political participation has a significant and positive impact on life satisfaction. http://www.emeraldinsight.com/journals.htm?articleid=1875409&show=abstract
Han et al (2013): The Contextual and Compositional Associations of Social Capital and Subjective Happiness: A Multilevel Analysis from Seoul, South Korea	High levels of political participation in South Korea (measured by endorsing political parties, signing petitions and attending demonstrations) are correlated with higher levels of SWB. http://link.springer.com/article/10.1007%2Fs10902-012-9375-x#page-1
Bjornskov, Fischer and Dreher (2010): Formal institutions and subjective well-being: Revisiting the cross-country evidence (p.427)	Analyzing the World Values Survey, the authors conclude that "democratization would in general be beneficial for national happiness when countries have reached a certain level of economic development at which most basic needs are met for the majority of the population." http://www.sciencedirect.com/science/article/pii/S0176268010000078

Olken (2010): Direct Democracy and Local Public Goods: Evidence from a Field Experiment in Indonesia.	Indonesian villages were randomly assigned to choose development projects through either representative-based meetings or direct election-based plebiscites. "Plebiscites resulted in dramatically higher satisfaction among villagers, increased knowledge about the project, greater perceived benefits, and higher reported willingness to contribute." (p. 244) http://dx.doi.org/10.1017/S0003055410000079
Samanni and Holmberg (2010): Quality of Government Makes People Happy (p. 10)	"People in democracies tend to be more satisfied with their lives than people living in less democratic societies. The correlation is stronger in the richer OECD countries, but it is also present in Non-OECD countries." https://www.qog.pol.gu.se/digitalAssets/1350/1350150_2010_1_samanni_holmberg.pdf
Fereidouni, Najdi, Amiri, (2013): Do governance factors matter for happiness in the MENA region? (p. 1036)	There is no significant relationship between democracy and life satisfaction in the Middle East and North Africa region http://www.emeraldinsight.com/journals.htm?articleid=17099151&show=abstract
Ott (2011): Government and Happiness in 130 Nations: Good Governance Fosters Higher Level and More Equality of Happiness (p.3)	Cross-country data from 130 countries shows democratic quality is positively correlated with happiness, but the effect disappears when controlling for technical quality. http://link.springer.com/article/10.1007/s11205-010-9719-z#page-1
Bjornskov, Dreher and Fischer (2008): Cross-country determinants of life satisfaction: exploring different determinants across groups in society	Cross-country data from 70 countries shows that "various measures of democratic institutions such as democratic legacy, the Gastil index and the Polity IV index, exert no significant effect on individual life satisfaction" http://link.springer.com/article/10.1007%2Fs00355-007-0225-4#page-1
Fair Playing Field	
Tavits (2008): Representation, Corruption, and Subjective Well-Being	A cross-country European study found "when the level of corruption is higher, people tend to report lower levels of subjective well-being" and "including corruption in the analysis considerably suppresses the effect of the macro-economic variables measuring unemployment and inflation." http://cps.sagepub.com/content/41/12/1607.short
Heukamp and Arino (2011): Does Country Matter for Subjective Well-Being?	A sample of 64 countries shows lower levels of corruption in a country significantly increase life satisfaction, even when taking into account many other related variables. http://link.springer.com/article/10.1007/s11205-010-9610-y#page-1
Welsch (2011): The Welfare Costs of Corruption	A sample of 146 countries shows SWB "is affected by corruption not only indirectly through GDP, but also directly through nonmaterial factors." http://www.tandfonline.com/doi/abs/10.1080/00036840600905225#.UkCIRbx3s1o

Sun and Xiao (2012): Perceived Social Policy Fairness and Subjective Wellbeing: Evidence from China	"Perceived fairness of social security and income distribution policies [in China] are positively associated with subjective well-being. After controlling for income, age, and education, the effect of income distribution fairness on work satisfaction was still positive and significant but had decreased in intensity, while the effect size on life satisfaction had changed little. Effects of social security fairness on both life and work satisfaction were still significant but had changed in different directions after adding demographic variables, in which the effect on life satisfaction had increased, while the effect on work satisfaction had decreased in size." http://link.springer.com/article/10.1007/s11205-011-9834-5
Altindag and Xu (2011): The Impact of Institutions and Development on Happiness	World Values Survey data comprising 74 countries show low corruption has a significant positive impact on life satisfaction in rich countries and a positive but insignificant impact on life satisfaction in poor countries. http://cla.auburn.edu/econwp/Archives/2011/2011-08.pdf
Arvin and Lew (2012) Development Aid, Corruption, and the Happiness of Nations: Analysis of 118 Countries Over the Years 1996-2009	In countries with high levels of corruption, receiving foreign aid has a negative impact on happiness. http://www.usc.es/economet/journals1/aeid/aeid1225.pdf
Bjornskov et al (2013) Inequality and Happiness: When Perceived Social Mobility and Economic Reality Do Not Match	World Values Survey data from 1990 to 2008 shows that "persons who perceive the income generation process as fair experience higher levels of subjective well-being" http://mpra.ub.uni-muenchen.de/44827/1/MPRA_paper_44827.pdf
Cheung and Leung (2007): Enhancing Life Satisfaction by Government Accountability in China	Significant positive correlation in China between perceived government accountability and life satisfaction, especially for those with less social power http://link.springer.com/article/10.1007%2Fs11205-006-9043-9#page-1
Rodriguez Pose and Maslaukaite (2011): Can policy make us happier? Individual characteristics, socio-economic factors and life satisfaction in Central and Eastern Europe (p. 90)	Lower corruption in Central and Eastern Europe is associated with higher SWB. http://cjres.oxfordjournals.org/content/5/1/77.short
Hayo (2006): Happiness in transition: An empirical study on Eastern Europe (p. 217)	There is no significant relation, using 1991 national-level data for 7 Eastern European transition countries, between corruption and life satisfaction. http://www.sciencedirect.com/science/article/pii/S0939362507000040

Fereidouni, Najdi, Amiri, (2013): Do governance factors matter for happiness in the MENA region? (p. 1036)	Control of corruption is positively associated with life satisfaction in the Middle East and North Africa region http://www.emeraldinsight.com/journals.htm?articleid=17099151&show=abstract
Jiminez (2011): What Makes a Country of Shiny Happy People?: On the Size of Government and Governance in Europe (p. 34)	There is a negative relationship between control of corruption and life satisfaction in data of European countries between 1992 and 2010. https://repository.library.georgetown.edu/handle/10822/553874
Kim and Kim (2011): Does Government Make People Happy?: Exploring New Research Directions for Government's Roles in Happiness (p. 888)	In large cross-country datasets, there is a positive and significant relationship between control of corruption and life satisfaction http://link.springer.com/article/10.1007/s10902-011-9296-0/fulltext.html
Rule of Law	
Wagner, Schneider and Halla (2009) The quality of institutions and satisfaction with democracy in Western Europe — A panel analysis	Rule of law leads to increased satisfaction with democracy in Western European countries http://www.sciencedirect.com/science/article/pii/S0176268008000700
Fereidouni, Najdi, Amiri, (2013): Do governance factors matter for happiness in the MENA region? (p. 1036)	Rule of law is positively associated with life satisfaction in the Middle East and North Africa region http://www.emeraldinsight.com/journals.htm?articleid=17099151&show=abstract
Bjornskov, Fischer and Dreher (2010): Formal institutions and subjective well-being: Revisiting the cross-country evidence (p. 426)	Data from the World Values Survey showed a fair and efficient legal system raises national happiness in both rich and poor countries. http://www.sciencedirect.com/science/article/pii/S0176268010000078
Graafland and Compen (2012): Economic Freedom and Life Satisfaction: A Cross Country Analysis	An analysis of 122 countries shows "life satisfaction is positively related to the quality of the legal system and protection of property rights" http://arno.uvt.nl/show.cgi?fid=122605
Jiminez (2011): What Makes a Country of Shiny Happy People?: On the Size of Government and Governance in Europe (p. 34)	There is a positive relationship between rule of law and life satisfaction in European data. https://repository.library.georgetown.edu/handle/10822/553874

Importance of Trust	
Bjornskov (2013): Do Economic Reforms Alleviate Subjective Well-Being Losses of Economic Crises?	SWB losses during economic crises are much worse in low-trust European countries as compared to high-trust countries http://link.springer.com/article/10.1007/s10902-013-9442-y#page-1
Helliwell, Huang and Wang (2013) Social Capital and Well-Being in Times of Crisis	Data from 30 European countries from 2002 to 2010 shows that "in the transition economies, the change of social trust, but not that of GDP per capita, has significant impact on the change of subjective well-being; in contrast, in the non-transition economies, the change of GDP per capita, but not the change of social trust, plays a significant role in explaining the change in subjective well-being." DOI 10.1007/s10902-013-9441-z
Killerby (2005): "Trust Me, I'm From the Government": The Complex Relationship between Trust in Government and Quality of Governance	A sample of 45 countries shows there is a weak correlation between trust in government and life satisfaction at the national level. http://www.msd.govt.nz/about-msd-and-our-work/publications-resources/journals-and-magazines/social-policy-journal/spj25/complex-relationship-between-trust25-pages-1-15.html
Kwak et al (2012): Political legitimacy and public confidence in police: An analysis of attitudes toward Mexican police	Public confidence in the police in Mexico is positively associated with life satisfaction and happiness http://www.emeraldinsight.com/journals.htm?issn=1363-951X&volume=35&issue=1&articleid=17019342&show=html
Kuroki (2011): Does Social Trust Increase Individual Happiness in Japan?	Japanese data shows that social trust has a positive and significant impact on SWB. http://onlinelibrary.wiley.com/doi/10.1111/j.1468-5876.2011.00533.x/full
Hudson (2006): Institutional Trust and Subjective Well-Being across the EU	Trust in the European Central Bank, the EU, national government, the law and the UN all positively impact well-being in 15 EU countries. http://onlinelibrary.wiley.com/doi/10.1111/j.1467-6435.2006.00319.x/abstract
Rozer (2013): Income Inequality and Subjective Well-being: A Cross-National Study on the Conditional Effects of Individual and National Characteristics	Cross-country data from 85 countries shows that "the positive association between national income inequality and subjective well-being is less strong for people from countries with high levels of social and institutional trust" http://econpapers.repec.org/article/sprsoinre/v_3a113_3ay_3a2013_3ai_3a3_3ap_3a1009-1023.htm
Hommerich (2012): Trust and Subjective Well-being after the Great East Japan Earthquake, Tsunami and Nuclear Meltdown: Preliminary Results	Japanese data shows that trust in governmental institutions has a positive impact on SWB and explains SWB more than social trust, but less than family trust and less than income. http://onlinelibrary.wiley.com/doi/10.1111/j.1475-6781.2012.01169.x/full

Oishi, Kesebir and Diener (2011): Income Inequality and Happiness	The negative correlation between income inequality and happiness in the United States disappears after controlling for general perceived fairness measures and general trust. http://pss.sagepub.com/content/22/9/1095.abstract
Ram (2009): Government spending and happiness of the population: additional evidence from large cross-country samples (p. 486)	The relationship between generalized trust and life satisfaction "may be fragile even in samples of modest size". http://link.springer.com/article/10.1007%2Fs11127-008-9372-0#page-1
Bohnke (2008): Does Society Matter? Life Satisfaction in the Enlarged Europe	Data from the European Union indicates that "the way in which people perceive their society—whether, for example, they trust their social services and political system—influences their individual well-being, and it does so the more political structures fail to provide an opportunity set in which people can realize their aspirations and ideas of self-fulfillment" http://link.springer.com/article/10.1007/s11205-007-9169-4#page-1
Samanni and Holmberg (2010): Quality of Government Makes People Happy (p. 9)	A positive relation between civic trust and happiness and life satisfaction is only supported among OECD countries. "Among Non-OECD countries, the relationship is weak and occasionally even negative, although statistically insignificant". This appears to be driven by high levels of trust in authoritarian regimes. https://www.qog.pol.gu.se/digitalAssets/1350/1350150_2010_1_samanni_holmberg.pdf
Decentralization of Government	
Diaz-Serrano and Rodriguez-Pose (2012): Decentralization, Subjective Well-Being, and the Perception of Institutions	Data from 29 European countries shows "fiscal and some forms of political decentralization have a positive and significant effect on the overall subjective well-being of individuals. However, fiscal decentralization has a different effect on the perception of institutions depending on whether we consider subnational expenditure or revenues." http://onlinelibrary.wiley.com/doi/10.1111/j.1467-6435.2012.00533.x/full
Rodriguez-Pose and Maslaukaite (2011): Can policy make us happier? Individual characteristics, socio-economic factors and life satisfaction in Central and Eastern Europe (p. 91)	Cross-country data from Central and Eastern Europe shows that "greater levels of political decentralization are associated with a greater degree of life satisfaction" http://cjres.oxfordjournals.org/content/5/1/77.short
Bjornskov (2008): On Decentralization and Life Satisfaction	Cross-country data from 66 countries shows that "more spending or revenue decentralization raises well-being while greater local autonomy is beneficial only via government consumption spending" http://www.sciencedirect.com/science/article/pii/S0165176507002418

Wassmer et al (2008): Sub-national Fiscal Activity as a Determinant of Individual Happiness: Ideology Matters	Data from the United States shows "no indication that the overall level of state or local fiscal activity affects life satisfaction." http://link.springer.com/article/10.1007/s10902-008-9109-2/fulltext.html
Voigt and Blume (2012): The Economic Effects of Federalism and Decentralization—a Cross-country Assessment	Cross-country data from 80 countries shows a positive correlation between life satisfaction and each of subnational expenditure, fiscal independence and the right of the lower government levels to a portion of the revenues transferred to them in a regular and unconditional fashion. http://link.springer.com/article/10.1007%2Fs11127-010-9745-z#page-1
Government Effectiveness	
Ott (2011): Government and Happiness in 130 Nations: Good Governance Fosters Higher Level and More Equality of Happiness (p.3)	"Good governance does not only produce a higher level of happiness, but also lowers inequality of happiness among citizens." http://link.springer.com/article/10.1007/s11205-010-9719-z#page-1
Whiteley et al (2010): Government Performance and Life Satisfaction in Contemporary Britain	British data between 2004 and 2008 shows that "policy outcomes, especially micro level ones, significantly influence life satisfaction." http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=7835020
Moller and Jackson (1997): Perceptions of service delivery and happiness	In South Africa, "improvements to local services were closely associated with increases in happiness among all sectors of the population, including rural dwellers and the poor". http://www.tandfonline.com/doi/abs/10.1080/03768359708439958#.UpJqH413s1o
Samanni and Holmberg (2010): Quality of Government Makes People Happy (p10)	Cross-country data for about 90 countries shows government effectiveness has an effect on levels of life satisfaction after controlling for other relevant explanatory variables. https://www.qog.pol.gu.se/digitalAssets/1350/1350150_2010_1_samanni_holmberg.pdf
Michalos and Zumbo (1999): Public Services and the Quality of Life	Perceived satisfaction with government services in a Canadian community, perceived value for money with regard to government services and use spending preferences and demand explain 66% of the variance in life satisfaction http://link.springer.com/article/10.1023%2FA%3A1006893225196
Lou (2009): Marching toward a Harmonious Society: Happiness, Regime Satisfaction, and Government Performance in Contemporary Urban China	Chinese "citizens who perceived government policies as being responsive to their needs were more likely to report a high level of personal well-being". http://onlinelibrary.wiley.com/doi/10.1111/j.1943-0787.2009.01137.x/abstract

Bjornskov, Fischer and Dreher (2010): Formal institutions and subjective well-being: Revisiting the cross-country evidence (p.425)	Data from the World Values Survey showed that honest and efficient government is correlated with SWB and "government efficiency varies systematically across world regions, but not over time", and is "associated with increased trade openness and positive business prospects". http://www.sciencedirect.com/science/article/pii/S0176268010000078
Ott (2010): Good Governance and Happiness in Nations: Technical Quality Precedes Democracy and Quality Beats Size (p.362)	In a comparison of 127 countries there is a significant positive correlation between technical quality and happiness in both rich countries and poor countries. http://link.springer.com/article/10.1007/s10902-009-9144-7#page-1
Fereidouni, Najdi, Amiri, (2013): Do governance factors matter for happiness in the MENA region? (p1036)	Government effectiveness is positively associated with life satisfaction in the Middle East and North Africa region http://www.emeraldinsight.com/journals.htm?articleid=17099151&show=abstract
Kim and Kim (2011): Does Government Make People Happy?: Exploring New Research Directions for Government's Roles in Happiness (p888)	Large cross-country datasets show a positive and significant relationship between government effectiveness and life satisfaction. "Government effectiveness has the most powerful explanatory power as compared to any other key variables (politics, economy, and health factors)" http://link.springer.com/article/10.1007/s10902-011-9296-0/fulltext.html
Freedom	
Verme (2009): Happiness, freedom and control	Data from 84 countries from 1981 to 2004 show that perceived freedom of choice and control is a more significant predictor of life satisfaction than variables pertaining to individual characteristics, individual social attitudes, individual values and country economic status. http://www.sciencedirect.com/science/article/pii/S0167268109001164
Bjornskov (2013): Do Economic Reforms Alleviate Subjective Well-Being Losses of Economic Crises?	European states with tighter regulations of credit, labor or product markets suffered larger SWB losses during economic crises http://link.springer.com/article/10.1007/s10902-013-9442-y#page-1
Rode (2013): Do Good Institutions Make Citizens Happy, or Do Happy Citizens Build Better Institutions? (p1479)	World Values Survey data shows that "findings indicate the existence of a causal channel from economic freedom to well-being, but can't exclude a long run effect of intrinsic happiness on economic freedom through social capital." http://link.springer.com/article/10.1007/s10902-012-9391-x
Belasen and Hafer (2012): Well-being and economic freedom: Evidence from the States	In the United States, comparing across states, "improvements in economic freedom lead to higher levels of well-being after controlling for other economic factors" http://www.sciencedirect.com/science/article/pii/S0160289612000359

Alvarez-Diaz et al (2010): The Politics of Happiness: On the Political Determinants of Quality of Life in the American States	In the United States, "the less friendly policies are to the free market ideal (i.e., the greater the amount of regulation), the more satisfied citizens are with the quality of their lives." http://journals.cambridge.org/action/displayFulltext?type=1&fid=7835055&jid=JOP&volumeId=72&issueId=03&aid=7835053&bodyId=&membershipNumber=&societyETOCSession=
Knoll, Pitlik and Rode (2013): A note on the impact of economic regulation on life satisfaction (p919)	European and World Values Survey data shows that deregulation is positively and significantly correlated with life satisfaction; however, the effect is somewhat lower if control for GDP per capita. http://www.tandfonline.com/doi/abs/10.1080/13504851.2012.762709#.UorJhI13s1p
Gehring (2013): Who Benefits from Economic Freedom? Unraveling the Effect of Economic Freedom on Subjective Well-Being	Cross-country data from 1990–2005 suggest that overall economic freedom has a significant positive effect on SWB. "Its dimensions legal security and property rights, sound money, and regulation are in particular strong predictors of higher well-being...Developing countries profit more from higher economic freedom, in particular from reducing the regulatory burden." http://www.sciencedirect.com/science/article/pii/S0305750X13001150
Inglehart et al (2008): Development, Freedom, and Rising Happiness: A Global Perspective (1981–2007)	Data from 52 countries shows that free choice and control over life decisions "showed a statistically significant association with change in SWB, regardless of whether the SWB index, happiness, or life satisfaction was the dependent variable." http://pps.sagepub.com/content/3/4/264
Gropper, Lawson and Thorne (2011): Economic Freedom and Happiness	In a cross-country sample of over 100 countries, there is a significant positive correlation between economic freedom and happiness. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2251393
Veenhoven (2000): Freedom and Happiness, A Comparative Study in 46 Nations in the Early 1990's	"Freedom is positively related to happiness among rich nations, but not among poor nations." However, with regard to economic freedom, "opportunity for free trade is positively related to happiness in poor nations, but not in rich nations. Similarly, the relation between economic freedom and happiness is strongest in nations where capability to choose is lowest." http://repub.eur.nl/res/pub/8859/2000a-full.pdf
Flavin, Pacek and Radcliff (2011): State Intervention and Subjective Well-Being in Advanced Industrial Democracies	Analysing 15 advanced industrial democracies, the authors found that "citizens are more satisfied with their lives as the level of state intervention into the market economy increases." http://onlinelibrary.wiley.com/doi/10.1111/j.1747-1346.2011.00290.x/full
Graafland and Compen (2012): Economic Freedom and Life Satisfaction: A Cross Country Analysis (p0)	"If the relationship between life satisfaction and economic freedom is controlled for income per capita, life satisfaction is independent from economic freedom." However, "for poor countries, freedom of trade fosters life satisfaction" http://arno.uvt.nl/show.cgi?fid=122605

Welsch (2003): Freedom and Rationality as Predictors of Cross-National Happiness Patterns: The Role of Income as a Mediating Variable	Analysing 54 countries in the mid-1990's, the authors found that freedom is positively related to happiness; however, "freedom affects happiness only indirectly (through its impact on income)" http://link.springer.com/article/10.1023%2FA%3A1026249123711#page-1
Hayo (2006): Happiness in transition: An empirical study on Eastern Europe (p215)	Greater political rights are positively associated with life satisfaction in Eastern Europe transition countries. http://www.sciencedirect.com/science/article/pii/S0939362507000040
Haller and Hadler (2006): How Social Relations and Structures can Produce Happiness and Unhappiness: an International Comparative Analysis	Life satisfaction and happiness are correlated with greater political freedom in 41 countries in the mid-1990s. http://link.springer.com/article/10.1007%2Fs11205-004-6297-y#page-1
Bjornskov, Dreher and Fischer (2008): Cross-country determinants of life satisfaction: exploring different determinants across groups in society (p158)	"Better regulatory quality robustly decreases well-being of people with low and middle incomes." http://link.springer.com/article/10.1007%2Fs00355-007-0225-4#page-1
Ovaska and Takashima (2006): Economic Policy and the Level of Self-Perceived Well-Being: an International Comparison	Data from 68 countries show a significant positive correlation between SWB and economic freedom (personal choice, freedom to compete and the security of privately owned property as its core components) but no significant correlation between SWB and political freedom http://www.sciencedirect.com/science/article/pii/S1053535705001770
Miscellaneous	
Environment: Halla et al (2013) Satisfaction with Democracy and Collective Action Problems: the Case of the Environment	"Citizens of European countries are more satisfied with the way democracy works in their country if (a) more environmental policies are in place and if (b) expenditures on the environment are higher, but environmental taxes are lower. The relation between environmental policy and life satisfaction is not as pronounced." http://link.springer.com/article/10.1007%2Fs11127-011-9844-5#page-1
Welfare and Unemployment Benefits: Ifcher (2011) The Happiness of Single Mothers after Welfare Reform	Welfare reforms and tax policy changes in the United States designed to encourage single mothers to increase the labor force participation helped close over 1/3rd of the SWB gap between single mothers and other respondents. These changes included the Temporary Assistance for Needy Families (TANF) program, which included work requirements and a five-year lifetime time limit, the Earned Income Tax Credit which was a tax incentive for low-income workers, and increases to Medicaid, job training and subsidized childcare. http://www.scu.edu/business/economics/research/upload/manuscript-singlemothershappiness-final-july2011.pdf

Herbst (2013) Welfare reform and the subjective well-being of single mothers	In studying the TANF program (defined above) in the United States, the authors found that the "implementation of TANF had mostly positive effects on single mothers' subjective well-being. Indeed, these women experienced a relative increase in life satisfaction, reductions in regrets about the past, and expressed more optimism about the future." http://link.springer.com/article/10.1007%2Fs00148-012-0406-z
Ouweneel (2011): Social Security and Well-Being of the Unemployed in 42 Nations	Using data from 1990 of 42 nations, 23 of which were "first world nations", the authors found a positive but small and not statistically significant correlation between social security expenditure as a percentage of GDP and both SWB and life satisfaction. http://link.springer.com/article/10.1023%2FA%3A1019619324661#page-1
Deeming and Hayes (2012) Worlds of Welfare Capitalism and Wellbeing: A Multilevel Analysis	Analyzing 18 OECD countries, the authors found that "respondents living in liberal and conservative countries experience at least twice the odds of unhappiness of those living in social democracies, after controlling for individual- and country-level explanatory variables. The observed differences between the worlds of welfare were found to be highly statistically significant." http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=8680666
Di Tella, MacCulloch and Oswald (2001)	Data from the 1975 to 1992 in the United States and twelve European countries shows that generosity of unemployment benefits is positively correlated with SWB of both unemployed and employed. http://www2.warwick.ac.uk/fac/soc/economics/research/workingpapers/2008/twerp615.pdf
Monetary policy: Monetary Policy and Happiness: Preferences over Inflation and Unemployment in Latin America Ruprah and Luengas (2011)	In 17 Latin American countries, both inflation and unemployment decrease life satisfaction and "unemployment appears to be more important than inflation for the group of countries with highest GDP per capita; the opposite holds for the countries with the lowest GDP per capita." http://www.sciencedirect.com/science/article/pii/S1053535710001113
Education: Oreopoulos (2007) Do dropouts drop out too soon? Wealth, health and happiness from compulsory schooling	A sample of 18 to 65-year olds from the UK and Northern Ireland in the 1973 to 1998 showed that a "year of compulsory schooling increases the likelihood of being overall satisfied with life by 5.2% points, and increases the likelihood of being very satisfied by 2.4% points" and "the results indicate that the likelihood of being very happy or fairly happy also increases with compulsory schooling" http://homes.chass.utoronto.ca/~oreo/old/research/compositions/do_dropouts_drop_out_too_soon.pdf

De Roiste et al (2012) Is School Participation Good for Children? Associations with Health and Wellbeing	Studying Irish schoolchildren, the authors found that self-reported level of participation in making school rules, participation in organizing school events and participation in expressing views in class were positively associated with SWB. http://www.emeraldinsight.com/journals.htm?articleid=17015612

Free Press: Tandoc Jr. and Takahashi (2012) The Complex Road to Happiness: The Influence of Human Development, a Healthy Environment and a Free Press	Press freedom is positively correlated with life satisfaction, even when the human development index is also included in the model http://link.springer.com/article/10.1007%2Fs11205-012-0109-6/fulltext.html
Progressive Taxation: Oishi, Schimmack and Diener (2012): Progressive Taxation and the Subjective Well-Being of Nations	Progressive taxation, defined as the difference between the highest and lowest effective tax rates, was correlated with higher life evaluation measures even when controlling for GDP per capita or Gini coefficients. http://pss.sagepub.com/content/23/1/86.short
Women's rights: Pezzini (2005) The Effect of Women's Rights on Women's Welfare: Evidence from a Natural Experiment	Increased access to birth control and abortion rights in 12 European countries between the 1960s and 1990s are strongly linked to increased life satisfaction of women of childbearing age. "Other women's rights have proved less beneficial. Mutual consent divorce laws decreased women's welfare. High maternity protection on the job has negligible effects." http://ideas.repec.org/a/ecj/econjl/v115y2005i502pc208-c227.html

List of Searches Performed

The following searches were performed on the EconLit database and on scholarly journals in the Worldwide Political Science Abstracts

(a) AB (government OR governance) AND AB (happiness OR "subjective well-being" OR "life satisfaction")
(b) AB "rule of law" AND AB ((happiness OR "subjective well-being" OR "life satisfaction"))
(c) AB voting AND AB (happiness OR "subjective well-being" OR "life satisfaction")
(d) AB (institutions OR institution) AND AB (happiness OR "subjective well-being" OR "life satisfaction")
(e) AB "inclusive institution" AND AB (happiness OR "subjective well-being" OR "life satisfaction")
(f) AB policy AND AB (happiness OR "subjective well-being" OR "life satisfaction")
(g) AB democracy AND AB (happiness OR "subjective well-being" OR "life satisfaction")
(h) AB trust AND AB (happiness OR "subjective well-being" OR "life satisfaction")
(i) AB freedom AND AB (happiness OR "subjective well-being" OR "life satisfaction")
(j) AB fairness AND AB (happiness OR "subjective well-being" OR "life satisfaction")
(k) AB decentralization AND AB (happiness OR "subjective well-being" OR "life satisfaction")
(l) AB regulation AND AB (happiness OR "subjective well-being" OR "life satisfaction")

Statistical Appendix

February 2014

1. Data Sources

a) Subjective well-being (SWB): A country-year panel of average survey measures of SWB derived from the October-2013 release of the Gallup World Poll (GWP) for the survey years from 2005 to 2012. The SWB measure, unless stated otherwise, is the national average response to the question of life evaluations. The English wording of the question is "Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?" This measure is referred to as *Cantril life ladder*, or just *life ladder* in our analysis. The Oct-2013 GWP release also has observations from the on-going 2013 survey. But those observations from the incomplete surveys are not used in the analysis.

b) Quality of governance -- Source 1: A country-year panel of governance indicators from the Worldwide Governance Indicators (WGI) project (Kaufmann, Kraay and Mastruzzi). According to the source, the WGI "are a research dataset summarizing the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms." The WGI project provides data for 215 economies over the period 1996 - 2012. For our analysis we use observations that overlap with our panel of subjective well-being. There are six dimensions of governance in the WGI: Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption. The indicators are on a scale roughly with mean zero and a standard deviation of 1. In places where we need to further reduce the number of dimensions, we use the simple average of the first two measures as an indicator of democratic quality, and the simple average of the other four measures as an indicator of delivery quality, following Helliwell and Huang (2008).

c) Quality of governance -- Source 2: Gallup's National institutions Index and its components from the 2005-2012 Gallup World Poll (October 2013 release). We use primarily WP139, confidence in the national government. According to Gallup's Worldwide Research Methodology and Codebook (June 2013), "[*t*]he national institutions index reflects citizens' confidence in key institutions prominent in a country's leadership: the military, the judicial system, the national government, and the honesty of elections." The index questions are "Do you have confidence in each of the following, or not? How about the military? (WP137)", "Do you have confidence in each of the following, or not? How about the judicial system and courts? (WP138)", "Do you have confidence in each of the following, or not? How about the national government? (WP139)" and "Do you have confidence in each of the following, or not? How about honesty of elections? (WP144)". Our analysis uses primarily WP139, confidence in the national government.

d) GDP per capita in purchasing power parity (PPP) and constant 2005 dollars from the September 2013 release of the World Development Indicators (WDI). The GDP figures for Taiwan and Zimbabwe are from the Penn World Table 7.1. A small number of observations are missing in the September-2013 WDI release but were present in the April-2013 release. In such cases, we use the numbers from the earlier release.

e) Political Rights (pr) and Civil Liberties (cl) indices are from the Freedom House. The index of political rights measures the electoral process, political pluralism and participation, and functioning of the government. The original data is on a numerical rating scale of 1 to 7, with 1 indicating the highest degree of freedom and 7 the lowest. We reverse the order so that a higher value indicates better, instead of worse, quality (*i.e.*, 1 becomes 7, 7 becomes 1, and so on). Finally, we transform the measure to a 0-to-1 scale by subtracting 1 and dividing the resultant value by 6. The index of civil liberties is intended to measure the freedom of expression and belief, the associational and organizational rights, the rule of Law, and personal autonomy and individual rights. The original data is on a 1-7 rating scale of descending order. Again, we reverse the order and turn the index into values between 0 and 1.

f) Corruption Perception Index (cpi) is from the Transparency International. This index reflects the perceived degree of corruption in public sectors. It is on a 0 - 10 scale, with 0 indicating severe corruption and 10 indicating no corruption. The index draws on a series of surveys conducted by other institutions on the bribery of public officials, appropriation of public funds, kickbacks in public procurement, and the effectiveness of anti-corruption efforts.

g) World Press Freedom Index (wpfi) from the Reporters without Borders. This index tries to capture the level of freedom that journalists, news organizations, and netizens enjoy, and authorities' efforts to respect and ensure respect for this freedom. The index is originally on a descending scale with a lower score indicating a greater degree of freedom. We flip the sign in this analysis, so that a higher value indicates better, instead of worse, quality. This is simply done by multiplying the original index by negative 1.

h) World Economic Freedom Index (wefi) from The Wall Street Journal and the Heritage Foundation. This index indicates the degree of economic freedom on a scale of 0 to 100 on an ascending scale with 100 indicating maximum freedom. The index considers ten components of freedom in four broad categories: Rule of Law (property rights, and freedom from corruption), Limited Government (fiscal freedom, and government spending), Regulatory Efficiency (business freedom, labor freedom, and monetary freedom), and Open Markets (trade freedom, investment freedom, and financial freedom).

i) Life Expectancy and Healthy Life Expectancy. We took the data used in the World Happiness Report (WHR) 2013. The statistics of healthy life expectancy at birth are from the World Health Organization (WHO), and are available for most countries in the year of 2007. But the data are not available for other years, and are missing for some countries. To impute the missing values, we obtain the data of non-health adjusted life expectancy at birth from the WDI that has very good availability in terms of time and country coverage. We compute the ratio of healthy life expectancy to life expectancy in 2007 for countries with both data, and assign countries with missing data the world average of the ratio. We then use the ratio,

together with the non-health adjusted life expectancy, to generate the healthy life expectancy data.

2. Sample coverage

We use country-year observations for which

a) the average life ladder is available, and

b) no missing information in any of the six dimensions of governance indicators, and

c) GDP data is available.

Sample coverage: A total of 836 country-year observations between 2005 and 2012 from 157 countries.

Regions: Some of the analysis includes dummy indicator for regions, namely Western Europe, Central and Eastern Europe, Commonwealth of Independent States, Southeast Asia, South Asia, East Asia, Latin America and Caribbean, North America and ANZ, Middle East and North Africa, and Sub-Saharan Africa.

3. Summary statistics and bivariate correlations

Tables 1-7 present the summary statistics and bivariate correlations.

4. Regression analysis

Tables 8-18 report estimates from the regression analysis.

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Tables – Statistical Appendix

Table 1: Summary Statistics for Key Variables - 2005-2012 Pooled Sample

Variable	Mean	Std. Dev.	Min.	Max.	N
Life Ladder	5.46	1.11	2.81	8.02	836
Per-capita GDP	12978	13526.97	275.84	72650.87	836
Democratic quality	-0.14	0.86	-2.24	1.53	836
Delivery quality	0.01	0.96	-1.69	2.2	836
Confidence in the national government	0.48	0.19	0.07	0.98	734
Healthy life expectancy	58.95	10.94	28.05	75.39	834
Freedom to make life choices	0.71	0.15	0.26	0.97	821
Generosity - adjusted for GDP	0	0.16	-0.33	0.54	792
Social support	0.82	0.12	0.29	0.98	829
Control of Corruption	-0.05	1.02	-1.64	2.55	836
Government Effectiveness	0.04	0.98	-1.77	2.43	836
Regulatory Quality	0.1	0.94	-2.16	1.98	836
Rule of Law	-0.07	1	-1.96	2	836
Voice and Accountability	-0.06	0.95	-2.21	1.77	836
Political Stability, Absence of Violence/Terrorism	-0.22	0.93	-2.81	1.5	836
Corruption Perception Index	4.15	2.13	1.3	9.6	833
Political Rights	4.63	2.07	1	7	836
Civil Rights	4.81	1.7	1	7	836
Press Freedom Index	-30.4	26.6	-140.67	10	833
Econonomic Freedom Index	61.29	10.08	21.4	90	817

Table 2: Correlation Coefficients - 2005-2012 Pooled Sample - Part 1 of 3

Variables	Ladder	Per capita GDP	Democratic	Delivery	ConfidenceInGov	HealthyLE	Freedom	Generosity	SocialSupport
Ladder	1.00								
Per capita GDP	0.73	1.00							
Democratic	0.61	0.69	1.00						
Delivery	0.71	0.84	0.86	1.00					
ConfidenceInGov	-0.05	-0.01	-0.12	-0.00	1.00				
HealthyLE	0.73	0.70	0.59	0.71	-0.18	1.00			
Freedom	0.54	0.45	0.46	0.51	0.39	0.32	1.00		
Generosity	0.23	0.19	0.11	0.22	0.21	0.02	0.38	1.00	
SocialSupport	0.68	0.55	0.54	0.54	-0.16	0.61	0.45	0.08	1.00

Table 3: Correlation Coefficients - 2005-2012 Pooled Sample - Part 2 of 3

Variables	LogPerCapitaGDP	Democratic	Delivery	ControlCorrupt	Effectiveness	Regulation	RuleOfLaw	Voice	Stability
LogPerCapitaGDP	1.00								
Democratic	0.69	1.00							
Delivery	0.80	0.86	1.00						
ControlCorrupt	0.76	0.84	0.97	1.00					
Effectiveness	0.82	0.82	0.98	0.94	1.00				
Regulation	0.79	0.84	0.97	0.90	0.94	1.00			
RuleOfLaw	0.78	0.86	0.99	0.96	0.96	0.94	1.00		
Voice	0.62	0.91	0.82	0.79	0.79	0.83	0.81	1.00	
Stability	0.63	0.91	0.74	0.74	0.71	0.69	0.75	0.65	1.00

Table 4: Correlation Coefficients - 2005-2012 Pooled Sample - Part 3 of 3

Variables	Democratic	Delivery	ConfidenceInGov	CorruptPerception	PolitRights	CivilRights	PressFreedom	EconFreedom
Democratic	1.00							
Delivery	0.86	1.00						
ConfidenceInGov	-0.12	-0.00	1.00					
CorruptPerception	0.82	0.97	0.04	1.00				
PolitRights	0.81	0.66	-0.30	0.59	1.00			
CivilRights	0.88	0.75	-0.25	0.67	0.93	1.00		
PressFreedom	0.73	0.54	-0.27	0.50	0.73	0.77	1.00	
EconFreedom	0.71	0.87	-0.02	0.82	0.54	0.64	0.46	1.00

Table 5: Summary Statistics: Changes from 2005-07 to 2010-2012 period

Variable	Mean	Std. Dev.	Min.	Max.	N
delta Life Ladder	0.07	0.43	-1.07	1.27	130
delta Log Per-capita GDP	0.09	0.12	-0.53	0.41	126
delta Democratic quality	-0.01	0.21	-0.85	0.70	129
delta Delivery quality	0.02	0.14	-0.43	0.66	130
delta Confidence in the national government	-0.01	0.13	-0.39	0.25	117
delta Healthy life expectancy	1.13	0.67	-2.86	4.04	130
delta Freedom to make life choices	0	0.08	-0.2	0.24	126
delta Generosity	-0.02	0.09	-0.3	0.2	124
delta Social support	-0.01	0.06	-0.27	0.23	129
delta Corruption Perception Index	0.09	0.5	-1.1	2.65	127
delta Political Rights	-0.07	0.68	-3	3	130
delta Civil Rights	-0.08	0.42	-1	1	130
delta Press Freedom Index	-8.14	13.6	-43.77	25.67	130
delta Econonomic Freedom Index	0.76	3.37	-9.48	11	124

Table 6: Correlation Coefficients - Based on changes from 2005-07 to 2010-2012 period - Part 1 of 2

Variables	Δladder	ΔLogPCGDP	Δdemocratic	Δdelivery	ΔNatGov	ΔHealthyLE	ΔFreedom	ΔGenerosity	ΔSocialSupport
Δladder	1.00								
ΔLogPCGDP	0.12	1.00							
Δdemocratic	0.10	0.22	1.00						
Δdelivery	0.18	0.25	0.36	1.00					
ΔNatGov	0.30	0.04	0.18	0.29	1.00				
ΔHealthyLE	-0.05	-0.04	-0.02	-0.09	-0.09	1.00			
ΔFreedom	0.37	0.01	0.11	0.18	0.58	-0.02	1.00		
ΔGenerosity	0.14	-0.04	0.00	0.01	-0.04	0.09	-0.00	1.00	
ΔSocialSupport	0.39	0.06	-0.01	-0.12	-0.08	0.14	0.16	0.14	1.00

Table 7: Correlation Coefficients - Based on changes from 2005-07 to 2010-2012 period - Part 2 of 2

Variables	Δdemocratic	Δdelivery	ΔNatGov	ΔCorruPI	ΔPolitRights	ΔCivilRights	ΔPressFree	ΔEconFree
Δdemocratic	1.00							
Δdelivery	0.36	1.00						
ΔNatGov	0.18	0.29	1.00					
ΔCorruPI	0.17	0.56	0.11	1.00				
ΔPolitRights	0.41	0.05	0.00	0.09	1.00			
ΔCivilRights	0.38	0.11	0.00	0.05	0.50	1.00		
ΔPressFree	0.18	0.01	0.05	-0.19	0.17	0.15	1.00	
ΔEconFree	-0.05	0.36	-0.07	0.36	0.06	0.13	-0.14	1.00

Table 8: Comparing Estimates Reported in World Happiness Report (WHR) 2013 and Estimates Based on the Latest Data

	c1	c2
	(1)	(2)
GDP used in WHR 2013	0.28	
	(0.07)***	
Updated GDP, default in later regressions		0.29
		(0.07)***
Healthy life expectancy	0.02	0.02
	(0.008)***	(0.008)***
Freedom to make life choices	0.9	0.95
	(0.34)***	(0.34)***
Generosity	0.86	0.82
	(0.27)***	(0.28)***
Perceptions of corruption	-.71	-.70
	(0.28)**	(0.29)**
Social support	2.32	2.30
	(0.46)***	(0.47)***
Year 2005	0.29	0.31
	(0.11)***	(0.11)***
Year 2006	-.17	-.17
	(0.05)***	(0.05)***
Year 2007	0.08	0.1
	(0.05)	(0.06)*
Year 2008	0.15	0.17
	(0.05)***	(0.06)***
Year 2009	0.06	0.09
	(0.05)	(0.05)*
Year 2010	-.01	0.006
	(0.04)	(0.04)
Year 2011	0.04	0.05
	(0.04)	(0.04)
Obs.	732	732
No. of countries (clusters)	149	148
R^2	0.75	0.74

Notes: 1). Column (1) shows the estimates reported in Table 2.1 in the WHR 2013. Column (2) shows the estimates from the updated data. There are four differences between the two columns: a) The WHR column uses May-2013 release of the GWP. The second column uses the October-2013 release. b) The WHR column uses GDP from the WDI April-2013 release. The second column uses primarily the WDI September-2013 release, with a small number of observations missing at that source replaced by observations in the April-2013 WDI release, and a few from the Penn World Table 7.1. c) The WHR column matches one-year lagged GDP to GWP observations. The second column uses current-year GDP. d) The two columns have slightly different coverage of country-year pairs. 2). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

Table 9: Focusing on the Governance-Quality Measures based on Data from the Worldwide Governance Indicators (WGI) Project

	c1	c2	c3	c4	c5	c6	c7	c8	c9
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Democratic quality	0.007	0.01	-.02	-.02	-.04	-.09	0.13	0.1	0.06
	(0.14)	(0.12)	(0.11)	(0.13)	(0.11)	(0.1)	(0.18)	(0.18)	(0.15)
Delivery quality	0.81	0.25	0.06	0.62	0.31	0.24	0.84	0.74	0.57
	(0.13)***	(0.14)*	(0.12)	(0.14)***	(0.14)**	(0.11)**	(0.23)***	(0.23)***	(0.23)**
Logged GDP		0.52	0.33		0.41	0.32		0.65	0.84
		(0.06)***	(0.07)***		(0.08)***	(0.07)***		(0.27)**	(0.26)***
Healthy life expectancy			0.02			0.005			-.06
			(0.007)**			(0.01)			(0.05)
Freedom to make life choices			1.16			0.66			0.95
			(0.34)***			(0.29)**			(0.23)***
Generosity			0.96			0.55			0.25
			(0.26)***			(0.29)*			(0.19)
Social support			2.12			1.97			1.46
			(0.44)***			(0.39)***			(0.33)***
Central and Eastern Europe				-.95	-.96	-.67			
				(0.19)***	(0.18)***	(0.18)***			
Commonwealth of Independent States				-.50	-.48	-.33			
				(0.33)	(0.29)*	(0.24)			
Southeast Asia				-.55	-.35	-.43			
				(0.22)**	(0.22)	(0.17)***			
South Asia				-.91	-.49	-.24			
				(0.29)***	(0.31)	(0.45)			
East Asia				-.91	-.92	-.79			
				(0.2)***	(0.19)***	(0.23)***			
Latin America and Caribbean				0.23	0.25	0.24			
				(0.23)	(0.22)	(0.19)			
North America and ANZ				0.29	0.34	0.2			
				(0.1)***	(0.12)***	(0.11)*			
Middle East and North Africa				-.41	-.49	-.30			
				(0.25)	(0.23)**	(0.22)			
Sub-Saharan Africa				-1.27	-.70	-.48			
				(0.23)***	(0.25)***	(0.3)			
Obs.	836	836	776	836	836	776	836	836	776
No. of countries (clusters)	157	157	154	157	157	154	157	157	154
R^2	0.51	0.63	0.74	0.72	0.76	0.8	0.1	0.11	0.2

Notes: 1). Columns (1) to (3) show estimates from pooled regressions with year fixed effects but without regional or country fixed effects. Columns (4) to (6) are from the same pooled regressions but with the addition of regional fixed effects. Columns (7) to (9) are from panel regressions with country fixed effects, in addition to the year fixed effects that are present in all the 9 regressions. For the last three columns, within country r-squared are reported. 2). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

Table 10: Focusing on Gallup World Poll's Measure of Confidence in National Government

	c1	c2	c3	c4	c5	c6
	(1)	(2)	(3)	(4)	(5)	(6)
Confidence in the national government	0.74	0.68	0.58	0.45	0.44	0.51
	(0.16)***	(0.15)***	(0.15)***	(0.17)***	(0.18)**	(0.17)***
Logged GDP		1.46	1.36	1.25	1.17	1.31
		(0.29)***	(0.27)***	(0.24)***	(0.25)***	(0.27)***
Democratic quality			-.32	-.22		
			(0.1)***	(0.1)**		
Delivery quality			0.78	0.59	0.5	
			(0.22)***	(0.25)**	(0.23)**	
Healthy life expectancy				-.07	-.07	-.08
				(0.05)	(0.05)	(0.05)
Freedom to make life choices				0.52	0.56	0.54
				(0.26)**	(0.25)**	(0.26)**
Generosity				0.22	0.23	0.26
				(0.2)	(0.21)	(0.22)
Social support				1.67	1.69	1.73
				(0.35)***	(0.36)***	(0.37)***
Obs.	734	734	734	696	696	696
No. of countries (clusters)	147	147	147	146	146	146
R^2	0.11	0.16	0.19	0.24	0.24	0.23

Notes: 1). All estimates are from panel regressions with country fixed effects and year fixed effects. Within country r-squared are reported. 2). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

Table 11: Comparing Rich Countries and Poor Countries

	Rich	Poor	Rich	Poor
	(1)	(2)	(3)	(4)
Democratic quality	0.69	-.07		
	(0.26)***	(0.17)		
Delivery quality	-.11	0.75		
	(0.44)	(0.27)***		
Confidence in the national government			0.72	0.42
			(0.22)***	(0.22)*
Logged GDP	0.83	1.07	1.49	1.19
	(0.42)**	(0.33)***	(0.45)***	(0.35)***
Healthy life expectancy	-.10	-.02	-.07	-.09
	(0.05)**	(0.09)	(0.04)	(0.09)
Freedom to make life choices	1.11	0.84	0.63	0.47
	(0.44)**	(0.29)***	(0.47)	(0.34)
Generosity	0.82	0.04	0.55	0.12
	(0.28)***	(0.23)	(0.29)*	(0.29)
Social support	1.16	1.50	1.52	1.81
	(0.81)	(0.37)***	(0.89)*	(0.42)***
Obs.	311	465	285	411
No. of countries (clusters)	62	92	59	87
R^2	0.21	0.22	0.26	0.23

Notes: 1). "Poor" include all countries with a per-capita GDP, averaged across the years in the sample, that is below a quarter of the US level. "Rich" include all countries above, including the US. 2). All estimates are from panel regressions with country fixed effects and year fixed effects. Within country r-squared are reported. 3). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

Table 12: Adding Alternative Political Variables

	c1	c2	c3	c4	c5	c6	c7
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Democratic quality	0.06	0.02	0.02	0.006	0.04	-.02	0.006
	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)	(0.13)	(0.15)
Delivery quality	0.57	0.58	0.57	0.58	0.63	0.56	0.78
	(0.23)**	(0.23)**	(0.23)**	(0.23)**	(0.23)***	(0.23)**	(0.23)***
Political rights index; 0-1 scale		0.33					
		(0.23)					
Civil rights index; 0-1 scale			0.51				
			(0.3)*				
Average of political and civil rights; 0-1 scale				0.58			
				(0.32)*			
Corruption perception index					-.04		
					(0.06)		
World press freedom index						0.004	
						(0.002)**	
World economic freedom index							-.02
							(0.01)**
Logged GDP	0.84	0.82	0.85	0.82	0.89	1.00	0.92
	(0.26)***	(0.25)***	(0.25)***	(0.25)***	(0.27)***	(0.28)***	(0.3)***
Healthy life expectancy	-.06	-.07	-.06	-.06	-.06	-.07	-.08
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)**
Freedom to make life choices	0.95	0.97	0.98	0.99	0.95	0.91	0.95
	(0.23)***	(0.23)***	(0.23)***	(0.23)***	(0.23)***	(0.22)***	(0.22)***
Generosity	0.25	0.27	0.26	0.27	0.24	0.27	0.24
	(0.19)	(0.19)	(0.19)	(0.19)	(0.2)	(0.19)	(0.2)
Social support	1.46	1.47	1.46	1.47	1.47	1.43	1.47
	(0.33)***	(0.33)***	(0.33)***	(0.33)***	(0.33)***	(0.33)***	(0.35)***
Obs.	776	776	776	776	773	773	757
No. of countries (clusters)	154	154	154	154	153	151	150
R^2	0.2	0.2	0.2	0.2	0.2	0.21	0.21

Notes: 1). All estimates are from panel regressions with country fixed effects and year fixed effects. Within country r-squared are reported. 2). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

Table 13: Alternative Specifications: Cross-sectional Regressions of Levels (Columns 1 and 2) and Cross-sectional Regression of Changes (Column 3)

	c1	c2	c3
	(1)	(2)	(3)
Democratic quality	-.02	-.11	-.03
	(0.1)	(0.11)	(0.18)
Delivery quality	0.06	0.26	0.79
	(0.12)	(0.12)**	(0.32)**
Logged GDP	0.29	0.29	0.25
	(0.08)***	(0.07)***	(0.3)
Healthy life expectancy	0.02	0.003	-.04
	(0.007)***	(0.009)	(0.05)
Freedom to make life choices	1.15	0.6	1.46
	(0.4)***	(0.39)	(0.46)***
Generosity	1.13	0.67	0.51
	(0.33)***	(0.33)**	(0.38)
Social support	2.49	2.25	2.07
	(0.51)***	(0.46)***	(0.65)***
Central and Eastern Europe		-.69	
		(0.19)***	
Commonwealth of Independent States		-.36	
		(0.23)	
Southeast Asia		-.55	
		(0.23)**	
South Asia		-.31	
		(0.28)	
East Asia		-.77	
		(0.21)***	
Latin America and Caribbean		0.2	
		(0.18)	
North America and ANZ		0.18	
		(0.24)	
Middle East and North Africa		-.36	
		(0.2)*	
Sub-Saharan Africa		-.59	
		(0.26)**	
Obs.	154	154	122
R^2	0.8	0.86	0.27

Notes: 1). Columns (1) and (2) show estimates from cross-sectional regressions that use observations that are the 2005-2012 averages at the country level. Column (3), on the other hand, is cross-sectional regression of changes, specifically changes from the 2005-07 period to the 2010-12 period. 2). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels.

Table 14: Changes in Delivery Quality from the 2005-07 Period to the 2010-12 Period, and the Equivalent Changes in Per-capita Real GDP in Terms of the Impacts on Life Ladder

	Delivery quality			Equivalent Δlog(PC RGDP)	
	2005-07 Avg.	2010-12 Avg.	ΔDelivery	Low Estimate	High Estimate
Palestinian Territories	-1.01	-.34	.66	.45	.75
Rwanda	-.44	.04	.47	.32	.54
Georgia	-.13	.26	.38	.26	.43
Myanmar	-1.74	-1.47	.27	.18	.31
Poland	.46	.7	.24	.17	.28
Paraguay	-.94	-.72	.22	.15	.25
Taiwan	.83	1.03	.2	.14	.23
Macedonia	-.22	-.02	.2	.14	.23
Brazil	-.19	.01	.2	.13	.22
Peru	-.33	-.15	.18	.12	.2
Montenegro	-.21	-.03	.18	.12	.2
Zambia	-.64	-.46	.18	.12	.2
Costa Rica	.32	.49	.17	.12	.2
Belarus	-1.14	-.97	.17	.11	.19
Sierra Leone	-1.07	-.91	.17	.11	.19
Serbia	-.35	-.19	.16	.11	.18
Laos	-1.1	-.94	.15	.1	.18
Uruguay	.56	.71	.15	.1	.17
Bosnia and Herzegovina	-.48	-.34	.15	.1	.17
Kyrgyzstan	-.96	-.81	.14	.1	.16
Sweden	1.86	2.01	.14	.1	.16
Central African Republic	-1.29	-1.16	.13	.09	.15
Moldova	-.56	-.43	.13	.09	.15
Albania	-.42	-.29	.13	.09	.15
New Zealand	1.88	1.98	.1	.07	.12
Guinea	-1.3	-1.2	.1	.07	.11
Romania	-.07	.03	.1	.07	.11
Chile	1.31	1.4	.1	.06	.11
Japan	1.27	1.36	.09	.06	.1
Kazakhstan	-.67	-.58	.09	.06	.1
Norway	1.81	1.9	.09	.06	.1
Togo	-1.13	-1.04	.09	.06	.1
Lithuania	.62	.7	.08	.06	.1
Morocco	-.25	-.17	.08	.06	.09
Bangladesh	-.94	-.86	.08	.06	.09
Angola	-1.25	-1.17	.08	.05	.09
Afghanistan	-1.64	-1.56	.08	.05	.09
Niger	-.69	-.61	.08	.05	.09
South Korea	.83	.9	.07	.05	.08
Burkina Faso	-.44	-.37	.07	.05	.08
Armenia	-.28	-.21	.07	.05	.08

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	Delivery quality			Equivalent Δlog(PC RGDP)	
	2005-07 Avg.	2010-12 Avg.	ΔDelivery	Low Estimate	High Estimate
Saudi Arabia	-.04	.03	.07	.05	.08
Ecuador	-.98	-.91	.07	.04	.07
Croatia	.26	.33	.07	.04	.07
Turkey	.16	.22	.06	.04	.07
Panama	-.03	.03	.05	.04	.06
El Salvador	-.24	-.19	.05	.04	.06
Cambodia	-.93	-.88	.05	.04	.06
United Arab Emirates	.72	.77	.05	.03	.05
Chad	-1.35	-1.31	.05	.03	.05
Belgium	1.4	1.45	.05	.03	.05
Canada	1.76	1.81	.05	.03	.05
Guatemala	-.65	-.61	.04	.03	.05
Colombia	-.14	-.09	.04	.03	.05
Israel	1.02	1.06	.04	.03	.05
Czech Republic	.8	.84	.04	.03	.05
Botswana	.62	.66	.04	.03	.05
Indonesia	-.51	-.47	.04	.03	.04
Latvia	.63	.67	.04	.02	.04
Malawi	-.49	-.45	.04	.02	.04
Cyprus	1.19	1.23	.04	.02	.04
Jamaica	-.08	-.05	.03	.02	.04
Mozambique	-.55	-.53	.03	.02	.03
Netherlands	1.86	1.88	.02	.02	.03
Zimbabwe	-1.61	-1.59	.02	.02	.03
Australia	1.79	1.81	.02	.02	.03
Nicaragua	-.7	-.68	.02	.01	.02
Bulgaria	.07	.09	.02	.01	.02
Uzbekistan	-1.27	-1.25	.02	.01	.02
Estonia	1.12	1.13	.01	.01	.01
Switzerland	1.87	1.88	.01	.01	.01
Mongolia	-.45	-.45	.01	0	.01
Cameroon	-.96	-.96	.01	0	.01
Trinidad and Tobago	.06	.06	.01	0	.01
Ghana	.01	.01	0	0	0
Russia	-.65	-.65	0	0	0
Finland	2.07	2.06	0	0	-.01
China	-.27	-.28	-.01	0	-.01
Honduras	-.66	-.67	-.01	-.01	-.01
Tajikistan	-1.06	-1.07	-.01	-.01	-.01
Singapore	1.98	1.97	-.01	-.01	-.01
Philippines	-.33	-.34	-.01	-.01	-.02
Nigeria	-.99	-1.01	-.01	-.01	-.02
Mexico	-.07	-.09	-.02	-.01	-.02
Liberia	-.95	-.97	-.02	-.01	-.02
Kosovo	-.43	-.45	-.02	-.01	-.02

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	Delivery quality			Equivalent Δlog(PC RGDP)	
	2005-07 Avg.	2010-12 Avg.	ΔDelivery	Low Estimate	High Estimate
Portugal	.97	.94	-.02	-.02	-.03
Bolivia	-.68	-.71	-.03	-.02	-.03
Slovenia	.91	.89	-.03	-.02	-.03
Vietnam	-.47	-.5	-.03	-.02	-.03
Kenya	-.64	-.67	-.03	-.02	-.04
Germany	1.66	1.62	-.04	-.02	-.04
Azerbaijan	-.75	-.79	-.04	-.03	-.04
Senegal	-.37	-.4	-.04	-.03	-.04
Benin	-.54	-.59	-.05	-.03	-.05
France	1.42	1.37	-.05	-.03	-.06
Uganda	-.44	-.5	-.05	-.03	-.06
Denmark	2.11	2.06	-.05	-.03	-.06
Dominican Republic	-.52	-.58	-.05	-.04	-.06
Malaysia	.64	.58	-.06	-.04	-.07
Hong Kong	1.81	1.75	-.06	-.04	-.07
Lebanon	-.41	-.47	-.07	-.04	-.08
United States	1.52	1.46	-.07	-.05	-.08
Thailand	.04	-.02	-.07	-.05	-.08
Haiti	-1.24	-1.31	-.07	-.05	-.08
United Kingdom	1.72	1.63	-.09	-.06	-.1
Argentina	-.43	-.52	-.09	-.06	-.1
Sri Lanka	-.09	-.18	-.09	-.06	-.11
Egypt	-.35	-.45	-.1	-.07	-.11
Iran	-.84	-.94	-.1	-.07	-.12
Slovakia	.74	.64	-.11	-.07	-.12
Jordan	.28	.17	-.12	-.08	-.14
Spain	1.19	1.07	-.12	-.08	-.14
Ireland	1.71	1.59	-.13	-.08	-.14
Ukraine	-.64	-.78	-.14	-.09	-.15
Italy	.54	.4	-.14	-.09	-.16
Pakistan	-.69	-.84	-.15	-.1	-.17
India	-.11	-.27	-.16	-.11	-.19
Mauritania	-.61	-.78	-.17	-.11	-.19
Mali	-.45	-.62	-.17	-.12	-.2
Hungary	.84	.66	-.18	-.12	-.21
South Africa	.4	.21	-.19	-.13	-.21
Nepal	-.64	-.83	-.19	-.13	-.22
Tanzania	-.36	-.57	-.21	-.14	-.24
Kuwait	.41	.19	-.23	-.15	-.26
Austria	1.84	1.61	-.24	-.16	-.27
Yemen	-.8	-1.06	-.26	-.18	-.3
Venezuela	-1.1	-1.39	-.29	-.2	-.33
Greece	.67	.33	-.34	-.23	-.39
Madagascar	-.31	-.74	-.43	-.29	-.49

Notes: The column with the heading "2005-07 Avg." shows the average value of delivery

quality over the 2005-2007 period in the GWP sample matched with the governance measure. The column with "2010-12 Avg." shows the 2010-12 average. The equivalent changes in per-capita GDP are based on the estimates shown in Table 9. The "high estimate" is based on column (8), which shows the estimated coefficient on the delivery quality to be 0.74 while that on the (log) per-capita GDP is 0.65. So each unit of changes in the delivery-quality measure is equivalent to 0.74/0.65 units of changes in the logarithm of per-capita GDP. The "low estimate" is based on column (9) that show the two coefficients to be 0.57 and 0.84, respectively. So each unit of changes in the delivery-quality measure is equivalent to 0.57/0.84 unit of changes in log per-capita GDP.

Table 15: Comparing Countries With High Delivery Quality and Countries With Low Delivery Quality

	HighDelivery	LowDelivery	HighDelivery	LowDelivery	HighDelivery	LowDelivery
	(1)	(2)	(3)	(4)	(5)	(6)
Democratic quality	0.52	0.05	0.52	0.02	0.68	-.06
	(0.28)*	(0.2)	(0.27)*	(0.22)	(0.28)**	(0.17)
Delivery quality	0.84	0.81	0.6	0.79	0.33	0.61
	(0.34)**	(0.32)**	(0.34)*	(0.32)**	(0.37)	(0.3)**
Logged GDP			0.94	0.31	0.89	0.88
			(0.53)*	(0.39)	(0.48)*	(0.36)**
Healthy life expectancy					-.09	-.03
					(0.05)*	(0.09)
Freedom to make life choices					0.79	0.96
					(0.4)**	(0.3)***
Generosity					0.74	0.04
					(0.27)***	(0.25)
Social support					1.52	1.45
					(0.53)***	(0.38)***
Obs.	336	500	336	500	303	473
No. of countries (clusters)	62	95	62	95	61	93
R^2	0.15	0.1	0.17	0.11	0.23	0.21

Notes: 1) The sample is split by whether the measure of delivery quality for a country, averaged across all years in the full sample, is greater or lower than zero. 2). All estimates are from panel regressions with country fixed effects and year fixed effects. Within country r-squared are reported. 3). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

Table 16: Regressions by Income Quintile Within Countries (5 is the highest) – The DV is Average Life Evaluations by the Income Quintile; Part 1 of 3

	Quintile1	Quintile2	Quintile3	Quintile4	Quintile5
	(1)	(2)	(3)	(4)	(5)
Democratic quality	-.002	0.07	0.18	-.06	0.15
	(0.18)	(0.17)	(0.21)	(0.21)	(0.21)
Delivery quality	0.75	0.64	0.34	0.8	0.75
	(0.36)**	(0.3)**	(0.29)	(0.28)***	(0.27)***
Logged GDP	1.15	1.15	1.14	1.11	0.84
	(0.36)***	(0.35)***	(0.32)***	(0.36)***	(0.32)***
Healthy life expectancy	-.11	-.14	-.10	-.12	-.08
	(0.05)**	(0.05)***	(0.05)**	(0.06)**	(0.06)
Freedom to make life choices	0.64	0.82	1.17	0.86	0.9
	(0.31)**	(0.29)***	(0.27)***	(0.28)***	(0.29)***
Generosity	0.52	0.1	0.41	0.27	0.12
	(0.3)*	(0.31)	(0.23)*	(0.24)	(0.28)
Social support	1.10	1.31	1.54	1.67	1.94
	(0.45)**	(0.41)***	(0.44)***	(0.36)***	(0.46)***
Obs.	708	708	706	707	706
No. of countries (clusters)	153	153	153	152	153
R^2	0.11	0.14	0.17	0.17	0.19

Notes: 1). All estimates are from panel regressions with country fixed effects and year fixed effects. Within country r-squared are reported. 2). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

Table 17: Regressions by Income Quintile Within Countries (5 is the highest) – The DV is Average Life Evaluations by the Income Quintile; Part 2 of 3

	Quintile1	Quintile2	Quintile3	Quintile4	Quintile5
	(1)	(2)	(3)	(4)	(5)
GWP's perception of corruption - quintile 1	-.96 (0.33)***				
GWP's perception of corruption - quintile 2		-.80 (0.29)***			
GWP's perception of corruption - quintile 3			-.60 (0.25)**		
GWP's perception of corruption - quintile 4				-.65 (0.25)***	
GWP's perception of corruption - quintile 5					-.66 (0.25)***
Logged GDP	1.51 (0.39)***	1.48 (0.38)***	1.33 (0.33)***	1.30 (0.41)***	1.00 (0.33)***
Healthy life expectancy	-.12 (0.05)**	-.15 (0.05)***	-.11 (0.05)**	-.13 (0.06)**	-.10 (0.06)*
Freedom to make life choices	0.55 (0.34)*	0.68 (0.32)**	1.09 (0.29)***	0.8 (0.32)**	0.9 (0.32)***
Generosity	0.48 (0.32)	0.02 (0.32)	0.37 (0.26)	0.31 (0.27)	0.22 (0.3)
Social support	1.25 (0.44)***	1.41 (0.43)***	1.65 (0.47)***	1.81 (0.37)***	2.07 (0.47)***
Obs.	669	669	667	668	668
No. of countries (clusters)	145	145	145	144	145
R^2	0.13	0.16	0.18	0.17	0.19

Notes: 1). All estimates are from panel regressions with country fixed effects and year fixed effects. Within country r-squared are reported. 2). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

Table 18: Regressions by Income Quintile Within Countries (5 is the highest) – The DV is Average Life Evaluations by the Income Quintile; Part 3 of 3

	Quintile1	Quintile2	Quintile3	Quintile4	Quintile5
	(1)	(2)	(3)	(4)	(5)
GWP's confidence in national government - quintile 1	0.39				
	(0.2)*				
GWP's confidence in national government - quintile 2		0.41			
		(0.18)**			
GWP's confidence in national government - quintile 3			0.35		
			(0.18)**		
GWP's confidence in national government - quintile 4				0.43	
				(0.22)**	
GWP's confidence in national government - quintile 5					0.52
					(0.17)***
Logged GDP	1.64	1.54	1.43	1.38	1.10
	(0.39)***	(0.37)***	(0.33)***	(0.41)***	(0.34)***
Healthy life expectancy	-.14	-.18	-.13	-.17	-.13
	(0.05)***	(0.05)***	(0.04)***	(0.06)***	(0.06)**
Freedom to make life choices	0.37	0.49	0.8	0.49	0.51
	(0.37)	(0.34)	(0.31)***	(0.32)	(0.3)*
Generosity	0.68	0.13	0.53	0.46	0.27
	(0.35)**	(0.33)	(0.24)**	(0.27)*	(0.3)
Social support	1.35	1.50	1.68	1.81	2.01
	(0.5)***	(0.47)***	(0.5)***	(0.4)***	(0.53)***
Obs.	630	630	628	629	629
No. of countries (clusters)	142	142	142	141	142
R^2	0.14	0.17	0.19	0.17	0.21

Notes: 1). All estimates are from panel regressions with country fixed effects and year fixed effects. Within country r-squared are reported. 2). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

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