‘Good’ Governance and Human Development:
The Case of China and India
Abstract

This paper attempts to answer two interrelated questions: what is good governance and what is its relationship with human development, and what allowed China to outperform India on the Human Development Index. The United Nations Development Programme and scholars connect human development very closely with good governance. However, even as its HDI score is 28% higher than India’s, China’s quality of government seems lower according to several governance indices.

‘Good governance’ combines minimalist aspects of governance, such as effectiveness, with a normative understanding of the ‘good’. The relationship between good governance and human development is strong, but it is the minimalist aspect of governance, effectiveness, that has the largest impact on human development levels. While the indicators are multicollinear, the results of Third Wave democratization suggest that effectiveness is the important variable. China was able to realize a comparatively high level of human development through an effective government which could autonomously formulate and implement policies. Though well-intended, India’s leadership seems to not have had the same ability to formulate or implement policies without influence of social forces. On the other hand, India’s difficulty in formulating and implementing policy also meant that it avoided upheaval.

Keywords: Human Development, Governance, State Capacity, India, China.
Words: 9,962
# Table of Contents

1. Introduction ........................................................................................................... 4

2. Design and Methodology ....................................................................................... 5
   2.1 Design .............................................................................................................. 5
   2.2 Methodology .................................................................................................... 5
       2.2.1 Quantitative Methodology ...................................................................... 5
       2.2.2 Qualitative Methodology ...................................................................... 6
   2.3 Material Selection ............................................................................................ 6

3. Human Development and the State ................................................................. 7
   3.1 The Good Life and Human Development ..................................................... 7
       3.1.1 Measuring Human Development ......................................................... 8
   3.2 Human Development and Governance ....................................................... 10
       3.2.1 Measuring Governance ....................................................................... 11
   3.3 The Relationship Between WGI and HDI ..................................................... 13
       3.3.1 WGI and HDI Correlation .................................................................... 13
       3.3.2 Effect of Governance Indicators on the HDI ...................................... 14
       3.3.3 Understanding Government Effectiveness .......................................... 15
   3.4 Summary .......................................................................................................... 16

4. Human Development in China and India ...................................................... 17
   4.1 The Puzzle ........................................................................................................ 17
   4.2 Human Development Compared 1950-2009 ............................................... 18
       4.2.1 Inequality and Human Development .................................................... 19
   4.3 Government Effectiveness in China ............................................................... 21
       4.3.1 The Vision ............................................................................................... 22
       4.3.2 1949-1976 ............................................................................................ 22
       4.3.3 Crisis of 1976-1979 ............................................................................. 24
       4.3.4 1979-Present ......................................................................................... 24
   4.4 Government Effectiveness in India ................................................................. 26
       4.4.1 The Vision ............................................................................................... 26
       4.4.2 1947-1975 ............................................................................................ 26
       4.4.3 Crisis of 1975-1977 ............................................................................. 28
       4.4.4 1977-Present ......................................................................................... 28
   4.5 Government Effectiveness Compared ......................................................... 29

5. Conclusion ............................................................................................................. 30

Appendix A: 1990 HDI Methodology ................................................................. 33
Appendix B: 2010 HDI Methodology ................................................................. 34
Appendix C: WGI Definitions ............................................................................... 35
Appendix D: WGI Definition of Government Effectiveness ................................ 36
Bibliography ............................................................................................................ 38
‘Good’ Governance and Human Development: The Case of China and India

1. Introduction

In February of 2011 the Hindu Times published an opinion piece by Amartya Sen on India’s obsession with overtaking China’s GNP growth. A few months earlier he had mentioned in passing that he felt this obsession was silly and he now felt the need to explain the comment in light of the debate it had generated. Acknowledging the importance of GNP growth in raising living standards, Sen makes the point that it by itself is a poor measurement of human development. What he had meant by his original comment was that GNP per capita is too narrow a measurement of development and that focus should instead be on the overall quality of life, and it is in this regard India should compare itself to China.

In his opinion piece Sen echoes an argument he has made previously: healthcare and education was better in China even before the recent economic growth, and that economic growth was partly dependent on pre-reform social policies. Calculations of historical Human Development Index (HDI) scores support Sen on the first point; from the same starting point in 1950 China’s HDI score was 12% higher than India’s in 1979, and 28% higher in 2009. This begs the question, however, how was China able to promote human development?

The United Nations Development Programme (UNDP), and most scholars, connects human development very closely with good governance. The UNDP’s 2002 Human Development Report (HDR) leads its chapter on governance with a quote from Kofi Annan: “Good governance is perhaps the single most important factor in eradicating poverty and promoting development.” However, even as its HDI score is 28% higher than India’s, China’s quality of government seems lower. Aggregating the World Bank’s Worldwide Governance Indicators (WGI), China has a score of -3.05 while India’s is -1.29. On the Bertelsmann Transformation Index’ Management Index China scores only a 5 as opposed to India’s 6.6. On the Fund for Peace’s Failed States Index (FSI) China scores 83.0 versus India’s 79.2. China’s performance is therefore a puzzle, of both academic interest as well as relevant for efforts to improve human development.

The puzzle leads to two interrelated questions: what is good governance and what is its relationship with human development, and what allowed China to outperform India on the HDI. This paper is an attempt to answer these questions by first examining human development and governance and their relationship, and

---

1 Nobel Prize-winning economist and philosopher perhaps most famous for his work on the causes of famine.
2 Sen 2011.
4 Crafts 2002, 398. Based on historical statistics Crafts uses UN’s 2001 methodology to calculate historical HDI scores for several countries. While the absolute scores might be up to debate because of potential inaccuracies, the relative position seems well supported by other sources - from a similar position at their founding, China’s and India’s development level diverged as measured by education, health, and material well-being.
5 UNDP 2010.
7 Kaufmann, Kray, and Mastruzzi 2010a. The aggregate scale is from -15 to 15; higher is better governance.
8 Bertelsmann Stiftung, 2009a; Bertelsmann Stiftung, 2009b. The scale is from 0 to 10; higher is better governance.
9 Fund For Peace, 2010. The scale is from 0 to 120, with higher number meaning worse governance.
then studying this relationship in China and India. Modern China and India are largely comparable as they were created almost simultaneously, are of similar size, and faced similar state-building problems at their founding. They are young enough that their history is well-documented, yet old enough that some conclusions can be drawn from that history.

This paper is divided into five sections. The design and methodology of this study is discussed in the second section. Human development, governance and their theoretical relationship is examined in the third section. The fourth section is a qualitative study of China and India’s development based on the results of section three. The fifth section concludes this paper with the results of the inquiry into the questions posed above.

2. Design and Methodology

2.1 Design

The study is in two steps. The first step is defining human development and governance, and then establishing the correlation and causal relationship between them through large-n quantitative analysis. The second step is a qualitative paired comparison of China and India.

The first step creates a framework to understand human development and governance, defining the terms as well as the establishing their relationship, which can then be used to analyze the development of China and India in the second step. These two steps, combining intensive as well as extensive elements, combine the best of both worlds, and should afford an answer to the question of what allowed China its relatively high HDI-score.

2.2 Methodology

2.2.1 Quantitative Methodology

The quantitative analysis starts with a definition of terms. Both human development and governance are open to different interpretations, and therefore require theoretical definition before their relationship can be analyzed. While the choice of HDI as a measure of human development is inherent in the question, this choice will be explained. WGI is used as the operationalization of governance, and this choice will also be discussed.

A large-n correlation is run to test the relationship between HDI and WGI across all countries. Correlation is generally not used in cases where there is a suspected causal relationship, but it was chosen here as a simple test of covariance. A multiple regression analysis is then run to determine the causal effect of each indicator on the HDI-level along with its statistical significance. Components of governance are highly correlated, making multicollinearity a problem which is also discussed.

---

11 Ibid., 273-274.
12 cf. Ibid., 38-40.
14 Ibid., 183.
15 Teorell and Svensson 2007, 199, 180, 128.
HDI scores become increasingly unreliable the lower they are, and it stands to reason that this would be true for other indices. This is a problem for the cross-sectional data, but more so for the historical. This means that data is directional; the focus should be on relative position and performance over time. Historical data is mainly presented in graphs comparing China, India and the World; the value at any given moment matters less than relative position. Where historical data is incomplete data-points have been connected to show trends and change over time. The World Average is calculated by aggregating available data and dividing by the number of data points.

2.2.2 Qualitative Methodology

The results in the previous section serve as the thematic focus for the small-n qualitative comparison of China and India. Using a chronologically descriptive and thematically analytical approach makes the study labor intensive, but it allows for better conclusions as “...it is not possible to explain something that has not first been described.”

This study uses the uncommon foundation paired comparison method described by McAdam, Tarrow and Tilly. This approach abandons traditional methods of comparison, focusing instead on the similarity of processes, and “...whether similar mechanisms and processes drive changes in substantially divergent periods, places, and regimes.” The uncommon foundations method works well in cases such as China and India where both outset and outcome are different though the processes were the same.

While there are overarching similarities between China and India, the various differences make a traditional method of agreement or method of difference analysis problematic. The uncommon foundations method is commonly used in studies of comparative state formation, which this partly is, as it overcomes the need to find possibly artificial similarity and instead turns the focus on priority in time and the causal mechanism.

2.3 Material Selection

This paper covers large swathes of theory and history. Material selection is biased towards academic texts, either by scholars who have published books or articles on their subject or from university publishing companies. While it is perhaps inevitable that all texts have some bias, this choice was made to limit that bias. Texts were read against each other to ensure that when only one text is

---

16 cf. Wolff, Chong, and Auffhammer 2010. The states without the capacity to administer effectively (and thus gather reliable statistics) tend to perform poorly on the HDI, and vice-versa.
17 Teorell and Svensson 2007, 23.
18 McAdam, Tarrow, and Tilly 2001.
19 McAdam, Tarrow, and Tilly 2001, 81-82; Cf. Teorell and Svensson 2007, 226-228.
20 McAdam, Tarrow, and Tilly 2001, 81.
21 China and India share important features, and are commonly compared. They are however far from the same and Mills’ method of difference would probably obscure differences that could have an explanatory importance.
referenced on a particular topic, that text is in overall agreement with other texts when similar topics are covered.

3. Human Development and the State

The definition of human development and governance, their measurements, and their general relationship is critical to understanding their relationship in China and India. This section seeks an answer to the question of what good governance is and what its relationship with human development is.

The HDI is an elegant as well as crude solution to the eternal problem of defining and quantifying human welfare. The elegant choice of a lowest common denominator definition of human development makes the HDI widely accepted. The crudeness of the measurement makes HDI easily quantifiable and understandable, but at a cost that will be discussed.

As the mechanism which mobilizes resources in a society the polity is inextricable from human development. However, the relationship is neither straightforward nor easily measured as there are no universally accepted definitions or measurements of governance. This study uses the WGI as a measurement of governance. While generally accepted these indicators have flaws that will be explicated.

This section is divided into four subsections. The definition and measurement of human development and governance are treated in the first two. A quantitative analysis of their relationship is presented in the third subsection, and the fourth closes this section with a summary.

3.1 The Good Life and Human Development

What constitutes the good life is a problem that has bedeviled philosophers throughout the ages. Is it e.g. the happy life as suggested by Aristotle, the devout life as suggested by St. Augustine, or the simple life as suggested by Thoreau? The intractability of the problem comes from its inherent insolubility. The question of the good life is ethical, and as such any answer is equally ‘correct’; “On questions of fact, we can appeal to science and scientific methods of observation; but on the ultimate question of ethics there seems to be nothing analogous...”.

Ethical disputes are by their nature insoluble as there is no objective correct of false, but they can be avoided through a lowest common denominator. While various ethical systems contain enormous internal tensions, they are cohesive as long as there is a commonly accepted lowest common denominator. Human development was long defined by such a lowest common denominator that was almost universally agreeable: income. The good life no matter its definition requires some level of subsistence or material well-being. However, income is

---

24 St. Augustine 401, Book V Chapter 4.
25 Thoreau 1854.
26 Russell 1945, 116.
27 An ethical system is a particular set of (consistent) ethical principles. Premised not on facts, but rather on an ethical position this encompasses both religions as well as ideologies.
28 UNDP 1990, 104; UNDP 2010, iv, 12.
only a means, not an end, and high income is no guarantee for human progress.\textsuperscript{29} This truth was driven home to the economist Mahbub al Haq as he surveyed the results of one of Pakistan’s fleeting economic booms; national income “...gave an utterly distorted picture...” of the effect this boom had on the lives of Pakistanis.\textsuperscript{30}

Al Haq together with Amartya Sen went on to develop the HDI to more fully measure human development.\textsuperscript{31} The measure is intentionally crude, in that it is “...a simple measure like GNP but, unlike GNP, without being oblivious of everything other than incomes and commodities.”\textsuperscript{32} In the introduction of the first Human Development Report (HDR) human development was defined as:

...a process of enlarging people's choices ...most critical of these wide-ranging choices are to live a long and healthy life, to be educated and to have access to resources needed for a decent standard of living.\textsuperscript{33}

The crudeness of the HDI has the benefit that it is a lowest common denominator of the good life that most would agree to, and that all polities can strive for.

While the nature of the good, or the good life, might seem an abstract concern it is inextricable from the study of politics. According to Aristotle the inquiry into ethics “...is political science, in one sense of the term ... since it [politics] legislates as to what we are to do and what we are to abstain from...”.\textsuperscript{34} In the words of Bo Rothstein: “It is ... as important to determine what the state should do as what it can.”\textsuperscript{35} As will be discussed below the early leaders of modern China and India both sought to promote human development loosely defined.

3.1.1 Measuring Human Development

The HDI uses a simple model of human development based on three components: longevity, education and a decent living standard.\textsuperscript{36} From 1990 to 2009 the dimensions were measured as follows. Longevity was measured by the life expectancy at birth, because of the intrinsic value of a long life but also because it is a proxy for health.\textsuperscript{37} Education was measured by literacy.\textsuperscript{38} Living standard was measured by GDP per capita, adjusted to account for the “diminishing returns to transforming income into human capabilities.”\textsuperscript{39} For every indicator the difference between the data-set minimum value and the observed value was divided by the difference between the maximum and minimum, creating a value from 0 to 1. The three values were then averaged to determine the overall HDI score (appendix A).\textsuperscript{40} In 1991 education was expanded to include

\begin{itemize}
\item \textsuperscript{29} UNDP 1990, 10.
\item \textsuperscript{30} UNDP 2010, 12.
\item \textsuperscript{31} UNDP 2010, iv. Sen and al Haq were far from alone in creating the intellectual underpinnings of the HDI, cf. Desai 1991. For a fuller picture of the philosophical underpinnings of the HDI, cf. Stanton 2007, 3-10.
\item \textsuperscript{32} UNDP 2010, vi.
\item \textsuperscript{33} UNDP 1990, 1.
\item \textsuperscript{34} Aristotle BC 398, Book I Chapter 2.
\item \textsuperscript{35} Rothstein 2010, 28.
\item \textsuperscript{37} UNDP 1990, 12.
\item \textsuperscript{38} Ibid.
\item \textsuperscript{39} Ibid. The income indicator is the log of the income.
\item \textsuperscript{40} UNDP 1990, 109.
\end{itemize}
projected schooling (weighted 1/3).\textsuperscript{41} In 1995 gross enrollment replaced projected schooling.\textsuperscript{42}

Starting with the 2010 HDR the education dimension is expected years of schooling and mean years of schooling, and standard of living uses GNI.\textsuperscript{43} Rather than the average of the three dimensions the geometric mean is used to limit substitutability (appendix B).\textsuperscript{44} The Hybrid HDI, the new methodology with traditional indicators, is used for historical comparisons.\textsuperscript{45}

The original authors understood that the initial index had a number of problems. They felt that political liberty was inextricable from enlarging choices, but left it out for lack of a good measurement.\textsuperscript{46} Furthermore, the index is created from national averages which might mask inequalities, and they might not be accurate.\textsuperscript{47} Material inequality affects social welfare negatively,\textsuperscript{48} and reduces the poverty-reducing impact of economic growth.\textsuperscript{49} As for the the inaccuracy of some countries’ data this can be accounted for but not remedied.

Criticism of the index falls into the conceptual and methodological. Conceptually some scholars, like the UNDP itself, would like HDI to cover more aspects of human development, primarily equality and ecology.\textsuperscript{50} Methodological critiques have focused on how the index is calculated,\textsuperscript{51} and the quality of data.\textsuperscript{52} HDR authors have responded to conceptual critiques not by expanding the HDI, but rather by adding several new indices focused on political freedom,\textsuperscript{53} gender equality,\textsuperscript{54} and economic equality.\textsuperscript{55} This allows the HDI to remain the crude measurement it was intended to be. The UNDP is also responsive to critics of the methodology\textsuperscript{56} and has made several methodological adjustments over the years.\textsuperscript{57} Because the minimum and maximum are set every year\textsuperscript{58} the initial index was not useful for comparisons over time.\textsuperscript{59} HDR authors have responded to this by suggesting that minimums and maximums be set for a time period, not year-to-year, when the goal is to make historical comparisons.\textsuperscript{60} This has been done both by the UNDP in the 2010 HDR,\textsuperscript{61} as well as by outside scholars.\textsuperscript{62}

\begin{thebibliography}{99}
\bibitem{41} UNDP 1991, 15, 90.
\bibitem{42} UNDP 1995, 19.
\bibitem{43} UNDP 2010, 15. As literacy rates rise it loses its value as an indicator.
\bibitem{44} Ibid., 15, 216.
\bibitem{45} Ibid., 26.
\bibitem{46} UNDP 1991, 23; UNDP 1990, 1, 13.
\bibitem{47} UNDP 1990, 1, 12, 112-113.
\bibitem{48} Wilkinson and Pickett 2010.
\bibitem{49} UNDP 2006, 272.
\bibitem{50} Hicks 1997; Sagar and Najam 1998; Neumayer 2001.
\bibitem{52} Srinivasan, 1994; Aturupane, Glewwe, and Isenman 1994; Wolff, Chong, and Auffhammer 2010.
\bibitem{53} UNDP 1991, 18-21.
\bibitem{54} Ibid., 17-18.
\bibitem{55} UNDP 1997; UNDP 1998; UNDP 2005.
\bibitem{56} UNDP 1993, 104. The 1993 report even states that the “...HDI should be seen as evolving and improving rather than as something cast in stone. It is also an exercise in which as many of its users as possible should actively participate.”
\bibitem{57} Stanton 2007, 27.
\bibitem{58} UNDP 1991, 96.
\bibitem{59} Trabold-Nübler 1991, 293
\bibitem{60} UNDP 1991, 96.
\bibitem{61} UNDP 2010, 3-48.
\bibitem{62} E.g. Crafts 1996; Crafts 2002.
\end{thebibliography}
Research into the reliability of data used to calculate the HDI suggests that the average country is displaced by about nine ranks and the “magnitude of the error variances is greater the lower the HDI rank, which is consistent with the quality of the statistical agencies improving with higher development.” There is little to be done about this last problem, but rather the HDI has to be treated as directional rather than absolute. The difference in rank of China and India were more than 18 ranks in 2010, supporting a real performance difference (table 1).

### 3.2 Human Development and Governance

Good governance seems to be the generally agreed-to prerequisite for (human) development. The exact definition of it is however less clear. Governance is defined by two scholars of public administration as “shorthand for the pursuit of collective interests and the steering and coordination of society.” In 1992 the World Bank defined governance in two ways, the “exercise of authority, control, management, power of government” and “the manner in which power is exercised in the management of a country’s economic and social resources for development. Good governance ... is synonymous with sound development management.” The UNDP does not define governance beyond linking it with (intrinsically good democracy, good governance is democratic governance.

The UNDP generally adheres to an Enlightenment conceptualization of government, and its emphasis on democracy should be seen as a product of this. Classical thinkers did not differentiate between state, regime, or society (politeia is best translated as regime) and conceptualized the state as individuals gathering for mutual support. Enlightenment thinkers such as Thomas Hobbes, John Locke, and Jean-Jacques Rousseau retained the Classical conception of the state as the product of the voluntary association of men for the purpose of the public good; “...every city is a society, and every society is established for some good purpose; for an apparent good is the spring of all human actions.”

<table>
<thead>
<tr>
<th>2010 Rank and Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
</tr>
<tr>
<td>India</td>
</tr>
<tr>
<td>China</td>
</tr>
<tr>
<td>World Avg.</td>
</tr>
</tbody>
</table>

Table 1: China and India are separated by more than 18 ranks, supporting a real performance difference. Source: UNDP 2010.

---

63 Wolff, Chong, and Auffhammer 2010, 4.
64 Ibid., 3.
65 This has two implications, the first is that the binning of countries into three bins depending on level of development should be avoided (cf. Wolff, Chong, and Auffhammer 2010, 24), and that minor differences in rank are not relevant.
66 UNDP 2010, 148
71 UNDP 2002, 3.
72 Ibid., 1.
73 Ibid., 36-37.
74 UNDP 2010, 19.
75 Mansfield 1983, 850.
76 Plato, Book II; Aristotle, Book I, Ch. 2-3.
77 Russell 1945, 550-551, 623, 695-701; Mann 1984, 110. Mann does not extend the idea of the state and society as one to Classical thought and instead limits himself to Enlightenment and Post-Enlightenment thought in which Rousseau’s General Will is important.
78 Locke used the phrase ‘public good’, cf. Russell 1945, 631-632; Locke 1690, 2-1.
79 Aristotle, Book 1 Chapter 1.
In the 19th century German scholars began to separate the state from society, conceiving it as separate from rather than part of society. Most famous in this tradition is perhaps Max Weber. Weber’s definition of the state as “…a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given community…” is today the standard. One reason for the shift in focus from the Enlightenment emphasis on the social contract and the public good might be that it is a subjective, inherently ethical concept. From a statist perspective governance is not good or bad, but the state is effective or ineffective depending its capacity to pursue its goals.

Weber’s understanding of the state laid the groundwork for the modern study. Its narrow scope and divorce from society carries over to definitions of state capacity, e.g. “...the degree of control state agents exercise over persons, activities, and resources within their government’s territorial jurisdiction.” In this and similar definitions the state’s autonomous survival becomes the focus, rather than its role as the guarantor and provider of the public good.

One definition of state capacity that in some ways reconciles the autonomy of the state with a moral imperative is Robert Rotberg’s the “...effective delivery of the most crucial political political goods … that citizens once made on sovereigns and now make on states.” Political goods include physical security, conflict resolution, education and health care, and infrastructure, and “...give content to the social contract between the ruler and the ruled.” Rotberg makes the monopoly on force the primary good, followed by adjudication, but then lists healthcare, education, regulation of society and the economy, and public participation in government as public goods. Strong states produce those goods, weak states are limited in their production, and failed state are unable to produce any political goods. While state capacity has become a focus for democratization studies to explain why some countries become consolidated democracies, the literature on human development seems focused on the more general governance.

3.2.1 Measuring Governance

An increasing interest in the role of governance on development has led to “...a significant increase in the supply and use of quantitative governance indicators.” Though criticized, the World Bank’s WGI are some of the most popular indicators of governance; the UNDP’s own 2002 governance index was based on the WGI. The WGI derives from a 1999 paper by Kaufmann, Kray, and

---

80 Mann 1984, 110.
81 Ibid.
82 Weber 1946, 78.
84 Vu 2010, 164-165.
85 McAdam, Tarrow, and Tilly 2001, 78.
86 Rotberg 2003, 2-3 If not directly then through private enterprise regulated by state institutions.
87 Ibid., 3-6.
88 Ibid., 3.
89 Ibid., 4.
91 Arndt 2008, 276.
94 UNDP 2002, 36.
Zoido-Lobaton, where the authors suggested that governance indicators could be created by aggregating several existing, more narrow, components. The WGI consists of six indicators in three groups (appendix C).

a) The process by which governments are selected, monitored and replaced:
   - Voice and accountability
   - Political Stability and Absence of Violence/Terrorism
b) The capacity of the government to effectively formulate and implement sound policies:
   - Government Effectiveness
   - Regulatory Quality
c) The respect of citizens and the state for the institutions that govern economic and social interactions among them:
   - Rule of Law
   - Control of Corruption

These six governance indicators are based on hundreds of variables from dozens of data sources:

*The source underlying the WGI comes from a large number of individual sources, and reflect the views on governance of thousands of survey respondents and public, private, and NGO sector experts worldwide.*

All indicators are normalized to produce a value between -2.5 and 2.5. Not all data sources are available for all countries, and this is accounted for through a standard error of the estimated value of the indicator. At a 75% confidence interval 73% of pair-wise comparisons show statistically significant differences. While these numbers might seem somewhat discouraging, Kaufmann et al. state that the “...margin of error does not imply that WGI cannot be used to make meaningful comparisons across countries over time … such margins of error is intended to enable users to make more sophisticated use of imperfect information.”

The WGI has been the subject of some criticism, often responded to directly by the authors. In a 2007 paper the authors outlined 11 mainly methodological criticisms, responding to and rejecting them point for point. Criticism notwithstanding, the continued use of the WGI supports its relevance.

---

95 Kaufmann, Aart, and Zoido-Lobaton, 1999. Arndt 2008 states that this was the first WGI, but reading the 1999 paper this seems more like the methodological backbone for future WGIs or an early prototype as it contains only three indicators, cf. Arndt 2008, 277.
96 Kaufmann, Kraay, and Mastruzzi 2010c, 4.
97 Ibid., 20.
98 Ibid., 12.
99 Ibid., 11.
100 Ibid., 13.
101 Ibid., 21.
103 Kaufmann, Kraay, and Mastruzzi 2007a; Kaufmann, Kraay, and Mastruzzi 2010b; Kaufmann, Kraay, and Mastruzzi 2010c.
104 Kaufmann, Kraay, and Mastruzzi 2007b.
criticism that Kaufmann et al. seem not have responded to is that there is no clear theoretical framework underlying the indicators,\textsuperscript{105} a point that will be revisited.

In the case of China and India their aggregate WGI scores are -3.05 and -1.29 with a standard error of 0.95 and 0.96 respectively; at a 70% confidence level China and India’s aggregate scores are somewhere between -4.00 and -2.10 and -2.25 and -0.32 respectively (graph 1).\textsuperscript{106} These numbers, corroborated by e.g. the BTI’s Management Index and the FFP’s Failed State Index, support a difference in the quality of governance between India and China.

3.3 The Relationship Between WGI and HDI

To test the relationship between human development and governance the bivariate correlation of HDI and the WGI aggregate is run. Using the Gothenburg University Quality of Government Institute’s Cross-Section dataset updated for 2009 there was data for 168 countries out of a possible 194.\textsuperscript{107} The 2009 HDR only has data for 2007, and the 2009 scores from the 2010 HDR is used.

Having established the relationship between WGI and HDI, a regression analysis is run of the governance indicators on HDI to test the fit of the aggregated WGI, and which indicators are statistically significant. Because the indicators use the scale same, some conclusions can also be drawn about relative effect on HDI. The results of the regression is then discussed from a theoretical perspective.

3.3.1 WGI and HDI Correlation

A correlation of 0.784 between HDI and WGI supports the proposition that governance and human development, as measured by the HDI and WGI, are covariant and that the relationship is positive; while this does not prove causality it does prove a correlation. The fit, $R^2=0.615$, reflects a somewhat poorer fit at lower values of aggregate WGI (graph 2); at higher values of WGI the fit becomes better. This supports the criticism that ‘good’ governance is atheoretical in that countries are benchmarked against an ideal state, such as Denmark, which is normatively appealing as well as effective.\textsuperscript{108} Two groups of countries stand out. Energy-exporting countries such as Venezuela, Iran and Turkmenistan outperform vis-a-vis the linear correlation. African countries such as Zimbabwe, Niger and Mozambique under-perform.

106 Kaufmann, Kraay, and Mastruzzi 2010d.
107 Kaufmann, Kraay and Mastruzzi. 2010d; UNDP 2010; Teorell, Samanni, Holmberg and Bo Rothstein 2011.
The correlation between human development and governance is positive and high, but at lower levels of governance this relationship weakens. This behavior could be expected if the aggregate WGI consists of some indicators that affect HDI and some that don’t. To determine the fit of the model and determine if all governance indicators affect HDI a regression analysis is run.

3.3.2 Effect of Governance Indicators on the HDI

The model of the causal relationship between WGI and HDI has a fit of around 0.68 (table 2). However, high multicollinearity among some indicators complicates the model. While any group of governance indicators would have a high correlation, e.g. effective taxation requires an effective bureaucracy and police, indicators should not measure the same thing. The results of a regression of the WGI support the criticism it lacks theoretical clarity as four indicators have very low (<0.1) tolerance. While it is conceivable for a state to be suffering violent opposition (which Political Stability measures) and still be effective, it is inconceivable that an effective government would not be ruled by or rule through law or have poor regulation.

Effective governance is almost by definition uncorrupt, but perceptions of corruption are likely to be partly driven by prosecution of corruption, reducing the overlap.

Four models were created to limit multicollinearity and strengthen the model based on the theoretical overlap between Government Effectiveness (GE) and other indicators. In model 1 through 3 insignificant (p > 0.01) indicators with the lowest tolerance were removed. In model 4, because of the theoretical overlap

109 While Rule of Law might seem the sine qua non of government, Rule by Law confers many of the same benefits. Laws are fundamental to a polity, which is ideally ruled by them, but the experience of East Asian countries show that rule through law need not be far less effective, cf. Carothers 1998, 97 and Hui 2005, 181-189. Regulatory Quality is more nebulous, but its definition suggests a large overlap with Government Effectiveness, though with a more free-market normative slant.
with GE, Control of Corruption (CoC) was removed. CoC and GE were the only indicators with a statistically significant (p < 0.01) impact on HDI when all other indicators were controlled for across the first three models. The counterintuitive negative impact of CoC is most likely for the reason suggested above.\textsuperscript{110} Lowering the confidence interval to 95% makes Political Stability also significant, but the effect is small. Voice and Accountability has no statistically significant effect on HDI in any model.

### Table 2: WGI are highly multi-collinear with respect to HDI.

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control of Corruption</td>
<td>-0.100***</td>
<td>-0.085***</td>
<td>-0.086***</td>
</tr>
<tr>
<td>(0.027)</td>
<td>(0.024)</td>
<td>(0.024)</td>
<td><code>-</code></td>
</tr>
<tr>
<td>Government Effectiveness</td>
<td>0.188***</td>
<td>0.206**</td>
<td>0.212***</td>
</tr>
<tr>
<td>(0.036)</td>
<td>(0.033)</td>
<td>(0.024)</td>
<td>(0.015)</td>
</tr>
<tr>
<td>Political Stability</td>
<td>0.025*</td>
<td>0.030**</td>
<td>0.030**</td>
</tr>
<tr>
<td>(0.013)</td>
<td>(0.013)</td>
<td>(0.013)</td>
<td></td>
</tr>
<tr>
<td>Rule of Law</td>
<td>0.046</td>
<td>0.048</td>
<td><code>-</code></td>
</tr>
<tr>
<td>(0.037)</td>
<td><code>-</code></td>
<td><code>-</code></td>
<td><code>-</code></td>
</tr>
<tr>
<td>Regulatory Quality</td>
<td>-0.002</td>
<td>0.1</td>
<td>0.007</td>
</tr>
<tr>
<td>(0.027)</td>
<td>(0.026)</td>
<td>(0.013)</td>
<td>(0.013)</td>
</tr>
<tr>
<td>Voice and Accountability</td>
<td>-0.002</td>
<td>0.338</td>
<td>-0.001</td>
</tr>
<tr>
<td>(0.014)</td>
<td>(0.014)</td>
<td>(0.014)</td>
<td>(0.014)</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.639</td>
<td>0.637</td>
<td>0.638</td>
</tr>
<tr>
<td>(0.008)</td>
<td>(0.008)</td>
<td>(0.008)</td>
<td>(0.009)</td>
</tr>
<tr>
<td>Adjusted R(^2)</td>
<td>0.680</td>
<td>0.679</td>
<td>0.681</td>
</tr>
</tbody>
</table>

*** Significant at the 0.01 level (2-tailed). ** Significant at the 0.05 level (2-tailed). * Significant at the 0.1 level (2-tailed).

Note: Standard error is shown in parentheses.

Table 2: WGI are highly multi-collinear with respect to HDI.

Source: Kaufmann, Kraay, and Mastruzzi 2010d; UNDP 2010.

All other indicators controlled for, increases in GE yield the highest increases in HDI. Other indicators are either comparatively weak or statistically insignificant.\textsuperscript{111}

#### 3.3.3 Understanding Government Effectiveness

According to the World Bank GE (appendix D) captures the perceptions of:

1. The quality of policy formulation and implementation, the credibility of the government’s commitment to its policies
2. The civil service’s independence from political pressures.

The first element is vague, but Charles Tilly’s work on European state formation suggests a definition. Tilly suggests that European states competed on resource mobilization to survive the internecine warfare of early modern Europe.\textsuperscript{112} The states that could mobilize the resources necessary to make war survived, those that could not did not. To produce political goods a state must be

\textsuperscript{110} The WGI definition of Control of Corruption, “capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests,” could also be problematic in two regards. First, any country cracking down on corruption might score worse on this indicator than an equally corrupt country where anti-corruption efforts are not in the news. Second, state capture by an elite is not incompatible with an effective government; one of the distinguishing features of weak states is that there is no center of power.

\textsuperscript{111} This, of course, does not make the Enlightenment heritage irrelevant per se, rather it needs to stand on its own legs as an ethical system (which it can) rather than be commingled with more empirical metrics of governance.

\textsuperscript{112} Tilly 1992; Cf. Hui 2005, 29-34.
able to mobilize resources;\textsuperscript{113} to implement its policies the state needs to mobilize resources and develop a basic consensus with its citizenry.\textsuperscript{114}

Civil service independence is probably best understood as state autonomy.\textsuperscript{115} There is a fertile middleground between the statist Germanic school, which conceptualizes the state as an inherently autonomous actor,\textsuperscript{116} and a “society-centered approach”\textsuperscript{117} that anthropomorphizes civil society.\textsuperscript{118} Joel Migdal describes that middle-ground as “[A]uthoritative and autonomous forces in society shaped the state as much as much or more than they were shaped by it.”\textsuperscript{119} According to Migdal there are four outcomes of state-society interaction, 1) the state transforms society, 2) the state incorporates social forces, 3) social forces incorporate the state, 4) the state fails to penetrate society.\textsuperscript{120} The state is not autonomous \textit{per se}, but it can to varying degrees achieve autonomy by transforming or incorporating social forces. If social forces incorporate the state or the state fails to penetrate society it loses its autonomy.

The autonomous state is able to formulate and implement its policies, and mobilize needed resources independently of social forces. The captured state will at best achieve some limited objectives through compromise, or at worst become a tool of the social force which captured it. State autonomy means independence from narrow social forces with interests orthogonal to a public good.\textsuperscript{121}

A reasonable theoretical definition of government effectiveness based on WGI’s description is the state’s \textit{ability to autonomously mobilize society’s resources to achieve its objectives}.\textsuperscript{122} This definition makes GE conceptually indistinguishable from state capacity.

3.4 Summary

A quantitative analysis of the relationship between governance and human development supports the statement that good governance is crucial for development. However, the conceptual ambiguity of governance masks a more complex relationship. While highly correlated with other indicators, even the democracy proxy, effectiveness is the most important determinant of HDI. This

\begin{footnotes}
\item[113] Rotberg 2003a. McAdam, Tarrow and Tilly’s definition of state capacity, “...the degree of control state agents exercise over persons, activities, and resources within their government’s territorial jurisdiction.” lends itself to a similar understanding. The state’s control, through its agents, over persons, activities, and resources, is the necessary prerequisite for the mobilization of resources.
\item[114] Tilly 1992, 99-103; Cf. Wang 2003. Coercion is very expensive, and to effectively mobilize resources the state will need to achieve some consensus with its citizenry, either transforming or placating social forces.
\item[115] The civil service is by definition the polity’s instrument, and thus can not be independent of political pressure. As the embodiment of the state it can however be independent of social forces that would affect formulation and implementation of state policies.
\item[116] Mann 1984, 110; Migdal 1994a, 7, 11-12.
\item[117] He 2009, 215.
\item[118] Migdal 1994a, 28.
\item[120] Migdal 1994a, 25-26. Examples of the four archetypes might be the Caliphate’s post-conquest transformation of the Middle East, Constantine’s conversion and employment of Christian institutions in the post-Diocletian Roman Empire, the outcome of the Investiture Controversy in Medieval Western Europe, and many parts of post-colonial Africa where the writ of the state carries little further than to the capital’s city-limits.
\item[121] Cf. Olson 1982. Influence or even capture of the state and its institutions by limited or narrow social forces impact policy formulation and implementation, often to the great detriment of the rest of society.
\item[122] This is, of course, a sub-optimal approach to creating a theoretical and operational definition; a clear theoretical definition should have proceeded the operational definition, cf. Teorell and Svensson 2007, 38-40. In this case there was no such definition so it had to be created retroactively and theoretically supported.
\end{footnotes}
correlation is likely similar to democracy’s high correlation with state capacity,¹²³ which Third Wave democratization suggests is a product of state capacity.¹²⁴

4. Human Development in China and India

From the same starting position in 1950 China and India’s human development quickly diverged. By 1970 China’s literacy rate was almost double that of India’s and life expectancy was almost ten years longer. Given the turbulence of this time-period for China, especially compared to democratic India, these scores are counter-intuitive. However, behind the facade of political stability in India sat a government whose effectiveness was low, while China was able to mobilize society and resources to implement through informal means.

This section is divided into five subsections. The puzzle of China’s high HDI score relative its low governance score is presented first. The second subsection provides a historical review of China and India’s human development, along with a discussion of inequality, its effect on HDI-score, and inequality in China and India. Based on the results of the previous section, government effectiveness in China and India is presented chronologically in the third and fourth subsection. The fifth subsection compares government effectiveness in China and India.

4.1 The Puzzle

The correlation between human development and governance, and the relative impact of government effectiveness on human development suggest that higher governance scores in general, and government effectiveness in particular, produces higher human development. China’s aggregate 2009 WGI score is lower than India’s, and its GE score is marginally greater (figure 1). However, China’s 2009 HDI score is higher,¹²⁵ with a statistically significant better rank (figure 2).

---

¹²⁴ Diamond 2000; Carothers 2002; Wang 2003; Fukuyama 2005
¹²⁵ UNDP 2010. 2009 HDI score is from the 2010 HDR and therefore uses the new methodology.
This begs the question what allowed China to outperform India on the Human Development Index given its comparatively poor governance scores?

4.2 Human Development Compared 1950-2009

The difference in human development between China and India cannot be ascribed solely to China’s economic growth, which Sen argued owes its existence partly to China’s social policies that directly affect the HDI. At similar levels of government effectiveness China outperforms India on the HDI.

From a position of near parity in 1950, with a similarly low GPD per capita, a life expectancy of around 40, literacy rate below 20%, and average schooling of 1.5 years, China’s 2009 HDI score was 28% higher (figure 3). Over the course

Figure 2: ...the difference in governance notwithstanding, China’s HDI score is higher, and the difference in rank is statistically significant.

Source: UNDP 2010.

Figure 3. From nearly the same level of HDI, China has been able to realize a higher level of development than India.
Note:1950 HDI is calculated using the pre-2010 methodology while the 2009 Hybrid HDI is calculated using the new methodology. 1950 GDP per Capita is in 1990 Int. USD, while the 2009 data is PPP-adjusted.

126 Drèze and Sen 1995, 73-74; Sen 2004; Sen 2005
127 Crafts 2002, 397-398.
of 60 years China’s GDP per capita has gone from being the same as India’s to being almost twice as large. Life expectancy has become almost ten years longer. The literacy rate in China is today over 90% while India’s is edging its way up to 70%.\(^\text{128}\) Even after going through the upheavals of the Great Leap Forward and the Cultural Revolution China still outperformed India (figure 4).\(^\text{129}\)

These national results, however, mask inequalities. To understand human development these inequalities must be examined.

4.2.1 Inequality and Human Development

China and India are huge countries with a population of 1.34 billion people spread over 9.64 km\(^2\) and 1.27 billion spread over 3.29 km\(^2\) respectively. In terms of population they are a bit more than 2.5 EU-27s each. In terms of area China is roughly 1.5 while India is about 0.75 times the size of EU-27. National statistics for these enormous nations mask equally large health and wealth inequality.

There is evidence that inequality has detrimental effects on human development. The correlation between material inequality and various health and social ills has been documented by among others Wilkinson and Pickett.\(^\text{130}\) Similarly, the correlation between income inequality, measured by the Gini coefficient, and human development is -0.388.\(^\text{131}\) Although the fit is poor this is a significant correlation. More noteworthy is the correlation between gender

---

\(^\text{128}\) Crafts 1996; UNDP 2010. The 1970 Hybrid-HDI score is not directly comparable to the historical score calculated by Crafts and cited in the introduction as the methodology is different. 1950 HDI and 2009 Hybrid-HDI scores and GDP are presented here as a comparison not over over time, but comparison between the countries at different times.

\(^\text{129}\) UNDP 2010.

\(^\text{130}\) Wilkinson and Pickett 2010.

\(^\text{131}\) UNDP 2009; UNDP 2010. Gini is measured from 0-100 where higher number indicate higher inequality.
inequality, measured by the UN’s Gender Inequality Index (GII), and human
development at -0.853, a correlation with very good fit (figure 5).\textsuperscript{132} Though the
correlation between human development and gender equality is high, the
relationship should probably be understood as spurious. History suggests that
gender equality is largely a dependent variable. As exemplified by e.g. Ataturk’s
reforms, an autonomous state can remedy or maintain retrograde structural
inequality making government effectiveness the independent variable.\textsuperscript{133}

![Figure 5: While correlation between HDI and Gini is significant, R^2 is low. Correlation between HDI and GII is higher, as is R^2. Source: UNDP 2009; UNDP 2010.](image)

In the case of India and China there are three inequalities to consider: regional,
income and gender. The regional differences in China and India are
considerable.\textsuperscript{134} The life expectancy is ten years longer in the East than in the
West of China; infant mortality is 4-6 per 1000 live births in the Northeast, while
19-41 in the Southwest.\textsuperscript{135} In India life expectancy is almost 10 year longer in the
West than the East, while infant mortality ranges from from 12-37 in the
Southwest to 62-79 in the Northeast.\textsuperscript{136} While a limited benchmark, these
differences suggest that regional differences in health outcome are smaller in
China than India (life expectancy is greater in China). The rural-urban divide also
seems smaller in China.\textsuperscript{137} While the caste-system is implicated in some of India’s
health-care problems,\textsuperscript{138} India does not have the health-care resources that China
does, especially in rural areas. More generally, while doctors per 1000 people has
increased 3.3 times in India versus China’s 2.3 since 1952, China had 4 times as
many doctors to begin with.\textsuperscript{139}

\textsuperscript{132} UNDP 2010. The GII “...reflects women’s disadvantage in three dimensions—reproductive health,
empowerment and the labour market—for as many countries as data of reasonable quality allow. The index
shows the loss in human development due to inequality between female and male achievements in these
dimensions. It ranges from 0, which indicates that women and men fare equally, to 1, which indicates that
women fare as poorly as possible in all measured dimensions.” cf. UNDP 2010, 219. It was constructed in a
way that “... none of the underlying measures pertains to a country’s general level of development, so
developing countries can perform relatively well if gender disadvantages are limited., cf. UNDP 2010, 90.
\textsuperscript{133} The policies of Pakistan’s Z. Ali Bhutto is a good example of an incorporated state jettisoning women’s
\textsuperscript{134} Dummer and Cook 2008, 599.
\textsuperscript{135} Ibid., 595.
\textsuperscript{136} Ibid., 596.
\textsuperscript{137} Ibid., 599.
\textsuperscript{138} Ibid., 598.
\textsuperscript{139} Ibid., 600.
According to the UN China’s income inequality as measured by the Gini coefficient has varied widely, from a peak of 56.1 in 1953 to a trough of 20.12 in 1981, to reach its current score of 41.5.\textsuperscript{140} By contrast India’s score has hovered between 30 and 40, and is today 36.8.\textsuperscript{141} Even allowing for poor data it seems that China’s income inequality was for an extended period lower than India’s. Given the quality of the underlying data it is hard to say that one is today incontrovertibly or significantly higher than the other.

China’s 2008 GII score of 0.405 versus India’s 0.748, makes gender inequality more unambiguous.\textsuperscript{142} There seem to be few if any historical measures of gender inequality so one was constructed from UNESCO’s literacy statistics.\textsuperscript{143} The difference between male and female literacy difference is used as a proxy for gender inequality on the basis that it suggests differences in societal investment level and future opportunities; with a correlation of 0.606 and a $R^2$ of 0.367 the measure is a passable proxy for GII.\textsuperscript{144} Even if it is a lagging indicator the resulting comparison suggests greater gender equality in China than India, not only today but also in the past (figure 6).\textsuperscript{145}

![Figure 6](chart.png)

While income inequality correlates with overall human development levels, gender inequality has a higher correlation. Income inequality has risen dramatically in China over the last twenty years, but it has historically limited income and gender inequality more effectively than India.

4.3 Government Effectiveness in China

When Mao declared the People’s Republic of China (PRC) on October 1, 1949,\textsuperscript{146} he led a party with a clear vision for the future. It would need all the resources it could muster to realize that future. Not only had a civil war ended, but after the Century of Humiliation China was in shambles. Former foes needed to be

\begin{itemize}
  \item \textsuperscript{140} Teorell et al. and UNDP 2004; UNDP 2010.
  \item \textsuperscript{141} Ibid.
  \item \textsuperscript{142} UNDP 2010.
  \item \textsuperscript{143} UNESCO 2011.
  \item \textsuperscript{144} The fit is poor because of a wall around at 0; once a society is literate literacy is no longer a good indicator of gender inequality. Removing fully literate societies produces a correlation of 0.66 and a $R^2$ of 0.436. Removing societies with a 5\% illiteracy would improve the fit and correlation further.
  \item \textsuperscript{145} The high difference between male and female literacy in China seems to be a lagging indicator as the difference in the 15-19 age group was only 11\% in 1982, cf. Drèze and Sen 1995, 73.
  \item \textsuperscript{146} Spence 1991, 512.
\end{itemize}
integrated into the new state, perceived enemies had to be kept at bay, and a desperately poor populace needed prosperity.

4.3.1 The Vision

In 1949 towards the end of the Civil War Mao outlined the vision for the future people’s republic in an essay.147

"Don't you want to abolish state power?" Yes, we do, but not right now; we cannot do it yet. … Our present task is to strengthen the people's state apparatus ... in order to consolidate national defence and protect the people's interests. Given this condition, China can develop steadily, under the leadership of the working class and the Communist Party, from an agricultural into an industrial country and from a new-democratic into a socialist and communist society, can abolish classes and realize the Great Harmony.148

Mao, like many of the CCP leaders, was deeply steeped in history and his favorite emperors were those Chinese might regard as the most cruel.149 He argued however that they had led effective governments; emperors Zhou, Qin Shihuang, and Sui Yang had consolidated large states, built infrastructure, and re-organized society.150

4.3.2 1949-1976

In 1949 nothing was left of the old imperial government and little of traditional social organization.151 The viable social organizations were those that had been organized by the CCP, and these swept away remaining elites and social units.152 The party also had an important role in the administration of the new state, where the experiences of administering Yan’an served it well.153 Not only did it have committed party members able to take on the task of administration,154 it could also tap the victorious People’s Liberation Army (PLA) for disciplined state workers.155

The framework for the new government nominally divided power between three central components: the CCP, the formal government structure, and the PLA:156

The formal government structure overlapped and interconnected constantly with the CCP organization, and both of them extended their influence through mass organizations that were intended to link the entire country across regional lines by dint of some special focus or shared interest...157

---

147 Ibid., 514.
148 Mao 1949a.
149 Li 1994, 122.
150 Ibid., 122-123. Emperor Qin Shihuang, the first emperor of historical China, in many ways created the blueprint for Imperial China, cf. Hui 2005, 221-223. His standardization of the Chinese script, social registration system, and antipathy towards Confucianist scholars were later emulated by Mao’s regime with the simplification of the Chinese script, the danwei system, and then the Cultural Revolution, one of whose stated targets was Confucianism, cf. Spence 1991, 635-636.
152 Ibid., 67-68.
154 Ibid., 519-521.
155 Mao 1949b.
156 Spence 1991, 519.
157 Ibid., 522.
Initially it proved to be a very effective structure. Within a year of the founding of the PRC a major land reform had been carried out which removed a traditional locus of power, women were given the right to hold land, and the remnants of the old Guomindang administration was integrated into the CCP state. The new state instituted social controls, with street-committees composed of neighbors responsible for social services, such as street-cleaning, health and vaccination programs, and night schools, as well as public security. To fully penetrate society and administer the new state the CCP needed new members, but it wanted to ensure that they would be effective and reliable. Mass campaigns were used to identify true believers with an ability to lead, and undesirables were identified by cataloging all citizens into different social categories.

Throughout the first 30 years of the PRC the CCP would turn again and again to mass campaigns to change modes of production, identify and reform ‘counter-revolutionaries, and transform society, by e.g. putting women to work outside of the home. Mass campaigns were used to improve basic hygiene, yielding large health and life expectancy dividends, and for the CCP to “...assert government control over workers’ organizations and end independent modes of operation of capitalists and bureaucrat functionaries.” The land reforms, public health improvements, the production gains during the first five year plan, as well as the the Great Leap Forward, the Anti-Rightist Movement, and the Cultural Revolution were all made possible by the party’s ability to mobilize society.

Leadership struggles led to increasingly erratic policy after the first years of the new republic. Emblematic of this is the 1957 Hundred Flowers Campaign. Intellectuals, whose association with the old regime made them suspect, had initially been allowed to ‘reform’ themselves through intensive studies of Marxism-Leninism, and self-criticism through self-critical autobiographies. This process had a highly demoralizing effect on intellectuals and, recognizing this, Mao and his faction in 1957 invited intellectuals to “speak out against abuses within the party.” The resulting wave of, at least seemingly loyal, criticism created a backlash in the party forcing Mao to reverse his stand. In the ensuing Anti-Rightist Movement 300,000 intellectuals were exiled to the countryside or saw their careers ruined. As the leadership became more invested in merciless intra-party struggles this push-pull pattern of factions acting and reacting would

158 Ibid., 516-517. Unlike similar land reforms in Japan and Taiwan, the CCP reform was exceedingly bloody and did not create an investment-class ready to support industrialization.
159 Ibid., 516.  
162 Ibid., 533.  
163 Ibid., 533-540.  
164 Ibid., 574-583.  
165 Ibid., 533-540; 590-596.  
166 Ibid., 578.  
169 Ibid., 564-565.  
170 Ibid., 568.  
171 Ibid., 570-571.  
172 Ibid., 572.  
173 Ibid., 572-573.
repeat itself\textsuperscript{174} until Mao’s faction finally launched the Cultural Revolution to make an end-run around his political foes.\textsuperscript{175}

While the CCP government was initially able to transform society, its ability to do so deteriorated with time as Mao’s coterie gathered more power to themselves.\textsuperscript{176} In the aftermath of the Great Leap Forward Mao’s approval of apparent performance began to trump revelations of gross malfeasance on the part of local cadres.\textsuperscript{177} Local officials increasingly “…dragged their feet in implementing unpopular policies; sent up false figures or other misleading data; hoarded resources; cooked the books; bent the rules; and dispersed under questioning by special investigators sent from above.”\textsuperscript{178} The Cultural Revolution severely damaged the credibility of the party in general and Mao in particular\textsuperscript{179} when the PLA had to intervene against overzealous Red Guards\textsuperscript{180} and Lin Biao fled to the Soviet Union.\textsuperscript{181}

4.3.3 Crisis of 1976-1979

Towards the end of the Cultural Revolution it was “… apparent that party-state and society were failing to engage each other in ways that produced empowering outcomes.”\textsuperscript{182} Mao’s death in 1976 set off a political struggle that would last four years before Deng Xiaoping’s faction consolidated its hold over the CCP, government, and the PLA.\textsuperscript{183} Unlike previous struggles however, the losers were allowed to keep rank and dignity, as well as their freedom.

Unnoticed by the feuding CCP leadership the Chinese population had since 1949 almost doubled to one billion people,\textsuperscript{184} and the per capita amount of cultivated land had almost halved.\textsuperscript{185} Seemingly at the verge of entering a Malthusian death trap, it was clear that the state’s ability to implement policies was severely damaged:

*The real power of the party-state apparatus to mobilize society was … seriously eroded. And the real power dispersed throughout society was deeply parcelized and nearly exhausted in phony political struggles.*\textsuperscript{186}

4.3.4 1979-Present

After Mao’s passing ultimate power was focused in a group of 25-35 people, consisting of universally respected party elders, one preeminent leader whose views were never ignored but not always heeded, specialists with various areas of expertise, and finally generalists with broad-based political experience who could cut across special-interest lines.\textsuperscript{187} Decisions were passed on to ministries, which

\textsuperscript{174} Cf. Ibid., 582.
\textsuperscript{175} Ibid., 602-639.
\textsuperscript{176} Shue 1994, 72.
\textsuperscript{178} Shue 1994, 71.
\textsuperscript{179} Ibid., 72.
\textsuperscript{180} Spence 1991, 610-612.
\textsuperscript{181} Ibid., 616-617.
\textsuperscript{182} Shue 1994, 72.
\textsuperscript{183} Spence 1991, 650-678.
\textsuperscript{184} Ibid., 683.
\textsuperscript{185} Ibid., 687-688.
\textsuperscript{186} Shue 1994, 73.
\textsuperscript{187} Spence 1991, 691-692.
in turn negotiated implementation with provincial leaders.\textsuperscript{188} Provincial leadership was split between party, government, and military, giving Beijing three routes of influence.\textsuperscript{189} While no one national leader could mobilize large elements of the party, state, and military as Mao had, the new leadership was able to receive feedback on policy.

Deng’s coalition immediately set about reorganizing society and reinvigorating the party-state.\textsuperscript{190} The party concluded that Mao had been 70% correct,\textsuperscript{191} but that towards the end of his life he had made errors.\textsuperscript{192} The leadership began a process of liberalization, loosening old economic and social control,\textsuperscript{193} not for the sake of liberalization but to strengthen the party’s rule.\textsuperscript{194} Deng was avowedly pragmatic, choosing policy based on its efficacy rather than normative appeal.\textsuperscript{195} Socialism, which alone could save China,\textsuperscript{196} was defined by Deng as public ownership, by the people or by a collective, and common prosperity.\textsuperscript{197} However, while some might be allowed to become prosperous before others, the social problems inherent in material inequality was of great concern to him.\textsuperscript{198}

In Mao’s China the number of police per capita as well as incidence of crime had been very low as official police was secondary to informal social control.\textsuperscript{199} With the liberalizations of the Deng-era this system began to break down,\textsuperscript{200} and the police-force had to be increased, improved in quality, and regulated more closely.\textsuperscript{201} Similarly, social registration changed from being focused on the street-committee, to the individual with formal identity cards.\textsuperscript{202} At all levels of government and society informal controls had been dominant or played a large role. As informal control mechanisms were loosened, the state’s ability to effectively administer was compromised. This increasing weakness was perhaps most apparent in the central government’s relative declining tax income through the middle of the 1990s.\textsuperscript{203} The central government was able to reverse the trend by pragmatic centralization.\textsuperscript{204}

Though the central government’s ability to mobilize resources and implement policies deteriorated over the course of the 1980s, it was far from ineffective. It enforced the one-child policy to evade a Malthusian Trap,\textsuperscript{205} and continued furthering the social rights of women.\textsuperscript{206} As the government limited its scope, and

\begin{itemize}
\item \textsuperscript{188} Ibid., 692.
\item \textsuperscript{189} Ibid., 693.
\item \textsuperscript{190} Shue 1994, 73.
\item \textsuperscript{191} Spence 1991, 679.
\item \textsuperscript{192} Cf. Ibid., 697.
\item \textsuperscript{193} Cf. Ibid., 699-703.
\item \textsuperscript{194} Shue 1994, 73.
\item \textsuperscript{195} Cf. Spence 1991 676; Shue 1994, 73.
\item \textsuperscript{196} Ibid., 679.
\item \textsuperscript{197} Wang 2010, 34.
\item \textsuperscript{198} Ibid., 35.
\item \textsuperscript{199} Wong 2001a.
\item \textsuperscript{200} Liu 2005.
\item \textsuperscript{201} Wong 2004; Wong 2005.
\item \textsuperscript{202} Spence 1991, 703.
\item \textsuperscript{203} Wang and Hu 1994, 3-211.
\item \textsuperscript{204} Ibid., 257-260.
\item \textsuperscript{205} Spence 1991, 685.
\item \textsuperscript{206} Ibid., 685-686, 703, 708.
\end{itemize}
new formal mechanisms of control were put in place the state again improved its ability to implement policies. In a 2003 study one scholar argued that “...the central government has increased its administrative and political control over local leaders” and that “...state capacity, defined as the ability to monitor and control lower level agents, has increased in China.”

4.4 Government Effectiveness in India

When India achieved independence on August 15 1947 it faced many of the same problems as China would two years later. The new country was founded on fratricide; Muslim demands for communal autonomy and then independence had lead to the traumatic partition that created modern India and Pakistan. The new Indian state had to resolve past differences and integrate former foes into a new nation. It also had to incorporate the 650-odd princedoms which were not formally part of the new state, while defending its border against an apparent foe which surrounded it on two sides. The country, and its populace, was desperately poor, and achieving what prime minister Nehru called an “adequate standard of living for the masses” would require a plan as well as mobilization of scant resources.

4.4.1 The Vision

Nehru, Mahatma Gandhi’s political heir, described the convocation of the first Planning Committee in 1942 in the following way:

Obviously we could not consider any problem, much less plan, without some definite aim and social objective. That aim was declared to be to insure an adequate standard of living for the masses. ... the national income had to be greatly increased, and in addition to this increased production there had to be a more equitable distribution of wealth.

To Nehru this rise in the national income would happen through planning, and he believed that “...it was obvious that any comprehensive planning could only take place under a free national government, strong enough and popular enough to be in a position to introduce fundamental changes in the social and economic structure.” In 1947 he got the opportunity to lead the building of that free national government.

4.4.2 1947-1975

The British Crown had throughout the 19th century pursued state-building activities in India through “...the creation of citizens, through regulated conduct, language and eduction, and through improved internal communications.”

---

207 Edin 2003, 52.
208 Jaffrelot 2004a, 10-12. Robb 2002, 183-187, 200-204; Khan 2007, 18, 40-103. Although the Congress Party was not free from communalist tendencies it appears far more pluralistic than the strictly nationalistic Muslim League.
209 Guha 2007, 36.
211 Guha 2007, 22-23.
212 Nehru 1973, 395. The first National Planning Committee was organized under the aegis of the British Raj to promote economic growth in India. This body transformed into the Planning Commission, responsible for India’s Five Year Plans, after Independence.
213 Nehru 1973, 397.
215 Robb 2002, 150.
Crown combined modernizing and centralizing ambitions\textsuperscript{216} with a respect for a tradition of diversity and administrative decentralization.\textsuperscript{217} The centralization efforts made modern government “...the most important unifying factor in India after about 1850.”\textsuperscript{218} Representative councils,\textsuperscript{219} and a modern bureaucracy staffed by non-British were the most important institutional legacies from this state-building.\textsuperscript{220} At India’s independence this institutional heritage lived on in the new state.\textsuperscript{221} While this allowed for a smooth transition, it also meant that the civil service had to take on duties it was not designed for.\textsuperscript{222}

Nehru’s party, the Congress Party (INC), which Gandhi had recommended be dissolved,\textsuperscript{223} became “…the main support of the new republic and it was more or less identified with the state.”\textsuperscript{224} The party was a product of the independence movement, initially unified by nationalism and Gandhi.\textsuperscript{225} It was a large tent including both urbane and poor,\textsuperscript{226} but its base was the well-educated and well-to-do.\textsuperscript{227} This limited social conflict, but also meant that the party was a blunt instrument:

\textit{The ideology and the organization of a weak nationalist movement precludes the use of an essential political resource, compulsion, either to resist concerted opposition from strategic social groups or to implement its redistributive goals. … Enmeshed into the existing social structure, the INC was incapable of generating an autonomous political force to confront and reform this social structure.}\textsuperscript{228}

This weak governing party controlled a weak central government. Though founded as the anti-thesis to the Pakistani Muslim League’s insistence on communal independence,\textsuperscript{229} the Indian republic afforded perforce extensive communal autonomy. The 1950 constitution protects groups as well as individuals and emphasizes both unity and centralization as well as regional and communal rights.\textsuperscript{230} While consociationalist scholars argue that this arrangement promotes inter-ethnic peace\textsuperscript{231} it does limit the central government’s ability to mobilize resources and affect change.\textsuperscript{232} In the case of India it meant that local landed interests were able to fend off the land reforms that meant so much for the development of Japan, Taiwan, and China;\textsuperscript{233} India was “…incapable of extricating itself from the grip of the propertied groups and consequently could not utilize

\textsuperscript{216} Ibid., 134-139.
\textsuperscript{217} Ibid., 115, 130-134, 151.
\textsuperscript{218} Ibid., 153.
\textsuperscript{220} Robb 2002, 155-157.
\textsuperscript{221} Kulke and Rothermund 1998, 294; Kohli 1989, 62.
\textsuperscript{222} Cf. Kohli 1989, 62-63.
\textsuperscript{223} Gandhi considered the INC a national forum rather than a party, cf. Kulke and Rothermund 1998, 294.
\textsuperscript{224} Kulke and Rothermund 1998, 294.
\textsuperscript{225} Kohli 1989, 56.
\textsuperscript{226} Kulke and Rothermund 1998, 294.
\textsuperscript{227} Kohli 1989, 52-53, 56.
\textsuperscript{228} Ibid., 57-58. Although Kohli’s principal focus is on redistribution, India’s challenges in this area illustrate the Indian state’s weak autonomy.
\textsuperscript{229} Guha 2007, 71, 79-81.
\textsuperscript{230} Robb 2002, 209.
\textsuperscript{231} O’Leary 2002, 8-12; Tremblay 2002, 210-211.
\textsuperscript{233} Kohli 1989, 63.
legitimate compulsion as a tool of social reform.” While limited measures were taken to improve women’s rights, substantial land reform was largely unsuccessful.

This dual weakness of the fledgling Indian state, social forces incorporating a weak state unable to mobilize resources, is perhaps epitomized in the first Five Year Plans. India’s “weak capitalism as well as increasingly ‘captured’ state,” meant that plans focused on industry, transportation, and agriculture at increasing costs relative to education and health. Though this plan produced wealth for the well-connected, it had few of the features or policies that created widely-shared economic growth and prosperity in Japan, Korea, and Taiwan. This failure was not for lack of ambition but for capacity; in the words of Chibber:

...the overall weakness of industrial policy was generated by a lack of capacity in the two tasks that are central to a developmental state: the capacity to impose discipline on state agencies around a coherent project and the capacity to discipline private capital into abiding by that project.

4.4.3 Crisis of 1975-1977

Throughout Nehru’s life the INC’s hold on power was largely unchallenged; after his passing in 1964 things changed. His immediate successor passed away in 1965 and Nehru’s daughter, Indira Gandhi, took control of the party as INC lost control of several local state governments. To address a struggling economy Gandhi used one of the few levers of power available to the central government by toppling state governments not controlled by the INC, and purged her party of the conservative old guard.

Gandhi became increasingly authoritarian throughout the 1970s. In 1975 she was found guilty of political corruption, but had a state of emergency declared which suspended the constitution and allowed her to stay in power. Political opposition leaders were jailed and elections postponed, until popular protests forced an election in 1977. A last-minute split of the INC allowed the opposition parties’ coalition to defeat INC. An era was at an end.

4.4.4 1977-Present

The coalition government voted into power in 1977 lost the following election, which was won by Gandhi whose INC was now only a shadow of its former self. Victory was the result of a “...personal plebiscite, rather than the campaign of the party.” Though Gandhi appeared a political strongman, this

Ibid., 64.
Kulke and Rothermund 1998, 297.
Ibid., 299.
For an in-depth discussion of the precursor to the Five-Year Plan, see Chibber 2003, 85-109.
Kohli 1989, 65.
Kohli 1989, 66. While the resources allotted to the first three fluctuated, education and health received an ever-smaller share of spending.
Chibber 2003, 163.
Chibber 2003, 162.
Ms. Nehru took the last name of her husband, who was not related to Mahathma Gandhi, at marriage.
Kohli 1994b, 92.
Kulke and Rothermund 1998, 304.
Ibid., 305.
Ibid., 307.
appearance obstructed the emaciated edifice upon which she stood. As politics turned increasingly personalistic so did also political institutions weaken, both parties as well as the civil service.\textsuperscript{249} Personalistic populism was the result of political fragmentation, as political rivals mobilized their communities “...to strengthen their own political demands.”\textsuperscript{250}

On the one hand this process of personalistic populism centralized power at the top,\textsuperscript{251} on the other it made the top increasingly ineffectual.\textsuperscript{252} Leaders in a democracy do not have the same coercive powers as those in more authoritarian states, but rather must rely on a greater degree of consensus. As power was centralized the crucial consensus-building link between the political center and social periphery weakened:\textsuperscript{253}

Weakness of parties and other institutions that could systematically link the state and society in India … further contributes to the powerlessness of the country’s centralizing and personalistic leaders. … without an instrument to systematically link the state and society, personalistic power enabled centralization but did not generate power to achieve goals.\textsuperscript{254}

An example of the powerlessness of the strong leader is the years after Gandhi’s assassination, when her son, Rajiv, took the reins of the INC and the state. His ambition to open up the Indian economy immediately met with opposition from his party, which he overcame through purges, then from the rural poor who feared subsidy-cuts, and finally the industrial elite which feared an end to import-substitution policies.\textsuperscript{255} In the end little was accomplished. Without functioning parties, or stable coalitions in government,\textsuperscript{256} parties are unable to drive change in India.\textsuperscript{257} Various social forces have incorporated the state, which is then unable to mobilize resources or implement policies. As a consequence India has been unable to produce the political goods needed to realize the goals of its founders and early leaders of a widely shared prosperity and development.

4.5 Government Effectiveness Compared

China and India’s leaders had largely similar goals to improve the living conditions of the populace at their founding. However, the Indian state did not have the ability to autonomously mobilize society’s resources to achieve its goals that China did. China was able to transform society and in the initial period seems to have created the consensus needed to invest its meagre resources in schooling, health-care and social reforms. India by contrast was increasingly incorporated by social forces as its personalistic politics undermined the central government’s already limited ability to affect national change.

\textsuperscript{249} Kohli 1994b, 92-95.
\textsuperscript{250} Ibid., 95-97.
\textsuperscript{251} Ibid., 97.
\textsuperscript{252} Ibid., 98.
\textsuperscript{253} Ibid.
\textsuperscript{254} Ibid., 99, 101.
\textsuperscript{255} Ibid., 102.
\textsuperscript{256} The years after the 1975-1977 Emergency have been very turbulent politically as various parties rise and fall, and coalitions are formed and dissolved almost from election to election, cf. Kulke and Rothermund 1998, 309-318.
\textsuperscript{257} Kohli 1994b, 104.
Mao and Nehru’s quotes capture essential aspects of their republics. Mao came to power as the leader of a disciplined, if not always unanimous, party with a vision for the future that would be realized through a strong state. For good and bad the CCP’s China could mobilize the masses for everything from public health campaigns which saved lives to the Four Pests Campaign which almost made sparrows extinct. Largely autonomous, the CCP state seems able to formulate and implement policies.

By contrast, Nehru led a loose social movement that became the leading party in the new state by default. This loose coalition apparently agreed on few things beyond the most basic, such as independence and the importance of an adequate standard of living. Demands for communal autonomy limited the central government’s ability to penetrate society and implement its policies, and these policies often reflected the concerns of social forces which incorporated the state.

Despite their differences both China and India faced similar crises in the 1970s as centralization deteriorated the effectiveness of the central government. In China this development was driven by factional fighting, and was resolved by devolving some policy-making to lower levels while strengthening the party-state’s formal control over other policy-making. In India this development was driven by fractionalization which led to personalization of politics. While it is clear that China’s central government can enforce policies, it is not clear that India’s government possesses that ability.

According to the WGI’s GE indicator China’s government is only marginally more effective than India’s. A qualitative comparison of China and India would suggest the WGI does not fully account for the effectiveness of China’s government. In the same way that ignoring the importance of informal policing mechanisms gives an inaccurate picture of the effectiveness of Chinese policing, it is quite possible that current measures of government effectiveness do not fully account for informal governance mechanisms in the PRC.

5. Conclusion

An examination of human development and good governance reveal a high degree of conceptual complexity. Combining both ethical as well as empirical aspects, any theoretical definition of human development is inherently complex and does not lend itself to easy measurement. The Human Development Index overcomes this through a lowest-common-denominator definition of human development, measured through a limited set of dimensions. This makes for a crude measure, but that is its strength. The more complex and more grounded in one ethical system or another the less universal the definition would be. Also, given the difficulty of getting reliable data for today’s index, a more complex operational definition would likely produce less insight.

Good governance in general and the Worldwide Governance Indicators in particular does not have the same theoretical clarity as offered by the HDI. An Enlightenment understanding of governance does not differentiate between state and society, making governance hard to limit and measure. There is a tendency for

good governance to be a measurement of all good things associated with governance based on a certain understanding of ‘good’. This lack of theoretical clarity is arguably reflected in the WGI’s maximalist incorporation of hundreds of variables. Beyond the minimalist Weberian effectiveness, the WGI also includes elements that seem more intrinsic ‘goods’ such as Voice and Accountability.

The correlation between good governance and human development, as measured by the WGI and HDI, is clear, but a regression of the governance indicators show that, all things being equal, changes in government effectiveness have the highest impact on human development. A country that improved its score only on the Voice and Accountability indicator would, according to the regression, see little to no net benefit in terms of human development. Given the multicollinearity of the various indicators it is hard to imagine that any state could affect one indicator but not another, but as demonstrated by Third Wave democratization there is reason to believe democracy is more dependent on government effectiveness or state capacity than the reverse. Democratic consolidation failed in Third Wave countries where the state was weak, while it succeeded in those where it was strong.\textsuperscript{259} All things being equal, government effectiveness has a larger impact on human development than any other indicator. This is not to say that democracy is not an intrinsic good, or that it does not have positive effects.

The answer to the first question posed in the introduction seems to be that ‘good governance’ combines minimalist aspects of governance, such as effectiveness, with a normative understanding of the ‘good’. The relationship between good governance and human development is strong, but it is the minimalist aspect of governance, namely effectiveness, that has the largest impact on human development levels. While the indicators are multicollinear, these results along with those of Third Wave democratization suggest that effectiveness is the important variable.

Policy is the proximate determinant of human development level, e.g. does government prioritize stadiums or schools. However, the preceding statistical analysis as well as theory suggest that the ultimate determinant is the capacity to produce public goods. Policy is irrelevant if it can not be implemented. The development of China and India corroborates this. While Mao and Nehru’s immediate objectives for their new republics differed, state power in the case of Mao and adequate standard of living for Nehru, they were both operating within a socialist framework.\textsuperscript{260} The major difference between the two governments was China’s ability to autonomously formulate policies and then implement them. In the case of public health campaigns, social investments, and gender equality these policies had a positive effect on human development. In the case of the Anti-Rightist Campaign, the Great Leap Forward, and the Cultural Revolution these policies had a disastrous effect. For good and bad, China could autonomously formulate and implement policies to fulfill its vision and transform society. India

\textsuperscript{259} Cf. Diamond 2000; Carother 2002; Wang 2003; Ottervik 2011.

\textsuperscript{260} Even though Nehru might have foresworn doctrinaire socialism, the inclinations of his government lay closer to economic planning than laissez-faire free-market capitalism
by contrast had apparent difficulty in implementing policies on a national level. The Indian state was incorporated by social forces, which compromised policy-making and implementation.

The answer to the second question posed in the introduction seems to be that China was able to realize a comparatively high level of human development through an effective government which could autonomously formulate and implement policies. Though well-intended, India’s leadership seems to not have had the same ability to formulate or implement policies without influence from social forces. On the other hand, India’s difficulty in formulating and implementing policy also meant that it avoided the upheavals seen under Mao. Without a autonomous state that could implement policy, most of Indian development was organic.

These results lend themselves to three interesting avenues for future research. The first is the correlation between human development, effective governance, and gender equality which seems especially worthwhile to study more deeply.

The second avenue is on the disempowering effect of some centralization balanced against the inability of a weak national government to steer the ship of state. The crisis experienced by China and India in the 1970s have interesting parallels, with implications for how to understand government effectiveness. As the leadership in both countries amassed more and more power unto themselves, the effectiveness of the respective governments seem to have decreased, albeit from different levels. The national government’s ability to get the feedback needed to formulate policies, generate consensus around their policies, and then see them implemented diminished in both countries. Though the regimes were very different, they were subject to the same processes. Further uncommon foundation comparisons would allow this mechanism to be verified or falsified more broadly.

The third avenue for future research is on a lowest common denominator definition and measurement of governance similar to the HDI. A Weberian definition with a measurement of the difference between formal tax levels and actual tax collection could be a start. This would leverage the correlation between all elements of the state to measure its overall effectiveness.
Appendix A: 1990 HDI Methodology

3. A mathematical formulation of the human development index

The human development index (HDI) is constructed in three steps. The first step is to define a measure of deprivation that a country suffers in each of the three basic variables — life expectancy ($X_1$), literacy ($X_2$), and (the log of) real GDP per capita ($X_3$). A maximum and a minimum value is determined for each of the three variables given the actual values. The deprivation measure then places a country in the range of zero to one as defined by the difference between the maximum and the minimum. Thus $I_{ij}$ is the deprivation indicator for the $j$th country with respect to the $i$th variable and it is defined as:

$$I_{ij} = \frac{(\max X_{ij} - \min X_{ij})}{(\max X_{ij} - \min X_{ij})}$$

The second step is to define an average deprivation indicator ($I_j$). This is done by taking a simple average of the three indicators:

$$I_j = \sum_{i=1}^{3} I_{ij}$$

The third step is to measure the human development index (HDI) as one minus the average deprivation index:

$$(HDI)_j = 1 - \left( I_j \right)$$
Appendix B: 2010 HDI Methodology

Technical note 1. Calculating the Human Development Index

The Human Development Index (HDI) is a summary measure of human development. It averages the achievement of a country in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. The HDI is the geometric mean of smoothed indices measuring achievements in each dimension.

Data sources
- Life expectancy at birth: UNDESA (2009a)
- Mean years of schooling: UNESCO Institute for Statistics (2010a)
- Expected years of schooling: UNESCO Institute for Statistics (2010b)
- Gross national income (GNI) per capita: World Bank (2010b) and IMF (2010a)

Creating the dimension indices

The first step is to create scales for each dimension. Minimum and maximum values (adjusted) need to be set in order to transform the indicators into indices between 0 and 1. Because the geometric mean is used for aggregation, the maximum value does not affect the relative comparisons (in percentage terms) between any two countries or periods of time. The maximum values are set to the actual observed minimum values of the indicators from the countries in the time series, that is, 1980-2008. The minimum values will affect every country, so that their scores will be appropriately constrained by a subsistence value or “normal” term added. Progress is thus examined against minimum levels that a country needs to survive over time. The minimum values are set at 80% of life expectancy, 10 years for both education variables and at 100% of the gross national income (GNI). The life expectancy minimum is based on long-run historical evidence from Maddison (2001) and Riley (2007). Literacy can assist without formal education, justifying the education minimum. A basic level of income is necessary to ensure access to HDIs in the lower value attained by any country in recorded history (in Zimbabwe in 2008) and corresponds to less than 200% living below the World Bank’s $1.25 a day poverty line.

Life expectancy index: \[ \frac{1}{a} \cdot \frac{1}{b} \cdot 0.847 \]
Mean years of schooling index: \[ 0.75 \cdot 0.564 \]
Expected years of schooling index: \[ 0.544 \cdot 0.553 \]
Education index: \[ 0.544 \cdot 0.553 \]
Income index: \[ 0.544 \cdot 0.553 \]
Human Development Index: \[ \sqrt[3]{0.544 \cdot 0.553 \cdot 0.847} \]

Overall effects of the Human Development Index methodological improvements

The methodological improvements in the HDI, using new indicators and the new functional form, result in substantial changes (figure 7.1). Adapting the geometric mean produces lower values with smaller changes occurring in connection with stron development across dimensions. The geometric mean has only a moderate impact on HDI values, cutting the upper bounds at a maximum value has less impact on overall index values and has little further impact on the index.

Analysis of historical trends in this Report

The analysis of changes in the dimensions in chapters 2 and 3 in a different version of the HDI, the hybrid HDI, which applies the same aggregation formula as the new HDI to the set of indicators used in previous Reports (since 1995) in order to allow more extensive analysis over time. Linear interpolation was used to fill missing values where both earlier and later values were present. When unavailable for the whole time period, gross national income values were projected using the last available value for forecasting purposes and the best forecast available (backward projection). A sensitivity analysis showed that the results of the analysis were robust to alternative extrapolation techniques. See Zohlnhöfer and others (2010) for further details on the construction of this data set.

The analysis in chapters 2 and 3 allows the reader to comprehend the evolution of selected dimensions over time and to forecast trends or to infer changes over time in the hybrid HDI. This measure evaluates the progress of countries compared with the average progress of countries with a similar inverted HDI level. It is calculated in the matrix of a second degree fractional polynomial regression of the annual percentage growth rate of the HDI on the lagged values of initial HDI values. Statistical table 2 shows the country rank in the decision matrix for the HDI among the 193 in 2008. See Rapoport and Almas (1994) for a description of the regression model based on fractional polynomial functions of a continuous variable.
Appendix C: WGI Definitions

(a) The process by which governments are selected, monitored, and replaced:

1. **Voice and Accountability (VA)** - capturing perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

2. **Political Stability and Absence of Violence/Terrorism (PV)** - capturing perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism.

(b) The capacity of the government to effectively formulate and implement sound policies:

3. **Government Effectiveness (GE)** - capturing perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

4. **Regulatory Quality (RQ)** - capturing perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

(c) The respect of citizens and the state for the institutions that govern economic and social interactions among them:

5. **Rule of law (RL)** - capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

6. **Control of Corruption (CC)** - capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.
Appendix D: WGI Definition of Government Effectiveness

Government effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

<table>
<thead>
<tr>
<th>Code</th>
<th>Concept Measured</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Representative Sources</strong></td>
<td></td>
</tr>
<tr>
<td>DRI</td>
<td>Government instability</td>
</tr>
<tr>
<td></td>
<td>Government ineffectiveness</td>
</tr>
<tr>
<td></td>
<td>Institutional failure</td>
</tr>
<tr>
<td>BU</td>
<td>Quality of bureaucracy / institutional effectiveness</td>
</tr>
<tr>
<td></td>
<td>Excessive bureaucracy / red tape</td>
</tr>
<tr>
<td>GCS</td>
<td>Quality of general infrastructure</td>
</tr>
<tr>
<td></td>
<td>Quality of public schools</td>
</tr>
<tr>
<td></td>
<td>Time spent by senior management dealing with government officials</td>
</tr>
<tr>
<td>GWP</td>
<td>Satisfaction with public transportation system</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with roads and highways</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with education system</td>
</tr>
<tr>
<td>IPD</td>
<td>Quality of the supply of public goods: education and basic health</td>
</tr>
<tr>
<td></td>
<td>Capacity of political authorities to implement reforms</td>
</tr>
<tr>
<td>PRS</td>
<td>Bureaucratic Quality</td>
</tr>
<tr>
<td>WMO</td>
<td><em>Bureaucracy: An assessment of the quality of the country's bureaucracy. The better the bureaucracy the quicker decisions are made and the more easily foreign investors can go about their business.</em></td>
</tr>
<tr>
<td></td>
<td><em>Policy consistency and forward planning: How confident businesses can be of the continuity of economic policy stance - whether a change of government will entail major policy disruption, and whether the current government has pursued a coherent strategy. This factor also looks at the extent to which policy-making is far-sighted, or conversely aimed at short-term advantage.</em></td>
</tr>
<tr>
<td><strong>Non-representative Sources</strong></td>
<td></td>
</tr>
<tr>
<td>ADB</td>
<td>Quality of public administration</td>
</tr>
<tr>
<td></td>
<td>Quality of Budget management</td>
</tr>
<tr>
<td></td>
<td>Efficiency of revenue mobilization</td>
</tr>
<tr>
<td>AFR</td>
<td>Government handling of public services</td>
</tr>
<tr>
<td>ASD</td>
<td>Quality of public administration</td>
</tr>
<tr>
<td></td>
<td>Revenue Mobilization</td>
</tr>
<tr>
<td></td>
<td>Quality of Budget management</td>
</tr>
<tr>
<td>BPS</td>
<td>How problematic are telecommunications for the growth of your business?</td>
</tr>
<tr>
<td></td>
<td>How problematic is electricity for the growth of your business?</td>
</tr>
<tr>
<td></td>
<td>How problematic is transportation for the growth of your business?</td>
</tr>
<tr>
<td>BTI</td>
<td>Consensus Building (MI)</td>
</tr>
<tr>
<td></td>
<td>Governance Capability (MI)</td>
</tr>
<tr>
<td></td>
<td>Resource Efficiency (MI)</td>
</tr>
<tr>
<td>IFD</td>
<td>Allocation &amp; management of public resources for rural development</td>
</tr>
<tr>
<td>LBO</td>
<td>Trust in Government</td>
</tr>
</tbody>
</table>
PIA  Quality public Administration
Efficiency of revenue mobilization
Quality of Budget management

WCY  Government economic policies do not adapt quickly to changes in the economy
The public service is not independent from political interference
Government decisions are not effectively implemented
Bureaucracy hinders business activity
The distribution infrastructure of goods and services is generally inefficient
Policy direction is not consistent

Sources of Governance Data Used in latest Update of WGI

<table>
<thead>
<tr>
<th>Source</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADB</td>
<td>African Development Bank Country Policy and Institutional Assessments</td>
</tr>
<tr>
<td>AFR</td>
<td>Afro-barometer</td>
</tr>
<tr>
<td>ASD</td>
<td>Asian Development Bank Country Policy and Institutional Assessments</td>
</tr>
<tr>
<td>BPS</td>
<td>Business Environment Survey</td>
</tr>
<tr>
<td>BTI</td>
<td>Bertelsmann Transformation Index</td>
</tr>
<tr>
<td>CCR</td>
<td>Freedom House Countries at the Crossroads</td>
</tr>
<tr>
<td>DRI</td>
<td>Global Insight Global Risk Service</td>
</tr>
<tr>
<td>EBR</td>
<td>European Bank for Reconstruction and Development Transition Report</td>
</tr>
<tr>
<td>EIU</td>
<td>Economist Intelligence Unit Risk-wire &amp; Democracy Index</td>
</tr>
<tr>
<td>FRH</td>
<td>Freedom House</td>
</tr>
<tr>
<td>GCB</td>
<td>Transparency International Global Corruption Barometer Survey</td>
</tr>
<tr>
<td>GCS</td>
<td>World Economic Forum Global Competitiveness Report</td>
</tr>
<tr>
<td>GII</td>
<td>Global Integrity Index</td>
</tr>
<tr>
<td>GWP</td>
<td>Gallup World Poll</td>
</tr>
<tr>
<td>HER</td>
<td>Heritage Foundation Index of Economic Freedom</td>
</tr>
<tr>
<td>HUM</td>
<td>Cingranelli Richards Human Rights Database and Political Terror Scale</td>
</tr>
<tr>
<td>IFD</td>
<td>IFAD Rural Sector Performance Assessments</td>
</tr>
<tr>
<td>IJT</td>
<td>IJET Country Security Risk Ratings</td>
</tr>
<tr>
<td>IPD</td>
<td>Institutional Profiles Database</td>
</tr>
<tr>
<td>IRP</td>
<td>African Electoral Index</td>
</tr>
<tr>
<td>LBO</td>
<td>Latino Barometer</td>
</tr>
<tr>
<td>MSI</td>
<td>International Research and Exchanges Board Media Sustainability Expert (GOV) Index</td>
</tr>
<tr>
<td>OBI</td>
<td>International Budget Project Open Budget Index</td>
</tr>
<tr>
<td>PIA</td>
<td>World Bank Country Policy and Institutional Assessments</td>
</tr>
<tr>
<td>PRC</td>
<td>Political Economic Risk Consultancy Corruption in Asia Survey</td>
</tr>
<tr>
<td>PRS</td>
<td>Political Risk Services International Country Risk Guide</td>
</tr>
<tr>
<td>RSF</td>
<td>Reporters Without Borders Press Freedom Index</td>
</tr>
<tr>
<td>TPR</td>
<td>US State Department Trafficking in People report</td>
</tr>
<tr>
<td>VAB</td>
<td>Vanderbilt University Americas Barometer Survey</td>
</tr>
<tr>
<td>WCY</td>
<td>Institute for Management and Development World Competitiveness Yearbook</td>
</tr>
<tr>
<td>WMO</td>
<td>Global Insight Business Conditions and Risk Indicators</td>
</tr>
</tbody>
</table>

CBIP: Commercial Business Information Provider
GOV: Public Sector Data Provider
NGO: Non-Governmental Organization Data Provider

37
Bibliography


