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China's Unbalanced Development, And What We Can Learn From It

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and what we can learn from it

by Manfredo Camperio

Abstract:

This paper argues that China's development is unbalanced, and to see the unbalance we must divide the concept of development into different categories representing its different aspects, such as economic, urban, social, and sustainable. By looking at the different characteristics of development through time, it is possible to see where the unbalance lies. Furthermore, we learn that by categorizing the nature of development, we can gain a more comprehensive insight into the development of individual countries. In conclusion, this paper proposes the creation of a possible Development Index, as it can provide greater understanding of each country's development.

Acknowledgment:

There are numerous people to whom I owe thanks: Dr. Xiangming Chen guided me through the rough seas of statistics and the uncharted mountains of China. He steered my passion towards a specific and realistic goal: something a dreamer such as I can only dream of! Professor Anne-Marie Hanson helped me to realize that I was "talking, but not saying". What would I have done without her questions: "What do *YOU* think this means? What do *YOU* want to accomplish?" I thank my partner Susan Puente-Matos, for gracefully enduring long discussions and providing me with great feedback. And lastly, I thank my parents, Filippo and Carolina: for believing in me, advising me, and for giving me this opportunity.

Content

Introduction

Over the past thirty-five years, China has undergone a rate of development unprecedented in human history. At the same time, China has also experienced the greatest human migration the world has ever known. But lately, China has experienced something even more unusual. From 1978 to present, nearly 160 million people have migrated from rural lands to urban areas[1]. And if that were not enough, the Chinese Government is planning to actively relocate to urban areas another 250 million rural residents in the next twelve years.[2] Yet, recently China has experienced the beginning of a small countermovement: some migrants have started seeking "a life back home."[3] As Katie Hunt suggests, some rural migrants are starting to feel that the advantages of urban life are being outweighed by the disadvantages, and returning home is the preferable option. Even though the quantity of income is greater in urban areas than in rural lands, the quality of life is not.

Countless literary works discuss China's unbalance. Authors[4] of these works argue that China's economic growth is not what it seems, but that our perception of it is misguided due to various flaws in economic statistics and data collection. I, however, do not argue that China's *economic* development is unbalanced, as many people already have, but that China's overall development is unbalanced between *quantity* and *quality:* a timeless human dilemma that affects all aspects of our lives.

[1] "The Largest Migration in History: China's Migrant Workers." The Economist
[2] Johnson, Ian. "China's Great Uprooting: Moving 250 Million Into Cities." The New York Times.
[3] Hunt, Katie. "China's Migrant Workers Seek a Life Back Home." CNN.
[4] Dorrucci, Ettore, Gábor Pula, and Daniel Santabárbara. *China's Economic Growth and Rebalancing; ecc.*

The development of a country is such a complicated process that humans cannot possibly claim to have figured it all out. As Zachary Karabell writes in his work *The Leading Indicators*, "no one number can measure our lives."[5] Development involves uncountable factors from a plethora of different fields, and thus it is impossible to accurately statistically measure. However, as Galileo Galilei once said, "measure what is measurable, and make measurable what is not." [6] As required by the limited knowledge of humans, we must simplify as much as we can in order to make it measurable and start to understand what stands before us.

So how does *quality* and *quantity* apply to development? It is easy to see how these apply when carrying out one activity, such as building construction. Carrying out a series of constructions rapidly and cheaply prioritizes quantity at the expense of quality. However, when looking at a country as a whole, matters are not so simple. When a country finds a new coal bed, it must organize a budget to be allocated for the building of infrastructure capable of extracting and shipping the coal. A small town, typically called a coal town or camp, will be built to house the coalmine workers, and roads and railroads will be extended to reach the newly discovered resource. But if part of that initial budget is not set aside to build schools, hospitals, and monitoring facilities in the coal town, the next generation of workers will grow up uneducated, ill, and unsafe. This simplified metaphor serves to explain what *quality* and *quantity* mean in regards to a country's development: in metaphorical words, urban and economic development can refer to the *quantity* of development, and social and sustainable development can refer to *quality* of it.

[5] Karabell, Zachary. *The Leading Indicators.* (Page 247)
[6] BrainyQuote, <http://www.brainyquote.com/quotes/quotes/g/galileogal381325.html>.

Even so, it must be specified that development is an indivisible concept that is essentially not divided into categories. Under the conventional definition, urban development is essentially equal to social development, economic development, and sustainable development: schools and hospitals are just as much a part of social and sustainable development as they are a part of economic and urban development. At the same time, railroads and markets are a part of urban and economic development just as much as they are a part of social and sustainable development. But in order to see how the development of China is unbalanced, we must try to look at different aspects of development separately in order to pinpoint what is being neglected and what is being over-emphasized. We must measure the immeasurable, and so lines must be drawn where lines do not exist, allowing us to start measuring.

Literature Review

The literature on development and relating topics is immense, and the literature on China's situation specifically is rapidly increasing. I particularly focused on evaluations of how the current ruling indicators of development came about, such as Karabell's *The Leading Indicators* and Peet's *Theories of Development*; critiques on those ruling indicators, such as Ferguson's *The Anti-Politics Machine* and Lochner's *Are GDP/GNP Appropriate Measures of Development?;* proposals of new indexes, such as *Human Development Reports* and *Social Progress Index*; and on evaluations of China's situation, such as Dorrucci's *China's Economic Growth and Rebalancing.*

Zachary Karabell argues in *The Leading Indicators: A Short History of the Numbers that Rule Our World* that the world works extremely differently from how it used to work merely a century ago, when today's leading indicators were conceived; because of this, the indicators are not accomplishing our intended goals anymore. In fact, it is impossible to see China's imbalance when looking at its GDP, unemployment, and inflation. In his work *The Anti-Politics Machine,* by now a basis of the development discussions, James Ferguson argues that even though the institutions that calculate development do their job as best they can, development is far too complicated to calculate, and so, the measurement of it should not even be attempted, as it will always be wrong and misleading[7]. However strongly Galileo would have disagreed with this argument, Ferguson has had great insight on the issue and attracted many followers to his side.

Nevertheless, following Galileo's belief, many people, such as Amartya Kumar Sen and Mahbub-ul-Haq, have attempted to measure the immeasurable. The *Human Development Reports* and the *Social Progress Index* are both innovative attempts at measuring development. They both select important indicators for human livelihood and attempt to summarize them quantitatively. The first, the Human Development Index, includes economic indicators among others, while the Social Progress Index does not include economic indicators at all. But before directly applying the lessons from this vast literature to China, we must first grasp the basic concepts that surround the measurement of development.

[7] Ferguson, James. *The Anti-politics Machine: "development," Depoliticization, and Bureaucratic Power in Lesotho*. Cambridge, England: Cambridge UP, 1990.

Development

de·vel·op·ment

noun \di-'ve-ləp-mənt, dē-\

: the act or process of growing or causing something to grow or become larger or more advanced

: the act or process of creating something over a period of time

: the state of being created or made more advanced

It is incredible to think that before a century ago statistics and indexes were almost entirely irrelevant to government operations. Government-collected economic data and calculated statistics grew increasingly important because of the Great Depression and the consequent realization that governments were clueless about what was happening in their country and why.[8] The ancestors of today's leading indicators were born in a world in which nation-states still had fairly 'enclosed' economies, where it was easy to pinpoint which country produced what; and governments knew nothing about their country's employment rate, cost of living, or even of their country's gross domestic product. As Karabell claims, these indicators were created simply to provide governments with a general understanding of what was going on within their country, not to determine whether the people of a country were doing well; or least of all created to provide predictions of the future.[9]

Today, these same indicators are used as undisputed labels for a country's rank in the world. Many people have spoken out against giving such authoritative power to these newborn statistics that are, at best, still in their trial stage. Robert Kennedy was of this opinion, and he spoke of the issue at a campaign speech at the University of Kansas a few

[8] Karabell, Zachary. *The Leading Indicators: A Short History of the Numbers That Rule Our World*.
[9] Karabell, Zachary. *The Leading Indicators:* (Page 242)

months before his assassination. He spoke such eloquent words that it would be unwise not to quote them in their entirety:

> "Too much and too long, we seem to have surrendered community excellence and community values in the mere accumulation of material things. Our gross national product… if we should judge America by that, counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for those who break them. It counts the destruction of our redwoods and the loss of our natural wonder in chaotic sprawl. It counts napalm and the cost of a nuclear warhead, and armored cars for police who fight riots in our streets. It counts Whitman's rifle and Speck's knife, and the television programs which glorify violence in order to sell toys to our children.
>
> Yet the gross national product does not allow for the health of our children, the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages; the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage; neither our wisdom nor our learning; our devotion to our country. It measures everything, in short, except that which makes life worthwhile. And it tells us everything about America except why we are proud to be Americans."[10]

These eloquent words point out the moral flaws these early economic indexes possessed. They do not calculate the actual well being of people, but merely the material production (regardless of the people's well-being). As mentioned earlier, the same indexes that today have the power to define nations and determine the future of entire populations were originally created as simple measurements to provide governments with a general understanding of what was being produced in their country, what was being imported, and how many people were actively searching for a job. However, for some reason or another, these indicators are now being interpreted as absolute representatives for the well being of the people. Today, the mentality has become more than doubtful: the more

[10] Karabell, Zachary. *The Leading Indicators:* (Page 48-49)

a country produces, the better-off the people will be. Of course, this mentality has a myriad of flaws and loopholes.

Even though these leading indicators have evolved, adapted, and become more complex than their original predecessors, they still maintain their original skeleton to this day. As Karabell argues, the world is not what it was a century ago: Iphones sold in the US are assembled in China with parts that are produced in at least a dozen other countries (and if we were to take into account the raw materials needed for the production of each part, there would be many more than a dozen countries involved); each country taking a share from the final price of the product.[11] However, gross domestic product (GDP) assumes that only China benefits from the sale of the Iphone, as it was finally assembled in China.[12] GDP does not take into account all the other countries involved in the production. This is terribly flawed, and Karabell takes this argument all the way by claiming that, in fact, there is no deficit between America and China, but we believe there is because we are using indexes based on a mentality that is at least a century old.[13] Today's world is not one where one good is produced in one country, but one where many countries with different skill-sets cooperate together in the production of a good. The fact that China assembles the majority of the world's products does not mean that it will be the ruler of the world, as it would have meant a century ago and today's indexes still seem to suggest, but simply means that China has a specific role in the massive industrial 'conveyor belt' of today's global economy. The outsourcing of American jobs to China does not mean the United States is on the decline, but rather that the United States is taking up a new role in the 'global conveyor belt' and shedding its former role.

[11] Karabell, Zachary. *The Leading Indicators:* (Page 174-176)
[12] Karabell, Zachary. *The Leading Indicators:* (Page 172)
[13] Karabell, Zachary. *The Leading Indicators:* (Page 170)

America is becoming the exporter of ideas, capital, and services, all of which are barely taken into account in today's leading indicators.[14]

Even though indexes such as GDP are outdated and distort our view of the world and the goals we strive towards, Karabell does not argue that indicators such as GDP are irrelevant and must be discarded. Instead, he argues that such indicators should be used as a part of a greater whole: "no one number can measure our lives."[15] Thanks to the works of people like Ferguson, we have realized that the development of countries is a complicated process that involves uncountable factors and many more variables.[16] Because of this vast array of elements, methods of calculating development have to limit themselves to selecting a handful of calculable factors used as representatives for their category. From this mentality, the Human Development Index was created.

The Human Development Index (HDI) is a composite statistical index that combines education, life expectancy, and income indices.[17] It was created in the 1990's within the United Nations Development Program, planned and led by the Pakistani economist Mahbub-ul-Haq. The central goal of the project was to shift focus of development policies from "income accounting to people-centered policies."[18] Together with his team and Nobel laureate Amartya Sen, Haq is credited with putting together the HDI. This index sets minimum and maximum 'goalposts' for a country in each category,

[14] Karabell, Zachary. *The Leading Indicators:* (Page 175-176)
[15] Karabell, Zachary. *The Leading Indicators.* (Page 247)
[16] Ferguson, James. *The Anti-politics Machine: "development," Depoliticization, and Bureaucratic Power in Lesotho*. Cambridge, England: Cambridge UP, 1990.
[17] "Human Development Reports." *Human Development Index (HDI).*
[18] *Human Development Index (HDI). Human Development Index (HDI).*

and then calculates "where each country stands in relation to these goalposts, expressed as a value between 0 and 1."[19]

Over time the HDI has been changed, adapted, and diversified for different purposes. Now, the HDI takes into account four factors: education, life expectancy, wealth, and standard of living. The educational development factor is measured by taking into account the "mean years of schooling for adults 25 years and expected years of schooling for children of school entering age."[20] The life expectancy factor is calculated "using a minimum value of 20 years and maximum value of 83.57 years." For the wealth factor, "the goalpost for minimum income is $100 (PPP) and the maximum is $87,478 (PPP)"[21] The last factor, the standard of living, is measured by

> "GNI per capita (PPP$) instead of GDP per capita (PPP$). The HDI uses the logarithm of income to reflect the diminishing importance of income with increasing GNI. The scores for the three HDI dimension indices are then aggregated into a composite index using geometric mean."[22]

By taking into account standard of living, wealth, education, and life expectancy, the HDI essentially groups the four factors that are most important to humans, and combines them into one number that shows where a country stands between 0 (which is poor) and 1 (which is excellent). The latest HDI reports, calculated in 2013, show the world's leading country to be Norway, standing at 0.955, and the world's lowest-ranked country to be Niger, with 0.304. China is ranked 101st with an HDI of 0.699[23].

The HDI has had great success and has received much positive feedback. However, as development is so complex, the HDI also as many flaws. First of all, it

[19] *Human Development Index (HDI). Human Development Index (HDI).*
[20] *Human Development Index (HDI). Human Development Index (HDI).*
[21] *Human Development Index (HDI). Human Development Index (HDI).*
[22] *Human Development Index (HDI). Human Development Index (HDI).*
[23] "*Human Development Reports*." United Nations Development Program.

synthesizes all categories into one number, not allowing for the analysis of each individual category represented. As we mentioned before, "no one number can measure our lives."[24] That said, however, the HDI is still a leap forward from its predecessors. The idea that economic output must be only one of many factors leading to a healthy development, rather than the only factor, was a big innovation.

Like the HDI, the Social Progress Index, "builds upon an important legacy of prior efforts to go beyond GDP in measuring national performance. […]It is based on a holistic and rigorous framework for defining social progress based on 54 indicators of social and environmental outcomes."[25] However, differently from the HDI, the Social Progress Index does not include any economic indicators or factors at all. The fields this index does consider are basic necessities, well-being, and opportunity. Interestingly enough, the top three countries in terms of the Social Progress Index are New Zealand, Switzerland, and Iceland; followed by the usual Northern European nations. The country with the lowest Social Progress Index is Chad.[26]

This index is similar to the HDI in the way that it divides the world into different categories that are deemed important, measures them, and summarizes them into one number. However, it is a radical shift from the HDI in that it does not consider economic factors as the objective of progress, but merely as a means for progress. Even thought this mentality has much to be applauded for, it is not widely accepted.

Taking into consideration all the above-mentioned measuring methods, the next step is to develop our own framework that will allow the world to clearly see the circumstances within the development of a country, which in this particular case is China.

[24] Karabell, Zachary. *The Leading Indicators.* (Page 247)
[25] Porter, Michael E., Scott Stern, and Michael Green. *Social Imperative Index*.
[26] Porter, Michael E., Scott Stern, and Michael Green. *Social Imperative Index*.

From the old mantra of Galileo, we must make measurable the immeasurable to try and make visible the imbalance in China's development.

Categorizing Development

While today's methods for looking at development provide a general overview of the nature of a country's development, it is possible to gain quite a different perspective by looking at development in entirely separate categories. By doing so it is possible to see each category in relation to one another and find out precisely if there are imbalances and where they lie.

As discussed before, the Human Development Index takes into account the economic and social aspects of development, while the Social Progress Index takes into account social and environmental aspects of development. But to gain a more comprehensive understanding, it is important to take more categories into account. For the purpose of this research, categorizing development into economic, urban, sustainable, and social development should be enough to see the Chinese imbalances between social and economic development, and between sustainable and urban development; figuratively speaking, the imbalance between quantity and quality.

First, as a representative factor for economic development, GDP per Capita provides a nice compromise in the heated international discussions. It provides a 'traditional' GDP statistic, that will appease the GDP supporters and the international system, and it provides a view of the lives of individuals, which will somewhat appease

some of the GDP opponents. Needless to say, using any kind of GDP indicator comes with all the flaws associated with GDP.

Second, as a representative factor for urban development, we will use the quantity of rail lines (in kilometers). This can be considered to provide a good window on the state of urban development, as rail lines are essential to the connectivity and prosperity of cities, and are much more environmentally sustainable compared to highways, which promote greater increases in pollution and fossil fuel consumption. However, if a country for any reason decided to eliminate all rail lines and replace them with highways, this indicator would become instantly useless and would have to be subject to change.

Third, as a representative for social development, public spending on education (as a % of total expenditures) provides a good window to the social priorities of a country. Education is a great indicator for social development because kindergartens, school, universities, and so on, foster a fundamental social scene in which children will grow up in, making it the future basis of that society. Furthermore, good education is critical to a successful future: theoretically, the better the education, the brighter the future. How much a country spends on education relative to how much they spend in total will show how much a country cares about developing future generation.

Fourth, to measure sustainable development, we can use the amount of alternative energy consumed as a percentage of total energy as a representative factor. Alternative energy not only includes the four traditional renewable energy sources (geothermal, solar, wind, and hydro), but also includes nuclear power. This is a good statistic for various reasons: first, it does not represent how much alternative energy a country produces, as that can be skewed by the amount it consumes. Second, a country might not produce any

energy at all, in which case it will be importing it. Measuring how much alternative energy a country consumes takes both possibilities into account. Third, this factor can show how much a country is focusing on sustainability.

Taking into account the 'sustainability' of a country is essential to understanding how healthy the future development of that country will be. As Filippo Camperio once told me: **"**you must not judge a marathon runner on his speed at the beginning of the race, but on his capabilities of maintaining that speed throughout the race." And just like a marathon runner, a country must be judged on its capabilities to maintain its development. Yes, China may have a rapidly increasing economic and urban development, but is China's development sustainable? Can it meet the need of the present without compromising the ability of future generations to meet their own needs?

The idea of development can no longer exist without the concept of sustainability. Only when human beings consumed a miniscule fraction of what we consume today could we have the luxury of not placing much importance on the sustainability of our development. According to the UN, the human population reached 7 billion people in October of 2011.[27] We can no longer afford not to take into account whether our resources and lifestyles can sustain themselves and endure into the future.

Here is an overview of the indicators that we will use as a representative for each development category:

Economic Development: GDP per Capita

Urban Development: Rail Lines (km)

Social Development: Gov. Spending on Education as % of Total Expenditure

Sustainable Development: % Alternative Energy Consumed

[27] UN. "As World Passes 7 Billion Milestone, UN Urges Action to Meet Key Challenges."

But however interesting and effective these representative are, they still have many flaws. As stated before, development is immeasurable, and any method of measuring it will prove to be flawed. Furthermore, the indicators selected above are basic and can hardly stand-alone. Because of this project's time, funding, and research constraints, the indicators must be a few and basic in order to accomplish the goal of this research in the allocated amount of time. This literary work is meant to initiate a new chapter in the international development discussion, with the hopes to attract expert research teams that can work on, adapt, and improve this method of measuring development and its imbalances.

The National Imbalance

To gain maximum understanding on China's development, we cannot simply look at one moment in time, but must take into account a certain amount of precedence. Analyzing a time span that is too large will make the results irrelevant, while analyzing a time span that is too small will make the results superficial. In China's particular case, a 30-year time span, from 1980 to 2010, seems to be appropriate to confidently defend the argument on China's unbalanced development.

Mao Zedong died on September 9, 1976.[28] The infamous Gang of Four was dismantled a month later for plotting the downfall of Mao's successor, Hua Gofeng.[29] The Cultural Revolution was coming to an end, with countless of skilled professionals

[28] Reuters. "*Mao Tse-Tung Dies In Peking At 82*."
[29] The Editors of Encyclopædia Britannica. "*Gang of Four (Chinese Politicians)*."

unable to contribute to society and schools still shut down.[30] Hua Gofeng proclaimed "*The Two Whatevers*": "we will resolutely uphold whatever policy decisions Chairman Mao made, and unswervingly follow whatever instructions Chairman Mao gave."[31] In 1977 Deng Xiaoping, still in exile for "political mistakes," was accepted back into politics after expressing his support for Hua's policies. By 1978, schools had reopened, transition to "socialist modernization" was proclaimed, and the extreme aspects of Mao's personality cult were moderated.[32] Nuclear weapon testing, missile, and space launches still continued. In 1979 full diplomatic relations with the U.S.A. were finally established and official diplomatic relations with Taiwan were officially terminated.[33]

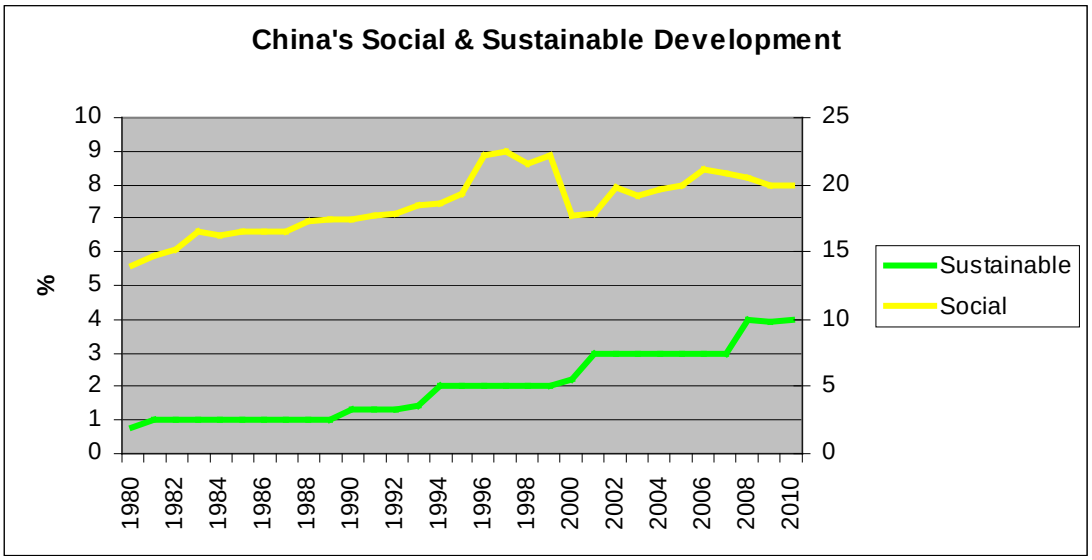
These are the circumstances China found itself in during the 1980's. The rest is well known: "It does not matter whether a cat is black or white, so long as it catches mice."[34] Deng Xiaoping became *defacto* leader and opened up China to international markets.[35] China's communism transformed into "Socialism with Chinese characteristics"[36] and rapidly became the world's largest manufacturer and one of the world's most powerful economies.[37]

Collecting the required data from 1980 to 2010 proved much harder than expected. Thankfully, Trinity College provided me with the necessary research experts to deal with such obstacles, and we were able to collect the required national data from the World Bank's database. To see China's full national data collection on the indicators

[30] "Cultural Revolution." History.com.
[31] Xiaoping, Deng. "*The "Two-Whatever" Policy Does Not Accord With Marxism -- Beijing Review.*"
[32] Lamb, Stefanie. "SPICE.*" Introduction to the Cultural Revolution*
[33] "*Exploring Chinese History* Comprehensive."
[34] Tyler, Patrick E. "*Deng Xiaoping: A Political Wizard Who Put China on the Capitalist Road*." The New York Times.
[35] CNN. "*Reformer with an Iron Fist*."
[36] Xiaoping, Deng. "Deng Xiaoping." Deng Xiaoping. Wellesley, 1984.
[37] SIS International Research. "China since the 1980s and Moving forward"

representing the four categories of development, please refer to appendix A (page 34). Visualizing in graphs the data in Appendix A will clearly show the unbalanced relationship shared by the four categories:

[38]

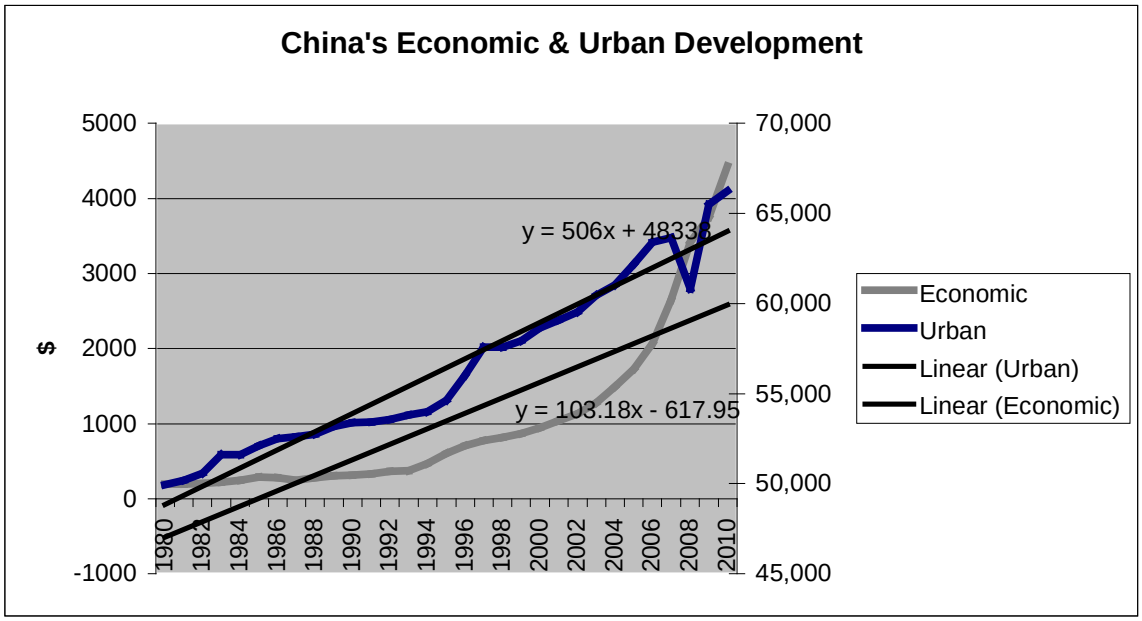


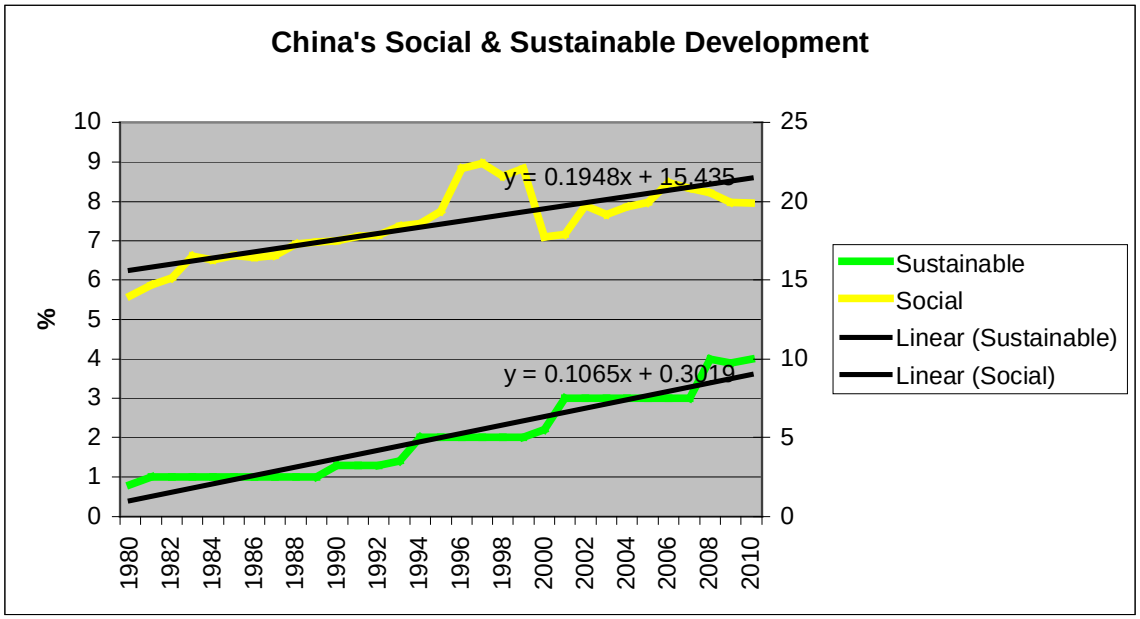
[39]

The economic and urban development are clearly rapidly increasing, while the social and sustainable development seem to be relatively stagnant, with only slight and fragmented

[38] World Bank. "*Indicators.*" Data World Bank. World Bank, Web. <http://data.worldbank.org/indicator>.
[39] World Bank. "*Indicators.*" Data World Bank. World Bank, Web. <http://data.worldbank.org/indicator>.

increases. The next step is to add trend lines on each graph and calculate the respective gradients to find out exactly what is the rate of increase of each category of development:





These gradients (which are the rate of increase) result to be 103.18 for economic development, 506 for urban development, 0.195 for social development, and 0.106 for sustainable development. The average gradient for conomic and urban development is

304.59, while the average gradient for social and sustainable development is 0.1505. Divide one by the other, and you find out the exact relationship between the two: the rate of increase of the urban and economic development is 2,023.85 times greater than the rate of increase of social and sustainable development.

From these graphs and their respective gradients, we can easily deduce that China is focusing too much on economic and urban development, and too little on social and sustainable development. Figuratively speaking, China is focusing too much on the *quantity* of their development, and too little on the *quality* of it. In order to reach a balanced development that can continue in the future, China must drastically and rapidly rebalance their focus.

It must be remembered that these conclusions are drawn from only four basic indicators (GDP per capita, Rail Lines, Gov. Expenditure on Education as a % of Total Expenditure, and % of Alternative Energy Consumed). In order to have an indubitable and certain conclusion on the imbalances of development, many more indicators must be included. This will provide more solid insight, which likely will suggest similar conclusions to the graphs I have presented above, but surely will be much more moderated and realistic. Hopefully, this method can be improved to the point that international institutions can use it to study, analyze, and improve the development process of all countries.

The Regional Imbalance

The process of development is a complicated one that is very hard to handle and manage effectively. Furthermore, the imbalances of development do not stop at the

national level at all, but can be very significant at the regional level as well. Many countries provide a good example of this situation. Italy is strongly divided between the wealthy economic north and the poorer agricultural south.[40] Similarly, the United States has deep socio-economic inequality among many of its states, such as Mississippi, Arkansas, and Tennessee, which are incredibly poor relative to other states such as Connecticut and New York[41]. But few countries exemplify regional development imbalances as China does. The vast differences in development between Western and Eastern China have sparked deep concerns among experts.[42] In fact, the Chinese government has acknowledged these concerns, and in 2000 enacted the "Go West"[43] series of policies, aimed at developing its Western regions. Nonetheless, there is still much to be achieved.

To begin analyzing the underlying developmental imbalance between Western and Eastern China, we selected three regions from each area: Xinjiang, Gansu, and Sichuan representing the Western regions, and Shanghai, Shangdong, and Zhejiang representing the Eastern regions. Collecting the same data on the regional level proved to be more arduous and very expensive compared to collecting the national data. Thankfully, again, Trinity College provided me with an expert research team and reasonable funds that aided me in this bureaucratic process. We collected the data directly from the National Bureau of Statistics of China[44]. Because of the high cost and the lack

[40] Bohlen, Celestine. "*North-South Divide in Italy: A Problem for Europe, Too.*"
[41] Sommeiller, Estelle, and Mark Price. "*The Increasingly Unequal States of America: Income Inequality by State, 1917 to 2011.*"
[42] Lu, Ding, and William A. W. Neilson. *China's West Region Development = : Domestic Strategies and Global Implications ;* Fan, Shenggen, Xiaobo Zhang, and Ravi Kanbur. "*China's Regional Disparities: Experience and Policy*."
[43] Moody, Andrew, Hu Haiyan, and Ma Wei. "*'Go West' Policy Is an Economic Milestone for Nation.*"
[44] "Statistical Data." National Bureau of Statistics of China. Web. <http://www.stats.gov.cn/english/>.

of availability of some statistical data, we have been limited to looking only at the economic and social development of each region, with GDP per capita representing economic development, and government expenditure on education representing social development. Data on government expenditures as a percent of total expenditures was not available, and the price of collecting data on regional expenditures was too high for us to make our own calculations. To see the full collection of data, please see Appendix B (page 35). Below is the sample used for the graphs:

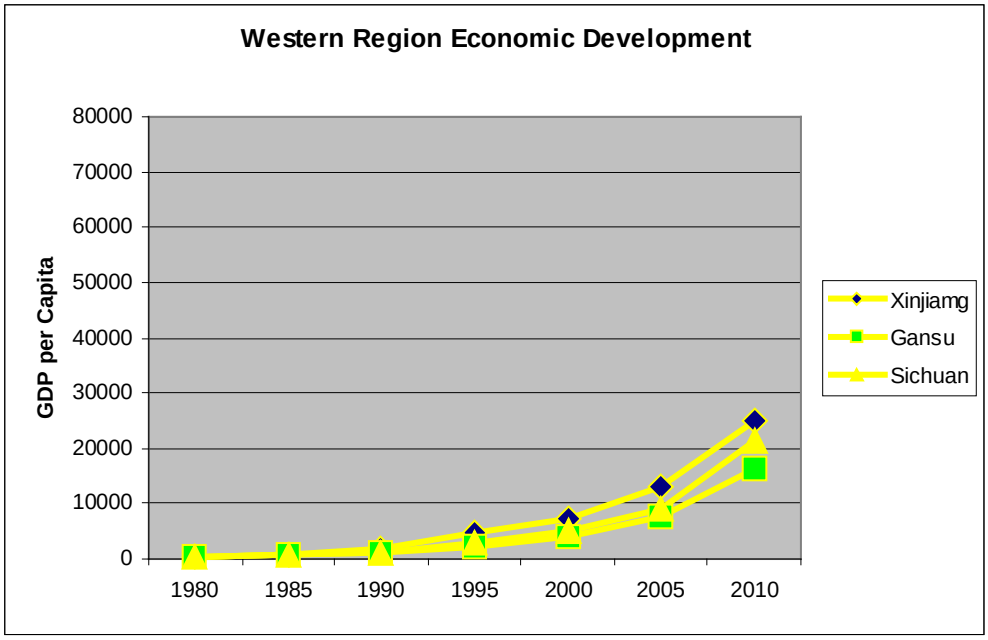
[45]

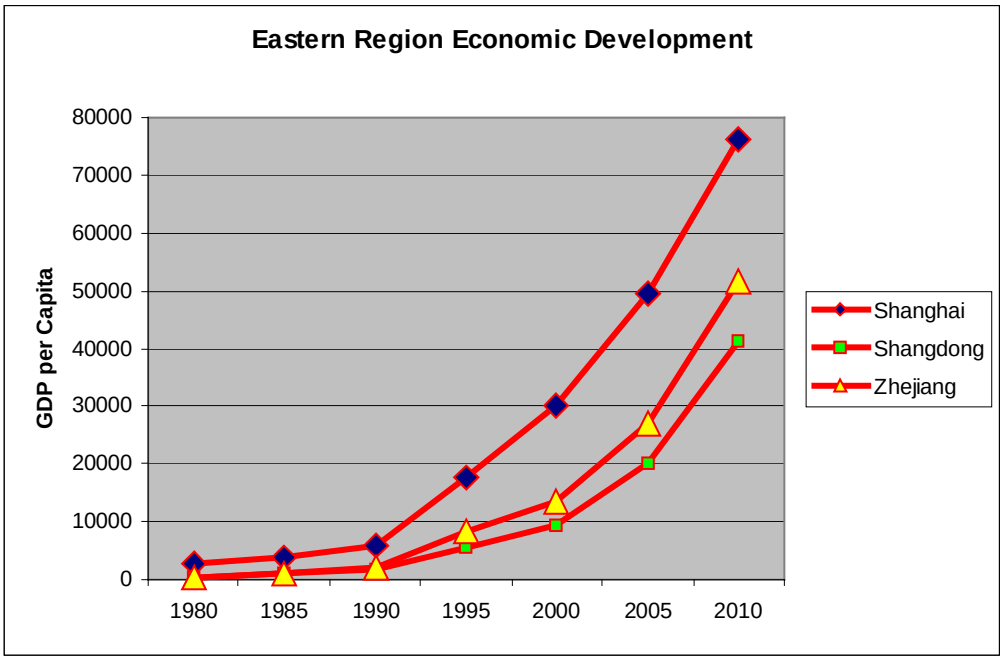
GDP	West			East		
Per Capita	Xinjiang	Gansu	Sichuan	Shanghai	Shangdong	Zhejiang
1980	410	388	320	2725	402	471
1985	820	608	570	3811	887	1067
1990	1713	1099	1136	5911	1815	2138
1995	4701	2316	3043	17779	5701	8149
2000	7372	4129	4956	30047	9326	13415
2005	13108	7477	9060	49649	19934	27062
2010	25034	16113	21182	76074	41106	51711
Education	**West**			**East**		
Spending	**Xinjiang**	**Gansu**	**Sichuan**	**Shanghai**	**Shangdong**	**Zhejiang**
1980	206.58				532.96	
1985	456.41				975.65	
1990	749.37				2020.6	
1995	1878.32		3782.81		5237.54	
2000	3135.38	2754.77	6480.48	8410.31	11810.42	7819.43
2005	7265.17	6748.31	14052.6	18294.15	24874.84	23154.89
2010	31383.56	22823.29	54065.46	41727.75	77044.72	60654.31

Even though various years were not recorded (or actively blocked from being released) and the exact indicator desired (government spending on education as a % of total expenditures) was not available, the data we did collect is still able to present the intended overview. Below are eight graphs, divided into four pairs. The first pair represents the economic development of the two regions, followed by two graphs showing their respective trend lines and gradient values. The third pair shows the social

[45] "Statistical Data." National Bureau of Statistics of China. Web. <http://www.stats.gov.cn/english/>.

development of the Western and Eastern regions, followed by two graphs showing their respective trend lines and gradients.



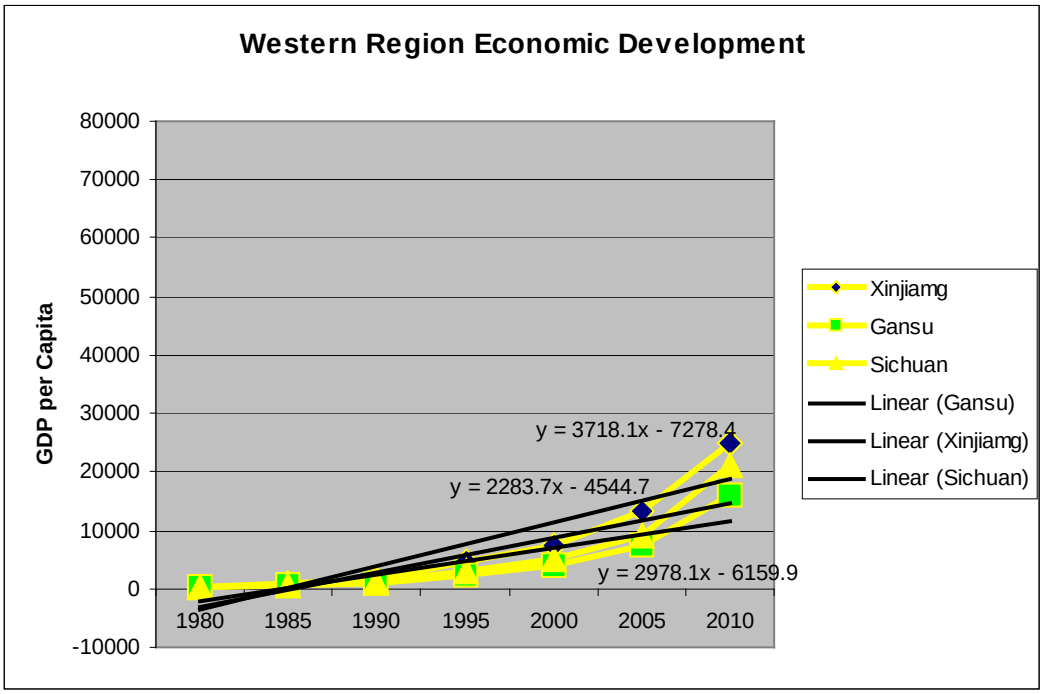


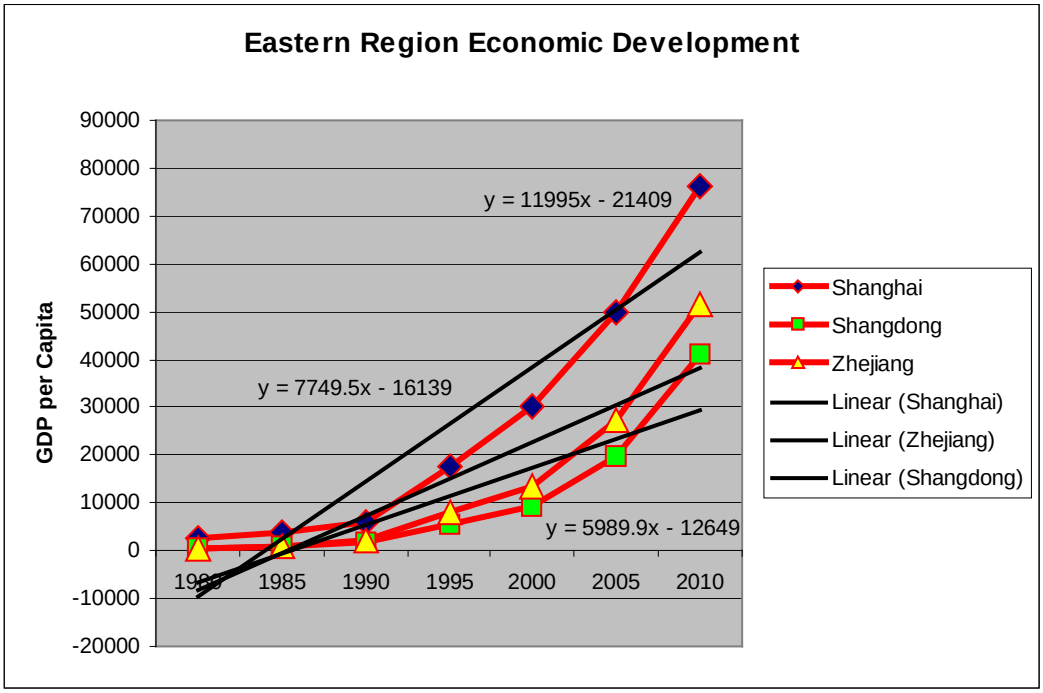
[46]

As is clearly visible at a first glance, the Eastern regions have an economic development that is increasing at a rate much greater than that of the Western regions. To put this in

[46] "Statistical Data." National Bureau of Statistics of China. Web. <http://www.stats.gov.cn/english/>.

numbers, as done earlier, we must see the actual values of the gradients and their relationship:



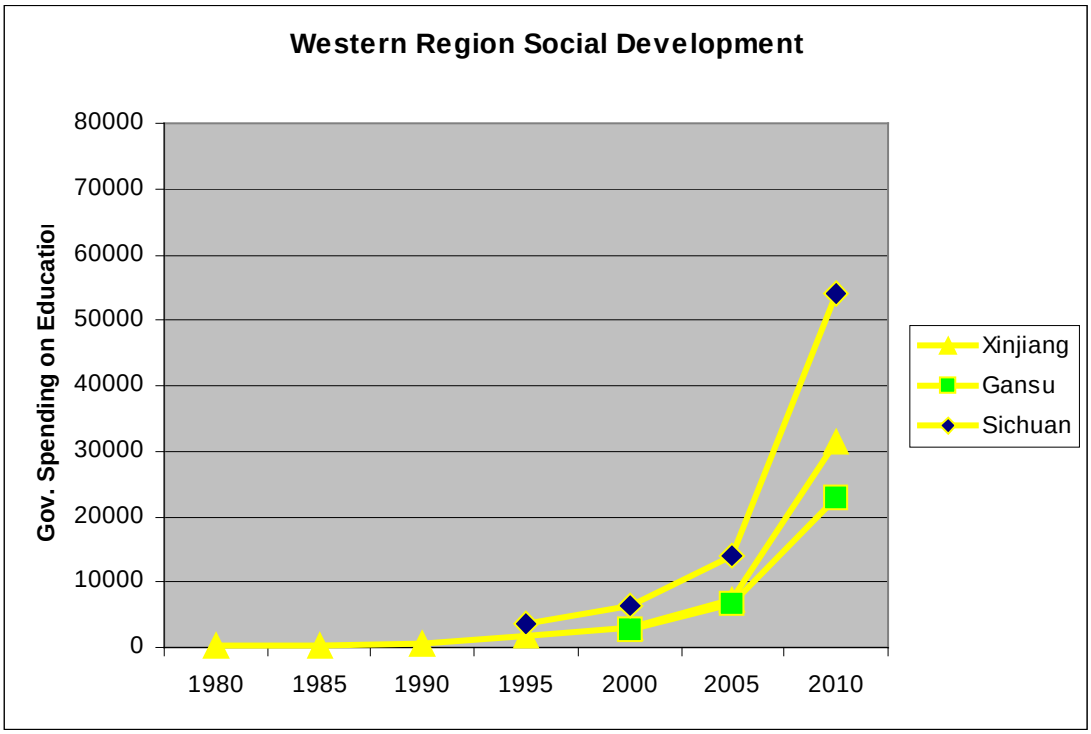


The gradients for each trend line are: 3718.1 for Xinjiang, 2283.7 for Gansu, and 2978.1 for Sichuan. For the Eastern regions, the trend lines' gradients are: 11995 for

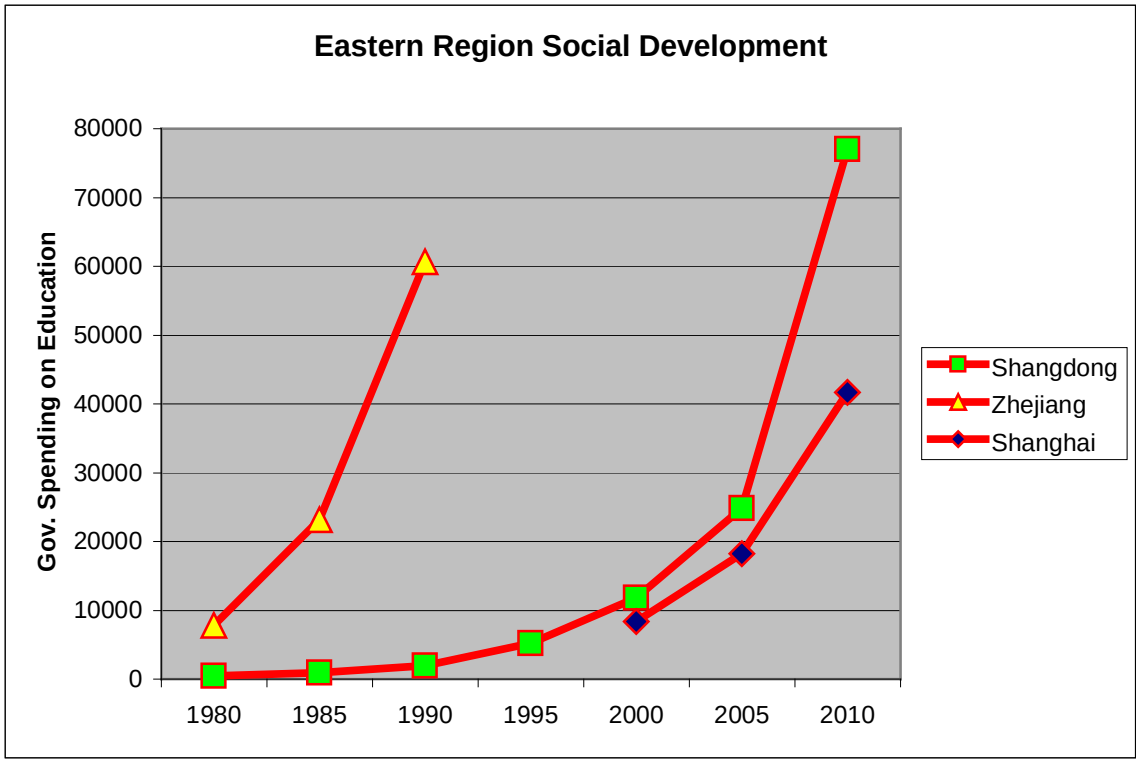
Shanghai, 7749.5 for Zhejiang, and 5989.9 for Shangdong. The Western regions average together to 2993.3, while the Eastern regions average to 8578.13. Again, there is a clear imbalance, which amounts to the Eastern regions' economic development increasing at a rate 2.86 times greater than that of the Western regions.

At the same time, there is an imbalance between the two regions' social development, as can be seen by the two graphs below.

47



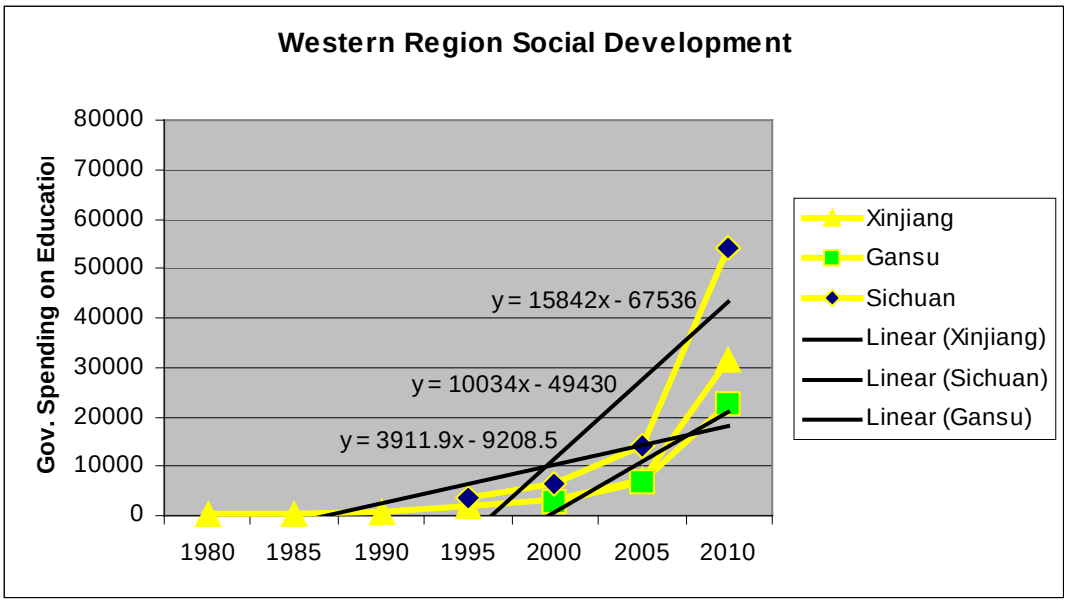
47 "Statistical Data." National Bureau of Statistics of China. Web. <http://www.stats.gov.cn/english/>.

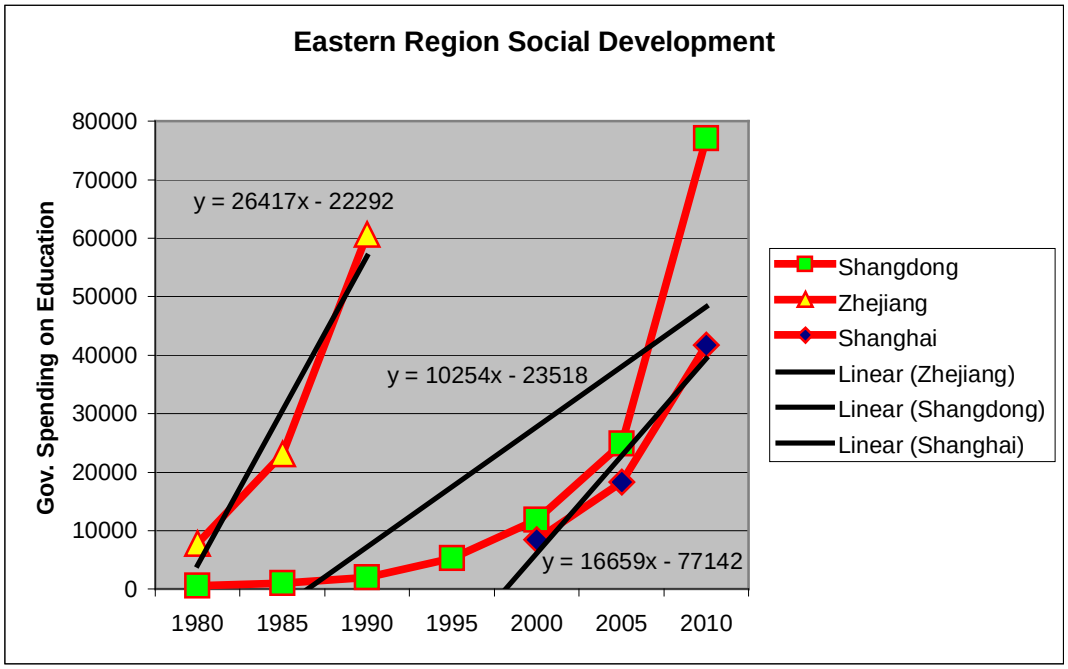


[48]

Even though the lack of data from various years for the Shanghai, Zheijiang, Gansu, and Sichuan provinces lightly skews the appearance of the data, the overall imbalance between the two regions is still fairly clear. As before, we must add trend lines and find out the gradient value to be able to give an exact number to the imbalance:

[48] "Statistical Data." National Bureau of Statistics of China. Web. <http://www.stats.gov.cn/english/>.





The gradients for the Western region are: 15842 for Sichuan, 10034 for Gansu, and 3911.9 for Xinjiang; while the gradients for the Eastern regions are: 16659 for Shanghai, 10254 for Shangdong, 26417 Zhejiang. The averages result to be 9929.3 for the Western regions, and 17776.67 for the Eastern regions; amounting to the Eastern

Regions' social development increasing at a rate 1.79 greater than that of the Western Regions.

All together these graphs and their respective gradients tell us that the economic and social development of the Eastern Regions are increasing at a rate 2.86 and 1.79 times greater than that of the Western regions, respectively. However, as said before, these numbers are drawn from few and basic indicators, and are summarized in a very simplified manner. Even so, the numbers do show that an imbalance lies between the developments of the two regions.

What do We Learn

The Development Index

To summarize, the results show that China's economic and urban development (figuratively speaking, the *quantity* of development) is increasing at a rate 2,023.85 greater than the rate of increase of the sustainable and social development (figuratively speaking, the *quality* of development). Furthermore, there is also an imbalance within between the Western and Eastern Regions of China. This imbalance amounts to the Eastern Regions having an economic and social development increasing at a rate of 2.86 and 1.79 times greater than its Western counterpart, respectively.

Using such a methodology, various implications arise. First, we know exactly how great the imbalances are, and where they lie. This allows the institutions involved in development (from the Chinese government itself and its various bureaus, to the World Bank, IMF, and UN, or any other interested international institution) to be able to actively and precisely rebalance the country's development, both at the national and

regional levels. This will allow these institutions to truly help countries achieve a healthy balance in their development process, ensuring a lasting future of increasing prosperity and social harmony.

Second, the fundamental concept that some countries are 'developed' and some are still 'developing' becomes irrelevant. Instead, through this method, all countries are perceived as constantly developing, with each country having a different balance between the various aspects of development. The goal becomes to create a healthy development process within each country, rather than focusing on solely increasing a country's GDP to compete according to today's international standards.

Lastly, following an evaluation and critique of current international standards based on published academic works, I propose that the international community should work on a comprehensive index following the above methodology, which could be referred to as the 'Development Index.' This will correspond to the average of separate aggregate indexes, which measure the various categories of development.

The categories of development should not necessarily be limited to the four used in this work (economic, urban, social, and sustainable). But they should include a broader range of aspects of development in an attempt to mirror as much as possible the true complicated nature of the process of development.

In doing so, an analyst can gain many different insights: general overviews, specific information, and comparative insights. By looking at the Development Index value for a specified country (the summarized value of all categories) an analyst gains a general understanding of a country's overall development. At the same time, by looking at the value of the separate indexes of each individual category of development, an

analyst will understand precisely were a country's strengths and weaknesses lie, and where the imbalances lie (if there are any at all).

Furthermore, an analyst can then compare between countries. This provides the analyst with examples of different countries' strengths and weaknesses, consequently providing the analyst with examples of successful and unsuccessful policies for a specific aspect of development. The intended goal would be, for example, that if Norway had the world's highest value for Social Development, policy makers could take Norway's successful policies related to that field of development and apply them to countries that had low Social Development values.

This is an appeal to all the dedicated people around the world to adopt this method, adapt it, improve it, and make the Development Index a reality. My hope is that this Development Index can help create a future in which countries will no longer forsake the well being of their citizens and environment in favor of economic and urban output. Hopefully, one day, humans will be living in a balanced world.

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Appendix A
National Data

From: World Bank. "*Indicators.*" Data World Bank. World Bank, Web. <http://data.worldbank.org/indicator>.

China	Economic	Urban	Social	Sustainable
1980	193	49,940	14	0.8
1981	195	50,182	14.71	1
1982	201	50,591	15.14	1
1983	223	51,604	16.51	1
1984	248	51,604	16.28	1
1985	292	52,119	16.57	1
1986	279	52,487	16.45	1
1987	249	52,611	16.54	1
1988	281	52,767	17.27	1
1989	307	53,187	17.39	1
1990	314	53,378	17.47	1.3
1991	330	53,416	17.77	1.3
1992	363	53,566	17.86	1.3
1993	374	53,802	18.43	1.4
1994	469	53,992	18.58	2
1995	604	54,616	19.36	2
1996	703	56,000	22.11	2
1997	774	57,566	22.40	2
1998	821	57,584	21.61	2
1999	865	57,923	22.10	2
2000	949	58,656	17.75	2.2

2001	1,042	59,079	17.91	3
2002	1,135	59,530	19.72	3
2003	1,274	60,446	19.17	3
2004	1,490	61,015	19.65	3
2005	1,731	62,200	19.95	3
2006	2,069	63,412	21.2	3
2007	2,651	63,637	20.82	3
2008	3,414	60,809	20.53	4
2009	3,749	65,491	19.93	3.9
2010	4,433	66,239	19.91	4

Appendix B

Regional Data

GDP per Capita	Xinjiang	Gansu	Shanghai	Shandong	Sichuan	Zhejiang
1980	410	388	2725	402	320	471
1981	450	367	2800	472	337	531
1982	488	393	2864	531	379	599
1983	583	462	2947	611	425	650
1984	661	515	3232	765	487	810
1985	820	608	3811	887	570	1067
1986	924	684	3956	956	614	1237
1987	1053	764	4340	1131	702	1478
1988	1347	905	5080	1395	861	1853
1989	1493	1007	5362	1595	960	2023
1990	1713	1099	5911	1815	1136	2138
1991	2101	1204	6661	2122	1283	2558
1992	2477	1384	8208	2556	1477	3212
1993	2964	1600	11061	3212	1854	4469
1994	3888	1921	14328	4441	2338	6201
1995	4701	2316	17779	5701	3043	8149
1996	5102	2946	20647	6746	3550	9552
1997	5848	3199	23397	7461	4032	10624
1998	6174	3541	25206	7968	4294	11394
1999	6443	3778	27071	8483	4540	12214
2000	7372	4129	30047	9326	4956	13415
2001	7945	4386	31799	10195	5376	14664
2002	8457	4768	33958	11340	5890	16841

2003	9828	5429	38486	13268	6623	20149
2004	11337	6566	44839	16413	7895	23817
2005	13108	7477	49649	19934	9060	27062
2006	15000	8945	54858	23603	10613	31241
2007	16999	10614	62041	27604	12963	36676
2008	19797	12421	66932	32936	15495	41045
2009	19942	13269	69164	35894	17339	43842
2010	25034	16113	76074	41106	21182	51711

Govt Expen Edu (Mil.RMB)	Xinjiang	Gansu	Shanghai	Shandong	Sichuan	Zhejiang
1980	206.58	#N/A	#N/A	532.96	#N/A	#N/A
1981	#N/A	#N/A	#N/A	544.53	#N/A	#N/A
1982	#N/A	#N/A	#N/A	628.04	#N/A	#N/A
1983	#N/A	#N/A	#N/A	676.56	#N/A	#N/A
1984	#N/A	#N/A	#N/A	775.33	#N/A	#N/A
1985	456.41	#N/A	#N/A	975.65	#N/A	#N/A
1986	#N/A	#N/A	#N/A	1147.57	#N/A	#N/A
1987	#N/A	#N/A	#N/A	1254.65	#N/A	#N/A
1988	#N/A	#N/A	#N/A	1618.89	#N/A	#N/A
1989	#N/A	#N/A	#N/A	1878.94	#N/A	#N/A
1990	749.37	#N/A	#N/A	2020.6	#N/A	#N/A
1991	#N/A	#N/A	#N/A	2251.18	#N/A	#N/A
1992	#N/A	#N/A	#N/A	2716.81	#N/A	#N/A
1993	#N/A	#N/A	#N/A	3370.52	#N/A	#N/A
1994	#N/A	#N/A	#N/A	4643.3	3431.66	#N/A
1995	1878.3	#N/A	#N/A	5237.54	3782.81	#N/A
1996	#N/A	#N/A	#N/A	6707.21	4144.92	#N/A
1997	2529.6	2011	#N/A	9077.92	5005.57	#N/A
1998	2512.1	1937	#N/A	8862.08	4830.56	#N/A
1999	2764.7	2360	7503.19	9999.02	5488.66	6379.56
2000	3135.4	2755	8410.31	11810.42	6480.48	7819.43
2001	4284.9	3598	9973.92	13775.29	8523.67	10829.8
2002	5013.4	4221	11606.59	16277.61	10225.9	13693.9
2003	5302.6	4757	13137.24	17914.84	10890.4	16420.8
2004	6139.4	5366	15535	20482.84	12252.2	20008
2005	7265.2	6748	18294.15	24874.84	14052.6	23154.9
2006	8927.9	8748	23517	29228.39	18187	31077
2007	14277	12397	28333.35	45335.74	29286	38388.9
2008	19921	18293	32606.28	55099.29	36928.1	45399
2009	24015	20636	34695.18	61348.64	45144.3	51933
2010	31384	22823	41727.75	77044.72	54065.5	60654.3