Gross Domestic Product and Social Welfare in Mexico: Are the Economists Missing Somethings

Kishore G. Kulkarni and Jeff Franklin

ABSTRACT

A proper measure of economic development should include health of the economy not just in terms of higher production but also in terms of social and psychological factors. Traditionally economic literature has ignored the measurement of any other factor than GDP to access economy's growth. The present paper discusses limitations of GDP measure and with the help of recent economic behaviour of Mexico shows that alternative measures are warranted.

Introduction

For years economists have been using Gross Domestic Product (GDP) figures as a method of measuring the economic health of countries. If a country's GDP is high or on the rise, it is often said that the economy is strong. While there are various factors taken into consideration when measuring GDP figures, not all aspects of a nation's economy are included. Some stark economic realities are therefore excluded, often blurring the gap between GDP figures and the true nature of the state of economic conditions within a country.

It is the authors' presumption that despite the impressive GDP growth of Mexico over the last few decades, economic health there is poor and declining. This is due to the lack of consideration given to income distribution, non-market transactions, diseconomies and the actual goods being produced to create the high GDP figures. Mistakenly focusing only on the total revenue within the country has put Mexico in a dire situation, where one segment of the population is benefiting and another continues to be marginalized. At the conclusion of the discussion, alternative measures of economic health are proposed for Mexico.

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Theoretical Review

Gross Domestic Product

As a practical method of measuring economic development, economists in most countries refer to GDP data. In fact, most countries use this method to report their economic activity and status. GDP, or Gross Domestic Product, is defined as the current market value of all final goods and services produced by an economy during any given income period.[1] This figure shows both total income created from current productivity in a country and the allocation of that income. Measuring economic growth through distinct analysis only came about in the early to mid-part of the twentieth century, with Nobel Prize-winning economist Simon Kuznets, who had strong interest in national income analysis and measurement, as well as economic growth.[2] GDP includes four individual components of measurement: consumption ©, investment (I), government spending (G) and net exports (X-M). Therefore, the GNP function looks as follows:

$$GDP = C + I + G + X – M$$

Where consumption represents the goods and services designed to satisfy human desires; investment refers to industrial equipment, real-estate and inventory purchases; government spending represents purchases of goods and services from the public sector that benefit society as a whole; and net exports refers to the difference between a nation's export of goods and services and those it imports.[3] While this seems a comprehensive and detailed enough measure of economic conditions in a country, GDP is by no means an all encompassing method of analysis. Yet, supporters of this method claim that only the above mentioned factors need be included for a true and complete measure of economic conditions. Thus many Well-Known economists in governments and multilateral development agencies around the globe use this method to measure economic conditions in a given nation.

Criticisms

In came the critics, stating that GDP alone could not be used as a sound and clear look into countries' economic welfare. An outspoken and well-known economist by the name of Oskar Morgenstern labeled GDP measures of economic development a "GIGO" process. That is, a method of *garbage in, garbage out.* Morgenstern criticized GDP harshly because he believed too many important factors were being left out of the process. Morgenstern offered four main arguments against GDP as a measurement of economic development. The first main argument he offered was that GDP left out notions of income distribution. The number of people in a country actually benefiting from GDP growth is not considered, rather only the products being produced. Hence GDP alone cannot do justice to economic growth measures if there are citizens in a country whom are not benefiting from that growth. Secondly, Morgenstern complained that GDP excluded non-market transactions in its analysis of economic development. Black markets and unregulated money transactions, while making up a major portion of developing countries' actual production, are left out of GDP measurements. Many Less Developed Countries (LDCs) have enormous black markets, making GDP estimates of economic welfare very suspicious simply on the fact that these markets are not considered in GDP measurements. Next, GDP fails to consider the diseconomies of a nation. That is, the down-side of economic development. Examples if this are pollution as a result of increased industrialization, obesity and health factors caused by a changing lifestyle and increased crime rates caused by rising inequalities and unemployment. However, many of the negative consequences of economic growth are considered here: higher crime rates lead to more expenditure on police service, politico-military tensions lead to increased spending on arms, increased disease rates as a result of higher pollution leads to more expenditure on healthcare services. Does this mean that GDP can overstate welfare of both the people and the economy, simply by concentrating on the numbers? The final major fault of using GDP as a measure of economic development is the fact that it does not consider what actual products are being produced, only how much of those products. GDP alone cannot monitor economic justice and welfare distribution in a country. Yet, is that not what is needed?

Why is neglecting to consider the aforementioned factors a problematic issue? This is a controversial topic, as the best method of measuring economic growth is not universally agreed upon. Governments place emphasis on crude economic growth in order to provide a higher standard of living for their people.[4] This growth is seen to be an increase in real output of an economy over time. While "growth" lends itself to a certain level of ambiguity, it is often associated with some types of economic expansion in the form of gross production level and money generated in or by an economy. The four factors included in GDP mentioned earlier are combined to create gross production and cash generation in an economy. Yet, they leave behind four important notions. Economic growth should be an all inclusive measure, one which measures the economic equality of a nation's people.

Some elaboration on each of the criticisms is warranted in order to further explore and understand the potentiality of GDP faults. Most notably, the notion that GDP measures do not include room for income distribution considerations is worrisome. Therefore, it is fair to make a statement that even if a country is experiencing a rising GDP and rising inequality in income distribution at the same time, many GDP supporters would call this economic development. It this fair? Let us imagine that Indonesia suddenly enjoys a tremendous rise in real GDP due to increased exports of lumber and copper products. At the same time, due to monopolies in the copper and timber industries and regional concentration, Indonesia's real poverty levels increase because income distribution is segmented.

Would it be an honest and accurate statement to say that Indonesia is experiencing economic development or merely income growth for a certain segment of the population?

Next, by not acknowledging the non-market sector of any particular economy, GDP measurements leave up to 35% of some LDCs' economies out of the equation. It is said that Mexico's non-market segment is so extensive that it makes up between 25% and 35% of the country's economic activity.[5] Without considering this aspect, mostly due to the fact that measuring a country's underground economy is nearly impossible to do accurately; can GDP be trusted as accurate? It seems not, mainly due to the notion that most in the underground economy avoid income tax. An example of the third criticism of GDP, which is the statement that it fails to measure economies justly by excluding 'diseconomies', is pollution. For instance, while Vietnam's GDP has increased dramatically over the last decade, so have pollution levels in Ho Chi Minh City and Hanoi. This increased pollution has adversely affected water safety for and respiratory health of the Vietnamese.[6]

Despite this, GDP measurements simply focus on the boom in the country's gross export figures and conclude that the country is experiencing an overall boom.

Lastly; by not considering the actual products being produced in an economy to create the GDP numbers, GDP can be misleading. If Mexico's main exports were to be a labor-intensive good such as sugarcane, GDP proponents would not concern themselves. As long as a high number of exports were resulting from the production of sugarcane, it would not matter the effect sugarcane production alone would have on Mexican society (e.g. mono-cropping limiting occupational diversity and opportunity, creating competition for low wage jobs and increased unemployment and underemployment). Looking into an economy from the outside using solely GDP potentially offers a blurred picture of economic reality. In the Mexico example above one might assume that most Mexican citizens are better off due to the increased export-caused GDP, yet it becomes evident that this is a premature statement.

Definitional Problems

The issue we are dealing with here is not so much that GDP as a measure is an unwanted or unuseful thing, rather only that it has been used to analyze something for which it truly cannot: a nation's economic welfare. Even if per capita incomes were rising in a country it does not automatically mean that its citizens are better off. It is not such a simple notion. "Defining economic growth solely in terms of per capita income is inadequate because there is no indication of its effect on the welfare of the population".[7] What GDP does measure sufficiently is economic growth. The differentiation between the terms economic growth and economic development is a touchy issue, often misunderstood, yet very profound. In fact, many famed economists have used the terms interchangeably.[8] Many believe that economic growth is synonymous with development; one begets the other. However, the distinction is tremendous and important to clarify.

While economic growth is indeed needed in order for a country to experience economic development, it does not guarantee the former. The noted Harvard economist, Simon Kuznets, labeled economic growth as a long-term rise in a government's ability to supply growingly diverse goods to its population, based on technology and ideological adjustments that are demanded.[9] This usually comes about in an increase in generated income and spending. What GDP does not do is look into the micro-level for benefit measurement or avoidance analysis vis-a-vis employment figures, health problems, income share or diversity of goods produced. Enter Gunnar Myrdal, who defined economic development as ".... the movement upward of the entire social system..." within a country.[10] Myrdal considered economic as well as non-economic factors in measuring economic development: education and healthcare access and infrastructure, distribution of power, class structure, etc.[11] These are important considerations because one must look at the individual, micro-level when attempting to analyze the health of a country's economy. After all, it is the people of a society that make up the economy. Without the workers in a factory, there would be no factory in which to earn income or generate profit. Without agricultural and manufacturing laborers, exports for profit would be impossible. Without people paying taxes no governments can increase spending and investment, there would be no government. Thus it is imperative to consider the welfare and benefit of the individual when considering notions of economic growth and development. Growth alone offers no guarantee of development or a "movement upward" in the social system. While development implies that growth is taking or did take place. Oskar Morgenstern said it best by stating that comparisons of relative growth and development demand more specific indexes "in addition to qualitative, historical, sociological description[s]".[12] Growth without development is a common experience in underdeveloped areas of the world.[13] As Simon Kuznets pointed out, modern economic growth is, "...not compatible with...." social problems such as inequality and education problems.[14] Then, what good is growth without development?

A Focus on Development

GDP is a fine tool for measuring the growth of money and spending in an economy, as long as would-be readers of GDP figures realize they are looking at growth numbers and not development numbers. In the following case involving Mexico, it is argued that increased GDP (i.e. increase in money income and spending) has not trickled down to the individual evenly across the country. Thus it is argued that while economic growth is taking place in Mexico, economic development is lagging behind and in some cases experiencing a regression. GDP figures in Mexico, lauded by so many around the world including economists and NAFTA supporters, are painting too rosy a picture of Mexico. The real welfare of the economy, by looking through the economic-growth-only lens, is being obscured by numbers and charts. When concentrating on development factors, it becomes evident that Mexico's true state of affairs is far bleaker than GDP champions would have us believe.

Mexico Case Study

The Numbers

Mexico has experienced tremendous economic growth in real terms over the past several decades. With its strategic location in trading with the United States, the liberalization of markets and welcoming in foreign investment, the country has boomed especially in the period from 1970 to 2000. In fact, real GDP grew by 205% from 1971 to the year 2001. That translates into $265 billion and $807 billion respectively.[15] As of the year 2004, Mexico's GDP stood at just over USD $941 billion (in PPP terms).[16] While GDP growth has fluctuated dramatically in recent years, from 6.6% in 2000, to -0.3% in 2001, to 0.9% in 2002, the average annual GDP growth rate from 1998 to 2001 was 3.5%.[17] NAFTA's implementation no doubt had a lot to do with Mexico's surging GDP. Increased exports and foreign direct investment have brought to the country a mass monetary presence. One might conclude that average Mexican's is celebrating with the increased wealth and living a far better life than say, 35 years ago, before the boom began. Yet, according to the Organisation for Economic Co-operation and Development (OECD), these figures conceal huge disparities within Mexico because recent growth has not been shared equally in all regions or among all social groups.[18] Looking into the figures, we see that 40% of the population currently lives below the poverty line and there is a GINI index of 53.1, making inequality in the distribution of wealth very obvious.[19] The GINI index proves that not everyone in Mexico is benefiting from the growth. It is for this reason that a further analytical look into the Mexican economy is warranted in order to find out who is benefiting and who is being marginalized.

Beneath the Surface

Looking beyond the real GDP figures, it is paramount that researchers and economists alike scale down to the micro, individual level in order to get a true picture of the economy. Income distribution is highly unequal in Mexico, despite these seemingly prosperous times.[20] Due to high income polarization, per capita GDP measurements are not representative either. In fact, per capita income was lower in 1996 than it was in 1980.[21] Inequality is one of the main socio-economic issues in Mexico at the moment. As a result, a huge underground economy (or non-market economy) exists throughout Mexico, in urban and rural areas alike. Additionally, environmental damage has taken place at an alarming rate since the economy took off in GDP terms. This has affected the health of the population and the quality of life overall. A final and important reality that exists in Mexico is the lack of diversification in GDP boosting goods - which rely heavily on export to the United States. The country is basically limited to service, textile and oil sector revenues for the major composition of its impressive GDP. Additionally, the country held nearly $ 160 billion in external debt as of 2004.[22] While Neo-classical economists would cheer in approval of this fact due to comparative advantage and factor endowment theory, the problem is that the lack of diversity has marginalized the Mexican population, both in terms of income and poverty.

Background: Causes and Underlying Factors

The Private Sector and Ineouality

A few decades ago, Mexico began to loosen its economic grip on society and allowed increased private sector influence. This economic liberalization policy proved successful, in some ways, as evident by a surge in real GDP. However, critics of the liberalization point out that the state's capacity to act on behalf and in the interest of the country's weaker groups was diminished.[23] This shift to private sector influence and some say control, created conditions for greater inequalities.[24] As private sector interests are gaining increasing influence on political outcomes, average laborers have lost many of their bargaining rights. Evidence shows that the main benefactors of the increased in GDP and economic liberalization have been big businesses, despite the state's attempts to create a more competitive and deregulated economy.[25] As a result, more than 28,000 small businesses have disappeared since the 1980s.[26] Textile industry laborers have suffered dramatic losses as well since the shift, having their salaries cut by nearly 52% in real terms from 1987 levels.[27] This leads the alert researcher to believe that while some have prospered because of the shift, a greater number has suffered or been left behind. The OECD even points out that income distribution in Mexico was more unequal in 2000 than in 1984.[28] This relates back to Oskar Morgenstern's first complaint of GDP as an economic welfare measurement. Morgenstern claimed that economies overlook distribution of income, or who is actually benefiting from growth, when using solely GDP figures to gauge welfare.

Lack of Diversification

Another reason why it is a fallacy to use GDP as an indicator of economic welfare in Mexico is the low level of diversification that exists. This is true both for industry type and geography. GDP-boosting sectors of the Mexican economy are located in only a few select regions. In fact, the industries that affect the national income are few in number as well. The service industry makes up nearly 70% of Mexico's GDP.[29] This plays into Morgenstern's concern that by focusing on GDP alone, countries pay no worry to the products actually being produced; rather, only the volume of product that creates the GDP figure. The dynamics of the southern part of Mexico vs. the northern areas may be able to explain some of the rising income inequality in the country.[30] Oil and gas makeup 1/5 of total government revenue in Mexico.[31] This is Mexico's main factor endowment: petroleum. Yet, these sectors are highly localized. The states of Campeche and Tabasco in the south of the country are where the majority of the oil and petrochemical reserves are located.[32] People here live far better than other southern neighbors due to the high incomes of workers in the oil industry. However, other states in the south including Chiapas are the poorest in Mexico, where people struggle to maintain a basic lifestyle. Contrary to the south, the northern border areas of Mexico thrive on increased trade with the United States. In fact, they depend so much on trade with America that 88% of all exports are purchased by U.S. entities. Textile exports makeup the other large portion of GDP. Textile-based products, some of which are merely assembled in Mexico, (therefore categorized as services industry trade) are Mexico's strong point. As one can imagine, due to fierce international competition for cheap goods, U.S. buyers of Mexican textiles demand cheap labor to produce them. However, as U.S. companies flock to build textile factories in U.S. border-states for easy shipping and cheap labor, Mexico is morphing into a country that has only one thing to offer in terms of trade. While this is not a negative thing this has put the country in a situation where there are too many competing for the same jobs. Since GDP does not allow for consideration of diversification in goods produced, Mexico is now an oil, textile and services country, where the two largest sources of foreign exchange earnings are oil and textile factories (*maquiladoras*).[33] Those that cannot break into these industries, or who do not live in an area where they exist, are left to dwell in the margins of the economy. This brings other major notions of unemployment, working conditions and migration into play.

The 'Non-market' Sector

So where do those Mexicans who do not fit into the economy's main industries go? What do they do? Simply put, they find alternative ways to survive. Mexico's underground economy[34] is extremely extensive. Some estimates put the underground economy's contribution to GDP as high as 35%.[35] Major job shortages due to lack of diversity in industry (thus creating too much competition for too few jobs) markedly influenced the rise in Mexico's informal sector.[36] The reasons why such a large informal sector is bad for the economy, and proves that GDP measurements of economic welfare are a fallacy, are four-fold.

1. Informal sector workers are also tax-evaders. The larger the informal sector, the less fiscal revenue a country generates. As the top marginal tax rate in Mexico is 35% (on individuals earning less than USD $8,000), many choose not to report income, creating a vicious cycle of tax avoidance/government revenue loss.[37]

2. Without knowing what is truly happening in the economy because of such a large informal sector, it leaves room for major statistical distortions. Not knowing the actual size of the economy, its growth rate, employment figures, income distribution, etc., how can one trust GDP as a credible measuring method? [38]

3. Contraband: the illegal production, transportation and sale of drugs were worth nearly USD $15 billion in 1993 alone.[39] While it is surely an empirical matter, one has to assume that drug revenues are factored into Mexico's GDP.

4. Informal sector participants are strong and unfair competitors for the formal market. This has forced countless legitimate businesses out of the marketplace, preventing them from generating legal growth rates in production and sales of their respective products or services.[40]

Economic Growth and Diseconomies

As Mexico is a free market economy, private businesses are allowed to flourish, and in some cases lured into increased investment via tax incentives and other favors. As Mexico was anxious to open up economically to the world and the private sector became increasingly dominant, resulting threats were not considered. Virtually blinded by the prospect of higher GDP numbers, Mexican officials paid inadequate attention to pollution controls and infrastructure considerations. This lack of concern (evidenced by an absence of protection policies) led to severe environmental degradation.[41] As is often the case when increased production and economic growth occur in a country, the environment can be damaged if not considered in policies favoring that growth. This is especially true in LDCs. Oskar Morgenstern was concerned with putting all stock into GDP for analyzing economic welfare because it overlooks the diseconomies[42] often created as a result of expanding production. Sometimes referred to as the "downside" of economic growth, the diseconomy most apparent in Mexico is pollution. Natural fresh water resources are extremely polluted in the Northern part of the country where most of the factories for export are located.[43] In Mexico City, industrial effluents pollute waterways along with the air. Ozone levels in Mexico City currently surpass World Health Organization standards 300 days out of every year.[44] Carbon emissions, as a result of increased energy use, are also a major dilemma in Mexico. In the period from 1980 to 1998, the country's total carbon emissions rose nearly 62%.[45] It does not take an environmental scientist or health specialist to figure out that all of this pollution has had an adverse effect on the health of the people of Mexico. The air pollution is so severe in the capital city that the Mexican Health Secretariat claims more than a third of Mexico's disease burden is the result of that air pollution.[46]

Increased production for export has no doubt created positive GDP results in Mexico. While a rising GDP is a net positive, it does not consider the negative effects the rise may have on a society and its people. Economic growth is good, but what are the downside effects of booming production and trade? GDP alone fails to consider this important notion of an economy's welfare, and does so here in case of Mexico.

Economic Growth VS Economic Development in Mexico

Economic growth does not necessarily guarantee economic development, or as Myrdal puts it, "...a movement upward of the entire social system...." If society is suffering from pollution-related disease and lack of freshwater resources despite the fact that real GDP is on the rise, can one genuinely claim that the economy is better off? What GDP measurements *do* for Mexico is give us a peak into the output of the country. Mexico has witnessed tremendous growth in overall revenue due to increased consumption, investment, government spending and net exports. This is deservingly applaudable. The preceding text was not meant as an implication that Mexico's growth is wrong for Mexico and that it should reverse that growth. Contrarily, Mexico's growth can be seen as similar to one of the Asian Tigers. The intention of this discussion was to urge the economist and the researcher not to be content with GDP alone as a measurement of economic welfare. What Mexico has been experiencing, as laid out in the definitions in part II of this discussion, is economic growth without the corresponding development, at least, without comparable development. The entire social system needs to be included as the vital umbrella which covers economic analysis. The entire social system is not moving up at the same rate as GDP growth in Mexico. Hence, we cannot say with complete confidence that the country's economic welfare is secure. It can only be stated that Mexico's economy is growing.

As long as inequality remains high, lack of geographic and sector diversification persists, and the underground economy flourishes and major diseconomies go unchecked; GDP measurements will fall short of describing the economic welfare of Mexico. To evaluate the true state of affairs in Mexico's economy, an index, or a set of indices, which measure income distribution, health, unemployment, migration, etc. along with GDP is needed. The World Bank's Human Development Index is a plausible option, yet it is not usually accepted by economists due to the broad scope of its measure. When studying the economic state of Mexico, we need researchers to be inquisitive and investigatory in his/her search for economic indicators. Do not stop at GDP, rather, look into the type of goods making up the economic growth, the level of inequality vis-a-vis income distribution, the extent and power of non-market transactions, and the types and severity of externalities caused by the economic growth and their effects on the population.

Conclusionary Statements

At the outset of the preceding discussion on Mexico's economy, it was presumed that GDP figures were a misleading phenomenon for that country's economic welfare. Through analyzing the criticisms of Oskar Morgenstern and viewpoints of Simon Kuznets and applying those to factual data, it was found that indeed the economic conditions in Mexico are not as optimistic as GPP proponents would have us think. Despite the impressive extent of Mexico's economic growth, we see that the socio-economic conditions in Mexico are far behind the GDP numbers.

Put quite simply, GDP alone fails as an indicator of economic development. It is indeed true that Mexico has experienced remarkable economic growth since the 1970's, and more recently from NAFTA's implementation, however the microeconomics *do* not match up to the macro-level data. A reputable index of measuring economic health should include aspects of the human condition in order to be truly comprehensive and accurate. GDP as a measure is a fallacy because it fails to consider quality of life issues. Whether it is the vast inequalities in income due to the lack of diversified products and industry-heavy regions, the detrimental health effects brought on as a result of the push for industrialization and increased trade (e.g. increase in factories in the capital and U.S. border areas), or the strong influence of the underground economy, Mexico is obviously not doing as well economically as the GDP tells us. When evaluating the Mexican economy and whether or not it is truly developing, one needs to ask vital questions: Who is benefiting from this increased GDP growth and is it evenly distributed? What has been the effect on the environment since the increase in in-country revenue? Has there been a boom in the underground economy? What products/services are being utilized in order to create this GDP growth, and is there any diversity or are we simply relying on a small number of industries and goods?

It is the authors wish that a new index of economic development measurement be created and utilized where all of the above factors are considered. Until that time, one has to be skeptical of solely trusting GDP data as an accurate measure of the development of the economy of Mexico. After all, it is the ".....movement upward of the entire social system......" that we desire and not just a larger Gross Domestic Product.

NOTES

1. Peterson, W. and Estenson, P. *Income, Employment and Economic Growth,* (W.W. Norton & Company, 8th ed., 1996), p. 40.
2. Peterson and Estenson, p. 42.
3. Peterson and Estenson, p. 45.
4. Morgenstem, Oskar. *On the Accuracy of Economic Observations.* (Connecticut: Connecticut Printers, Inc., 1963), p.283.

5. Fraser Institute website: http://oldfraser.lexi.net.
6. This knowledge comes from the author's first-hand experience while living in Viet Nam as a journalist from 2001-2002.
7. Kulkarni, K.G., et al "Economic Growth and Income Distribution in Malaysia: A Test of the Kuznets Inverted U Hypothesis." *Prajnan* 16, 4 (1997-98), p. 487.
8. Brinkman, Richard "Economic Growth versus Economic Development: Toward a Conceptual Clarification." Journal of Economic Issues 29, 4 (1995), p. 1177.
9. Brinkman, p. 1178.
10. Brinkman, p. 1179.
11. Brinkman, p. 1179.
12. Morgenstern, p. 301.
13. Brinkman, p, 1184.
14. Ibid.
15. Energy Information Administration website: www.eia.doe.gov.
16. Central Intelligence Agency website: www.odci.gov/cia.
17. State Department website.
18. OECD. *Territorial Reviews: Mexico.* (Paris, France: OECD Publications, 2003), p. 31.
19. Central Intelligence Agency website: www.odci.gov/cia.
20. Ibid.
21. Foreign Affairs website: www.foreignaffairs.org.
22. Central Intelligence Agency website: www.odci.gov/cia.
23. Kleinberg, R. and Clark, J. *Economic Liberalization, Democratization and Civi1 Society In the Developing World* (New York: St Martin's Press, Inc., 2000), p. 219.
24. Ibid.
25. Kleinberg, p. 226.
26. Kleinberg, p. 230.
27. Kleinberg, p. 232.
28. OECD, p. 32.
29. Central Intelligence Agency website: www.odci.gov/cia.
30. Bovillon, C., Legovini, A. and Lustig, N. "Rising Inequality in Mexico: Returns to Household Characteristics and the Chiapas Effect," (*Inter American Development Bank / World Bank,* October, 1998), p. 15.
31. State Department website.
32. Oreggia, Eduardo R. "Regional Policies and Income Disparities in Mexico: A Review of Convergence Aspects," (*Secretaria de Desarollo Social,* January, 2000).
33. Kleinberg, p. 225.
34. Defined as activities that generate revenue into the economy but which are not regulated or registered by the government. Examples include street vendors, prostitution, drug dealing, street side barbers, shoe shining, etc.
35. Fraser Institute website.
36. Ibid.

37. Ibid.
38. Fraser Institute website.
39. Ibid.
40. Ibid.
41. Energy Information Administration website.
42. Defined as external factors created by a growing economy. In this case, I am referring to negative consequences on society and the environment; namely, pollution, disease, increased migration due to job loss, etc.
43. CIA website.
44. Ibid.
45. Ibid.
46. Energy Information Administration website.

BIBLIOGRAPHY

Bouillon, C., Legovini, A. and Lustig, N. "Rising Inequality in Mexico: Returns to Household Characteristics and the Chiapas Effect," *Inter American Development Bank / World Bank,* October, 1998.

Brinkman, Richard "Economic Growth versus Economic Development: Toward a Conceptual Clarification." *Journal of Economic Issues* 29, 4 (1995): 1 171-1185.

Castaneda, J.G. "Mexico's Circle of Misery: How U.S. Bailouts Postpone Reform." *Foreign Affairs*. http:/www.foreignaffairs.org/19960701faessay421/Jorge-g-castaneda/ mexico-s-circle-of misery (Accessed on May 16, 2004).

Central Intelligence Agency. "Mexico." *The World Fact Book*. http://www. odci.gov/cia/ publications/factbook/geos/mx html (Accessed on May 2, 2004).

Energy Information Administration, U.S. Department of Energy. "Mexico: Environmental Issues." *Country Analysis Briefs.* http://www.eia.doe.gov/cabs/mexenev.html (Accessed on May 16, 2004).

Morgenstern, Oskar. *On the Accuracy of Economic Observations.* Connecticut: Connecticut Printers, Inc., 1963.

OECD. Territorial Reviews: Mexico. Paris, France: OECD Publications, 2003.

Oreggia, Eduardo R. "Regional Policies and Income Disparities in Mexico: A Review of Convergence Aspects," *Secretaria de Desarollo* Social, January, 2000.

Kleinberg, R. and Clark, J. *Economic Liberalization, Democratization and Civil Society In the Developing World*. New York: St. Martin's Press, Inc., 2000.

Kulkarni, K.G., et al "Economic Growth and Income Distribution in Malaysia: A Test of the Kuznets Inverted U Hypothesis." *Prajnan* 16, 4 (1997-98): 487-499.

Peterson, W. and Estenson, P. *Income, Employment and Economic Growth.* W.W. Norton & Company, 8th ed., 1996.

State Department. "Mexico Background Information." *Country Background* http:// www.state.gov/documents/organization/8208.pdf (Accessed on May 19, 2004).

Winkler, Raymundo. "The Size and Some Effects of the Underground Economy in Mexico." *The Fraser Institute* http://oldfraser.lexi.net/publications/books/uderground/ section_3.html (Accessed on May 16, 2004).