Growth in Guatemala: A Mixed Blessing for the Poor

<http://godinternational.org/godintl/wp-content/uploads/2008/08/guat08-9528-640x480.jpg>

Lucas Paine Van Meter

Haverford and Bryn Mawr Colleges

Growth in Guatemala: A Mixed Blessing for the Poor

Lucas Paine Van Meter

ABSTRACT:

One of the most important questions in development economics is: who benefits from economic growth? The present study attempts to answer this question, with regard to one country in particular: Guatemala. Some of the literature on this topic claims that its growth is not pro-poor, meaning it does not benefit individuals below the poverty line. Some of the variables held culpable for this phenomenon include the rise to power of an elite oligarchy that supposedly captures the benefits of growth. Others blame increasing inequalities in infrastructure, productive assets, opportunities and the like. But by observing data, especially that which has been collected since these studies were published, one can see that the malevolent oligarchs have actually done an excellent job of reducing poverty. However, some questions remain with regard the structure of this evidently pro-poor growth. The data suggest that growth occurs differently in different regions. Perhaps more alarming is the fact that when one lowers the poverty line, growth becomes non-pro-poor. And, finally, there is a period of non-pro-poor growth between 2000 and 2002. This paper first demonstrates the existence of this structure of growth, using data from years as recent as 2006 in the context of various mathematical tests of pro-poorness. It then suggests the variables that influence pro-poorness, including high relative inflation in consumer goods and changes in labor force activities and international commodity prices. Based on these conclusions as well as evaluations of past policies, this paper makes policy recommendations with the intent of fostering pro-poor growth in Guatemala.

SECTION 1: METHODOLOGY AND TERMINOLOGY

Defining "Pro-Poor Growth:"

Before either this paper's contribution or the literature surrounding the topic can be discussed, the reader must become familiar with the measures, methods, and terms that will be used from here on. First to be discussed is the definition of pro-poor growth. Broadly speaking, pro-poor growth refers to economic growth that is beneficial to the poor. But what is unclear is how beneficial growth should need to be. Not surprisingly, almost any instance of economic growth contributes to poverty reduction. In other words, if a country is getting richer overall, the chances are good that poverty is being reduced. Should the criteria defining pro-poor growth be that inclusive? While there are some times when it is beneficial to view pro-poor growth in this light, it's usually expected, and therefore doesn't really tell us anything new. The alternative is defining economic growth as pro-poor if the poor benefit more than do the rich.[1] The problem with this case is that, in some instances, it highlights the wrong priority. For example, in China in the 1980s, market liberalization and decollectivization resulted in massive growth that benefited the rich more than the poor. But still, the poor gained far more than they would have if this second definition of pro-poor growth had been the goal. There is no single right definition of pro-poor growth, so this paper will use the two previously discussed. In the literature, these definitions are called absolute and relative pro-poorness, respectively.[2]

---

[1] Ravallion, Martin and Chen, Shaohua. "Measuring Pro-poor growth." *Economic Letters* (2003) Vol. 78, No. 3, pp. 93-99

[2] Shorrocks, Anthony and Van Der Hoeven, Rolph. *Growth, Inequality, and Poverty.* Oxford: Oxford University Press. 2004

We now seek to define pro-poor growth in mathematical terms. The purpose of this is to establish a clear and testable difference between pro-poor growth and non-pro-poor growth so that we can later gain a picture of what form growth has taken over the years in Guatemala. The first logical step is to choose an index with which to measure the level of poverty. The index that best satisfies the axioms proposed by Amyarta Sen (1976) is the Watts index, introduced by H.W. Watts in 1968. The aforementioned axioms are those that ensure that changes in various factors (such as number of poor or depth of poverty) have effects on the poverty measure of interest that agree with basic intuition. The Watts index can be represented as follows:

$$W = \int_0^{H_t} \log\left[\frac{z}{y_t}(p) \right] dp$$

Where W is the Watts index, H_t is the headcount poverty index at time t, z is the poverty line, y_t is income at time t, and p is the quantile of income, varying from zero to one.[3] This paper, however, talks about *changes* in poverty – not poverty in its absolute sense; therefore, we need to measure the *change* in the Watts index over time. To do this, one simply differentiates the Watts index with respect to time (t). This is multiplied by negative one for simplicity of explanation:

$$-\frac{dW_t}{dt} = \int_0^{H_t} \frac{d\log y_t(p)}{dt} dp = \int_0^{H_t} g_t(p) dp$$

Where:
$$g_t(p) = \left[\frac{y_t(p)}{y_{t-1}(p)} \right] - 1$$

---

[3] Ravallion, Martin and Chen, Shaohua. "Measuring Pro-poor growth." *Economic Letters* (2003) Vol. 78, No. 3, pp. 93-99.

In other words, $g_t(p)$ is the growth rate of income within the pth quantile, or the growth incidence curve. Therefore when one integrates this with respect to p, from zero to H_t, he or she is left with the area under the growth incidence curve up to the poverty line.[4] Therefore, the change in the Watts index (W), which will be taken to mean the change in poverty, is the opposite of this. This can be regarded as the opposite of the amount of income growth that occurred within the poor population between t-1 and t with more emphasis given to the poorer observations. This weight is given because the x-axis of the growth incidence curve is not just the observations (or groups of observations) ranked by income, but rather population quantiles ranked by income. These are cumulative, which means if the growth pattern is one that changes inequality among the poor without changing the average growth rate of income in this group, the growth incidence curve will show a larger deviation (from 0% growth) among the very poor than among the less poor.

This index yields an intuitive, meaningful understanding of the level of poverty. If the income of any subgroup below the poverty line falls, the Watts index increases. If a household increases its income enough to rise above the poverty line, the Watts decreases; this is because the poverty "line" used in the Watts index is in the form of a the headcount index (at time t), which is a population quantile, and is therefore fixed with respect to the number of observations described. The Watts index falls given an inequality reducing transfer among the poor, ceterus paribus, because of the extra weight given poorer observations. Finally, the Watts index is, intuitively, unresponsive to changes in income among the non-poor. [5]

---

[4] Ravallion, Martin and Chen, Shaohua. "Measuring Pro-poor growth." *Economic Letters* (2003) Vol. 78, No. 3, pp. 93-99.

[5] ibid.

Now we are at the final stage of defining pro-poor growth mathematically. Recall that this paper refers to two different types of pro-poor growth: relative and absolute. Absolute pro-poor growth simply requires that the poverty measure of interest falls during periods of growth. Since this paper measures poverty with the Watts index, economic growth can be called pro-poor in absolute terms if $\frac{dW_t}{dt} < 0$ whenever $\frac{dY_t}{dt} > 0$. In relative terms, economic growth can be called pro-poor if the poor benefit relatively more than do the non-poor. This can be determined by observing the growth elasticity of poverty reduction, which is as follows:

$$\varepsilon_{W_t,Y_t} = \left[-\frac{dW_t}{dt} \middle/ W_t \right] \middle/ \left[\frac{dY_t}{dt} \middle/ Y_t \right] \approx \ln\left[-\frac{dW_t}{dt} \right] \middle/ \ln\left[\frac{dY_t}{dt} \right]$$

Economic growth is pro-poor in relative terms if $\varepsilon_{W_t,Y_t} > 1$ and non-pro-poor if $\varepsilon_{W_t,Y_t} \leq 1$ because the elasticity measures how much the poor are benefiting relative to the entire population.[6] The tests of absolute and relative pro-poorness discussed above will be used to determine the character of economic growth in Guatemala.[7]

Indicators:

There are many indicators used in this report. To start with, the Gini Coefficient and the MLD (Mean Log Deviation) index measure general inequality. The Gini can be regarded as the

---

[6] Shorrocks, Anthony and Van Der Hoeven, Rolph. *Growth, Inequality, and Poverty.* Oxford: Oxford University Press. 2004

[7] Ravallion, Martin and Chen, Shaohua. "Measuring Pro-poor growth." *Economic Letters* (2003) Vol. 78, No. 3, pp. 93-99.

area between the country's Lorenz curve and that which represents a perfectly even distribution. The MLD index is the weighted sum of inequality within subgroups. Measuring poverty, the headcount index is equal to the number of observations (in this case households) that fall below the poverty line (which is fixed with respect to income). Income will be approximated by Gross Domestic Product (GDP) and GDP per capita. Income shares will be represented as a percentage of GDP held by a given population quantile, usually a quintile. The most important poverty indicator, which was described in Section 1, is the Watts index. This indicator alone will be used to determine the relative and absolute pro-poorness of Guatemalan growth. It is preferred for this use over other poverty indicators such as the poverty headcount index, the poverty gap index, or the average income below the poverty line because it takes into account changes in inequality among the poor, income increases that lift observations out of poverty, and any other income changes among the poor. It is, therefore, less likely to give a false impression of pro-poorness or non-pro-poorness. However, the other indices have their merits and will be used in the analysis of Guatemalan growth.

SECTION 2: BACKGROUND

This paper's goal is to evaluate the structure of growth, with particular attention paid to who has benefitted from growth over the past two decades. Then it examines why this has been the case and the policy implications that become clear through the discussion of the previous two points. But before this paper can make its contribution, it is important that the reader develop a sense of relevant events, characteristics, and trends over the past two decades in order to better understand the points that are to be made. The first of these to be reviewed is the structure of the

economy. This will be followed by a summary of the pertinent political events that have shaped the past twenty years. Finally, these discussions will be used to frame the goals of the rest of the paper.

The Economy:

Poverty and inequality are historically high in Guatemala. This is not just true with regard to income. The country's agricultural land is very unevenly distributed with 2% of the population owning 75% of the arable land. Poor areas generally lack infrastructure such as roads, and investments in human capital, such as education, are pitifully low. The question at hand is: what is happening to the levels of poverty and inequality?

In determining the causes of various growth structures, it is important to note that agriculture is a very important sector, comprising roughly one third of GDP over the past two decades. Since most of the poor are involved in agriculture, it is a crucial sector for poverty alleviation. Changes in commodity prices and worker productivity have incredibly large impacts on welfare below the poverty line.

Below is a general summary table that provides the Gini coefficient (inequality), real GDP, the Watt's index, the poverty headcount index at $2 a day and $1.25 a day, and income quintiles over the years in which poverty indicators are available:

Figure 1: Summary Table

	1987	1989	1998	2000	2002	2006
Watts	0.4534	0.3518	0.0745	0.0629	0.0985	0.0514
GINI index	58.26	59.6	55.65	54.97	55.34	53.69
Poverty headcount ratio at $2 a day (PPP) (% of population)	70.4	55.78	29.83	26.76	29.75	24.3
Poverty headcount ratio at $1.25 a day (PPP) (% of population)	52.54	39.33	15.65	13.06	16.92	11.7
Income share held by highest 20%	61.96	62.87	59.67	59.21	58.91	57.83
Income share held by 2nd highest 20%	18.34	18.78	18.65	18.6	19.61	19.51
Income share held by middle 20%	10.75	10.52	11.51	11.61	11.78	11.98
Income share held by 2nd lowest 20%	6.19	5.68	7.03	7.21	6.82	7.24
Income share held by lowest 20%	2.76	2.15	3.14	3.37	2.88	3.44
Income Share held by lowest 10%	1	0.68	1.02	1.14	0.96	1.25
GDP (constant 2000 US$)	1.16E+10	1.25E+10	1.79E+10	1.93E+10	2.05E+10	2.36E+10

(WDI Online. World Development Indicators. The World Bank, 2009)

Political Changes:

There have been some unusual events in Guatemala's political history, some of which may have had a significant impact on poverty and the structure of growth. The most cited example is the oligarchy that, to some degree, rules the country. Some scholars have suggested that the oligarchs have made growth non-pro-poor. This and other relevant characteristics such as corruption will be reviewed here.[8]

The political characteristic that best sets Guatemala apart from other LMCs in Central America and Latin America in general is the existence of an oligarchic form of government. While nominally a presidential representative democratic republic, Guatemala is to some degree run by a small group of very wealthy European elite families. According to Dosal (1995) there are roughly 22-50 families that make up the oligarchic elite. They are represented by the

---

[8] Krznaric, Roman. "The Limits on Pro-poor Agricultural Trade in Guatemala; Land, Labour, and Political Power." *Journal of Human Development* (2006) Vol. 7, No. 1, pp. 111-135

Coordinating Committee of Agricultural, Commercial, Industrial, and Financial Associations, or CACIF (pronounced /ka-`sif/), which is a private lobbying organization. CACIF achieves political and economic objectives such as maintaining low tax rates and tax exemptions, influencing judicial decisions, changing the labor code, and controlling the media, mostly through bribes and strategic relationships.[9]

The political structure of Guatemala has changed significantly in the past two decades. For 36 years the country was immersed in a violent civil war. It was ended by 1995-elected president Alvaro Arzu, a member of an oligarch family, who met with guerilla leaders and signed a peace treaty at the end of 1996.[10] With the peace accords came an opportunity for change, yet still the presence of the oligarchs could be felt. Being an oligarch, Arzu appointed many members of CACIF as high level government officials. For example, he appointed Rayes Mayen, one of the co-heads of CACIF as minister of agriculture.[11]

Arzu continued to lead the country until the beginning of 2000, when he passed the baton to his political opponent, 1999-elected Alfonso Portillo, a corrupt member of the Guatemalan Republican Front (FRG).   The FRG was a political party led by Efraín Ríos Montt, the former military dictator during the civil war who was banned from running for president because he had led a coup in 1982. Montt hand-picked Portillo, the former leader of congress. However, he

---

[9] Krznaric, Roman. "The Limits on Pro-poor Agricultural Trade in Guatemala; Land, Labour, and Political Power." *Journal of Human Development* (2006) Vol. 7, No. 1, pp. 111-135

[10] http://fletcher.tufts.edu/research/2008/Gagnon.pdf

[11] Diane M. Nelson . A Finger in the Wound: Body Politics in Quincentennial Guatemala. University of California Press, 1999

was no oligarch.[12] Portillo was not a member of an oligarch family and, being a military ruler, was in fact anti-oligarch (the oligarchs, none of whom hold military positions, ended the civil war, effectively ending military rule). During Portillo's reign, he and The FRG were accused of bringing corruption on an unprecedented scale. There was evidence that his government engaged in substantial theft, money laundering, transferring funds to the army, and creation of foreign bank accounts, totaling more than one billion USD. Portillo, finishing his term, backed Montt's presidential campaign, which had become unbanned, but nevertheless ultimately failed.[13]

In 2004, Oscar Berger became president, bringing the country back to oligarchic rule. The Grand National Alliance (GANA) was a pan-oligarchic party formed in opposition to the military-based FRG. Berger's family, which was of Belgian descent, was a major player in agriculture and owned vast sugar and coffee plantations. Years before becoming president, Berger had further strengthened his status among the elite by marrying another agricultural oligarch, Wendy Widmann.[14]

As the reader will note, the period between 1996 and 2000 was characterized by oligarch rule, led by Arzu. 2000-2004 was a period in which the oligarchs lost importance and were replaced (most importantly in the presidential office) by non-oligarchs with close ties to the military. Portillo and his administration were accused of vast corruption (to the extent that Portillo had to flee to Mexico after is term). Between 2004 and 2008 Guatemala returned to

---

[12] http://fletcher.tufts.edu/research/2008/Gagnon.pdf

[13] Diane M. Nelson . A Finger in the Wound: Body Politics in Quincentennial Guatemala. University of California Press, 1999

[14] ibid

oligarch rule under Berger. These periods, as the reader will see, have very different growth patterns. Several scholars have drawn the connection between the political regime and pro-poorness. But the question is, did they draw the right connection?

The Present Paper:

Guatemala has experienced relatively healthy growth for the past two decades. This begs the question, who benefits from this growth? The answer to this question in turn determines (and is determined by) whether the issues of poverty and inequality are getting better or worse or staying the same. A further question that arises is, based on who benefits from growth and why, what policies should be implemented to ensure optimal reduction of poverty in the future.

It has been suggested by certain scholars that growth may not be pro-poor. Both poverty and inequality are historically very high and some believe that growth isn't helping as much as it should, if at all. It has also been stated that the oligarchs are to blame for this phenomenon. However, taking a different approach, looking at macroeconomic indicators, and over a longer period of time, the picture looks different. The goal of this study is to determine the structure of growth over the past two decades and to see what role, if any, is played by the oligarchs in this process. Finding results in disagreement with previous studies, the present paper suggests some possible shortcomings in the literature and suggests a revised point of view. The findings here are complimentary to those of the World Bank in its newest, yet unpublished poverty assessment. While the present paper comes to similar conclusions, the methodology and results are both nuanced and, together with the World Bank report, paint a more or less complete picture of the

issues mentioned above. In particular, the present paper has a longer timeframe, spanning 1987 and 2006 rather than 2000 and 2006. It also uses macro indicators rather than micro-level data.

Data:

Data used in this paper come primarily (and indirectly) from Guatemalan household surveys. These include: Encuesta Nacional Socio-demográfica (ENS) 1987, Encuesta Nacional Socio-demográfica (ENS) 1989, Encuesta Nacional de Ingresos y Gastos Familiares (ENIGFAM) 1998, Encuesta Nacional sobre Condiciones de Vida (ENCOVI) 2000, Encuesta Nacional de Empleo e Ingresos (ENEI) 2002, and Encuesta Nacional sobre Condiciones de Vida (ENCOVI) 2006. These are the only sources for most poverty and inequality indicators, leaving our analysis with the years 1987, 1989, 1998, 2000, 2002, and 2006. Other data, such as GDP and productivity, come from WDI online, the World Bank's world development indicators database. Some of the household survey data are accessed via PovcalNet, the World Bank's online poverty analysis tool while others are collected from summary statistics books. Some data from ENEI (2002) is accessed via the UNDP reports and wage and unemployment data come from the International Labor Organization.

SECTION 3: THE DEBATE & WHAT HAS BEEN SAID

Is Economic Growth Usually Pro-Poor in the Developing World?

Obviously whether or not growth is pro-poor depends on one's definition of pro-poor. In general, there is not much debate with regard to the absolute pro-poorness of growth in the

developing world. As one would expect, when growth occurs, poverty usually falls. Therefore it is only in the case of exceptions to this rule that a big fuss is made.

Dollar and Kraay (2002) began to address the question of relative pro-poorness when they showed that the general pattern is pro-poor by regressing the log of income per capita on the log of income per capita in the poorest quintile of the population across hundreds of countries. They found a roughly one-to-one relationship ($\beta_2 = 1.0734$). They also regressed the changes in these variables and, once again, found a roughly one-to-one tradeoff ($\beta_2 = 1.185$).[15] Since these coefficients were slightly greater than one, economic growth was pro-poor, not only in absolute terms, but in relative terms, too. The conclusion? Growth is good for the poor. Guatemala was not an outlier in this statistical analysis, indicating that perhaps growth is pro-poor there.[16]

Given the overwhelming tendency for growth to be pro-poor in absolute terms, there is not much cross-country literature discussing the issue. Instead, scholars have examined the question of how best to reduce poverty, using economic growth – whether to focus on its distribution or its magnitude. Stated differently, we want to know what the main causes of non-pro-poorness are. Not surprisingly, a large part of the debate has to do with whether or not growth is pro-poor in relative terms and whether or not it needs to be.

Is Economic Growth in Guatemala Pro-Poor?

---

[15] Dollar, David and Kraay, Aart. "Growth is Good for the Poor." *Journal of Economic Growth* (2002) Vol. 7, pp. 195-225

[16] ibid.

An important discussion of the structure of Guatemalan growth and poverty is the World Bank's 2000 publication, "Poverty in Guatemala." This is an in-depth, multidimensional analysis of poverty in Guatamala, executed by GUAPA, the Guatemalan Poverty Assessment Program. With regard to the pattern of economic growth, the study suggests that, given the data and qualitative information in 2000, economic growth is not pro-poor because of a failure to create enough low-skilled jobs. Both agriculture and non-agricultural sectors receive blame for this. Also interesting is a statement that, even using solely data from 2000, simulations suggest that the incidence of poverty increased in 2001. It is intriguing to see an increase in poverty, especially as this could signal the existence of a change in growth patterns, post-1996.[17]

The GUAPA report calculates the growth elasticity of poverty (not reduction thereof; and using the headcount index) to be -.99. Given the growth rate from 1989 to 2000, this elasticity predicts that the incidence of poverty should have dropped from sixty-two percent to fifty-three percent. In reality, it only dropped to fifty-six percent. It is likely, according to this study, that the difference reflects a specific aspect of the calculated elasticity – namely that it was estimated using single-year data, and therefore assumes that inequality does not change. In other words, this simulation assumes that everyone benefits equally from growth. But since poverty reduction was considerably less than that predicted by the model, there is reason to believe that this assumption is not a valid one in Guatemala. If that is the case, as supported by the GUAPA report, it means that Guatemala exhibits a different pattern of growth than does most of the rest of the world. In short, it exhibits non-pro-poor growth.[18]

---

[17] World Bank (2003) 'Poverty in Guatemala,' *Report No. 24221-GU*, World Bank, Washington, DC, 20 February.

[18] ibid.

The World Bank has, since this publication, produced another report which uses data from ENCOVI 2006, the sequel to ENCOVI 2000. Although this poverty assessment has not yet been published, it is more or less complete and shares some valuable insights. The most important aspect of this report is that it takes essentially the opposite viewpoint of its predecessor because, rather than drawing conclusions based on data from 2000, it looks at changes between 2000 and 2006. This gives it far more explanatory power especially when considering intertemporal issues (trends). It is the same factor that allows the present paper to disagree with previous papers, which are either based on one year of data or only focus on 2000-2002, an unusual blip in the pattern of growth. Although the new report lauds the poverty decreases that have occurred between 2000 and 2006, there are some exceptions to this. For example it discusses the possibility of growth that is bad for the extremely poor, even though it is good for the poor. It also includes a cross-regional analysis which reveals that, while pro-poor growth has reduced poverty drastically in some regions, there exist regions in which poverty increased, and in which growth is not, in fact, pro-poor.

The Causes of Non-Pro-Poorness:

Aart Kraay (2004) decomposed poverty changes into three different sources: the growth rate of average incomes, the sensitivity of poverty to the growth rate of average incomes, and changes in the income distribution, holding average income constant. His paper found that the most important factor, by far, was the growth rate of average incomes. This suggests that the absolute definition of pro-poor growth is the better goal, because, although the rich may benefit more than do the poor, a given investment in improving the growth rate of average incomes will

have a greater impact on poverty reduction than the same investment in either of the other two variables. Focusing primarily on the growth rate is therefore the most effective way to reduce poverty. The next most important factor was the pattern of growth in relative incomes. Kraay found no cross-country evidence of the final factor, the sensitivity of poverty to the growth rate of average incomes.

Guatemala's oligarchy has been pointed to by various scholars as a possible determinant of the growth structure. Simon Helweg-Larsen (2003) argues that growth in Guatemala is non-pro-poor because of the unequal distribution of productive assets. The reader might be wondering, why doesn't the government just redistribute the productive assets equitably? Unfortunately, the rich 2% of Guatemalans who own 75% of the agricultural land in Guatemala also control the entire government.[19] If Helweg-Larsen is right, then the last thing these oligarchs want is to give away their land.

He also describes the futility of redistribution and the body responsible for systematically blocking pro-poor policy: CACIF. According to Helweg-Larsen, what is striking about it is the degree of power it has enjoyed ever since the National Advancement Party (PAN) came into power in 1996 under Arzu: "PAN opened its doors to business elites in shaping the new Guatemalan economic order. The party had its major support base in the modernizing economic elites of CACIF, and allowed strong roles for business leaders in the era of post-Civil War decision-making." (Helweg-Larsen, 2003, 622) From 1950 to the mid-1970s, the extensive power wielded by this body was only by means of its money. Decisions were made and

---

[19] Krznaric, Roman. "The Limits on Pro-poor Agricultural Trade in Guatemala; Land, Labour, and Political Power." *Journal of Human Development* (2006) Vol. 7, No. 1, pp. 111-135

executed by means of lobbying and bribes. But in the early eighties, it was given a more direct role in government when members of the oligarchy began to attain cabinet positions. In 1991, CACIF helped to elect Jorge Serrano, who, in return, appointed many members of CACIF and the oligarchy to government positions. According to Dosal (1995), Serrano's economic policy was whatever CACIF wanted it to be. "The network of elite, powerful asset holders continuously expands and strengthens itself by means of strategic marriages between influential people in key sectors."[20]

When the 36 year-long civil war came to an end in 1996, there was an attempt at land reform, written into the Peace Accords. This served as a good example of CACIF's alleged power to block pro-poor policy. Although the land reform could not be called off completely, CACIF had other tricks up its sleeve. Using bribes and lobbying, it made certain that the source of funds for purchasing land from wealthy owners was tiny – not nearly enough to do the job. Funding for the land reform required tax reform. Since the oligarchs did not want either of these to occur, it killed two birds with one stone by blocking the tax reform.[21] This, argues Helweg-Larsen, was only the beginning, though.

The way market-based land reform works is that an organization, in this case Fontierra, acquires land at roughly market price and sells it to peasants at low prices and with low interest rates. CACIF, according to Helweg-Larsen, not only made the prices and interest rates far too high to allow much acquisition by the poor, but it also made the process extremely bureaucratic.

---

[20] Helweg-Larsen, Simon. "The Peace of the Oligarchs; Land Distribution and the Guatemalan Peace Process." *Revue Canadienne d'Etudes du Developpement* (2003) Vol. 24, No. 4, pp. 617-632.

[21] ibid.

Peasant organizations reported that numerous trips had to be made to Guatemala City in order to acquire even a small plot of land. This was expensive and time consuming to the point that it was not feasible for isolated, rural Guatemalans without transportation - in short, those who needed the land reform in the first place. This is just one case in which the elite oligarchy has been blamed for foiling attempts to make economic growth pro-poor.

SECTION 4: A REVISED UNDERSTANDING

Although some previously mentioned studies on poverty in Guatemala have suggested that economic growth is non-pro-poor, the country-wide indicators seem to tell a different story. This section uses data from available years, notably 1987, 1989, 1998, 2000, 2002, and 2006, to paint a picture of how growth occurs in Guatemala. Most of the disagreement between this study and previous ones stems from the current availability of more up-to-date data, and the fact that this analysis spans 2 decades with 6 years of data rather than 1-2 years. Roman Krznaric's scathing review of the oligarchs with regard to systematic exclusion was primarily based on data from 2000 and 2002, a period that is far from representative of the past two decades. This section, which focuses on country-wide indicators, first demonstrates that economic growth is in fact pro-poor in Guatemala. It also summarizes some of the problems that persist, such as a pattern of non-pro-poor growth that can be observed when one uses a stricter poverty line. It then suggests the variables that influence pro-poorness, such as relative inflation in basic consumer goods and changes in labor force activities. The value of this analysis is evident in Section 5, which makes policy recommendations with the intent of fostering pro-poor growth in Guatemala.

Before demonstrating the structure of growth, it is important first to take note of the magnitude of growth over time. For the most part, Guatemala has enjoyed a relatively high growth rate for more than the past two decades. This paper takes economic growth to mean growth in GDP in constant 2000 dollars as well as the per-capita values. The per-capita values are considered to be equivalent to the average income level.

Figure 2: Annual Growth Rate of Real GDP:

(periods spanned by years in which poverty indicators are available)

	1987-1989	1989-1998	1998-2000	2000-2002	2002-2006
Growth Rate of GDP (Constant $)	3.994	4.825	3.797	3.145	3.747

(WDI Online. World Development Indicators. The World Bank, 2009)

Given the fact that the economy is growing, we now seek to find out who has been reaping the benefits of this growth. A general picture can be drawn from the evolution of various indicators over time. With this knowledge in mind, one can also test pro-poorness mathematically. First, observe that inequality has decreased significantly over time. This can be expressed in terms of either the Gini index or the MLD index:

Figure 3: Gini Index:
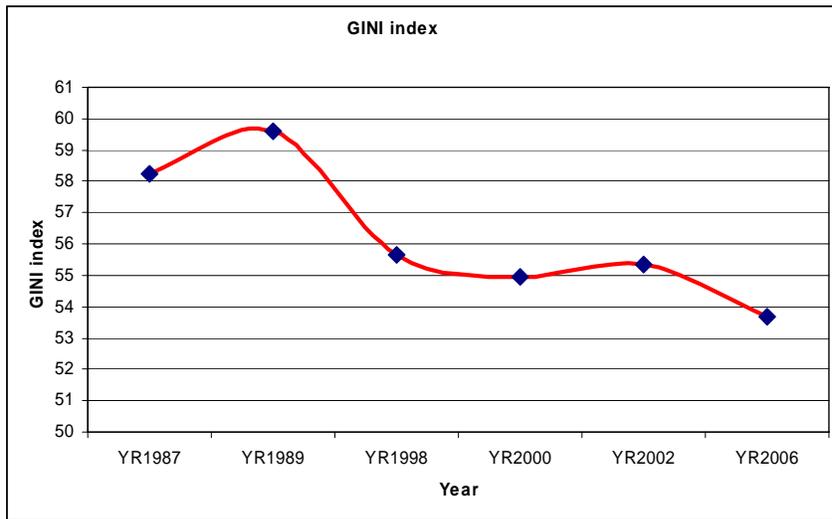
(WDI Online. World Development Indicators. The World Bank, 2009)

Figure 4: MLD Index:
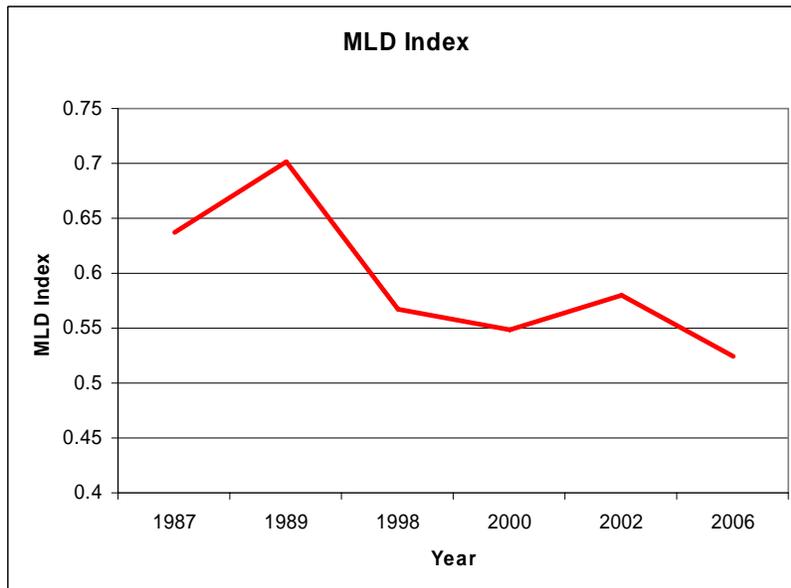
(PovCalNet. Poverty Indicators. The World Bank, 2009)

While inequality remains high, the picture has clearly improved. The combination of positive

growth rates and declining inequality usually signals the existence of pro-poor growth. It also

suggests that the oligarch hypothesis may not be quite right. One detail to notice, though, is that

inequality increased slightly during the 2000-2002 period. This period will be discussed in detail

later. Although the Gini and MLD indices are useful, they are fairly blunt instruments. They

give us the sense that inequality is decreasing, but they still do not tell us exactly who is

benefitting from growth and by how much. Taking one step closer to this goal one might be

interested to note the trends in income shares over time. Figure 5 shows that every quintile of

the population has increased its share of wealth, except for the richest, in which reside the

oligarchs and many others:

Figure 5: Share of Income by Population Quintile

|	YR1987	YR1989	YR1998	YR2000	YR2002	YR2006
Income share held by highest 20%	61.96	62.87	59.67	59.21	58.91	57.83
Income share held by 2nd highest 20%	18.34	18.78	18.65	18.6	19.61	19.51
Income share held by middle 20%	10.75	10.52	11.51	11.61	11.78	11.98
Income share held by 2nd lowest 20%	6.19	5.68	7.03	7.21	6.82	7.24
Income share held by lowest 20%	2.76	2.15	3.14	3.37	2.88	3.44

(WDI Online. World Development Indicators. The World Bank, 2009)

Converging quintiles are a clear hint that economic growth has been pro-poor. However, a few

concerns should be mentioned. First, the quintile showing the most growth, the second

wealthiest, is obviously not one that falls below the poverty line. This does not, however,

support the oligarch hypothesis, since the oligarchs are among the wealthiest 10%, not the

second-highest 20%. If they were truly systematically capturing growth, their share of income

would not be declining. Also alarming is the fact that the quintile improving the least, apart from

the richest one, is actually the poorest one. So while the quintiles are converging, it appears that

the moderately wealthy and middle classes are experiencing growth at a faster rate than are the

poor, especially the extremely poor.

The above are indicators of inequality and growth, but not poverty. Therefore, we now

shift to observing the poverty indicators. Below, one can see that the headcount index of poverty

has fallen (with the exception of the 2000-2002 period):

Figure 6: Poverty Headcount Index:


Poverty Headcount Index:
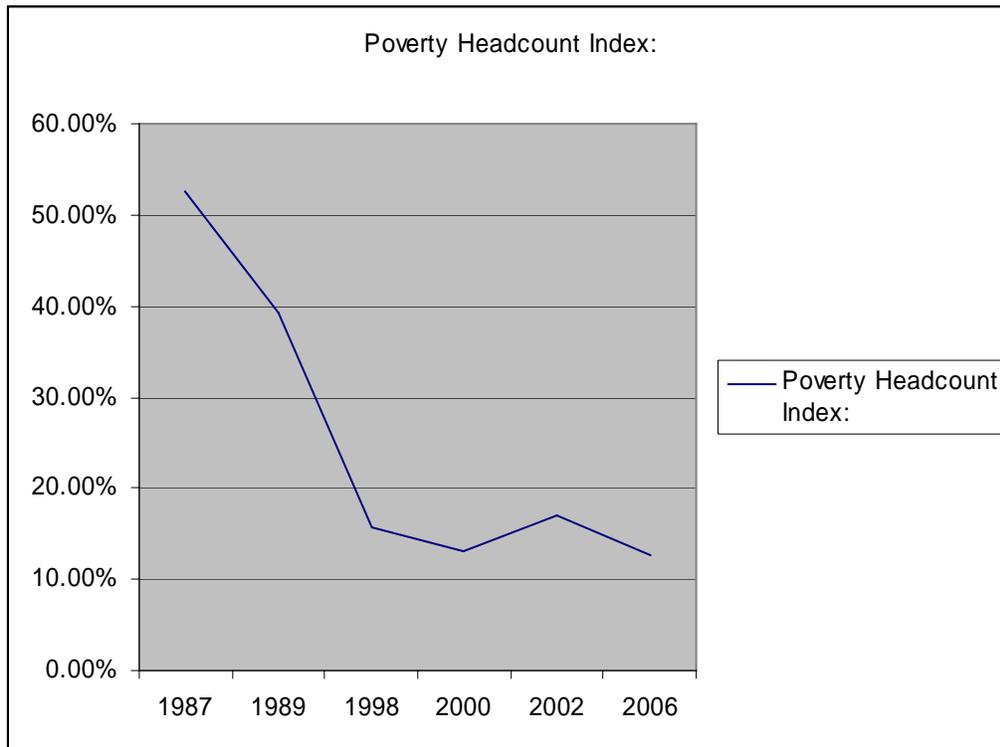
(PovCalNet. Poverty Indicators. The World Bank, 2009)

Note: This indicator is likely unreliable because of unrealistic values (especially 1998-2006). However, the trend thereafter can most likely be trusted, as it matches the corresponding periods of the Gini, MLD, and Watts indices.

Observing the Watts index over time, one can see that poverty, according to these dimensions, has decreased over time, with the exception of 2000-2002, in which poverty increased:

Figure 7: Watt's Index:

Watts Index
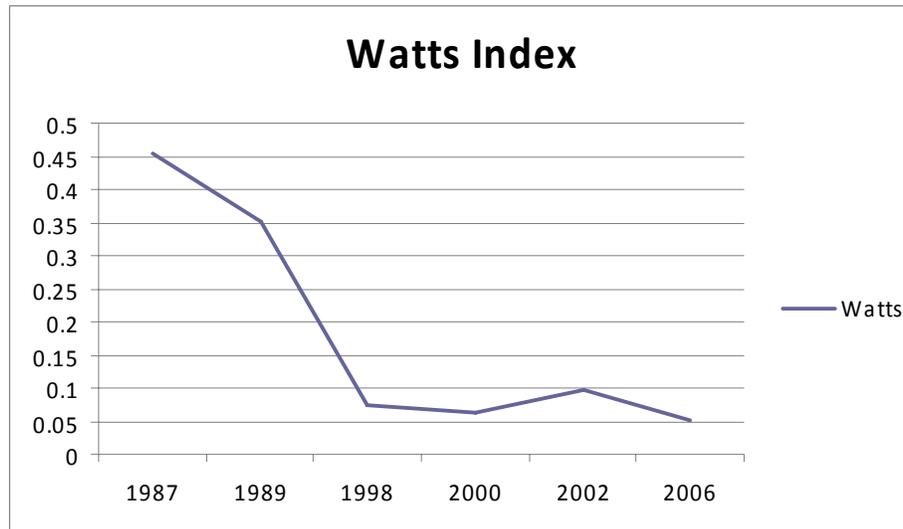
(PovCalNet. Poverty Indicators. The World Bank, 2009)

If the reader relates this graph back to the Gini and MLD Index graphs, he or she will note the similarity, indicating that both the inequality and poverty indicators are telling the same story: one of pro-poor growth (except between 2000 and 2002).

Now, in order to verify the structure of growth, we use the aforementioned tests, which use the Watts index.

First, observing the trend in absolute pro-poorness, we see that poverty has been reduced every year except for between 2000 and 2002. Therefore, these periods are considered pro-poor and non-pro-poor, respectively (all of these years are characterized by positive growth):

Figure 8: Absolute Pro-Poorness Test:

	1987	1989	1998	2000	2002	2006
Watts	0.4534	0.3518	0.0745	0.0629	0.0985	0.0514
Change in Watts (%)		-22.4085	-78.8232	-15.5705	56.59777	-47.8173

(PovCalNet. Poverty Indicators. The World Bank, 2009)

Now, observing the trend in pro-poorness in relative terms, one observes the growth elasticity with respect to poverty reduction:

Figure 9: Relative Pro-Poorness Test:

	1987	1989	1998	2000	2002	2006
Watts	0.4534	0.3518	0.0745	0.0629	0.0985	0.0514
Change in Watts (%)		-11.20423467	-8.758132777	-7.785234899	-28.29888712	-11.95431472
GDP (constant 2000 US$)	11574215680	12498814976	17927290880	19288827904	20502028288	23574927360
Growth Rate		3.99422009	4.825769407	3.797386435	3.144826606	3.747067155
Growth elasticity of poverty reduction		2.805111991	1.814867649	2.050156083	-8.998552437	3.190312377
Pro-poor in relative terms?		0	1	1	0	1
Pro-poor in absolute terms?		1	1	1	0	1

(PovCalNet. Poverty Indicators. The World Bank, 2009)

Since the elasticity is greater than 1 at all times except between 2000 and 2002, we reach the same conclusion as above with regard to pro-poorness in relative terms. Clearly, in both of these cases something bizarre happened between 2000 and 2002 to cause a considerable increase in poverty, even in the presence of positive growth. The elasticity of -8.99 is very unusual indeed. So what happened? This question is examined in Section 3, "Causes of Pro-Poorness or Lack Thereof."

While growth has been pro-poor in both absolute and relative terms for most of the past two decades, there is still cause for concern. As intimated earlier, the picture looks different when one traces changes in extreme poverty instead of changes in general poverty. While extreme poverty decreased between 2000 and 2006, the change was tiny and not statistically significant according to the World Bank's calculations.

Figure 10: Headcount Indices:

	Headcount index (General Poverty)	Headcount Index (Extreme Poverty)
2000	56.2	15.7
2006	51	15.2
Value Change	-5.2	-0.5

(World Bank (2008) 'Guatemala Poverty Assessment' *Report No. 43920-GT*, World Bank, Washington, DC, 31 May.)

Since there was no statistically significant change in the headcount index of extreme poverty, the growth elasticity of poverty reduction automatically becomes zero, which is less than one, and therefore signals non-pro-extremely poor growth in relative terms. Also, since the poverty measure of interest did not fall during a period of growth (the condition for absolute pro-poorness), growth was non-pro-extremely poor in absolute terms as well.

This unfortunate trend over the past decade has not necessarily been a result of unequal nominal earnings per se. When observing the growth incidence of real income across the entire population, we see that the extremely poor gained enough income to make growth pro-extremely poor in both relative and absolute terms. Reverting to the Watts index, we observe a growth elasticity of extreme poverty reduction greater than one, as well as a negative change in the Watts index. This is not much different from the picture we get when we use the general poverty line rather than the extreme poverty line. But the reason we see pro-extremely poor growth here

is that the extreme poverty line is that which was calculated in 2000, which is 2,920 Quetzals (2006 base year). The reader will soon see that the poverty line changed between the two years, thereby changing the pattern of pro-poorness.

Figure 11: Relative Pro-Poorness Test – Extreme Poverty #1

	2000	2006
Watts	0.0037	0.0024
Change in Watts (%)		- 5.855855856
GDP (constant 2000 US$)	19288827904	23574927360
Growth Rate of Real GDP		3.703438658
Growth elasticity of poverty reduction		1.581194235
Pro-extremely poor in relative terms?		1
Pro-extremely poor in absolute terms?		1

(WDI Online. World Development Indicators. The World Bank, 2009)

(PovCalNet. Poverty Indicators. The World Bank, 2009)

Inflation occurred at differing rates across socioeconomic groups. The inflation rate given by the GDP deflator averaged over these six years at 4.33% per year. Or using consumer prices, the inflation rate was 7.05%. But using consumer prices of basic food goods only, the inflation rate is an additional 1.63% per year:

Figure 12: Food Prices and Consumer Price Index (approximation of relationship; agriculture price index is not exactly the same as basic food items)

	YR1998	YR2000	YR2002
Agriculture price index (2000=100)	92.44720496	100	161.9633398
Consumer Price Index (2000=100)	89.98	100	116.28

(WDI Online. World Development Indicators. The World Bank, 2009)

Since the extreme poverty line is based on daily calorific needs, these basic food items are the only consumer prices that are important. Therefore, due to increases in the cost of living that occurred primarily among items that make up the entirety of consumption for the extremely poor, the minimum income needed to maintain the same essential daily consumption of 2,173 Kilo-calories increased.[22] This, of course, means that the extreme poverty line increased – in this case, 9.8% from 2,920 Quetzals to 3,206 Quetzals (constant, 2006). The general poverty line, on the other hand, since it is based on additional basic non-food items, actually fell .3% from 6,596 Quetzals to 6,574 Quetzals. As the reader will see, this is the main reason that growth was pro-poor, but not pro-extremely poor.[23]

Now, taking into account the differing inflation rates across the economy, and the resulting higher extreme poverty line, we see that growth between 2000 and 2006 ceases to be pro-extremely poor.

---

[22] World Bank (2008) 'Guatemala Poverty Assessment' *Report No. 43920-GT*, World Bank, Washington, DC, 31 May.

[23] ibid.

Figure 13: Relative Pro-Poorness Test – Extreme Poverty #2

	2000	2006
Watts	0.0037	0.0034
Change in Watts (%)		-1.351351351
GDP (constant 2000 US$)	19288827904	23574927360
Growth Rate of Real GDP		3.703438658
Growth elasticity of poverty reduction		0.364890977
Pro-extremely poor in relative terms?		0
Pro-extremely poor in absolute terms?		1

(PovCalNet. Poverty Indicators. The World Bank, 2009)

(WDI Online. World Development Indicators. The World Bank, 2009)

While the main cause of non-pro-extremely poor growth in Guatemala has been high relative inflation in basic food items, the picture is actually larger than that. Inequality decreased between 2000 and 2006 but improvements occurred at a higher rate among the middle- and upper-middle-class population than they did among the poor, especially the extremely poor. Note in Figure 5: Income Distribution by Population Quantiles, the trend in income shares among population quantiles. First, note that the poorest two quintiles show less improvement

between 2000 and 2006 (an increase of .07 percentage points for the poorest and an increase of .03 percentage points for the second poorest) than middle quintile and second richest quintile. The middle quintile increased by .37 percentage points; the second richest quintile increased .91 percentage points. Since the extremely poor make up roughly 15 percent of the population in these years, the lowest two quintiles give a good approximation of their plight. So while the existence of non-pro-extremely poor growth is mainly owed to high relative inflation in basic food items, part of the problem is also one of nominal income (or real income, as deflated with one common consumer price index).

SECTION 5: DETERMINANTS OF THE GROWTH STRUCTURE

Now that the dimensions and magnitude of poverty and growth over time have been demonstrated, the discussion moves to why they are thus. The logical first step is to isolate the anomalies and other important phenomena and then to explain them in turn. One of these is the existence of a period, from 2000 to 2002, during which growth was positive but poverty and inequality increased dramatically. Another important irregularity to explain is the fact that the second, third, and fourth income quintiles gained wealth at a faster rate than did the first (poorest) quintile. Finally, it is important to determine the causes of Guatemala's otherwise pro-poor growth, since this is very helpful in determining how to reduce poverty and promote pro-poor growth in the future.

First to be examined are the causes of Guatemala's overwhelmingly pro-poor growth over the past two decades. Much of this phenomenon can be attributed to changes in the agriculture

sector. Between 1989 and 2005, productivity in agriculture increased. This can be represented by value added per worker in constant dollars:

Figure 14: Agriculture Value Added per Worker:

Agriculture value added per worker (constant 2000 US$)
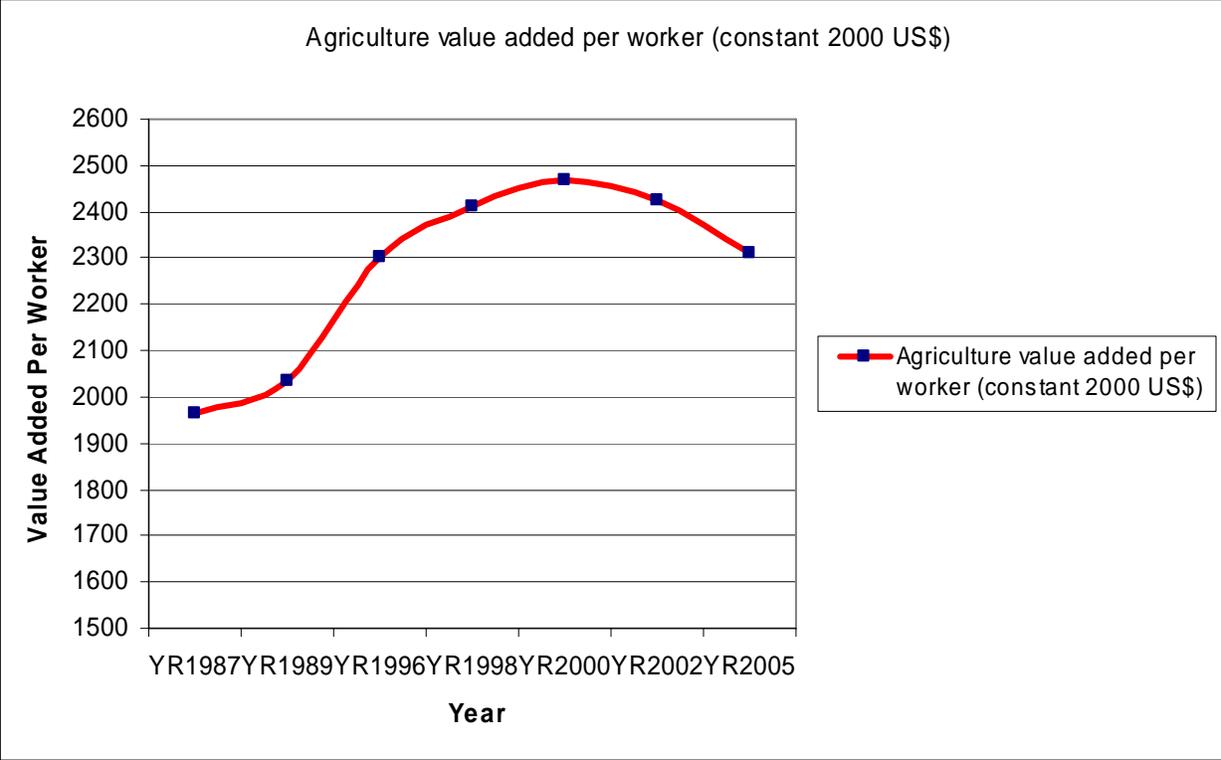
(WDI Online. World Development Indicators. The World Bank, 2009)

Since this is value added in constant dollars, it does not represent changes in commodity prices. Instead, it represents changes in quantity produced per worker. This is a function of agricultural production (+) and agricultural employment (-).

Employment in Agriculture
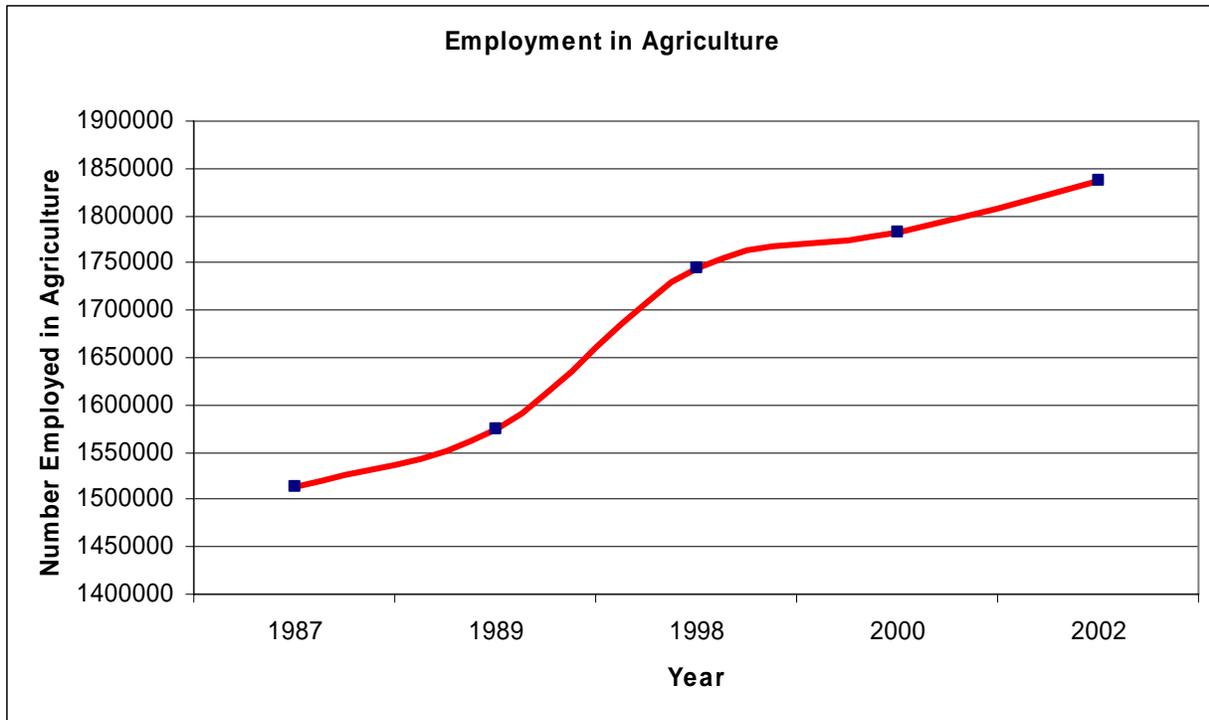
(WDI Online. World Development Indicators. The World Bank, 2009)

Since agricultural employment is increasing, we can be sure that the increase in productivity per worker is not due to a decline in the number of workers. And since productivity per worker in constant dollars is increasing, we can be sure that the effect of increased production has outweighed the effect of increased employment.

Also important were increases in coffee prices (see Figure 20) that caused productivity in current prices to increase (see Figure 19). Since we are now talking about current prices, changes in commodity prices are quite important. During this period they contributed to increasing wages and thereby reduced the level of poverty:

Figure 15: Real Wages in Agriculture:
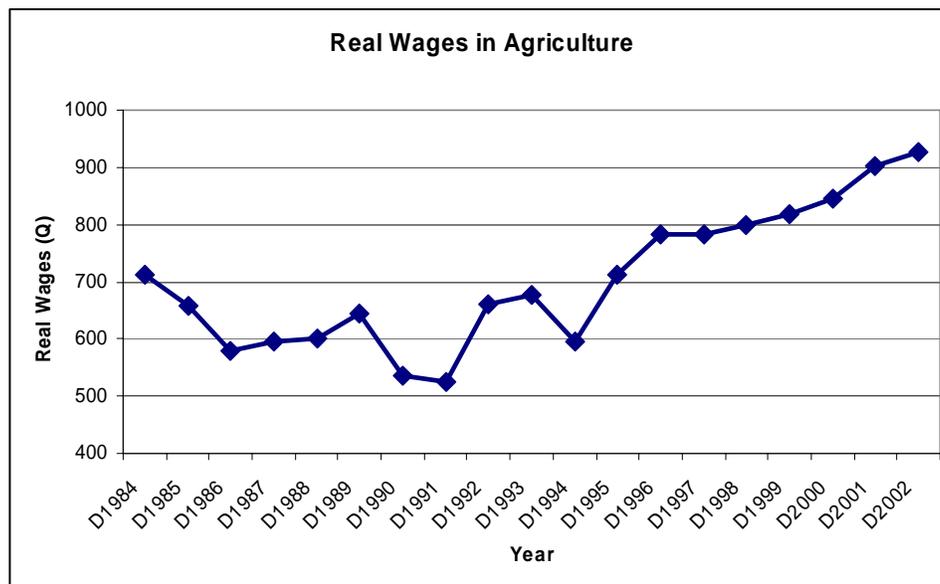
(ILO database. <http://www.ilo.org>)

Some poverty reduction can be attributed to certain sources of income which have become more prevalent over time. One such source is remittances, both domestic and international. As the reader will note in the table below, the number of households receiving remittances increased considerably for all income groups except the richest (Q5).

Percentage of Households Receiving Remittances[24]

	2000	2006
Total	21	31
Poorest	12	23
Q2	18	31
Q3	19	35
Q4	24	35
Richest	31	32

[24] World Bank (2008) 'Guatemala Poverty Assessment' *Report No. 43920-GT*, World Bank, Washington, DC, 31 May.

The increase in prevalence of international remittances is even stronger:

**Percentage of Households Receiving Remittances from Abroad**[25]

	2000	2006
Total	9	17
Poorest	4	11
Q2	7	17
Q3	9	18
Q4	12	19
Richest	14	19

Since the poor benefited greatly from the increase in prevalence of remittances, this might be one of the most significant causes of poverty reduction. This is verified by the fact that, among households that receive remittances, the average amount received increased by almost 30 percent between 2000 and 2006. A large part of this increase is due to the fact that thousands of Guatemalans fled to the U.S. in the last decade of the war in order to escape the violence and danger.

One of the changes that helped to reduce poverty at least between 1991 and 2000 is the fact that agricultural workers have begun to get a slightly bigger reward for their work, independent of productivity. Profits in the agriculture sector, while mostly accruing to the wealthy land-owners and oligarchs (who are often one and the same), gradually became shared to a greater extent with the poor wage laborers. This can be seen below in the chart of the ratio of wages to value-added per agricultural worker; the latter can be regarded as productivity (in constant 2000 USD).

---

[25] Ibid.

Figure 16: Ratio of Wages to Productivity (value added in constant dollars)

Ratio of Wages to Productivity
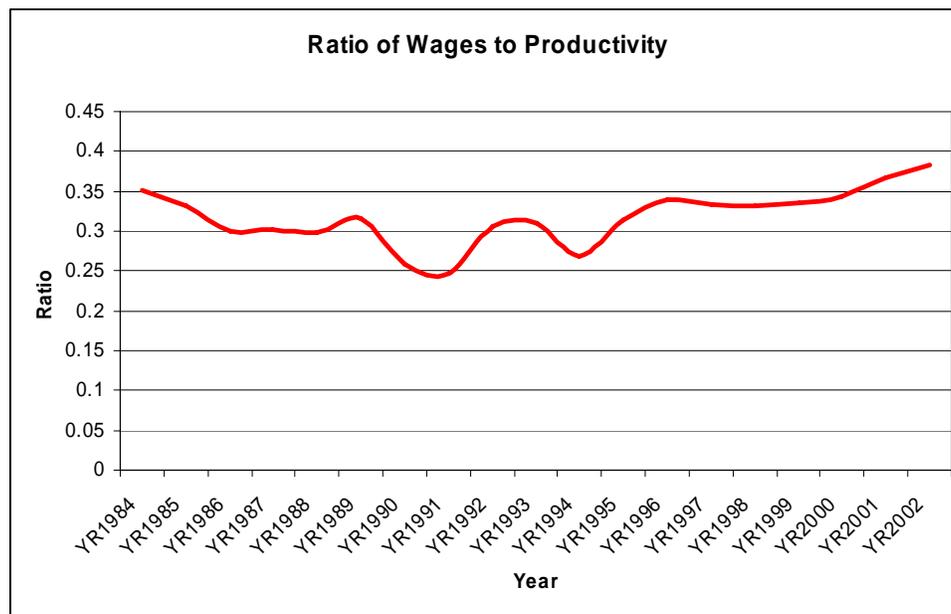
(WDI Online. World Development Indicators. The World Bank, 2009)

The increasing ratio of wages to productivity indicates that the poor are getting a larger slice of the pie. The causes of this change cannot be ascertained, although liberal labor policy, including a rising minimum wage imposed under Arzu, likely played some role.[26] There also may have been market factors such as decreased labor supply resulting from migration to cities. However this is unlikely because agricultural employment increased during this period. (See Figure *)

 Since employment increased, it is much more likely that labor demand increased due to increased demand for agricultural goods at home and abroad. We can be fairly certain that the increase in the ratio of wages to productivity was not due to decreases in productivity because

---

[26] Diane M. Nelson . A Finger in the Wound: Body Politics in Quincentennial Guatemala. University of California Press, 1999

this was a period in which productivity increased (See Figure 14: Agriculture Value Added per Worker).

During the period from 2000 to 2002, as poverty increased, growth declined but remained positive:
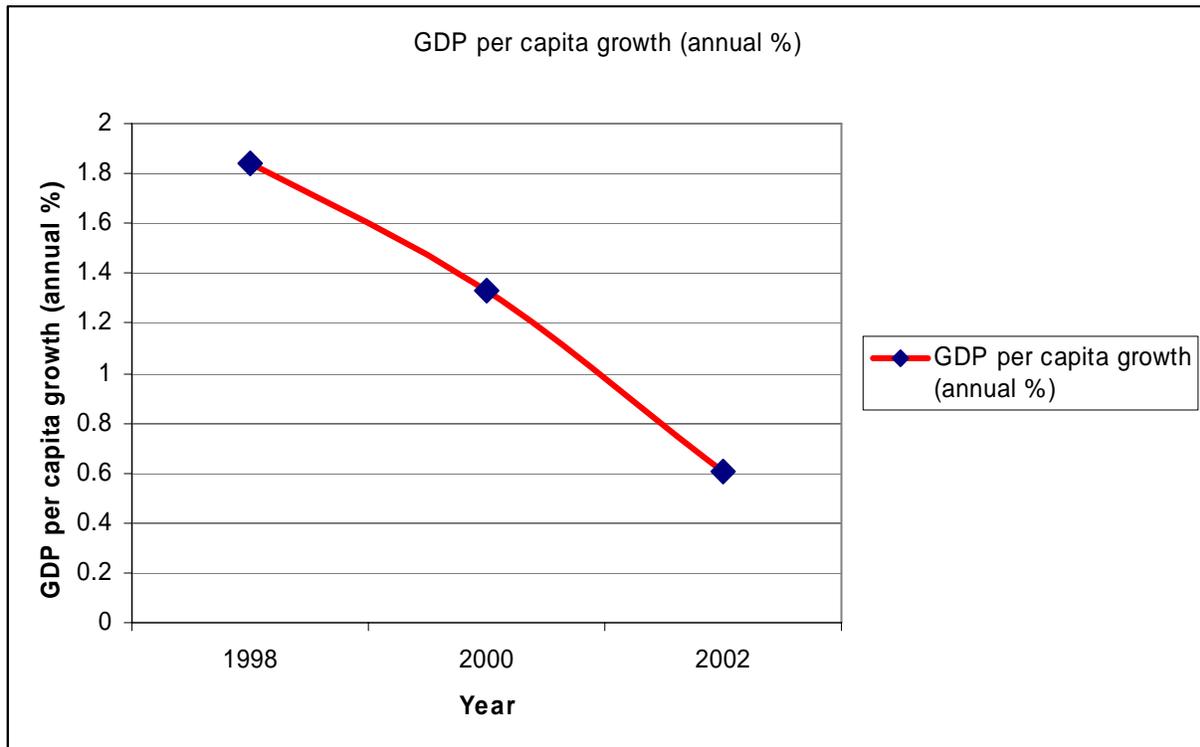
Figure 17: GDP Growth (Annual %):
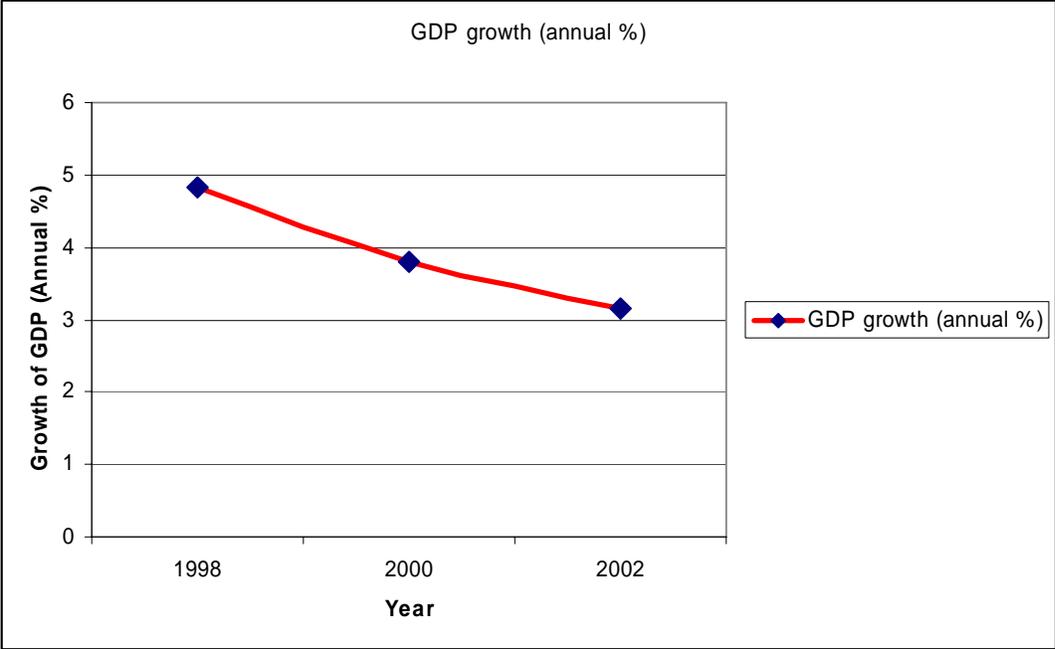
While the rest of the past two decades have been characterized by increasing growth rates, the period from 1998 to 2002 is characterized by declining growth. This is particularly noticeable when one takes into account population growth:

Figure 18: Growth of GDP per Capita:

GDP per capita growth (annual %)

(WDI Online. World Development Indicators. The World Bank, 2009)

With the population size increasing by 4.8% between 2000 and 2002, we witness a precipitous decline in growth per capita, almost approaching zero growth.

Relating this growth to poverty reduction leaves one with pertinent questions: if growth declined but was still positive, should we not have seen positive but small progress in poverty reduction rather than an increase in poverty? And were the respective causes of the growth rate decline and the poverty increase one and the same? Clearly more than just the growth rate is responsible for the changes in poverty, because the growth elasticity of poverty reduction went from close to two in the late eighties and through the nineties to almost negative nine between 2000 and 2002. In other words, for a 1% growth rate, poverty as measured by the Watts index

would increase by almost 9%. Even between 1998 and 2000 the growth elasticity of poverty

reduction was 2.05, which is why these years are not included as part of the anomaly in this

paper. Now, we move to a discussion of why the structure of growth was thus during this period.

It should be noted that the ratio of wages to productivity picked up between 2000 and

2002 (See Figure Z), and yet this was a period in which poverty increased. Wages increased and

productivity in constant dollars decreased, which should have had little net effect on poverty.

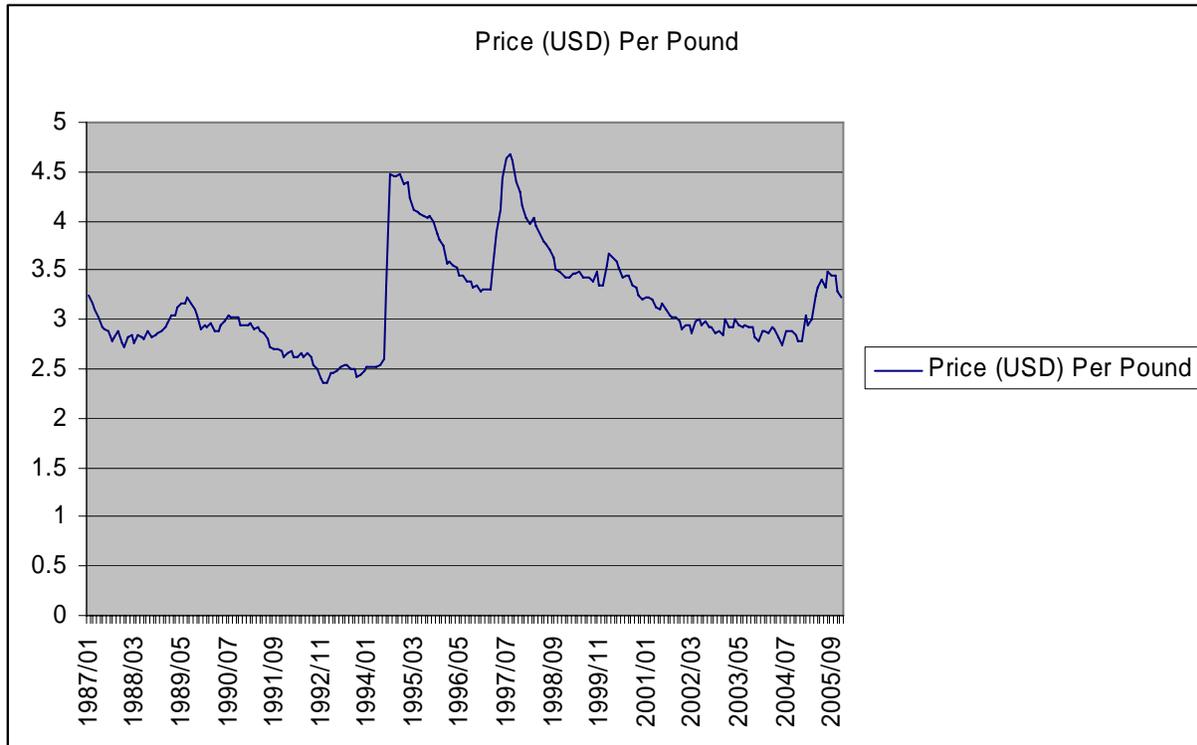But during this period, value added in current dollars declined sharply:

Figure 19: Agriculture Value Added (current US$)
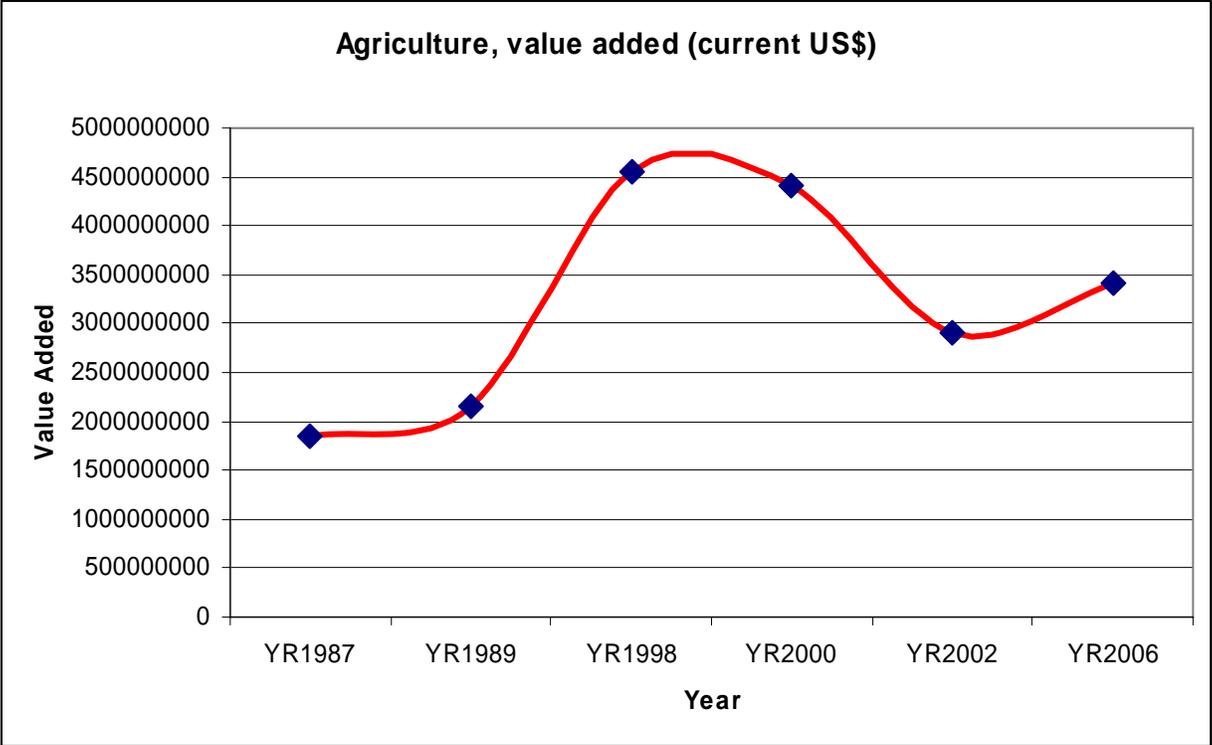
(WDI Online. World Development Indicators. The World Bank, 2009)

Notice that agriculture value added in current dollars follows the same basic trend as coffee prices (per pound (below):

Figures 20 and 21: Coffee Price per Pound (2000 USD):

(The International Coffee Organization <http://www.ico.org/coffee_prices.asp>, 2009)

Thus, since productivity in current prices closely tied to the prices of produced goods, and because coffee is a very important cash crop in Guatemala, it is likely that a significant cause of the decline in productivity in current prices was the decline of coffee prices. Below is a closeup view of 2000 to 2002:

Figure 21: Coffee Price Per Pound:
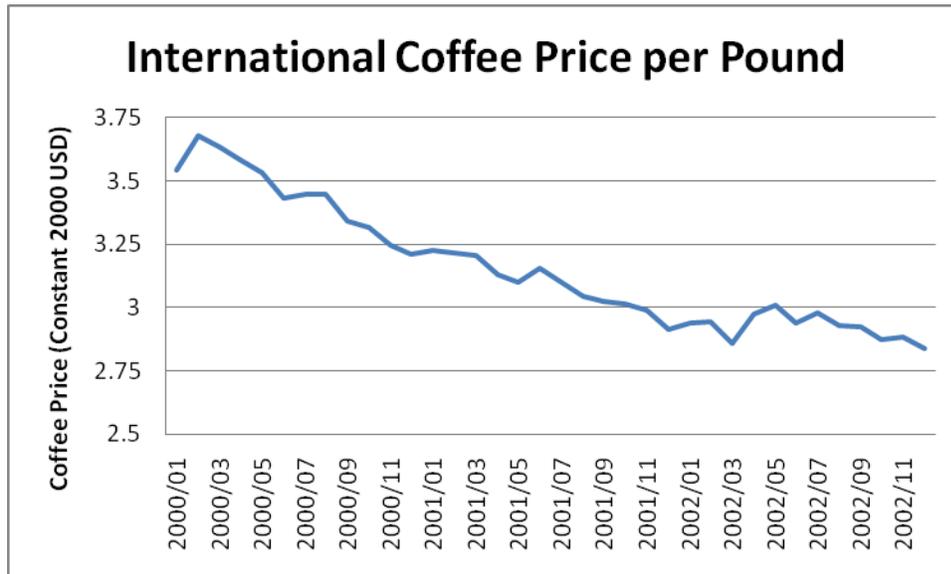
International Coffee Price per Pound

(The International Coffee Organization <http://www.ico.org/coffee_prices.asp>, 2009)

The crash of coffee prices was most likely caused by supply outstripping demand. At the end of the nineties, Vietnam made a quick entrance into the world coffee market. In just a few years it increased its coffee production by a factor of almost 14 bringing it from a virtually unnoticed coffee producer to the second largest in the world. At the same time, Brazil, the largest exporter of coffee in the world, also expanded production hastily. The result was, of course, a huge increase in supply, with no corresponding increase in demand, which tends to be steady and price inelastic. The clear result is the fall in price that one observes in the above graph. Since trees take a long time to mature, and represent a substantial sunk cost, Guatemala was unable to adjust quantity accordingly.

However, in spite of a coffee crash and a resulting fall in agricultural productivity in current prices, during this period (2000-2002), real wages increased:

Figure 22: Real Agricultural Wages:

|	D2000	D2001	D2002
Real Agriculture Wages	845.53	902.6761	926.5074

(WDI Online. World Development Indicators. The World Bank, 2009)

Normally one would expect a decline in productivity per worker to have a negative impact on wages. The fact that it didn't indicates that, while wage workers probably fared reasonably well (both agricultural employment and agricultural wages increased at the same time). Somebody else took a big hit. It probably wasn't the subsistence sector (part of non-wage sector) because coffee is a cash crop. So those who suffered had to be land-owning producers. Losses suffered by large land-owning producers obviously would not have increased poverty, but those suffered by small land-owning producers definitely would. Since 42 percent of poor Guatemalans own land, it is likely that it is among this population that poverty increased.[27]

Also important is value added in constant dollars, which declined during this period of non-pro-poor growth.

---

[27] Fletcher, Lehman; Graber, Eric; Merrill, William and Thorbecke, Erik. *Guatemala's Economic Development: The Role of Agriculture*. Ames: The Iowa State University Press. 1970.

Figure 23: Agriculture Value Added per Worker:
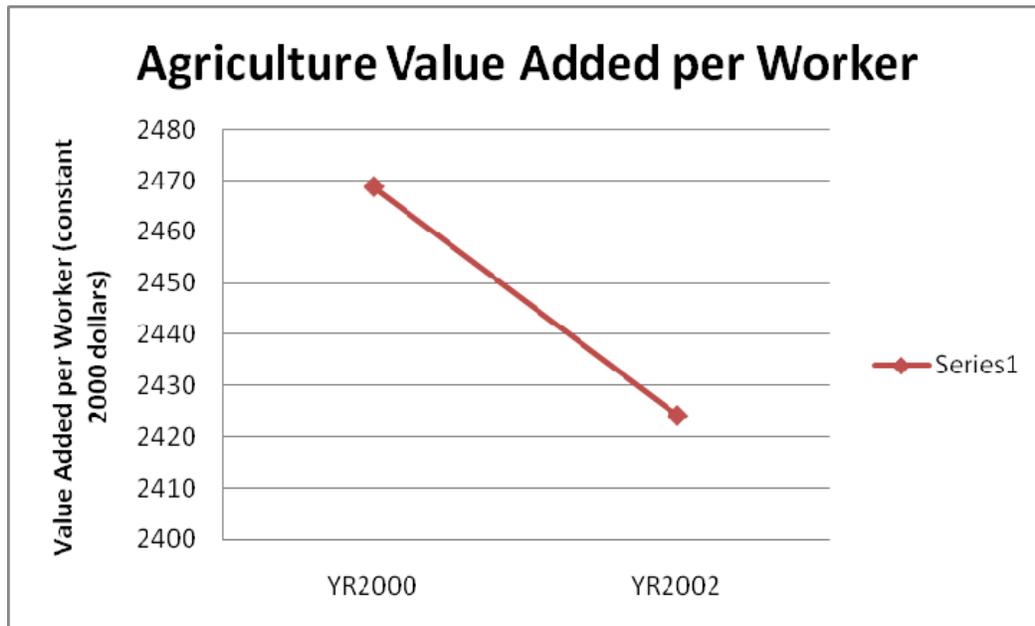
(WDI Online. World Development Indicators. The World Bank, 2009)

Just as increases in productivity caused decreases in poverty by means of increases in

agricultural wages, the decline in productivity between 2000 and 2002 caused an increase in

poverty. This manifested itself in the inequality measures as well, since, while poor farmers

were becoming poorer, the growth rate was still positive. People somewhwere were getting

wealthier. By referring back the the income by quintiles chart (Figure 2) one can determine who.

The reader will note that the 2nd, 3rd, and 4th quintiles increased their respective shares of income.

In addition to the indicators, some valuable insight has come from the former vice-

president of Guatemala, Eduardo Stein (Berger administration): "It is not strange … that the

years 2000-2002 are identified as an increase in poverty in Guatemala (if I understood correctly): they coincide with [the] FRG/Portillo [government], but also with the international collapse of coffee and a two year drought."[28] And in all likelihood, Stein is right. The two year drought is a clear explanation for declines in productivity and constant prices. And the issue of coffee prices has already been outlined. With regard to politics, recall that oligarchs ruled 1996-2000 and 2004-2008. Both of these periods were excellent with regard to poverty reduction and pro-poor growth. But between 2000 and 2004, Guatemala was let by a corrupt, non-oligarch military president named Portillo. As described in the background information, he was accused of money laundering, opening large American bank accounts, and handing off money to the military in return for support. While it is unlikely that these corrupt acts would have had a large effect on the poor, it is not entirely inconceivable that they would have at least a minor negative impact. And it is certainly more believable than various scholars' accusations of oligarchs, who were not even in power at the time.

SECTION 5: POLICY RECOMMENDATIONS

So far, this paper has indicated the structure of growth and how it relates to poverty. It has then explained the likely reasons behind these phenomena. The next logical step is to use this knowledge to determine the best strategies of poverty reduction in the near and distant future.

---

[28] Personal Communication: Eduardo Stein. 15, April 2009.

Given the degree to which increases in remittances have reduced poverty in the past two decades, there are different policy approaches that could prove to be useful. The first is deregulation. Any bureaucracy that may currently be hindering the flow of remittances would be removed. In Guatemala, this includes fees at the private banks that handle most of remittance volume, as well as strict ID requirements that are difficult to meet for many poor individuals. Other ways of encouraging remittances include selling remittance bonds and opening foreign currency accounts. Finally, since remittances from abroad depend on the success of emigrants, programs could be set up to help Guatemalan expatriates earn more income, while at the same time, encouraging them to send it home. This method is already being used by the Philippines. The Philippine Overseas Employment Administration helps Filipino/a emigrants find jobs in their new countries. Meanwhile, the Filipino Overseas Workers Welfare Administration stations diplomats around the world to council Filipino/a citizens living abroad. Part of the income tax burden is shouldered by this agency for all of these individuals who send part of their income home. While being expensive, this type of policy can contribute to large increases in remittances.[29]

Another problem posed to remittances is the sparseness of banks in poor, rural areas. This keeps the people who most need remittances from getting them. A government policy that incentivizes opening new locations in poor, rural areas would be useful for minimizing this problem.

---

[29] Sophism, Yaw. <http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=106354&comment=2087109#com>

Important to keep in mind, though, is the fact that remittances are expected to fall in years to come. Therefore, rather than discussing potential increases in remittances, we are actually discussing minimization of decreases in remittances. Given the gravity of the US financial crisis in combination with the United States' status as the number one source of international remittances to Guatemala suggest that the worst may be ahead of us. As Guatemalan emigrants' income falters, so will their remittances, and thus the incomes of their families at home. Since the current economic crisis is global in nature, it will not only affect Guatemalans in the US, but also those around the world. The World Bank's recent poverty assessment recognizes that remittances will fall and suggests enacting government programs designed to compensate. Their source of funding is not specified, but presumably is taxes. The specific nature of such programs is not described explicitly, although it is suggested that implementation might be in the form of direct cash transfers equaling the amount by which remittances to the poor decrease.[30]

Among the potential methods that have been recommended for alleviation of poverty in Guatemala is microfinance. The basic idea behind microfinance is that small loans are given to a targeted group (or groups) of individuals, in order to provide liquidity for that group's investments. This is great for making growth pro-poor, because with access to loans, the poor can take part in and contribute to the growth rate more than would otherwise be possible. Microfinance is currently a very popular tool worldwide because of its ability to promote pro-poor growth. It has been argued, though, that because microfinance in Latin America usually targets poor women, it is sacrificing economic growth in favor of poverty alleviation. This

---

[30] World Bank (2008) 'Guatemala Poverty Assessment' *Report No. 43920-GT*, World Bank, Washington, DC, 31 May.

argument is based on the assumption that women make less efficient use of the loans or they engage in less profitable activity. Michael Kevane and Bruce Wydick (2001) test this statement for Guatemala in particular and find that this tradeoff only exists for women under 30.[31] It is primarily the result of limited time due to child-care. In all other cases, growth is not sacrificed, but rather, made pro-poor. The results also show that loans exhibited diminishing marginal returns, as measured by increases in hired labor and increases in sales, thereby verifying the loans should remain small. Kevane and Wydick conclude that, in order to promote optimal pro-poor growth, microfinance should target women over 30 (especially 34-50) with small loans, to be used toward inputs.[32]

Microfinance is different from pro-poor economic policy because it is carried out primarily by NGOs. Since it does not use state funds and has no negative side-effect, there is really no down-side to microfinance. The limiting factor is funds at the disposal of NGOs. As the world enters the 2008 Global economic crisis, these funds will dwindle and Microfinance efforts in Guatemala will likely suffer. There is no question, however, that Microfinance is beneficial, and that loans should remain small and targeted primarily at middle-aged women.

Another set of solutions is described by Roman Krznaric (2006) in his analysis of the oligarchy and agriculture in Guatemala. The first suggestion is that of land reform. But, as the author admits, this is not politically feasible because of the power of CACIF. Still, he argues, given the problem of productive asset distribution, the only large, meaningful improvement that

---

[31] Kevane, Michael and Wydick, Bruce. "Microenterprise Lending to Female Entrepreneurs: Sacrificing Economic Growth for Poverty Alleviation?" *World Development* (2001) Vol. 29, No. 7, pp. 1225-1236.

[32] Kevane, Michael and Wydick, Bruce. "Microenterprise Lending to Female Entrepreneurs: Sacrificing Economic Growth for Poverty Alleviation?" *World Development* (2001) Vol. 29, No. 7, pp. 1225-1236.

could ever occur is redistribution of land.[33] As will be seen later, this is not really the case. The distribution of land has barely changed at all over the past two decades, and yet poverty and pro-poorness have experienced incredible variation.

As noted in Section 3: The Debate, Roman Krznaric suggests full implementation of the labor code. This entails enforcing the minimum wage for rural workers, as well as non-wage benefits (e.g. 13-month salary bonus). But he does not execute the appropriate analysis to determine whether that would actually be beneficial. While it sounds nice to say that producers should pay poor people more, the issue is far more complicated. If producers' demand for inputs is inelastic and if capital and labor are most accurately characterized as substitutes rather than compliments, then raising wages to an artificially high level will simply cause factor substitution. Producers will buy more capital and lay off workers, increasing unemployment. The factor substitution could also result in reduction of hours which is harder to spot in the data than open unemployment. So while some workers will increase their earnings, others will become unemployed or underemployed. If, however, input demand is elastic and/or labor and capital are complimentary, then any wage increases for the poor that are feasible within the Guatemalan political climate are absolutely beneficial to poverty reduction.[34]

The two key variables for determining if wage policy is effective are the price elasticity of demand for inputs and their status as compliments or substitutes. The latter can be determined with the cross-price elasticity of demand, which is negative for compliments and positive for

---

[33] Krznaric, Roman. "The Limits on Pro-poor Agricultural Trade in Guatemala; Land, Labour, and Political Power." *Journal of Human Development* (2006) Vol. 7, No. 1, pp. 111-135

[34] Todaro, Michael and Smith, Stephen. *Economic Development.* New York: Addison Wesley. 2006.

substitutes. Since the price elasticity of demand is -1.52, demand for inputs is inelastic.[35] With

regard to the status of capital and labor as substitutes or compliments, they are obviously not

perfectly in either category. A farm with no machines must employ more many more workers to

plant, harvest, fertilize, and irrigate. But at the same time, machines work in conjunction with

laborers and must be operated by people. And since some tasks cannot be overtaken by

machinery (such as picking coffee "berries"), the addition of a new plot of land, say, requires

both increased employment and increased capital. Since the price elasticity of demand for inputs

is relatively elastic, liberal wage policy should be effective and not cause much (if any)

decreased employment, even if labor and capital are substitutes. This reinforces the earlier

conclusion that increases in wages (partially thanks to Arzu) were beneficial in reducing poverty

between the mid-nineties and 2000.

   If, as Krznaric argues, the main cause of non-pro-poorness is the unequal distribution of

land, in combination with a rich oligarchy, one can either try to find ways for the poor to

generate income without needing land, or one can redistribute land in other, more creative ways.

Fletcher, Graber, Merrill, and Thorbecke suggest taxing farmers for idle land and land that is not

used intensively. There is evidence of an inverse relationship between farm size and

productivity for Guatemalan farms. This is due to the fact that large farmers use their plots less

intensively than do small farmers, often using minimal inputs or even leaving sections fallow.

Taxing this type of use would force large farmers to either start using land intensively, or sell it

to someone who will (small farmers). The general idea is to make everybody treat land as the

scarce asset it is for the rural poor. According to the authors of this study, such a policy would

---

[35] Penn World Tables. <http://pwt.econ.upenn.edu/php_site/pwt61_form.php>

"probably be easier to administer" than land reform.[36] This is the crucial point, because if this policy is politically feasible, then perhaps there is a way to redistribute land.

Denise Stanley and Sirima Bunnag (2001) look at the issue of crop and other product diversification in a new light. They stress the importance of treating Guatemala's exports as a broker treats an investment portfolio. Among the goals is choosing to promote new products that either have low instability or, better yet, that covary negatively with existing exports with regard to price, volume, and cost. This, in turn, lowers the total export earnings variance. Based on their analysis, Guatemalan non-traditional agricultural exports (like coffee and snow peas) covary positively with one another as well as with total exports with regard to price, volume, and/or cost. This clearly creates major problems of volatility, which can be withstood less easily by the poor than by the non-poor. To make matters worse, there seems to be a trend of high volatility in general with non-traditional agricultural exports.[37]

Non-traditional manufacture exports, however, were found to covary negatively with other exports, making them a better sector to promote through policy. Although not mentioned in the 2001 article, this is also beneficial because employment in manufacture eliminates the problem of unequal land distribution. The productive assets necessary for manufacture, primarily skill and labor, pose less of a problem with regard to making growth pro-poor. While it is true that these productive assets are distributed very unequally, investing in education is politically far more feasible than land reform. According to Stanley and Bunnag, non-traditional

[36] Fletcher, Lehman; Graber, Eric; Merrill, William and Thorbecke, Erik. *Guatemala's Economic Development: The Role of Agriculture*. Ames: The Iowa State University Press. 1970.

[37] Stanley, Denise and Bunnag, Sirima. "A New Look at the benefits of Diversification: Lessons from Central America." *Applied Economics* (2001) Vol. 33, No. 11, pp. 1369-1383.

manufacture exports were more stable than agricultural exports in other Central American countries. Notably, in Costa Rica, promotion of microelectronics and circuitry manufacture promoted low-volatility, pro-poor growth because of the nature of its covariance, volatility, and other characteristics. It has yet to be seen if other countries can do what Costa Rica did.[38]

Conclusion:

In the present paper we have established that economic growth has been pro-poor for the past two decades. We have also verified that growth was non-pro-poor between 2000 and 2002 and that growth has been non-pro-extremely poor between 2000 and 2006. The various determinants of this growth structure have included the international coffee price, value added in both constant and current prices in agriculture, remittances, and relative inflation in basic food products, among other factors. The fact that that the two periods with the most pro-poor growth are also periods in which oligarchs were in office does a lot to undo the points of Roman Krznaric and Simon Helweg Larsen. Most of the causes of the growth structure were market forces. But if any political factor accounted for the one short period of non-pro-poor growth that did exist, it most likely was the corruption of the Portillo regime, which coincided perfectly with the span of poverty increases.

Now, Guatemala has another oligarch in office: Alvaro Colom. Simon Granovsky-Larsen (2008) says, "Notwithstanding Colom's best intentions, then, the many interests of his

---

[38]Stanley, Denise and Bunnag, Sirima. "A New Look at the benefits of Diversification: Lessons from Central America." *Applied Economics* (2001) Vol. 33, No. 11, pp. 1369-1383.

party and his compromised ascent to power make probable the continuation of the trends that defined the last four years in Guatemala: the concentration of wealth and resources, the increased presence of transnational companies, the acceleration of internal and external migration for economic reasons, and the ballooning of figures for poverty across the country despite a steadily growing gross national product."[39] But poverty figures have not continued to balloon. In fact, it would have been impossible for them to "continue to balloon," since they were never increasing in the first place, except during the short period between 2000 and 2002. This represents the analyses of various scholars that only used one or two years of data and, in some cases did not execute the proper analysis. When looking at a longer span with more years, it is quite clear that such conclusions are incorrect. It is hard to say whether Colom has been good or bad for Guatemala yet. But the fact that he is an oligarch, if anything, is a mark in his favor.

Ideally, some of the policy recommendations made in this paper will come to pass. With increased bank coverage, remittances can continue to reduce poverty inspite of the world-wide recession. Investments in education and agricultural inputs (such as fertilizer, high-yield seeds, and irrigation) must be increased in order to stimulate productivity. Microfinance organizations must continue to invest in middle-aged Guatemalan women. In general, Guatemala (its government, its agencies and related non-profits and banks) must take logical steps to ensure that growth continues to be pro-poor. This is the only way in which the historically high levels of inequality and poverty can be changed for the better.

---

[39] <http://www.nisgua.org/news_analysis/index.asp?id=3055&mode=pf>

Bibliography:

Adler, John H; Schlesinger, Eugene R and Olson, Ernest C. *Public Finance and Economic Development in Guatemala*. Stanford: Stanford University Press. 1952.

Besley, Timothy and Cord, Louise J, Eds. *Delivering on the Promise of Pro-Poor Growth* Washington: The International Bank for Reconstruction and Development. 2007.

Carey, David. "Maya Perspectives on the 1999 Referendum in Guatemala: Ethnic Equality Rejected?" *Latin American Perspectives* (2004) Vol. 31, No. 6, pp. 69-95.

C Clert, AM Ibáñez. *Exclusion and Poverty in Guatemala's Rural Villages: The Challenge of Tackling Cumulative Barriers*. Guatemala Poverty Assessment Report Technical Background, 2002

Dollar, David and Kraay, Aart. "Growth is Good for the Poor." *Journal of Economic Growth* (2002) Vol. 7, pp. 195-225

Fletcher, Lehman; Graber, Eric; Merrill, William and Thorbecke, Erik. *Guatemala's Economic Development: The Role of Agriculture*. Ames: The Iowa State University Press. 1970.

G Hall. *Indigenous People, Poverty and Human Development in Latin America*. Development in Practice, 2007 – Routledge

Grimm, Michael. "Removing the Anonymity Axiom in Assessing Pro-Poor Growth." *Springer Science and Business Media* (2006)

Grosse, Melanie; Harttgen, Kenneth and Klasen, Stephan. "Measuring Pro-Poor Growth in Non-Income Dimensions." *World Development* (2008) Vol. 36, No. 6, pp. 1021-1047.

Hamilton, Sarah and Fischer, Edward F. "Non-Traditional Agriculture Exports in Highland Guatemala: Understandings of Risk and Perceptions of Change." *Latin American Research Review* (2003) Vol. 38, No. 3, pp. 82-110.

Helweg-Larsen, Simon. "The Peace of the Oligarchs; Land Distribution and the Guatemalan Peace Process." *Revue Canadienne d'Etudes du Developpement* (2003) Vol. 24, No. 4, pp. 617-632.

J Edwards. *Education and poverty in Guatemala*. Washington, DC: The World Bank, Guatemala poverty assessment, 2002

Kevane, Michael and Wydick, Bruce. "Microenterprise Lending to Female Entrepreneurs: Sacrificing Economic Growth for Poverty Alleviation?" *World Development* (2001) Vol. 29, No. 7, pp. 1225-1236.

Kraay, Aart. "When is Growth Pro-Poor? Evidence from a Panel of Countries." *Journal of Development Economics* (2006) Vol. 80, No. 1, pp. 198-227.

Krznaric, Roman. "The Limits on Pro-poor Agricultural Trade in Guatemala; Land, Labour, and Political Power." *Journal of Human Development* (2006) Vol. 7, No. 1, pp. 111-135

Ravallion, Martin and Chen, Shaohua. "Measuring Pro-poor growth." *Economic Letters* (2003) Vol. 78, No. 3, pp. 93-99.

Sen, Amartya. "Poverty: An Ordinal Approach to Measurement." *Journal of Development Economics.* 1976.

Shorrocks, Anthony and Van Der Hoeven, Rolph. *Growth, Inequality, and Poverty.* Oxford: Oxford University Press. 2004

Smith, Carol A. "Survival Strategies Among Petty Commodity Producers in Guatemala." *International Labour Review* (1989) Vol. 128, No. 6, pp. 791-813.

Sophism, Yaw. <http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=106354&comment=2087109#com>

Stanley, Denise and Bunnag, Sirima. "A New Look at the benefits of Diversification: Lessons from Central America." *Applied Economics* (2001) Vol. 33, No. 11, pp. 1369-1383.

Tibbetts, Robert. "Growth, Poverty, and Inequality in Latin America and Guatemala." *International Affairs Journal at UC Davis* (2006)

Todaro, Michael and Smith, Stephen. *Economic Development.* New York: Addison Wesley. 2006.

Woodward, Ralph Lee, Jr. *Class Privilege and Economic Development*. Durham: The University of North Carolina Press. 1966.

World Bank (2003) 'Poverty in Guatemala,' *Report No. 24221-GU*, World Bank, Washington, DC, 20 February.

World Bank (2008) 'Guatemala Poverty Assessment' *Report No. 43920-GT*, World Bank, Washington, DC, 31 May.