Growth and Distribution: A Guyana Case Study

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Abstract

The principal contribution of this article is that it provides evidence of recent trends of inequality in Guyana, but the article goes beyond this and describes the evolution of inequality since 1974 to 2013. This is done within a Kaleckian framework to derive profit and wage rates, since recent Gini coefficients data are absent. The evidence implies that inequality is on the rise. The article argues that the mining and quarrying sector regulates Guyana's growth performance and ignites growth in the non-tradable services sector, which are characterized by low-wage-low-employment opportunities. Thus, a greater share of the gains in income in these sectors goes to profits when growth is sustained.

1 Introduction

In many poor and developing countries, data on inequality are either absent or dated -this makes research on inequality and distributional conflicts uncommon. This article uses a Kaleckian framework to overcome these difficulties. Specifically, it employs Kalecki's profit equation and annual growth rate data to estimate annual wage rates. The dynamics between profit and wage rates are used to determine the evolution of inequality in Guyana – a small and open economy.

The evidence suggests that inequality is on the rise in Guyana even as per capita income increases. Exclusive focus on poverty rates is typical of many developing countries, but what is the point of helping the most vulnerable in society today, if we dam them to poverty tomorrow? Gross inequality of income creates disparities in wealth and consequently, reduces the equality of opportunity in a society. Accumulated wealth is a significant determinant of future income (Piketty 2014), and the principal reason why developing countries must include distributional conflicts in their policy matrix.

Although inequality is under-researched in Guyana, Gafar (2004) and Khemraj (2013) have undertaken empirical and theoretical studies respectively. Gafar (2004) contends that growth in Guyana has no relationship with inequality, especially since the Gini coefficient has remained relatively stable during the years 1993-1999. This is contrary to the contention in this article. Gafar (2004) time series is limited; therefore, any definitive conclusion on the relationship between growth and distribution in Guyana would be premature. The advantage of this article is that it traces the evolution of inequality in Guyana from 1974-2013; the evidence proves that growth and wage rates are highly correlated. Although Gafar (2004) explains that Guyana experienced marginal reductions of inequality during 1993-1999, this article labels this experience as a recovery, in light of a deterioration of inequality in the previous decade. Khemraj (2013) proposes that the elected oligarchy in Guyana constructs an uneven income growth between the principal ethnicities. Although this article does not investigate the political economy underpinnings of distributional conflicts, it is likely that the majority of the profit earners are those in the ethnic group with the greatest political power.

The evolution of inequality in Guyana has been one of deterioration (1974-1984), recovery (1985-1995), improvement (1996-2006) and further deterioration in recent

years (2007-2013). From this perspective Gini coefficients would indicate marginal gains in the distribution of income or stability as Gafar (2004) explains. But the Kaleckian approach goes deeper and highlights the implications of growth on wages and profits. But what is the cause of the recent rise of inequality in Guyana? The article explains that sustained growth of non-tradable services permits profits to gain a greater share of a growing pie. Most of the services industry in Guyana is characterized by low-wage-low-employment intensive opportunities, thus, growth in these conditions increase inequality.

Unlike the rich literature on Guyana's growth performance, this articles places significant explanatory power in the mining and quarrying sector. The apparent consensus in the literature is that political economy considerations are the principal determinants of Guyana's economic performance. This article presents evidence that illustrates the simultaneous but coincidental change in gold prices and political regimes.

The remainder of the paper is organized as follows. Section 2 outlines the Kaleckian approach to inequality. Section 3 provides a critical but brief review of Guyana's growth literature, while section 4 discusses the evolution of inequality in Guyana. Section 5 examines the source of the recent rise of inequality and section 6 concludes.

2   A Kaleckian Approach to Inequality

Equation (1) is the national income accounting identity with a government sector and an open economy. National income, consumption, investment, government spending and net exports are Y, C, I, G and $(X-M)$ respectively. Equation (2) further disaggregates national income (Y) into profits (P) and wages (W).

$$Equation\ (1)\ Y\ =\ C\ +\ I\ +\ G\ +\ (X-M).$$
$$Equation\ (2)\ Y\ =\ (W\ +\ P)\ =\ C\ +\ I\ +\ G\ +\ (X-M).$$

Kalecki (1942) showed the world how laissez faire capitalism disempowers labor and empowers capital. Although this argument is age old, see Marx (1990), [1867]), Kalecki used national income identities to make his point. In his original formulation, Kalecki assumed a closed economy, no public sector and that all wages are spent. This leads us to the following formulation:

$$\text{Equation (3) } Y = W + P = C_1 + C_2 + I,$$

where C_1 and C_2 are consumption out of wages and profits respectively.

$$\text{Equation (4) } W + P = C_1 + C_2 + I.$$
$$- C_1 \qquad - C_1$$

Since Kalecki assumes that all wages are spent: $W = C_1$, when we subtract C_1 from both sides of equation (4) we are left with equation (5) - this is Kalecki's famous profit equation.

$$\text{Equation (5) } P = C_2 + I.$$
$$\text{Equation (6) } W = C_1.$$

Equations (5) and (6) led Kalecki to claim *that workers spend what they earn, but capitalists earn what they spend.* This is the inherently unequal relationship between profits and wages or labor and capital. Equation (7) illustrates the equilibrium condition when national savings (NS) are equal to investment (I). Equation (8) simply disaggregates national savings into savings from wages $(s_1 W)$ and profits $(s_2 P)$, where s_1 and s_2 are the average propensity to save from W and P respectively: note that s_1 is not equal to s_2.

$$\text{Equation (7) } NS = I.$$
$$\text{Equation (8) } s_1 W + s_2 P = I.$$
$$- s_1 W \qquad - s_1 W$$

Equation (8) allows us to find the rate of profit (P): when we subtract $s_1 W$ from both sides of equation (8), the following remains:

$$\text{Equation (9) } s_2 P = I - s_1 W.$$
$$/ s_2 \quad / s_2$$

Then we divide both sides of equation (9) by s_2; equation (10) illustrates the rate of profit (P):

$$\text{Equation (10) } P = (I - s_1 W) / s_2.$$

Keeping Kaleck's assumption that all wages are spent $(W = C_1)$, savings out of wages must be equal to zero $(s_1 W = 0)$, therefore, the rate of profit (P) is:

$$Equation\ (11)\ P\ =\ I\ /\ s_2.$$

Although this profit rate was derived from a closed economy without any public sector, this derivation holds when the model is generalized to an open economy with a government sector. Equation (12) illustrates the equilibrium condition when injections are balanced with leakages, but generalized to an open economy (exports (X) and imports (M)) with a government (G):

$$Equation\ (12)\ NS\ +\ T\ +\ M\ =\ I\ +\ G\ +\ X.$$

$$-T\ -M\qquad -T\ -M$$

Subtracting taxes (T) and imports (M) from both sides of equation (12) leads us to the following:

$$Equation\ (13)\ NS\ =\ I\ +\ (G-T)\ +\ (X-M)$$

This can be rewritten as

$$Equation\ (14)\ s_1 W\ +s_2 P\ =\ I\ +\ (G-T)\ +\ (X-M).$$

Solving for the rate of profit (P) requires us to subtract both sides of equation (14) by $s_1 W$ and then divide both sides by s_2. The rate of profit (P) equals:

$$Equation\ (15)\ P\ =\ (I\ +\ (G-T)\ +\ (X-M)\ -s_1 W)\ /\ s_2.$$

Note carefully that $(I\ +\ (G-T)\ +\ (X-M)\ -\ s_1 W)$ is the same as $C\ +\ I\ +\ G\ +\ (X-M)$, where $C\ =\ s_1 W$. Since the rate of profit (P) and savings rate (s_2) are in *rate* forms, $C\ +\ I\ +\ G\ +\ (X-M)$ also needs to be transformed into *rate* form. The *rate* form of $C\ +\ I\ +\ G\ +\ (X-M)$ is the growth rate (g) of the overall economy. Thus, the rate of profit (P) could be generalized, where (g) is the rate of growth of the overall economy and (s) is the savings rate - see equation (16).

$$Equation\ (16)\ P\ =\ g/s.$$

Therefore, the wage rate (W) can be calculated as follows:

$$Equation\ (17)\ W\ =\ g\ -\ P.$$

2.1 Dynamics of Wage and Profit rates and Wage and Profit shares

Wage rate (W) and profit rate (P) are different from wage share (α) and profit share $(1-\alpha)$. The ratio of wages to national income is the wage share (α) and the ratio of profits to national income is the profit share $(1-\alpha)$. Note carefully that $\alpha+(1-\alpha)=1$. For illustrative purposes, let's assume that the wage share is 0.6 and the profit share is 0.4. When the profit rate (P) and the wage rate (W) are the same, the profit and wage shares of 0.4 and (0.6) remain the same. In other words, income distribution/inequality remains the same. When $W > P$, inequality declines and wage share increases relatively faster than profit share. Conversely, when $P > W$, inequality increases and profit share in national income rises faster than wage share. These analytics are used to determine the evolution of inequality in Guyana; since recent inequality data (Gini coefficient) are absent, except for years 1992, 1993, 1999 and 2006.

The Kaleckian approach permits the author to determine directly, whether growth in Guyana is *inclusive* or not. It is an invaluable approach to the study of income distribution in countries that have poor data collection institutions. Due to the paucity of data on inequality in Guyana, studies that empirically investigate distributional issues are lacking. Therefore, this article is an essential update on distributional conflicts and the first study to employ the Kaleckian approach to study of inequality in Guyana.

Gafar (2004) seeks to ascertain the relationship among market reforms, poverty reduction and inequality in Guyana. The essential conclusion is that inequality (as measured by the Gini coefficient) has remained relatively stable between the years (1993-1999), where its Gini coefficient has marginally declined from 0.467 to 0.421. Consequently, Gafar (2004) infers that growth in Guyana does not increase or decrease inequality, although, it reduces poverty. Stable wage and profit shares in Guyana necessitate stable wage and profit rates, but the evidence presented in this article illustrates a highly volatile wage rate.

The ability to look beyond Gini coefficients and uncover the dynamics between wage and profit rates is an additional benefit of the Kaleckian approach. The latter does explain stable income distribution in Guyana between (1974-1999), but it offers new insights that could not be discerned using Gini coefficients. The period (1974-1984) was

characterized by substantial increases of inequality, but fortunately, the following period (1985-1995) experienced a full recovery. In aggregate, the period (1974-1995) was one of relatively stable income inequality, but the Kaleckian approach adopted in this essay, reveals that the stability of income distribution was because of a deterioration and then a recovery in the distribution of income. Since recent data on inequality are absent, Gafar (2004) is limited because its analysis terminates in the year (1999). The advantage of this article is that it is able to trace the evolution of inequality in Guyana from 1974 to 2013.

On a theoretical front, Khemraj (2013) advances the thesis that an uneven income growth is the inevitable end in Guyana when the electoral outcome is fixed by ethnic/race voting. Although the popular studies on inequality (Stiglitz (2012) and Piketty (2014)) emphasize the differences of income between wages and profits, Khemraj (2013) underscores the income differences between the two primary ethnicities (Afro-Guyanese and Indo-Guyanese) in Guyana. While Gafar (2004) calls for pro-poor growth policies and less redistribution, Khemraj (2013) advocates for constitutional reform to hedge against the tendencies of oligarchies to deliberately increase inequality.

Unlike Gafar (2004), this article contends that there is a strong nexus between growth and distribution in Guyana – more specifically, wages and profits. This article does not investigate the latent ethnic conflict that beset Guyana's political economy, but a casual juxtaposition of this with the evolution of wage and profit rates in Guyana, reveals that the ethnic group with the greatest political power would be the profit earners. Thus, increasing inequality in Guyana could easily mean rising inequality between the two principal ethnicities.

3 A Critical Review of the Existing Literature

Table 1 displays a brief review of various studies that sought to explain Guyana's economic performance. It is clear that most agree that the source of Guyana's poor economic growth is directly related to internal political turmoil, while Grenade and Pasha (2011) explained the growth recovery through improved governance among other things. Although this paper sides with the terms of trade argument it is important to interrogate the political economy considerations.

Table 1

Various Explanations of Guyana's Economic Performance.	Various Studies
Governance/Political Economy Troubles	Singh (2013), Khemraj (2013) Staritz et al (2007), Grenade and Lewis - Bynoe (2011) and Grenade and Pasha (2011).
Geography	DaCosta (2007).
Macroeconomic Management	Grenade and Lewis-Bynoe (2011) and Grenade and Pasha (2011).
Terms of Trade	Grenade and Pasha (2011), Weisman (2003).
Poor Inter-sectoral Linkages	Khemraj et al (2013).
Poor Financial Intermediation	Khemraj (2009).
Debt	Weisman (2003).

Source: Author's representation

For instance, Singh (2013) ran a number of regressions to determine the principal factors that matter for Guyana's growth. Among his significant variables, political regimes (PPP[1] and PNC[2]) proved to be statistically significant for growth. But we must take great caution with how we interpret the results from mechanical regressions. The change in growth performance in Guyana is so dramatic between different political regimes that the regression analysis will include these political regimes

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[1] People's Progressive Party
[2] People's National Congress

as significant growth determinants. But as Figures 2 and 11 highlight, the change in gold prices is a better explanation of Guyana's economic performance.

Much of the political turmoil that Guyana experienced during the 2000s is used to explain its turbulent growth performance in these years. But when one looks at the gold price in Figure 11 for the same years, one notices that there were little growth in the price of gold, in fact, gold prices actually declined. This story of poor growth in the price of gold mirrors negative growth rates in the mining sector for corresponding years (see Figure 2).

It is clear in Figures 2 and 6 below that the rate of growth of the mining and quarrying sector is an outlier. This means that its growth rate will significantly affect the overall growth rate of the economy. When its growth rate is above the average growth rate of the other sectors, the economy's growth rate will increase. Conversely, when its growth rate is below the average growth rate of the other sectors, it will tend to pull the economy's growth rate downwards. This gives credence to the terms of trade explanation listed in Table 1 and thus, overshadows the political economy explanations. With poor and turbulent growth it is unlikely that any analysis will find strong inter-sectoral linkages among the various sectors in Guyana. Although, as this paper explains, growth in the services industry is a direct result of growth in the mining and quarrying sector.

Since Guyana benefited from a Multi - Lateral Debt Relief initiative in 2006 one may claim that lower debt levels is the cause of growth. But Figure 11 illustrates a spike in the price of gold in that specific year, which results in corresponding increases in the growth and profit rates in the mining and quarrying sector in Guyana. Figures 2 and 4 corroborate this story. Reinhart and Rogoff (2010) concludes that when debt to GDP ratios rise above 90% growth rates become negative - a striking conclusion. But this was an erroneous conclusion as Herndon *et al* (2013) highlight, the authors explain that Reinhart and Rogoff (2010) had coding errors in their data and criticized them for using unconventional weighting and excluding data. When these errors were corrected the debt-doom relationship literally disappeared. Thus, instead of high debt leading to poor growth, the causation is reversed.

Sound macroeconomic management will always remain a necessary condition for growth, but by itself it is in sufficient to ignite the growth process. Although foreign investors look keenly at various countries macro stance, there are other equally or more important variables that they take into consideration. Most critically: infrastructure development, human capital development, natural resource endowment etc., if these are lacking and a nation has a good macro stance this would matter little to prospective investors.

High interest rate spreads in the banking sector is conventionally understood as an indication of poor financial intermediation, but Stiglitz and Weiss (1981) contend that this state of credit market disequilibrium could be efficient. The authors explain that when information is imperfect about the credit worthiness of potential borrowers high spreads are needed to cover the costs incurred in searching for information to reduce this asymmetry. Secondly, borrowers that are less likely to repay are usually the first loan applicants, therefore, interest rate spreads that cover search costs to reduce information asymmetry are likely to reduce adverse selection and non - performing loans. Essentially, interest rate spreads in Guyana's banking sector may not necessarily reflect poor financial intermediation but prudent banking practices.

4   Evolution of Inequality in Guyana

Figure 1 depicts the evolution of profit and wage rates from 1974 to 2013 in Guyana. This time period is divided into four (4) periods (A, B, C, D), where A, B and C are a decade each, while period D spans only six (6) years. Guyana's rate of economic growth is not included in Figure 1 but it is important to indicate that it is highly correlated with the evolution of wage rates, except in the latter years in period D. Essentially; wage rates are the greatest casualty of poor growth and the greatest beneficiary during the recovery phase of period B.

The white bars indicate increasing wage share relative to profit share, while the grey bars are indicative of rising inequality or rising profit share relative to wage share. It is obvious that in recent years the distribution of income has worsened, as is indicative by the growing grey bars in the last few years. The marginal reduction of inequality that Gafar (2004) alluded to is depicted by the sizable white bars in the period of (1990-

1996). But note carefully that this improvement in the distribution of income follows a period of substantial increases of inequality. A careful examination of Figure 1 illuminates the violent changes in wage rates that would be hidden in Gini coefficients. As was explained earlier, wage and growth rates are highly correlated, which means that the relationship between growth and the distribution of income is *significant*, contrary to Gafar (2004).

Figure 1. Evolution of Inequality
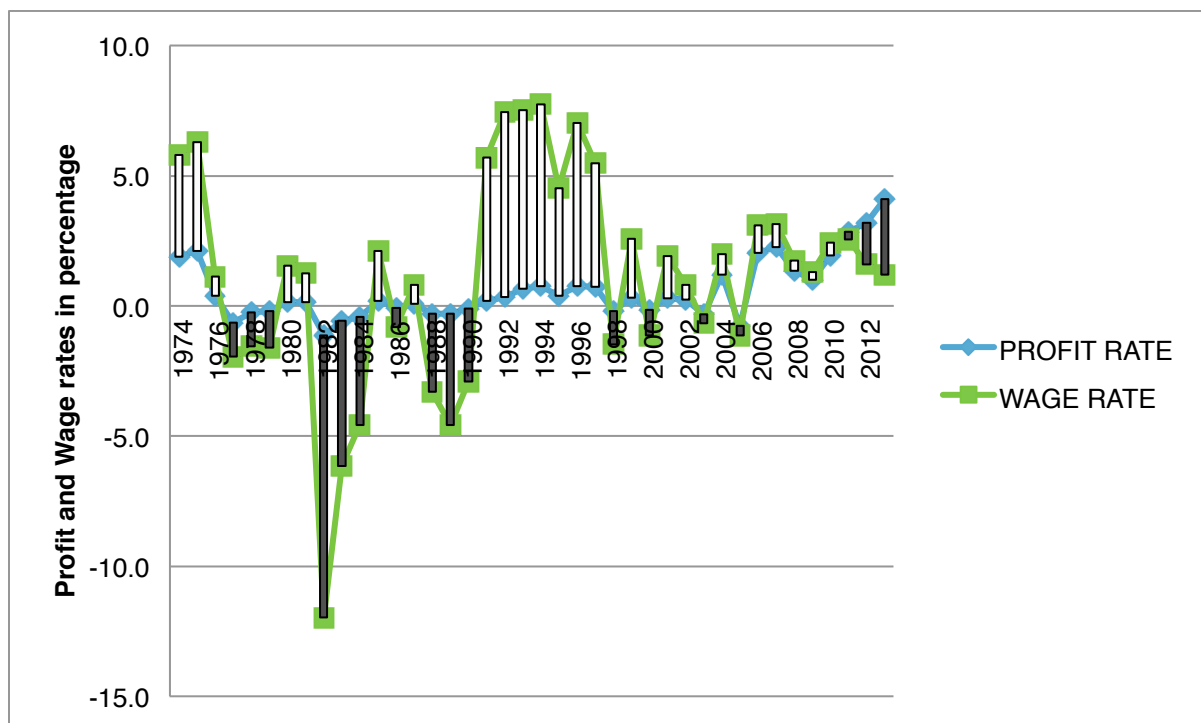
Data Source: World Bank

4.1 Period A: Labor's Lost Decade (1974-1984)

The average growth rate (or lack there of) for this period was approximately (-0.94%). It is obvious from the graph that the greatest casualty of poor growth is labor; somehow profits manage to stay alive. This brings out an important point that Keynes (1930) highlighted: he argued that profit is like the widow's cruse (from the bible) that is never depleted, even in downturns. The great recession in the USA is a modern day example of profits having the upper hand - see Stiglitz (2012) and Piketty (2014) of how the great recession has worsened already high inequality and prolongs the recovery.

Average profit and wage rates are: (0.13%) and (-1. 07%) respectively, thus, profit rate grew on average (0.9%) faster than wages. The consequence of this is increased inequality. This means that growth in the next decade must increase per capita income and ensure that most of the gains in income go to wages to advance a recovery. Indeed, Guyanese labor has lost the battle in this decade.

4.2 Period B: A Tale of Recovery (1985-1995)

The average profit and wage rates in this period were (0.16%) and (2.2%) respectively, wages have exceeded profits by an average of (2%) per year. A genuine recovery in the distribution of income in Guyana. Note carefully that the author wishes to differentiate between recovery and reductions of inequality. Taking into consideration the worsening of inequality during the previous decade, this period was a recovery; unlike the contention of Gafar (2004), who argues that this period experienced reductions of inequality. An average growth rate of (2.3%) characterized this period and based on the recovery of inequality, this has been a decade of inclusive growth. It is remarkable how a mere decade could be so inclusive that the erosion of the wage share in the previous decade can be conquered.

4.3 Period C: Genuine Reductions of Inequality: Good Luck or Good Policy? (1996-2006)

Unlike a steady rise in the wage rate during the recovery phase, wage rates have been highly volatile in this decade, while profit rates remain steady. Average growth was (2.06%), while average profit and wage rates were (0.37%) and (1.68%) respectively. Indicating that on average, wages rose (1.31%) faster than profits - a genuine reduction of inequality in Guyana. This is no small achievement, most countries in the world cannot boast of two decades of perpetual improvement in the distribution of income. It is important to highlight though, that the rate of growth in this period is lower than in the recovery phase and the rate of reduction of inequality is lower in this decade than in the previous. Fundamentally, inequality decreased at declining rates.

4.4 Period D: A Reversal of Fortune (2007-2013)

This period is not a full decade, it only accounts for 2007 to 2013 – however, more than half of a decade. This is Guyana's best period thus far; average growth stands strong at (4.4%). Wage rates grew by an average of (1.99%) and profit rates recorded an average increase of (2.38%). A reversal of fortune, profit rates grew (0.39%) faster than wage rates. Two points are vital:

- These years witness the return of inequality and
- It is rising at a much slower pace than inequality has declined in the two previous decades.

While the latter point may comfort some, it is a cause for concern that in the period of strongest growth, the distribution of income has deteriorated. *Although all boats float, the tide is elevating some boats faster than others*. Instead of consolidating the gains made in Period C, Guyana's growth explosion has disproportionately benefited profits or capitalists - that small group that manages to stay afloat during hurricanes (Period A) and even appropriate a greater share in income when the tide is steady (Period D). The widow's cruse indeed!

4.5 A Brief Synopsis

The Poverty Reduction Strategy Paper (PRSP) (2011-2015) explains that inequality has declined between 1992 and 2006; this is consistent with the recovery phase and the genuine reductions of inequality period highlighted above. Specifically, the PRSP (2011-2015) contends that the Gini coefficient has declined from 0.44 to 0.35 - a reduction by 0.09. This gain is presently under threat as the reversal of fortune period underscores.

Period B is the best performing decade in terms of reductions of inequality, except it was a recovery. Actual reductions of inequality in Period C were relatively less spectacular. Unfortunately, Period D is chipping away at these gains. Although absolute income increases during Period D, income disparities are widening and this is a cause for concern. The reduction of inequality in Period C seems to be more good luck than good policy. Firstly, the strength of growth in this Period is weaker when compared to the previous decade. Secondly, the dramatic fluctuations of both growth and wage rates could not have been the objective of any good policy.

An inclusive growth model is one that increases per capita incomes without the simultaneous increase of income disparities, while safe guarding the gains from improved distribution of income in times of poor growth. From this perspective, Guyana's recent growth explosion is not inclusive, although the two previous decades point to the contrary. But an inclusive growth model must produce sustainable growth, this point is lacking in the two previous decades.

5 Why did Inequality decline and then reversed?

To answer this question we need to take a closer look at the sources of growth in Guyana and the nexus between these and the services sector. Figures 2 and 3 illustrate the growth rates of the non-services and services sectors respectively, for the years 1990-2009. The author proposes that the source of growth in Guyana is the mining and quarrying sector and this causes spillover effects into the services industry. The source of the recent increase of inequality lie in this causation mechanism, but this will be made clear shortly.

Figure 2. Growth Rates of Non-Services Sectors at 1988 Prices
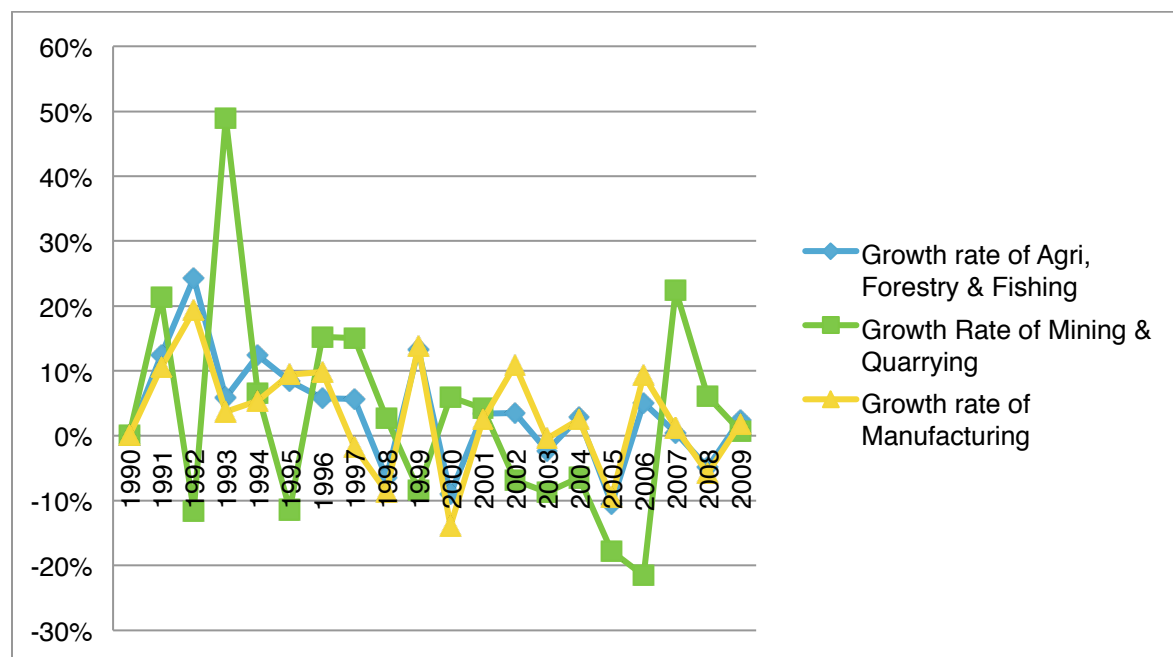
Data Source: Bank of Guyana

Figure 3. Growth Rates of Services at 1988 Prices
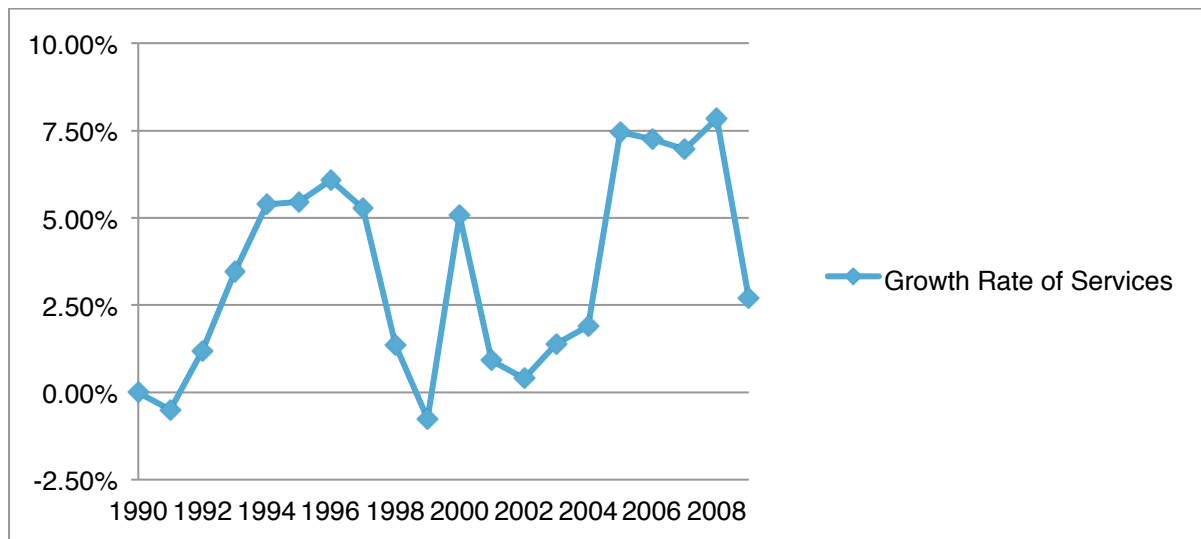
Note carefully in Figure 2, two episodes of growth booms (1992 & 2006) in the mining and quarrying sector. It is clear that these twin episodes were not only short lived, but also collapsed. Remarkably, in the period of 1995 to 2005 growth is this sector collapsed to negative values. To prove our causation mechanism, we must expect a similar growth pattern for the services sector in Figure 3. The escalation in growth rates for the services sector mirror the twin boom periods in the mining and quarrying sector. Similarly, growth in the services industry also collapsed, mimicking the twin collapses in the mining sector. But there is an important difference with the collapses in the rate of growth of the services sector: they do not immediately follow collapses in mining; there is a time lag between the collapses in the services industry and the mining and quarrying sectors. And finally, the period of continuous deceleration (1995-2005) in the mining and quarrying sector transitions to unstable growth in the services sector over the same period.

It is obvious that a collapse in the rate of growth of the mining sector will take time to work its way into the services industry, which explains the time lag in collapse between the two. This means that growth in the overall economy does not immediately follow a collapse in the rate of growth of the mining sector since growth continues for a short period in the services industry. The essential point is that the growth and profit

rate of the mining and quarrying sector regulates the performance of all other sectors, especially the services industry.

Note carefully that the period of negative growth in the mining and quarrying sector (1995-2005) is also Period C - Genuine reductions of inequality: Good luck or Good Policy? Since growth rates were stagnant for most sectors and negative in the mining and quarrying sector (see Figure 2), it follows that profit rates were stagnant for most sectors and negative for the mining and quarrying industry. Hence, there is little surprise that inequality declined in Period C. This strengthens the view that reductions of inequality in this period have more to do with good luck than good policy: surely; stagnant and negative profit rates are not consistent with any good economic policy. Figures 4 and 5 illustrate the profit rates for the various industries and line A-B depicts the dramatic decline in profit rates in the mining and quarrying sector.

Figure 4. Profit Rates of Non-Services Sectors at 1988 Prices
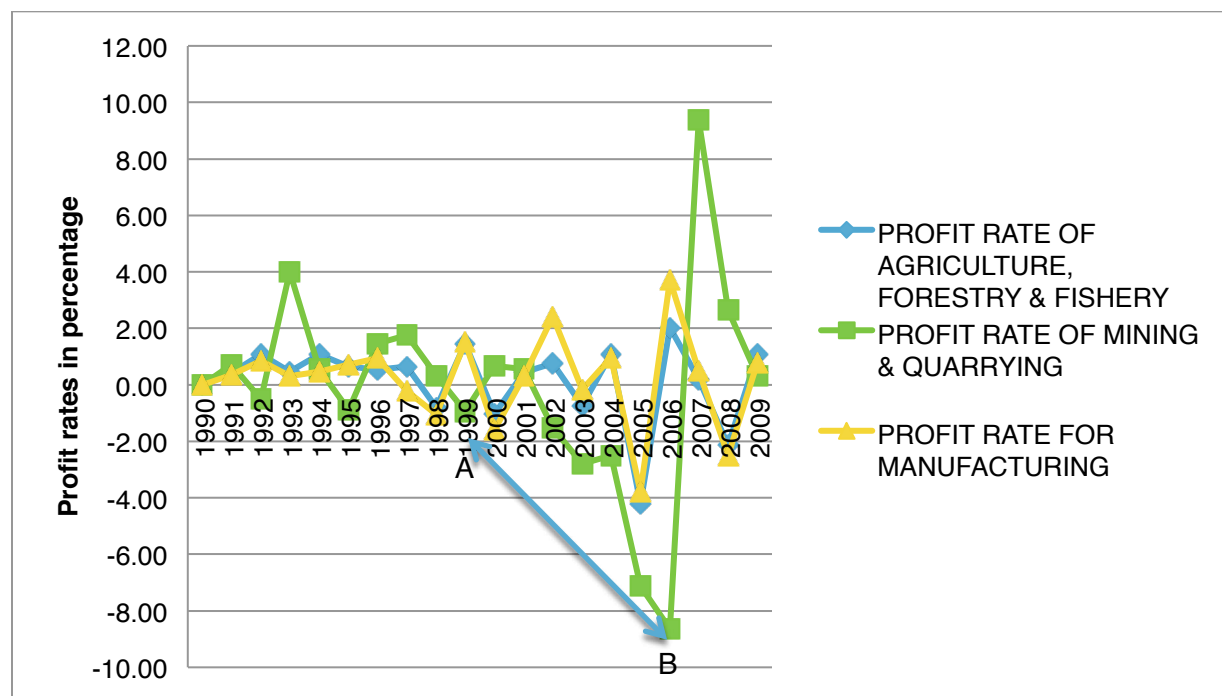
Data Source: Bank of Guyana

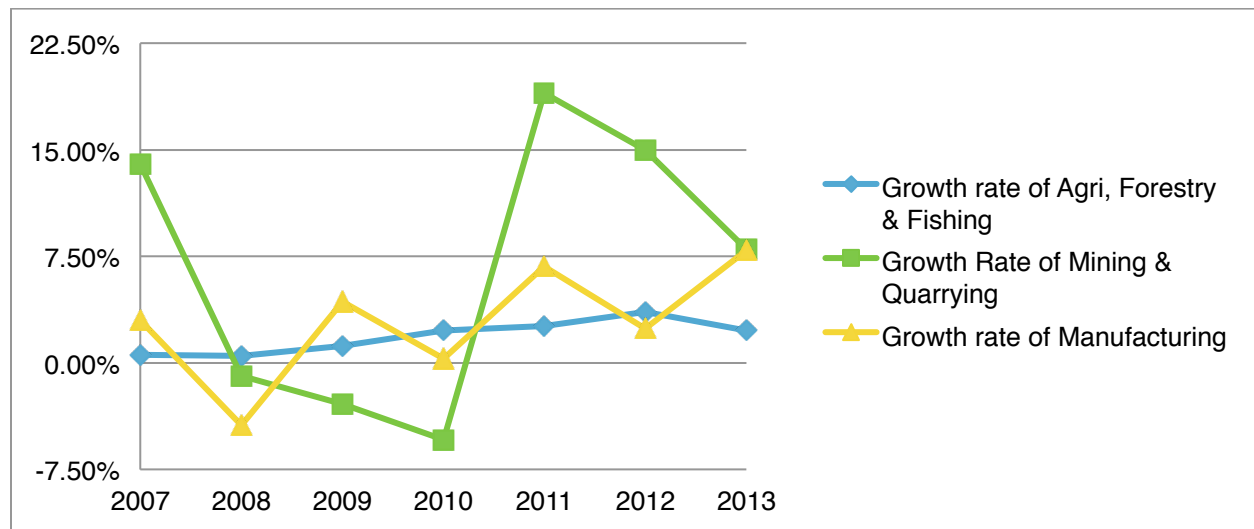## Figure 5. Profit Rates of the Services Sector at 1988 Prices
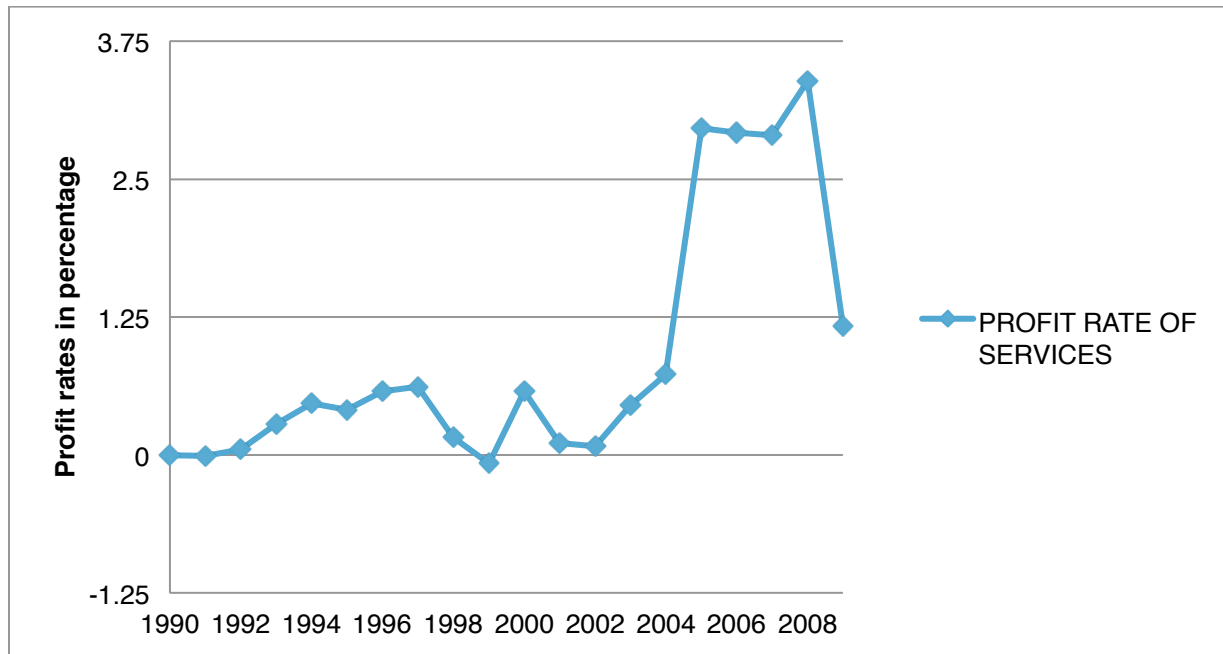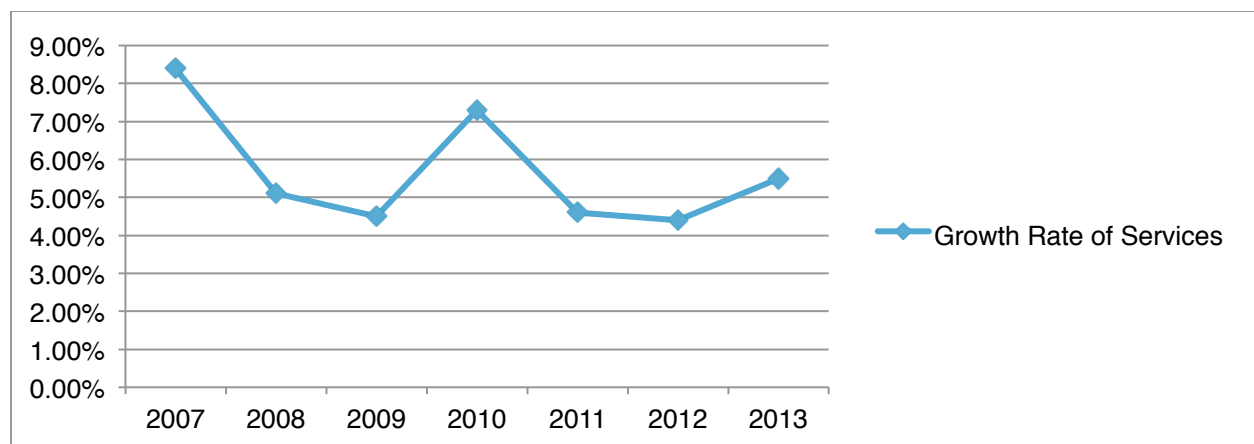

Data Source: Bank of Guyana

Stagnation, upsurge and collapse characterize the profit rates for these sectors in the period of 1990-2009. The decline of inequality in this period is simply the outcome of poor and unsustainable growth (that led to the collapse and stagnation of profitability), instead of two decades of inclusive growth. The reverse is also true: a boom in the mining sector that is *sustained* will lead to sustained growth in the services industry and sustained profitability in all sectors.

Figure 6. Growth Rates of Non-Services Sectors at 2006 Prices
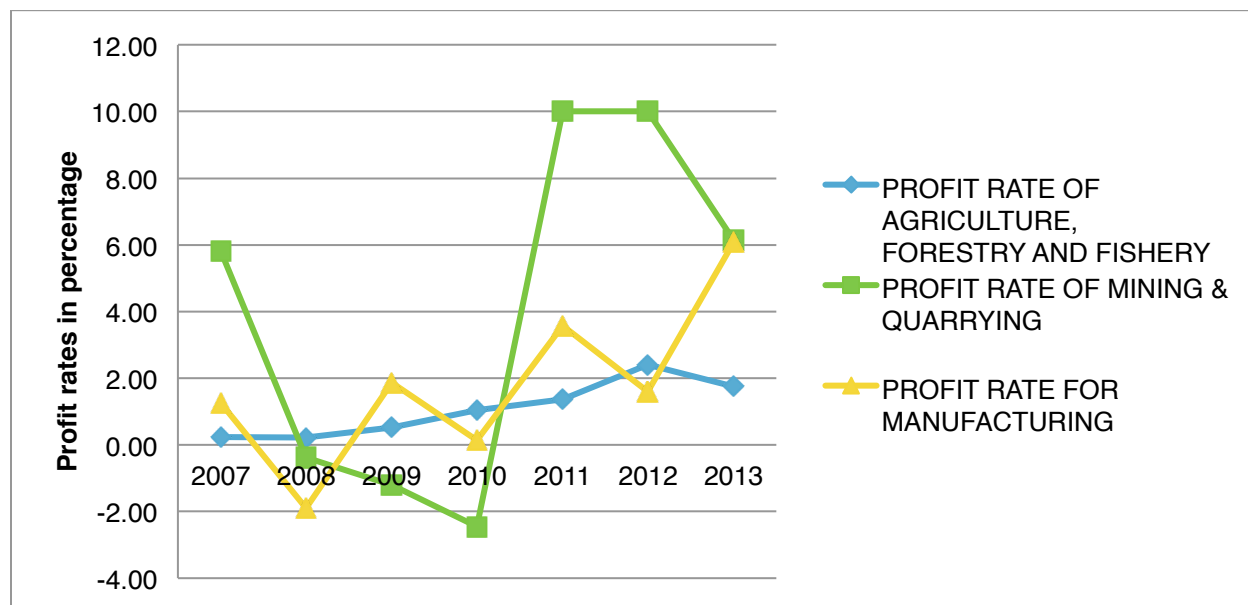

Data Source: Bank of Guyana

Figure 7. Growth Rates of the Services Sector at 2006 Prices
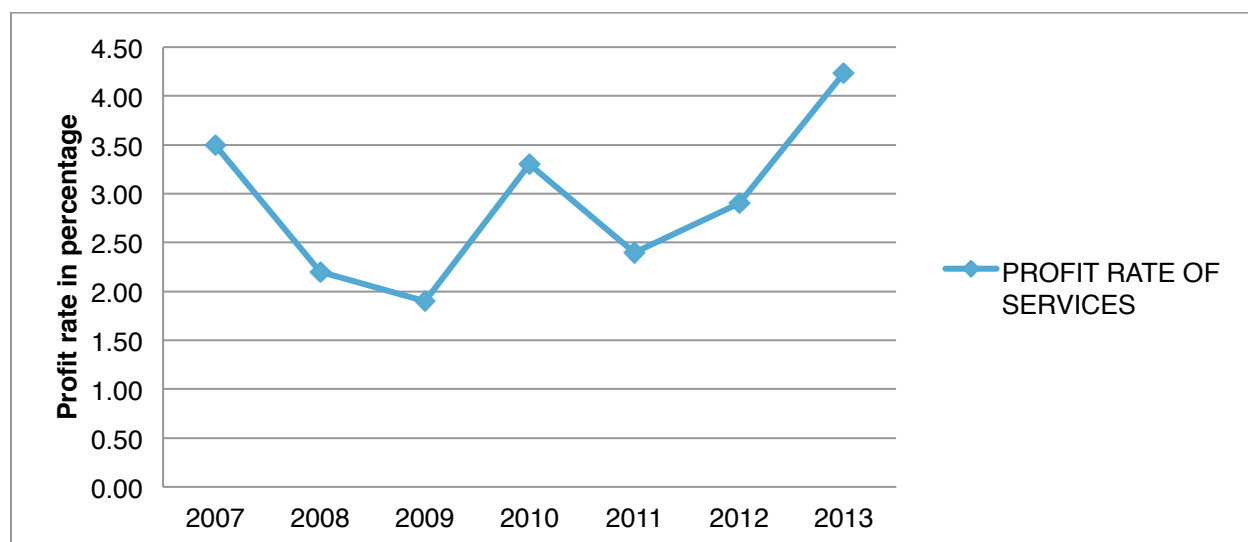

Data Source: Bank of Guyana

Figure 6 highlights a third mining boom in 2010 that corresponds to an equivalent boom in the services sector in the same year (see Figure 7). Unlike previous mining and quarrying booms, this one remains steady in spite of a decline in growth rates – note, that this decline is not a collapse like previous booms. Consequently, growth is steady and healthy in the services sector, which validates the line of causation from the mining and quarrying industry to the services sector. A sustained gold boom leads to sustained profitability in all sectors, especially services, and this increases inequality. See Figures 8 and 9 for profit rates.

Figure 8. Profit Rates of Non-Services Sectors at 2006 Prices

Data Source: Bank of Guyana

Figure 9. Profit Rate of the Services Sector at 2006 Prices

Data Source: Bank of Guyana

But this increase of inequality is not because of sustained profitability *per se*, rather, sustained profitability in the services sector in Guyana. Simply put, growth in the

services sector is not employment intensive - profits appropriate most of the gains in income. This is why inequality rises when growth and profits are sustained in the non-tradable services sector. The nexus between the mining sector and the services industry should be no mystery: mining activities require intermediate goods that can be sourced from importation; this gives rise to wholesale and retail sub-sectors. Increased transportation by air, water and land is directly connected to the mining and quarrying industry. Increases in construction are related to the government's housing program, but also to increased demand for construction by traders in the services sector that wish to capitalize on the mining boom. Wholesale and retail services are also linked to the government housing program and not just importation of intermediate goods for the mining industry. Notwithstanding this, Figures 2, 3, 8 and 9 suggest that the growth in the services industry is more correlated with mining booms than with the government's housing program.

Growth in the services sub-sectors listed above plus financial services have a low employment premium. Consider the following: a wholesale or retail trader has six sales girls/boys, an outlet store and one building for storage. A mining boom that leads to greater importation does necessarily require ten sales girls/boys and more store outlets, though it may or may not necessitate additional storage. But how many additional employees are needed to assemble, store and transport new goods? In fact, many traders may use their existing six sales boys/girls to undertake the assembling and storage. Financial services increase with mining booms: more loans to miners, traders in the services sector and contractors and other customers in the construction sector. This will require increased monitoring of financial assets, but do you think it requires many more financial analysts?

Growth in construction and transport will inevitably lead to job increases, but how many? It takes a handful of workers to build a building and though the excavator operator will earn premium wage, his job alone replaces many more potentially employable labor. Similarly, growth in ICT and online shopping are hardly labor intensive. Consequently, sustained growth in these services sectors or low-wage-low-employment intensive sectors lead to increased inequality. Ergo, if growth were sustained in Periods B and C inequality would have worsened since the low-wage-low-

employment intensive sectors were more prevalent. This begs the following question: Is Guyana's growth model inclusive? A poor growth model is evident when a society's only chance of reducing inequality is with poor growth. Surely, a good and inclusive growth model would be one where the gains from a society's longest period of growth are widely shared.

Figure 10 illustrates the profit rates for the various sub-sectors in the services industry; it highlights their oscillation around a horizontal trend during the period that inequality has declined (1990-2006). It is clear from the graph that distribution; construction, transport and financial services are the leading sub-sectors in the services industry - unfortunately, these are low-wage-low-employment intensive sectors. Consider Figure 11, it illustrates the evolution of gold prices since 1974 to 2014. Note the dramatic change in gold prices since 1992, which coincidentally happens to be the year the PPP regime, regains political power. The graph highlights the continuous decline in gold prices after 1994, which mirrors the collapse in the rate of growth of the mining and quarrying sector. As gold prices accelerated in 2006, the mining sector skyrocketed at the same time (see Figure 2), only to decline after the decline in prices in 2007. As the global prices recovered in 2010 so do growth and profit rates in the mining sector, except this time, they have remained high.

Figure 10. Profit Rates of the Services Sector

Data Source: Bank of Guyana
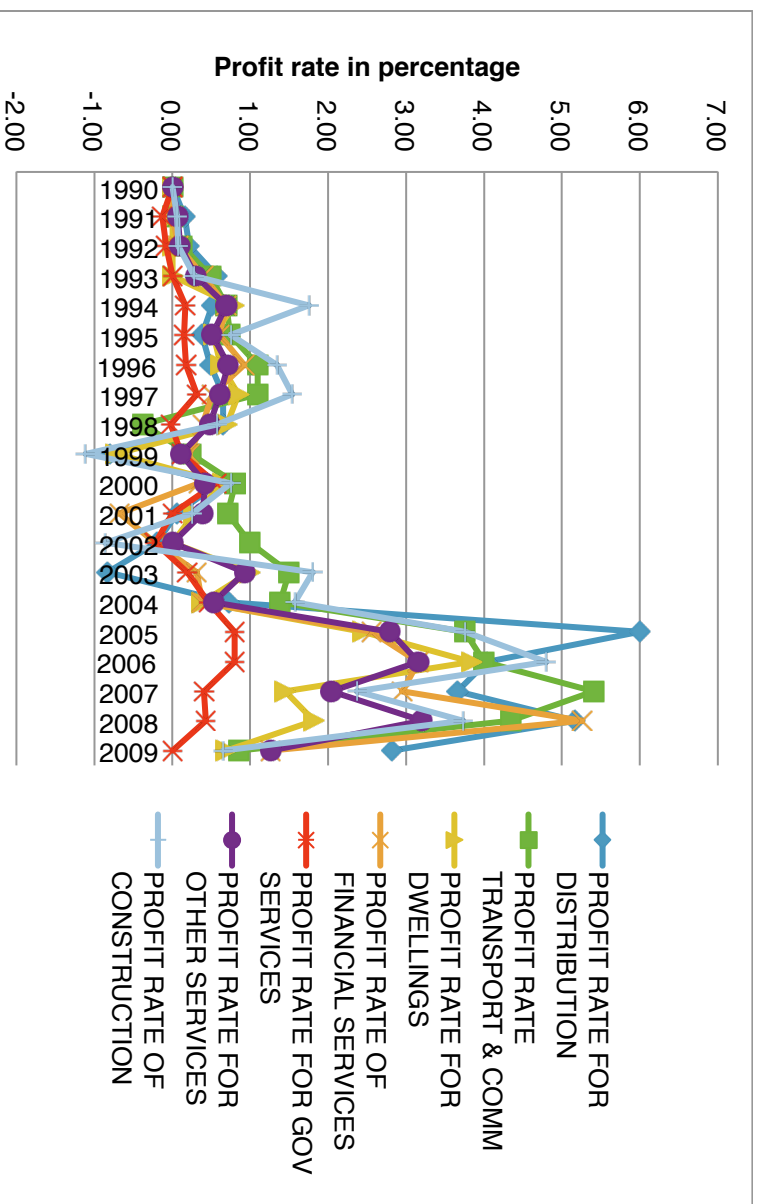
Figure 11. Evolution of Gold Prices: 1974-2014

Data Source: http://data.okfn.org/data/core/gold-prices
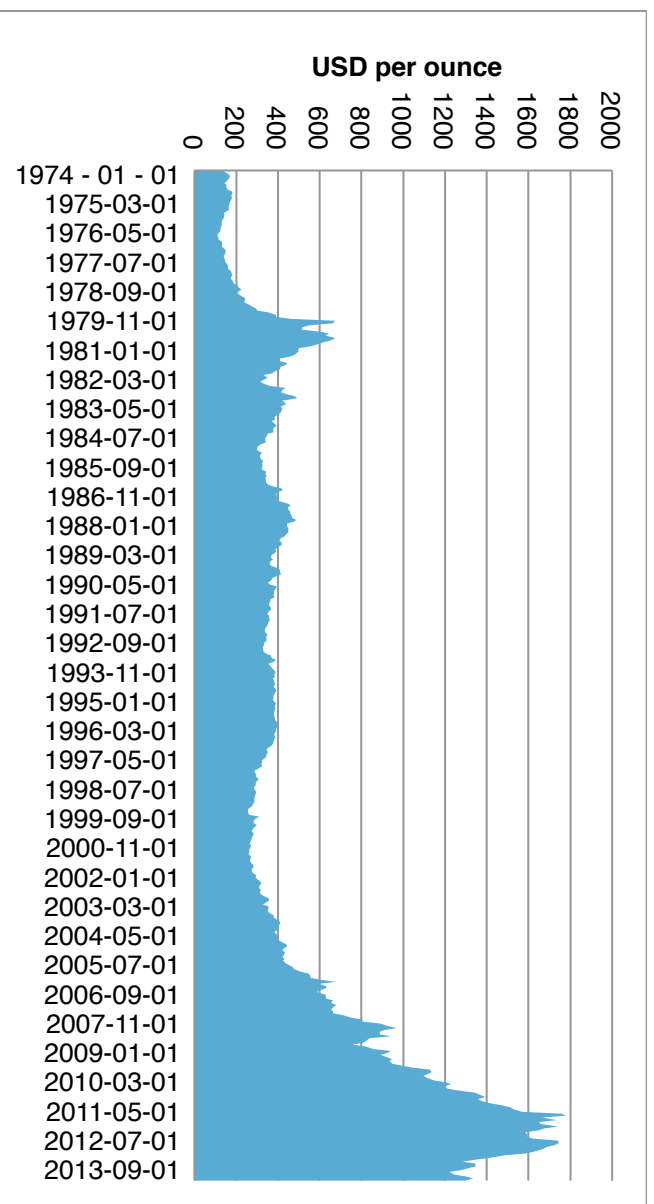
6 Conclusion

The principal contribution of this article is that it provides evidence of recent trends of inequality in Guyana, but the article goes beyond this and describes the evolution of inequality since 1974 to 2013. This is done within a Kaleckian framework to derive profit and wage rates, since recent Gini coefficients data are absent. The evidence implies that inequality is on the rise and this calls into question the inclusive nature of Guyana's recent growth boom.

The article argues that the mining and quarrying sector regulates Guyana's growth performance and ignites growth in the services industry. Unfortunately, much of the latter is made up of non-tradable services and consequently, low-wage-low-employment opportunities. Thus, a greater share of the gains in income in these low-wage-low-employment sectors go to *profits* when growth is sustained. This parallels the jobless recovery in the advanced countries since the great recession - growth performance of this nature increases inequality.

This in turn adversely affects the future growth cycle: it increases household indebtedness, intensify migration, unemployment and underemployment, reduce savings, increase crime and exacerbate labour market mismatches etc. When the *initial* levels of inequality and unemployment are less than socially acceptable, increased inequality results in a fractured society.

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