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Assessment

Growth, Employment and the Productivity–Wage Gap: Revisiting the Growth–Poverty Nexus

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INTRODUCTION

The State of Working America 2008/2009 — which gives a fascinating empirical account of how the economic performance of the US economy in the last decade shaped the living standards of its working people — is not written with an audience of development economists and practitioners in mind. However, it brings a breath of fresh air, offering a welcome antidote to the type of reasoning that has come to hold sway in current development policy debates on the question of 'pro-poor growth'. This Assessment aims to pick out a few central themes of *The State of Working America 2008/2009*, summarize them in a condensed form and highlight their relevance to present-day concerns in development economics, in particular with respect to the growth–poverty reduction linkage. More specifically, two issues will be dealt with: the centrality of wage employment growth and the importance of the productivity–labour earnings nexus as key conditioning factors for inclusive economic growth.

Pro-poor growth requires a sharp distinction between the 'poor' and the 'non-poor' and formulates the problem of development as pulling the poor above the poverty line under the impulse of economic growth. The usual argument is that the adoption of certain core macroeconomic policies — the so-called 'fundamentals' of low inflation, trade openness, market liberalization, sound financial policies and good governance — will induce economic growth, which in turn lead to poverty reduction. Analytically, therefore, the main approach consists of linking (or, more precisely, correlating)

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macroeconomic growth (as measured by per capita GDP growth) *directly* with changes in the incidence of poverty (usually derived from successive household budget surveys), possibly correcting for changes in the distribution of income (or, most often, in household expenditures). Empirically, this approach relies extensively on cross-country growth regressions to provide evidence for the growth–poverty linkage.[1]

Interestingly, within this type of reasoning there is little mention of the fact that the standards of living of the majority of working people — 'poor' and 'non-poor' alike — depend on how output growth divides between productivity growth and employment growth and, in turn, on how and to what extent productivity growth translates into a growth in labour earnings. It appears, therefore, as if per capita GDP growth directly translates itself into improved standards of living, particularly those of the poor, regardless of the mechanisms through which these transmissions are supposed to take place. In other words, the regime of accumulation and the ways in which it shapes the employment relation and the productivity–labour earnings nexus are somehow left out of the equation.

It is in this sense that *The State of Working America 2008/2009*, and its predecessors in the same series, make such refreshing reading for development economists and practitioners who have grown tired of listening to these arguments. Published biennially since 1988 by the Economic Policy Institute — an independent policy research institute based in Washington DC — these book-length publications provide a view of the state of the US economy from the perspective of the majority of people living and working within it. The analysis presented in these reports illustrates vividly what insights can be gained from sound empirical descriptive analysis aimed at identifying stylized facts about the historical trajectory of growth and distribution in an economy by looking at the specificities of its more recent conjunctures against the background of broader long-run trends, using a wide variety of data on family incomes, wages, employment, benefits and taxes, wealth and poverty. While the series is strictly confined to what happens to working Americans and their families living in the USA, it is nonetheless relevant for development economists and practitioners, not only in its own right, but also because the US economy has often been taken — explicitly or implicitly — as an exemplar (or, at least, a close approximation) of a model of unfettered 'free market' capitalist development, the underlying propositions of which are held to be generally valid. In recent development policy discourses, particularly since the 1980s, this model and exemplar have blended together

1. In a sub-section entitled 'An Obituary to Growth Regressions', Lindauer and Pritchett (2002) provide an insightful critique of this approach. They argue that 'the basic flaw in growth regressions is that they confuse partial correlations with (stable) parameters and confuse empirical variables (that might be associated with policies) with feasible actions to promote growth' (ibid.: 18–19). This, they conclude, then leads to the questionable view that 'one would think that the development community does not need any big ideas since they have the results of growth regressions' (ibid.: 18).

in ways that have induced prescriptive policy making in which a number of propositions have come to assume the status of generally accepted axioms of development. One of these propositions concerns 'the mantra among economists and policy makers' that 'as grows productivity, so shall living standards' (*The State of Working America 2008/2009* — henceforth *SWA*, p.15). A closer reading of *SWA*, however, casts serious doubt on the validity of this proposition even where the US economy is concerned, and, hence, cautions against 'the advisability of exporting the US model to other economies' (p. 14).

The analytical approach taken in *The State of Working America 2008/2009* consists of looking at the relation between economic performance and living standards of working people, including poverty and inequality. In terms of emphasis, the analysis focuses primarily on the 'boom period' of the 2000s cycle — in particular, the boom from late 2001 to 2007, ending in the downturn (from 2008 onwards) provoked by the recent financial crisis. It then compares this period with the 1990s, against the background of broader long-term trends and business cycles in the US economy from 1944 onwards (when relevant data series became available). The next two sections of this essay deal with what *The State of Working America 2008/2009* has to say about the way that the linkage between growth and the standards of living of working people in the US economy and society is mediated by the nature of employment growth and of the productivity–labour earnings nexus. The concluding section discusses the relevance for present-day development discourses on growth and poverty. Length constraints preclude in-depth consideration of the other key themes such as gender and race inequality that feature prominently in this report. These themes are well known in the literature, not only on the US economy, but also in development discourses on growth and poverty.

ECONOMIC GROWTH AND LIVING STANDARDS DURING THE 2000s

Perhaps the most startling conclusion reached by the authors of *The State of Working America 2008/2009* in their analysis of the 2000 to 2007 boom period in the US economy is that 'the economy did well, except for the people in it' (p. 47). This state of affairs, they point out, crystallized well before the 2008 financial crisis, thus damaging the standards of living of working people and leaving them ill-prepared to deal with the consequences of the crisis.

To depict economic performance, the authors refer to GDP growth and labour productivity growth, where labour productivity is defined as output per hour worked. To depict standards of living, *SWA* starts by taking the perspective of the median worker or, alternatively, of middle-income families (as represented by the average income of the middle quintile of the income distribution) before going on to look in greater detail at three key elements

Table 1. Growth of GDP, Aggregate Employment and Earnings, 2000–2007

Category	**2000–2007 Period Growth Rates**
GDP (in real terms)	18.0%
Productivity (in real terms)	19.0%
Annual hours per worker*	0.4%
Annual hours per working family*	−3.0%
Jobs (in numbers)	4.0%
Labour force participation rate	−1.1%
Average (hourly) wage*	−0.4%
Median weekly earnings of full-time workers	0.2%
Median income of working age households	−3.4%

Notes:
All growth rates are rounded to one decimal point.
*indicates that the summary refers to the 2000–2006 period only.
Source: *SWA*, p.19, Table 1; p. 128, Table 3.2.

of income inequality: the bottom-half gap (the ratio of the 50th to the 10th percentile), the top-half gap (the ratio of the 90th or 95th percentile to the 50th percentile), and the gap at the very top (between the top 1 per cent or 0.1 per cent income earners relative to the bottom 90 per cent).

Table 1 compares the growth rates of key macro indicators of economic performance with those of employment, labour force participation and incomes or earnings of middle-income families or median workers, for the period 2000 to 2007. During this period, the growth in employment fell far short of GDP growth. Unemployment rose from 4 per cent in 2000 to 4.6 per cent in 2007 (*SWA*, p. 19), which implies that the rate of growth of the share of employment in the labour force was −0.6 per cent (on average, about −0.2 per cent per annum). Moreover, for the first time, the labour force participation rate shrank during this cycle: from 67.1 per cent in 2000 to 66.0 per cent in 2007 — a decline of 1.1 percentage points. This is 'historically unprecedented over a business cycle', a feature which, the authors argue, implied that the unemployment rate could have been higher if workers had not left the job market due to weak employment growth (*SWA*, p. 19).

The most striking feature in this table is that productivity growth (on average, 2.5 per cent per annum) did not translate into anything like a comparable growth in labour earnings: the average hourly wage actually fell by 0.4 per cent during this period, the median weekly earnings of full-time workers remained more or less stagnant, while the median income of working age households actually fell by −3.4 per cent (a change which is also affected by changes in hours worked per family). In sum, two key features characterize this period. The first is its weak employment growth. As the authors show, the experience of the 2000s stood in sharp contrast

with what went before: in growth terms, it was a 'productivity-rich' but largely 'jobless' experience. The second is what the authors refer to as 'the stunning disconnect between the possibilities of improved pay and the reality of stunted pay growth' (*SWA*, p. 121). The next section looks at these two features in more detail.

THE PRODUCTIVITY–WAGE NEXUS AND EMPLOYMENT GROWTH

How well working families fare depends on productivity growth, the extent to which it translates into growth in labour earnings, and whether it goes hand in hand with employment growth. The combination of these elements can be very different at different historical conjunctures, even in a single country, thus pinpointing the salient features of each conjuncture as well as the contrasts between them.

In the US economy, as shown in Table 2, there has been a dramatic shift in the way in which the gap between productivity and the median wage or median (labour) compensation (wages and employment-provided benefits) has evolved in the US economy. The longer-term pattern that is clear from Table 2 is that the productivity–compensation gap has been increasing steadily over these four successive recoveries. The last recovery, however, stands out in particular since median compensation remained stagnant and the median wage actually fell slightly notwithstanding the fact that productivity growth was higher than in any of the prior recoveries.

This widening gap can be decomposed into different elements, each of which drives a different wedge between productivity growth and the growth in median labour compensation. This can best be illustrated by re-expressing this gap as the ratio of labour productivity to the median compensation (both expressed in real terms) and decomposing it as the *product* of three terms: the ratio of (nominal) productivity to the average (mean) (nominal) compensation; the ratio of average (mean) to median (nominal)

Table 2. Annual Growth Rates in Median Wage, Labour Compensation Growth and Labour Productivity during Four Business-cycle Recoveries, 1975–2007

Period	Productivity	Median wage	Median (labour) compensation	Productivity–compensation gap*
1975–79	1.4%	0.7%	1.4%	0.0%
1983–89	1.6%	0.4%	0.2%	1.3%
1992–2000	1.8%	0.5%	0.1%	1.7%
2002–07	2.2%	−0.1%	0.0%	2.2%

Note:
*Productivity growth minus the growth in median hourly compensation.
Source: *SWA*, p. 125, Table 3.1 (slightly rearranged).

compensation; and the ratio of the consumer price index (CPI) to the GDP deflator. That is:

$$\frac{\text{REAL PRODUCTIVITY}}{\text{REAL MEDIAN WAGE}} \equiv \frac{\text{PRODUCTIVITY}}{\text{MEAN COMPENSATION}} \times \frac{\text{MEAN COMPENSATION}}{\text{MEDIAN COMPENSATION}} \times \frac{\text{CONSUMER PRICE INDEX}}{\text{GDP DEFLATOR}}$$

The first term on the right hand side of this decomposition indicates that the productivity–compensation gap widens if productivity grows faster than average (mean) hourly labour compensation, which includes the pay of all workers, including top-level managers. This term, therefore, depicts shifts in income from labour to capital. In the US economy, in terms of long-term trends, from 1973 to 2007, productivity rose by 83 per cent versus a 49 per cent rise in average labour compensation (*SWA*, p. 160). This wedge grew consistently over time with the notable exception of the 1995 to 2000 period when wage growth accelerated along with productivity growth, a process that was reversed in the subsequent period (ibid.). This shift from labour to capital, the authors of *SWA* argue, 'has been large when compared to the size of loss of wages for the typical worker due to factors such as shifts to services, globalization, the drop in union representation, or any other prominent causes of growing wage inequality' (p. 162).

A shift in income from labour to capital does not of necessity imply a worsening distribution of income. However, as the authors show, the common assumption that all or even most American households invest heavily in the stock market — either directly or indirectly through pension stock plans — is a fallacy: 'less than half of households have any stock holdings, and only about a third have stock holdings that are worth more than $6,000' (p. 279). Moreover, for the typical household, debt grew much faster than income, thus raising the debt burden for middle and lower income households (p. 264). The same argument holds for net worth (the difference between total assets and total liabilities): the bottom 80 per cent of households holds 15.3 per cent of net worth, while the top 5 per cent holds 59 per cent (p. 273).[2] What the data show, therefore, is that, to a large extent, low- and moderate-income households depend on labour income alone to meet their expenses (p. 279).

2. These data mask, furthermore, an important feature of wealth distribution in the US economy: 'wealth is very unequally distributed by race — far more so than either wages or income'. The median black household, for example, had a net worth equal to 10 per cent of that of the median white household (*SWA*, pp. 271–2).

The second term in the decomposition of the productivity–wage gap depicts the difference between the growth rates of average (mean) and median hourly compensation, which, in the US economy, reveals the extent to which inequality in labour earnings has grown over time, rendering the distribution more skewed, particularly at the top end, thus pulling the mean and median further apart. For example, as far as wage income is concerned, from 1989 to 2006, the top 10 per cent of wage income earners received 90.9 per cent of all of the income growth over this period, while their income share in 1989 already stood at 40.1 per cent of total wage income (p. 162). Even 'more impressive', as the authors point out, 'is that the top 1% received 59% of the income growth from 1989 to 2006 even though this group had only 14.5% of all income in 1989' (pp. 162–3).

The *SWA* goes on to investigate empirically the various structural factors that might account for this growth in wage inequality (coupled with a stagnant median wage): the shift to lower-paying industries, increased trade competition, de-unionization, the eroding value of the minimum wage, sluggish job growth and the technology story — the premise that technological change displaced some workers while increasing the demand for others (mainly skilled workers), a story for which the authors express some serious scepticism (pp. 121–226). The authors further point at the demand-deflating effects of the large chronic trade deficits characteristic of the US economy over the last three decades, which add to sluggish job growth, particularly in the manufacturing sectors (pp. 186–98).

These shifts in income from capital to labour and from low and middle to top wage earners do not just affect the existing structure of incomes, but also have repercussions for income-class and intergenerational mobility. US social mythology, the authors argue, holds that 'due to low class barriers in America, anyone who is willing and able can pull themselves up by their bootstraps and achieve significant upward mobility' (p. 108). More emphasis, therefore, is given to equality of opportunity than to equality of income or of wealth. The underlying idea is that unregulated markets and mobility go hand in hand. The authors of *SWA*, however, find no such acceleration in mobility that might offset the higher inequality witnessed in recent decades. Instead, measures of intergenerational mobility — where wealth and access to education financed by income play a major role — show that 'the income of adult children correlate[s] significantly with that of their parents, suggesting that the apple falls not too far from the tree' (p. 119). More disconcerting, however, is that there appears to have been considerable backsliding by African American children: '45% who started their lives as children of middle-income families ended up in the lowest income fifth as adults' (p. 119). Finally, the authors show that evidence from international comparisons reveals greater mobility between generations in Europe than in the United States (pp. 108–110).

The third term in the decomposition — the relative price ratio — translates nominal changes in productivity and labour compensation into real changes.

To express aggregate nominal productivity in real terms it needs to be adjusted for changes in the prices of investment goods, exports and consumer purchases (the GDP deflator), while to express median labour compensation in real terms adjustments need to be made for changes in prices of consumer purchases (p. 160). Since these two price indices do not necessarily move in unison, their respective movements over time should be accounted for separately. This divergence in inflation rates of the prices of overall output, on the one hand, and of consumer goods, on the other, can produce quite a sizeable effect. In the US economy 'for the entire period from 1979 to 2007 roughly 42% of the growth in the productivity–compensation gap can be explained by the relatively faster inflation in consumer purchases than in the inflation of overall output' (p. 162).

Employment growth is the other main determinant of how working families fare. The 2000 to 2007 period, for example, started with what the authors refer to as a 'jobless recovery' followed by very weak employment growth thereafter (p. 227). For the period as a whole, 'annual job growth was 0.6%, well below the 1.8% annual job growth of the 1990s cycle and the 2% average of prior cycles' (ibid.). This has consequences for the growth in standards of living. Indeed, the rapid growth in employment, the authors argue, has both a direct and indirect effect on the standards of living of working households: directly, because as employment grows, so does income; and indirectly, since tight labour markets are an important determinant to ensure that productivity growth translates into wage growth.

Table 3 illustrates this point by comparing the decomposition of growth in middle-incomes during the 1990s, characterized by tight labour markets in the second half of the decade, with that during the 2000s, when labour markets were sluggish. The differences between the periods are remarkable: middle-income growth was 10.6 per cent during the 1990s (implying an average annual growth rate of 0.9 per cent). In contrast, during the 2000–06 period, middle-income growth turned negative, at −1.1 per cent (implying an average annual growth rate of −0.2 per cent), yet 'productivity actually

Table 3. Decomposition of the Growth in Middle-incomes in the 1990s and 2000s

Aggregates	Decomposition of Period Growth Rates	
	1989–2000	2000–2006
Income growth	10.6%	−1.1%
Labour earnings	8.8%	−1.3%
of which: Annual hours	*4.1%*	*−2.2%*
Hourly wage	*4.7%*	*1.0%*
Other income	1.8%	0.1%

Source: *SWA*, p. 21, Table 2 (slightly rearranged).

grew faster over the 2000s cycle than over the 1990s (2.5% annually in the 2000–2007 period versus 2.0% in the 1990s)' (p. 18).

Household labour earnings increase because household members work more, as measured by the growth in annual hours worked, or because they earn better wages, as reflected in the growth of the hourly wage. During the 1990s, changes in annual hours and in the hourly wage each accounted for roughly half of the rise in labour earnings, while in the 2000–06 period annual hours declined, while the hourly wage increased only slightly. The experience of the late 1990s, the authors conclude, is 'a reminder of the great extent to which a low unemployment rate benefits workers, especially low-wage earners' (ibid.).

During the 1990s, for example, the bottom fifth of families witnessed income growth of 14.5 per cent, roughly equally divided between 7.3 per cent due the increase in annual hours and 7.0 per cent due to the rise in hourly wages (p. 47). This income growth of the bottom fifth was well in excess of the income growth of 10.6 per cent of the middle fifth. In contrast, during the 2000–06 period, the bottom fifth families witnessed an overall income decline of −3.2 per cent, well in excess of the −1.1 per cent fall in incomes of the middle fifth. Of this, labour earnings fell by −1.1 per cent, which further decomposed into a fall by −3.5 per cent in annual hours and a rise of 2.4 per cent in hourly wage, and other income fell by −0.2 per cent (p. 47). The authors conclude: 'the great American job machine is arguably the most powerful mechanism in our economy for achieving broadly shared prosperity' (p. 259). This is because those at the bottom are much more likely to experience unemployment, underemployment, and slower wage growth because of a weak economy (p. 180).

In conclusion, the interplay between the productivity–labour earnings nexus and employment growth has serious consequences for the dynamics of poverty. The lesson is that GDP growth and productivity growth on their own do not guarantee a fall in poverty rates. In a longer-term perspective, in the US economy, the poverty rate (using the official poverty line) stood at 11.1 per cent in 1973, rose to 12.8 per cent by 1989 and up to 13.8 per cent in 1995, after which it fell to 11.3 per cent by 2000 as a result of the high employment growth coupled with strong wage growth during the second half of the 1990s. From 2000 to 2007, however, the poverty rate rose again to 12.5 per cent (p. 303). Moreover, the poverty rate for African Americans stood at 29.3 per cent in 1995, fell to 22.5 per cent in 2000, but rose again to 24.5 per cent in 2007. What these data show is that 'whereas African American poverty fell faster than white poverty in the 1990s, it rose more quickly in the 2000s' (ibid.). The better performance in the 1990s, the authors argue, was due to the fact that 'the combination of full-employment job markets and expanded work supports were complementary to policies that emphasized work in the paid labour market as the primary pathway out of poverty' (p. 333).

PRO-POOR GROWTH, THE PRODUCTIVITY–LABOUR EARNINGS NEXUS AND EMPLOYMENT GROWTH

In an influential article on development policy, Dollar and Kraay (2004: 57) argued that: 'our evidence does strongly suggest that economic growth and the policies and institutions that support it on average benefit the poorest in society as much as anyone else'. The implication of this is that, particularly in small, aid-dependent economies, much of the policy dialogue turns around investigating — or, more precisely, monitoring — the relation between per capita GDP growth and the incidence of poverty, usually measured on the basis of periodic household budget surveys, possibly correcting for changes in inequality, although it is questionable whether changes in the distribution of household expenditure surveys give much insight into what is actually happening to the distribution of income. If per capita GDP growth is positive and inequality (of household expenditures) did not increase much, income poverty is expected to fall. When this does not happen — as, for example, is the case in Tanzania or Mozambique — a paradox is said to exist.

Yet in much of the development literature on pro-poor growth nowadays, little or no attention is paid to the underlying mechanisms that determine the dynamics of income: how it is generated and distributed in production. More specifically, the dynamics of employment growth and of how and to what extent productivity growth translates into the growth in labour earnings is left out of the equation. The recent shift in focus to poverty appears to have more or less completely displaced the much greater prominence given by the pioneers of development economics to employment and its relation to growth and distribution (Wuyts, 2002).

This is further compounded by the fact that the concept of employment — when it is used — has become a mixed bag embracing both wage employment and self-employment, thus deflecting attention away from the growing pervasiveness of labour markets, both urban and rural. The questionable notion that the spread of the so-called informal economy has gone hand in hand with the development of varied forms of 'backyard capitalism' in which each household provides its own labour through self-employment has meant that wage labour is seen as relatively *less* important, and not more. This view, however, ignores the myriad ways in which wage labour occurs within unorganized production and the varied wage forms that this implies; this, in turn, conditions and is conditioned by how productivity — or the lack thereof — is organized and how it translates into labour earnings and thus underscores the standards of living of working people, particularly those at the lower end and in the middle of the income distribution.

Furthermore, present-day policy discourses on the growth–poverty nexus pay little attention to the movements in relative prices — the differential rates of inflation of consumer goods and of total output (GDP). However, as Kalecki (1976) pointed out long ago and as literature on the Indian economy has reiterated more recently (Bhaduri, 2006; Rakshit, 2009), the dynamics

of food prices in particular, and the underlying mechanisms that differentiate these from the movement of prices in others sectors, can give rise to sharp divergences in their respective rates of inflation that greatly affect outcomes in terms of standards of living, particularly of the poor.

The empirical analysis in *The State of Working America 2008/2009* illustrates that the growth–poverty reduction nexus cannot be taken as an axiom, not even within the confines of a single country, let alone for the purpose of cross-country comparisons. A closer look at the US experience casts serious doubt on the validity or indeed the prescriptive 'exportability' of this notion as an axiom for development policy. An important lesson for development economists and practitioners from this analysis is that it pays to put the interrelations between productivity, labour earnings and employment back at the centre of the stage in order to get to grips with the dynamics of poverty and inequality in developing economies.

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