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1 December 2008

Online at <https://mpra.ub.uni-muenchen.de/16827/>

MPRA Paper No. 16827, posted 18 Aug 2009 00:15 UTC

The poverty of statistics

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August 2009

Abstract

This paper is a prepublication version of a paper accepted for publication by *Third World Quarterly*. It offers a critique of the picture of world growth and world inequality generally disseminated by international agencies. The positive view commonly presented depends, it shows, on the widespread consensus that economic performance should be measured using 'Purchasing Power Parity' (PPP) statistics, instead of market exchange rates. Although originally conceived narrowly as a basis for comparing living standards, PPP indicators are now promoted, with scant pause for critical thought, as a unique and unexceptionable standard for comparing and aggregating national income statistics.

To get to the heart of the flaws in the PPP concept, this article adopts a unique approach: it *accepts* the claims made on their behalf at face value. It shows that, even on the basis of these claims, the wrong conclusions have been drawn, which in turn shows that they are not fit for purpose. By comparing PPP and Market Exchange Rate measures of inequality it shows that what really took place, in the closing decades of the last century, was a systematic reduction in the prices of consumption goods in the third world. PPP statistics have concealed this underlying and unsustainable trend, allowing it to be packaged as a stable reduction in poverty.

Neither genuine growth, nor lasting and sustainable poverty reduction, were achieved over this period. The fall in the price of consumer goods masked a systematic failure, for much of the third world, to overcome the central problem of development – the high price of capital goods, which PPP statistics understate and, intermediate goods, which PPP statistics completely omit.

Introduction¹

In 2000, the UN took the unusual step of defining a human right in terms of a statistical construct. Its New York Millennium Summit specified the first of eight Millennium Goals, 'Eradicating extreme poverty and hunger', as follows:

- Reduce by half the proportion of people living on less than a dollar a day
- Achieve full and productive employment and decent work for all, including women and young people
- Reduce by half the proportion of people who suffer from hunger

The dollar of target 1 is economically unique. It cannot buy anything and is nowhere legal tender. It is not a money of account for entitlements like the European 'Green Pound', nor a borrowing unit like Special Drawing Rights, nor a special means of payment like the Patacon and Lecop notes issued by Argentine provinces after the 2002 Peso collapse. No financial instruments, not even derivatives, are denominated

¹ Among numerous people whose input to this article was vital, special mention is due to Robert Wade and Radhika Desai for their painstaking and informative comments, and to Marc Berger for his unflagging editorial encouragement. Any errors are of course my own responsibility.

in it. The Purchasing Power Parity (PPP) international dollar is not, in a word, money. It is a summary measure of welfare, standing in place of everything an individual, or a national economy, can theoretically access in a market economy.

The target is also socially unique. Other Millennium goals specify tangible social achievements rooted in rights and capabilities: food, shelter, education, and life. Goal two seeks to 'reduce by two thirds the mortality rate among children under five'. Goal three seeks 'a full course of primary schooling'. The dollar-a-day target substitutes an abstraction, a basket of goods which nobody actually buys.

PPP-denominated indicators are thus neither fish nor fowl. They record neither actual economic activity nor tangible social welfare. Nevertheless they have, in the last 25 years, become a near-universal substitute for both. It is a safe bet that an economic journalist, reaching for a number to encapsulate the state of spaceship Earth, will hit on something measured in PPP, be it world output, inequality, productivity, or headcount poverty. PPP-denominated performance has become a catch-all synonym for the achievements, and collateral damage, of globalisation.

The purpose of this paper is to sound a note of caution. I contest the wide economic consensus that this transformation in economic reporting and targeting has been an advance. I will show that as an analytical tool, PPP indicators have disguised what they should reveal, and PPP targets have worsened what they should have improved.

Existing criticisms of poverty statistics fall into two main groups. One concerns the 'weighting' assigned to country sizes.² A second focuses on technical flaws in PPP calculations.³ The discussion on both fronts is extensive, and I will not add to it.

I will embark on a third course. I will *accept*, for the sake of argument, the claims advanced in favour of PPP measures. I discount problems of transitivity, representativity, comparability, and Gershenkron effects, and set aside the differences between the 11 aggregation procedures under current consideration,⁴ dismissing the 33 per cent discrepancy between Maddison's and ICP estimates of world GDP.⁵ I will assume that all problems of low participation and missing data have been overcome,⁶ ignore the acknowledged fact that the characteristics required of a PPP index cannot all be met by a single indicator,⁷ and will not heed practitioner warnings that PPP estimates, extrapolated from a single benchmark year, cannot be used to infer trends.⁸

2 Cf Milanovic (2002), Sala-i-Martin (2001). To summarise briefly, the debate concerns distortions that arise if 'world inequality' is estimated by asking if the *number* of poor countries is falling or rising, relative to the number of rich countries. Suppose India becomes richer whilst Grenada and Albania become poorer. It is clearly false to present this as an increase in inequality and account should be taken of these countries' demographic size. However and on the other hand, even if this correction is made, if a few Indian people grow very rich then 'average' Indian GDP per capita may increase though most citizens have become poorer, making it seem as if world inequality was falling, when in fact the absolute number of poor people may well have increased.

3 Cf Wade (2002), Reddy (2008), Ravallion (2002). The issue is whether PPP statisticians *accurately* measure what they are supposed to. One example is the benchmarking process: heroically but misguidedly, PPP statisticians infer prices they do not know from whatever data that they do possess. Until 2005 China and India did not even take part in benchmarking exercises, and when they did, Chinese GDP in PPP terms was dramatically revised downwards. The methods used to calculate PPP prices, on these and many other grounds, are hotly debated and produce widely-varying estimates.

4 See Dikhanov (1997) for an detailed assessment of the merits and demerits of the main procedures

5 Kravis 1986

6 Wade (2004a)

7 Gulde and Schulze-Gattas(1992:111)

8 Dey-Chowdhury (2007)

In short, I assume that PPP measures of performance do what they say on the tin: provide an accurate measure of the relative prices of goods and services in different countries and over time. I will then show that the results expose fundamental flaws in the reasoning behind their adoption, and demonstrate that they are not fit for the purpose claimed for them. I focus on two problems: the measurement of poverty, and the measurement of growth.⁹

Poverty and prices

Headline reductions in PPP indicators of poverty, I will show, do not express improvements in macroeconomic performance, notably growth or equality. Instead they capture statistically a long-term process of *reductions in the price of consumption goods in the third world relative to the first world*.

It is obvious that a continuous reduction in the relative price of consumption goods in the third world cannot go on for ever, and it was never sustainable. Beginning about 2002, it has reversed, placing hundreds of millions at risk. The UN June high-level conference on the world food crisis noted, *inter alia*, that:

The food crisis ... has not been caused alone by the rise in oil prices, climatic conditions, speculation, nor biofuels production. It is also the consequence of changing demographic and consumers' patterns and years of systemic failures of development strategy on many fronts. (UN 2008:2)

Reliance on PPP measures of performance is one such 'front'. Their wholesale and misleading adoption has obscured the improvements in third world capacity really required to rise from poverty and stay out of it.

The crux of the matter is this: as soon as a majority, or even a large proportion, of the people in any country live in towns making industrial products,¹⁰ food production no longer guarantees their livelihood. Their survival depends on exchanging industrial products for sufficient money to purchase food from the dwindling population of agricultural producers. Furthermore, as the productivity of agriculture itself rises, it loses any residual natural character and depends on access to industrial products of all kinds, from tractors to transport, from fertilisers to pharmaceuticals.

Genuine development, and permanent reduction in poverty, from this point on depends not on the simple price of foodstuffs or even consumer goods in general, but on the price of the *means of producing them* – in short on the price of capital and intermediate goods.¹¹ Genuine and sustainable poverty reductions are for this reason conditional on acquiring and deploying advanced technology under a skilled and educated workforce.

The principal requirement for economic progress in every country, from which no third world county is exempted, is the power to purchase capital and intermediate

⁹ This article was written before it was possible to take full account of the results of the 2005 ICP round. This will be corrected in subsequent work.

¹⁰ In this article I use the term 'industrial products' as a shorthand for 'non-agricultural goods and services'.

¹¹ The general law that sustainable growth depends on the steady cheapening of manufactured inputs lies behind empirically-confirmed, but perhaps more restrictive formulations such as *Kaldor's Laws*. See Thirlwall (2003)

goods, not consumer goods. The price of the former, set by the advanced countries,¹² has remained high in the third world. PPP measures of performance, I will show, have failed to capture this reality, crucially reducing costs of *production* – the critical indicator that determines whether sustainable improvements have been achieved, to mere costs of *consumption*.

This tendency is so far advanced that, as I will show, an entire element of the costs in the third world – intermediate capital goods – is completely omitted from PPP calculations, even though they constitute 50 per cent or more of the actual costs that third world countries incur, and their high prices rank among the greatest obstacles to third world development.

Cheap consumer goods are not a proxy for growth. Nor are they a sufficient condition for sustained increases in standard of living, including those of the poorest.

Falling consumer goods prices, if accompanied by relative rises in manufacturing goods prices, are not a sign of economic health but indeed, have in history been associated with economic impasses. Russian planners in the 1920s described what they termed a ‘scissors’ crisis when consumer goods and agrarian incomes fell while the price of manufactured goods rose, choking off growth by thwarting investment and, indeed, production itself. The problem became known to development economists from the early 1950s thanks to the work of Prebisch (1950) and Singer (1950) who showed that the relatively high price of capital goods facing third world producers was a decisive obstacle to development in their countries.

But, as we shall see, PPP statistics *themselves* prove that the divergence between the price of consumer and capital goods has accentuated massively under FTL, leaving many parts of the South dependent on a relation to the North as distorted as in the classical period of neo-colonialism.

With the post-liberalisation closing of the scissors, and the onset of a new period of rising consumer good prices as yet unaccompanied by reductions in the price of capital and intermediate goods, hundreds of millions of people are now at risk on a scale no statistic can conceal.

Growth, trade and China

PPP-based evidence is not only misleading about poverty but also world growth. In a nutshell, PPP statistics attribute to ‘globalisation’ what should be attributed to China.¹³ This, they do by greatly overstating China’s weight in the world economy. This in turn conceals the true causal relationships between growth and liberalisation.

No room remains for doubt that China’s growth is historically and geographically without parallel. Its sustained average growth is 2-3 times greater, in real terms, than that of any advanced country and outstrips all other third world nations.

However China’s growth has many causes other than its simple insertion into the

12 Throughout, the words ‘Advanced countries’ and ‘First World’ are used interchangeably to mean those countries defined as advanced by the IMF. ‘Third world’ refers to all other countries except countries in transition, for which economic data remains disputed, and countries for which consistent long-run data is not available. All data and sources available at www.radicaldemon.org.

13 ‘Globalization’ in this article refers to the rhetorical usage of its advocates and detractors. Elsewhere I use the more precise ‘Financial and Trade Liberalization’ (FTL) to refer to the range of liberalization policies introduced nationally and internationally following the debt crisis: structural adjustment plans, privatization, deregulation, and the multilateral trade agreements overseen by the World Trade Organisation (WTO).

world market, not least its distinct property relations and its vigorously-disputed approach to capital controls, joint ventures and technology transfer. Its process of development differs from the bulk of its comparators precisely in its single-minded approach to acquiring advanced technological capacity, which it approaches not by implementing the prescriptions of liberalisation but by systematically thwarting them. It is all too convenient to forget that China entered the WTO from a previously acquired position of strength, holding over half a trillion dollars of US debt.

It is therefore at least moot whether 'globalisation' transformed China, or whether China transformed 'globalisation'.

Yet even the inclusion of this demographic giant in aggregate statistics is insufficient, on its own, to establish an evidence-based case that globalisation has worked. As commentators acknowledge,¹⁴ whether the inclusion of China yields an unambiguous case in favour of liberalisation, depends critically on the denomination of the statistics. If world GDP is calculated by aggregation at PPP exchange rates, China's growth is assigned a weight some 3.5 times greater than at market exchange rates.¹⁵ This device boosts world growth to levels where the rhetoric of globalisation works.

The misrepresentation of China's effect is rendered possible by the use of PPP statistics – that is, the two flaws work hand in hand. It can *only* be asserted that world performance has improved during the FTL decades 1980-2000 if PPP statistics are used *and* China is included, so that the early stages of China's growth can be acclaimed a success of 'globalisation'. As charts 1-3 will show, if China is omitted and market exchange rates are used, these claims are not supported by the evidence.

These two flaws combined have led to a systematic tendency to overstate the economic health of the world system, at the very point when prudence about its deep structural instabilities was doubly imperative – as the credit crunch and attendant slowdown have made disastrously clear. Attention was drawn to this in April 2008 when the IMF and World Bank reduced their estimates of China's GDP by almost 40 per cent, cutting world growth by over half a percentage point.

Scholarship on the causes of recent world growth should, I suggest, focus on the *specifically Chinese* factors leading to this exceptional performance. PPP measures, to the contrary, have by incorporating Chinese success into world aggregate statistics at a level that assign to China a deceptive weight, dissolved both of these into vague and false claims of a general phase of world expansion in which China merely participates passively. Such claims now ring hollow. PPP statistics have rendered plausible an explanation which otherwise would never have held water, that world and Chinese growth are merely two aspects of a single common phenomenon – 'globalisation'. A more sanguine approach to measurement cannot but lead to a more accurate appreciation of the both the true risks facing the world economy, and the true causes of the genuine – but limited – economic successes of the past few years.

Purchasing power and 'globalisation'

The ease with which conclusions favourable to liberalisation can be drawn from PPP statistics lead to further basis for doubt: the close association between the rhetoric of 'globalisation' and the recourse to PPP-based evidence. We have noted that the successes of 'globalisation' arise only if PPP-based statistics are used. It is to say the least disingenuous to claim that this relation is driven by the thirst for truth alone.

¹⁴ See for example, 'Economics Focus', *The Economist*, 4 August, 2001.

¹⁵ prior to the IMF's recent downward revision of PPP GDP for China – see below.

As late as 1995, the IMF was still assessing whether or not to adopt PPP weights for its estimates of world growth. Like 'globalisation' itself, the concept of Purchasing Power Parity made a rapid journey, from the unrecognised work of a coterie of enthusiasts, to a near-universal standard. In both cases, the marriage of political expediency and unrequited expertise, as ever, proved a potent antidote to professional caution. PPP statistics, in a nutshell, made globalisation look good. More specifically, they made the World Bank and the IMF look good.

The transition could not have been so complete, or rapid, were it not for the huge volume of PPP-based studies emerging from World Bank and IMF researchers, which virtually set the terrain of the entire discussion, stealthily changing the terms of debate about poverty. Yet their statistical departments rank among the few in the world unprotected against bias by formal independence. This cannot but raise concerns about their objectivity, increased by analysis of the governance model of their statistical activities.¹⁶

Admittedly there are some limits, however brittle, on the scope for politically-induced distortion. The International Financial Institutions (IFIs) are secondary providers, using data from national sources and nominally independent institutions like the International Comparison Programme (ICP). Nevertheless, as widely-accessible sources for internationally comparable data, they exercise enormous authority.¹⁷ They have considerable discretion in nominating the evidence deemed appropriate to judge the success of their own policies. They have led the field in promoting PPP statistics on world poverty and growth, whose general availability is almost entirely due to their activity.

Balance is long overdue. I do not deny the genuine improvements in understanding that can arise from PPP evidence, above all in making transparent processes of price differentiation which, this paper will argue, are essential to understanding the shape of the modern division of the world. When used to *supplement* market-exchange-rate statistics, they can offer extra information. This is not, however, how they figure in discussions on development, poverty and growth, where they are used as a *substitute*. I find the balance sheet of this almost wholly negative. PPP evidence has led to misleading conclusions supporting misguided policies. The goal of a single measure of consumption and production, independent of monetary magnitudes, is theoretically and empirically flawed. It should be abandoned, and claims about social or economic advance which rest on it should be carefully scrutinized, re-assessed, and for the most part, dropped.

Poverty reduction or price reduction?

I begin with a simple calculation. Chart 1 shows GDP per capita, relative to advanced countries, of the third world both excluding and including China.¹⁸ GDP is here

¹⁶ See Wade (2004b, 2007), Korzeniewicz and Moran (2008)

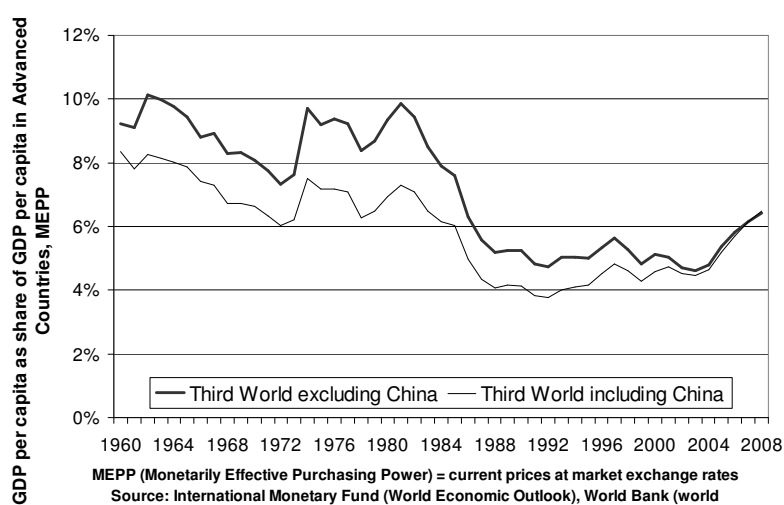
¹⁷ The United Nations is a noteworthy exception. OECD statistics, though produced to a high quality, unfortunately only cover OECD countries.

¹⁸ Milanovic (1999 2005) (see also Ravallion et al 2008 and footnote 2), criticises poverty measures drawn from GDP statistics, and calculates inequality from household income data independent of national boundaries. I comment on only two points which affect my argument. Firstly, I myself (see Freeman and Kagarlitsly 2004) define inequality in terms of *territories* – the first and the third world – not countries. GDP per capita in each territory is unaffected by national division within them. Secondly, differences *between* these worlds is a basic geopolitical fact, re-enforced by 'globalisation' to the great detriment of the third world, and cannot be set aside. In throwing out a much-needed baby with some admittedly dirty bathwater, the 'household headcount' approach comes perilously close to

measured by the same means as that used by accountants and financiers. It is converted into a single currency at market exchange rates. Dollars are usually used in comparisons because it is the normal reporting currency for world transactions; for equality comparisons such as charts 1 and 2, any currency of course yields the same results.¹⁹ The measure, in short, is *money*, as normally understood and used in exchange. To emphasise this, in this article I adapt a phrase of Keynes and describe it as *Monetarily Effective Purchasing Power* or MEPP.

The MEPP income per capita of the third world excluding China more than halved, relative to that of the advanced countries, between 1980 and 1992. Inequality, measured in these terms, doubled. Chart 2 shows the same magnitude – world inequality expressed as the ratio of first and third world GDP per capita – calculated using PPP measures of GDP.

Chart 1: World inequality (low = less equal)

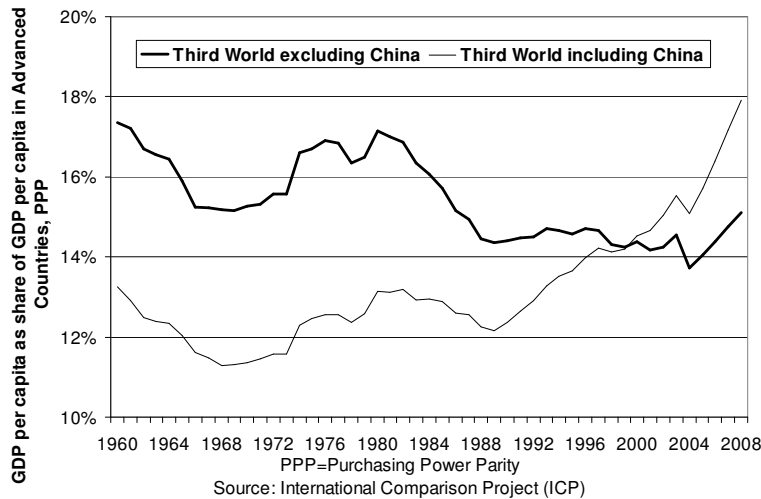


The two measures tell a different story, highlighted in Chart 3, which compares the ‘most prudent’ story from chart 1 – at market exchange rates without China – with the ‘most enthusiastic’ story from chart 2 – at PPP exchange rates including China.

denying that the third world exists.

19 Figures for 2007 and 2008 are ‘nowcasts’ – best estimates based on the IMF’s forecasting model and data available as of April 2008.

Chart 2: World inequality using PPP (low = less equal)

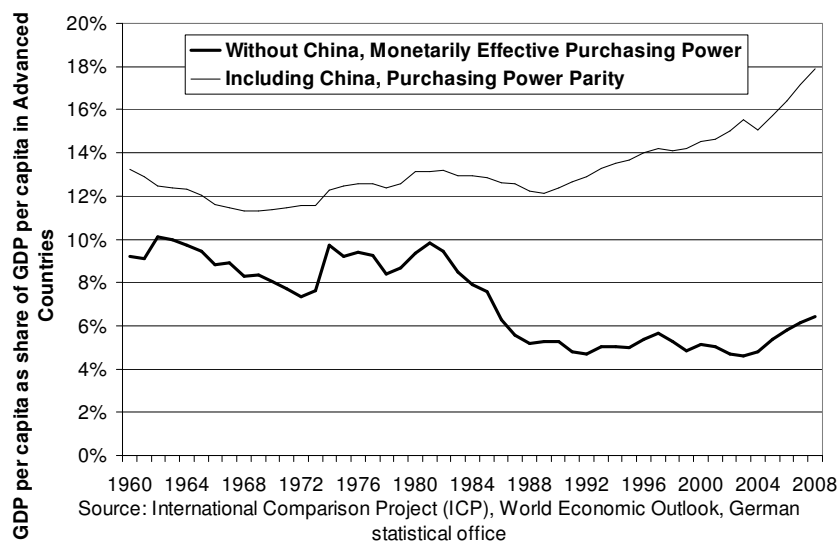


According to the most enthusiastic account, using PPP and including China, inequality reached its worst ever point in 1968 when it bottomed out at 12 per cent, dipping briefly in 1988 before twenty years of almost uninterrupted betterment. But from the most prudent point of view, using MEPP and excluding China, inequality became sharply worse in the FTL decades, reaching an unprecedented and historic low of 4 per cent in 2004. A correction did begin in 2000 but even so, by 2008 world inequality at 6 per cent remained significantly worse than its pre-globalisation average of 8 per cent.

To see how critical these statistical choices are to basic judgements about inequality and growth, let us consider the debate provoked by Firebaugh and Gosling (2004) who write as follows: “Following nearly two centuries of growth,”

global income inequality declined in the last decades of the 20th century ... the major equalizing force is faster-than-world average income growth in China and South Asia, industrializing regions where 40% of the world’s people live. Apparently what matters most about economic globalization thus far is its role in the spread of industrialization throughout populous poor regions of the world. If so, then globalization most likely has reduced global income inequality.

Chart 3: Inequality measures compared (low = less equal)



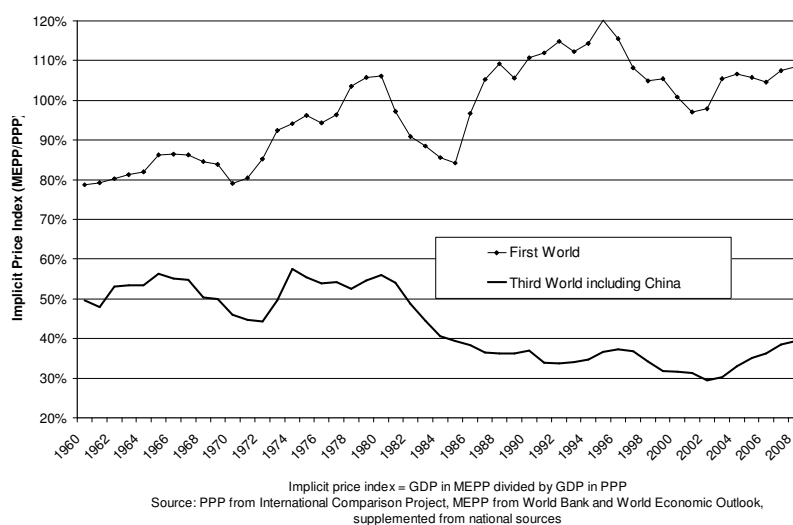
Statements of this nature depend absolutely on an uncritical acceptance of PPP-based

evidence and a renunciation of any other. They hold only if the upper measure in Chart 3 is treated as unconditionally true, and the lower measure ignored. Let us therefore interrogate it more closely.

As indicated in the introduction, let us assume that the PPP figures on which chart 2 is based are a true record of the relative differences in the prices both of individual commodity ‘basic headings’, and of the baskets of goods used in arriving at PPP conversions. That is, let us unconditionally accept all the claims advanced on behalf of PPP statistics by their supporters, as regards their accuracy as a measure of relative price differentials in consumer goods between countries.

In that case, why does the trend in inequality, measured as GDP per capita in MEPP, diverge so systematically from that measured in PPP? Chart 3 shows the ‘implicit price index’ – the ratio between GDP measured in MEPP and in PPP terms. This is the standard measure of the price level as defined by PPP statisticians, as they themselves define it. That is to say, *their own statistics* yield the clear conclusion that, since 1981, there has been a prolonged process of divergence between prices in the third world, and prices in the first world. In the advanced countries, prices relative to ‘world’ PPPs basically trended slowly upwards from the 1960. In the third world, prices more than halved between 1981 and 2003, rising to a limited extent only in the five post-liberalisation, pre-crunch years 2003-2008. Their future trend is as yet unknown.

Chart 4: implicit price index in the first and third worlds (low = lower prices)



“Improvements” in inequality or poverty recorded since 1980 are thus entirely due to the falling trend of the prices of consumer goods in the third world since the onset of ‘globalisation’. The World Bank’s ‘Povcal’ site²⁰ lets us calculate the consequences. In 1981, using the ‘dollar a day’ measure of \$32.74 per month, headcount poverty stood at 40 per cent of households worldwide. If prices had remained constant, in 2004 an income of \$2.4 per day would be required to maintain the same living standard, giving a headcount of 54 per cent.

Only low prices therefore stand between over half the world’s population and an income level lower than the target set at the beginning of the 1980s. Without the fall in third world consumer prices observed over this period, the number in extreme

20 World Bank Povcal group, www.iresearch.worldbank.org/PovcalNet/jsp/index.jsp.

poverty would have risen, not fallen, from 40 to 54 per cent of the world's people. We would now be further from the first millennium goal than in 1980. The balance sheet of 'globalisation' would be indisputably negative.

Does money matter?

Let us now revisit the arguments in favour of Purchasing Power Parities and reconsider them in the light of these facts. Two different arguments are often conflated. The first, a statistical argument, is that if two individuals face different prices, the person facing lower prices can consume more for the same money, and this should be taken into account when comparing their well-being.

This argument is unexceptionable. However behind it lurks the much stronger claim that price is some kind of superficial distortion, superimposed on a 'true' reality of tangible consumed and produced things. PPP then becomes more than an additional statistical tool: it becomes the 'correct' or 'true' measure of the economy. PPP proselytisers write as if price differences were some kind of geographical inflation, a source of irrelevant variation to be eliminated and ignored. "Purchasing power parities" writes Kravis (1986:24):

...are the *correct* converters for translating GDP and its components from own-currencies to dollars (the usual numeraire); the alternative measure, exchange rates, *obscures* the relationship between the quantity aggregates of different countries. Drawing on the reports of the United Nations International Comparison Project (ICP), the article contends that exchange rates systematically *understate* the purchasing power of the currencies of low-income countries and thus *exaggerate* the dispersion of national per capita incomes. (my emphasis - AF)

The emphasised words point to the problem. That the two measures – MEPP and PPP – yield different results, nobody denies. But what determines that one of these is superior? We might with equal validity say that PPP 'obscures' the underlying monetary reality, 'exaggerates' the purchasing power of low-income currencies and 'understates' the dispersion of per capita incomes.

There is no *a priori* reason for claiming that money prices obscure or distort some true relationship which quantity measures reveal. The reasons usually given, on closer study, turn out not to be reasons at all, but restatements of the single unproven prejudice that money does not measure anything useful. "Because market exchange rates are based on short-term factors and are subject to substantial distortions from speculative movements and government interventions", writes Datuk Chander (2002:1) in a paper prepared for the World Bank and referenced on the ICP site, "comparisons based on exchange rates, even when averaged over a period of time, such as a year, yield unreliable and misleading results." Chander goes on to cite the case of Japan whose per capita GNP was 67 per cent of that of US in 1985, but rose to 147 per cent in 1995. "This was not", says Chander "because of superior performance of the Japanese economy but because of the phenomenal appreciation of the Japanese yen versus the US dollar."

This 'phenomenal appreciation' of the Yen amounted to a rise of 56 per cent, relative to the dollar, over the eight years separating 1987 from 1995. This is substantial, but by no means exceptional and, in particular, it is much *less* than comparable fluctuations in the prices of goods. Between April 2007 and April 2008 wheat, rice, and soybean prices rose by 40 per cent, 60 per cent and 40 per cent. respectively, whilst fertiliser prices rose by two *hundred* per cent and oil by 150 per cent. By what standard are exchange rate movements judged 'phenomenal' or 'short-term'? Set against commodity price movements so violent as to threaten halving the living

standards of the majority of the world's poor within a few years, exchange rates are a paragon of stability. Food prices are, moreover, just as subject to speculative movements and government interventions as foreign exchange rates, if not more. Why are these not deemed to count as 'distortions'?

An exchange rate is, in the last analysis, simply a price like any other. It is the rate of exchange of one commodity – the currency of one country – for another – the currency of another country. The only distinctive feature of money, as opposed to any other commodity, is that it is liquid: it can purchase other commodities. But this is the very reason monetary measures of performance are important, and not ignorable. Keynes clearly established – a finding which economics has not renounced and has, indeed, recently rediscovered to its cost – the centrality of money *qua* money in the business cycle. This point has been underlined more emphatically by the 2008 credit crunch than any treatise could hope to achieve.

I can think of no good theoretical reason why the money should cease to be important when considering differences in space instead of time.

The real reason for claiming that money is insignificant is, in summary, neither the speed of exchange rate movements nor their vulnerability to speculative or non-market forces. It is the unsubstantiated prejudice that consumption and production can uniquely be expressed and understood in terms of 'quantities' – that 'money is a veil'. This idea rests on the central false conception, already discredited in economic thinking, that money and price are of secondary importance, as if a market economy could somehow function without payments.

Among the many problems with this extensively-criticised 'physicalist'²¹ view, are the assumptions that the idea of 'quantity' is as easy and unproblematic for all commodities as it is for simple primaries like corn, or that an unambiguous meaning can be assigned to such things as a quantity of education, or health, or entertainment.²² In addition to this, however, the relation between physical quantities and money quantities – that is, price – is not *random*. It has a structure, varying in time and space. This structure itself informs us about the processes at work in the world, and if we reduce the description of that world to the single dimension of quantity, we ignore this vital information and will cease to understand the world. We have already noted that, in the business cycle, this structure varies in time. I will now show that price variations across space also are not random and not superfluous.

Kravis (1986:13) acknowledges that price differences have a geographical structure. But he does not draw the obvious conclusion that price is non-ignorable in explaining other geographical differences. The dispersion of prices across territories is not a 'distortion'. It is an irreducible causal factor of poverty and underdevelopment. If we suppress price information as 'incorrect', we irretrievably suppress its explanatory power. In particular we will not be able to understand the economic forces which have separated the first from the third world, and inevitably, therefore, we will not be able to understand the true impact of liberalisation on that division.

What is the third world?

The division between first and third worlds, reduced to its economic essence, is a division of the world into zones of low wages and productivity on the one hand, and high wages and high productivity on the other. In this division, price is a causal

21 See Kliman (2007) for a definition and discussion of physicalism.

22 See for example Kravis (1986:22)

factor, in two senses: consumer goods are cheaper in the third world than in the first, and capital and intermediate goods are more expensive in the third world than in the first.

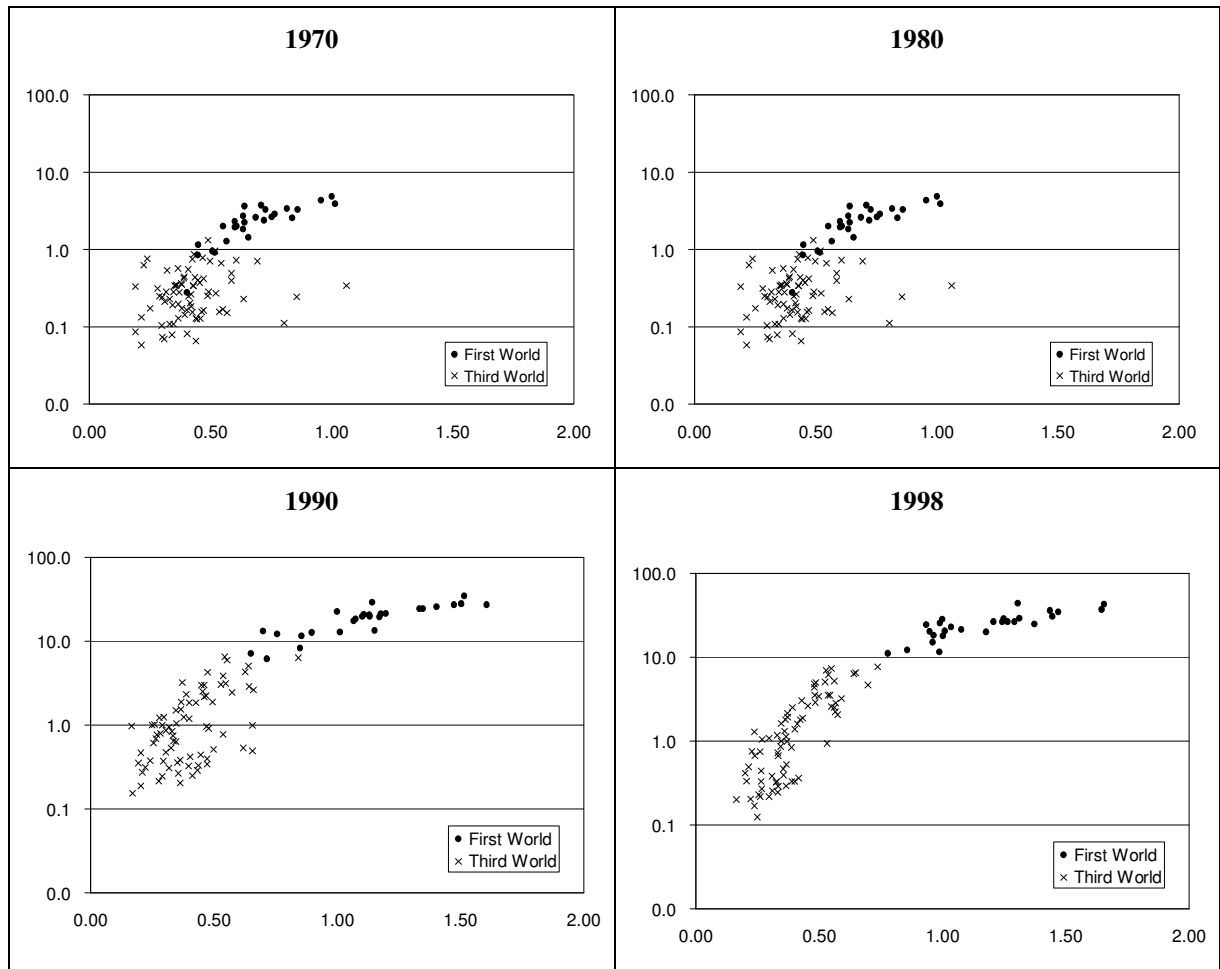
To put the same thing another way, capital and intermediate goods in the third world are much more expensive, relative to consumer goods, than in the first world. It is therefore simply more costly to *produce* in the third world, than in the first world, except insofar as labour is cheaper and is used instead of capital, that is, except insofar as production is more backward. The 'achievements' of globalisation arise, therefore, not from any new processes of development induced by liberalisation but from the consequences of *arresting* them. This appears as progress only if measured using an indicator which treats the relative cheapening of consumer prices – and its concomitant, the relative rise of the prices of the means of producing consumer goods – as if this constituted an improvement.

This is clarified by a closer study of the geographical dimension of price differentiation as it developed in the FTL decades. Chart 4 gave the aggregate relation between prices in the first world as a whole and the third world as a whole. Chart 5 now shows this relation in more detail by considering individual countries. Each subchart, for a given year, shows the relation between GDP per capita (in MEPP) and price level in that year. Each mark corresponds to a country. The bold dots are first world countries and the fainter dots are third world countries.

By end of the FTL decades, the first and third world had separated into two entirely distinct price-growth zones. Thus, looking at the chart for 1998, all third world countries for which complete data is available had a lower implicit price index than all first world countries, and all third world countries had a lower GDP per capita than all first world countries. The world had completely divided into two 'halves', the third world in the bottom left quadrant and the first world in the top right quadrant.

Reduced to its essential, the impact of liberalisation was to reconstitute the third world.

Chart 5: GDP per capita versus price level



Vertical axis: GDP per capita in PPP. Horizontal axis: implicit GDP price index. Each dot represents one country.

Source: ICP, WEO

Over the same period, income became highly correlated with prices. The 1998 chart demonstrates particularly clearly the tight power-law relation which evolved during the FTL decades, with a correlation coefficient of 0.94.

This close association between price and income levels was a specific feature of ‘globalisation’. It was a clear outcome of the impact of financial and trade liberalisation, an outcome which vanishes from view if only we eliminate price differences as unworthy of consideration. Table 1 shows how the correlation coefficient has evolved over time. A high correlation coefficient implies that, if a country has a low price level, then it is very likely that the same country will have a low GDP per capita. By the mid-1990s, the correlation between low prices and low GDP per capita was almost perfect. The net effect of ‘globalisation’ was thus an almost complete polarisation, a reversal of any residual convergent trend of the years until 1980.

Table 1: Correlation between GDP per capita and price level.

1970	1980	1990	1994	1996	1998	2000	2002	2004	2006	2008
0.73	0.81	0.95	0.96	0.96	0.94	0.93	0.91	0.91	0.89	0.89

Source: ICP, WEO and national statistical agencies

To summarise: in the previous section I showed that poverty reduction, as reported using PPP statistics, was in fact the outcome of a general reduction of the prices of

consumer goods in the third world over the period of financial and trade liberalisation. It might have been the case that, nevertheless, this price reduction was achieved by development, for example a relative rise in productivity. But in this section, I have shown additionally that empirically, these low prices were systematically linked to low GDP, that is, low output, again relative to the first world. With fewer and fewer exceptions as this period rolled on, the lower the relative price level in any given country, the lower its output was likely to be when compared with any first world country.

This does not necessarily imply a causal relation: I have not argued that low prices ‘cause’ poverty (or for that matter that poverty causes low prices). It does however indicate that the relation is systematic and structural. Such a tight correlation is cannot be accidental and *some* set of causal relations must be involved. Whatever these are, they cannot but be obscured if price is set aside as an irrelevant distortion. Money, in a word, matters.

Not by bread alone: the true cost of capital

What are the possible causal connections for the relations observed in the last section? We can shed some initial light on the matter by studying the price of an important section of consumer goods themselves – so-called ‘hi-tech’ goods, being those which require for their production levels of skill and technology associated with the third world.

Third world prices are not in fact uniformly lower. A widely-cited illustration of PPP methodology is the ‘Big Mac’ index, showing the cost of a Big Mac in the major countries of the world. In 2007 CommSec created another index called the ‘iPod’ index.²³ Table 2, extracted from this index, shows the US dollar cost of an iPod Nano in January 2007

Table 2: the iPod Index

Brazil	\$327.71	Germany	\$192.46
India	\$222.27	China	\$179.84
Denmark	\$208.25	US	\$149.00
France	\$205.80	Japan	\$147.63
UK	\$195.04	Canada	\$144.20
Spain	\$192.86		

Source: CommSec

The cheapest country in which to buy an iPod is thus Canada, followed by the US and China, with India and Brazil at the most expensive end. The price of goods incorporating high technology of all kinds do not follow the same price patterns, geographically, as the goods that make up the PPP basket.

The high relative price of high-tech goods in the third world is confirmed by PPP research itself, as regards the price of a second category of consumer goods – durables, such as cars, white goods, and so on. Kravis (1986) provides table 3, showing the inverse relation between the price of producer durables, and income level for a range of countries in 1975:

Table 3: price levels for producer durable goods by income class, 1975

Income class	Relative producer
--------------	-------------------

23 www.comsec.com.au/public/news.aspx?id=809

(US=100)	goods price level
0-14.9	3.2
15.0-29.9	2.04
30.0-44.9	2.11
45.0-59.9	1.58
60.0-89.9	1.17
90.0-100.0	1.00

Source: Kravis (1986 p16, table 7)

A differential therefore exists not merely between price levels but between types of good. As is well known, this affects the structure of consumption. A country can enjoy a low PPP price index, with certain consumer goods available at low prices such as food, housing, clothing, health and education services, and so on, and will therefore show a relatively low poverty headcount.

But this advantage does not apply across the range. Manufactured goods and advanced producer services, above all where their production requires advanced technology, are significantly more expensive in those countries which do not produce them. This is an important factor in class differentiation, since access to ‘Western’ living styles and standards is generally restricted to the upper-middle class layers who can afford luxury goods. It means that, in effect, the difference between the price of luxuries and staples is significantly greater in many third world countries than in the first world.

However the above in itself merely brings about a difference between patterns of consumption. Much more significant is the implication of this differentiation for production.

Table 4 illustrates this point. The International Comparison Project releases ‘implicit price indices’ for each of the main components of GDP (Final consumption, Government expenditure, Capital Investment, Export balance) and its subdivisions. For capital investment these constitute Construction and Machinery, further broken down respectively into Residential, Non-residential, Other and Transport equipment, Non-Electrical Machinery, Electrical Machinery. Comparing the relative costs of capital investment and equipment with final consumption gives an indication of the true cost of growth.

The relative price of these two components of GDP are significantly different for the two groups of countries. The median cost of both capital investment and machinery, relative to consumption goods, is over twice as high in the third world as in the first world.

Recall, at this point, that the average PPP ‘advantage’ of the third world, in terms of lower overall prices, was at that time just under 3 (chart 3). The differential between the price of capital and consumption goods in the third world wipes out more than two thirds of this advantage.

This is acknowledged by PPP statisticians who do make attempts to understand its causes, but appear to have dedicated little attention to its effects. “Exchange rates” write Kravis et al (1985)

... *distort* certain kinds of structural comparisons. These *distortions* arise because the deviation of purchasing power parities from exchange rates is not uniform for all kinds of goods. In the price structure of low-income countries, for example, capital goods tend to be more expensive relative to consumer goods than is the case in high-income countries. Exchange-rate conversions thus tend to *exaggerate* the relative proportion of GDP that is taken in the form of capital goods in poor countries. [my

emphasis – AF]

Table 4: Price of Capital Investment and Machinery, relative to domestic consumption

First world			Third world		
Country	Capital Investment	Machinery	Country	Capital Investment	Machinery
Portugal	144%	205%	Sri Lanka	94%	389%
Korea	135%	170%	Pakistan	264%	353%
New Zealand	136%	169%	Bangladesh	304%	352%
Hong Kong	155%	164%	Egypt	332%	323%
Greece	126%	158%	Morocco	237%	321%
Spain	129%	158%	India	211%	300%
Canada	97%	120%	Mauritius	369%	290%
Italy	114%	118%	Benin	327%	285%
Japan	129%	116%	Thailand	209%	274%
UK	118%	113%	Kenya	240%	265%
Ireland	98%	111%	Iran	139%	258%
Netherlands	113%	107%	Malawi	203%	252%
Norway	90%	106%	Madagascar	352%	232%
France	101%	103%	Cameroon	336%	225%
Belgium	98%	101%	Zimbabwe	209%	212%
United States	100%	100%	Congo	268%	210%
Australia	109%	98%	Zambia	253%	205%
Finland	89%	97%	Senegal	268%	203%
Austria	94%	97%	Philippines	284%	187%
Germany	97%	95%	Tunisia	194%	177%
Sweden	108%	95%	Rwanda	208%	165%
Denmark	96%	94%	Botswana	156%	163%
Luxembourg	98%	88%	Ethiopia	249%	161%
			Sierra Leone	451%	159%
			Cote d'Ivoire	181%	152%
			Mali	223%	144%
			Swaziland	162%	141%
			Nigeria	138%	125%
			Turkey	91%	105%
			U.R. Tanzania	77%	62%
Median	108%	107%	Median	230%	211%

Source: ICP 1985 price comparison round (UNSTAT 1994). As in the rest of this report, participating economies in transition (Hungary, Poland, Former Yugoslavia) have been omitted because of the lack of consensus around the data. Other omitted countries are those which did not take part in the 1985 programme.

The language, where as before I have emphasised the key words, is even more revealing. If capital goods are expensive relative to consumer goods – that is, if consumer goods are cheap relative to capital goods – by what standard is it decreed that exchange-rate conversions ‘distort’ the share of capital goods in poor countries? It is surely closer to the mark to say that PPP conversions understate the cost of capital goods – that is to say, understate the difficulty of industrialisation or indeed, mere industrial survival.

Moreover, whereas a theoretical argument, albeit disputable, supports the notion that ‘real’ expenditure is somehow more basic than monetary expenditure, it cannot be called on in this case. Investment and capital goods are just as ‘real’ as consumer goods. Their quantities are just as measurable. By what criterion are their prices decreed to be ‘exaggerated’? The PPP approach is rooted both conceptually and, as I will show, actually, in a *consumption* standard of price, excluding or wildly understating the impact of capital goods on third world costs.

This may have some justification in terms of the direct measurement of poverty. It is not justified as a generic measure of economic performance. It cannot be correct to assign capital goods secondary or trivial importance in any modern economy.

The problems created for developing countries by the relatively high cost of capital goods, compared with consumption goods, is well-known in development literature. Attention was first drawn to it by Singer (1950) and Prebisch (1950) who in the 1950s pointed to the depressive effect on development of relative decline in primary goods prices, compared to manufactures. The long-term nature of this trend is evident from the recurrence of references to it. Benham (1940) had drawn attention to it ten years earlier and the phenomenon of declining relative exchange rates was even noted by Marx in his discussion of the colonies.

Table 5: Wages and Unit Labour Costs in Manufacturing – Comparison between China and Selected Developed and Developing Economies, 1998

Country	Relative to Chinese level of		
	Wages	costs	Implied labour productivity (output per worker)
United States	47.8	1.3	36.8
Sweden	35.6	1.8	19.8
Japan	29.9	1.2	24.9
Singapore	23.4	1.3	18.0
Taiwan Province of China (1997)	20.6	2.3	9.0
Republic of Korea	12.9	0.8	16.1
Chile	12.5	0.8	15.6
Mexico	7.8	0.7	11.1
Turkey	7.5	0.9	8.3
Malaysia	5.2	1.1	4.7
Philippines (1997)	4.1	0.7	5.9
Bolivia	3.7	0.6	6.2
Egypt	2.8	1.5	1.9
Kenya	2.6	2.0	1.3
Indonesia (1996)	2.2	0.9	2.4
Zimbabwe	2.2	1.2	1.8
India	1.5	1.4	1.1

Source: Wages and Unit costs UNCTAD (2002:159, table 5.4). Productivity calculated by author (column 2 / column 3)

Industrialization in the third world has modified the argument. Third world countries – acting on standard Ricardian advice – have moved into large scale production of certain types of manufactures and indeed many services,²⁴ particularly those in which cheap labour appeared to confer a competitive advantage. UNCTAD (2002:68) establishes that primary commodities declined between 1980 and 1998 from 51 per cent to 19 per cent of developing world exports. But as UNCTAD Trade Development Reports also repeatedly point out, the relative price disadvantage of the third world in high technology or high skill goods remains stubbornly persistent.

24 In China, (Freeman 2008) services are actually the only broad sector in which employment has risen, reaching 38 per cent in 2004 compared with 11 per cent in manufacturing and 42% in agriculture.

The move into manufactures has established a new world division of labour, no longer defined by primary exports but by the types of manufacture in which third and first world specialise. As UNCTAD (2005:86) puts it,²⁵ attention has now shifted to the “prices of manufactures exported by developing countries relative to those exported by developed countries.” The fundamental difference between first and third world remains – as it always was – a division between *levels of productivity*.

This is made particularly clear by a comparison of wage costs and unit costs in various countries, given in table 5. There is room for some doubt over figures which show the USA as the country with the world’s lowest unit costs, most probably due to the effects of averaging. Nevertheless the basic qualitative point is so striking that it clearly holds regardless.

Taking the extreme case of the USA, where hourly wages are nearly fifty times higher than in China, wage costs per unit of output were, in 1998, only 1.3 times greater. This is just another way of saying that the average labour productivity of a US worker is 36.8 times higher than that of her or his average Chinese counterpart. This clarifies one of the most basic issues of development, running counter to a great deal of conventional wisdom concerning comparative advantage – not to mention policy advice – which is that low wages cannot be traded for productivity advantage without the *additional* factors of capital and skills.

Development is conditional on being able to access and purchase the most advanced current technology, in the broadest sense of the combination of equipment, intermediate goods, and skills which are all required for competitive production.

But, as we have seen, it is precisely investment goods that are required to transform the productivity of developing countries, whose high prices are ignored in the assessment of poverty statistics by most commentators. As Desai (2008:45) has noted, not only were PPP’s ‘development by statistical redefinition’ but ‘added insult to the injury of low incomes by in effect congratulating a people for them’.

Yet this error is just the tip of the iceberg. Investment goods are at least included in the PPP basket. Their high cost is largely ignored, however, because the cost of fixed capital formation is a relatively small part of GDP, constituting only the surplus allocated to growth.

A still more basic cost, however, is simply omitted from the PPP statistics altogether, namely the cost of intermediate goods. This is an issue not of development, but mere survival. This is the subject of my final section.

The cost of survival and the price of manufactures

Why are capital goods assigned such secondary importance by PPP advocates in assessing economic performance? In this section, I will show that the reason is not merely conceptual but arises from a fundamental error of calculation that goes to the heart of the PPP construct – the failure to recognise *intermediate* goods, required by industrial processes, as a cost.

First however let us consider some of the secondary reasons for underestimating their importance. The first point is that third world countries often acquire capital goods from abroad, and so the problem of their price is subsumed into the terms-of-trade discussion. However, the real issue is not one of trade but of price: it is the high price of the intermediate products consumed on a daily basis by the country’s industries

25 in a prescient passage also predicting the present sharp rise in primary commodity prices

which obstructs development, whether imported or produced locally.

Second, capital goods can appear as a kind of 'luxury' in comparison with the life-and-death issues of poverty itself. World opinion is focussed on the immediate problems of feeding, clothing, and housing two billion people on the margins of existence. But the price of capital goods *is* a life-or-death matter. The very successes, however limited, of third-world industrialisation, mean that an increasingly large majority of the population are industrial producers, and can therefore survive only if they can both sell their output competitively on the world market, and purchase their inputs at prices which provide a margin sufficient to live on.

This leads to the final point. For all the reasons given above, any attempt to record the true structure of third world costs must take full account of the cost of production. This, PPP statistics do not do. A fundamental flaw at their heart prevents them doing so, namely, their exclusion of the cost of intermediate goods.

The object of study, for price and growth comparisons, should be the total spending that a given country is required to make in order to reproduce itself from year to year. Conventionally, PPP statistics assume this is given by Gross Domestic Product. They begin from the main items that make up GDP: final consumption, government spending, investment, and the balance of trade. They then break down each item into various general types such as beverages and food, which is further broken down into such sub-items as bread and cereals, meat, fish and so on. Lastly, they consider the relative share of each of these items within spending on GDP, multiplying it by the country-based price of each such item, to arrive at the total PPP cost of GDP.

This can be thought of as a weighted average of individual prices, in which the weights are the share of each separate item in the country's expenditure.

At first sight, capital goods are therefore only a small proportion of the costs of a country, corresponding to the 10-20 per cent of GDP that is invested in new production. But these are *not* the only expenditures on capital the country makes. Industry relies not just on labour and capital equipment to keep going, but must also purchase the steady stream of components and raw materials that are needed simply to keep the production lines running. The more complex the manufacturing process, the more sophisticated the inputs required. The publisher requires paper and ink, the computer manufacturer the printed circuits, metal cases, power supplies, fans, screens and so on.

Table 6: Input-output table of the USA, 1987 (simplified)

	Intermediate Use			Final Expenditure					Total expenditure	
	Manufacturing Inputs	Non-Manufacturing inputs	Total intermediate use	Consumption	Government	Investment	Net Export	Total Final Consumption (GDP)	Statistical Adjustment	Total expenditure including the cost of intermediate goods
Non-Manufacturing goods	659	1,492	2,150	2,311	287	436	0	3,034	0	5,184
+Manufacturing goods	835	499	1,334	710	175	332	-175	1,042	0	2,394
+Statistical Adjustment	0	0	0	0	0	0	0	0	456	0
=Total Intermediate Use	1,512	1,991	3,503	3,020	463	768	-175	4,075	456	8,034
+Factor Incomes (value added = wages + rent + profit)	883	3,193	4,076							
=Total output including factor incomes	2,394	5,184	7,578							

Source: van Ark (1994, chapter 3). Table further simplified by author. Figures in billions of US dollars

GDP does not include all the monetary expenditures that a country makes in order to reproduce itself. It omits the most important costs of all, namely, what its producers must pay, in order to produce the products the population consumes.

The intermediate expenses which we have just assessed do not figure in PPP indicators. This is because of the definition of GDP itself which, as all first-year undergraduates are told, represents *final* consumption. It excludes intermediate goods and, with them, all those real and costly expenses which a producer must make in order to create the final product.

This vital but obscure point has to be fished out of a backwater of the PPP literature, the work of the International Comparison of Productivities (ICOP) project dealing with ‘producer PPPs’ for international comparisons of productivity.²⁶ This work does not directly assess aggregate country PPP measures but seeks to compare the ‘true’ real output of individual industries, asking for example whether the car industry in Germany is more productive than that of the USA, when allowance is made for price differences between the two countries.

A central point emerging from these studies is that account must be taken not merely of the price of its outputs, but also the price of its inputs. This arises in connection with a rather technical procedure called ‘double deflation’, which deducts the adjusted price of inputs from the adjusted price of outputs to give real value added.

However, the issues raised go beyond this restricted technical question because the inputs themselves are a cost. As discussed above, these are simply absent from the normal GDP statistics. Van Ark illustrates this with the table that we have reproduced as table 6. This shows that the GDP of, for example, the USA, at \$4,075bn, is only half that of its actual total annual production and consumption, which, when intermediate goods are included, comes to \$8,034. A total of \$3,503 bn worth of goods are simply omitted from the nation’s true costs, if one reports – as PPP statistics do – only the unshaded part of the table. Indeed, if we add together intermediate costs and capital investment, find that for the USA at least, 54 per cent

26 cf for example van Ark (1993)

of total annual expenditure is accounted for by capital goods of one kind or another

However, as we have noted, it is precisely the price of such goods that account for the truly crushing costs falling on a third world country, which begins from a position of weakness in comparison to the first world in its technical development, in the skills of its workforce, and so on.

The structure of third world prices – cheap consumer goods, cheap wages, and expensive producer durables and consumables – does not improve this situation, but makes it worse. It is only those countries, most notably China, which have focussed their efforts in building up an independent and competitive capacity for producing such goods, which have held their own and advanced in the climate fostered by trade and capital liberalisation.

The future of international statistics

In this article, I think I have shown that PPP statistics are holed below the waterline. What is more likely to float? A simple answer would be MEPP indicators. However I am unhappy with the idea that these are a ‘true’ or universal statistic any more than PPP indicators. Any statistic is useful for *something*: the false claim advanced on behalf of PPP indicators is that they are *superior*; usually in some absolute sense. This idea should never have been allowed onto the slipway, let alone sent out of the harbour, though it is taken seriously by many people who should know better. In contrast, though MEPP statistics, to push the metaphor a bit further, can probably navigate the coastal waters of our subject, they do require additional support to navigate its deeper oceans.

In particular, as we have seen, *price* figures among the most vital pieces of information we require to understand both geographical differentiation and cyclic change. To know prices, however, we need both monetary information as provided by MEPP statistics, and ‘physical’ information as supplied by PPP statistics, so that neither on its own can ever tell the whole story.

Certainly, MEPP data should never be left *out* of the account, because as I have shown they tell us vital things which PPP statistics have catastrophically failed to reveal, without which we cannot plan for any real improvement in the human condition. In the near future, I hope that whenever a journalist or propagandist concludes that equality is improving or growth is rising, on the basis of PPP statistics, responsible professional economists will rise as a body to protest that the conclusion is unacceptable if contradicted by MEPP or other evidence. If nothing more happens than this, it would be a great advance.

But this is not the whole story. Once the idea of a ‘universally correct’ measure is set aside, the idea that usually pops up is the ‘horses for courses’ concept – each statistic should be used to study a different problem. The more cautious advice from the World Bank is that living standards and output should be studied at PPP exchange rates, but debt and trade should be studied with market exchange rates.

This is as attractive as it is trite, but it is very wrong for the reasons we have just explained. Monetary and quantity statistics are not tools for studying different problems, but are both required to study every problem. They reveal different aspects of every aggregate of transactions, whether this be GDP, exports, or industrial output. Therefore, they should both be used in every concrete analysis. It is no more correct to omit MEPP aggregations from a rounded study of living standards, than it is to omit PPP indicators from a rounded study of trade. What is required is, rather, a professional ban on drawing any conclusion from a single set of indicators.

Thus, my reform proposal is ‘statistical pluralism’ – a professional insistence that, in order to study any economic phenomenon seriously, we need to consider it from a variety of angles and we therefore require a variety of measures. The duty of the reporting agencies is to make all these measures available, and the duty of the analysts is to consider all of them.

From this, there follows one last surprise conclusion; a third, vital, set of statistics is altogether missing, namely, the *labour value* of a product or an aggregate. As Marx coherently argued (and as Ricardo and Smith, whose opinion on other matters is widely sought, concurred), the labour required to produce something is an essential quantitative measure which we need in order to understand its economic role. Every actual commodity is, quantitatively a unity of three, not two magnitudes: its physical size, or, as Marx put it, use value, its money price, and the quantity of labour embodied in it.

For decades, economics has refrained from producing statistical estimates of labour values but there is no good reason for this other than that it is considered eccentric and potentially subversive. The idea of labour value statistics has also suffered in a blind alley patrolled by the Marxists, who define labour values as the solution to a problem in general equilibrium, and without reference to money. This procedure not only introduces inconsistencies which are then falsely attributed to Marx but vastly overcomplicates a relatively simple idea.²⁷ Modern techniques (see Freeman 1998, Karahanogullari 2008) can now calculate labour values from national statistical and labour market information, and it emerges that these labour values are a distinct magnitude independent of both price and quantity.

Labour values, when calculated for first and third world countries, provide information which is not available either from physical quantity or from price. Most notably, they directly demonstrate the central issue of development. In a nutshell, the labour of the third world exchanges for the labour of the first world in a ratio of about 35:1, which is reflected in the different relative unit wage costs encountered in the first and third world. Put another way, the effect of the market, on the world scale, is that the employer of a single worker in the first world, can obtain, in exchange for what that labourer makes for her, the produce of thirty-five labourers from the third world – and vice versa. This simple social fact deserves to be directly quantified. A complete story, I suspect, will not be told until it is.

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²⁷ For a general discussion of these issues see Freeman and Carchedi (1995) and Kliman (2007)

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