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**Measure for Measure; Price Indexes for Well-Being**

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# Measure for Measure; Price Indexes for Well-being

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## Abstract

*At a national level, inflation control ranks foremost as a weapon in the official armoury to defend the economy and maintain stability. Other priorities such as growth and poverty reduction also need price data to track progress so that long-term strategies can be implemented dealing with issues in real terms. Similarly, cost information shown in the current budget and in projected education and health expenditures rest on certain assumptions about the expected trend in the prices of goods and services relevant to these sectors. The primary concern of most governments is to improve the standard of living of their populations through a rising economic prosperity that generates the higher disposable income levels to allow them sovereignty of choice. The redistribution through taxes of income and wealth to promote a fairer society is another associated official aim that has actual and implicit implications for well-being. For all such policies and to evaluate their impact on household and also individual living standards, decision-makers require consistent estimates of real income and consumption. Measures that depict national inflation, consumer prices, the cost of living and the standard of living are all necessary to understand the variously defined aspects of change in living standards and household well-being.*

## 1. Introduction

Many decision makers seem unwilling to confront the moral dilemma of drawing a fine distinction between the political philosophy of policy and the persuasive technocratic rationality of an economic logic embedded in theory. When acknowledged theory has been formally incorporated into a particular statistical artefact, it is thereby imbued with acceptability and accorded an unquestioned authority. This paper approaches the problem of capturing changes in well-being through the conventional statistical technique of deflating observed values, in this case of personal outlays, by suitable price deflators. It explains why, for each notion of well-being and associated policy objective, the choice of a relevant price measure is crucial. Although indexes of inflation, consumer prices, the cost of living, etc, all appear, superficially, to be similar and address a related concern, the underlying methodological issues are quite different. In selecting the

relevant price measurement different guiding principles will apply. The primary differences between the various price indexes most likely to be used to assess changes in well-being are first described. The influence of absolute and relative price movements on identifying changes in well-being when viewed in terms of consumer surplus is referred to. How inter-area differences in price levels relate to inter-spatial comparisons and structural economic and topographical features is briefly touched on.

## 2. Choice of Relevant Temporal Price Index

Recent attempts to integrate certain precepts of economic theory into the scientific methodology of index number construction have opened up new avenues of interpretative analysis. At the same time, however, it has spawned old arguments about the appropriateness of an underlying theory that is limited insofar as it is bound by certain premisses possessing weak conceptual and empirical foundation. Such a concern applies even more forcefully to qualitative evaluations that involve subjective and personal or externally independent judgemental assessments. Only evidence based quantitative approaches are considered in this paper. 'Smiley faces' and happiness indicators, including self-evaluations of well-being, while now increasingly popular, are not discussed (1). Statistically, such surveys are rarely robust and their results are not scientifically replicable.

To clarify the conceptual distinctions and their relevance to specific policy issues, a summary description of the distinct types of price index and their limitations follows. 'Input' price measures such as commodity price indexes, wholesale price indexes and producer price index numbers, although possessing equal importance, particularly in relation to the question of inflation and estimation of the value of non-market services provided by government and non-profit sectors, are not considered.

### a. Inflation Index

Inflation is best understood in the context of the GDP deflator. It is an aggregate goods and services index (Hill, 1997) linked to a defined total basket of commodities such as overall GDP. But, as such, it is not a pure price index because it comprises a weighted set of prices, either of overall production or expenditures. Changes in this index are usually taken to represent the rate of general inflation of the whole economy. Its use enables policymakers to identify economic growth and the total 'cake', in terms of market and non-market output, that has been shared amongst the population over successive periods of time (2).

In many countries, this index – because it is based upon components of national income - is estimated only once a year; occasionally, it may be calculated every quarter. Quite similar measures can be compiled to deflate total final household consumption or actual household expenditure to reflect real consumer outlays. Price indexes relating to major sub-components of consumption, often deemed essential to well-being such as food and housing or fuel and energy, may be separately calculated. In the UK, the Deputy Prime Minister's Office has been producing a non-seasonally adjusted monthly index of changes in house prices since February 2002, although this is not a good measure of changes in the cost of shelter or housing services.

GDP covers all the producing sectors in the economy. Real economic growth is obtained by deflating estimates of net output (gross output less intermediate consumption) and its various sector sub-components that are expressed in nominal prices by their respective deflators. The relative contributions of the factors of production and, specifically, of labour to GDP growth can also be ascertained. Because domestic inflation is measured most relevantly from the production side, it is reasonable to want to derive also some estimate of the 'rate of reward' earned by labour, i.e., the amount of effort in labour units required to gain a given level of well-being.

Output is expressed in producer prices and so, therefore, is basic inflation. Purchasers' prices are important, however, if the intention is to look at the final consumption expenditure of the population for the primary purpose of assessing household living standards. Purchasers' prices are useful when taking a holistic review of the combined effects of market prices, imported inflation and commodity taxes on overall consumer choice and behaviour.

An analytically helpful distinction could be made in official statistics between a 'supply' induced inflation caused by a combination of rising wages and higher intermediate costs (related, say, to shortages in key raw materials and energy inputs); and 'demand' inflation brought about by the effects of increased incomes. Higher income accruing to labour or from capital unmatched by corresponding parallel gains in productivity will lead to a rise in prices. An increase in demand resulting from a change in individual preferences (conditioned by what goods are available, fashion, the media, advertising, new health and lifestyle concerns, etc) would independently trigger inflation from the spending side. An escalation in prices can also be precipitated by precautionary spending and speculation.

The results of recently commissioned surveys in the US and UK show that people not only perceive inflation to be much higher than reported by government but that they also expect price increases to continue to be well above the level suggested by the official figures. Furthermore, they see planned outlays on less frequent 'capital' items such as a new car, digital TV, computer, replacement washing machine, or an overseas holiday, being put on indefinite hold because the general increase in prices has put these expenditures out of reach.

#### b. Consumer Price and Retail Price Index [CPI and RPI]

In whatever way inflation is measured, it is not the same as a change in consumer prices (or the cost of living) as many media pronouncements would have people believe. Both of the above price indexes incorporate consumer responses to market movements in the level and pattern of relative prices. Specifically, households modify their spending according to how the prices of items most relevant to their usual purchasing pattern change. Their overall consumption behaviour undergoes adjustment, especially where items comprising priority outlays that command a large share of the regular household budget are concerned. Changes in outlays respond to both disposable income and substitution effects when prices rise. The extent to which such changes occur and total outlays and retail turnover are affected depends on the importance of the good or service whose price has risen to the total family budget (3).

The CPI and RPI are the most common form of price measures although they have been in existence for a shorter period than certain commodity price measures and wholesale price indexes. They differ from an inflation measure of aggregate final household consumption (such as is computed in the US) and from a price index for the domestic absorption aggregate because the consumption weights for a CPI are based on the expenditure patterns obtained from the results of a selected sample of households. The weights for the UK RPI are calculated only after spending by the very rich and most pensioners is excluded, eliminating the top and bottom households from any influence on the index. This truncation of the consumption profile emphasises spending by the 'middle class' rather than that of a more representative average population group.

In practice, few governments see any need to make a distinction between a CPI and an RPI. Conceptually, in the CPI, the weights should refer to a broader notion of actual plus imputed consumption similar to that recognised in national accounting. The RPI is better understood as an index that refers to the prices of goods and services offered for sale.

These indexes are invariably base weighted price measures although, in some cases, the weights and the base reference period (as in the case of the family of RPI measures produced in the UK) may be annually updated. In this case, the average household outlays over some previous period, based on a continuous household expenditure survey, are adopted as the revised weights. The usual weighting reference period covers several years to circumvent problems of cyclical, seasonal and special random influences. This is designed to come up with an estimate of the 'normal' monthly expenditure pattern. It is customary for the index to be re-based with a new regime of products and prices in January each year. The common CPI practice is to measure the change in price of identical products across different outlets and to produce national average prices.

If the weights of a CPI are regularly revised, it is sometimes referred to as a 'Paasche-type base-weighted index'. It is a simple form of chain-linked index. It tracks the prices of those products representing the way people modify their outlays in response to different circumstances. It is a sound basis for mapping prices from one month to the next in the same year but, conceptually, it does not properly monitor the progression of monthly year-on-year price change because the weights change each year. A CPI (or RPI) that is updated regularly, such as every five years, is simple and transparent and easy to maintain. This common index construct has some limitations in socially diverse and complex, fast changing economies.

The intrinsic construction of the CPI in the US compiled by the Bureau of Labor Statistics is different because the index adopts a point of purchase based probability selection of items. This means that different products are priced at different outlets and the same product is rarely priced across similar outlets (4). While the US CPI possesses useful policy relevant properties that allow the local generation of area related price changes and produces domain denominated indices at selected urban levels, it faces a major problem because the calculation of average product prices, either monthly or annually, at a city or national level, is not possible (5). This means it does not permit inter-area comparisons of price levels that are deemed useful for a wide range of business decisions such as product placement and relevant employment remuneration. Public policies to ensure the equitable provision of social benefits are thereby constrained. This was not the main reason, however, why the US Senate Finance Committee set up the Boskin Commission to investigate the workings (and alleged bias) in the BLS CPI (6).

CPI and RPI, whatever their focus, fall short as economic constructs as their weights are based on aggregate household expenditures that may confound several influences. The inability to relate, conceptually, changes in the index to individual consumption propensities and income elasticities implies that meaningful interpretation and analysis cannot be underpinned by the axioms and premisses of micro-economic theory. They are neither true inflation indexes nor cost of living measures.

c. Cost of Living Index [COLI]

A COLI differs from a CPI in that it measures the change in specific consumption costs required to maintain the same (constant) standard of living enjoyed by an average individual. This assumes a COLI measures the costs of an individual staying on the same 'indifference curve', although not necessarily at the same place on it. In fact, consumers may not be so indifferent between various combinations of products that satisfy their desires because of a real or perceived quality difference in items. It is not only a matter of measuring how households modify their patterns of consumption in response to price change (overall cost) but also how they change their habits and accommodate their spending to take account of the gradually changing lifestyles normally enjoyed by the rest of society or groups with whom they are associated. The cost of living thus represents a shifting concept that refers not just to price change (cost) but to what, as Adam Smith first pointed out in the case of poor working people needing to wear shoes, the capacity to enjoy a recognised and accepted way of life in the community (living) (7). This is not, however, the way the ordinary person perceives the cost of living (8).

The main emphasis of the Boskin Report was on how to measure changes not in consumer prices but in the average cost of living in the US. This is not an 'either/or' question about what, ideally, a price index should measure; if total inflation is separately and properly assessed by a GDP deflator, then the problem is to produce a more reliable and refined cost of living index. Questions of quality change and substitution effects have to be taken into account because a COLI is intended to incorporate not only consumer response to movements in the level and pattern of relative prices but also how they react to new products and quality change. The index should also reflect the way people shift their spending to different outlets.

A COLI introduces an added complexity insofar as it requires someone to define what constitutes an average lifestyle and to decide how it should be embedded in a price index. The extent to which a COLI needs to be

explicitly modified to incorporate progressive, dominantly technically induced and supply driven quality change has also to be determined. Significant in this regard is the finding by many survey analysts that poor households are price sensitive whereas higher income households tend to be more quality sensitive.

A COLI cannot be directly related to a defined basket of commodities because outlays will change to maintain a subjective notion of 'utility' and satisfaction. This implies there is no satisfactory method to compare the present cost of living with that of the mediaeval peasant or even of those living in the urban slums of a century ago, the time when working class expenditures was first measured by price index numbers (9).

#### d. Standard of Living Index [STOLI]

A price based STOLI differs from a COLI in the intention to quantify the costs of moving from a lower indifference curve to the next level higher up. This implies an adjustment in consumption patterns to derive a higher level of satisfaction. Although difficult to define, it is, conceptually, the best index to apply in assessing changes in real well-being. Because of the difficulty of identifying exactly when a new increased level of utility is reached, a STOLI has to be approximated by aggregating a range of indicators – themselves measures of improved well-being – and also by making various consumption cost comparisons at fixed intervals.

Well-being, assessed in terms of standard of living, is an elusive concept that is primarily a matter of personal choice. Being subjective, it is almost impossible to quantify in a robust way. Any political pressure to measure changes in the quality of life by incorporating judgemental values within a price index can only expose governments to the charge of official data manipulation. Undoubtedly, the resulting measure would be ambiguous and misleading. Quality of life has little place in price index measurement or in the related determination of public policy except, of course, when viewed as an overall goal.

Many problems apply to the range of prices set by administrative fiat or agreed by tender and as recommended by an official regulatory body. There are difficulties of identification in the case of the wide range of charges, sometimes client specific, for medical and educational services, pharmaceutical products and drugs, transport services and energy use as supplied by private enterprises as well as quasi-public sectors. All these valuations and variations in pricing approach make the practical problem of quantifying real well-being more elusive.



#### e. Real Income Index

Early ideas about measuring the cost of living were associated with a humanitarian concern about the well-being of working class households. This was also related to the size and composition of the family. The adequacy of the daily or weekly wage or of piece-rate remuneration to cover the basic needs of a working class household became an issue of political concern, ranking alongside pressures to improve factory working conditions and hours of work, especially for children. The switch in the focus of policy attention towards the level of minimum wages in relation to prices highlighted a need to secure progress in raising real incomes.

The problems of using this measure to determine well-being runs into a similar difficulty to that mentioned above in the case of a STOLI. Part of the normal 'basket' of goods and services available to households and individuals will comprise a significant quantum of non-market goods and services that are provided free or well below the full costs of production. With the provision of public non-market goods and services to serve the community, a real income index as conventionally measured no longer provides a proper proxy for a real improvement in well-being. When direct taxes and subsidies are taken into account it is an index that tracks, more relevantly, changes in disposable income. Clearly, improvements in the quality and availability of social services like health and education and community amenities along with individual social benefits such as pensioners' concessions do much to enhance actual and perceived feelings of well-being.

The matter of quality change does not necessarily apply to every type of index. Indeed, in some circumstances, there may be effects (although, perhaps, difficult to quantify) in a direction opposite to what has been assumed in the analysis of Boskin (10). If consumer surplus is the main thing to be taken into account, then it must be assumed that consumers weigh up for themselves the trade-off between prices and quality. In a national accounts context, the parallel question of what quality adjustment does to the size of the producer surplus and actual total value of output, including any additional sales tax collected by government, cannot be ignored.

### **3. Choice of Inter-Spatial Index**

Inter-spatial indexes are used in comparisons of relative incomes and levels of well-being expressed in terms observed expenditures. These

measures apply to inter-area comparisons within a country as well as to the more familiar inter-country comparisons. It may seem surprising to some that an inter-area index is necessary where the same base unit of currency is used across the country, but there are usually quite substantial and varied price differentials between regions within large countries and even significant price differences between districts in the same city – as noted by Charles Booth at the very end of the 19<sup>th</sup> century in his famous Survey of Life and Labour in London. Also, as mentioned above, such price differentials can apply to different and often well-defined socio-economic groups within the same country.

The use of current official exchange rates has long been dismissed (for a wide range of reasons) as a meaningful way to convert values in nominal national currencies to a single uniform currency like the US dollar or the euro. Analysts have thus turned to the use of purchasing power parity or PPP estimates to provide a uniform and appropriately normalised basis for comparing value data between countries. PPPs equalise the price level between countries enabling appropriate comparisons of GDP and its derivatives in real terms.

In principle, for both within and between country comparisons, the foundation of PPP methodology rests on a selected aggregation of single elementary price ratios of the same product that express its price in terms of the price in another country or region. The ratios are then combined by products and averaged across product groups (known as ‘basic headings’) that are weighted by their respective GDP expenditures to become part of a multilateral combination of binary country comparisons. The values obtained have been effectively re-priced by a common international price level that is related to a specific chosen, base country invariant, reference currency.

The selected aggregation procedure is not independent of the objective for which the comparison is required. Under all ICP enquiries since 1975 – and even before when international comparisons of real economic conditions between two countries were initially carried out using ‘a standard basket of comparable goods and services’ – the basic PPP was calculated from price ratios of exactly the same comparable items. The category PPPs were then weighted, either as if the primary interest was to treat all prices as having the same international significance irrespective of their provenance, or as if it was important to weight each set of prices belonging to a group of similar products by their respective importance in terms of their total transaction value. This latter approach ‘biases’ the

international price level closer towards the price structures of the larger, richer countries.

From the point of view of estimating comparative well-being between countries, it would seem desirable, *prima facie*, to compare the prices of goods that satisfy a similar need (defined by the value of the outlays on that product) and are nationally representative in the respective countries. It also seems relevant, if absolute well-being is the aim, to weight such price ratios according to their value within a country as well as between countries, that is, to apply a Geary-Khamis aggregation formula. This would accord with some notion of Pareto optimality but would hardly be relevant to securing greater relative well-being, particularly for the poor.

In the case of the US, additional econometric studies have to be carried out on the price data to produce inter-area national comparisons [Moulton et al., 1999]. For small countries, dominantly rural or city-states, the need for inter-area price level differences is mostly irrelevant and not required for policy purposes. But a similar question is encountered if there is an intention to measure the impact of prices on households possessing different socio-economic characteristics [Hobun and Lagakos, 2005]. The design of the CPI and its operating system has implications for such calculations as well as for international comparisons because it may also restrict how far the estimation of the product substitution effects assumed to take place, actually do so as hypothesized.

Nevertheless, it is useful to point out that there is more possibility to integrate and harmonise the needs of an ICP exercise with an existing CPI if the price index is of a conventional base weighted design that is compiled on the basis of the collection of prices for the same uniform product across all outlets. Furthermore, the traditional CPI focus on 'representative' products need not be a drawback if new methodologies that identify sub-groups of countries possessing common characteristics related to distinct sub-strata within a given region and that price similar but not necessarily identical products, is adopted. (See ADB Evaluation Report on the 2005 ICP for the Asia and Pacific Region, January 2008). The methodology requires not the usual PPP method that calculates the price ratios of exactly comparable products, but the calculation of price ratios for equally representative products. That is, it computes price ratios of items that satisfy the same use and need ('utility'). If this procedure could be adopted, then it would generate not only comparable measures of differences in living costs but also better measures of the differentials between living standards.

#### **4. Some aspects of different price indexes**

The COLI adjustments to the CPI that have been advocated by the Boskin Committee significantly lower (compared with existing measures) the reported rate of consumer price increase and the perceived strength of inflationary forces embedded in GDP (11). The result is that growth, defined as output measured at constant prices, will be shown as proportionately higher and yet there could be a mis-match between estimates of 'true' quality adjusted output and actually recorded production.

As far as the purchase of services is concerned, there is a very real possibility that trading down to gain the benefit of lower prices will mean having to accept a downgrade in 'quality' in the form of a personally inconvenient time of day, day of the week or similar seasonal restrictions (as in most surface and air travel, communications, utilities use and maintenance services, etc). These restrictions and regulations limit the availability or use of certain services and access to them at a lower cost thus reducing general well-being.

The decline in the quality of purchased service delivery that makes up a large and growing part of consumer spending, have so far been ignored in index number adjustments. Partly this is because statisticians have argued inferior service is difficult to identify and thus quantify in a consistent and robust manner. But, in principle, this is no more difficult to assess than a quality change in a hi-tech product. In practice, the latter is determined as an improved capital service flow but, in reality, the improvement may mainly represent an enhancement of potential capacity. In this case it will not then automatically translate into an equivalent increase in actual individual utility derived from its use. Examples of deterioration in service quality, variously measured in terms of consumer dissatisfaction, delays, unfulfilled orders, inconvenience interrupted service delivery and failed service pledges, can be found in all forms of transport, public communications facilities, the mail service, utility services, banking, even in education and health delivery, especially where provided by the state (15).

The Boskin Report's criticisms concentrated specifically on the monthly CPI produced by the BLS. This index was unique among the existing family of household expenditure based price indexes globally extant because its radical design focused directly on the measurement of the relative changes, per se, in prices of specific products, rather than on movements in the average aggregate price. Indeed, perhaps, too little

acknowledgement has been made of the highly innovative nature of the BLS index and its conceptual ingenuity (5), (6)

Regular updating of any price index system with a whole new set of weights and items and then re-pricing and re-basing them continues to be a major resource intensive exercise. It represents a big strain on most statistical bureau's annual budgets and requires the data back-up of a continuous household income and expenditure survey to remain current. This may be one reason for countries wishing to adhere to a conventional base-weighted price index measure that, in a slow growth, low income and non-dynamic socio-economic environment, is quite acceptable.

In respect of aggregation, there is a greater sense now that the appropriate criterion for selecting average household (or individual) outlays to serve as index weights should be the median or mode rather than the aggregate mean expenditure. The moral imperative to move in this direction (that is towards a 'democratic' and away from a 'plutocratic' index construction) and thereby avoid the distortion created by the underlying skewness of the distribution of expenditures is now buttressed by a technical rationale. A weighting pattern constructed from the aggregation of individual household expenditure shares rather than the calculation of average total expenditure shares constitutes a significant element of the difference between a COLI and a CPI because it recognises individual propensities and the possibilities of substitution.

Do any of the current official index numbers reflect the true phenomena of inflation or the changing cost of living as they affect peoples' lives and hence their well-being? With existing measures, it is difficult to tell. But there are several pertinent related factors indicating that, in both the US and UK, the present CPI construct understates the degree of price change as it impacts on people in general. For one thing, household consumer debt and, particularly, credit card debt is, historically, at an all time high while the level of readily accessible savings, not surprisingly, is at a record low. Through interest rates and other monetary and fiscal measures (such as tax reductions on incomes of the richest in the US), households have been increasingly persuaded by government policy to maintain high rates of consumption. In so doing, they were also being asked implicitly to run the risky course of mortgaging their future by securing consumption loans against their basic fixed assets that, in the case of property, they mostly did not own. Households have found themselves forced into this position because they cannot delve into their more fungible asset reserves and savings without incurring heavy financial loss and service charges on top of punitive transfer penalties.

## 5. Closing reflections

One well-known writer and observer of US policy (Krugman, 2006) has pointed out that, in some crucial policy areas, decision makers were groping their way through the ‘dark matter’ of economics. This situation arises because issues like inflation, the cost of living or the balance of invisible trade are complex phenomena that are difficult to identify. But, having urged the public to believe more in the sanctity and neutrality of official numbers than in the rhetoric of ideological propaganda, it has become that more difficult for analysts to persuade the public not to treat all official figures as gospel. Most professional analysts are well aware that many published estimates are subject to some element of informed judgement. They also contain a not insignificant amount of educated guesswork. Inevitably, in such a politically sensitive area as inflation or the cost of living, the statistics can also be subject to selective official interpretation when disseminated.

Nevertheless, the apparent ‘stealth’ involved in currency monetisation automatically leading to a depreciation in the nominal value of the money unit makes ordinary people far more aware that there is, fundamentally, no distinction between inflation and a general tax on their incomes. The well-being of the society is, consequently, placed under direct attack. In particular, for those living on the margins of subsistence with minimal income and little or no room for manoeuvre in their daily way of life, no line can be drawn between inflation, a rise in the cost of living and a fall in their standard of living. When inflation is driven specifically by substantial price increases in priority energy and food items, especially in staple products, this bites significantly into household well-being as choice is restricted and people cut back on all their expenditures.

The importance of keeping the nomenclature and definitions clear cannot be over-emphasized. In the UK, confusion exists among many observers over what the traditional retail price index and the new CPI are supposed to measure and little public understanding of what each index does not measure. After the official announcement in December 2003 to switch, at the beginning of 2004, to a new index that would henceforth be used to track inflation, the government substituted the new CPI, an index that excludes housing costs, for the RPI, the index that had been traditionally used to define monthly inflation. The CPI, effectively, replaced the RPIX, the existing RPI adjusted to exclude the cost of mortgage repayments – that, for middle class households, represented around 40% of their regular monthly outlays. By so doing the UK implemented, as the primary

indicator of domestic inflation, the new Harmonised Index of Consumer Prices, an index constructed according to a set of guidelines and binding legal requirements established under EU regulation. Thus, although it has the merit of providing comparable measures of price change across all EU states, it has diminished application to UK inflation.

Getting the policy right matters and getting the right price index matters to policy. There is a need (that cannot be properly addressed in the present article) to re-examine the meaning and relevance of some, often mis-named, derivatives of conventional price index numbers, some of which are being increasingly used to inform certain policies. Among these are the ‘core’ and harmonised price indexes (already referred to) that, in one way or another, exclude selected items from their calibration. For example, a core price index removes extreme and volatile prices from any consideration, leaving a kernel of relatively stable items that lie at the centre of the distribution of price change. A core index will thus tend to leave out fuel and energy prices and certain food items like fruit and vegetables that fluctuate seasonally. The index is by no means indicative of the primary components that are inter-connected with, and help drive up, all prices. By construction, in fact, a core index will rise slower than the conventional aggregate price index, not least because the distribution of monthly price change is not normal but positively skewed.

All price indicators convey a strong political content and so there is a need for greater clarity in terms of both their intended and potential policy application and basic measurement objectives. In a number of countries, the process of index compilation is becoming more opaque and ambiguous. Official approaches have paid too little attention to the way increasing inequality, statutory obligations, legal requirements, local religious constraints and the changing social and demographic structure of society can affect a wide range of personal spending priorities, sometimes reducing choice and restricting desired product access, and affecting personal well-being. Most of these factors are not picked up in the recorded outlays found in conventional surveys nor are they found in the aggregate methods of calculating average household expenditure over time.

The paper concludes with a general plea for greater authenticity, honesty and integrity in the construction of price index numbers. This implies governments engaging in more participatory discussion and public debate on what price indexes measure, what else needs to be measured and how indexes should be compiled to respond more relevantly to specific social and economic concerns.

## Footnotes

1. The regular, sometimes fortnightly, 'Social Weather Stations' self-assessment surveys on such matters as poverty, hunger, political contentment that are carried out in the Philippines using a standard panel of respondent are good examples of this approach. The latest study [August 2008] indicated that 62% of the population felt they had experienced a significant decline in their well-being over the past year.
2. The total size of the 'cake' and how it rises matter to leading policy officials such as the Chairman of the US Federal Reserve, the UK Chancellor of the Exchequer, the Managing Director of the IMF and the Governor of the European Central Bank. They pay particular attention to the phenomenon of inflation but have chosen different ways to define it. Thus, it is not unknown for some of them to have declared – before the current financial crisis - that 'the economy is experiencing steady growth and stable prices' or that 'growth has been stronger than expected but inflation has been kept in check'. Such statements are mostly tautologies. The reported phenomenon arises simply from how growth, as a statistical artefact, is estimated using current GDP measures and corresponding indices of price change.
3. Priority household spending on goods and services essential to sustain the family's well-being and maintain a consistent income earning capacity, squeezes all other outlays when their prices rise
4. The complex design of the US CPI with its comprehensive coverage of a multiplicity of item prices and outlets across the whole country turned out to be its Achilles heel. The effort to maintain price change purity remains time and resource consuming. The index is difficult to manage and expensive to conduct. It also contains an irreducible judgemental component in the choice of items at the outlet level. Despite guidelines, this potentially allows too much individual discretion in the selection of items and too little flexibility on when a given item in the index should be replaced. For all the depth and extent of coverage, the index cannot provide estimates of price level differences between towns and regions in the US.
5. Little recognition is given to John Earley of the BLS and the significant part he played in devising the methodology of the BLS index. The US CPI is a probability based location specific, point of purchase, item priced index that identifies what people tend to buy in those outlets where most carry out their shopping, as determined in the baseline survey.
6. The US CPI investigated by the Boskin Committee during 1995-6 was significantly out of date, having been re-based on January 1987 using household survey expenditures relating to the period 1882-4. It is not clear as to the extent or the speed with which outlets were switched with changed shopping and spending habits over this period and whether such phenomena were captured in a timely way by the CPI methodology
7. In the UK, the recent Turner Report on pension reform came down clearly on the side of indexing benefits to keep abreast of the changing lifestyles enjoyed by society in general and not to tie them to the changing cost of maintaining a static standard of living, a process that makes pensioners progressively poorer over time compared with the rest of the community. If such action should require raising taxes on those with higher incomes, this might not be bad for social well-being if it were to cut marginal expenditures on less important



- items, curb excessive consumerism, and boost economic stability as well as environmental sustainability. It is worth reasserting that if a government owes any duty to society it is primarily to the sick, old, poor and vulnerable
8. Usually, when people refer to their 'high' cost of living, what they mean is how expensive it has become to make ends meet each spending period. It is not specifically a prices issue but a household outlay matter. Every household's cost of living is affected not only by underlying prices but also personal obligations and prevailing social conditions. The cost of living is a relative concept that can be placed within a broader time dimension and specific social and community context. This will reflect the overall economic conditions, institutional and cultural characteristics, and the societal inter-relationships in which a household finds itself. In this respect, individuals understand their cost of living not just in terms of how well they seem to be coping compared with some previous period, but also how well they stand in relation to the way they perceive others are able to sustain a particular lifestyle.
  9. The 1834 Poor Law Reform Act in Great Britain was a much earlier example of official action to devise a norm, defined in terms of a minimum eligibility standard in respect of a person's basic food requirements, to determine the 'cost' of living in as frugal a way as possible.
  10. Bloomberg reported earlier this year that customer service at US airlines was the worst it had been for five years, according to an index of consumer satisfaction. The poorest performance and persistent low rankings were to be found in three of the largest operators who accounted for a large share of the passenger market, *International Herald Tribune*, 17 May 2006. Not to be outdone, the introduction of the new network timetables heralded by the UK National Rail service in January 2006 that accompanied yet another annual increase in fares well above both the official 'inflation' target and the observed increase in prices, showed that even on certain blue ribbon mainline routes, the point to point service was no faster than what it had been in the 1930's. In addition, new data on delays and cancellations of services, as well as on overcrowding, revealed little improvement in service provision,
  11. Despite an already very low rate of price change in Japan, changes in the methodology for the headline consumer price index introduced in August 2006 were expected to shave 0.3 points off the current CPI (*Financial Times*, 18 May 2006). This would lead to a small but anxiously awaited apparent increase in Japan's sluggish growth.

## References

[To be supplied]

Michael Ward, Cambridge, 10 August 2008

