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EDITORIAL

Purchasing power of income is a subject that interests all of us, occupying a key place in the economic debate and negotiations between employers and employees and involving a comparison of trends between income and prices.

The following report focuses on price indexes and the measurement of purchasing power.

The French, generally speaking more than their European neighbours, perceive inflation to be greater than price increases reported by official indexes.

Indexes of disaggregated prices, calculated by category of households, can provide a useful supplement to the general index. From the perspective of cost of living, rather than inflation itself, the authors have presented concrete proposals to enrich the indexes including taking better into account health costs, incorporating housing costs, a greater consideration of the de quality effect, a clarification of the cost of 'necessities' ... The report proposes that the consumer price index be supplemented by average price indexes and indexes based on major functions of satisfying needs.

Christian de Boissieu
Executive Chairman of the CAE

Measuring Purchasing Power

Report by Philippe Moati and Robert Rochefort

A significant and persistent divergence has developed over recent years in France between purchasing power trends portrayed by official figures and the perception of households. As a subject ranking among the primary preoccupations of the French, it is urgent and essential to understand the reasons for this divergence between 'measured' and 'perceived'. This is the focus of the last report of the French Council of Economic Analysis (Conseil d'Analyse Economique or CAE) that distinguishes the consequences of a perceptual bias from those attributable to limitations of measurement conventions, aggregation processes and new consumer and distribution practices that increasingly complicate the measurement of price trends.

Based on their analysis, Philippe Moati and Robert Rochefort propose adjustments to measuring methods and the creation of additional indicators to evaluate the cost of living, and even well-being.

This report was discussed in the presence of Christine Lagarde, the French Minister of the Economy, Finance and Employment on October 18, 2007. This summary presents the main conclusions of the authors' report.

Measured versus perceived: presentation of the problematic and issues

When the INSEE announces a 2.3% increase in purchasing power of household income for 2006 (3.2% forecasted for 2007), slightly more than two thirds of the French public considers in contrast that purchasing power declined. This discordance between the official measurement of purchasing power and the perception of households is based on a threefold problematic:

- Official statistics indicate sustained growth in purchasing power over the long term, including in recent years. However since 2001, perceived inflation has exceeded measured inflation. As a result most households are sceptical about these figures. This scepticism

is strengthened by other data (BIPE, INC) that differ from these official statistics;

- Purchasing power is undoubtedly rising, though clearly at a slower pace over 2003, 2004 and 2005, highlighting a new economic situation in relation to preceding years and long-term trends;
- Studies on consumption recently carried out by the CRÉDOC notably highlight the discontent of households wishing to consume more.

To restore confidence in indicators, it is necessary to explain the origins of this divergence between perceived and measured purchasing power and to improve the indicators of measurement. Different explanations are analyzed and most importantly a misperception of the true situation by households.

Different factors contributing to the perceptual bias

While purchasing power is the product of a confrontation between income and price increase trends, there is a tendency to focus on the second rather than the first. In France, accustomed to modest salary increases and in recent years wage stagnation (particularly following the adoption of the 35 hour workweek in France), employees tend to expect this to be accompanied by a comparable stability in price levels. This contributes to hypersensitivity to any price increases even when they are low.

Evidently, the adoption of the euro that profoundly altered price references was a major upheaval. However, price increases associated with the switch to the new currency contributed to a focus on mass retail products (notably foodstuffs) and certain services (cafés, restaurants) in a manner virtually concomitant with the full inflationary consequences of the Galland law and the resulting increase in the hourly cost of labour following the implementation of the 35-hour workweek.

The authors also highlight other structural changes such as the general extension of promotions and low-cost marketing to all categories of goods and services and even the advent of 'free' goods and services in certain sectors. These changes have rendered indicators concerning the quality/price ratio less legible. As a result, the 'reality' of prices applied in traditional distribution channels are called into question.

The perceptual bias also concerns measurement of income. For example, households tend not to include revenue from their savings when measuring their income. Instead such revenue is strictly equated with a simple and natural appreciation of investments. More fundamentally, when remuneration of labour varies from one year to another and is distributed in irregularly over a year, consumers tend to underestimate income. This might contribute to lowering the estimate of their 'permanent income'

and in line with economic theory, reduce their consumption. In fact, this has not at all been the case. Rather we have seen an increase in the consumer appetite of households, largely associated with the development of new goods and services in the NICT sector.

In effect, while economists define purchasing power as the quantity of goods and services that can be purchased with disposable income (whereby when income growth outpaces growth in prices, purchasing power increases), the man in the street in contrast considers that his 'purchasing power' represents 'his' ability to purchase goods and services considered standard consumer items of the moment. However, in the last decade, the appearance of new goods and services as well as new types of lifestyles and consumption have led to the creation of additional costs and affected income. This increase in the consumer appetite in an environment marked by weak growth in purchasing power, feeding a sentiment of frustration, has very likely significantly contributed to a perceptual bias among households concerning trends about their standard of living.

Finally, other perceptual biases also result from the failure of consumers to fully take into account improvements in the quality of goods and services acquired. These latter are justly considered by economists as an increase in the volume of consumption that they *a priori* not actually perceive.

Understanding and reducing the effects of aggregation

A second explanation for the divergence between perceived and measured purchasing power is that neither the statistics nor the households are incorrect but rather the statistics simply provide macroeconomic data whereas households naturally are inclined to base perceptions from their individual perspectives.

For the general public to consider that public indexes reflect reality, transition tables must be produced that reconcile the actual situation experienced by

households with the average or global situation. Firstly, the authors recommend that the growth rate of household income be deflated by the growth rate of the general population, or even better by the number of households or even the number of individual consumption units to properly reflect the smaller size of households. In an environment where overall purchasing power has increased only 1% to 3% in recent years, it can be shown in this way that on an average or individual basis purchasing power has virtually stagnated.

However, more significantly, how should define average? Trends for growth in income are unequal. In the last few years, earned income has increased at a significantly slower pace than property income while individual increases in earned income have been very unequal. Households are also not equal in respect to exposure to inflation. Depending on the specific structure of their spending, they are more or less exposed to the price trends that are reflected by the inflation rate but in reality which vary considerably according to the individual product category. The creation of category-specific indexes by the INSEE was a good initiative though they are too numerous and based on conventional statistical-administrative criteria that do not always reflect in any meaningful way concrete situations. The authors recommend establishing standard profiles: single-parent families, young adults, retired persons, new homeowners, precarious workers, persons living alone... Beyond a description of these situations, these indicators should guide the focus of social welfare policies. This could also be based on data drawn from consumer panels to evaluate trends for purchasing power of the income of these standard profiles or selected social categories.

Measuring 'cost of living trends'

A third area of reflection involves a fundamental question. Do methods used to measure price movements result in an erroneous

evaluation of purchasing power trends or at the least a measurement that does not correspond to the perception of households of the cost of living? The strict objective of the consumer price index (CPI) providing the basis for determining the denominator to calculate purchasing power is simple and clear: measure inflation. This is especially necessary for indexations provided for in many contracts to protect parties against the consequences of the depreciating currency though this is far from sufficient to accurately reflect the cost of living.

Convergence of the CPI and the HICP

There exists a Harmonised Index of Consumer Prices (HICP) in the European Community. This HICP index is slightly different from the published CPI, and in certain respects, one might wish the second to be closer to the first. For example, by not including prices applied in the sector of public hospitals or retaining gross prices for other health costs whereas the HICP uses net prices, (i.e. after eliminating health insurance benefits), the CPI minimises increases in costs borne by consumers in a period marked by decreasing levels of reimbursement.

Taking housing into account in an expanded price index

It is recognised in national accounting that the acquisition of housing represents an act of investment and not consumption. Despite this, it cannot be ignored that property inflation further increases the cost of living for those who decide to become property owners today in relation to their predecessors five or ten years ago. It is for this reason essential that the CPI be supplemented by an 'expanded' index that includes housing, even if this exercise is complicated. Harmonization with other European countries is also advisable.

More rigorously defining 'cost of necessities'

Recent work concerning the treatment of costs of necessities has resulted in a measurement of purchasing power of 'disposable income' more in line with the

perception of households. This work has moreover provided additional insight on purchasing power trends by social categories where the weight of costs of necessities increase as household budgets are lower. However, to date, the definition of ‘costs of necessities’ remains ambiguous notably because of an amalgamation between expenses resulting from evolving standards of consumption and expenses associated with the assumption of contractual commitments that are not easily reversed on a within a short-term timeframe. Defining the notion of the costs of necessities consequently constitutes a prerequisite for estimating the purchasing power of disposal income by INSEE.

Better taking into account improvements in quality

For the economist, quality is one of the components of consumption volume along with quantity, and in consequence does not affect the calculation of inflation. Frequently changes in standard of living involve integrating new products in the CPI when the corresponding purchases become significant whereas others are no longer included in the sample for the calculation. In this respect, several techniques exist to measure changes in the level of quality between products and eliminate their impact on the CPI. For the INSEE, if a flat TV screen is on average more expensive than a CRT screen, it no longer represents the same product and consequently, the switch from one of these references to the next increases the volume of consumption, though not the price. In addition, the price of television sets in the CPI is constantly declining as each reference taken by itself has experienced a drop in price. And yet while recognising over time that the quality of these items has improved, the consumer nevertheless considers that they have become more expensive.

As the renewal of the offering of retail items available on the market accelerates, measuring quality and change is complicated. How can subjectivity be avoided when

distinguishing between a real improvement in the quality of the product from a pure marketing effect? How should one measure gains in the quality of services such as for example through hotlines? Ultimately it is likely that these regular improvements in quality are not fully taken into account in the index. This was one of the results of the Boskin report that considered inflation overvalued by American statistics. However, at the same time, improvements in quality are frequently forced on consumers as new products push out their predecessors or as new standards of quality are adapted as consumer standards. Accordingly, for the consumer, the cost of satisfying its needs (‘cost of living’) increases much faster than the CPI indicates.

Measuring the impact of distribution practices

New distribution and consumer practices complicate the measurement of price trends. How should one correctly factor in promotional practices that grant indirect, deferred or even individual rebates (customer loyalty programs)? How should one strictly separate prices and volumes on which the CPI is based in light of commercial offerings in the form bundled or flat rates services? At present satisfactory responses to these questions do not exist.

Creating additional indexes

Concerning the CPI, it is not possible to affirm that there is a significant bias in measurement in one way or another. To better meet the current demands of the public, indexes should be developed to supplement the CPI. Philippe Moati and Robert Rochefort propose two potential areas in this respect and explain the logic of this objective:

- An ‘average price index’ would involve tracking trends of average prices weighted by market shares, for various articles and models of a single generic product. This would involve identifying the cost for households to satisfy a need for a certain product, taking into account evolving consumer standards as indicated by chan-

ges in the sharing of the market between substitutable items;

- Another approach would measure trends of the cost of satisfying needs by moving from tracking a larger selection of specific goods and services as with the CPI to a narrower definition of functions (communication, heating, travel...). This involves measuring the cost of living not on the basis of inputs as with the CPI but outcomes. This type of approach focuses more on a service-based consumer society where there no longer exists a clear-cut division between goods and services but rather a mix of goods and services or packages destined to meet the full needs of a customer.

From purchasing power to quality of life and well-being

The macroeconomic measurement of purchasing power and the CPI refer to objectives that have been taken into account in developing these indicators such as an image of the economic system that prevailed during the post-war Fordist era and the 30-year boom. These indicators conflict with today’s economic and social reality that has considerably evolved in response to:

- The central role of innovation that has accelerated the pace of product renewal;
- A service-based economy where the weight of services in household spending increases yearly (introducing daunting theoretical and methodological challenges for measuring prices) and pushing providers to broaden their offering of standard products by proposing customised ‘solutions’ through bundled contractual packages moving well beyond ordinary commercial exchanges;
- The increasing complexity of social stratification accompanied by a growing heterogeneity of the economic and personal trajectories of individuals.

In response to the crisis of confidence in economic indicators, measures must be undertaken to adapt them (along with the underlying representations) to the fundamental characteristics of

today’s economic and social landscape. This reassessment of indicators may be extended even to a discussion of the role the measurement of purchasing power has in steering the economy and public debate. The importance of this role is largely a consequence of the overly rapid conflation, by both economists and the general public, between purchasing power and the standard of living and even the quality of life.

The authors suggest that the opinions of households concerning power trends in reality reflect an overall general sentiment of a decline in the quality of life (well-being) taking into account the convergence of factors as varied as the increase in global risks, job insecurity and stress, concerns about the health and environmental consequences of our lifestyles, and the absence of visibility about the future, etc. For this reason focus should be devoted to developing indicators for quality of life and well-being drawing on the work of the socio-economics of happiness that better reflect the actual perception of individuals and provide new tools in public decision-making than the sole indicators currently available.

Comments

Gilbert Cette opened by emphasising the considerable quality of the analysis of the average level of prices by the INSEE. He also noted that taking into account the diversity of situations in respect to the cost of living and purchasing power must not replace an evaluation of average situations. This was followed by six additional observations:

- Concerning the disconnect between perceived and measured inflation, Gilbert Cette insisted on an inevitable degree of subjectivity when comparing the mass of opinions on price trends with a statistical measurement. Moreover, this disconnect is not limited to France or the euro area;
- The persistence of the disconnect in France and Spain can be explained by the loss of standard references concerning price trends, notably in response to the complexity of the conversion ra-

tes in these countries, as well as price trends for certain basic consumer goods driven by the strong growth of the minimum wages since 2000;

- The impact of this disconnect on growth and macro-economic stability through the behavior of consumers and the determination of salaries has not been confirmed by recent studies;

- The index for the level of average prices as a reference for indexation for a wide range of incomes occupies a critical role in economic policy. Thus, considerable caution must be exercised considering any innovation in this area;

- A 'consensual definition' of the costs of necessities implies from the outset the adoption of standards by their very nature open to dispute that the INSEE should avoid;

- Finally the real question concerns the contrast between the relatively robust growth of average wages (approximately 3% per year since 2002) and the sentiment shared by many employees of weak growth in purchasing power in recent years. According to Gilbert Cette, those employees close to the minimum wage that represent less than 20% of total wage bill have captured nearly half the increase in the purchasing power of the average salary.

The comments of **Jacques Delpla** covered four points:

- The first exculpated the role of the INSEE in respect to the current unease about purchasing power that is rather a structural consequence of the insufficiencies of reforms of the labour market combined

with significant increases in the cost of oil and other basic commodities;

- Secondly, current criticisms of the CPI of the INSEE are the result of a perceptual bias and the lack of understanding about how the quality effect is taken into account. In this respect, Jacques Delpla does not support the proposal for additional indicators to supplement the CPI. They would render the existing references even further difficult to interpret;

- Thirdly, calling into question the CPI and creating additional indexes evaluating a higher degree of inflation could adversely affect the financing of a portion of the public debt by means of treasury bonds indexed on the CPI;

- Finally, to ensure the credibility of the INSEE, the government should confer upon it an independent legal status accompanied by greater transparency, freedom of means, improved governance and the possibility for competitive tendering procedures.

Gilles Saint-Paul began by noting the informative and pedagogical contributions of the report on the construction of the CPI and purchasing power trends. In this respect, he noted that while the use of CPI could contribute to an imperfect estimation of the growth in purchasing power, it nevertheless provided a very clear indication of trends, except in the case of 'forced' expenditures where a price increase would require a reduction in the consumption of other items. This is for example the case with the more restrictive regulatory requirements imposed on construction resulting in an increase in costs. Finally, Gilles Saint-Paul addressed the excessively low weighting of rental expenditures in the CPI (6%) in relation to reality and calculated how the CPI would have evolved between 2000 and 2006 if the weighting of this component was more

reasonable (25%). On this basis, he noted that purchasing power would have been reduced by 1.7 points over this period. Finally, the use of direct indicators of well-being for economic policy is questioned. In effect, consideration of the economy of happiness calls into question the notion of revealed preference included in real GDP: transactions in the market that are objective do no longer measure necessarily either utility or happiness that is subjective. On this basis, is economic policy capable of modifying this subjectivity to increase happiness? Gilles Saint-Paul is convinced that the well-being of individuals must be based on voluntarily and freely made choices rather than states of mind in order to preserve freedom and individual responsibility.