

If Governments Are Really Serious About Sustainable Growth, Why Do They Not Put “Human Beings” Back Into The Limelight of Growth?

Paolo Roberti¹
Istat (paolo.roberti@istat.it)

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Introduction

In the early 1930s, at the dawn of the macroeconomic revolution, macro and micro analytical frameworks were deemed natural complements, not parts of different puzzles. Indeed, the distribution of income by size was an essential adjunct of national income estimates or, as observed by Kuznets², the latter would not throw any light on the welfare of a nation. Before long, however, and unexpectedly, factor and personal distributions were “disconnected”. As a result, they moved apart and advanced along different pathways. So have national aggregates and personal income distribution statistics. The former burgeoned straight away, the latter withered. For long, “faceless averages” have taken the place of individuals, as if macroeconomics and economic statistics did not need “to show” the human beings concealed behind them, and their “faces”.

Distributive analysis has resumed its momentum only after the 1980s. As yet, however, macro aggregates have not been re-connected to individuals (and indeed firms), though the demand for looking beyond and “inside” macro frames and aggregates has grown systematically, boosted by

- the changing vision of development, which has taken on new and multiple dimensions;
- the new geo-economy and increasing internationalisation and globalisation of economic activities;
- the growing interest for research on the “drivers” of growth;
- policy analysis and the need to support decisions with “evidence”, not judgements.

Nor has growth delivered on all its promises. It has produced welfares, but also diswelfares which have benefited average and upper income groups or been disproportionately borne by weaker groups, respectively. Inequality has not disappeared, neither has poverty. In the wake of these trends, the tellers of the then in vogue romance of economic growth that would bring affluence to all and take care of every problem have had to retract and admit that growth with equity (i) is but one of the possible outcomes, and not even the most likely; and (ii) does not just happen, but has to be pro-actively nurtured with the right policies.

A corollary of these developments is a remarkable change in the focus of economic analysis. On the one hand, the supremacy of income growth has been challenged and has significantly lessened ever since. On the other hand, conflicts between faster growth and greater equality —a source of sterile debates in the 1980s and 1990s— are acknowledged. They are no longer mulled over, though, as inevitably conflicting goals, as borne out by plentiful evidence from recent economic history. Nowadays, encouraging sustainable growth and ensuring equity rank together as two of the most important economic policy objectives³ in the foreseeable future. The challenge is in the choice of a consistent policy mix.

On the surface of it, the toolkit which is available to shape policies to promote growth without damaging equity is apparently rich. In fact, it is not. Complex intricacies and a host of socio-economic and political factors, including the need to tailor policies to problems, hamper the task of policymakers and restrict the set of possible choices. Amazingly, there are no *silver* or *magic* bullets⁴ distilled from the theory and policy realms that serve to provide guidance, nor policies that

² Kuznets S. (1933) pp. 34.

³ Another key policy objective is environmental sustainability, which is not discussed here.

⁴ Ranis G. (2004) and Baily M.N. et al (1993), Ch. 1.

can be exported from one country to another with a guarantee of success. From the analytic standpoint, major drawbacks relate to:

- The limitations of existing theory, spawned by the uncoupling of factor and personal income distributions which have thwarted the analysis on the (i) basic conditions and links between trends in growth and inequality; (ii) drivers behind observed trends; and (iii) impact of the policy choices made in the past;
- The inadequacy of the available statistical information, which continues to deter the effort of reconciling aggregates and personal individualized data;
- The lack of a comprehensive production-distribution-environmental-policy framework, which is required to link up the different parts of the picture and make policy recommendations with adequate knowledge and confidence (though there have been some attempts such as social accounting matrices⁵).

Against this background, Bourguignon⁶ has suggested that for the purposes of development policy the adoption of a three-dimensional poverty (*the goal*), growth (*the means*) and inequality (*the driver*) reference framework or PGI-Triangle may prove convenient. His suggestion stems from a vision of growth in which the real challenge “lies in the interactions between distribution and growth, and not in the relationship between poverty and growth on the one hand and poverty and inequality on the other”, since – he maintains – the latter are essentially arithmetic. At the outset, Bourguignon’s proposition is captivating. Upon closer scrutiny, however, it no longer looks as promising as it does in the beginning. First, PGI complexities appear to be underestimated. Second, the answers to development questions that come from the theory (and empirical evidence) on the relationship between the factor and personal distributions of income are far less definite than implied by the PGI Triangle. Finally, processes (i.e. production and distribution) and outcomes (i.e. growth, inequality and poverty) appear to be lumped all together.

Stimulated by Bourguignon’s thought-provoking article, this paper proposes a novel approach to the assessment of PGI performance. The perspective is tri-dimensional and multi-layered. Growth is appraised by means of standard aggregate indicators complemented with a distributive chart that allows us to gauge how poor and non-poor fare, and whether “distances” among groups shrink or widen. Similar frameworks can be developed to evaluate other policies for which the distributive dimension is deemed to be a critical feature (e.g. tax incidence).

The paper is in four parts. The first discusses Bourguignon’s PGI-Triangle framework. The second, examines its possible limitations and, in particular, what the triangle may hide “under the carpet”. The third, looks at growth, distribution and poverty and what they portend, that is distinct processes, as in Bourguignon’s triangle, or “joint outputs” triggered by the same drivers and viewed from different perspectives, as in this paper. Finally, a multilevel and multidimensional framework for appraising progress towards the goal of sustainable growth is put forward in part four, together with a “*quadrant*” that permits the switching of the focus from income to national welfare and gauging aggregate changes in growth, inequality and poverty, side by side with the gains and losses of different income groups.

⁵ One notable exception is constituted by SAMs, i.e conceptual analytical frameworks for examining growth and distributional issues, which represent a snapshot of the circular flows (from production to income payments to factors of production and to households) that take place in a given year. The picture they provide for households suffers, however, because of poor disaggregation. See, among others, Round J. (2003).

⁶ Bourguignon F., (2004).

1. Development Strategies and the Poverty-Growth-Inequality Conundrum: Does the PGI-Triangle Really Help to Clarify the Issues?

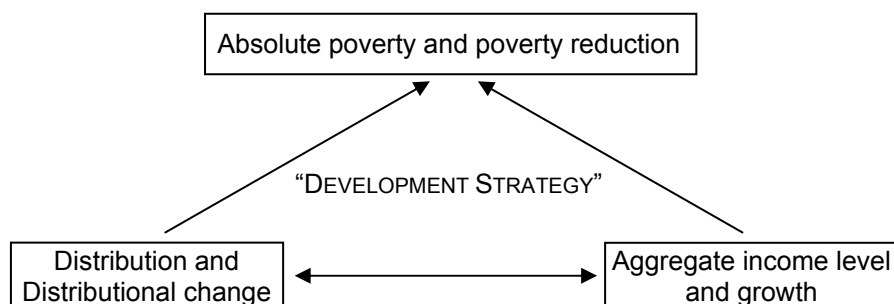
In a recent article on formulating development strategies and determining whether the focus should be placed on growth, poverty and/or inequality, Bourguignon has maintained that the answer can be simply expressed in two statements:

- “..the rapid elimination of absolute poverty, under all forms, is a meaningful goal for development”;

- “..to achieve the goal of rapidly reducing absolute poverty requires strong, country-specific combinations of growth and distribution policies...An arithmetic identity links growth of the mean income in a given population, with the change in distribution – or in ‘relative’ incomes – and the reduction of absolute poverty...Poverty reduction in a given country and at a given point of time is fully determined by the rate of growth of the mean income of the population and the change in the distribution of income”⁷.

On this basis, he upholds that development strategies can be illustrated by a *Poverty-Growth-Inequality Triangle*, since (i) “they are fully determined by the rate of growth and distributional changes”; and (ii) “..poverty is a function of aggregate growth and income distribution and may therefore change as a result of income growth and/or distributional changes” (see Diagram 1).

DIAGRAM 1: BOURGUIGNON’S POVERTY-GROWTH-INEQUALITY (PGI) TRIANGLE



Although, both growth and distribution are recognized to be important for poverty reduction, Bourguignon contends that growth is more important and matters twice because it:

- Lifts the standard of living, and by thus doing causes a fall in absolute poverty.
- Impacts on the structure of the economy and fosters socio-economic and institutional change, with possible modifications in the distribution of income and welfare in favour of the poor and/or lower income groups.
- The PGI-Triangle portrayal of development rests on formal analysis which maintains that changes in poverty between any two periods can be studied with the help of (i) an *identity* in which they are a function of growth, distribution and variations in distribution; and (ii) *growth decomposition analysis*⁸ which allows to distinguish between changes associated to distribution-

⁷ Bourguignon, op. cit., p.1.

⁸ That is, graphic investigation in which the initial income distribution density curve is compared with the new income curve and with a hypothetical curve which shape matches exactly that of the initial curve, but is otherwise shifted to the right and has the same mean of the new curve (e.g. Roberti (1996), p. 2).

neutral horizontal shifts in incomes (or pure income growth effect) and/or variations in the shape of the density curves (or distributional effect).

At first glance, the PGI-Triangle paradigm looks alluring. It seems to provide a simple and novel way to formally re-state and address a classical growth puzzle and policy dilemma which, here, can concisely be subsumed as follows: is there conflict or complementarity between economic and social policy, or between policies for growth and policy for poverty and inequality? This is a long-standing question and challenge in the never ending search for policy-answers (or *silver bullets*) for development policy (and agencies)⁹. Alas, policy practitioners know it too well that answers are not only complex, but that they cannot be given unless the precise policy milieu, objectives and menu of possible options are known. In the case of the PGI-Triangle, however, the issue under discussion does not concern policy *per se* or the tenet “to achieve the goal of rapidly reducing absolute poverty requires strong, country-specific combinations of growth and distribution policies”¹⁰. A positive answer can be assumed on this, to simplify things. The hurdle is whether the PGI-vision can be thought of as a “policy tool” which can help, in practice, to unravel country specific development issues and policy dilemmas.

Bourguignon¹¹ obviously endorses the PGI-Triangle vision of development which, at the very beginning of his paper, he presents as a handy tool for addressing development policy dilemmas. Later on, however, he appears to have doubts, both when he reviews studies on the theoretical and empirical foundations of the asserted two-way relationship between growth and distribution, and when he discusses the scope for redistribution in development. When, however, the question “*What does this imply for policy*” is discussed in the concluding session, two answers are acknowledged. The first, which can be pigeonholed as the “*abridged*”, is found at the very beginning of the concluding session, where it is stated that: “... *At face value these arguments would lead to progressive redistribution of income over some time period which accelerates poverty reduction for given patterns and rates of growth, thereby yielding positive results. If one interprets literally the potentially negative relationship between inequality and growth, then this redistribution policy would enhance growth. It would then be sufficient to have at one’s disposal policy instruments to guarantee that growth is pro-poor.... for a virtuous circle to start and lead progressively to faster growth, declining inequality and accelerated poverty reduction.*”¹²

The second answer, which can be labelled as the “*disenchanted*”, is definitely more realistic, thought-provoking and challenging than the first. It is bewildering as well. The development process which surfaces from it is more complex, subtle and, at the same time, more pragmatic than under the *abridged* PGI-triangle policy vision. In the *disenchanted* variant it is acknowledged that a variety of factors —ranging from history and initial conditions to behaviours, social stratification, the political context, political institutions, redistributive mechanisms, transition processes and so on— are at work all the way through a country’s development process. These can interact in complex and undependable ways, thus making outcomes far from predictable. Ultimately, the picture that emerges is much more twisted and complicated than in the allegedly straightforward *abridged* PGI version. Unlike the latter, it comes forth as more realistic and closer to the real world. At the end of the day, a puzzling doubt lingers unresolved: does the PGI-Triangle actually offer practical principles and guidelines for policy? And, assuming a positive answer, what are they?

⁹ E.g. Ranis (2004).

¹⁰ Bourguignon, op. cit., p.1.

¹¹ The PIG literature has grown very fast spurred by World Bank research on Pro-Poor Growth. See, among others, Essama-Nssah B. (2004), Kraay A. (2004), Klasen(2003) and <http://poverty.worldbank.org/library/subtopic/13409/>.

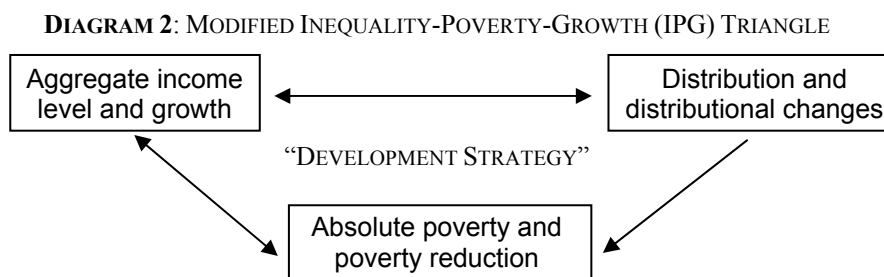
¹² Bourguignon, op.cit., p.19.

In a nutshell, too many “buts” remain unanswered and besiege the *abridged* PGI jigsaw of development policy. Eventually, there appear to be instances in which not all pieces fit together or can be assembled in different ways. The fundamental question, therefore, is whether in spite of these problems it can still be considered a step forward in the right direction. As it is argued below, the doubts surrounding the proposed PGI-Triangle vision do not stem from complexity *per se*; they come from other quarters. First, the *abridged* PGI-Triangle vision hides behind aggregates what actually counts and is crucial for policy. Second, growth, poverty and distribution are all end results. Policy can be prompted by poor end result, but not shaped by them. It has to tackle causes, and be customized to have a bearing on them. Third, growth, distribution and poverty are part and parcel of the same process or problem: the production and distribution of national wealth and their drivers. They do not form a “triangle”. Rather they denote two ends of a continuum, or two sides of an identity, or are cognates. Both subsume a complex web of relationships and activities. Formally, they are described by density curves that can shift (as production/income grows) and modify their shapes (as the distribution of production/income changes). These aspects are discussed in the paragraphs which follow.

2. What the PGI-Triangle Illustrates Looks Alluring, But What It Hides Is Crucial

Triangles have always been captivating. Ostensibly, they look as if the imagery they convey is pretty straightforward. Time and again, however, triangles have been used to inhabit symbols. When this happens, what they foreshadow is not what they stand for. Likewise, their shape makes it extremely easy to “turn them around” and, by thus doing, to convey different ideas. The PGI-Triangle in Diagram 1 is no exception, since it can be easily transformed into an IPG Triangle (see Diagram 2), if it is postulated that “*increasing inequality, by damaging social solidarity, fostering the ‘them’ and ‘us’ mentality, and excluding some from the benefits of growth, damages the long-term health of the economy*”¹³. This is not a new thesis. Beveridge’s fight against “Goliath squalor” was based on a vision of growth propped up by fighting against inequality and squalor¹⁴. In this instance, social policy clearly dominates over economic policy in the fight against poverty.

One additional and more important problem with the PGI-Triangle vision of development relates to what it hides “under the carpet”. That is, a host of human, social, institutional and economic factors –which interrelate in multifarious, complex and changing (over time and space) ways, at different stages, levels and moments in time– which comprise: the role and behaviour of individuals; economic agents and institutions; the functioning of markets and systems of governance; the production process; returns to factors of productions or aggregate factor incomes; the role of the corporate sector and of financial institutions; the distributional impact of the state, and so on.



¹³ Report by the Joseph Rowntree Foundation, (1995), p.36. See also, Baily et al (eds) (1993), pp.4-6.

¹⁴ Beveridge W. H., (1943), especially pp. 33-36.

In this broader socio-economic and institutional milieu, national income is a "summary of the play of economic forces". Depending on the choice of the stage at which the combined effects of the different factors are analysed, the concept of national income may indicate the value of production, distribution, consumption or welfare by means of "aggregates" anchored to categories and groupings of various types (typically referring to income typologies, sources and so on). For some reasons, however, reference to aggregates has eclipsed individuals, with the consequence that the study of the links between growth (appended on nations and sectors), distribution and poverty (appended on individuals and families) has suffered unduly. Individual and family income distribution has developed as a separate subject. Even data have been collected separately, by means of ad hoc surveys (e.g. individual incomes and consumers surveys) or from administrative sources (e.g. tax data). In view of opinions, such as that expressed by Simon Kuznetz in the early 1930s:

*"National income as a whole retains meaning only in so far as the national distribution by size of personal income shows tendencies toward stable patterns. But from any point of view such a frequency distribution is an indispensable complement of national income estimates if these are to throw any light on the welfare of the nation."*¹⁵

The de-link between aggregates and individuals is bewildering. Ex-post, two reasons appear to loom behind the absence of individuals from macro frameworks. The first, is the unwarranted faith in macroeconomic management and steadfast growth which, it was reckoned, would have paved the way to prosperity for all, eradicated poverty, and diminished inequality. The second is expediency, or the use of statistical short-cuts to collect information and estimate national income aggregates, without being bogged down into collecting and maintaining the links with individual data¹⁶.

In the wake of this, economic aggregates thrived with the mounting interest in macro economic research and policy, and focus on equilibrium among macro variables over the medium and long-term. Distributive aspects, instead, were alien to the new macro framework. Interest for them waned and they almost fell into oblivion. In short, increasing demand for factor income data squeezed the demand for personal income statistics. And, since the latter were not needed to estimate factor income, national accounts and personal income statistics were cut apart and de-linked since around the end of the 1930s. Although in opposite directions, the developments behind these outcomes were spurred by the same forces which made the success of macro aggregates: the belief that "what was good for a country was also good for all its citizens". Official statistics followed suite, and for decades paid only lip service to collecting and publishing data on the personal distribution of income.

Much has changed since the 1970s, following renewed interest in the distributional and social implications of development, and passionate debates on the existence of an inverted U-curve. Past under-investment on distributional research and statistics continues, however, to thwart distributive analysis, specifically, on macro-micro links¹⁷. This is witnessed by the inability to answer questions such as those on the distributional effects of economic development and on the combination of conditions and policies that can be associated to different patterns of development. As A.B. Atkinson has put it "*the literature provides valuable insights, but we lack at present an overall framework to relate the different parts of the picture...It is not (even) possible to read straight from*

¹⁵ Kuznets S., *Ibidem.*, p. 34.

¹⁶ Volle M., (1982), pp. 1-10.

¹⁷ See footnote 4.

*changes in the distribution of a single components of income to changes in the overall distribution of income...there are several intervening stages between the two”*¹⁸

In the circumstances, what is hidden behind PGI aggregates –as conventionally measured by GDP growth rates, overall inequality indices and poverty counts– is exactly what governments need to know and understand, if they want to execute, with some reasonable “guarantee of success”, policies which can be expected to be appropriate to steer the process of development along paths which can be deemed to be distributionally-correct or, indeed, sustainable. In the PGI-triangle vision of development an implicit assumption is made that policymakers already know how to master the relationships (sign and magnitude) subsumed by the arrows in diagrams 1 and 2. Regrettably, this is not the case. Behind the PGI-Triangle, a formidable number of “drivers” (that is framework conditions, factors and relationships) is hidden. These are ignored manifestly. The oversimplification which ensues is clearly incoherent and unwarranted, as it implies that the “PGI compass” can be used to generate complementarities that allow to attain PGI objectives concurrently. Empirical analysis, however, has defied this conjecture, as is indeed acknowledged in Bourguignon’s paper. First, it has borne out that policy objectives are not necessarily complementary and, second, that the “*Absolute Wisdom*“ or “*Master Artificer*“ assumption¹⁹ cannot be expected to apply to development policy. Complementarity can but be attained by shaping policies on specific problems and by monitoring that they actually work the way they are intended to, maintaining course over time and progressing steadily along the path of sustainable growth. All this cannot be based on conjectures or general theories. It has to be achieved. As shown by cross section and, even more so, time series analyses “PGI success” cannot be taken for granted. Graphs 1.a, 1.b and 1.c, which map trends in aggregate growth, distribution and poverty in the USA during 1968-1997, bolster this claim. Nowhere, does this evidence hint at the existence of stable relationships, arithmetic or otherwise; nor does it suggest that income curves shift and change shape in predictable fashions. What the graphs show is a very complex world which looks like Boccioni’s, not Leonardo’s.

As yet, no one-type-fits-all growth with equity policy package has been identified, let alone agreed; nor are there policies which can be implemented with a guarantee that stated distributional objectives will be achieved²⁰. Lessons from experience have indicated that “*any commitment, no matter how resolute, or any strategy, no matter how well conceived in its broad outlines, will be doomed to failure if specific policy changes are made in the wrong direction or at the wrong time*”²¹, and if values and behaviours²² are not duly taken into account. Likewise, empirical research has confirmed that a policy may not necessarily be expected to produce the same effects in different socio-economic and political environments. Even, apparently minor aspects, such as those regarding program design and administration, may matter for success and be no less vital than crucial strategic elements. As observed by D. Donnison, in the “*drama of social reform...a sufficiently senior official who is unsuited for the task can be a disastrous obstruction*”²³.

In a nutshell, the success of a policy hinges on a host of factors which involve aspects ranging from means, methods, policy mix, timing, sequencing, administration and, more generally, all the

¹⁸ Atkinson, A.B. (1996), p.7.

¹⁹ Baer W.C., (1975), p.85.

²⁰ As reminded by Atkinson A.B. op. cit., p.44 : “This is a challenging program, but without further progress (..in the theory of income distribution..) one can only have limited confidence in policy recommendations. The best designed policy may be thwarted by the reactions of individuals, or by the corporate sector, or by the operation of the labor or capital market. It is not sensible to make proposals for new policy directions without understanding why governments have made the choices they did in the past.”

²¹ Field G.S., (1980), p. 242.

²² Glazer N., (1988), especially Ch.1.

²³ Donnison D., (1982), p 220.

ingredients of what in the 1970s became known as “social engineering”. But even the latter has not guaranteed success, as witnessed by the end of faith in social engineering and its promises. What lessons are there, then, to be learned from experience in order to build up the knowledge needed to tackle issues of growth, inequality and poverty?

Remarkably, the lessons coming from experience have remained practically unchanged since the early 1980s²⁴:

- Growth has alleviated absolute and relative poverty in some countries but not in others;
- Growth has increased inequality in some countries, but not in others;
- High and Increasing inequality and poverty have not always and everywhere hampered growth;
- Absolute or relative poverty and inequality measures have tallied in some cases and not in others;
- A high aggregate growth rate has been neither necessary nor sufficient for reducing absolute and relative poverty;
- A high aggregate growth rate has been neither necessary nor sufficient for reducing inequality;
- Commitment in helping the poor has not necessarily resulted in progress²⁵, and progress has taken place even in the absence of such commitment.

Evidently, targeting policy to PGI aggregates alone is not sufficient to ensure sustainable growth, regardless of which aggregate goal is picked or given priority, since sustainable growth is not about aggregate growth, but about whose growth; not about overall inequality, but about how much and what kind of inequality; and not about poverty *per se*, but about inclusion and sharing the fruits of growth fairly among all citizens.

No matter which particular PGI blend might be deemed desirable and chosen as target, there are multifarious drivers and factors (relating to individuals, institutions and markets) at work behind it, which have to be “mastered”. The role of these intervening factors has been clearly underestimated, partly because of overconfidence (e.g. as with the war on poverty) and, to a greater extent, due to lack of knowledge and consideration. Eventually, this blunder has thwarted even the best designed policies. Unsurprisingly, “social engineering” has proven insufficient to deliver what it promised.

Putting together all the pieces of the growth, distribution and poverty conundrum, and gazing underneath the broader macro dimensions, is an endeavour which, amazingly, has attracted remarkably little curiosity – at least until recently. This applies, especially, to the analysis of the “drivers” of income distribution, which is definitely in need of further developments. Another piece which is missing in the PGI jigsaw²⁶ is learning from experience. Closing these gaps is a crucial step towards comprehending how policies capable of triggering “distributionally-correct” growth can be designed and implemented. A lot more “digging” is then necessary before frameworks, such as the proposed PGI (or indeed IPG)-vision can be usefully employed to provide effective directions to development policy.

²⁴ E.g. in Field G.S., *Ibidem* ,pp.239-244.

²⁵ In the U.K., the reforms of social protection which followed the “Fowler reviews” were said to be the “most radical after Beveridge”. They might have then, be expected to have major effects on inequality. Instead, their effect was “more to move certain kind of households around within the lower part of the income distribution, rather than to make any significant difference to the numbers with incomes below particular thresholds or poverty lines”. See Evans M., (1996) pp.236-261. See also on this Glazer N, (1988).

²⁶ Atkinson A.B. remarks that “It is not sensible to make proposals for new policy directions without understanding why governments have made the choices they did in the past”, (1996), p. 44).

Regrettably, the contrast between the apparent absence of relationships in the trends in factor shares and income inequality is –as underlined by A.B. Atkinson– striking. Existing theory provides valuable insights, but not an overall framework that can help to relate the different parts of the picture. Anyone wanting to link economic analysis on the determinants of payments to factors of production –the *G* variable in the triangle– with the personal distribution and redistribution of income –the *I* and *P* variables of the triangle– is likely to end like the student pictured by Cannan in the early 1900s, that is in rage²⁷. All the more so, if one considers that since then the intricacy of the jigsaw of inequality has grown. As yet, a solid bridge between the *G* and *IP* variables has not been built yet.

Whereas, in the early 1900s, understanding the mechanisms governing the distribution of factor incomes might have contributed to relate trends in production with trends in poverty (definitely linked to developments in labour markets) and in richness (undeniably linked to rent and profits), in inequality and in distribution, today, the increased degree of sophistication of the latter has made this task even more challenging. The new picture looks labyrinthine. It is complex and has many dimensions. New factors are at play all along the density curve. Some of them are conspicuous, but others are hidden. Inequality is no longer identified with income distribution alone, but has to do with “command over resources over time”. This extends well beyond present income. It has many more facets and can be grasped only in a dynamic perspective, in which past, present and future are linked together. Consequently, traditional static snapshots of income inequality have lost much of their relevance for policy purposes. Richard Titmuss was among the first to spot the changing traits of inequality and to make a well articulated case on why greater sophistication and “a new approach” was required for distributive analysis and policymaking: “*...fact and economic theory are at variance, and ...no conclusion which takes account of an ageless individual and forget the family, which measure ‘income’ and omits ‘wealth’, which disregards the unit of time in command-over-resources, which fails to inquire into the meaning of power, which avoids investigating the interlocking connections between social and economic institutions, and which is oblivious of the key role played by the educational system in the social distribution of ‘life chances’, can be relied upon in the context of the social changes we have depicted. Ancient inequalities have assumed new and more subtle forms; conventional categories are no longer adequate for the task of measuring them*”²⁸.

Under the circumstances, the PGI-Triangle clearly underestimates existing real life complexities and distributive mechanisms (that is, in basic conditions behind poverty and inequality in specific situations, in the multi-dimensionality and cumulation of disadvantages and so on). From a policy perspective the triangle is blinded since it tags aggregates and averages, and does not gaze at the human beings which are “parading” along the density curves, let alone at their “faces” or circumstances. Therefore, it lends itself to the criticism that it provides a framework which is too crude and unsophisticated to serve development and distributional policies, especially when social goals are at stake²⁹. Since poverty alleviation has increasingly been seen as an economic policy instrument and goal³⁰ an investment in PIG policy knowledge is clearly needed.

²⁷ Quoted in Atkinson, op. cit., p.19.

²⁸ Titmuss R.M., (1962), p198-199.

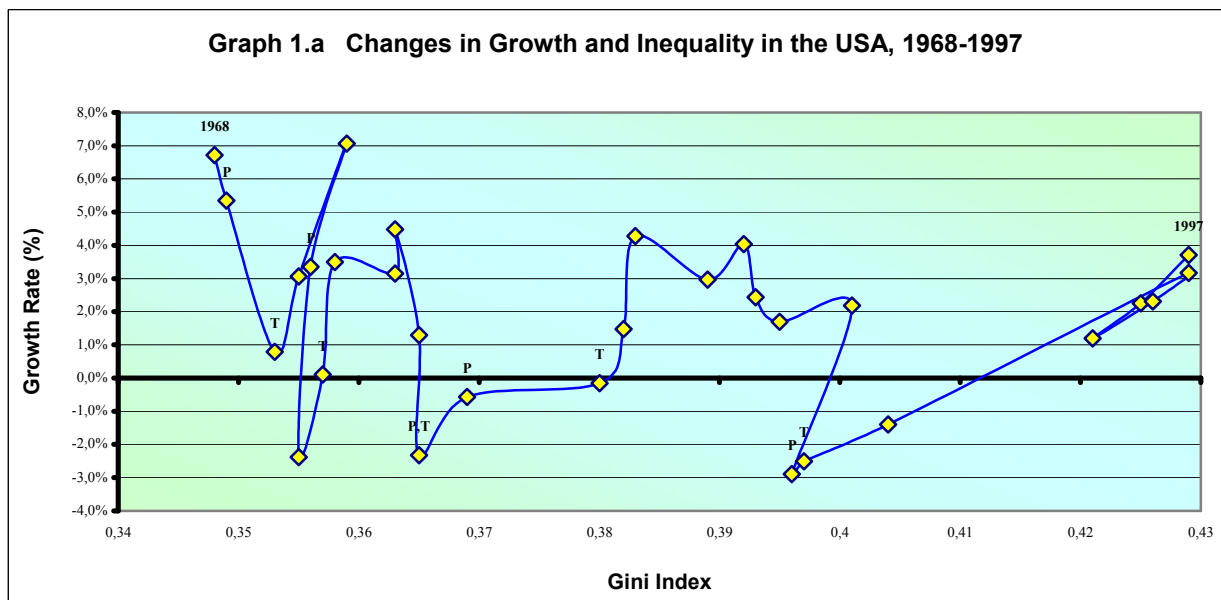
²⁹ E.g. How would graph 1.a, b and c look if inequality and poverty were to be measured by indices other than Gini’s and headcounts?

³⁰ E.g. as witnessed by the increasing emphasis on pro-poor growth in World Bank policy, activities and research since the 1990s. See, among others, Essam-Nssah, op.cit. and Ranis, op. cit.

3. Growth, Distribution and Poverty Are End Results, that Is Counts of the ‘Wealth’ Produced, of the Income Distributed and of the Number of Individuals that Got an Income Below Given Thresholds

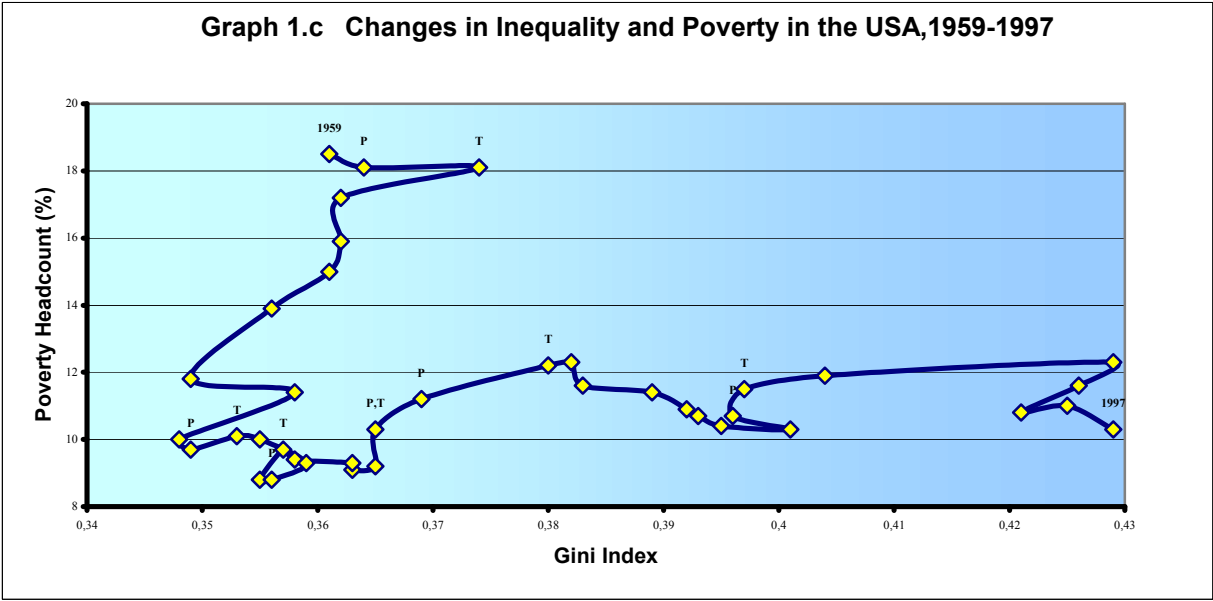
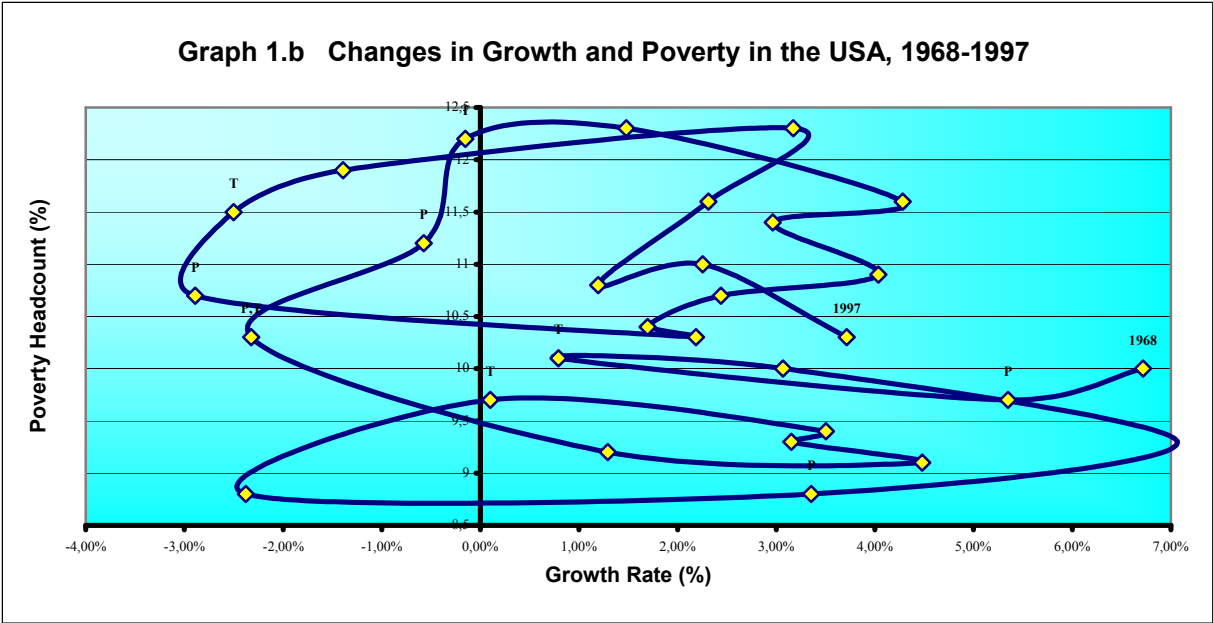
Income is created and distributed at one go. Growth, distribution and poverty are not distinct events, but end results, that is counts of the ‘wealth’ that has been produced; of the income that has been distributed and received³¹; and of the number of individuals that have received an income below given, absolute or relative, thresholds. They are part and parcel, and indeed a joint product of the same process: the simultaneous creation and distribution of national wealth, observed at different moments and in a different perspective³². Whichever is looked at, production or distribution can be gauged only ex post, when goods have already been manufactured and incomes have already accrued to individuals or families. Both offer a snapshot of what has already happened or achieved and cannot be changed, except by redistributing parts of the “cake”. New snapshots can only look different if underlying conditions or “mechanisms” (primary and secondary distributive rules) are changed.

Change can just happen or be made to happen. By and large, socio-economic and technological change happens. Policy changes, instead, are made to happen by human intervention on frameworks, rules, endowments and other factors. Their aim is to “manipulate” processes and provoke structural breaks, that is displace trends from their course by affecting the way in which systems work (primary distribution level) or by modifying end results through redistribution (secondary or higher levels of redistribution). In either instances, systems may retort and neutralize policy induced (first order) effects. Therefore, manipulating processes and twisting end results may not necessarily be assumed to come with a guarantee of success. Second and higher order effects can bring systems back to where they were and, indeed, impose costs in terms of forgone growth, higher inequality and poverty. Additionally, unexpected developments can replace old problems with new ones.



³¹ The term income distribution can take many meanings. Here it is understood to mean personal distribution.

³² See Pen J., (1971), Chapter 1.



Symbols: The letters P and T in the graphs mark peak and trough years, respectively

Clearly, the proposed PGI-Triangle vision shields the intricate processes, complexities, and asynchronies that exist in the real world, with which policy has to deal. Looking at aggregates, then, cannot help to address structural, systemic and, especially, distributive issues. Neither can policy be resolved on the basis of countries' PGI records. They have to be shaped on specific problems and their causes, on values and, more generally, on what lies behind aggregates: factors, endowments, processes, rules, incentives, behaviours and so on. This leads to *where, how* and by *which means* governments may intervene. Yet again, the uncoupling of aggregates and individuals comes up as a critical hindrance. As noted earlier on, at present we lack (i) an overall framework to relate together the different parts of the whole picture; and (ii) statistical information systems that allow the "navigation" across different dimensions and levels (micro, meso and macro). What exists is too aggregate and, astoundingly, does not contemplate individuals. These have simply been removed from the production/income picture though, in real life, everything is eventually hooked up on

them. But, individuals are not there, as if frequency distributions were a dispensable element of development policy and national income accounts.

In the circumstances, the PGI-Triangle appears as an attempt to offer a compass to a policymaker who thinks he can safely sail and land in three different continents just because he has a boat and a large scale drawing (not even a map) of the world.

4. Growth, Poverty and Distribution Subsume a Complex Web of Relationships. They Can Hardly Be Seen to Form a Triangle, but Are Formally Described by Density Curves Which Over Time Can Shift and Change Their Shape

At a given moment in time, a country's growth is measured by the percentage change in total income (the integral of the density curve) or average (per capita) income. Distribution, instead, is more complex to gauge. Graphically, it is hinted by the shape of the density curve. Analytically, it is appraised by means of a host of measures of position, dispersion, kurtosis and inequality. Finally, cash poverty is assessed as the percent of individuals with income below given (absolute and relative) thresholds and by means of coefficients (simple or composite) which can measure incidence, gaps, severity or summarize all of them. Income can be redistributed in various ways and at different stages of the life-cycle. When this happens some individuals gain and others lose; relative incomes change and so may the shape of the density curve. Total and average income, however, do not change, since income redistribution *per se* is a zero-sum-game (at a given moment in time, though, not over time³³).

One way to grasp the arithmetic relationships that exist between growth, distribution and inequality at a moment in time, is to transform each point of a distribution (i.e. individual incomes) into ratios or deviation from the mean or other benchmark (see cols. 4-5 in Table 1).

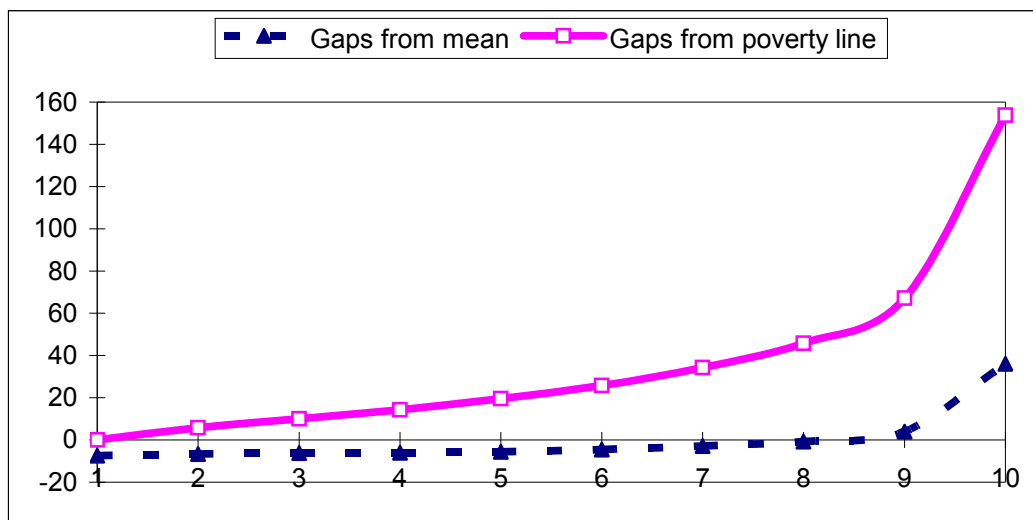
TABLE 1 - PERSONAL INCOMES: LEVELS AND "DISTANCES"

INCOME UNITS	PRIMARY DISTRIBUTION (Incomes before tax and benefits)	SECONDARY DISTRIBUTION (Income after tax and benefits)	RELATIVE INCOMES	
			(Percent deviations from the mean)	(Percent deviations from poverty line)
1	$y_1 \longrightarrow$	$y_1 - T + TR = D y_1$	$(Dy_1 - Dy_m)/Dy_m$	$(Dy_1 - Dy_{pl})/Dy_{pl}$
2	y_2	$y_2 \cdot T + TR = D y_2$	$(Dy_2 - Dy_m)/Dy_m$	$(Dy_2 - Dy_{pl})/Dy_{pl}$
.
.	$\cdot \longrightarrow$.	.	.
.
.
N	$Y_n \longrightarrow$	$y_n - T + TR = D y_n$	$(Dy_n - Dy_m)/Dy_m$	$(Dy_n - Dy_{pl})/Dy_{pl}$
Sustainable Growth Aggregates				
$Y = \sum y_i$	$Y - T + TR = DY = \sum Dy_i$	$0 \text{ or } \frac{1}{2} \sum n_i (y_i/y_m - 1) $		$\sum n_i n_j (y_i/y_{pl} - 1)$
$y_m = Y/N$	$y_m = \sum Dy_m/N$			

³³ For the sake of simplicity it is assumed that the "income- redistribution-bucket-is-not-leaking" hypothesis applies.

In turn, these can be graphically represented in Schutz's type graphs³⁴ (see Graph 2), which permit to portray and judge how total income and the benefits of growth are shared between *unders* and *overs*. If, instead, the focus is on cash poverty, iso-income inequality curves (which use the poverty threshold as reference income), as proposed by Roberti,³⁵ permit to ponder changes in distance between the poor and non poor (or indeed any other group). Basically, this is equivalent to placing individual or grouped data along a sort of Pen's parade — which opens up with “dwarfs” and ends with “giants” — in which “heights”, that is each individual's income is re-scaled on the mean income or the poverty (or other) threshold, respectively. As it can be gathered from Table 1 and Graph 2, transformations such as these allow to associate growth and distributive records (over time and, if deemed desirable, across space or other dimensions) and, concurrently, to monitor distributive “misalignments” and “biases” within and between “*unders*” and “*overs*”; or poor, non poor and rich. At the same time they foreshadow the way towards the development of an “equitable growth framework” which can be used to judge the “quality” of growth.

GRAPH 2 SCHUTZ'S AND ROBERTI'S INCOME GAPS CURVES



The “equitable growth framework” which is behind Diagram 3 stems from the transformation of the initial income information in Table 1 which, in sequence, spring from the nature of “income” which can serve, on the one hand, to measure individual outcomes (the contribution given to or the value of production) and, on the other hand, to compare differences in end-results (how rich or poor is somebody relative to somebody else). Income statistics, then, can be looked upon from different perspectives and used to extract different messages. From the same original quantitative information it is thus possible to obtain statistics or indicators which, through appropriate transformations, permit the appraisal of:

- *Economic performance*, by looking at real *income gains (or losses)* or growth-induced changes in national and personal incomes (cfr. Diagram 3, Part A, Section 1);
- *Progress/retreat from equality*, by looking at changes in relative distances from the mean (or, alternatively, median or modal) income (cfr. *Ibidem* , Section 2);

³⁴ Schutz R.R., (1951).

³⁵ Roberti P., (1982).

- *Progress/failure in the fight against poverty* by looking at changes in the size of the gaps between the incomes of the poor and the non poor³⁶ (cfr. *Ibidem*, Section 3);

and, when all the above pieces are put together in sync, within a growth, inequality and poverty multidimensional space, to shed light on the equitable growth puzzle by means of *comprehensive distributive maps* (cfr. *Ibidem*, section B).

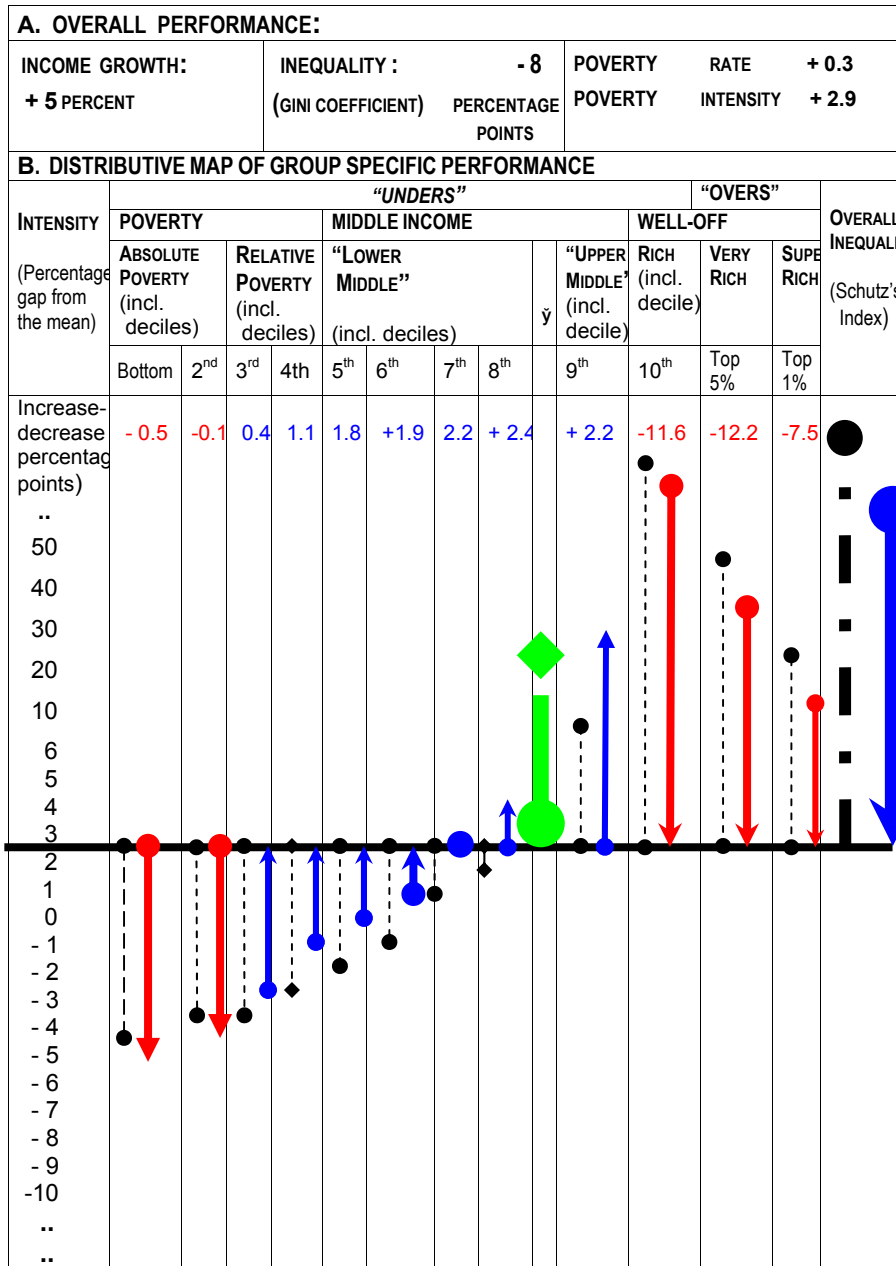
Unlike the aggregate PGI-Triangle vision, this approach permits to create a versatile *Multidimensional Monitoring G-IP Reporting Framework* or *Quadrant* (MMG-IP) which allows to judge growth (G), inequality and cash poverty (IP) developments in a multidimensional and multilevel (overall and distributive) environment grounded on specific “comparators”, such as the mean (as in Diagram 3) or other threshold(s), not just national aggregates. Furthermore, the MMG-IP permits to identify and focus on specific segments (such as low, middle or high income groups) and to capture those areas in which problems may be emerging and likely to be located, with a good degree of precision; and, if desired, to zoom into the aggregate picture by connecting the income information with that on the circumstances of the groups that, say, appear to be underperforming or lagging behind. This makes it possible to give a “face” to groups and individuals. Albeit blurred and difficult to discern, this evidence will permit:

- To put individual human beings back into the limelight of statistics;
- To identify potential target groups and accurately profile them and, in turn, to answer questions such as ”what are their circumstances? and “what makes them remain weak”?³⁷;
- To conduct tailored searches for the determinants of different groups’ strengths and weaknesses, to answer questions such as, “why are certain segments of the population weak and faring differently from others?” or “why certain groups do not share the benefits of, say, economic growth”?
- To understand needs, e.g. what exactly is required and what can be done to overcome problems, such as investing in human capital or providing various types of incentives;
- To spell out and assemble the policy package, e.g. set program objectives (i.e. to do exactly what), means (e.g. what and how), target groups and access (e.g. who can claim and how) and other parameters (e.g. how much).
- To spell out and assemble the policy package, e.g. set program objectives (i.e. to do exactly what), means (e.g. what and how), target groups and access (e.g. who can claim and how) and other parameters (e.g. how much).

³⁶ Which implies assuming that the poor/non-poor distinction is a dichotomy and not a spectrum. Alternatively, an income band can be used as reference.

³⁷ Notably requiring longitudinal micro-data for answers.

DIAGRAM 3 GROWTH, POVERTY, INEQUALITY AND THE “SUSTAINABLE GROWTH QUADRANT”



Another advantage of the MMG-IP is that it lays the basis, albeit slightly, for moving a step forward in bridging factor and personal income distributions (and redistribution), along the lines sketched in Diagram 4. So far, analyses have fallen short of attempting to explain trends in aggregate factor income by type with household income aggregates by source. The undertaking has proved challenging. As noted by A.B. Atkinson, it has mostly served to confirm “the limitations of existing theory in answering the question: why has income inequality increased?”³⁸

³⁸ Op. cit., p. 44.

From this analytical viewpoint, the MMG-IP appears to open up new vistas for development policy, since point aggregates can easily be re-connected with individuals and families, if micro data are available. Eventually, these will appear with a “face”. It will also be possible to associate them with an activity, a source of income (such as wage or pension income) and other circumstances. As it can be gathered from diagrams 2 and 3, new value added and knowledge is created when micro and macro links are re-established. First, the aggregate income information can be sliced and attributed to smaller units such as quantiles or other groupings and, eventually, individuals (e.g. representative or typical). Second, factor and transfer income can be channelled one level below the usual households aggregate, such as attributed to individuals or earners. Pursuing along this road, it becomes also possible to associate trends in factor and household income at the aggregate level with trends in the incomes of groups distinguished according to their position along the density curve and, eventually, to a host of other circumstances.

By thus doing:

- Production and distribution are re-connected (to date, it is possible to link factor and personal income aggregates, not factor aggregates and individuals or households micro statistics), as it was deemed imperative³⁹ in the early 1900s, when the foundations for the development of national accounts were being laid down;
- Trends in factor income can be related to trends in personal income at lower levels of aggregation. This permits greater accuracy and opens up the possibility to switch away from “faceless averages” to groups of households, which can be characterized by a substantial degree of homogeneity in terms of, say, circumstances and sources of income. In principle, it becomes possible to identify “typical” archetypes, compare patterns and test hypotheses, such as “growth is good for all”; this approach can also be used to establish (and signal) whether growth is fairly shared or whether there are groups, which either lag behind or benefit more;
- Direct inferences can be drawn for the personal distribution from the observation of changes in factor prices, institutional behaviour (e.g. of corporations) and public policy.
- Moreover, economic theory on returns to factors of production (labour income, capital and land) can be better related to the personal distribution.

Currently, aggregates have buffeted our understanding of these links, since all incomes are lumped together into group-totals or averages. With the MMGI-P, heterogeneities can be minimized, no matter their source, whenever elementary micro data are available and when these data can be integrated into appropriately systematized information systems. Problems of data heterogeneities and unavailability cannot be, however, expected to disappear at once. They will have to be dealt with in the years ahead.

Diagram 3, provides an illustration of the new vistas that open up when growth is appraised through a broad, welfare focused framework in which use is made of both G-IP aggregates and distributive statistics, notably overall indicators and enlargements showing changes in the distribution of household income by selected groups (percentiles). As can be gathered.

As can be gathered from the *MMG-IP*, the aggregate data in Section A tell that growth was buoyant, inequality fell and poverty increased, especially in intensity. The distributive enlargement, that is the data in Section B, permit to add precision to an otherwise sweeping and indistinguishable picture. Growth can now be “allocated” to different household groups situated in different points

³⁹ SAMs have attempted to re-establish macro-micro links, but the snapshots they provide are quite poor. See footnote 4 above.

along the income curve, from bottom to top. When this happens, significant differences begin to appear, showing that behind there are winners and losers, laggards and fast movers. Eventually, the picture which emerges, reveals critical details. It is sharper and permits to unveil “facts” in a fashion that is useful for policy purposes since it discloses that:

- aggregate growth was buoyant, but benefits have mostly accrued to upper and lower middle income groups⁴⁰. The relative losses suffered by households in the bottom two deciles are particularly disturbing;
- overall inequality has declined, but not for the poor who have lost ground and become more unequal vis-à-vis all other groups. As far as they are concerned, inequality has increased;
- poorest households have fallen further behind (i.e. with no-trickle down), while poor households with incomes close to the poverty line have enjoyed some of the benefits of growth. The process of development, then, has excluded the very poor.

The message from the figures in the *MMG-IP Quadrant* is strong and clear. Judging equitable growth is most often a question of value judgements, no matter whether they are or are not made explicit. Given that, it can only be re-proposed the remit that changes in inequality should preferably be appraised with Pareto’s welfare criteria in mind⁴¹. In essence, the assumption that all households move alike, which is implicit in most overall indices, should be rejected. Conflicting trends are the norm. This entails that what is central for policy and distributional analysis is to know what happens to the “unders” and “overs” that we care about. Or to put it another way, it matters for policy to know who “loses” and who “wins”.

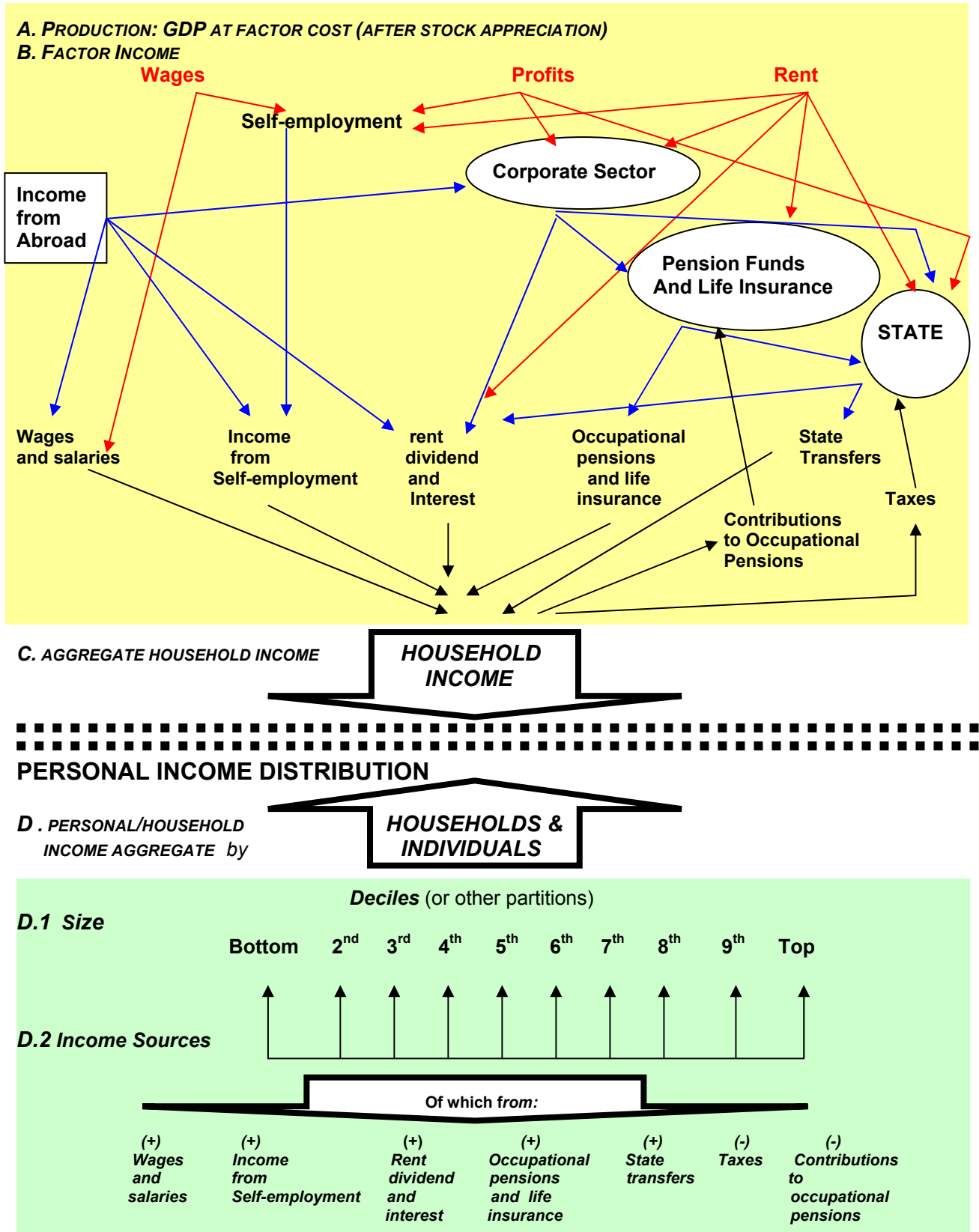
Diagram 3 provides a vivid example⁴² of how one-dimensional aggregates (cfr. Part A) can be misleading and uninformative. What they show may not only be an incomplete picture, but also an irrelevant or a bad proxy of what happens. In a nutshell, good distributive policies cannot be based only on evidence consisting of national aggregates and averages.

⁴⁰ For the sake of simplicity, no indication is given in the text as to whether incomes are before or after taxes and transfers. If statistics are available the Quadrant permits to portray separately all stages, from the before to after taxes and transfers distribution, and to map the impact of each separately.

⁴¹ Roberti P., “Income Distribution: A Time-Series and a Cross-Section Study”, in *Economic Journal*, vol.84, n. 335, September 1974, pp. 629-638.

⁴² The data portrayed in the Quadrant are used for illustrative purposes only. They refer to a low income Asian country. Its name is not given, since it is irrelevant.

Diagram 4 PRODUCTION & FACTOR INCOME DISTRIBUTION



D.1 Circumstances etc. (e.g. size, composition and number of earners)
 Note: Section A is based on Hill (1996).

Conclusions

Since the late 1900s, economic performance has increasingly come to be judged on how the “growth dividend” is distributed among different individuals, population groups and areas and taking into account its impact on the environment; no longer on its size alone. Currently, “sustainable growth” has replaced growth *tout court* and has become the key and foremost goal of public policy. Nonetheless, improvements in all dimensions do not and cannot be expected to necessarily occur simultaneously⁴³. Trade-offs cannot be avoided. They are constantly made, though more often implicitly than explicitly. They can take different forms and mean different things, depending on a host of different factors and situations. Seldom they are neutral.

Governments and Policymaking do not appear to have sufficiently adapted to the new, increasingly complex and multidimensional policy environment. Existing policy and impact assessment knowledge has patent gaps. The maps which are used to chart the way towards equitable and/or sustainable development are not yet fit for the task. Engaging in the development of two (or more) E's⁴⁴ analytical policy framework, along the lines of Bourguignon's PGI macro relational frames, is a clear and welcome first step to tackle the whole spectrum of issues and challenges faced by policymakers, when they enter the domain of sustainable growth and allied win-win-win policies. Investing in macro frameworks, however, is not enough. They permit to catch only a glimpse of the policy puzzle. A host of other pieces is invariably needed to catch the full picture; chart and implement cost-effective and efficient policies, and to evaluate whether they may work or not, both at the macro and micro levels. Likewise income growth rates, aggregate poverty and inequality indicators tell only a part of the story. In general, this tends to invariably turn out to be too aggregate for distributive policymaking.

What is not disclosed, however, is imperative for good policymaking. The unequivocal lesson which has come from policy impact analysis is that without looking beyond means and aggregate indicators, it is impossible to grasp the full policy process, that is the complex interrelationships that link values, circumstances, means, objectives and outcomes. Another unequivocal lesson is that integrated policy frameworks and approaches cannot be based solely on macro relationships and macro aggregate information, when targets concern *distributions*, not just *levels*. When policy is about the latter, the evidence cannot but be *finely grained*. This implies the production of, and access to microdata and information systems that can support a whole variety of analytical needs spanning over the entire macro and micro policy research spectrum.

This study has focused on PGI performance only. It has described and reminded of the difficulties that are hidden behind PGI variables and “triangles”. It has not dealt with the drivers of PGI performance or with the policies that can best foster PGI progress. It has focused, instead, on the PGI policymaking environment, reminding us that PGI performance is not just about “social engineering” and social relationships. It is far more complicated than that assumed in the fight against poverty that has been launched time and again. In practice, Keynes saying on macro economic policy: “there may be several slips between the cup and the lip”⁴⁵ is also applicable to the PGI policy environment. PGI policymaking is about mastering the whole policy jigsaw, that is multifarious drivers and factors (associated with individuals, institutions and markets); intricate processes, complexities, synchronies and asynchronies; and a host of other aspects allied with program design and implementation (including means, methods, the policy mix, timing,

⁴³ See Nugent J.B. and Sarma C.V.S.K., (2002).

⁴⁴ Where E stands for economic (alias growth), equity and environment.

⁴⁵ Keynes J.M. (1936), p.173.

sequencing, administration and so on) which have clear and recognized influences, and cannot be discounted or trivialized.

Eventually, three problems hinder PGI policy and performance:

- a) The persisting disconnect between growth and distribution;
- b) Data sources and information systems that are de-linked or come from different sources;
- c) Separate assessments/reporting framework that have not yet been integrated into one multidimensional monitoring/reporting framework (MMRF) which simultaneously permits two E's and one 'P "growth" performance assessments.

The proposed *MMR G-IP Quadrant* developed in this paper deals with (c) above only. It permits linkage of the macro and micro outcomes and "looking beyond sheer averages" to judge achievements not just on the basis of aggregate growth rates, but also of their underlying distributive patterns, both vertically and horizontally. Like all other attempted solutions, this one also has its limitations but, on balance, it is to be highly recommended. It permits to qualify growth and judge national performance within a broader perspective and using criteria which lead us back closer to assessing growth in terms of welfare.

Lack of distributive data has for long hindered this move, leading to a search for shortcuts, that is alternative routes that eventually have not served to clarify development issues. However, household income data are presently available in many countries. Moreover, developing knowledge and building capacity to collect personal income data is an activity that international agencies, notably the World Bank, have eagerly supported.

The *MMG-IP Quadrant* appears to provide governments with a map that can serve to illuminate PGI performance. It can perhaps be hoped that the *MMG-IP Quadrant* which is proposed in this paper as a basis for judging national performance becomes standard practice, if the concern with sustainable growth is more than lip-service?

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