



University of Calabria
Department of Economics, Statistics and Finance "Giovanni Anania"
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*Mezzogiorno/Mezzogiorni:
multiple trajectories and multiple equilibria*

TONY ATKINSON'S LEGACY

*Andrea Brandolini, Alessandra Casarico
& Holly Sutherland*

*B4 Semi-Plenary Session
Aula Magna, Centro Congressi «Beniamino Andreatta»*

Sir Anthony Barnes Atkinson

Caerleon, 4 September 1944 – Oxford, 1 January 2017

I am not sure that I will be able to finish [the book I am writing on measuring global poverty], but it is quite interesting to read all the different country studies for places that I scarcely knew existed (like the Solomon Islands!). I keep an atlas on my desk! I am very impressed with the overall quality of the work being produced in statistical offices around the world, and feel that there is a lot of scope for mutual learning.

IMPORT STRATEGY AND GROWTH UNDER CONDITIONS OF STAGNANT EXPORT EARNINGS¹

By A. B. ATKINSON

In an article published in this journal some years ago, Professors K. N. Raj and A. K. Sen discussed the alternative patterns of growth open to a developing country which has no scope for increasing its export earnings.² Their discussion was based on an interesting model of development, which emphasized the importance of rigidity in the domestic structure of production arising from non-transferability of capital between sectors and non-substitutability between inputs. It was also characterized by a greater degree of disaggregation than is common in theoretical models of development planning, distinguishing between investment goods which produce consumption goods (e.g. textile machinery) and investment goods which produce investment goods (e.g. machine tools). In the context of the problem of allocating the limited competing uses—importing machinery and so on—planning authority, they compared resulting from using this foreign exchange. However, while this comparison was a complete solution to the problem, Professor Bhagwati in a comment compared four arbitrary time-paths unless a complete mapping of the possibilities. The aim of this note is to provide a more complete mapping of the possibilities. The correct import policy can, in principle, be chosen to meet two very different objectives and in contrast to Raj and Sen, who concentrate on *alternative objectives*, I shall concentrate on:

- I. Maximize the capacity of the

¹ I am grateful to P. Dasgupta, J. A. Mirrlees and J. H. Williamson for their helpful comments on an earlier version of this paper, and particularly to the latter for his criticisms.

A NEW VIEW OF TECHNOLOGICAL CHANGE¹

The recent literature on technological progress has almost entirely been based on the assumption that its effect can be represented as shifting the production function outwards—as illustrated in Fig. 1. Technical advance is assumed to raise output per head for all possible techniques. The advocates of this approach seem, however, to have forgotten the origins of the neo-classical production function: as the number of production processes increases (in an activity analysis model), the production possibilities can be more and more closely approximated by a smooth, differentiable curve. But the different points on the curve still represent different processes of production, and associated with each of these processes there will be certain technical knowledge specific to that technique. Indeed, both supporters and critics of the neoclassical theory seem to have missed one of the most important points of the activity analysis (Mrs. Robinson's blueprint) approach: that if one brings about a technological improvement in one of the blue-prints this may have little or no effect on the other blue-prints. If the effect of technological advance is to improve one technique of production but not other techniques of producing the same product, then the resulting change in the production function is represented by an outward movement at one point and not a general shift—see Fig. 2. This figure

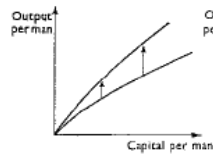


FIG. 1.

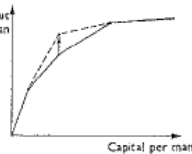


FIG. 2.

shows the extreme case where technical progress is completely "localised" to one technique: there are no spillover improvements in other techniques. In reality we should expect that a given technical advance would give rise to some spillovers and that several techniques would be affected. However, we would reach the traditional position only if there were spillovers to every technique. This means that a technical advance would have to be

¹ The authors are very grateful to G. de Menil, P. A. Diamond, R. S. Eckaus, F. H. Hahn, M. Porec, M. Rothschild, K. Shell and J. H. Williamson for their helpful comments on an earlier draft. Stiglitz's research was supported in part by the United States-United Kingdom Educational Commission and the National Science Foundation.

The Timescale of Economic Models: How Long is the Long Run?¹

Although models of economic growth have been intensively studied in recent years, relatively little attention has been given to the underlying timescale of these models.² While in many cases we know how the major variables of the models change over time, in very few cases do we know how *quickly* they will change. Yet the speed of change is a prediction of the model, and by examining this we have a further test of the model's properties. For example, in many cases it is shown that all paths converge to a long-run equilibrium, but we also want to know how soon the paths will reach the vicinity of this equilibrium. The speed of convergence makes a great deal of difference to the way in which we think about the model. Alternatively, where a model gives rise to oscillations, we need to have some idea as to their probable period. If we throw away information about the time dimension, we are reducing still further our limited understanding of the relationship between these models and the real world.

In an attempt to show how an analysis of the timescale may provide valuable additional information, I have examined three very different models of economic growth. The first is that of a one-sector economy where there is non-neutral technical progress (in the Harrod sense). In such an economy, one of the factor shares tends asymptotically to zero and the other to one. In section 2, I attempt to throw further light on some of the implications of this. Finally, section 3 is concerned with Dr Goodwin, and examines the period

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in a one-sector economy where there are constant technical progress and savings are constant, in such a model a non-zero rate of technical progress tends asymptotically to zero, and Phelps [3] to conclude that this is a case of constant factor shares (Bowley's error), be some endogenous mechanism source-augmenting. But although one of the aims of this paper is to show how quickly this happens. It is quite clear that the fall from 35 to 15 per cent is a series. Further, while no one would expect the observed factor shares, Bowley's model is a model that predicts a slow decline towards reality. The purpose of

¹ de Menil, D. M. G. Newbery, M. Rothschild, comments on an earlier version of this paper. They were carried out at the University of Cambridge. This has largely been confined to one exception: is Morishima and Kaneko [12].

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POVERTY IN BRITAIN AND THE REFORM OF SOCIAL SECURITY

A. B. ATKINSON



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On the Measurement of Inequality

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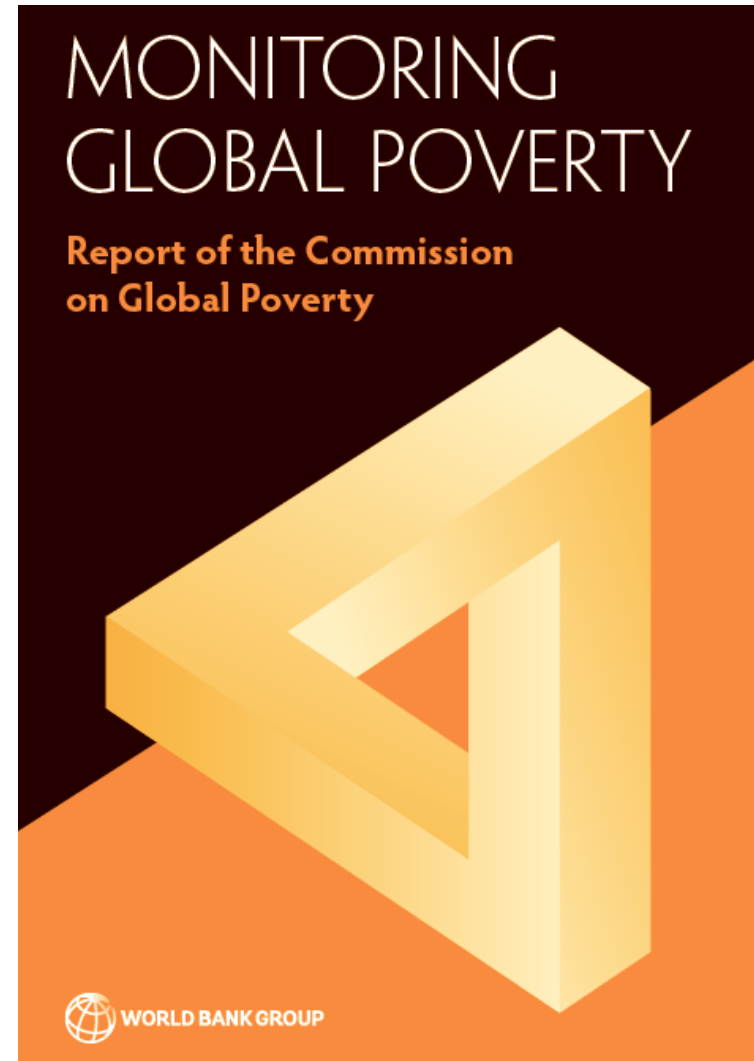
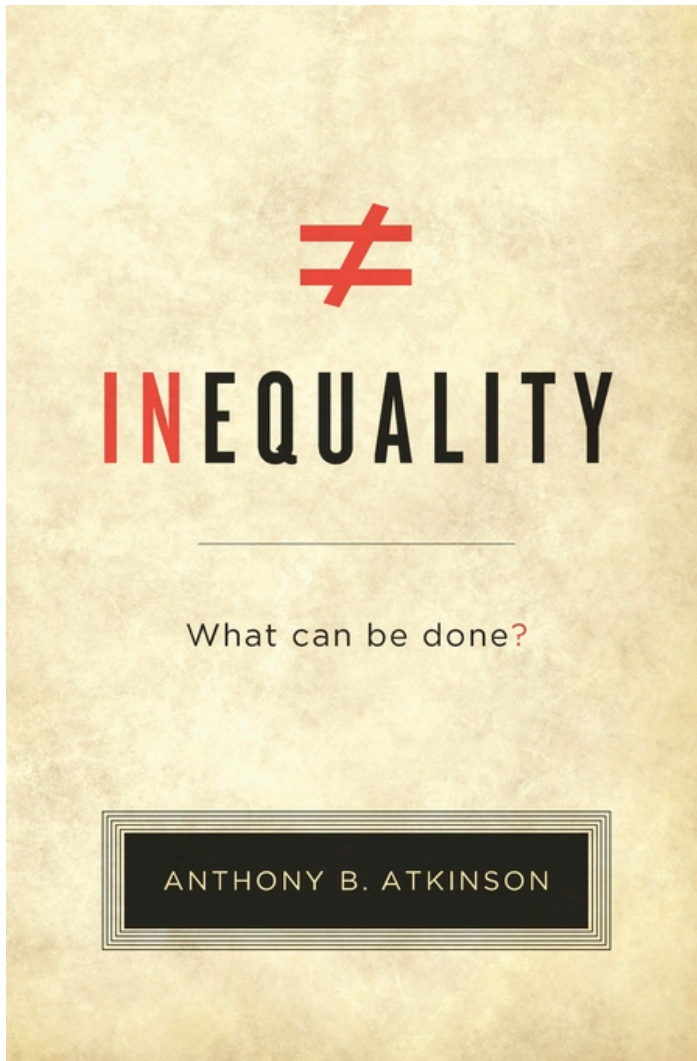
1. INTRODUCTION

Measures of inequality are used by economists to answer a wide range of questions. Is the distribution of income more equal than it was in the past? Are underdeveloped countries characterised by greater inequality than advanced countries? Do taxes lead to greater equality in the distribution of income or wealth? However, despite the wide use of these measures, relatively little attention has been given to the conceptual problems involved in the measurement of inequality and there have been few contributions to the theoretical foundations of the subject. In this paper, I try to clarify some of the basic issues, to examine the properties of the measures that are commonly employed, and to discuss a possible new approach. In the course of this, I draw on the parallel with the formally similar problem of measuring risk in the theory of decision-making under uncertainty and make use of recent results in this field.¹

The problem with which we are concerned is basically that of comparing two frequency distributions $f(y)$ of an attribute y which for convenience I shall refer to as income. The conventional approach in nearly all empirical work is to adopt some summary statistic of inequality such as the variance, the coefficient of variation or the Gini coefficient—with no very explicit reason being given for preferring one measure rather than another. As, however, was pointed out by Dalton 50 years ago in his pioneering article [3], underlying any such measure is some concept of social welfare and it is with this concept that we should be concerned. He argued that we should approach the question by considering directly the form of the social welfare function to be employed. If we follow him in assuming that this would be an additively separable and symmetric

¹ My interest in the question of measuring inequality was originally stimulated by reading an early version of the paper by Rothschild and Stiglitz [13], to which I owe a great deal.

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Today Session

Rudy Gnutti (musician and director, Barcelona)

Interview to Tony Atkinson

Alessandra Casarico (Bocconi University)

Top Incomes and Gender

Holly Sutherland (ISER, University of Essex)

An EU Guaranteed Income for Children?

General Discussion