



A Note Reconsidering ‘A Theory of Wealth Distribution & Accumulation’: Perspective on Uncertainty

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Abstract

Growth and Distribution have become one of the main instruments for achieving a better standard of living. Fundamental issues of Political Economy can be defined as a conscious effort of the society to follow the economically developed in order to promote rapid and fundamental change. Such a concept is fairly broad as it seeks to promote not only a fast growth-rate but also significant structural socio-economic changes. Within a Post-Keynesian approach, the present note extends the model of overlapping generations considering uncertainty. Anxiety and uncertainty with regard to the outlook and outcome for the future are fundamental characteristics of human condition and society, as highlighted by Jacobs (2019). In this paper, we emphasize such concepts, given that the distribution of wealth between generations requires leadership leading to action and acceptance of risk and uncertainty.

1. Introduction

The purpose of this article is to explore the behavior of wealth accumulation in a more general form like Baranzini (1991) did in “A Theory of Wealth Distribution and Accumulation.” We provide a more general framework for the macroeconomic theory of income distribution and wealth accumulation, especially by focusing on structural dynamics of classes, saving and accumulation in the presence of uncertainty and portfolio choice. In order to expand our knowledge in this field, we consider the role of market imperfections in the generation of different socio-economic classes.

We expect this article might strengthen the sharing of new ideas of common interest in economic science and political economy, both belonging to orthodox and heterodox schools. As Morishima (1977, p. 61) has pointed out, “International friendship among economists of different schools of thought is more important than that of the same school, especially in such a difficult period of history when political and economic interests are giving rise to so many conflicts.”

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We are living through one of those periods of history when the degree of uncertainty about the future goes beyond the limits of tolerance, as was argued by Inglehart and Norris (2016). They consider that the economic insecurity perspective makes the mass support populism, putting social cohesion at risk and making the task of governing particularly difficult. We are mainly concerned with the present and future of a more democratic society and showing that the instability can give rise to hybrid types of regimes, introducing authoritarianism in institutions.*

As we know, a democracy that is not accompanied by social and economic betterments for the population-at-large is putting its survival at risk. Increasing discontent could lead to social and political unrest allowing significant room for anti-democratic forces.

There is growing evidence that the increasing complexity of relations between the most advanced capitalist economies has already produced a structure with a certain degree of autonomy, the embryo of a possible economic system of greater reach than the one currently in existence. But this development has not been accompanied by an advancement at the institutional level. This explains the inadequate way in which regulation, namely coordination and control, is being exercised within the framework of the new structure. The resulting tension can only be absorbed if there is an effective advancement at the institutional level, or if there is a turn-around in the whole process to restore the autonomy of decision to the national power centre.

Bagchi and Svejnar (2015) present a new vision about the impact of wealth concentration affecting income distribution and show the negative relationship between concentration and economic growth, which is an example of power concentration. Ghatak (1978) concludes about these kinds of models that it is necessary to test the model systematically, considering all available information, to provide economic planning for obtaining an optimal solution.

Sugahara et al. (2016) presented an extension of Teixeira, Sugahara, and Baranzini (2002) considering heterogeneous agents and governments, leading capitalists and workers to keep a positive intergenerational stock and presenting the existence of both classes in the equilibrium. Following the article published in 2002, Góes and Teixeira (2020) presented an extension of Baranzini's Theory, with a mathematical formalization, concerning technical progress, leading to a Structural Change approach, and introduced behavioral differences between rentiers and workers.

However, in their approach, they did not consider uncertainty, which is an important issue when a real economy is analyzed. The definition of uncertainty is complex. Keynes (1921) defines this concept as the variation in a situation of complete knowledge to complete ignorance. Shackle (1972) defines this concept as a binary, where a decision can be certain or uncertain. The post-Keynesians used Shackle's definition but named it Fundamental Uncertainty.†

The present contribution deals with a broader understanding of the link between these theories and this assumption. Our note is structured into three sections: first, the introduction; the second section develops a new vision of Góes and Teixeira (2020) considering uncertainty and the third section features concluding remarks.

* Carothers (2018) analysed this concept in 35 countries, but we are sure that it has a broader validity.

† Dequech (2004) says, "[...] different conceptions of probability underpin the different ways in which uncertainty has been expressed."

2. Structural Dynamics of Classes, Saving and Accumulation in the Presence of Uncertainty and Portfolio Choice

The Post-Keynesian theory can be supported by an orthodox microeconomic foundation, which was presented by Baranzini (1991). He dealt with the adaptation of the Samuelson-Diamond overlapping generation model and linked both Kaldor-Pasinetti models with some neo-classical microeconomic issues. Teixeira, Sugahara, and Baranzini (2002) dealt with an extension of this model considering taxation in their hypothesis and showed that the essential nature of the “Cambridge Equation” is preserved in Baranzini’s approach.

In this vein, Góes and Teixeira (2020) expanded their view considering technological progress, which is an important issue to construct a Structural Change vision, which led the authors to analyze different behaviors between rentiers and workers. However, they did not consider uncertainty in their assumptions. This is the main focus of the present note: linking uncertainty with economics and political institutions.

Let us now broaden the scope of our analysis by introducing a stochastic element, as done by Baranzini (1991). Uncertainty, in finance and economics and in numerous cases, generates a two-class society. This is important since, at least to a certain extent, even in economics one could argue that the persistence of the classes in the system, either in a static or in a non-explosive dynamic context,* depends critically on the way in which the population is divided into sub-groups.

We may say, rephrasing ecological scientists like Ilkka Hanski (2012, 2014) and Dennis Chitty (1960), that even though any single sub-group may be vulnerable to extinction, the population as a whole persists as a result of movement between sub-groups. In economic terms, this would mean that the economic and social system would be able to reproduce itself year after year without the risk of collapsing.

The micro-economic foundations of a two- or more-class model may be used to study the issue of the dynamics of dynasties in a stochastic world. The focus is on:

1. the dynamics of capital accumulation in a stochastic world where individuals, families or dynasties have the choice between consumption or saving over a given time-horizon;
2. the choice of individuals or families with respect to the kind of financial investment chosen, i.e. safe and/or assets. The *U.S. Surveys of Consumer Finances* of the 1980s show that the proportion of households desiring no financial risk for their savings is about 69% for the lowest quintile of income earners and only 6% for the top 1%. Not surprisingly, the holding of stocks, either directly or through mutual funds, increases with income, from about 5% for the lowest quintile to about 78% for the top 1%;
3. the conditions under which uncertainty, *via* a portfolio choice, may give rise to class differences, thus reinforcing the hypothesis of a society characterized by the presence of different socio-economic classes as in the case of the classical, post-Keynesian model, and also some neoclassical models of growth, income distribution and wealth accumulation.

* For instance, in a steady-state model, the system expands, but the relationships among variables remain constant.

The analysis has a double purpose:

- First, to expand the analysis of the micro-foundations of the economic behaviour of individuals, families or dynasties, with particular focus on their behaviour concerning long-term saving and consumption-patterns, we may add that individuals make up families, families make up dynasties, and dynasties make up classes with a homogeneous economic behaviour.
- Second, to bring closer the ‘real’ and ‘monetary’ research lines of the post-Keynesian research programme: the former with particular reference to growth, income distribution, and capital accumulation; the latter with emphasis on the integration of money and uncertainty with the post-Keynesian framework.

This is just the first step in this direction, and more effort will have to be made to formulate an exhaustive macro-economic framework including all elements of the two separate research lines. The uncertainty structure (relative to the rate of return on the risky assets) that one may introduce here is the so-called Markowitz-Merton-Flemming continuous-time optimal portfolio approach where investment opportunities are stationary and consumption preferences are iso-elastic. This assumption, as John Stanton Flemming (1974, p. 137) points out, ‘enormously simplifies the arguments—and the results.’

Merton (1969, 1971) considers a continuous-time consumption portfolio problem for an individual whose income is generated by capital gains on investment in assets with prices assumed to satisfy the geometric Brownian motion hypothesis and where the stationary nature of the problem leads to (a) a policy of consuming at a rate proportional to wealth; and (b) an optimality of a constant portfolio composition. In this way Merton’s analysis (which has the merit of considering a finite time-horizon) yields explicit solutions for optimal consumption and portfolio composition. Flemming’s analysis (1974) was motivated by the desire to ‘present Merton’s continuous-time portfolio analysis in a form more accessible to those who, like the author, are intimidated by the terminology of stochastic processes and integrals.’ By assuming an infinite time-horizon, Flemming arrives at the same results as those obtained by Merton. Our analysis is based on the Merton-Flemming approach. However, here the focus is on the consumption and mean accumulation rates of the family or dynasty. The influence of variance and risk-aversion on all variables is also considered in detail, deriving some results that have so far passed unnoticed in the literature.

The analysis shows that the variance of the risky rate of return has a negative effect on the optimum accumulation of wealth, while at least for reasonable values of the parameters, risk-aversion has a negative effect on the rate of growth of mean wealth. Looking at the results obtained from a historical point of view in order to throw some light on the different patterns of accumulation of capital, it may be shown that (under the realistic assumption of decreasing risk-aversion with the amount of wealth) in the case of a double capital market, uncertainty may contribute to generating a two-class society. In fact, all other things being equal, one class should end up with a very high capital stock per capita, while the other would register an accumulation rate that decreases continuously with time (see Baranzini, 1991, pp. 190-9).

Uncertainty also tends to generate (or to perpetuate) a two-class society in a model that considers only risky assets like stocks (and not riskless assets like cash, savings accounts,

money markets funds, CDs and bonds). However, while here one class ends up with quite a large amount of financial wealth per capita, the other class with an initial average or high risk-aversion reaches a constant mean accumulation rate (equal to the rate of growth of population), thus endowing their children with a fixed and limited amount of marketable wealth. Even in the quite unlikely case of increasing risk-aversion with the amount of wealth, uncertainty is bound to generate or perpetuate a two- or multi-class society. In this specific case, uncertainty tends to lead to less ambiguous results than in the case of a number of stochastic models, and the conclusions yield additional insights into the long-term process of wealth accumulation (or dispersion). One may therefore conclude by emphasizing that the process of wealth accumulation, including human capital in a more comprehensive model, may be studied in the context of assigning to different groups a specific rate of growth of population or specific investment opportunities.

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A number of similarities seem to emerge from a comparison of the behaviour of a number of species recently studied by biologists and ecologists, the behaviour of past agricultural alpine communities, as well as that of today’s households that may choose between safe and risky assets for the accumulation of their savings.

- In general, there seems to be a sort of ‘invisible hand’ that governs the systems, and which ensures the survival of the species, both animal and human.
- In particular, the existence of different classes or sub-classes of insects and other animal species according to the research of Hanski and others, and the existence of socio-economic classes with different behaviours, might ensure a ‘general stable equilibrium’ of the community or of the system. In the case of socio-economic classes, deviations at the (sub-) group levels seem to be absorbed and neutralized at the macro-level.

We are well aware that these results should be interpreted with great care. But we are certain that animal and human species do share common behaviours and mechanisms that ensure their survival and prosperity. Herlyn and Radermacher (2019, pp. 75) claim that “a further problem is added today, namely the partial undermining of democracy by globalization and thus the undermining of its ability to correct such imbalance, which results in a starting position that is unfavourable for more equalisation and makes it difficult to correct conditions (the so-called ‘trilemma of globalization’)”.

3. Concluding Remarks

This article considers that when uncertainty is introduced in scientific models, they do not matter if the object analysed is human or an animal. Their propensities have a common behaviour which reinforces the method, using other sciences to prove some similarities with economics, as shown by Stanley et al. (2001), who linked physics and social science. In the

animal world, we characterize species, which live in different communities and share common behaviour, especially when uncertainty is involved. Note that uncertainty sweeps the world today not in any historically unprecedented ways, but reflecting a basic human condition that has been holding true to this concept at least until the Industrial Revolution. According to Jacobs (2019), “the visible uncertainties of the past also review unseen opportunities unleashed by unseen forces which were long overlooked due to humanity’s preoccupations with visibly looming threats.”

“There has clearly been a historical evolution of socio-economic structures from being based on the conception of growth for growth’s sake towards the wellbeing of all citizens and society.”

For humans, the capital and wealth accumulation certainly depends on their inherent natures, which characterize the overlapping generation, considering that day after day we decide to save or consume and at the end of our lives share our own wealth with the next generation. Wealth concentration by the richest people (almost 1% of the population in the world) is 78% of current wealth, meaning that the next 1% of the next generation will earn this amount not by hard work but by inheritance.

To change this reality, the individual and society will have to accept risk, moving from poverty to abundance and embrace uncertainty along the way. However, they do not know what the value of risk-aversion is; an economy can maintain at least two classes in the society. In this vein, the present situation will be considered. Quite centrally, implementing desirable decisions will lead to changes and the present unequal concentration of wealth will not continue to persist. There has clearly been a historical evolution of socio-economic structures from being based on the conception of growth for growth’s sake towards the wellbeing of all citizens and society.

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