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# Effects of the taxation on inheritance in a microfounded model of growth and post-Keynesian distribution with overlapping generations and life cycle

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### Abstract

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This paper extends the model of overlapping generations with heterogeneous agents, allowing both classes (capitalist and worker) to hold a positive intergenerational capital stock. The main results were:

- (i) equilibrium interest rates that maximize the consumption and savings plans of working and capitalist classes were positively
  affected by taxation;
- (ii) an increase in taxation and therefore, in transfers to the working class raises the participation of intergenerational inheritance of this class in the total capital stock;

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(iii) the taxation affects the distribution of wealth between the classes because it increases the participation of the working class in
 the total capital stock of the economy.

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### **1. Introduction**

Since the overcoming of the razor's edge problem<sup>5</sup> proposed by Kaldor (1955), post-Keynesian theorists have 29 been working on long-term macroeconomic problems. However, unlike the Solow solution (Solow, 1956), the model 30 proposed by Kaldor (1955) necessarily depends on there being at least two income classes, namely, capital and labor. 31 This dependence results from the flexibility of the propensity to save that is no longer an exogenous constant and 32 becomes dependent on the distribution of income between capital and labor, which hypothetically, will have a different 33 propensity to save. Thus, if the propensity to save part of the profit is greater than the propensity to save part of the 34 wages, there will be a distribution of income between capital and labor that will cause the average propensity to save 35 in economics solve the problem raised by Harrod (1939) and Domar (1946). 36

In the same research line, Pasinetti (1962) proposes a new model with the existence of two social classes, the 37 capitalists and the workers. This change comes from the observation that individuals must have one only propensity to 38 save, regardless of whether the source of their income is derived from capital or labor. Although Pasinetti (1962) works 30 with the definition of personal income distribution (between capitalists and workers) in place of functional income 40 distribution (between capital and labor) as Kaldor (1955), his work resulted in the same solution to the problem of 41 "razor's edge" and reached the same equation for the rate of profit: (1)  $P/K = g_n/s_c$ , where P is the mass of profit, K 42 the capital stock of the economy,  $g_n$  the natural growth, and  $s_c$  the propensity to save of the profit (in Kaldor) or of the 43 capitalist (in Pasinetti). 44

Eq. (1), known as the Pasinetti Theorem or Cambridge equation shows that the rate of profit depends on the natural growth rate of the product and the capitalist class's savings behavior, and it has not, at first, any relation to the form of the function production (or marginal productivity of capital) and the behavior of workers.

Two important issues related to the macroeconomic model of Kaldor-Pasinetti concern, first, to the implications 48 of the introduction of the government on determining the long-term interest rate (Cambridge equation) and personal 49 income distribution and, second, the compatibility of macro model results (with and without government) with the 50 Orthodox microfoundations. To deal with the first problem, Steedman (1973), Dalziel (1989) and Pasinetti (1989a,b) 51 insert the government activity in the Kaldor-Pasinetti model assuming that the government collects direct and indirect 52 taxes, and makes transfers to the workers. In opposition to Steedman (1973), Dalziel (1989) and Pasinetti (1989a,b) 53 admit that the government's savings is not necessarily equal to zero. The results found by Steedman (1973) and Pasinetti 54 (1989a,b) show that both the long-term interest rate of the economy, determined by the Cambridge equation, as the 55 share of income profits come to depend positively on tax profits  $(t_p)$ . To Dalziel (1989), the government's insertion 56 does not change the interest rate nor does it affect the functional income distribution. Although there is a disagreement 57 over the effects of the taxation of the profits, the fundamental results of the Kaldor-Pasinetti model are kept in all these 58 works, that is, the interest rate and income distribution depend fundamentally on the natural growth rate  $(g_n)$  and the 59 propensity to save of the capitalists  $(s_c)$ . 60

Regarding the second issue, Baranzini (1991) proposed a microfoundation of the model of growth and income distribution of Kaldor–Pasinetti from the use of utility functions of two representative agents, one a capitalist and the other a worker. In this model, Baranzini (1991) uses economies where individuals save for the life cycle and may save for their descendants (the next generation). Thus, by capitalists and workers maximizing intergenerational

 $<sup>^{5}</sup>$  The problem of the "razor's edge," developed by Harrod (1939) and Domar (1946) says that full employment of the factors is only possible if the workers growth rate is equal to the ratio of the propensity to save of the economy and the technological coefficient where the technological coefficient is the capital/product ratio.

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