PRIVATE SAVING AND THE MACRO-ECONOMIC DISTRIBUTION OF INCOME: THE 'CLASSICAL' AND THE 'MANAGERIAL' SAVINGS FUNCTIONS

Matthew J. Lambrinides

NUMBER 36

WARWICK ECONOMIC RESEARCH PAPERS

DEPARTMENT OF ECONOMICS

UNIVERSITY OF WARWICK
COVENTRY

PRIVATE SAVING AND THE MACRO-ECONOMIC DISTRIBUTION OF INCOME: THE 'CLASSICAL' AND THE 'MANAGERIAL' SAVINGS FUNCTIONS

Matthew J. Lambrinides

NUMBER 36

University of Warwick

October, 1973.

TABLE OF CONTENTS

INTRODUCTION

There is a long tradition in the history of economic thought which considers the functional distribution of income as one of the crucial determinants of the evolution of the economy. The tradition, which dates back to Ricardo, is based on the premise that the propensity to save out of profits is significantly greater than the propensity to save out of other forms of income.

In the first section of Part I, we will review three of the most prominent theories which have utilized such a 'classical' theory of saving behavior; the theories of Ricardo, W.A. Lewis and the Cambridge School. In the second and third sections we will outline the arguments which have been put forward in support of the Classical Savings Function and evaluate their validity in the context of contemporary economies.

Part II will examine the modifications which must be made to the Classical Savings Function if the latter is to be applicable to contemporary economies. After outlining the Theory of the Firm which has been developed by the Managerial School (section A), we will examine its implications for aggregate saving behavior. Section B, thus, deals with the behavioral foundations of the Managerial Savings Function, which postulates a dependence

of aggregate saving on the macro-economic distribution of after-tax private income between corporations and households. Section C deals with two political-economic theories of contemporary capitalism whose implications for private saving are in agreement with the Managerial Savings Function. Part II ends with section D which shows that the Cambridge Theories of Growth and Distribution should have utilized the Managerial rather than the Classical Savings Function.

I. Saving and the Macro-economic Distribution of Income Under Entrepreneurial Capitalism: The Classical Savings Function

A. The Classical Savings Function and Theories of Economic Growth

1. Ricardo's Theory of Accumulation[1]

In the Preface to The Principles of Political Economy and Taxation, Ricardo stated

> The produce of the earth and all that is derived from its surface by the united application of labor, machinery, and capital, is divided among three classes of the community, namely, the proprietor of the

---

1 My interpretation of Ricardo's theory relies heavily on Ronald L. Meek, "Thomas Joplin and the Theory of Interest," in Ronald L. Meek, Economics and Ideology and Other Essays (London: Chapman and Hall, Ltd., 1967), and G.S.L. Tucker, Progress and Profits in British Economic Thought (Cambridge University Press, 1958), Chapter VI.

> land, the owner of the stock of capital necessary for its cultivation, and the laborers by whose industry it is cultivated...
>
> To determine the laws which regulate this distribution is the principal problem of Political Economy.[2]

Ricardo's assignment of the macro-economic distribution of income to the position of the 'principal problem of Political Economy' was not motivated by considerations of equity. Like most classical economists, Ricardo was primarily concerned with the growth of the economy over time. He believed that the 'three classes of the community' spent their income in ways which had different effects on the rate of growth. Ricardo's argument has three components:

(a) "All savings are made from profits."

D. Ricardo, Works, vol. IV, p. 234.

Ricardo occasionally admitted that some saving might be done out of rents or even out of wages.[3] In the main part of his analysis, however, he abstracted from all sources of saving other than profits.

(b) (Planned) Investment Equals (Planned) Saving

Like all classical economists up to Thomas Joplin,

---

2 Piero Sraffa (ed.), The Works and Correspondence of David Ricardo, vol. I, "On the Principles of Political Economy and Taxation," (Cambridge University Press, 1953), p. 5. To be cited as Works.

Ricardo assumed that all savings were transformed into capital. The term 'accumulation' accordingly denotes both the act of saving and the corresponding act of investment.

Classical economists believed that the problem of transformation of saving into capital, like all monetary problems, was relevant only for the analysis of short-run economic behavior. Being a short-period phenomenon, the possibility of disequilibrium between intended saving and intended investment could be abstracted from in the analysis of the 'real' factors which determined the evolution of the economy in the long-run.

The classical premise that liquidity preference was zero in the long-run, which was the foundation for the belief that planned saving determines planned investment, was based on what has come to be known as Say's Law. In Ricardo's words,

> No man produces but with a view to consume or sell, and he never sells, but with an intention to purchase some other commodity which may be immediately useful to him, or which may contribute to further production.[4]

(c) The Rate of Growth of Output is Determined by the Rate of Accumulation

---

3 See, for example, Ricardo, Works, vol. I, pp. 347-8.

4 Ricardo, Works, Vol. I, p. 290.

In Ricardo's model, all capital is circulating capital and accumulation means employment of productive workers; that is, workers whose product has value greatter than the value of their subsistence.

> When we say that revenue is saved, and added to capital, what we mean is, that the portion of revenue so said to be added to capital, is consumed by productive instead of unproductive laborers.[5]

Since fixed capital is abstracted from, the production function is of the form $Q = f(L)$, where Q is net output and L is input of productive labor. It follows that for any given initial conditions, L_0 and $Q_0 = f(L_0)$, $dQ/Q = y\ (dL/L)$. Since dL/L equals, by definition, the rate of accumulation, it follows that the rate of output growth is determined by the rate of accumulation.

To recapitulate the Ricardian argument; At any given moment, the macro-economic distribution of income, and in particular the share of profits, determines saving. Saving equals accumulation and accumulation determines growth. For any given initial conditions of production, the distribution of income determines the rate of saving, and the rate of saving determines

---

5 Ibid., p. 151, footnote.

the rate of growth.

2. W. Arthur Lewis's Theory of Underdevelopment

Ricardo's argument that the rate of economic growth depends on the size of the capitalist sector, as measured by the share of profits in national income, has recently been used by W.A. Lewis as one of the cornerstones of his theory of underdevelopment.

In his Economic Development with Unlimited Supplies of Labor, Lewis wrote

> The central problem of the theory of economic development is to understand the process by which a community which was previously saving and investing 4 or 5 percent of its national income or less, converts itself into an economy where voluntary saving is running at about 12 or 15 per cent of national income or more.[6]

And,

> Much the most plausible explanation is that...saving increases relatively to the national income because the incomes of the savers increase relatively to the national income.[7]

---

6 W.A. Lewis, "Economic Development With Unlimited Supplies of Labor," in A.N. Agarwala and S.P. Singh (ed.), The Economics of Underdevelopment (Oxford University Press, 1963), p. 416.

7 Ibid., p. 417.

Who are the savers? In true Ricardian fashion, Lewis argues that "the major source of savings is profits...whether...distributed or undistributed."[8] The inescapable conclusion of Lewis's analysis is that

> If we ask 'Why do (underdeveloped countries) save so little?' the truthful answer is not 'Because they are so poor'; ...the truthful answer is 'Because the capitalist sector is so small.'[9]

3. Cambridge Models of Growth and Distribution

The existence of a causal connection between the rate of growth on the one hand and the distribution of income between wages and profits on the other is also central to the macro-economic theories of the Cambridge School.[10] But, while Ricardo and Lewis argued that the direction of causation is from the profit share to the rate of saving to the rate of growth, the Cambridge theorists maintain that the causality runs from the rate of growth to distribution to saving.

---

8 Ibid., p. 417.

9 Ibid., p. 419.

10 See, especially, N. Kaldor, "Alternative Theories of Distribution," in The Review of Economic Studies, Vol. XXIII, No. 2 (1955-56), pp. 83-100.

The Cambridge economists are concerned with the steady-state equilibrium of a growing economy. Harrod[11] has shown that, if g_n is the economy's natural rate of growth, v the optimal capital-output ratio, and s the ratio of saving to income, then steady-state equilibrium requires that:

$$g_n = s/v. \qquad \text{(I-1)}$$

According to Harrod's Fundamental Dynamic Theorem, for any given g_n and v, there exists only one saving rate, s_r, which is consistent with full employment, steady-state equilibrium; that is, $s_r = g_n \cdot v$ (I-2). This is the only saving rate which equalizes saving out of full employment income with the investment required to maintain output at the full employment level.[12] Harrod furthermore argued that the actual saving rate, s, being the resultant of the saving decisions of numerous households, is independent of g_n and v. Harrod's inescapable conlusion was that (I-2) will not, as a rule, be fulfilled and that, as a consequence, steady-state growth is generally impossible.

According to the Cambridge theorists, Harrod's

---

11 R.F. Harrod, Towards a Dynamic Economics (St. Martin's Press, New York, 1966), Lecture 3, pp. 63-100.

conclusion concerning the general impossibility of steady-state growth is unwarranted. As J. Robinson has put it, "the problem is created by the unnatural assumption that s...is determined by the psychology of households rather than by the requirements of firms."[13] The economists of the Cambridge School accordingly argue that, for given g_n and v, condition (I-2) is established through changes in the distribution of income between profits and wages.[14] In Kaldor's formulation of the Cambridge model the following assumptions are made.

(a) The propensity to save out of profits (s_p) is significantly greater than the propensity to save out of wages (s_w). Aggregate saving, S, is, thus, given by

$$S = s_p P + s_w W \qquad \text{(I-3)},$$

where P is profits and W is wages.

---

12 The right-hand side of (I-2) stands for the ratio of investment to income which must prevail if full-employment is to be maintained along the steady-state path. This can be seen by noting that

$$s_r = \frac{S}{Y} = \frac{\Delta Y}{Y} \cdot \frac{\Delta K}{\Delta Y} = \frac{I}{Y} .$$

(I-2) is, therefore, nothing but the requirement that, if the economy is to remain on the steady-state path, then, at any given moment, S must be equal to the I required to sustain full employment.

13 Joan Robinson, Economic Heresies (Basic Books, New York, 1971), p. 116.

(b) Investment (I) is independent of the supply of savings as well as of the relative prices of capital and labor. I is thus determined independently of S, P, and W.

(c) Investment is maintained at the level required to sustain full employment along a steady-state growth path as defined by Harrod; that is,

$$I = \Delta Y_n \cdot v \qquad (I\text{-}4),$$

where Y_n is full-employment national product when growth occurs at the natural rate.

(d) Profit margins (and with them, the distribution of full employment income, Y_n, between P and W) are determined by the relationship of aggregate demand to aggregate supply. When intended investment exceeds intended saving at the full-employment level of output, profit margins are raised, income is redistributed in favor of profits, and saving increases until it becomes equal to planned investment.

---

14 The Cambridge economists do not maintain that steady-state growth with full employment is what will result from their models. They, rather, argue that the sources of economic fluctuations are to be found in phenomena other than the determination of the rate of saving.

Conversely, when I, as defined in (I-4) is less than S, as given in (I-3), profit margins fall so as to reduce the share of profits and the level of savings.

The requirement that S = I at the full-employment Y, together with the above four assumptions, imply that the distribution of Y_n between P and W is given by

$$\frac{P}{Y_n} = -\frac{s_w}{s_p - s_w} + \frac{1}{s_p - s_w} \cdot \frac{I}{Y_n}, \quad \text{and}$$

$$\frac{W}{Y_n} = 1 - \frac{P}{Y_n}. \quad 15$$

Since Y_n is determined outside the model, and since s_p and s_w are behavioral constants, P/Y_n and W/Y_n depend on I; that is, at full employment, the distribution of income between profits and wages is determined by the investment behavior of the capitalist sector subject to the differential saving propensities of capitalists and workers.

B. Explanation of the Propensity to Save Out of Profits: The Accumulation Motive in Ricardo, Marx and Schumpeter

1. One of Ricardo's fundamental assumptions is that the propensity to save out of profits is so much higher than the propensity to save out of other forms

of income that, for all practical purposes, it is legitimate to assume that all saving is done out of profits.

It is easy to see why, in Ricardo's model, hardly any saving should be expected to be done out of wages. Adopting the Malthusian Principle of Population, Ricardo argued that, at any particular stage of social development, there exists a 'natural price of labor', that is, a real wage which allows workers to reproduce themselves "without either increase or diminution."[16] Whenever the market wage rate exceeds the natural price of labor, workers become "flourishing and happy"[17] and "so great are the delights of domestic society, that in practice it is invariably found that an increase in population follows the amended condition of the laborer."[18] Population and the supply of labor (Ricardo considers the two identical for the purposes of his model) thus adjust so as to keep the real wage at subsistence level in the long-run. Since, in the long-run,

---

15 For derivation see N. Kaldor, ibid.

16 Ricardo, Works, Vol. I, p. 93.

17 Ibid., p. 94.

18 Ibid., p. 407.

wages are just sufficient to provide for the workers' subsistence level of consumption, no saving can possibly be done out of wages.

But what is it that motivates capitalists to save and invest the bulk of their profits while landlords spend their rents on luxury consumption. Ricardo's answer amounted to identifying the ownership of capital with power and taking the urge of the capitalist class to enhance their power through accumulation as a datum. "I consider the wants and tastes of manking as unlimited. We all wish to add to our enjoyments or to our power. Consumption adds to our enjoyments, accumulation to our power."[19] That, however, is hardly an adequate explanation. For the problem still remains as to what it is that, in the case of capitalists, tilts the balance in favor of the power given by accumulation and against the enjoyments of luxury consumption.

The same omission is made by Lewis. He too assumes that the average propensity to save out of profits is significantly higher than the average propensity to save out of wages, but fails to supply a theory of capitalists' behavior which would account for the difference between the two saving propensities.

---

19 Ibid., Vol. VI, pp, 134-5.

2. It was Marx who first supplied an economic rationale for Ricardo's postulate concerning the propensity to save out of profits.

Marx accepted Ricardo's statement that accumulation enhances the social position of the capitalist. "Only as personified capital is the capitalist respectable. As such he shares with the miser the passion of wealth for wealth."[20] Marx recognized, however, that the desire for the social power and respectability made possible by wealth is not enough to ensure that accumulation will always take precedence over luxury consumption. The capitalist, he wrote, "has a fellow-feeling for his own Adam, and his education gradually enables him to smile at the rage for asceticism, as a mere prejudice of the old-fashioned miser."[21] It is only the force of competition that ensures that the bulk of profits will be ploughed back. The capitalist indeed shares with the miser the passion of wealth for wealth.

> But that which in the miser is a mere idiosyncracy, is, in the capitalist, the effect of the social mechanism, of which he is but one

---

20 Karl Marx, Capital, (Modern Library, New York), Vol. I, p. 649.

21 Ibid., p. 650.

> of the wheels...capitalist competition makes it constantly necessary to keep increasing the amount of the capital laid out in a given industrial undertaking, and competition makes the immanent laws of capitalist production to be felt by each individual capitalist, as external coercive laws. It compels him to keep constantly extending his capital, in order to preserve it, but extend it he cannot, except by means of progressive accumulation.[22]

How is it that competition forces the capitalist to save and reinvest the bulk of his profits? Marx's argument is based on the assumption that there are important economies of scale in all lines of productive activity.

> The battle of competition is fought by cheapening of commodities. The cheapness of commodities depends, ceteris paribus, on the productiveness of labor, and this again on the scale of production. Therefore, the larger capitals beat the smaller.[23]

If a capitalist fails to keep expanding the scale of his operations in pace with his competitors, his unit costs will rise relative to those of his competitors and his profits will correspondingly fall. With his main source of investible funds cut down, the capitalist will find it increasingly difficult to invest in the labor-saving types of equipment that are being introduced by his competitors. As a result, his costs will rise

further relative to those of his competitors. This cumulative process will go on until the prodigal capitalist is forced into bankruptcy.

Like most theorems of Classical Political Economy, the hypothesis that the propensity to save out of profits greatly exceeds the propensity to save out of other forms of income was thus first derived from the existence of competition in the capitalist sector.

3. But what if the capitalist sector is monopolistic or oligopolistic? In this case, the capitalists could collectively, although not necessarily collusively, opt for a low rate of accumulation and a correspondingly high level of luxury consumption. In the absence of competition is there no social mechanism to prevent the capitalists from satisfying their 'fellow-feeling for their own Adam'? Is the high propensity to save out of profits bound to disappear together with competition?

In contrast to the classical economists, Schumpeter did not visualize the nineteenth century capitalist economies as competitive market systems. Schumpeter rather argued that monopolistic practices were a central and necessary feature of capitalist development.

---

22 Ibid., p. 649.

23 Ibid., p. 686.

Nevertheless, according to him, in the nineteenth century, "the bourgeoisie worked primarily in order to invest, and it was not so much a standard of consumption as a standard of accumulation that the bourgeoisie struggled for."[24] But, it was not the inexorable laws of competition that made the early capitalists identify their self-interest with saving and accumulating the bulk of their profits. The driving power was instead supplied by the family motive.

> When we look more closely at (the) idea of self-interest of entrepreneurs and capitalists we cannot fail to discover that the results it was supposed to produce are really not at all what one would expect from the rational self-interest of the detached invididual or the childless couple...Consciously or unconsciously (the classical economists) analyzed the behavior of the man who means to work and save primarily for wife and children.[25] (emphasis in the original)

But, Schumpeter continued, with the progress of industrialization and the spreading of the bourgeois mentality of calculating 'rationally' the costs and benefits associated with every aspect of life, the institution of the bourgeois family was bound to disintegrate.

---

24 J.A. Schumpeter, Capitalism, Socialism and Democracy (Harper Torchbooks, Third Edition), p. 160.

> As soon as men and women learn the utilitarian lesson and refuse to take for granted the traditional arrangements that their social environment makes for them, as soon as they acquire the habit of weighing the individual advantages and disadvantages of every prospective course of action--or, as we might also put it, as soon as they introduce into their private life a sort of inarticulate system of cost accounting--they cannot fail to become aware of the heavy personal sacrifices that family ties and especially parenthood entail under modern conditions and of the fact that at the same time, excepting the cases of farmers and peasants, children cease to be economic assets... With the decline of the driving power supplied by the family motive, the businessman's time-horizon shrinks, roughly, to his life-expectation. And he might now be less willing to fulfill that function of earning, saving and investing...He drifts into an anti-saving frame of mind and accepts with an increasing readiness anti-saving theories that are indicative of a short-run philosophy.[26]

4. The Case of the Underdeveloped Countries

In the preceding section we saw that, insofar as contemporary, developed, monopoly-capitalist economies[27] are concerned, there is no adequate theory as to why individual capitalists should be expected to save a

---

25 Ibid., p. 160.

26 Ibid., pp. 157 and 161.

higher proportion of their income than wage-earners and landlords. The absence of anything resembling perfect, price-competition in contemporary western economies renders inapplicable the Marxian mechanism that guaranteed that the only way to maintain a profit-income was to keep reinvesting it. Similarly, the increasing 'rationalization' (in Weber's sense of the term) of social behavior, which accompanies capitalist development, renders the Schumpeterian 'family motive' for accumulation increasingly weak.

What about the contemporary underdeveloped countries? Is the 'classical' saving behavior applicable to them? Lewis's'classical' saving theory has been criticized by a number of students of underdevelopment. Paul Baran has argued that

> While in advanced countries, such as France or Great Britain, the economically ascending middle-classes developed at an early stage a new rational outlook, which they proudly opposed to the medieval obscurantism of the feudal age, the poor, fledgling bourgeoisie of the underdeveloped countries sought nothing but accommodation to the prevailing order...They made political and economic deals with their domestic feudal overlords or with powerful foreign investors, and what industry and commerce developed in backward areas in the course of the last hundred years was rapidly moulded in the straitjacket of monopoly.[28]

in the nineteenth century.[30] The International Demonstration Effect is especially applicable to wealthy businessmen who are in frequent contact with western trade partners and managers of international corporations.

It is interesting, in this context, to consider the case of Pakistan in the period prior to the secession of Bangla Desh.

During the 1950's, Pakistan appeared to fit the Lewis model remarkably well. "Well over half of industrial returns after taxes were saved and reinvested in industry."[31]

Papanek argues that

> the reasons for this departure from expectations are complex. The attitude of Pakistan's industrialists did not conform to some authors' (e.g., Baran's) stereotypes. These men had worked for their wealth, not inherited it, and they were little inclined either to waste it, or their precious time, by high living. Many seemed to have the Muslim equivalent of the protestant ethic. Or rather, many had been used to a frugal existence and their wants increased much more slowly

---

28 Paul Baran, "On the Political Economy of Backwardness," in A.N. Agarwala and S.P. Singh, Ibid., pp. 77-78.

29 Ibid., p. 81.

30 Ragnar Nurkse, Problems of Capital Formation in Underdeveloped Countries (Oxford University Press, 1967), part iii, "The Standard of Living and the Capacity to Save."

> than their income. Industrialists probably had a standard of living which was traditional and changed slowly; they took from profits whatever was required to maintain this standard, and reinvested the rest.[32]

Furthermore,

> the natural frugality of some industrialists may have derived support from the appeals by political leaders for austerity...although appeals for austerity might not have been very effective if it had been possible to indulge a taste for extravagance. Unfortunately for the potential profligate...the government's restriction on imports, travel and domestic production of luxury goods discouraged the use of high incomes for consumption.[33]

Whatever its causes might have been, the 'classical' saving behavior of Pakistani capitalists proved to be but a passing phenomenon. In spite of the government's effort to cultivate it, Papanek's 'Muslim ethic' was even more short-lived than its Protestant equivalent. For "by the 1960's...the expenditures of the newly rich seemed to be catching up with their income."[34]

---

31 Gustav F. Papanek, Pakistan's Development; Social Goals and Private Incentives (Harvard University Press, 1967), p. 198.

32 Ibid., p. 199.

33 Ibid., p. 200.

34 Ibid., p. 199.

C. The Propensity to Save Out of Wages. Saving and the Distribution of Income by Size

The crucial assumption made by classical saving theories is that the propensity to save out of profits is significantly higher than the propensity to save out of wages.[35] The theoretical justification for this type of saving behavior has been based on two assumptions. First, workers receive a wage rate which is barely sufficient to maintain their consumption at the conventional subsistence level. It follows that workers cannot save any significant part of their income. Second, capitalists save a large portion of their income either because of the requirements of competition or because of their ambition to build a family empire.

We saw that the assumption regarding the motivation of capitalists to save the bulk of their income is of doubtful validity when applied to contemporary economies, whether developed or underdeveloped. The first assumption utilized by the classical savings function is also inapplicable under contemporary conditions.

No matter how 'subsistence' is defined, it is clear that workers can and do save, definitely in rich but also in several poor countries. It is still possible to

argue that, although saving out of wage-income is positive, and although individual capitalists are not motivated toward saving by their specific social position, the propensity to save out of profits will exceed the propensity to save out of wages. In this case the functional distribution of income is regarded as a proxy for the size distribution of personal incomes. It is assumed, that is, that, first, capitalists are richer than workers, and, second, that the average propensity to save increases with income. One example of this view is the justification provided for the consumption function of the Klein-Goldberger econometric model of the U.S. economy.[36]

Starting from the observation that, when high-income groups are included in cross-section studies of the consumption-income relation, striking non-linearities emerge, Klein and Goldberger argue that "characteristics of the size-distribution of income would be desirable variables in an aggregative consumption function."[37] Lacking conti-

---

35 Ricardo also considered rents. Post-Ricardian writers have either disregarded rents or lumped them together with profits.

36 L.R. Klein and A.S. Goldberger, An Econometric Model of the United States, 1929-1952 (North Holland, Amsterdam, 1969).

37 Op. cit., p. 4.

nuous time-series data on the size distribution of income, Klein and Goldberger then proceed to use the functional distribution of personal income as a proxy for its size distribution. The justification for this procedure is that wage income roughly corresponds to low income and non-wage income to high income.[38]

The belief that "under an individualistic system, great inequality is necessary to...(high rates of) saving and accumulation"[39] has been one of the strongest arguments against economic equality. As Henry Wallich has put it, "inequality promotes growth, and...growth is worth more than redistribution...Even those who are at the low end of the income scale stand to gain more, in the not very long-run, from speedier progress than from redistribution."[40]

---

38 Ibid., p. 5. It should, however, be pointed out that Klein and Goldberger also argue that the functional distribution of personal income is an important determinant of the consumption-income relationship because owners of unincorporated enterprises "tend to show higher marginal saving rates out of incomes than do wage earners since they have immediately evident investment outlets for their accumulated savings. In addition the difficulties of raising loan funds in modern capital markets have pushed these people toward heavier reliance on retained earnings." (Ibid., p. 6).

39 Henry Simons, "Progressive Taxation and the Accumulation of Wealth," in Edward C. Budd (ed.), Inequality and Poverty (W.W. Norton and Co., New York, 1967), p. 130.

That inequality promotes saving has been shown to be empirically wrong by J. Cromwell.[41] For our purposes, however, the important point is that, even if Simons's assertion were correct, the classical savings function would not be reinstated as a valid description of saving behavior. For in that case the true functional relationship would not be between wage-profit distribution and saving, but, rather, between size distribution and saving.

What is then left of the classical argument that different types, as distinct from different sizes, of income are associated with different saving propensities? Both the Marxian and the Schumpeterian theories of capitalists' saving behavior were meant to apply to an economy where firms are owned and controlled by individual entrepreneurs. It is, then, hardly surprising to find out that both theories fail to be validated by the conditions prevailing in contemporary capitalist economies. According to the theories to be examined in Part II of this paper, the principle of the classical savings function is applicable to contemporary economies provided that one focuses his attention on the division of income between corporations and households, rather than between profits (whether distributed or retained) and wages.

II. Saving and the Macro-economic Distribution of Income under Corporate Capitalism: The Managerial Savings Function

A. Managerial Capitalism and the Theory of the Firm

One of the most important and controversial advances in twentieth century economics has been the development of the thesis of Managerial Capitalism. The private sector of developed, capitalist economies is, according to the Managerial School, dominated by large corporations whose ownership is widely dispersed. The dilution of ownership makes it practically impossible for stockholders to supervise actively the operations of their corporation. The managers of modern joint-stock companies are thus left with wide discretionary power to run their enterprises according to their own preferences rather than in the sole interest of stockholders.

R.A. Gordon, the first economist to explore systematically the preference structure of controlling managerial groups, argued that

---

40 Henry Wallich, The Cost of Freedom: A New Look at Capitalism, (Harper and Brothers, New York, 1960), pp.

41 J. Cromwell, Income Distribution, Consumption and Economic Growth, Unpublished manuscript, Cambridge, Mass. 1970.

> the most important spurs to action by the businessman...are probably the following:...the desire for goods for direct want-satisfaction (measured, presumably, by salary and other forms of compensation), the urge for power, the desire for prestige and the related impulse for emulation, the creative urge, the propensity to identify oneself with the group and the related feeling of group loyalty, the desire for security, the urge for adventure and for 'playing the game' for its own sake, and the desire to serve others.[42]

Starting from Gordon's hypothesis of managerial motivation, Robin Marris has argued that most of the arguments in the managerial utility function are positively correlated with the firm's rate of growth.

Let us begin by dividing the motives listed by Gordon in two categories. The first category consists of those 'spurs to action' which refer directly to the professional activity of the managers; namely, the creative urge, the propensity to identify oneself with the group and the related feeling of group loyalty, and the urge for adventure and for playing the game for its own sake. The second category includes those motives which are external to the immediate professional tasks performed by managers. All motives, other than those included in the first group, belong to the second category.

With respect to the first group of motives, Marris has argued that "groups of people collaborating in teams tend to develop what might be described as a 'norm of professional competence' relating to the efficiency of individual performance."[43] Since "the manager at work is in continuous contact with colleagues from whom he experiences both pressures and stimuli",[44] we should expect that managers tend to develop a norm of competence relating to what they perceive as the content of their professional activity.

> ...The functional essence of management (lies) in the provision of organization... But (this does not imply) that the system will admire the humdrum administrator...(For) it is difficult to award the accolade of professional ability to a chief executive who competently maintains a constant output, with constant profits, constant product mix, and constant methods of production in a constant market!...The norm of professional competence requires outlets for ability to prove competence in a positive sense, to prove not merely that one can jump to a certain height, but that one can jump higher than most of one's colleagues... (And) the testing tasks of business life are those which are the least routine: the development and marketing of new products

---

42 Robert A. Gordon, Business Leadership in the Large Corporation (University of California Press, Berkeley and Los Angeles, 1966), p. 305.

43 Robin Marris, The Economic Theory of Managerial Capitalism (Basic Books, New York, 1968), p. 56.

> and of new methods of production, the planning and execution of expansion, the creation of organization where none previously existed.[45]

In short, the professional environment of managers strongly favors the pursuit of policies that lead to organizational expansion.

Marris, furthermore, argues that most of the motives in the second category are positively correlated with the firm's rate of growth. The correlation is, however, in this case indirect, stemming from an association of the 'external-to-professional-activity' motives with the size of the firm.

Empirical studies of managerial salaries have shown that the larger the corporation for which a manager is working, the higher will be his salary at any given post.[46] Also the greater will be the manager's power over subordinates within the corporation as well as over people and events outside the firm. The same positive correlation with size applies to professional prestige and social status. A vice-president of I.B.M. is regarded more highly than a vice president of a small computer company both within the computer industry and

---

44 Ibid.

45 Ibid., pp. 58-59.

by wider social groups.[47]

It follows that managers attach utility to the size of their corporation. In order to satisfy most of the motives in the second group, a manager would like to be associated with as large a corporation as possible. This he can achieve in either of two ways. He can either advocate policies that will be conducive to the growth of the firm for which he is working or transfer to a larger company.

There is, however, a strong preference for internal promotion. "Unless they are hopelessly incompetent, 'inside' candidates are always given priority."[48]

---

46 See H.A. Simon, "The Compensation of Executives," Sociometry, March 1957.

47 Cf. R.A. Gordon, op. cit., pp. 305-6:

> "The corporation executive possesses power by virtue of his position of authority in a firm which is itself powerful. His power is a product of his position ratherthan of personal wealth. Power in this case means authority over subordinates, control of the disposal of vast resources, and great influence over persons and affairs outside the firm. The corporation is a vehicle through which power comes to be held and exercised...Power thus secured increases with the size of the firm. Here lies an important explanation of the tendency of many large firms to become larger, even if sometimes the profitability of such expansion is open to serious question. The working of the power urge in this respect is reinforced by the tendency of businessmen to identify themselves with their enterprises. Expansion is desired for the enhancement of personal power and also because of the satisfaction of being associated with a powerful organization."

This is so because "when combined in teams, (managers) are normally much more 'productive in the firm where the team was developed than in any other firm of comparable size and character."[49] Since mobility is limited, the second category of motives also leads managers to follow, both individually and collectively, policies which are aimed at making the growth rate of their firm as high as possible.

There is only one important managerial objective which may be in conflict with growth; that is, security of tenure. A corporation that is trying to grow too fast too soon may be forced to move into relatively unprofitable markets. The fall in the rate of return on the firm's total invested capital might result in a low valuation in the stock market. The firm would then be open to the danger of take-over from another management which was on the look-out for buying capital inexpensively. The successful take-over bid would most probably be followed by the collective dismissal of the management of the firm taken over.

The fear of a take-over thus places a definite limit on the growth rate which a managerial group will aim for. The group will always derive utility from

---

48 Marris, Ibid., p. 100.

maintaining a safe valuation of its stock. But the utility which managers derive from security differs in one important respect from the utility which they derive from growth. As the rate of growth increases, the utility of managers increases without a limit. There is, in contrast, a saturation level for utility derived from the security insured by a high valuation of the company's stock. Once a take-over is averted, higher valuation which is achieved at the expense of growth does not add to the utility of the managerial group.[50]

Marris thus concludes that managers will choose to operate their firm so as to maximize its rate of growth subject to the constraint of a safe valuation by the stockmarket. The valuation constraint will be satisfied when the firm is earning a rate of profit and distributing a dividend which is not significantly lower than that of firms of equal risk.

B. The Managerial Hypothesis: Implications for Corporate Saving

Marris's hypothesis of managerial motivation has important implications for corporate saving.

A firm can grow either by ploughing back its own profits or by borrowing in the capital market. Management-controlled corporations have a strong preference for financing their investment internally. According to Galbraith, this is so because

> No form of market uncertainty is so serious as that involving the terms and conditions on which capital is obtained. Apart from the normal disadvantages of an uncertain price, there is danger that under some circumstances no supply will be forthcoming at an acceptable price. This will be at the precise moment when misfortune or miscalculation has made the need most urgent. And unlike suppliers of raw material or even labor, the supplier of funds is traditionally conceded some degree of power. Money carries with it the special right to know, and even to suggest, how it is used. This dilutes the authority of the planning unit.[50]

The strong preference for internal finance thus translates Marris's managerial objective into the rule 'maximize the retention rate subject to distributing enough dividends to maintain the minimum safe stock-market valuation.'

The argument that "the expansion of the firm de-

---

49 Op. Cit., p. 89.

50 Ibid., p. 107.

pends on its accumulation of capital out of current profits"[52] goes back to Michal Kalecki.

As far back as 1937 Kalecki wrote, "the amount of capital owned by the firm...is of decisive importance in limiting the size of the firm"[53] for three reasons.

First, the higher is the ratio of debt to equity for a given firm, the higher will be the degree of lender's risk; that is, the probability that the firm will be unable to meet its fixed interest obligations in case of an unsuccessful venture. It follows that

> It would be impossible for a firm to borrow capital above a certain level determined by the amount of its (equity) capital. If, for instance, a firm should attempt to float a bond issue which was too large in terms of its (equity) capital, this issue would not be subscribed in full. Even if the firm should undertake to issue the bonds at a higher tate of interest than that prevailing, the sale of bonds might not be subscribed since the higher rate itself might raise misgivings with regard to the future solvency of the firm.[54]

---

51 J.K. Galbraith, The New Industrial State (Houghton Mifflin Co., Boston, 1967), p. 39.

52 M. Kalecki, "Entrepreneurial Capital and Investment," reprinted in M. Kalecki, Selected Essays on the Dynamics of the Capitalist Economy (Cambridge University Press, 1971), p. 106.

53 Ibid., p. 105.

Second, 'borrower's risk' increases as debt increases relative to the capital owned by the firm's shareholders.

> The greater the investment in relation to (equity) capital, the greater is the reduction of the (firm's) income in the event of an unsuccessful business venture. Suppose, for instance, that (a firm) fails to make any return...If (the firm) has borrowed, (it) will suffer a loss which, if it continues long enough, must drive (the firm) out of existence... The heavier the borrowing the greater will be the danger of such a contingency.[55]

Finally, financing expansion through a new issue of ordinary shares is also limited by a firm's internal capital.' This is so because

> There is a risk that the investment financed by an issue of shares may not increase company profits proportionately as much as the issue increased the share and reserve capital. If the rate of return on the new investment does not at least equal the old rate of profits, then the dividends of the old shareholders...will be 'squeezed.' Risk of this type is, of course, the greater the larger the new issue.[56]

What makes Kalecki's contribution extremely important for our analysis is that the principle of increasing risk

---

54 Ibid., pp. 105-106.

55 Ibid., p. 106.

56 Ibid., p. 108.

associated with increases in outside relative to inside finance implies that the retention ratio determines the rate of growth of a firm even in the absence of managerial preference for internal finance of expansion.

The important claim of the managerial theory is that the corporate saving rate chosen by managers will exceed the retention rate which would be chosen by stockholders, if the latter were in control of their corporation's saving policy.[57]

Stockholders derive utility not only from present dividends, but also from future dividends and capital gains. The discounted present value of the extra dividends and capital gains which result from the successful reinvestment of retained profits, may more than compensate stockholders for their sacrifice in terms of foregone present dividends. So long as this is true, stockholders will be happy to see profits channeled into retained earnings. Furthermore, while stockholders are in agreement with the retention policy of their management, the stockmarket valuation of the firm will increase as corporate saving increases.

---

57 The following argument is based on R. Marris, op. cit., pp. 106-107.

Let us, now, assume that, in any given period, corporate investment is subject to either a constant or a diminishing rate of return, and that stockholders have a diminishing marginal rate of substitution between present and future consumption. These two assumptions guarantee that there exists a corporate saving rate, generally less than one, which maximizes the utility of stockholders. Call this rate r^*. The loss in the utility of stockholders which results from the sacrifice of one extra dollar of foregone present dividends exceeds the gain in utility generated by the growth in the future dividend and capital gain which is made possible by the retention. It follows that any r greater than r^* will lower the valuation of the firm in the stockmarket, as dissatisfied stockholders will attempt to penalize the management by selling their stock and buying the stock of another company which follows retention policies that are more to their liking.

The benefits which are derived by managers from increases in r do not require any abstinence on their part. When they retain their firm's earnings, managers are not sacrificing their own present income. Managers

will, therefore, want to push r to levels higher than the one most preferred by stockholders. They will, furthermore, do so even though, as r increases beyond r^*, the valuation of the firm will decline, provided that it does not fall below the minimum safe valuation.[58]

The macro-economic implications of the managerial theory follow immediately from the argument developed thus far. Since, in general, any management-controlled corporation will follow a retention policy such that $r > r^*$, the saving rate of an economy's private sector will be higher the larger is the share of income accruing to corporations.

C. Corporate Saving in Political-Economic Theories of Contemporary Capitalism

The classical savings function is thus found to be theoretically relevant to the study of contemporary capitalism, but only in its modified, 'managerial' form. According to Marris's theory, the macro-economic distribution of income is an important determinant of aggregate saving. But it is the distribution of private income between corporations and households, rather than the distribution between wages and profits, that is relevant for the study of the saving behavior of a

corporate economy. The same view is central to two recent political-economic theories of contemporary capitalism; those of J.K. Galbraith[59] and of S.A. Marglin.[60]

It is a common foundation of these two theories that the social stability of capitalism requires a high rate of economic growth.

> (The key to) the acceptability of capitalism to the overwhelming majority of the people who have no significant direct stake in private ownership of the means of production is...(the ability of capitalism to provide), with the passage of time, an ever-increasing abundance of material goods and services for an ever-increasing proportion of the population.[61]

But economic growth requires, among other things, accumulation of physical capital; and capital accumulation presupposes saving.

---

58 According to some neoclassical economists, the only safe valuation is the maximum valuation which pertains when the managers follow the wishes of the stockholders. For an exposition, analysis and empirical testing of the neoclassical view see M.J. Lambrinides, Can the Stock-market Reconcile Bureaucracy with Democracy? and Saving and Social Choice: A Study of the Relationship Between Personal and Corporate Saving (forthcoming Warwick Economic Research Papaers).

59 J.K. Galbraith, ibid.

60 S.A. Marglin, What do Bosses Do? The Origins and Functions of Hierarchy in Capitalist Production, mimeo., Cambridge, Mass., May 1971, especially part V on "Hierarchy and Savings."

In a capitalist economy, savings can be supplied either by individuals, who abstain from consuming their entire disposable income, or by organizations, notably corporations and the government. Both Galbraith and Marglin argue that individuals cannot be relied upon to supply consistently the amount of savings required to sustain a growth rate in the range experienced by contemporary capitalist economies. In the words of J.K. Galbraith,

> The individual serves the industrial system not by supplying it with savings and the resulting capital; he serves it by consuming its products. On no other matter, religious, political or moral, is he so elaborately and skillfully and expensively instructed ... It would be highly inconsistent for a society which so values consumption, and so relentlessly presses its claims, to rely on consumers, through their savings, for its capital. It would be even more incongruous if the need for capital were large. In a society which so emphasizes consumption and so needs capital, the decision to save should obviously be removed from the consumer and exercised by other authority. All industrial societies do so. In the formally planned economies of the Soviet Union and Eastern Europe, income is withheld for investment by the industrial enterprise and especially by the state. In the United States and the western-type economies this withholding is performed by the corporation.[62]

Galbraith's position is in agreement with Marglin's empirical investigations in personal saving behavior. Marglin has shown that the empirical evidence for the U.S. post-war economy is consistent with the hypothesis that

> Households tend to spend whatever income they can lay their hands on. Households do not save, by and large and on the average, except inadvertently--when their incomes are rising faster than they can adjust their spending. And growth-induced disequilibrium hardly provides enough saving to cover the costs of owner-occupied housing. Virtually nothing is left over to finance the acquisition of new plant and equipment.[63]

It is, then, the

> hierarchical control of production (that) prevents the spending tendencies of households from putting an end to accumulation because it permits those at the top to set aside resources for expansion of the means of production before turning the value added by producers to workers and shareholders in the form of wages and dividends.[64]

---

61 Marglin, ibid., p. 82.

62 J.K. Galbraith, ibid., pp. 37-38.

63 S.A. Marglin, ibid., p. 80.

64 Op. cit., p. 80.

Both Marglin and Galbraith thus maintain that, in contemporary corporate economies, individuals cannot be relied upon to save any significant portion of their disposable income. It follows that, according to them, the private rate of saving will vary inversely with the share of households in after-tax private income and positively with the corporate share.

4. Corporate Saving and the Cambridge Theory of Distribution

The three theories which have been analyzed so far in this chapter all imply that, if the classical savings function is to be applicable to advanced capitalist economies, it must be modified so as to concentrate on the distribution of income between corporations and households rather than between wages and profits. The Cambridge Theory of Distribution, which was outlined in Part I, is intended to be a theory of advanced rather than early capitalism. It is, therefore, interesting to find out why it is that the Cambridge economists have maintained the classical dichotomy, lumping together dividend income, which accrues to households, with retained earnings which accrue to corporations.65

In his defense of the Cambridge Theory of Saving

against Samuelson and Modigliani, N. Kaldor put his case as follows

> I have always regarded the high savings propensity out of profits as something which attaches to the nature of business income, and not to the wealth (or other peculiarities) of the individuals who own property...In the early days of industrial capitalism when the ownership and management of businesses were united in the same person...a high propensity to plough back business profits inevitably entailed a high propensity to save out of individual income... But nowadays businesses are to a large extent owned by rentier-capitalists (shareholders) whose personal saving propensity need bear no relation to the savings propensity of the enterprises which they own. They are free to consume, in addition to their dividend income, as much of their capital (or their capital gains) as they like.[66]
>
> (emphasis added)

We see, then, that Kaldor is anxious to emphasize that, according to his theory, the propensity to save out of dividends is not generally higher than the propensity to save out of wages. But, if that is the case, then it is not the distribution of private income between profits and wages which is critical for the determination

---

65 In the ensuing discussion, we will follow Kaldor in assuming that the marginal and average propensities to save out of any given type of income are constant and, therefore, equal to one another.

of private saving under advanced capitalism, where the dominant form of business organization is the corporation. For, if $s_w = s_d$,[67] then any given distribution of private income between profits and wages, is consistent with an infinity of private saving rates, depending upon the apportionment of profits between dividends and retentions.

It seems then that Kaldor is substantively in agreement with the other theorists discussed in this chapter. On Kaldor's own terms, it is not profits in general, but only retained profits that are characterized by a saving propensity higher than the propensity to save out of wages.

CONCLUSION

> "Our society is an organizational society. We are born in organizations, and most of us spend much of our working lives working for organizations, We spend much of our leisure time paying, playing and praying in organizations. Most of us will die in an organization, and when the time comes for burial, the largest organization of all - the state - must grant official permission."
>
> A. Etzioni, Modern Organizations (Prentice-Hall, 1964), p. 1.

---

66 N. Kaldor, "Marginal Productivity and the Macro-Economic Theories of Distribution," The Review of Economic Studies, vol. XXXIII (4), No. 96, October 1966, pp. 310-311.

Like all other aspects of life in advanced, industrial societies, economic life is pervaded by large, bureaucratic organizations. One of the most obvious changes in the structure of developed, capitalist economies during the twentieth century is the dominant position which is now occupied by large corporations and the government.

> Nothing so characterizes the industrial system as the scale of the modern corporate enterprise. In 1962 the five largest industrial corporations in the United States... possessed over 12 per cent of all assets used in manufacturing. The fifty largest corporations had over a third of all manufacturing assets. The 500 largest had well over two thirds...In the mid-nineteen fifties, 28 corporations provided approximately 10 per cent of all employment in manufacturing, mining and retail and wholesale trade... In 1970 four corporations accounted for an estimated 22 per cent of all industrial research and development expenditure.[68]

And,

> the services of Federal, state and local governments now account for between a fifth and a quarter of all economic activity (in the United States). In 1929 it was about eight per cent.[69]

---

67 s_w stands for the propensity to save out of wages; s_d for the propensity to save out of dividends.

68 J.K. Galbraith, The New Industrial State (Boston: Houghton-Mifflin, 1967), pp. 74-75.

The paper has shown that the increased bureaucratization of economic life requires a modification in the focus of the view that aggregate saving depends on the macroeconomic distribution of income. If it is to be applicable to contemporary capitalist economies with a sizable corporate sector, the Classical Savings Function, which asserts that saving depends on the distribution of income between wages and profits (whether distributed to shareholders or retained by corporations), must be replaced by the Managerial Savings Function, which considers private saving to be a function, inter alia, of the division of after-tax private income between households and privately owned corporations. According to the Managerial theory, the saving rate of an economy's private sector will, ceteris paribus, be higher the larger is the share of corporations in after-tax private income.70

---

69 Ibid., p. 2.

70 That the increased bureaucratization has made a significant difference to the operation of the economy is not universally accepted. Neo-classical economic theory regularly analyzes contemporary capitalism by using general-equilibrium models which do not differ, in any substantive way, from the model presented by Walras in 1874. By failing to include the large corporation and the government in its model of the economy, neo-classical analysis has taken the position that the consequences of the increased bureaucratization of

continued overleaf

footnote 70 continued

economic life are, at most, of the second order of importance.

For an analysis of the neo-classical theorem that aggregate saving is not affected by the distribution of after-tax private income between corporations and households see the author's Can the Stockmarket Reconcile Bureaucracy with Democracy? (forthcoming Warwick Economic Research Paper).

For an econometric test of the validity of the Managerial Savings Function against the neo-classical theorem that saving and corporate structure are not related functionally see M.J. Lambrinides, Saving and Social Choice: A Study of the Relationship Between Personal and Corporate Saving (forthcoming Warwick Economic Research Paper). It is there shown that, in the case of the U.S. economy during the period 1919-58, the re-allocation of one dollar of after-tax private income from the household to the corporate sector has resulted to twenty to forty cents of extra saving.