Classical Economics and the Question of Effective Demand

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‘What is now proved was once only imagined.’ – William Blake

ABSTRACT

The principle of effective demand was independently discovered by Kalecki (1933) and Keynes (1936). This simultaneous discovery is all the more interesting given their very distinct and different intellectual backgrounds. From my historical investigation, I find a strong thread running all the way from Cantillon (1755) and other classical economists to Marx which ascribes an important role for consumption demand as a determinant of economic growth. Rosa Luxemburg, working on Marx’s analytical framework, poses what I call ‘the Keynes question’: where does the continuous growth in demand which would validate the growth in supply come from? It is therefore Luxemburg’s theory of capital accumulation which acts as the bridge between classical economists, Marx and Kalecki. Thus, I find a strong case for arguing that the problem of demand-deficiency – or equivalently, the question of aggregate demand sufficiency – organically grew out of classical economics.

1 Introduction

The economics of Cantillon, Quesnay, Turgot, Steuart, Smith, Ricardo, Sismondi and Malthus find a mature treatment in the work of Marx. In particular, the work of Quesnay, Smith, Ricardo and Sismondi occupy a pivotal position. Rosa Luxemburg, in her Accumulation of Capital (1913), employs Marx’s analytical framework to pose, what we have called the (dynamic) Keynes question: where does the continuous growth in demand which would validate the growth in supply come from? Subsequently, in 1933, with strong influences from Marx and Luxemburg, Michał Kalecki develops his theory of activity levels and employment. Kalecki (in 1933) and Keynes (in 1936) independently discovered the principle of effective demand. It will be seen in this paper that the problem of demand-deficiency, so to speak, – or equivalently, the question of aggregate demand sufficiency – organically grew out of classical economics, with Luxemburg’s theory of capital accumulation acting as the bridge between classical economists, Marx and Kalecki.

Section 2 brings together the link between consumption demand and economic growth in classical economics and Marx. The pivotal position of Luxemburg in the Marx-Luxemburg-Kalecki sequence (with respect to the question of demand sufficiency) is presented in section 3. Section 4 discusses the principle of effective demand in Kalecki and Keynes and its not-so-shadowy presence in the classical economists in their exposition of the circular flow. Section 5 concludes the paper.
2 Consumption demand and classical growth theory

It is the lack of an analysis of planned saving and planned investment in the work of classical economists, except for fragments in Sismondi and Marx, which allow us to focus on consumption demand. A very special assumption is made by the classical economists, especially Smith and Ricardo (and even Malthus), when they treat planned saving to be one and the same as planned investment. This is not an accounting identity which is true by definition nor is it an equilibrium condition in their theoretical framework. As a consequence of such an assumption, the problem of demand insufficiency is not manifest in Smith and Ricardo. Growth, in Smith, is determined by the gap between output per worker and real wages and higher growth is brought about by a widening of this gap. Similarly, in Ricardo, it is the same gap which is necessary for growth. For both Smith and Ricardo, higher the ratio of productive to unproductive labour over time, higher is the rate of growth. In contrast, Malthus and Sismondi stress the need to have an optimum ratio between the two such that the (unproductive) consumption demand is sufficient to fill the gap between output per worker and real wages, thereby validating the output supplied. Sismondi does not, unlike Ricardo explicitly, and Smith implicitly, assume that planned saving and planned investment are one and the same thing. Although Malthus makes the very special assumption, he rightly points out the dependence of investment on consumption, a kind of an accelerator idea. Marx furthers the analysis found in the classical economists, particularly through the attention paid to the nature and role of money in a capitalist economy. In Marx, the balance between aggregate supply and aggregate demand is accidental because of the unstable nature of investment demand.

The following can be said about classical growth theory. Firstly, net capital accumulation is necessary for growth. Secondly, all the authors are aware of the constraints posed by aggregate demand on activity levels and growth, but due to the special assumption found in Smith and Ricardo especially, problems arising from insufficient aggregate demand do not emerge. Cantillon, Quesnay, Turgot and Steuart particularly emphasize the role of consumption demand in the determination of activity levels. Thirdly, the further dynamic question of whether the growth in productive capacity from net investment will be validated by further growth in demand is not addressed. Fourthly, there are no automatic tendencies which ensure that the demand for labour adapts to its supply. As a matter of fact, in the classical economists and Marx, the equilibrium in the commodity market does not simultaneously engender equilibrium in the labour market.

The classical economists before Smith, with the exception of Cantillon, possessed a rudimentary, but a clear account of the necessary role of capital accumulation in determining activity levels. The first theory of capital accumulation is to be found in Quesnay, despite his theory of profits being highly unsatisfactory. All the classical economists and Marx acknowledge that net capital accumulation is necessary for economic growth. But, net capital accumulation, as Malthus, Sismondi and Marx point out, is not
sufficient for economic growth. The idea that demand should validate supply is to be found in the concept of the circular flow, found in Cantillon, but rendered significantly greater analytical clarity by Quesnay, and also present in Turgot and vaguely in Steuart. Marx’s depiction of the circuit of capital and the circular flow notion as outlined by Quesnay possess a strong conceptual affinity. Moreover, in both these accounts, it is demand which is relatively autonomous. That is, commodity supplies adapt to commodity demands. In addition to demand (particularly consumption demand) being the autonomous element, there is much discussion of taste formation in Cantillon and Steuart, which is valuable in developing a classical theory of consumption along the lines of Duesenberry’s relative income hypothesis.

The concept of circular flow, conspicuous in Quesnay and Turgot, suggests that if the planned expenditure is insufficient to demand the aggregate output at their normal prices, then activity levels will fall in the subsequent period of production. It is in this context that they discuss saving, a leakage from the circular flow. Both Quesnay and Turgot mention hoarding, a particular form of saving, as detrimental to activity levels. Hoarding or what Steuart calls ‘laid up’ profits is correctly treated as a leakage from the circular flow. The concept of circular flow is present in Cantillon, but not as analytically vivid, as in Quesnay. Closely related to this concept is the notion of the surplus in classical economics. As a matter of fact, it is the notion of the surplus which renders classical economics a distinct approach in understanding economic processes and makes it stand in marked contrast to marginalist economics, where there is no surplus to be found.

Before Smith, the dominant role of consumption demand in the determination of activity levels was discussed in relation to the concept of circular flow primarily, and also in the context of the realization of the surplus. From Smith onwards, the importance of demand in general is discussed in the context of the realization of the surplus (and the subsequent generation of incomes, notably profit income), which is conceptually distinct from the existence of the surplus itself. In Smith, the ‘extent of the market’ poses a constraint on the capacity growth generated by net capital accumulation. Sismondi and Malthus raise objections to Ricardo’s lack of attention to demand and they emphasise the economy’s need to possess the right proportion between productive and unproductive consumption in order to ensure the sufficiency of demand such that the surplus can be realized. Sismondi also utilises the concept of the circular flow which translates into a spiral when discussing growth: ‘[a]ggregate consumption determines an equal or greater reproduction. It is here that the circle can enlarge itself and change into a spiral’ (New Principles: 104). It is in Marx that the problem of demand deficiency gets tackled more vehemently and receives an extensive treatment, albeit scattered across his various texts. Demand deficiency adversely affects the realization of the surplus (or surplus value) and
leads to the possibility of crises. In sum, Sismondi, Malthus and Marx pointed out the problems with the crypto-supply-side growth theory found in Smith and Ricardo.  

Conceptually, the surplus and its realization forms need to be kept distinct. Surplus, in classical economics, refers to that part of the aggregate output which is left over once the replacement requirements are met. If workers have a share in the surplus, then the surplus has to be distributed between workers and capitalists as wages and profits. The classical economists and Marx assumed workers’ wages to be at subsistence levels, a magnitude determined by wider social and political factors. This assumption sort of implies that the wages were only adequate for their consumption. The surplus, however, can be said to be realized if and only if the entire output finds buyers and is sold at least at their normal prices. The existence of a surplus does not and cannot guarantee its realization, except when the special assumption is made that planned saving is the one and same as planned investment.

Quesnay identifies the role workers' consumption plays in maintaining the bon prix of agricultural commodities, the bon prix being a variable analogous to normal prices in spirit. In Sismondi, the depressed wages, which in turn is a product of the extant social order, is considered the main factor through which a general glut occurs; in other words, such depressed wages and consequently low workers' consumption negatively impacts the realization of the surplus. When the entire surplus is not realized (at normal prices), capitalists will be unable to obtain their entire profits, which will consequently affect net investment and aggregate output in the following period of production. Even if the rate of profit is the only motive for accumulation, the realization of the rate of profit associated with any given real wage and production methods depends upon natural prices prevailing. And these natural prices may not prevail if there is insufficient demand for the productive capacity generated by the additional accumulation. This issue finds a clearer articulation in Marx in what he calls the ‘general formula of capital’ (Capital I: 153). Although the surplus is generated in the sphere of production, it is realized only in the sphere of exchange. Due to the volatility attributed by Marx to investment demand, the gap between gross output and real wages (and unproductive consumption) is not always entirely filled leading to periodic crises.

The correct formulation of the productive-unproductive labour/consumption distinction in the context of growth theory is that it reflects the balance between capacity creating expenditure and non-capacity creating expenditure. Capital expenditure, which in both the classical economists and Marx includes wages of productive labour, is capacity-

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1 Pasinetti (1997: 101) also notes that the problem of demand deficiency is present in classical economics with Sismondi, Malthus and Marx emphasizing the periodicity of market gluts.
2 There are references to workers’ saving in Cantillon, Steuart and Smith thereby indicating that by subsistence wages, classical economists did not refer to a biological subsistence.
3 I write ‘in spirit’ owing to the logical problems with Quesnay's price theory.
creating whereas unproductive consumption expenditure is non-capacity-creating, and so the latter is capable of filling the gap between capital expenditure and aggregate supply. In so far as investment demand is ultimately a derived demand, it is not economically feasible for investment demand to fill the gap entirely unless it is a single good economy with the same good being used for investment and consumption (much like Aspromourgos’s (2009: 195) characterization of Smith’s saving and investment decisions as being ‘akin to a corn farmer’). Roy Harrod’s model of growth demonstrates the case of ongoing growth in an economy with capital goods alone, but the growth path is a highly unstable one (Harrod 1939). That is, logically, there can be a path of investment that is appropriate to a full employment effective demand; it is self-validating but requires special assumptions. In conclusion, consumption demand plays a dominant and a relatively autonomous role in the growth theory of the classical economists and Marx through the two related concepts discussed in this section – the circular flow and the surplus realization.

3 Marx-Luxemburg-Kalecki

Employing the classical concepts of surplus and its realization, Marx is able to point out that periodic crises occur due to the recurrent insufficiency of demand. This is the point made earlier by Sismondi and Malthus. In Sismondi and Marx, since workers’ wages are less than the value they add to the product, workers’ consumption is never sufficient to buy back the entire product. Together with the instability of investment demand, the realization of the surplus is not assured. To put it differently, the gap between the value of output and the real wages is not filled. Drawing on the theoretical framework employed by Marx, Rosa Luxemburg engages closely with the problem of demand insufficiency in her Accumulation of Capital (AC hereafter) published in 1913 (cf. Groenewegen 2013: 71).

The object of her study is also a capitalist economy where ‘production is primarily production by innumerable private producers without any planned regulation’ (AC: 34, also see 78). In this economic system, the main aim of the capitalist ‘is the production of surplus value’ (AC: 37, 42). More precisely,

[...]he aim and incentive of capitalist production is not a surplus value pure and simple, to be appropriated in any desired quantity, but a surplus value ever growing into larger quantities, surplus value *ad infinitum*.

(AC: 39)

Luxemburg possesses a theory of growth. By growth, she refers to ‘the gradual expansion of production beyond immediate requirements, and in a continual growth of the population itself as well of its demands’ (AC: 41). Wages of the workers are at subsistence levels, as in

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4 According to Eltis, strong traces of Harrod’s growth formula can be found in Quesnay and Marx (Eltis 1998). From the discussion in section 1, it is perhaps possible to find traces not just in Quesnay and Marx, but also in Sismondi and Malthus.

5 Groenewegen (2013: 80) points out the strong likelihood of J. A. Hobson as also having ‘guided Luxemburg on the matter of demand deficiency’ alongside Marx.
Marx and the classical economists (AC: 78). Her analysis of growth does not take into account foreign trade since Marx ‘treats the whole world as one nation’ (AC: 139).\(^6\) That is, the entire world is treated as a single closed economy.

According to Luxemburg, it is in Marx that we first come across ‘the problem of the reproduction of the entire social capital’ (AC: 31). She reiterates: ‘[i]ndeed almost every scientific economist up to the time of Marx concluded that there is no social capital’ (AC: 54). But, clearly, this is not a correct observation because the classical economists’ distinction between necessaries and non-necessaries and the subsequent distinction between productive and unproductive labour points towards the presence of the notion of a ‘social capital’. Marx looks at simple as well as expanded reproduction, the former being the starting point or the basis to examine the latter. Luxemburg explains the role of simple reproduction in the following extracts.

... Marx’s diagram of simple reproduction is valid as the starting-point and foundation of the reproductive process not only for capitalism but also, \textit{mutatis mutandis}, for every regulated and planned economic order, for instance a socialist one.

\textit{(AC: 103)}

In theory, the analysis of simple reproduction also provides the necessary starting point for all scientific exposition of enlarged reproduction.

\textit{(AC: 107)}

In order to formulate the problem of reproduction in the most basic manner, Luxemburg, following Marx, considers ‘for the present only two departments of total capital: the production of producer goods, and that of consumer goods for workers and capitalists’ (AC: 83).\(^7\) These two departments are studied both in isolation and in relation to each other. The latter clarifies the inter-sectoral relations between ‘producer goods’ and ‘consumer goods.’

The two departments are interdependent, and are therefore bound to display a certain quantitative relationship, namely the one department must produce all means of production, the other all provisions for the workers and capitalists of both departments.

\textit{(AC: 84)}

And although the absolute figures used in Marx’s scheme are arbitrary, the ‘quantitative relationship’ expresses fundamental relations in a growing economy. As Luxemburg observes, it is ‘the quantitative ratios which are relevant, since they are supposed to express strictly determinate relationships’ (AC: 122).

\(^6\) Luxemburg also recognises that foreign trade is excluded in the theories of Sismondi and Ricardo. ‘Right at the outset of their debate, Sismondi and Ricardo had agreed on a remarkably lucid and precise formulation of the problem, excluding the question of foreign commerce altogether’ (AC: 205).

\(^7\) It is perhaps inappropriate to consider the consumption goods of capitalists as part of ‘total capital’ unless they refer to the goods necessary for the reproduction of the capitalists.
Net accumulation requires an increase in the production of constant capital (‘producer goods’) thereby enabling the capitalists to appropriate greater surplus value from the workers (AC: 40, 109). With simple reproduction, the constant capital warrants merely a strict renewal. Positive net accumulation forms the basis of enlarged reproduction.

[The] use of part of the surplus value (and in particular the use of an increasing part of it) for the purpose of production instead of personal consumption by the capitalist class, or else the increase of reserves, is the basis of enlarged reproduction under capitalist conditions of production.

(AC: 108)

That is, ‘the capitalists’ abstention from consuming the whole of their surplus value ... [is] the foundation of accumulation’ (AC: 132). It is as if the capitalists on their own are transforming their saving directly into investment without requiring any wider saving-investment coordination.

Investment is a necessary condition for expanded reproduction, but it is not sufficient. In fact, for surplus value (or profits) to be realised so that it can be accumulated, it is necessary that ‘the commodities produced during the preceding period of production’ be successfully sold (AC: 40). In addition, the commodities produced in the current period ought to be *profitably* sold.

It is absolutely essential to the accumulation of capital that a sufficient quantity of commodities created by the new capital should win a place for itself on the market and be realised.

(AC: 44)

Moreover, if one group of capitalists decide to invest a large proportion of their profits, then, what economic forces ensure that the increased output fill find adequate aggregate demand? If a gap exists, there will be a glut in the market. As in Marx, the following possibilities exist for the occurrence of an economic crisis. One possibility arises when all the capitalists decide to accumulate; as a consequence, the supply of their output rises but they are unable to find buyers. Another route is through the hoarding of money. Finally, there could be a disproportion with respect to the production and consumption plans of the various industries. These three possibilities are contained in the following three excerpts respectively.

[t]he ‘abstinence’ of the capitalists in Department I ... finds expression in a painful loss of consumers for whose expected demand production had largely been calculated. Since the capitalists of Department II, on whom we tried the experiment whether they might not possibly be the long-sought buyers of the additional product of accumulation in Department

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8 Hence, during expanded reproduction, ‘the proportion of constant to variable capital changes’ (AC: 110n). Luxemburg notes, ‘[t]his continuous qualitative change in the composition of capital is the specific manifestation of the accumulation of capital, that is to say of enlarged reproduction on the basis of capitalism’ (AC: 110). This is a contingent proposition, as it is in Marx.
I, are themselves in sore straits—not knowing as yet where to go with their own unsold product—they are even less likely to be of any help to us. There is no shutting our eyes to the fact that an attempt to make one group of capitalists accumulate at the expense of the other is bound to get involved in glaring inconsistencies.

(AC: 150)

Money is withdrawn from circulation and accumulated as a hoard by the sale of commodities without a subsequent purchase. If this operation is conceived as one taking place universally, then it seems inexplicable where the buyers are to come from, since in that case everybody would want to sell in order to hoard, and no one would want to buy.

(AC: 140-1)

...a crisis could be explained only by a disproportion of production in various branches, and by a disproportion of the consumption of the capitalists and the accumulation of their capitals.

(AC: 332)

A formulation of growth based on departments or sectors can only talk of demand deficiency as arising from disproportions between these units. The deeper reason, as Luxemburg notes, pertains to the contradictory nature of accumulation and consumption in a capitalist economy (see also AC: 147, 155).

[Marx’s scheme] does indeed permit of crises but only because of a lack of proportion within production, because of a defective social control over the productive process. It precludes, however, the deep and fundamental antagonism between the capacity to consume and the capacity to produce in a capitalist society, a conflict resulting from the very accumulation of capital which periodically bursts out in crises....

(AC: 346-7; emphasis added)

Given that aggregate output and aggregate demand have to be equal, growth occurs if and only if the increase in supply generated by the net capital accumulation is exactly validated by an increase in demand.

Luxemburg poses the dynamic Keynes question in different contexts trying to locate what might provide the source of additional demand in an economy with positive net capital accumulation. Her questions are simultaneously directed at sectoral analysis and to aggregate analysis.

From the point of view of reproduction the question is a different one. How is it possible that the unplanned supply in the market for labour and means of production, and the unplanned and incalculable changes in demand nevertheless provide adequate quantities and qualities of means of production, labour and opportunities for selling which the individual capitalist needs in order to make a sale? How can it be assured that every one of these factors increases in the right proportion?
...the desire to accumulate plus the technical prerequisites of accumulation is not enough in a capitalist economy of commodity production. A further condition is required to ensure that accumulation can in fact proceed and production expand: the effective demand for commodities must also increase. Where is this continually increasing demand to come from, which in Marx’s diagram forms the basis of reproduction on an ever rising scale?

(AC: 131)

...the question is: if, and in so far as, the capitalists do not themselves consume their products but ‘practise abstinence’, i.e. accumulate, for whose sake do they produce? Even less can the maintenance of an ever larger army of workers be the ultimate purpose of continuous accumulation of capital. From the capitalist’s point of view, the consumption of the workers is a consequence of accumulation, it is never its object or its condition, unless the principles (foundations) of capitalist production are to be turned upside down.

(AC: 334)

That is, in an economy where net accumulation is positive and workers are paid subsistence wages, where does the demand to consume the increased supply of commodities come from? ‘The question is rather where the demand can arise—to find an effective demand for the surplus value’ (AC: 164; cf. Sweezy 1942: 202-3; Trigg 2009: 38; Groenewegen 2013: 76). One possible answer is that ‘the natural increase of the population creates this growing demand’ (AC: 133). If so,

[t]he question is therefore whether the natural increase of the working class also entails a growing effective demand over and above the variable capital. And that is quite impossible. The only source of money for the working class ... is the variable capital which must therefore provide in advance for the natural increase of the workers.

(AC: 134)

In other words, the ‘extra demand’ cannot come from workers’ wages which are at subsistence levels and equals the variable capital (also see AC: 143) for it is always less than the value of the product they produce. The other possible route is via foreign trade (AC: 136); but, by assumption and with respect to discovering general laws, foreign trade is not admissible. Luxemburg reiterates: ‘[t]his brings us back to the old question: How, and by whom, is the accumulated surplus value to be realised?’ (AC: 139).

Luxemburg identifies the various routes by which this ‘extra demand’ has been treated in the literature before proceeding to provide her solution; the classical economists Sismondi and Malthus find a mention.

A sure instinct that realisation of the surplus value requires ‘third persons’, that is to say consumers other than the immediate agents of capitalist production (i.e. workers and capitalists) led to all kinds of subterfuges: ‘unproductive consumption’ as presented by Malthus in the person of the feudal landowner, by Vorontsov in militarism, by Struve in the ‘liberal professions’ and other hangers-on of the capitalist class; or else foreign trade is brought into play which proved a useful safety valve to all those who regarded accumulation with scepticism, from Sismondi to Nicolayon.
Marx has not provided an answer (cf. AC: 165). Her solution, which she considers a ‘historical’ one as opposed to a ‘theoretical’ one, is that ‘there should be strata of buyers outside capitalist society’ (AC: 351). ‘Whatever the theoretical aspects, the accumulation of capital, as an historical process, depends in every respect upon non-capitalist social strata and forms of social organisation’ (AC: 366; also see 417).

In an open economy with a government, Luxemburg’s solution, logically speaking, points to a foreign trade surplus and/or government spending. These two, together with capitalists’ consumption, are the components of Michal Kalecki’s theory of the realization of profits. The first, of course, has a problem of global coherence, since the balance of trade must be zero for the world as a whole. But, this does not, perhaps, mean that the chase for trade surpluses is irrelevant to the level of global effective demand. In 1933, building on Luxemburg’s work, Kalecki presented his theory of activity levels, within the framework of a cycle (cf. Sawyer 1985: 148). At the same time, his is also an account of the realization of the surplus, or with Kalecki’s assumption regarding wages, of profits. Gross investment, capitalists’ consumption and workers’ consumption determine aggregate output. It is therefore Luxemburg who acts as the bridge between classical economists, Marx and Kalecki. Her work also reinforces the occurrence of crises as a permanent feature of capitalism, the reason being aggregate demand deficiency.

4 Kalecki, Keynes and classical economics

Kalecki and Keynes independently discovered the principle of effective demand. From the detailed historical investigation presented in the previous chapters and summarised in section 1, it is clear that the problem of demand was extant in classical economics and in Marx. In this section, the principle of effective demand in Kalecki and Keynes will be succinctly articulated, and its connection with the circular flow in classical economics systematically addressed. Furthermore, the standpoint of Kalecki, Keynes and the classical economists and Marx on labour demand and supply will be assessed. It will be presently seen than the dynamic question of capacity and demand growth is not posed by either Kalecki or Keynes (though Luxemburg did pose it).

Aggregate income \((Y)\), in Kalecki, is broken down into wages \((W)\) and profits \((P)\). Workers are assumed to spend their entire wages on consumption \((C_w)\). Capitalists use profits either for consumption \((C_p)\) or accumulation \((A)\).

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9 Sebastiani also notes the role of Luxemburg for Kalecki’s theoretical framework. ‘[F]or Kalecki, the approach to the theory of effective demand came about as a natural extension of his own cultural tradition. This continuity is reflected in several aspects of Kalecki’s work, where Marx’s influence worked mainly through Rosa Luxemburg’ (Sebastiani 1991: 268). Kowalik expresses this view more forcefully: ‘...Michal Kalecki’s (M.K.) theory is the best theoretical continuation and solution to the main problems that Rosa Luxemburg (R.L.) wanted to solve in her opus magnum’ (Kowalik 2009: 102).
\[ Y = W + P \]
\[ W = C_w \]
\[ P = C_p + A \]
\[ Y = C_w + C_p + A \]  
\[ W + P = C_w + C_p + A \]  
(11.1)

Since \( W = C_w \), we arrive at
\[ P = C_p + A \]  
(11.2)

In Kalecki’s formulation, capitalists’ consumption contains an autonomous component \((B_0)\), that is, a portion of capitalists’ consumption that is independent of profits. Moreover, when profits increase, the consumption that is induced by the profit increase does not rise in proportion (that is, \(0 < \lambda < 1\)).

\[ C_p = B_0 + \lambda P \]  
(11.3)

Investment orders are an increasing function of autonomous consumption and gross accumulation and a decreasing function of the volume of capital equipment. Investment, in Kalecki, depends on autonomous consumption and gross accumulation in relation to the volume of existing capital equipment (Kalecki 1933: 8-9). In other words, an increase in capitalist consumption and/or investment demand induces more investment. This is the accelerator idea, that investment is ultimately derived a derived demand and is not entirely autonomous of consumption. From 11.2 and 11.3,

\[ P = B_0 + \lambda P + A \]
\[ P = [1/(1 - \lambda)] * [B_0 + A] \]  
(11.4)

The algebra outlined above is a theory of activity levels as well as a theory of profit realization (cf. Kalecki 1933: 1-2 for a concise algebraic account). Capitalists will earn (normal) profits only if adequate aggregate demand (consumption and investment demand) is forthcoming. The first term in equation (11.4) is the profit multiplier. For any given \(B_0 + A\), an increase in the propensity to consume by capitalists \((\lambda)\) will increase aggregate demand and consequently raise profits and activity levels. Alternatively, profits and activity levels increase if there is in increase in autonomous consumption and/or investment for any given propensity to consume.

Does Kalecki (1933) encompass a theory of value? Yes, it does. A theory of value is necessary so that prices and the rate of profit can be determined. According to Kalecki,

\[ P = pY \]
where \( p \) is the profits per unit of output and \( Y \) is the volume of aggregate output. Kalecki then assumes that ‘aggregate production and profit per unit of output rise or fall together’ (Kalecki 1933: 11n; see also the discussion at Sawyer 1985: 160 on the ‘proximate cause of profits’ in Kalecki).\(^ {10} \) This assumption renders Kalecki’s theory of the rate of profit (and value) unsatisfactory, much in the same way as Quesnay’s theory of value (see section 3.2). Kalecki, as Sebastiani writes, ‘sticks stubbornly to the field of market prices ... so that his conception of profit appears entirely within the sphere of realization’ (Sebastiani 1991: 265).

When capitalists’ consumption increases, the production of consumption goods for capitalists expands which generates a rise in labour employment in the consumption goods industry. Further, this additional labour employment causes an increase in production of consumer goods for workers. Together, they lead to a rise in the aggregate output and employment levels. According to Kalecki, \( Y \) and \( p \) rise until the increase in profits exactly equal the sum of the increase in the production of investment goods and capitalists’ consumption (\( \Delta P = \Delta C_P + \Delta A \)). This implies that ‘[c]apitalists as a class gain exactly as much as they invest or consume’ (Kalecki 1933: 12). And, if they neither invested nor consumed, they would not make any profits. To put the question differently, what fills the gap between the value of output and real wages in Kalecki? His answer is: gross accumulation and capitalists’ consumption.\(^ {11} \)

This gap between wages and output, and the filling of this gap in Marx, Luxemburg and Kalecki is analytically equivalent to Keynes’s saving gap. In Keynes’s theory, for any hypothetical increase in income, the associated increase in aggregate output will not be validated by the increased aggregate demand unless ‘something else’ fills the gap between the change in income and change in consumption – as shown in the diagram below. This something else is investment in Keynes’s framework, as expounded in The General Theory of Employment, Interest and Money (1936). Moreover, the presence of autonomous elements of aggregate demand implies that there are no systematic forces which ensure that the saving gap is entirely and exactly filled up by investment demand.

\(^ {10} \) A similar line of reasoning is to be found in the Treatise on Money published in 1930, wherein Keynes, while distinguishing saving from investment, argues that the difference between the two would be eliminated via changes in the prices of investment goods and/or consumption goods which would subsequently impact profits (Moggridge 1973: 339).

\(^ {11} \) ‘The conclusion that the increase in capitalists’ consumption increases in turn their profits, contradicts the common conviction that the more is consumed the less is saved. This approach, which is correct with regard to a single capitalist, does not apply to the capitalist class as a whole’ (Kalecki 1933: 12). For, the ‘[i]nvestment or consumption of some capitalists creates profits for others’ (ibid).
As Keynes observes in the final chapter (chapter 24 titled ‘Concluding Notes on the Social Philosophy towards which the General Theory might Lead’): ‘the growth of wealth, so far from being dependent on the abstinence of the rich, as is commonly supposed, is more likely to be impeded by it’ (Keynes 1936: 372). This is essentially the Kalecki proposition that capitalists’ consumption and accumulation determine activity levels and profits.

Aggregate output is determined by aggregate demand, which is chiefly constituted by consumption and investment demand in a closed economy without government. Keynes’s principle of effective demand can be formulated in a very simple manner as follows. The macroeconomic equilibrium condition is that planned aggregate monetary expenditure ($AD$) must equal the monetary value of aggregate output ($Y$): $Y = AD$. The proceeds from the sale of aggregate output accrue as wages and profits, their total being the national or aggregate income.

$$AD = C + I$$

$$C = C_0 + cY$$

$$I = \bar{I}$$

The consumption ($C$) and investment ($I$) demands make up the aggregate demand. Consumption demand contains an autonomous component ($C_0$) and an induced one, the latter dependent on aggregate income. The magnitude of induced income depends on the change in aggregate income and the marginal propensity to consume ($c$) which is assumed to lie between zero and one. Investment is given. Since, in equilibrium, $Y = AD$,

$$Y = C_0 + cY + \bar{I}$$
\[ Y = \frac{1}{(1 - c)} \times [C_0 + \bar{I}] \]  

Activity levels, in Keynes, are determined by autonomous demands and the multiplier \(\frac{1}{(1 - c)}\) reflecting the demand induced by them. The greater the propensity to consume, the larger is the multiplier and consequently higher the activity levels. When the economy is in equilibrium, the aggregate demand and aggregate supply of commodities do equilibrate but labour demand and labour supply do not. Keynes’s theory also therefore points out that there are no persistent forces in a competitive economy which results in the full-employment of labour.

Aggregates demand determines aggregate supply. This entails that investment determines saving. In equilibrium, aggregate supply and demand are equal and so are planned saving and investment. Since decisions to save and invest are in general undertaken by different sets of people, what mechanisms ensure the equality between full employment saving and planned investment? According to Keynes, it is activity levels which act as the equilibrator. The theoretical and practical insight Keynes provides is the following: ‘the level of income must be the factor which brings the amount saved to equality with the amount invested’ (Keynes 1936: 179). Furthermore, he points out that full employment is a special case and not a general one, which can exist only ‘by accident or design’ (Keynes 1936: 28). The equality between full employment planned saving and planned investment, as per the principle of effective demand, is a fluke. This is because, at the full-employment position, investment has to exactly equal the volume of saving (income minus consumption) generated by the income arising from production. When the volume of investment exceeds the full-employment level of saving, inflation occurs and there is disequilibrium between planned saving and planned investment (Keynes terms this ‘a state of true inflation’. (Keynes 1936: 118-9)). The other disequilibrium situation, and the more common one, in Keynes’s view, is when full employment planned saving exceeds planned investment. As Keynes phrases it:

...employment can only increase pari passu with an increase in investment; unless, indeed, there is a change in the propensity to consume. For since consumers will spend less than the increase in aggregate supply price when employment is increased, the increased employment will prove unprofitable unless there is an increase in investment to fill the gap.

(Keynes 1936: 98)

The resultant equilibrium is one which is characterised by unemployment of labour (with unutilised and under-utilised capacity) (cf. Garegnani 1979: 68; Milgate 1982: 78). That gap, Keynes suggests, ought to be filled up by investment demand (cf. Bleaney 1976: 223). As Kahn also notes, investment ‘is the constituent of Effective Demand which is mainly responsible for fluctuations, and also for demand being often chronically unduly low – as

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12 No special significance is ascribed to consumption demand, except indirectly through the propensity to consume function, in Keynes (Bleaney 1983: 221; Sawyer 1985: 185-6 points out that both Kalecki and Keynes viewed investment as the more active variable).
well as, on occasion, unduly high' (Kahn 1984: 142). And this is also the Marx point. In Kalecki as well, it is the fluctuations in investment based on ‘changes in profitability and economic activity’ which drive the fluctuations in aggregate demand and therefore activity and employment levels (Sawyer 1985: 154; also see Vianello 1989: 165 on this in Marx and Kalecki).

How did Keynes arrive at the principle of effective demand? His economics is thoroughly influenced by Alfred Marshall, and it is only in his 1932 lectures that Keynes started to develop the principle of effective demand (Clarke 1988: 260-3). There are references to Marx in Keynes’s lectures and in the General Theory (Keynes 1936: 3n, 32) and a biographical essay on Malthus (Keynes 1933), wherein Ricardo is severely criticised for assuming the Say’s law. Despite these notable references to Malthus and Marx, Keynes’s economics is in no way classical or Marxian, and despite the strong Marshallian influence, Keynes’s economics distinct from it as well. Whereas, Kalecki’s economics is based on Marx and he has been inspired by Luxemburg (see Kalecki 1967). Kalecki (in 1933) and Keynes (in 1936) independently discovered the principle of effective demand. This simultaneous discovery is all the more interesting given their very distinct and different intellectual backgrounds. Kalecki’s principle of effective demand grows out of the classical

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13 As early as 1931, in Unemployment as a World Problem, Keynes writes that investment ‘is, in fact, the element in the economic situation which is capable of sudden and violent change. … And nothing, obviously, can restore employment which does not first restore business profits. Yet nothing, in my judgment, can restore business profits which does not first restore the volume of investment… (Keynes 1931: 354-5).

14 In his 1932 lectures entitled ‘The Monetary Theory of Production’, Keynes noted that aggregate supply depends on profits, which in turn depends on aggregate demand (Clarke 1988: 265; cf. Rymes 1989: 47-84). That is, aggregate supply adapted to aggregate demand via changes in aggregate income.

15 These references to Marx, especially his general formula for capital, can be found in the lecture notes published in Rymes (Rymes 1989: 93-5; cf. Moggridge 1973: 420; Dillard 1991: 209-10; Sardoni 1991: 231); Keynes delivered this lecture on 23 October 1933 during the Michaelmas Term.

16 Although published in 1933 for Essays in Biography, a very early version of this essay was presented in May 1914 titled ‘Is the problem of population a pressing and important one now?’. Subsequently, he expanded on the essay, especially on Malthus, and presented it on various occasions (see the editorial note at Keynes 1933: 71).

17 Say’s law, according to Keynes, means that ‘the whole of the costs of production must necessarily be spent in the aggregate, directly or indirectly, on purchasing the product’ (Keynes 1936: 18). Or, to use the circular flow terminology, there should not be any leakage.

18 Pasinetti is perhaps not exaggerating when he writes that Keynes ‘would have found immediate links with all earlier classical economists, and not only with Malthus’ (Pasinetti 1997: 101).

19 As Sawyer puts it: ‘…Kalecki should … be seen as operating within the classical or Ricardian-Marxian approach to economics, whereas Keynes can be seen as firmly within the Marshallian tradition and more generally within the neo-classical [marginalist] tradition even though he became critical of aspects of that approach…’ (Sawyer 1985: 184; also see 185). However, Kates argues, although unconvincingly, that Keynes’s principle of effective demand as found in the General Theory was due to him reading the Malthus-Ricardo correspondence in late 1932 (Kates 1994). For an interpretation which places Malthus as a significant forerunner of Keynes and also for an argument
tradition, by way of contrast with the path Keynes took to arrive at essentially the same core theory. As the previous two sections demonstrate, the Marx-Luxemburg-Kalecki sequence shows how the issue of effective demand grew out of the classical approach—“organically”, so to speak, without needing the assistance of Keynes.

Marx recognises the mutual causation between demand and supply (TSV I: 273; cf. section 10.4). Kalecki and Keynes have the same two-way causation but, unlike Marx, solves it for a determinate aggregate output (say $Q$), and in such a way that demand is the autonomous factor. The essence of the principle of effective demand of Kalecki and Keynes can be set out as follows. Suppose $C = cQ$ and $I = I_P$, then $Q = cQ + I_P$; that is $Q = \frac{1}{1-c} \times I_P$. Consumption demand is determined by aggregate output; alternatively, demand adapts to supply. Whereas, aggregate output is determined by aggregate demand, with investment demand and the marginal propensity to consume being the ultimate determinants (cf. Kenway 1980: 151). This is the Kalecki and Keynes step beyond Marx.

The idea (very clear in Kalecki and Keynes) that investment, insofar as it is a demand for additional production capacity, ultimately cannot be autonomous with respect to consumption demand, points to the phoniness of the apparent autonomy of accumulation in Smith and Ricardo. This is the deeper implication of the following extract from Keynes.

Consumption ... is the sole end and object of all economic activity. Opportunities for employment are necessarily limited by the extent of aggregate demand. Aggregate demand can be derived only from present consumption or from present provision for future consumption.

(Keynes 1936: 104)

Sismondi, Malthus and Marx noted problems with the crypto-supply-side growth story in classical economics (especially in Smith and Ricardo). Classical economists, in particular, Quesnay and Turgot, noted that leakages from the circular flow tend to reduce activity that Keynes has been influenced by Malthus’s ideas, see O’Leary (1942). Rutherford (1987) argues that a strong affinity is present between the economics of Malthus and Keynes, and it is to Keynes’s Treatise on Money that one should turn to for evidence and not the General Theory since it is in 1933 that the principle of effective demand was first worked out.

Patinkin disagrees with the view that Kalecki and Keynes possess the same core theory. According to Patinkin, the core message in Kalecki (1933) is not about aggregate demand determining activity levels but about ‘the cyclical behavior of investment on the implicit assumption that there always exists equality between planned savings and investment’ (Patinkin 1989: 40). It is true that investment demand plays a crucial role in Kalecki, but it is the variability in investment demand which consequently determines aggregate profits, incomes and employment, and planned saving is brought into equilibrium with planned investment due to variations in aggregate profits.

It is true that Malthus did possess something like an accelerator idea, even if in a very rudimentary way (Hollander 1962: 359; also noted in section 1).
levels. The main vehicle of saving in their writings, and also in Marx, is hoarding. But, leakages do not affect the economics of Smith and Ricardo due to their very special assumption of planned saving and planned investment being the one and the same thing. Marx, through the general formula of capital and the associated issue of realization of the surplus, also points to the significance of aggregate demand and more importantly, that, it is aggregate demand which determines aggregate supply. This is exactly the opposite of what marginalist economics suggests: aggregate demand adapts to aggregate supply and planned investment adapts to planned saving via a sufficiently sensitive interest rate (and in a general equilibrium, through the flexibility of both commodity and factor prices). In classical economics, there is a very long run tendency for labour supply to adapt to labour demand via the population mechanism. But, this tendency is not to be found in Marx. In Kalecki and Keynes, there are no mechanisms which ensure the equilibrium between labour supply and labour demand. In contrast, marginalist economics suggests that labour demand adapts to labour supply, such that labour is always fully employed.

5 Conclusion

The problem of insufficient demand was not just implicit in classical economics but has been explicitly addressed through the concept of the leakages from the circular flow in Quesnay and Turgot, the extent of the market in Smith, the role of aggregate demand as determining aggregate supply in Ricardo and the pronounced arguments against Say’s law present in Sismondi, Malthus and Marx. However, there is an absence of an analysis of saving and investment equilibration in classical economics and Marx. Luxemburg, drawing on Marx, posed the demand sufficiency question more clearly. In 1933, Kalecki, building on Marx’s framework articulates the principle of effective demand. It is therefore Luxemburg who acts

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22 Hoarding, as Marx noted, refers to selling without buying, and keeping the money in a hoard. This is rightly considered by Quesnay, Turgot, and Marx particularly as detrimental to activity levels and economic growth. Keynes makes the same point when he writes that there cannot be a buyer without a seller or a seller without a buyer…. it makes nonsense to neglect it when we come to aggregate demand. This is the vital difference between the theory of the economic behaviour of the aggregate and the theory of the behaviour of the individual unit, in which we assume that changes in the individual’s own demand do not affect his income. (Keynes 1936: 85)

Also see the discussion in Fan-Hung (1939: 31) where he notes the similarity between the issue of surplus realization in Marx and the principle of effective demand in Keynes.

23 Keynes (incorrectly, in relation to the definition of classical economics employed in this thesis) posits that the classical theory of the rate of interest ‘regarded the rate of interest as the factor which brings the demand for investment and the willingness to save into equilibrium with one another’ (Keynes 1936: 175). Actually, Keynes is here referring to the marginalist theory of the rate of interest (cf. Garegnani 1978: 339, 342-4). Corry (1959: 720-2) incorrectly ascribes such a theory of interest to classical economics, in particular, to Malthus; but he is correct in arguing that Malthus, as Smith and Ricardo, treated planned saving as one and the same as planned investment.

24 The similarity with respect to the general presence of unemployment in Marx and Keynes is noted also by Alexander (1940: 125).

25 It is owing to this reason that Milgate (1983: 101) mentions that ‘the theory of output and employment … is missing from the work of the old Classical writers.’
as the bridge between classical economics, Marx and Kalecki. And the sequence Marx-Luxemburg-Kalecki suggests that the problem of effective demand organically grew out of classical economics, without needing the assistance of Keynes.

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