THE KOREAN ECONOMIC REVIEW
Volume 11, Number 2, February 1996.

KEYNES AND STEUART: THE AGGREGATE VERSUS THE INTERSECTORAL DEMAND THEORY OF OUTPUT *

HONG-SEOK YANG**

In this paper, an attempt is made to cast a new light upon J.M. Keynes's 'principle of effective demand' in his General Theory *and to trace one of its cognates in Sir James Steuart's* Inquiry, *i.e., what he himself called the 'political effects of luxury'. As they are compared in terms of modern macroeconomic theory and policy, both similarities and differences are discussed in some major details of the respective theories.*

I. INTRODUCTION

The 'principle of effective demand' expounded in J. M. Keynes's *General Theory of Employment, Interest and Money* (1936) rejected the then widely accepted approaches to the theory of output and employment. It was basically intended to show that the equilibrium position of the market economy might not always be one of full employment; though there have been enormously divergent interpretations on it ever since. As many attempts have been made to accommodate its message to the various theoretical frameworks, in fact, the 'initial novelty' of Keynes's own theory seems to be getting vaguer. Here in what follows, another attempt is made to cast a new light upon Keynes's contribution to the development of the theory of output and employment, with emphasis on its distinctive feature. Meanwhile, Sir James Steuart (1713-80) was one of the earliest of those who advanced a systematic analysis questioning whether or not the market would ensure, of itself, full employment for the labour force in an economy.[1] In this paper, scrutini-

* This paper is a substantially revised and incorporated version of an appendix in my Ph.D. thesis which has already been published by Edward Elgar in 1994. Many thanks are due to two anonymous referees for their very helpful comments.

** Lecturer, Economics Department, Dongeui University.

[1] Despite his original ideas and ground-breaking thinking for his time, unfortunately, Steuart has often dismissed by later readers as an out-of-date state-interventionist impregnated with 'mercantilism'. His major economic work is *An Inquiry into the Principles of Political Oeconomy*, first published in 2 quarto vols., London, 1767. A revised version was published in the first 4 vols. of *The Works, Political*

sing Keynes's 'principle of effective demand' in terms of the prototype, as it were, presented in his *General Theory*, we will trace one of its cognates in Steuart's *Inquiry* (1767) to make a close comparison between them. By the nature of the case, our analysis of their respective theories of output and employment might be rather schematic but not necessarily oversimplified.[2] We shall begin by examining Keynes's and Steuart's theory in turn and then give a comparative account of them.

II. KEYNES'S 'PRINCIPLE OF EFFECTIVE DEMAND'

The gist of Keynes's economics is the 'principle of effective demand', according to which, given the productive capacity of an economy, there must exist some appropriate amount of 'effective demand' so as to actually utilise the whole capacity. It ultimately amounts to an explanation of the determination of the actual *vis-à-vis* potential level of output in the economy. Let us start our discussion of Keynes's theory with the very notion of 'effective demand'.

2.1 'Effective demand'

According to Keynes, the aggregate demand for output becomes 'effective', as far as the production goes on until the aggregate expected 'proceeds' from the production would be equal to the aggregate 'supply price' of output, given the methods of production and the amount of resources in the economy.[3] Thus, the

---

Metaphysical, and Chronological, of the late Sir James Steuart, collected by his son, General Sir James Steuart, in 6 vols., London, 1805. The latter version is used in this paper. For a full list of the bibliography of Steuart, including his other economic writings, see Yang (1994a), which presents a rigorous analysis of the *Inquiry* in terms of modern economics. While Steuart has hardly been treated any more than as an anachronistic mercantilist in some standard textbooks in Korea, there have been a great deal of studies made on him in Japan. To make a general survey of the enormous Japanese literature, see Kawashima (1972) and Watanabe (1994).

[2] The present discussion indeed requires a 'potted account' of Keynes's theory in particular. Although it may run the risk of raising 'unnecessary and controversial' points as his theory has been so familiar to many of us by now, the very account is to be seen as part of what we are trying to argue in this paper.

[3] To quote Keynes,

> … the *effective demand* is simply the aggregate income (or proceeds) which the entrepreneurs expect to receive, inclusive of the incomes which they will hand on to the other factors of production, from the amount of current employment which they decide to give. The aggregate demand function relates various hypothetical quantities of employment to the proceeds which their outputs are expected to yield; and the effective demand is the point on the aggregate demand function which becomes effective because, taken in conjunction with the conditions of supply, it corresponds to the level of employment which maximises the entrepreneurs expectation of profit. (*General Theory*, p.55; original italics and parentheses.)

'effective demand' is that amount of the aggregate demand for output in the economy, which would be equilibrated with its aggregate supply in consequence of the entrepreneurs' maximisation of their expected profits from the production. Let us explore this point a little further.

In a given state of technique, resources and costs, according to Keynes, the production process involves an entrepreneur in two kinds of expenses: the 'factor cost' and the 'user cost' of production. The one refers to the 'amounts which he pays out to the factors of production (exclusive of other entrepreneurs) for their current services'; whereas the other the 'amounts which he pays out to other entrepreneurs for what he has to purchase from them together with the sacrifice which he incurs by employing the equipment instead of leaving it idle'. After defining the 'profit or income' of the entrepreneur as the 'excess of the value of the resulting output over the sum of its factor cost and its user cost', Keynes assumed the entrepreneur to endeavour to maximise it in deciding what amount to produce. Meanwhile, the 'aggregate income or proceeds' of production in the economy, as a whole, comprise all those expenses and profits resulting from the production. On the other hand, what was called the 'aggregate supply price' of the output of production is the 'expectation of proceeds' which will just make it worth the while of the entrepreneurs to carry out the production. Given the production techniques and the economic resources in an economy, the entrepreneurs' expectation of profits will be maximised at the point where the 'aggregate income or proceeds', expected to receive from their production, is equal to its 'aggregate supply price'; for if the 'expected proceeds' are greater than the 'aggregate supply price', there will be an incentive to entrepreneurs to increase their production and, if necessary, to raise costs by competing with one another, up to the point where they are finally equalised. As the 'proceeds', which entrepreneurs expect to receive from the production, eventually depend on the demand for the output, and as the 'supply price', which makes the production possible, directly reflects the supply conditions of the output, this very point denotes none other than the equilibrium of 'aggregate demand' for output and its 'aggregate supply' in the economy. (In fact, Keynes represented it as the intersection of the 'aggregate demand function' and the 'aggregate supply function' in his discussion.) Keynes called this equilibrium amount of 'aggregate demand' the 'effective demand' in the economy.[4]

Therefore, we could see that while the notion of 'effective demand' is firmly grounded on the recognition of the circularity of income in the economy as a whole, it *per se* presupposes the equilibrium of supply and demand of output in

[4] See *General Theory*, pp.23-6.

the aggregate.[5] Moreover, as the 'effective demand' has a 'unique equilibrium value' – rather than an 'infinite range of values' – in Keynes's analysis, the level of output and the amount of employment are determined exactly in the same amount as the 'effectual demand' in the economy.[6] What is significant in this system of analysis is that there is no reason why the level of income, thereby determined, should be one of full employment. It further suggests that any autonomous – i.e., independent of income – increment of 'effective demand', e.g., government expenditure, would bring forth the increase of income and the enhancement of employment in the economy, through the multiplier effect.[7] This provides a basis for the active role of government in the market economy, as it may have control over the level of output and employment in the economy by means of its demand-management policy. Thus, Keynes's 'principle of effective demand' serves as a rationale of the 'mixed economy'.

---

[5] This does not imply that 'supply creates its own demand' at any level of output. Rather, it points to the fact that the proposition involves an additional, *ad hoc*, assumption as to the relationship between the 'aggregate expected proceeds' and the 'aggregate supply price' of output in the economy, i.e., that they are equal for all levels of output. Cf. *General Theory*, p.26.

[6] As Keynes assumed both the method of production and the 'factor cost' per unit of employment to be given, the amount of employment and the level of output corresponds to each other in each individual firm and industry, and in the aggregate. According to him, the 'effectual demand' in an economy is composed of two sorts of demand: for consumption goods and for investment goods. The amount of consumption in the economy, on the one hand, depends on its level of income. (As is well known, Keynes formulated the amount of consumption as a function of the level of income in the economy, using the notion of 'propensity to consume'. Cf. *General Theory*, chs. 8 and 9.) On the other hand, the amount of investment depends both on the expected profitability of all possible investment projects and on the rate of interest in the economy. (Contriving the notion of 'marginal efficiency of capital', Keynes showed that the inducement of investment depends partly on the 'schedule of the marginal efficiency of capital' or the 'investment demand-schedule' and partly the rate of interest in the economy. Cf. *General Theory*, ch.11.) While both the consumption function ('propensity to consume') and the expected profitability of projects (the 'schedule of the marginal efficiency of capital' or the 'investment demand-schedule') in a certain period of time might be assumed to be known from circumstances in the economy, what would determine the rate of interest? Keynes conceived of the determination the rate of interest as a purely monetary phenomenon: that is, it is determined by the demand for and the supply of money in the economy. (In his explanation, in particular, it depends on the 'liquidity-preference schedule' of individual money holders and the quantity of money issued by the central authority. Cf. *General Theory*, ch.13.) To sum up, given the 'liquidity-preference schedule' and the quantity of money in the economy, the rate of interest would be determined in its money market. Once the rate of interest is determined, the amount of investment would be determined correspondingly, given the 'schedule of the marginal efficiency of capital'. The thus determined amount of investment constitutes the 'effectual demand' in the economy, together with that of consumption. Eventually, the level of income would be generated exactly in the same amount as the total 'effective demand'. For a certain 'propensity to consume', the level of income would adjust itself so as to equilibrate the aggregate demand and the aggregate supply in the commodity market.

[7] Cf. *General Theory*, ch.10.

2.2 Saving-investment relation

There are two particular characteristics to note in Keynes's theory of output and employment. One is the saving-investment relation, as a corollary of his 'principle of effective demand', and the other is the analytical setting of his conception of unemployment in the *General Theory*. In the course of analysis leading to the conclusion that a market economy is not always at the full employment equilibrium, it could be observed that the 'actual saving' is constantly equal to the 'predetermined' amount of investment in the economy, whatever decisions may be made to save. In other words, as long as income is generated in the same amount as the sum of consumption and investment, and as long as what is left in income after consumption is, by definition, to be saved, the amount of saving must, *ex post*, be equal to that of investment. Indeed, it is in the process of equilibrium of saving and investment that the level of income is determined in the economy. They are equalised in the economy as a whole only through the adjustment of the level of income, as the one is assumed to be a function of the level of income and the other to be determined independently. This is what makes Keynes's theory fundamentally different from the 'classical theory' as he called it.[8]

2.3 Marshallian 'short period'

As far as the analytical setting of the Keynes's theory is concerned, the question

---

[8] Keynes included in what he called the 'classical school' not only Ricardo and James Mill and their predecessors but also the followers of Ricardo, i.e., 'those who adopted and perfected the theory of the Ricardian economics, including (for example) J. S. Mill, Marshall, Edgeworth and Pigou'. Cf. *General Theory*, p.3. In the 'classical theory', saving and investment represent, respectively, the supply of and the demand for investible resources, and the rate of interest, as their price, is to be determined by the interaction of these supply and demand. Thus, together with a symmetrical notion that competitive wages ensure the equality between the supply of and the demand for labour, according to the 'classical theory', the equilibrium position of an economy is characterised a set of market-clearing prices and that of associated quantities of individual commodities and 'factors of production'. Therefore, market forces would automatically lead the economy to the full employment of labour and other 'factors of production'; unless there exist certain 'structural' causes which prevent the market forces from operating properly, i.e., some 'market failures'. In this light, Keynes himself remarked, in the first chapter of his *General Theory*, as follows:

> … the postulates of the classical theory are applicable to a special case only and not to the general case, the situation which it assumes being a limiting point of the possible positions of equilibrium. (p.3.)

That is to say, as Keynes tried to show in the *General Theory* that the equilibrium position of a market economy is not always one of full employment, he eventually accomplished it by establishing that it is the level of income, rather than the rate of interest, which equilibrates saving and investment in the economy. For Keynes's own postulates of the 'classical theory', see *General Theory*, ch.2. And for his detailed discussions of saving-investment relation, see *General Theory*, chs. 6 and 7.

is whether it is based on a static or a dynamic view of the productive capacity of an economy. In other words, was it initially set out regarding the long-period 'normal' level of output or the short-period 'cyclical' one? While his 'principle of effective demand' is basically about the determination of the actual level of output *vis-à-vis* the potential level of output, the gap between them accounts for the existence of unemployment in the economy. Thus, the analytical time horizon must be subject to how Keynes assumed the very potentiality of the economy, i.e., its productive capacity, in his *General Theory*.[9]

In fact, while Keynes was rather concerned with both consumption and investment only as the monetary expenditure which constitutes 'effective demand' in the economy, he did take into account the effects of changes in either labour force or capital stock, due to *current* consumption or investment, on the productive capacity. That is to say, in his analysis, consumption and investment, which constitute the 'effective demand' and eventually determine the level of output in the economy, are assumed to have no effect on its capacity of production, nor *vice versa*; whereas, in a 'long-period' analysis of output and employment, if anything, the 'effective demand' and the productive capacity must be to affect each other. Therefore, we may conclude that as far as his 'principle of effective demand' was concerned, Keynes conducted his analysis on the basis of the Marshallian 'short period', in which all the 'factors of production', including technology and market conditions, in the economy are assumed to be given, leaving the effects of changes in them out of consideration.[10] Leaving more characteristics of Keynes's theory of output and employment for the

---

[9] As is implied in our discussions so far, the concept of equilibrium in Keynes does not refer to a situation where all economic activities are carried out on their relevant demand and supply curves, but one which would not change of itself unless it is disturbed. Basically, therefore, both analytical time horizons, i.e., the 'normal' long-period and the 'cyclical' short-period, might be compatible with his analysis of output and employment in terms of 'effective demand'. Nevertheless, the question is which was the whole system of his analysis actually designed to explain, one determined by the 'dominant and persistent' forces of the market economy or the other by its 'changeable and temporary' conditions.

[10] Keynes himself made it clear in his *General Theory*, as follows:

> We take as given the existing skill and quantity of available labour, the existing quality and quantity of available equipment, the existing technique, the degree of competition, the tastes and habits of the consumer, the disutility of different intensities of labour and of the activities of supervision and organisation, as well as the social structure including the forces, other than our variables set forth below, which determine the distribution of the national income. This does not mean that we assume these factors to be constant; but merely that, *in this place and context, we are not considering or taking into account the effects and consequences of changes in them.* (P.245; italics added.)

Thus, Keynes's analysis was originally set up on the ground of the Marshallian short-period, in which the capacity of production in an economy was assumed to be given and the consequences of its changes were out of the scope. For some different views on the analytical time horizon of Keynes's 'principle of effective demand', see Eatwell (1979). Also cf. Yang (1987).

later discussion, let us turn to Steuart's.

Ⅲ. STEUART'S 'POLITICAL EFFECTS OF LUXURY'

At the very outset of his *Inquiry*, Steuart stated that the first matter of 'political oeconomy' is to secure subsistence and other necessities for all the members of the society and to maintain their employment by means of creating 'reciprocal relations and dependencies' among them.[11] This view reflects what he was really interested in and what his economics was chiefly about, while it demonstratively indicates how he actually conceived of the mechanism of an exchange economy. That is, Steuart's main concern was with the level of output and employment in the economy, and his analytical focus was on the interdependence between economic sectors and social classes therein. In fact, his theory of population and that of economic growth and foreign trade in the *Inquiry* all seem intimately related to that of the level of output and employment.[12] He carried out the latter in terms of a unique analytical device of his own, coined to signify the interdependence of sectors and classes in the economy: that is, the notion of 'effectual demand'.

3.1 'Effectual demand'

Throughout his *Inquiry*, Steuart assumed, implicitly or explicitly, that the economic activities of individuals abide by the 'principle of self-interest'.[13] At the same time, he put great emphasis on the fact that, in an exchange economy, these activities must be mutually dependent.[14] This is evident from that, in his economic analysis, all

---

[11] See *Inquiry* in *Works*, vol.1, p.3.

[12] For detailed discussions of Steuart's theory of output, employment and population, and that of economic growth and foreign trade, see Yang (1994a), ch.4 and ch.5, respectively.

[13] For some presumptions on human nature underlying the whole of Steuart's political economy, including that of self-interest, see Yang (1994a), ch.9, which highlights his discussion of the 'principle of self-interest' in the economic activities of individuals in contrast with the 'public spirit of statesman' in guiding and adjusting them.

[14] According to Steuart, this mutual dependence among individuals in their economic activities originates from the reciprocity of their wants or demand. In this regard, he described rather dramatically the characteristic feature of an exchange economy in comparison with a slave economy, as follows:

> Men were then forced to labour because they were slaves to others: men are now forced to labour because they are slaves to their own wants. (*Inquiry* in *Works*, vol.1, p.52.)

For a detailed discussion of Steuart's conception of an exchange economy – particularly of the nature and consequence of the mutual dependence among individuals in the economy, see Yang (1994a), ch.2. Also cf. Steuart's three-stage theory of society, discussed in *ibid.*, ch.9.

the economic sectors and social classes in the exchange economy are envisaged as depending on each other for their production and consumption.[15] From this observation of the reciprocal wants or demand of individuals and their efforts to have some equivalents to gratify them or to meet it in the exchange economy, Steuart derived his own notion of 'effectual demand'.[16] While it basically conveys the idea that those who demand or consume must have some proper equivalents to give those who supply or produce, the notion of 'effectual demand' relates to the operation of the economy as a whole, rather than that of a single sector or industry, as it underlies his analysis of the level of output in an exchange economy rather than that of the value of an individual commodity.[17]

According to Steuart, as the reciprocal wants among individuals materialise into the 'effectual demand', the level of output, the amount of employment and the size of population in the economy, altogether, would be determined correspondingly. Indeed, in his analysis, they are so closely related to each other that they go together from start to finish.[18] This point seems to reflect the fact that the economy concerned in his *Inquiry* is basically the one in growth, where both labour and natural resources, such as land, become fully utilised and thereupon the multiplication of population further accelerates the increase of the level of output. In other words, for Steuart, the determination of the level of output, along with that of both the amount of employment and the size of population, is an integral part of his dynamic analysis of economic growth, based on the 'capacity

[15] Yang (1994a), ch.2, particularly well illustrates the point in question in terms of a basic macroeconomic model of circulation derived from Steuart's *Inquiry*. We will introduce the model later on when we formalise his theory of output. The transactions between sectors and classes, appearing in the model, represent the results of the economic activities of individuals for securing their means of subsistence and other necessities, i.e., their wants or demand.

[16] To quote Steuart,

> Every person who is hungry will make a demand, but every such demand will not be answered, and will consequently have no effect. The demand must have an equivalent to give: it is this equivalent which is the spring of the whole machine; for without *this* the farmer will not produce any surplus, and consequently he will dwindle down to the class of those who labour for actual subsistence. ⋯ it is the *effectual* demand, as I may call it, which makes the husbandman labour for the sake of the equivalent. (*Inquiry* in *Works*, vol.1, pp.153-4; original italics.)

[17] We may find that it is totally different from what Smith, after him, meant by the same term. In Smith, it relates to a single sector or industry as it serves for explaining the relation between the actual market price of commodities and their 'natural price'. Cf. Yang (1994b), part Ⅲ. Rather, Steuart's 'effectual demand' has an affinity with Keynes's 'effective demand' in the sense that both notions have some bearing on the level of output in the economy as a whole.

[18] The main theme of the first book of Steuart's *Inquiry* is how the level of output, the amount of employment and the size of population in an exchange economy are determined. To have a general idea on some relationship premised between these macroeconomic quantities and to understand further the nature of his notion of 'effectual demand', see, for example, *Inquiry* in *Works*, vol.1, p.35. Also see Yang (1994a), ch.4.

utilisation' of economic resources. In this dynamic analysis, labour is supposed to be the only input which could be augmented for the further expansion of production in the economy while land and other natural resources have 'physical' limitations and both the composition and the scale of various produced means of production are determined by the technology of the economy. Thus, the growth of population is essential to that of output. This explains why he constantly endorsed the increment of population. In any case, it is this dynamism in the simultaneous determination of the level of output, the amount of employment and the size of population in a growing economy, which Steuart's notion of 'effectual demand' primarily concerns.[19] Bearing in mind the above characteristics of Steuart's notion of 'effectual demand', let us move on to examine in detail how Steuart actually carried out his analysis of the level of output in terms of the notion.

3.2 An input-output model

In what follows, taking as an example the intersectoral transactions described in Steuart's *Inquiry*, we shall closely examine how the 'effectual demand' of each sector and class is realised and how, as a result, the level of output, i.e., both the scale and the composition of gross output in the economy, is determined in his analysis.[20] Basically, Steuart conceived of an exchange economy as being composed of two economic sectors and three social classes. Two different goods are produced in the two sectors, i.e., agriculture and manufacturing industry; whereas, including some intermediate goods employed in the production process, they are consumed by the three classes, i.e., farmers, the 'industrious' and landlords. Thus, there are supposed to be three kinds of transactions in the whole economy: intrasectoral, intersectoral and non-sectoral. Those transactions of the first two kinds are to take place on the basis of the social division of labour within and without each sector, involving both production and consumption. Those of the last kind, occurring between landlords and either farmers or the 'industrious', are to be based on the transfer of income from the farmers to the landlords in terms of land rent, involving the latter's consumption only. While all these transactions eventually underlie the circular process of production, consumption and distribution in

[19] In this context, we might observe that Steuart's analysis of the level of output, based on his notion of 'effectual demand', originally started at a different point from Keynes's, based on his notion of 'effective demand'. So to speak, the one was in a more dynamic setting than the other, as it allowed an important factor of economic growth, i.e., population, to be determined within the model. To pursue further the dynamic aspect of Steuart's economics, we must explore his theory of economic growth in connection with foreign trade. Cf. Yang (1994a), ch.5.

[20] In formalising Steuart's theory of output in this section, we partly draw on the macroeconomic model of the circulation of goods and money between sectors and classes, derived from his *Inquiry* by Yang (1994a). For the detailed description of the model, see *ibid.*, ch.2.

[Table 1] Transactions (I)

Demand \ Supply		Commodities A	Commodities M	Revenue	Total supply
Sectors	A	10	2	9	21
	M	10	2	0	12
Landlords		1	8		
Total demand		21	12		

the economy as a whole, each of them represents the realisation of 'effectual demand' of the sectors and classes concerned. The transactions between the sectors and the classes could be represented in Table 1.[21] Through this table, we may clearly understand how Steuart grasped the interdependence between the sectors and classes in the economy in terms of the demand and supply conditions of each commodity.

Let us further divide the transactions in Table 1 to take account of two important elements of Steuart's basic conception of an exchange economy: i.e., his distinction between the 'physical necessaries [necessities]' and 'luxuries', and his identification of the 'profit upon alienation' in the value of commodities.[22] As far as the former is concerned, on the one hand, although he alluded to no definite dividing line between 'physical necessaries [necessities]' and 'luxuries' as such, Steuart broadly classified commodities into these two sorts: the one consisting of subsistence goods and some intermediate goods, produced in the agricultural sector, and the other of non-subsistence goods and some produced means of production, produced in the manufacturing sector. On the other hand, as for the latter, he clearly distinguished the 'profit upon alienation' from the 'real value' of commodities, as their prime cost, and regarded it as a distinct category of income like the wages of labour and the rent of land. After all, mainly on account of the existence of the 'profit upon alienation' in the value of commodities, not only the farmers in the agricultural sector but also the 'industrious' in the manufacturing sector are supposed to consume 'luxuries' as well as 'physical necessaries [necess-

[21] In this table, all the magnitudes are expressed in value terms; and while the rent revenue of landlords, transferred from farmers, is counted in the supply side, their expenditure is counted in the demand side. In the meantime, we might observe that this transactions table looks quite similar to the one derived from Quesnay's *Tableau Economique*. For a detailed discussion of some similarities and differences between them, see Yang (1994b), part II.

[22] Steuart's discussion of 'physical necessaries [necessities]' and 'luxuries', and that of the 'profit upon alienation' in the value of commodities, see Yang (1994a) ch.2 and ch.3, respectively.

ities]', apart from the landlords receiving the rent of land from the farmers.[23] To take these points into consideration, we may modify the previous transactions t-able as in Table 2.[24]

On the basis of this transactions table, we could formalise Steuart's discussio-ns of the determination of the level of output - both its scale and composition - in an exchange economy. Assuming that the value of commodities is given as their 'current price' determined in the markets, we can represent the table in a simple algebraic equation, as follows:[25]

$$\begin{aligned} y &= yC + f_1 + f_2 + f_3 \\ &= yC + f \\ &= yC + f_n + f_x \end{aligned}$$

where y: row vector of (value) gross output

C: (value) input-coefficient matrix, i.e., $\begin{bmatrix} 2/21 & 1/21 \\ 2/12 & 1/12 \end{bmatrix}$

f_1: row vector of (value) farmers' consumption

f_2: row vector of (value) the industrious's consumption

f_3: row vector of (value) landlords' consumption

f: row vector of the (value) total consumption in the economy, i.e., $f_1 + f_2 + f_3$

f_n: row vector of the (value) total consumption of 'physical necessaries [necessities]' in the economy, i.e., $f \begin{bmatrix} 1 & 0 \\ 0 & 0 \end{bmatrix}$

---

[23] This point seemed to be one of the characteristics of Steuart's model of circulation, compared with Cantillon's and Quesnay's. Cf. Yang (1994b). Meanwhile, in Steuart, the wages of labour were not fixed at a subsistence level, but determined by its productivity. Thus, part of the wages also contribute to the consumption of 'luxuries'. Cf. Yang (1994a), ch.3.

[24] In Table 2, we further distinguish, in the demand side, between the intermediate goods and the 'physical necessaries [necessities]' in the agricultural products and between the produced means of production and the 'luxuries' in the manufactures, respectively. Meanwhile, we simply assume those amounts of intermediate goods and produced means of production in each sector and those of 'physical necessaries [necessities]' and 'luxuries' in each class, appearing in the table, in an arbitrary way. Correspondingly, in the supply side, we make separate entries for both the wages of labour and the 'profit upon alienation' in each sector, and again arbitrarily assume their amounts in the table. Of cou-rse, all these amounts are in aggregate terms.

[25] As all the amounts in Table 2 are expressed in terms of monetary value, we assume further, here, that money was just supposed to serve as a mere medium of exchange. For Steuart's monetary analy-sis, see Yang (1994a), ch.6.

[Table 2] Transactions (II)

Demand \ Supply		Real value				Profit upon alienation	Total supply
		Commodities		Wages of labour	Rent of land		
		A	M				
Sectors	A	2	1	8	9	1	21
	M	2	1	8	0	1	12
Classes	Farmers	8	1				
	Industrious free hands	8	1				
	Landlords	1	8				
Total demand		21	12				

f_x: row vector of the (value) total consumption of 'luxuries' in the

economy, i.e., $f\begin{bmatrix} 0 & 0 \\ 0 & 1 \end{bmatrix}$.

Thus,

$$y = (f_n + f_x)(I - C)^{-1} = f_n(I - C)^{-1} + f_x(I - C)^{-1}$$

Therefore, as long as the technology of production (C) and the total amount of the consumption of 'physical necessaries [necessities]' (f_n) are given from outside of the model, the level of output in the economy (y) is to be dependent upon the total amount of the consumption of 'luxuries' (f_x).[26]

3.3 The 'political effects of luxury'

The above result seems to come rather directly from Steuart's notion of 'effe-

[26] Apparently, the model itself simply tells us that, on the basis of the equilibrium condition of supply and demand for all the commodities in the economy, we could derive both the scale and the composition of its gross output from such data as the technology of each economic sector and the consumption of 'physical necessaries [necessities]' and 'luxuries' by each social class. However, the emphasis of Steuart's analysis was rather on the effects of the consumption of 'luxuries' on the gross output, than on the equilibrium as such. In other words, he wanted to show us how the level of output changes in an economy as its total amount of the consumption of 'luxuries' changes, *ceteris paribus*.

ctual demand'. As the very notion implies that those who demand and consume should have some equivalents to give those who produce and supply, the consumption of some goods must logically precondition the production of other goods to exchange. Therefore, as far as the production methods of all the goods are to be predetermined, the determination of the level of output in the economy could be explained in terms of the consumption of final goods; and, moreover, as far as the consumption of 'physical necessaries [necessities]' are, more or less, stable at a certain point in time, the level of output could be described as depending on the consumption of 'luxuries'. Without doubt, Steuart had in mind this analytical mechanism of the determination of the level of output in terms of the 'effectual demand' for the very final goods, i.e., 'luxuries', when he referred to the 'political effects of luxury or the consumption of superfluity'.[27]

According to Steuart, the interdependence among individuals in an exchange economy could be reduced to the mutual relation between the producers or suppliers and the consumers or demanders of commodities. This mutual relation, in turn, is based on their 'effectual demand' for either 'physical necessaries [necessities]' or 'luxuries'. In the meantime, there is some asymmetry between the 'effectual demand' for 'physical necessaries [necessities]' and that for 'luxuries', stemming from the nature of the respective kinds of commodities. That is to say, the demand for 'physical necessaries [necessities]' basically depends on the number of people or the population in the economy, whereas that for 'luxuries' usually depends on the 'spirit' or the 'taste of superfluity' which prevails among the people. Moreover, the demand for 'physical necessaries [necessities]', mostly made by farmers and the 'industrious', is related to both consumption and production, whereas the demand for 'luxuries', mostly made by landlords, is related to consumption only. Therefore, in so far as the 'physical necessaries [necessities]' of the producers could be regarded as sorts of inputs for their production, the demand for 'physical necessaries [necessities]' must be regulated by the level of output. On the other hand, as long as the 'spirit' of people affects their consumption of 'luxuries' and only the 'effectual demand' makes the consumption possible, it is the 'effectual demand' for 'luxuries' which ultimately determines the level of output in the economy.[28]

As we might have already alluded to, there are two fundamental things presupposed in Steuart's discussion of the 'political effects of luxury'. One of the presumptions underpinning his analysis of the level of output is about the productivity of each sector in the economy. As already explained, according to him, both *economic* and *social* surplus or net product are produced in the agricultural sector and distributed to farmers, either as their 'profit upon alienation' or as part of their wages of labour, and to landlords, as their land rent, respectively;

[27] *Inquiry* in *Works*, vol.1, p.350.
[28] *Cf. Inquiry* in *Works*, vol.1, p.352.

whereas, in the manufacturing sector, only *economic* surplus is produced, going to the 'industrious', either as their 'profit upon alienation' or as part of their wages of labour.[29] In consequence, the agricultural surplus is supposed to be what sustains the consumption of 'luxuries' by both the landlords and the farmers, and the manufacturing surplus is to be what enables the 'industrious' to consume their 'luxuries'. Therefore, the 'effectual demand' for 'luxuries' could be augmented only through the enhancement of productivity of each sector. The more productive the agriculture, the more the land rent transferred to landlords and the more the 'profit upon alienation' and the wages of labour accruing to farmers; as a result, the more the 'effectual demand' for 'luxuries', the higher the level of output in the economy. The more productive the manufacturing industry, the more the 'profit upon alienation' and the wages of labour accruing to the 'industrious'; as a result, the more the 'effectual demand' for 'luxuries', the higher the level of output in the economy. The productivity of economic sectors might be, then, a most crucial determinant or parameter in Steuart's analysis of the level of output in terms of the 'political effects of luxury'.[30]

Another significant presumption in Steuart's analysis of the level of output is about what ultimately decides the degree or level of consumption of 'luxuries' in an exchange economy. Steuart suggested two major circumstances which would exert a great influence on people's consumption of 'luxuries': i.e., the existence of money and the 'standard of taste' of the people.[31] That is to say, whilst money as 'imaginary wealth' stimulates farmers and the 'industrious' to further produce and 'alienate' subsistence and 'luxuries', respectively, with a view to supplying more and more wants, it is the very 'taste for superfluities' in those who have equivalents to give for them, including landlords, that actually determines the level of consumption of 'luxuries' in the economy.[32]

---

[29] It should be noted here that, apart from the 'profit upon alienation', accruing to farmers and the 'industrious', and the land rent, transferred to landlords, part of the wages of labour might be regarded as surplus and being spent on 'luxuries', as they are determined by its productivity, rather than fixed at a subsistence level, according to Steuart. Cf. Yang (1994a), chs. 2 and 3.

[30] The point in question is self-evident in the following statement, in which Steuart argued for the increase in the rent of land with a view to boosting the level of output in the economy.

> … the raising of the rents of lands shews the increase of industry, as it swells the fund of subsistence consumed by the industrious; that is, by those who buy it. (*Inquiry* in *Works*, vol.1, p.58.)

That is, while the landlords demand for 'luxuries', i.e., manufactures, promotes the production in the manufacturing sector, so far as the demand is 'effectual'; this 'effectual demand' for 'luxuries' could be augmented, whenever the productivity of agriculture increases their rent revenue.

[31] Cf. *Inquiry* in *Works*, vol.1, p.237.

[32] For Steuart's description of how the introduction of money had been spurring people on to more production and 'alienation', see *Inquiry* in *Works*, vol.1, p.239. Nevertheless, the existence of money is rather a necessary than a sufficient condition, for the enhancement of consumption of 'luxuries' in the exchange economy. According to Steuart, it is the 'taste for superfluities' which eventually

After all these fundamental suppositions and postulates premised, it might be said that, according to Steuart, the level of output in a monetary economy is determined by the 'effectual demand' for 'luxuries', which depends not only on the productivity of each economic sector – as it should be *effectual* – but also on the 'standard of taste' of each social class – as it is the demand for *luxuries*.[33]

3.4 The fallacy of composition

It is well known that the argument of this sort, i.e., the fallacy of composition with regard to the consumption of 'luxuries', was rather common among some mercantilist authors in the seventeenth and eighteenth centuries.[34] Steuart apparently seemed to inherit some of his predecessors' views of the utility of luxury as he was in favour of the consumption of 'luxuries' in his analysis of the level of output. Nevertheless, as already discussed above, his argument was rather based on his unique notion of 'effectual demand' in terms of which he firmly grasped the interrelation of economic sectors and social classes and thereupon systematically analysed the determination of the level of output in an exchange economy.[35]

As discussed above, in Steuart's analysis, no sooner has the level of output been determined than the amount of employment in the exchange economy is to

---

determines the level of consumption of 'luxuries' in a monetary economy. Cf. *Inquiry* in *Works*, vol.1, pp.237-8. Also see *Inquiry* in *Works*, vol.1, pp.41-6. Meanwhile, for an overall picture of Steuart's macroeconomic analysis of money and the level of output, see Yang (1995).

[33] Indeed, to this effect, Steuart himself succinctly laid down a desirable 'plan of political oeconomy' in terms of the following two principles.

> A ruling principle … is to keep the husbandman closely employed, that their surplus may be carried as high as possible; because this *surplus is the main spring of all alienation and industry*. The next thing is *to make this surplus circulate*; no man must eat of it for nothing. (*Inquiry* in *Works*, vol.2, p.175; italics added.)

As long as the productivity of each sector is ultimately decided by the technological conditions of the economy, its level of output might be seen as being determined by the very consumption of 'luxuries'. That is, the more the consumption of 'luxuries', the higher the level of output.

[34] Among others, Bernard Mandeville, in his *Fable of the Bees: or Private Vices, Public Benefits* (first edition, 1714), typified the doctrine of the economic beneficence of luxury spending in those authors. Cf. Hutchison (1988), pp.115-26, and also Keynes (1936), pp.358-71. In Steuart's own words,

> Now in the question before us, the only abuse I can find in these habits of extraordinary consumption, appears to be relative to the character of the consumers, and seems in no way to proceed from the *effects of the consumption*. The vices of men may no doubt prove the cause of their making a superfluous consumption; but the consumption they make can hardly ever be the cause of this vice. (*Inquiry* in *Works*, vol.1, p.190; italics added.)

Also see *ibid.*, p.199.

[35] When he discussed the respective development strategies for an exchange economy, corresponding to its different stages of trade, Steuart was still consistently utilising his own notion of 'effectual demand'. For an open economy, however, he did not consider the domestic consumption of 'luxuries' to be always preferable. Cf. Yang (1994a), ch.5.

be known correspondingly. In other words, the level of output and the amount of employment are so closely related to each other that they would be determined together at the same time, in proportion as the 'effectual demand' of individuals in the economy becomes realised.[36] Given the technological conditions of production and the mutual relation of economic sectors, both the level of output and the amount of employment in the economy depend on the 'effectual demand' for 'luxuries'. Therefore, according to Steuart, it is the insufficiency of the 'effectual demand' which accounts for the existence of unemployment in the economy.[37]

Ⅳ. COMPARISON

Having discussed both Keynes's and Steuart's theory of output and employment in the previous sections, we may now be able to compare and contrast one with the other. Let us start with the notions of 'effective demand' and 'effectual demand', which underlie the whole system of their respective theories. As discussed previously, they are commonly concerned with the operation of the economy as a whole, rather than the value of an individual commodity. Essentially, they are based on the recognition of the reciprocity of demand and supply in the macroeconomic level. Nevertheless, in Steuart, the emphasis was on the interdependence between different economic sectors and between different social classes; whereas, in Keynes, it was on the relation between income and spending in the aggregate. Therefore, Steuart's 'effectual demand' refers to the level of reciprocal demand for different commodities between sectors and classes through the medium of money; whereas Keynes's 'effective demand' the amount of aggregate demand actually realised by monetary spending in the economy.

From this dissimilarity between the notion of 'effectual demand' and that of 'effective demand', originate the differences in their respective theories of output and employment. As we may directly infer from these notions, first of all, the analytical focus of Steuart's theory was on the effect of the consumption of certain commodities on the general level of output in the economy; whereas that of Keynes's theory was on the equilibrium of the aggregate demand, i.e., consumption and investment, and the aggregate supply, i.e., income, in the economy. Hence, the 'political effects of luxury' in the one and the 'principle of effective de-

---

[36] For instance, according to Steuart, the actual amount of employment in an economy is to be determined rather straightforwardly in association with the level of output, as follows:

> The more the necessities of man increase, *ceteris paribus*, the more free hands are required to supply them; and the more free hands are required, the more surplus food must be produced by additional labour, to supply their demand. (*Inquiry* in *Works*, vol.1, p.236.)

[37] For Steuart's discussions of how the actual amount of employment in an exchange economy would be determined along with its level of output and how it might fall short of the potential capacity of the economy, see Yang (1994a), ch.4, section 3.

mand' in the other. According to the former, on the one hand, the level of *gross* output in an exchange economy is determined by the 'effectual demand' of various social classes for 'luxuries', materialising through the productivity of different economic sectors. On the other hand, according to the latter, the level of *net* output or income, either spent or saved, in the economy is determined exactly in the same amount as the 'effective demand', composed of consumption and investment, as a result of the equilibrium of aggregate demand and aggregate supply. Therefore, while the productivity of economic sectors and the 'standard of taste' of social classes are the two main pillars in Steuart's 'political effects of luxury', the saving-investment relation, derived by way of equalising income and 'effective demand' in the aggregate, is a primary corollary of Keynes's 'principle of effective demand'. Let us have a close look into these fundamentals of the respective theories of output and employment, from a comparative point of view.

According to Steuart, while all the sectors in the economy produce surplus or net produce and all the social classes consume both 'physical necessaries [necessities]' and 'luxuries', the productivity of economic sectors and the 'effectual demand' for 'luxuries' represent different faces of one coin. That is, unless the economic sectors are productive, there is no 'effective demand' for 'luxuries'; and, unless there is any 'effective demand', no economic sector produces anything. It is this juxtaposition of both analytical themes, i.e., productivity and luxury spending, on the same dimension in terms of his own notion of 'effectual demand' that distinguishes Steuart from the others before and after him, who dealt with one or the other separately.[38] On the other hand, as Keynes made use of the notion of 'propensity to consume (or to save)', the saving-investment relation implied in his 'principle of effective demand' eventually leads to its fundamental proposition that it is the level of income which equilibrates saving and investment in the economy as a whole. That is, if the 'propensity to consume (or to save)' is given as a certain ratio of what proportion of income is to be consumed (or saved), the level of income must adjust itself to equalise the amount of saving and that of investment in the economy, as long as the latter is determined independent of it. Thus, the greater (or the smaller) the propensity to consume (or to save), the higher the level of income, with a 'predetermined' amount of investment; and the

[38] For instance, attaching great importance to the exclusive productivity of agriculture, F. Quesnay tried to show the crucial role of the expenditure of the rent revenue of proprietors of land in the determination of the level of output in the economy by means of his *Tableau Economique*, though the latter mechanism does not entirely depend on the former presumption (cf. Yang (1994b), part II); whereas B. Mandeville, in his *Fable of the Bees*, pointed to the beneficence of consumption of luxury goods, that is, the fallacy of composition regarding luxury spending. In fact, the emphasis on the productivity, on the one hand, dominated the economic doctrines of R. Cantillon and A. Smith, as well as those of the Physiocrats. On the other hand, the significance of the luxury spending was to be brought to light in the literature recurrently up until Keynes, in different guises, as represented by T. Malthus, among others.

greater the amount of investment, the higher the level of output, given the 'propensity to consume (or to save)'.[39] As far as it is ultimately concerned with the effect of spending, whether for consumption or for investment, on the level of income in the economy, Keynes's 'principle of effective demand' amounts to another version of the doctrine of the economic beneficence of 'spending-more', whose origin goes back to the economic writings of some mercantilist authors in the seventeenth and eighteenth centuries. Unlike those authors, Keynes carried out his analysis in aggregate monetary terms, as he did not categorise commodities into subsistence and luxury goods. Nevertheless, in common with them, Keynes did not explicitly take account of either the productivity of each individual economic sector in an economy or the productive capacity of the economy as a whole, in his analysis. This last point is what essentially differentiates Steuart's theory of output and employment from Keynes's and others'. In fact, apart from the inseparable relation between the productivity of economic sectors and the 'effectual demand' of social classes for 'luxuries', discussed above, there is one other thing which characterises Steuart's theory: that is, its analytical setting, which allows of the effects of changes in the productive capacity of an economy, particularly the growth of its population.

Although both Steuart's and Keynes's theories of output and employment are concerned with the determination of the actual level of output *vis-à-vis* the potential level of output in an exchange economy – whether in gross or net terms, they are fundamentally different in their respective analytical settings. That is to say, while they commonly relate to the utilisation of the productive capacity in the economy, the one approaches it in a dynamic context and the other in a static one. For Steuart, the analysis of output and employment cannot dispense with that of population, in that the level of output, the amount of employment and the size of population in an economy are all closely so related to each other that they must be determined concurrently; whereas, for Keynes, it is not the case, as he simply assumed the size of population to be given. In consequence, on the one hand, Steuart's analysis could encompass the effects of changes in the productive capacity of the economy, since labour is supposed to be the only input which could be augmented for further production, with land and other natural resources being 'physically' limited and various produced means of production being subject to the given technology. On the other hand, Keynes's analysis must confine itself to the determination of the relatively short-period cyclical level of output in the economy with the given capacity of production, as it assumes not only the amount of capital stock but also that of the labour force in the economy to be given. This difference between the analytical setting of Steuart's theory and that of Keynes's finally accounts for their disparate conceptions of unemploy-

[39] In this context, the investment, as well as the consumption, is no more than a mere component of the 'effective demand' without any further effect on the productive capacity in the economy.

ment.

Steuart conceived of unemployment as a result of the population outgrowing employment, due to the imbalance between economic sectors. According to him, the problem originates from the very fact that, in an exchange economy, production and consumption are 'alienated,' i.e., these economic activities are conducted on separate accounts. In other words, the cause of unemployment in the economy lies in the disproportion between those who produce and those who consume. The former bears upon the amount of employment, whereas the latter upon the size of population. Particularly, the amount of employment depends on the production of both 'physical necessaries [necessities]' and 'luxuries', whereas the size of population on the consumption of 'physical necessaries [necessities]'. Therefore, in Steuart's conception, unemployment might still exist in the economy, even if the equilibrium of production and consumption is always assured and there is thus no such thing as under-consumption. What matters is their composition. On this dynamic relation between the level of output, the amount of employment and the size of population in the exchange economy, he established that a lack of 'effectual demand' would cause some unbalanced capacity-utilisation between economic sectors and, thereupon, unemployment in the economy. On the other hand, Keynes understood the existence of unemployment in the economy from rather a static point of view of its productive capacity. That is, leaving out of consideration the consequences of changes in either capital stock or labour force, due to investment or consumption expenditure, he concentrated on the gap between the potential amount of employment, corresponding to the given productive capacity, and the actual amount of employment, generated by the 'effectual demand' consisting of those monetary spendings, in the economy. Thus, according to Keynes, the existence of unemployment is due to the shortage of 'effective demand', which essentially denotes either under-consumption or under-investment in the economy, in the sense that part of the productive capacity of the economy is being idle in the actual level of output.

To conclude, we may say that as both Steuart in the late 18th century and Keynes in the early 20th century seriously doubted the self-adjusting mechanism of the market economy in regard to its level of output and employment, they unfolded their theories on the common basis of the insightful observation of the reciprocity of supply and demand in the macroeconomic level. The notion of 'effectual demand' in the one and that of 'effective demand' in the other point to the very reciprocity. Nevertheless, their respective theories of output and employment differ in analytical focus and setting: Steuart on the intersectoral demand in a growing economy and Keynes on the aggregate demand in a stationary one. Hence, divergent diagnoses and prescriptions for the problem of unemployment. In any case, one is certainly a precursor of the other as an advocate of government's active role in the market economy so far as the macroeconomic matters are concerned.

REFERENCES

Eatwell, J. (1979), 'Theories of Value, Output and Employment', first published in *Thames Papers in Political Economy*; revised version in *Keynes's Economics and the Theory of Value and Distribution*, John Eatwell and Murray Milgate eds., London: Duckworth, 1983.

Hutchison, T.W. (1988), *Before Adam Smith: The Emergence of Political Economy, 1662-1776*, Oxford: Basil Blackwell.

Kawashima, N. (1972), *Steuart Kenkyu (A Study of James Steuart)*, Miraisha.

Keynes, J.M. (1936), *The General Theory of Employment, Interest, and Money*, Macmillan; reprinted as vol.VII of *The Collected Writings of John Maynard Keynes*, London: Macmillan St. Martin's Press for the Royal Economic Society, 1973.

Mandeville, B. de (1714-29), *The Fable of the Bees: or Private Vices, Public Benefits*, ed. with a commentary, by F.B. Kaye, 2 vols., Oxford: Clarendon, 1924.

Quesnay, F. (1758), *Tableau Economique*, 1st ed.; 2nd and 3rd ed., 1759; in Meek, R.L. *The Economics of Physiocracy: Essays and Translations*, George Allen and Unwin, 1962.

Steuart, Sir J. (1767), *An Inquiry into the Principles of Political Oeconomy*, 2 quarto vols., London: A. Miller and T. Cadell; revised version in the first 4 vols. of *The Works, Political Metaphysical, and Chronological, of the late Sir James Steuart of Coltness, Bart.* collected by his Son, General Sir James Steuart, Bart., 6 vols., London: T. Cadell & W. Davies, Strand, 1805; reprinted, New York: Augustus M. Kelly Publishers, 1967.

Watanabe, K. (1994), 'Studies on Sir James Steuart in Japan: After the Second World War to the Present (1992)', *10th Anniversary Issues of Economic Papers*, Economic Society of Nara Sangyo University.

Yang, H-S. (1987), 'Keynes after Sraffa: Closing the Keynesian System with the Ricardian Theory of Value and Distribution', mimeo (M.A. dissertation).

Yang, H-S. (1994a), *The Political Economy of Trade and Growth: An Analytical Interpretation of Sir James Steuart's* Inquiry, Aldershot: Edward Elgar.

Yang, H-S. (1994b), 'The Early Cost-of-production Theories of Value: From Petty to Smith', in 3 parts, mimeo.

Yang, H-S. (1995), 'J. Steuart's Macroeconomic Analysis of Money, Price and Output', mimeo (presented at Colloque International: James Steuart en 1995, Grenoble, France).