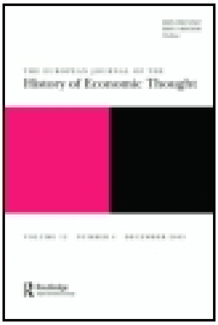

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1. Introduction

In this paper I present a defence of Adam Smith's two highly controversial and almost universally criticized propositions. The first proposition relates to the so-called *additive* theory of value, where it is alleged (including Ricardo 1951; Marx 1968, 1992) Adam Smith argues that value of a commodity is determined by adding up independently determined wages, profits and rent. The two charges against the additive theory of value are: (i) Adam Smith forgets to include raw materials and depreciated machines in his calculation (Marx); and (ii) Adam Smith forgets the constraint binding on the system – that is, given the net output, if wages and profits are independently determined, then rent must be the residual; thus treating rent as independently determined part of income amounts to a logical slip (Ricardo and Marx).[1]

The second proposition relates to Adam Smith's explanation of the falling rate of profits. It is alleged that Adam Smith makes a simple error of fallacy of composition when he argues that, in a growing economy, the rate of profits have a tendency to fall because of increased competition of capital. The argument is that although a flow of capital in one sector may explain a fall in the rate of profits in that sector, an overall growth and capital accumulation in all the sectors simultaneously may not logically result in the fall in the rate of profits in all the sectors simultaneously.

In what follows, I refute the charge that Adam Smith forgets to include the raw materials and used machines in his calculation of the values of commodities in Section 2. In Section 3, I argue that Adam Smith treated both wages and profits as necessary costs of production but rent on land as

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1 Also see Dasgupta (1985).

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the residual *surplus*. Thus a constraint binding on the value of total output was recognized by Adam Smith. Section 4 presents an interpretation of Smith's theory of falling rate of profits, which shows that Adam Smith's proposition is not necessarily a case of fallacy of composition.

2. The problem with accounting?

Let us begin with the first proposition. In Chapter VI of the *Wealth of Nations*, Adam Smith writes:

> In every society the price of every commodity finally resolves itself into some one or other, or all of those parts [wages, profits, and rent]; and in every improved society, all the three enter more or less, as component parts, into the price of the far greater part of commodities. (Smith 1981: I, iv, 68)

However, it is obvious that the cost of raw materials and depreciated fixed capital, which is not an element of either wages or profits or rent in the production of a particular commodity, must also constitute a part of its price.[2] Here is what Adam Smith has to say on this point:

> In the price of corn, for example, one part pays the rent of the landlord, another pays the wages or maintenance of the labourers and labouring cattle employed in producing it, and the third pays the profit of the farmer. These three parts seem either immediately or ultimately to make up the whole price of corn. A forth part, it may perhaps be thought, is necessary. In the price of corn, for example, one part pays the rent of the landlord, another pays the wages or for replacing the stock of the farmer, or for compensating the wear and tear of his labouring cattle, and other instruments of husbandry. But it must be considered that the price of any instrument of husbandry, such as labouring horse, is itself made up of the same three parts; the rent of the land upon which he is reared, the labour of tending and rearing him, and the profits of the farmer who advances such a rent of this land, and the wages of this labour. Though the price of the corn, therefore, may pay the price as well as the maintenance of the horse, the whole price still resolves itself either immediately or ultimately into the same three parts of rent, labour, and profit. (Smith 1981: I, vi, 68)

2 This, according to Marx, was not merely an oversight on Smith's part but rather essential for his additive theory of value: 'One can see here too why Adam Smith (despite his considerable scruples on this point) resolves the entire value of the commodity into rent, profit and wages and omits constant capital, although of course he admits its existence for each ''individual'' capitalist. For otherwise he would have to say: The value of a commodity consists of wages, profit, rent and that part of the value of the commodity which does not consist of wages, profit, rent. It would therefore be necessary to determine value independently of wages, profit and rent' (Marx 1968: *TSV II*, 219).

Clearly Adam Smith is not denying that the price of horse is included in the price of corn. What he is stating is that the price of horse itself can be further broken into wages, profits and rent, and its raw materials in turn can further be broken into wages, profits and rent, and on and on. The procedure is exactly the same as it is used for calculating the embodied labour content of a commodity. To calculate the 'indirect' labour-time in the production of a commodity, one needs to go further and further in the production chain of the raw materials and fixed capital equipments to gather the direct labour-time spent in their production until the residue of raw materials and fixed capital equipments become negligible. Adam Smith proposes exactly the same procedure to gather the wages, profits and rent components of the raw materials and the depreciated fixed capital equipments used up in producing a commodity. That is why he insists that the price of a commodity *ultimately* and *not* necessarily *immediately* resolves itself into wages, profits and rent. Thus one could say that the price of a commodity for Adam Smith is constituted by *direct* and *indirect* wages, profits and rent.

Adam Smith's style of writing has been a reason for confusion among many readers of his book. For example, after arguing that the price of any good must ultimately resolve into wages, profits and rent, he goes on to write:

> As the price or exchangeable value of every particular commodity, taken separately, resolves itself into some one or other or all of those three parts; so that of all the commodities which compose the whole annual produce of the labour of every country, taken complexly, must resolve itself into the same three parts, and be parcelled out among different inhabitants of the country, either as wages of their labour, the profits of their stock, or the rent of their land. The whole of what is annually either collected or produced by the labour of every society, or what comes to the same thing, the whole price of it, is in the manner originally distributed among some of its different members. Wages, profits, and rent, are the three original sources of all revenue as well as of all exchangeable value. All other revenue is ultimately derived from someone or other of these (Smith 1981: I, vi, 69)

Below I show that Adam Smith is consistent and correct in his reasoning and all the charges against him of inconsistency and mistakes on this point are results of misinterpretations. First of all, Adam Smith is quite clear that National Income, which is divided into wages, profits and rent, is made up of 'value added' and not total prices of gross output. For example, he writes:

> As soon as stock has accumulated in the hands of particular persons, some of them will naturally employ it in setting to work industrious people, whom they will supply with materials and subsistence, in order to make a profit by the sale of their work, or

> *by what their labour adds to the value of the materials.* In exchanging the complete manufacture either for money, for labour, or for other goods, over and above what may be sufficient to pay the price of the materials, and the wages of the workmen, something must be given for the profits of the undertaker of the work who hazards his stock in this adventure. *The value which the workmen add to the materials, therefore, resolves itself in this case into two parts, one which pays their wages, the other the profits of their employer upon the whole stock of materials and wages which he advanced* (Smith 1981: I, vi, 65–6; emphasis added)

Smith's reasoning can be understood by following a simple example. Let us take a one-good world of corn, where corn is the only raw material as seed and wages are paid in terms of corn as well. Let us suppose that two units of corn are produced by one unit of corn seed, eight hours of labour, and one unit of land. Let us also suppose that wage is equal to half a unit of corn for eight hours of labour and the rate of profit is 20%. In this case, the 'real price' of corn is 16 hours of labour, where the 'real price' is defined by the labour-time a commodity commands in the market. Now, given the 'real price' of corn as 16 hours of labour, from our production equation we know that, on average, one unit of corn production requires half a unit of corn, half a unit of land, and four hours of labour. Thus the 'real price' of corn in the first place resolves into four hours of labour to workers plus $(8+4)\ 0.2 = 2.4$ hours of labour as profit plus eight hours as raw materials plus the remaining 1.6 hours as rent. Now, the 'real price' of raw materials used in producing one unit of corn can further be broken into two hours to workers as wages plus $(4+2)\ 0.2 = 1.2$ hours as profit plus four hours as raw materials plus the remaining 0.8 hours as rent. Similarly the 'real price' of raw material of this round of production can again be broken into the share of wages, profits and rent plus the 'real value' of the raw materials, and on and on until the raw material element becomes negligible. Now if we add up the 'real prices' of all the wages, profits and rent, we get total wage share $= (4+2+1+0.5+\ldots)$, total profit share $= (2.4+1.2+0.6+\ldots)$ and total rent share $= (1.6+0.8+0.4+\ldots)$. The three geometrical series converge to eight hours of labour, 4.8 hours of labour and 3.2 hours of labour respectively. Thus the 'real price' of corn is resolved into eight hours as wages, 4.8 hours as profits and 3.2 hours as rent. Now we can check that in our original example of two units of gross output or one unit of net output of corn production, the direct share of wages, profits and rent come to exactly 8, 4.8 and 3.2 respectively. That is, when the 'real price' is ultimately resolved into wages, profits and rent, it equals the direct share of the three classes in the production of one unit of the net output.

The example can be easily generalized for the complicated case of n goods in the system. But before we get to that, it is important to point out that Adam Smith maintained that the land that is capable of producing food always pays rent, which is interpreted as *physical surplus* produced in the agricultural sector. Thus in a sense 'corn' is the only 'basic good'[3] in his system. Now let us suppose that there is another good 'iron' that requires both corn and iron for its production; for example:

$$\begin{aligned}&0.25 \text{ ton of corn} + 0.25 \text{ ton of iron} + 8 \text{ hours of labour}\\&\quad + 1 \text{ acre of land} \rightarrow 1 \text{ ton of iron}\end{aligned}$$

This implies:

$$(1/4\ p_C + 1/4\ p_I + 8 \text{ hrs. of labour})(1 + r) + 1.t = p_I.$$

From our corn example above, we already know that 'real price' of one ton of corn (p_C) is 16 hours of labour, the rent of one acre of land (t) is 3.2 hours of labour and the rate of profits (r) is 20%. After plugging these values in the above production equation of iron, we get 'real price' of one ton of iron (p_I) = 25.14 hours of labour. Similarly, if we add another good 'coal' in the system, where both 'coal' and 'iron' along with 'corn' are needed in the production of both 'coal' and 'iron', then we can accordingly represent the system of production of both 'coal' and 'iron' as given below:

$$\begin{aligned}&0.25 \text{ ton of corn} + 0.25 \text{ ton of iron} + 0.5 \text{ ton of coal}\\&\quad + 8 \text{ hours of labour} + 1 \text{ acre of land} \rightarrow 1 \text{ ton of iron}\end{aligned}$$

$$\begin{aligned}&0.25 \text{ ton of corn} + 0.25 \text{ ton of iron} + 0.25 \text{ ton of coal}\\&\quad + 8 \text{ hours of labour} + 1 \text{ acre of land} \rightarrow 1 \text{ ton of coal}\end{aligned}$$

This implies:

$$(1/4\ p_C + 1/4\ p_I + 1/2\ p_{CO} + 8 \text{ hrs . of labour})(1 + r) + 1.t = p_I$$

$$(1/4\ p_C + 1/4\ p_I + 1/4\ p_{CO} + 8 \text{ hrs. of labour})(1 + r) + 1.t = p_{CO}$$

3 The concept of 'basic goods' was introduced by Sraffa (1960: 7–8). A basic good is a good that enters directly or indirectly into the production of all other goods; whereas a 'non-basic good' either does not inter into production of any good or only into the production of a sub set of non-basic goods.

Again, plugging the values of price of 'corn' and the rent of land from the corn model and the given $r = 20\%$, we can solve for price of iron and price of coal in terms of hours of labour commanded by one unit of these commodities. This example can easily be generalized for n non-basic goods case on the assumption that the system is productive in the sense that all commodities as inputs are either less than or equal to their outputs; in other words, the Hawkins–Simon condition holds and that prices are either strictly positive or zero. The same idea can be translated in Adam Smith's reasoning in the following manner:

$$(Ap + H)(1 + r) + tL = p,$$

where A is an n x n matrix of commodity inputs $a_{ij,}$ which represents the quantity of good j required to produce, on average, one unit of good i. We take good one as corn with a_{11} positive and all other a_{ij} elements as zero in the first row of matrix A. H, L, and p represent vectors of labour time, land units and the 'real price' or the labour time commanded, respectively. We can represent our production system in terms of Adam Smith's price equations as:

$$(H + rH + tL) = p - Ap(1 + r) = [I - A(1 + r)]p$$

$$p = [I - A(1 + r)]^{-1}(H + rH + tL)$$

on the assumption that $[I - A(1 + r)]p$ is invertible. This can be expanded as:

$$p = [I + A(1 + r) + A^2(1 + r)^2 + A^3(1 + r)^3 + \ldots](H + Hr + tL)$$

This resolves all prices into wages, profits and rent. It should be noted that Adam Smith's system can be generalized for n basic goods system as well. In this case, we first take real wages as given and derive the 'maximum rate of profits', given the wages, by putting the rent (t) equal to zero. Since the system is taken to satisfy the Hawkins–Simon condition – that is, there is positive surplus after the payment of real wages in the system – we can be sure that the 'maximum rate of profits' will be positive. On the assumption that the given rate of profits is always below the 'maximum rate of profits' we can determine $n - 1$ relative positive prices and the rent (t) per unit of land by solving the simultaneous equation problem.[4]

4 'Smith's value-added accounting is shown to be correct by Leontief-Sraffa modeling' (Samuelson 1977: 42). Our procedure given above is similar to

Of course, Adam Smith did not solve the simultaneous equation problem, but he did think in terms of one commodity corn model, as explained above, and thought that the argument will carry through for more than one good case. Let us note two aspects of the above solution at this time: both wages and the rate of profits are taken as given, whereas rent is determined as residual, which brings us to the second point of the issue.

3. Rent as residual

Adam Smith argues that:

> Rent . . . enters into the composition of price of commodities in a different way from wages and profit. High or low wages and profit, are the causes of high or low price; high or low rent is the effect of it. It is because high or low wages and profit must be paid, in order to bring a particular commodity to market, that its price is high or low. But it is because its price is high or low; a great deal more, or very little more, or no more, than what is sufficient to pay those wages and profit, that it affords a high rent, or a low rent, or no rent at all. (Smith 1981: I, xi.b, 162)

But why should a commodity's price be 'high' enough that it affords rent? Is it because, at any given time, the supply of the commodity is falling short of its effectual demand, thereby raising its market price and allowing the monopoly power of the landlord to be able to extract all the excess profits over and above the given natural rate of profit as rent? If that is the case, then increase in the supply of the commodity should reduce its market price and eliminate the rent. Smith argues that in the case of 'corn' or food for the working class in general, a supply response does not affect the price because in the case of food, both supply and effectual demand move simultaneously parallel to each other:

> As men like all other animals, naturally multiply in proportion to their means of their subsistence, food is always, more or less, in demand. It can always purchase or command a greater or smaller quantity of labour, and somebody can always be found who is willing to do something, in order to obtain it. (Smith 1981: I, xi.b, 162)

It sounds as if Smith believed that there were always some unemployed labourers in the system who could be immediately employed against the excess food or the population mechanism worked instantaneously. But

Sraffa's (1960) dated labour approach, and his statement in the beginning of the Chapter vi that 'prices . . . ''resolve themselves''' is a clear reference to Adam Smith. I am indebted to Antoine Rebeyrol for the mathematical representation of my idea.

Smith elsewhere argues that the market price of agricultural produce in general fluctuates much greatly than industrial goods:

> The price of the one species of commodities [industrial goods] varies only with the variations in demand: That of the other [agricultural goods] varies, not only with the variations in the demand, but with the much greater and more frequent variations in the quantity of what is brought to market in order to supply that demand. (Smith 1981: I, vii, 76)

Thus it is safe to assume that the context of the discussion on rent is the long-term context and not the market period context. In the case of land that produces food, Smith maintains that such land *always* pays a positive rent. Thus the problem for the theory is to explain the perpetual 'high' price of corn in the context of free competition and no restriction on supply.

Rosenbluth (1969) maintains that there is an apparent redundancy of Smith's Chapter Eight on wages and deficiency in the treatment of rent on land that always produces rent. He argues that once the labour commanded measure is taken as the *numéraire* in the system, the value of wages by definition is equal to one, and if the prices of commodities are determined by adding up given profits, rent, and wages, then the real wage basket is automatically determined once the prices are determined by given profits, rent, and unity wages. On the other hand, rent on land that always pays rent cannot be determined unless the price of food or corn is known. Thus, according to Rosenbluth, the significance of Chapter Eight on wages lies in determining the 'real price' of corn, which is used in the chapter on rent to determine rent as a residual. Hollander (1973: 173ff.) agrees with Rosenbluth's reasoning but goes on to add that the 'money price' of corn is not determined by his general principle of price determination for other commodities, but rather by 'specie distribution'; that is, by the international flow of money supply. Thus the real wages in terms of corn determined in the chapter on wages simultaneously determines the money wages, given the money price of corn. Now given the money price of corn, the money wages and the rate of profits the rent on corn land is determined as a residual on the assumption that the money price of corn is always high enough to generate a residual rent.

Neither Rosenbluth nor Hollander, however, explains why the money price of corn must always be larger than what Smith calls the *sufficient price*; that is, a price that covers the natural wages and natural profits only, of corn. I find an immediate problem with their explanation. The 'real' corn wages as well as money wages determined in Chapter Eight on wages by no means guarantee that there would be a positive rent on land that produces corn. However, Adam Smith's proposition was that such lands always produce rent. Now, it is true, as we have alluded to above, that Smith maintained that, in the case of corn, an increase in its supply brings forth an equal increase in its effectual demand in the long-term through population mechanism. This may explain why corn prices will not fall but it does not explain why corn prices must be high enough to afford a positive rent to begin with. This proposition cannot be established through the price mechanism; it must be established through the notion of *physical surplus*.

It should be noted that the notion of surplus can only be defined from a particular point of view. From a purely scientific point of view, no surplus can be produced in nature; from a technical point of view, all the net output after deducting the total physical inputs used in the production process from the gross output must be treated as surplus (Sraffa's position); in Classical Political Economy, the notion of surplus was defined from particular class positions – for example, both Ricardo and Marx took the capitalist point of view in defining the surplus, where wages are taken as part of the necessary cost and thus part of the inputs and the rest of the output is treated as surplus; it is our contention that, unlike Ricardo and Marx, Adam Smith took the landlord's point of view in defining the surplus – for him, both wages and a normal profit are considered necessary cost and only rent is treated as surplus. In this paper we use the term 'surplus' in this strict sense and distinguish it from its common usage, for example, Adam Smith frequently uses the word 'surplus' for expressing 'over and above', by writing it in italics. Below we shall argue that in this context Smith maintained the fundamental Physiocratic proposition that rent is a *surplus*, which is a gift of nature:

> But land, in almost any situation, produces a greater quantity of food than what is sufficient to maintain all the labour necessary for bringing it to market, in the most liberal way in which that labour is ever maintained. The surplus too is always more than sufficient to replace the stock which employed that labour, together with its profits. Something, therefore, always remains for a rent to the landlord. (Smith 1981: I, xi.b, 163)

Here we have Smith's reasoning in terms of 'corn model' in embryo. This confirms the procedure we have applied above in determining Smith's prices by taking rent as residual. The notion of rent as residual was also present in the quotation cited earlier, where Smith states 'But it is because its price is high or low; a great deal more, or very little more, or no more, than what is sufficient to pay those wages and profit, that it affords a high rent, or a low rent, or no rent at all'. And it is further confirmed by his notion of the maximum rate of profit: 'The highest ordinary rate of profit may be such as, in the price of the greater part of commodities, eats up the whole of what should go to the rent of the land, and leaves only . . . the bare subsistence of the labourer' (Smith 1981: I, x, 113). Thus the allegation that

Adam Smith did not have a constraint binding on his distributional variables is simply not true.[5]

Furthermore, our claim that Smith's proposition regarding rent is Physiocratic in nature is confirmed by both the nature of his critique of the Physiocratic doctrine as well as the application of his theory to the principle of direct taxation. In his critique of the Physiocratic system, Adam Smith wrote that 'This system, however, with all its imperfections is, perhaps, the nearest approximation to the truth that has yet been published upon the subject of political oeconomy,...' (Smith 1981: IV, ix, 678). The 'imperfections' mainly allude to the treatment of manufacturing labour as sterile or unproductive by the Physiocrates. From the point of view of determining the nature of the *surplus*, Adam Smith's objection to such characterization of manufacturing labour, however, boils down to just a semantic quibble, as he claims:

> [T]his class [the class of manufacturers], it is acknowledged, reproduces annually the value of its own annual consumption, and continues, at least, the existence of the stock or capital which maintains and employs it. But upon this account alone the denomination of barren or unproductive should seem to be very improperly applied to it. We should not call a marriage barren or unproductive, though it produces only a son and a daughter, to replace the father and mother, and though it did not increase the number of the human species, but only continued it as it was before. Farmers and country labourers, indeed, over and above the stock which maintains and employs them, reproduce annually a neat produce, a free rent to the landlord. As a marriage which affords three children is certainly more productive than one which affords only two; so the labour of farmers and country labourers is certainly more productive than that of merchants, artificers and manufacturers. The superior produce of the one class, however, does not render the other barren or unproductive. (Smith 1981: IV, ix, 674–5)[6]

However, when it comes to identifying the nature and the origin of rent, he completely identifies with the Physiocratic notion of rent as 'gift of nature'; as he states:

> No equal capital puts into motion a greater quantity of productive labour than that of the farmer. Not only his labouring servants but his labouring cattle, are productive labourers. In agriculture too nature labours along with man; and though her labour

5 It should be noted that in Ricardo the marginal land does not pay any rent and the *surplus* on the marginal land is defined by the profit over and above the input cost and the wage payments. In Smith, however, all lands that produce food pay rent and the *surplus* is defined by the rent over and above all the input costs plus wages and profit costs.

6 It should, however, be noted that it was important for Smith to distinguish between the manufacturing labour that reproduced its own cost from service labour that did not even reproduce their own cost and thus were unproductive in his opinion.

costs no expence, its produce has its value, as well as that of the most expensive workmen. The most important operations of agriculture seem indeed, not so much to increase, though they do that too, as to direct the fertility of nature towards the production of the plants most profitable to man. . . . The labourers and labouring cattle, therefore, employed in agriculture, not only occasion, like the workmen in manufactures, the reproduction of a value equal to their own consumption, or to the capital which employs them, together with its owners profits; but of a much greater value. Over and above the capital of the farmer and all its profits, they regularly occasion the reproduction of the rent of the landlord. *This rent may be considered as the produce of those powers of nature, the use of which the landlord lends to the farmer.* It is greater or smaller according to the supposed extent of those powers, or in other words, according to the supposed natural or improved fertility of the land. It is the work of nature which remains after deducting or compensating every thing which can be regarded as the work of man. It is seldom less than a fourth, and frequently more than third of the whole produce. No equal quantity of productive labour employed in manufactures can ever occasion so great a reproduction. In them nature does nothing; man does all; and the reproduction must always be in proportion to the strength of the agents that occasion it. The capital employed in agriculture, therefore, not only puts into motion a greater quantity of productive labour than any equal capital employed in manufactures, but in proportion too to the quantity of productive labour which it employs, it adds a much greater value to the annual produce of the land and labour of the country, to the real wealth and revenue of its inhabitants. Of all the ways in which a capital can be employed, it is by far the most advantageous to the society. (Smith 1981: II, v, 363–4; emphasis added)

Clearly the 'power of nature' results in physical output, the extent of which is given by the fertility of land. Since there is no price paid for the nature's contribution to the physical output, it turns into a pure *surplus* and is appropriated by the landlord as rent.

One way of determining whether an original income category is a necessity or a *surplus* within a theory is to observe the effect of a direct tax on such an income category. If the income category is a necessity, then the incidence of the direct tax will not stick there and it will cause 'disruptions' to productive activities in the entire system. On the other hand, if the income category is a *surplus*, then the incidence of direct tax on such income will stick and it will not have 'disruptive' impact on the entire system.

In the case of rent of land, we find that the landlords are unable to pass on the incidence of a direct income tax on rent of land to the consumers or any other class and that it does not have any 'disruptive' impact on the entire system of production. For example:

A land tax which . . . is assessed upon each district according to a certain invariable canon . . . has no tendency to diminish the quantity [and therefore] it can have none to raise the price of the produce. It does not obstruct the industry of the people. It subjects the landlord to no other inconveniency besides the unavoidable one of paying the tax. (Smith 1981: V, ii.c, 828–9)

Similarly, in the case of a variable tax according to a fixed percentage of the real rent:

> If by such a system of administration a tax of this kind could be so managed as to give, not only no discouragement, but, on the contrary, some encouragement to the improvement of land, it does not appear likely to occasion any other inconveniency to the landlord, except always the unavoidable one of being obliged to pay the tax. (Smith 1981: V, ii.c, 834)

In the case of wages, the matter is quite different however:

> In all cases, a direct tax upon the wages of labour must, in the long run, occasion both a greater reduction in the rent of land, and a greater rise in the price of manufactured goods, than would have followed from the proper assessment of a sum equal to the produce of the tax, partly upon the rent of land, and partly upon consumable commodities. . . .The declension of industry, the decrease of employment for the poor, and diminution of the annual produce of the land and labour of the country, have generally been the effects of such taxes [direct taxes on wages]. (Smith 1981: V, ii.i, 865)

Now, what about the third original source of revenue, the profit? Smith deals with this category as 'revenue arising from stock', which is divided into two parts: one as 'profit' that goes to the agent who employs the stock; and the other as 'interest', which goes to the owner of the stock who does not employ it himself but lends it to the person who employs it. In the case of the profit to the person who employs the stock, the matter is straightforward:

> This . . . part of profit is evidently a subject not taxable directly. It is the compensation, and in most cases it is no more than a very moderate compensation, for the risk and trouble of employing the stock. The employer must have this compensation, otherwise he cannot, consistently with his own interest, continue the employment. If he was taxed directly, therefore, in proportion to the whole profit, he would be obliged either to raise the rate of his profit, or to charge the tax upon the interest of money; that is, to pay less interest. If he raised the rate of his profit in proportion to the tax, the whole tax, though it might be advanced by him, would be finally paid by one or other of two different sets of people, according to the different ways in which he might employ the stock of which he had the management. If he employed it as a farming stock in the cultivation of land, he could raise the rate of his profit only by retaining a greater portion, or what comes to the same thing, the price of a greater portion of the produce of the land; and as this could be done only by a reduction of rent, the final payment of the tax would fall upon the landlord. If he employed it as a mercantile or manufacturing stock, he could raise the rate of his profit only by raising the price of his goods; in which case the final payment of the tax would fall altogether upon the consumers of those goods. If he did not raise the rate of his profit, he would be obliged to charge the whole tax upon that part of it which was allotted for the interest of money. He could afford less interest for whatever stock he borrowed, and

> the whole weight of the tax would in this case fall ultimately upon the interest of money. So far as he could not relieve himself from the tax in one way, he would be obliged to relieve himself in the other. (Smith 1981: V, ii.f, 847)

However, what about a direct tax on the interest of money? As far as a tax on interest is concerned, Smith's practical position was that it would encourage the stock to flee from the country where it was taxed to the country where it was not. In that case, such a tax would be extremely harmful to the economic health of the country that imposes the tax. However, in a theoretical case of a closed economy, he draws a parallel between interest of money and rent of land:

> The interest of money seems at first sight a subject equally capable of being taxed directly as the rent of land. Like the rent of land, it is a neat produce which remains after completely compensating the whole risk and trouble of employing the stock. As a tax upon the rent of land cannot raise rents; because the neat produce which remains after replacing the stock of the farmer, together with his reasonable profit, cannot be greater after the tax than before it: so, for the same reason, a tax upon the interest of money could not raise the rate of interest; the quantity of stock or money in the country, like the quantity of land, being supposed to remain the same after the tax as before it. The ordinary rate of profit, it has been shown in the first book, is everywhere regulated by the quantity of stock to be employed in proportion to the quantity of the employment, or the business which must be done by it. But the quantity of the employment, or of the business to be done by stock, could neither be increased nor diminished by any tax upon the interest of money. If the quantity of the stock to be employed, therefore, was neither increased nor diminished by it, the ordinary rate of profit would necessarily remain the same. But the portion of this profit necessary for compensating the risk and trouble of the employer, would likewise remain the same; that risk and trouble being in no respect altered. The residue, therefore, that portion which belongs to the owner of the stock, and which pays the interest of money, would necessarily remain the same too. At first sight, therefore, the interest of money seems to be subject as fit to be taxed directly as the rent of land. (Smith 1981: V, ii.f, 847–8)

Now, the question is whether interest of money is part of what Adam Smith defines as 'natural rate of profit'? If it is a part of the 'natural rate of profit', then the profit income has two elements: one is a necessity and the other is a *surplus*. If that is the case, then it is not clear where this *surplus* comes from. I shall, however, argue that in Adam Smith's scheme of things interest of money is not a part of the natural rate of profit and it does not constitute an original source of income.

First of all, it should be noted that Adam Smith has a notion of minimum rate of profit, which is defined as 'something more than what is sufficient to compensate the occasional losses to which every employment of stock is exposed' (Smith 1981: I, ix, 113). When the natural rate of profit is at or near the minimum rate, interest of money vanishes as no employer can afford to pay any interest on borrowed stock. When the rate of profit rises beyond the minimum level, then there emerges a 'neat' or 'clear' profit from which a rate of interest could be afforded:

> It is this surplus only which is neat or clear profit. What is called gross profit comprehends frequently, not only this surplus, but what is retained for compensating such extraordinary losses. The interest which the borrower can afford to pay is in proportion to the clear profit only. (Smith 1981: I, ix, 113)

Now the question becomes: is this clear profit a *surplus*? To answer this question, we would first need to recall Adam Smith's definition of 'natural rate of profit':

> His profit, besides, is his revenue, the proper fund of his subsistence. As, while he is preparing and bringing the goods to market, he advances to his workmen their wages, or their subsistence; so he advances to himself, in the same manner, his own subsistence, which is generally suitable to the profit which he may reasonably expect from the sale of his goods. Unless they yield him this profit, therefore, they do not repay him what they may very properly be said to have really cost him. (Smith 1981: I, vii, 73)[7]

Here we can see that there is no trace of *surplus* in the notion of natural rate of profit. Could it be that Smith identifies the natural rate of profit with the minimum rate of profit? The answer is no, as he clearly states that:

> The natural price itself varies with the natural rate of each of its component parts, of wages, profit, and rent; and in every society this rate varies according to their circumstances, according to their riches or poverty, their advancing, stationary, or declining condition. (Smith 1981: I, vii, 80)

Thus the part of profit that is 'neat' or 'clear' is not necessarily a *surplus* category. Although the level of clear profit may rise or fall with changes in the historical situation; for a given historical situation, it can be understood as a conventional 'normal' cost of capital investment.

In the chapter on 'Of the component Parts of the Price of Commodities', Adam Smith makes it quite clear that interest is not a part of profit and that it is a derivative rather than an original income category:

> Whoever derives his revenue from a fund which is his own, must draw it either from his labour, from his stock, or from his land. The revenue derived from labour is called wages. That derived from stock, by the person who manages or employ it, is called profit. That derived from it by the person who does not employ it himself, but lends it to another, is called the interest of the use of money. It is the compensation which the borrower pays to the lender, for the profit which he has an opportunity of making by

7 A.K. Dasgupta, in my opinion, mistakenly identifies this statement with Smith's notion of minimum rate of profit. See Dasgupta (1985: 47).

> the use of the money. Part of the profit naturally belongs to the borrower, who runs the risk and takes the trouble of employing it; and the part to the lender, who affords him the opportunity of making his profit. The interest of money is always a derivative revenue, which, if it is not paid from the profit which is made by the use of the money, must be paid from other source of revenue,... The revenue which proceeds altogether from land, is called rent, and belongs to the landlord.... All taxes, and all the revenue which is founded upon them, all salaries, pensions, and annuities of every kind, are ultimately derived from some one or other of those three original sources of revenue, and are paid either immediately or mediately from the wages of labour, the profits of stock, or the rent of land. (Smith 1981: I, vi, 69–70).

There are, therefore, three distinct groups of people in this story. One group of people employs their *own* stock and earns a normal or 'natural' rate of profit as their income, which is defined as their 'proper fund of subsistence'. Any tax on this category of income would disrupt the real economy because '[u]nless they yield him this profit, therefore, they do not repay him what they may very properly be said to have really cost him'. A second group of people do not own any stock. They could either earn their income as wages by offering their labour for hire or by borrowing stock from a group of people who own stock but do not employ it themselves and investing them for profit. This group of people earns a minimum income as a reward for taking the risk of employing capital. Any tax on this income will also disrupt the economy because it will take away the minimum incentive to employ the borrowed stock. The third group of people lends the stock to the second group of people and receives interest as their income, which is a part of the total profits earned by the investment of their stock. This group of people has no impact on the real economy as it is in their interest to lend their stock so long as it brings an interest earning larger than zero. Therefore, this income category can be taxed without causing any disruption to the real economy. We can conclude that the natural rate of profit does not contain any *surplus*.[8] However, when the

8 Krishna Bharadwaj writes: 'Smith acknowledged that surplus arose not only in agriculture (as was the view of the Physiocrats in France), but also in manufactures' (1989: 22). She, however, provides no evidence in support of her claim. Her reading of Smith is an example of an attempt to read Sraffa's interpretation of Ricardo into Smith. Also Maurice Dobb (1973), without providing any evidence, simply interprets Smith's 'productive labour' as productive of 'surplus', and thus identifies profits with surplus. O'Donnell tries to read Smith from the perspective of Garegnani's (1984) 'surplus approach' framework. He confuses Smith's concept of *revenue* with the concept of *surplus* and therefore mistakenly declares profits to be a surplus in Smith's system. This leads him to inevitable frustration, as he notes: 'However, what is striking about these surplus relationships is that they were not used by Smith to develop a theory of the *rate of profit*, his concern being, almost exclusively, the *amount* of surplus and its implications for accumulation' (O'Donnell 1990: 52). The source

natural rate of profit happens to be higher than the minimum rate, then it becomes worthwhile for some employers who do not have enough stock of their own to borrow from those who are willing to lend and then share the 'clear' profit with the money lenders at some conventionally determined rate. Here the interest payment could be understood as expenditure out of profit income and a tax on interest to be a tax on transferred income. This is why Adam Smith considered rent to be the only original *surplus* category of income. Professor Hollander, in his attempt to deny Smith's Physiocratic foundation on this issue, argues that:

> A well known statement referring to landlords as 'the only one of the three orders whose revenue costs them neither labour nor care, but comes to them, as it were, of its own accord, and independent of any plan or project of their own' must, therefore, be qualified. This proposition distinguishes the return to *labour* and to *entrepreneurship* from that of *land*, but neglects to take into account interest payments, which in principle should be classified together with rent. (Hollander 1973: 170)

In the light of our argument above, however, there is no reason to qualify Smith's statement since he did not consider interest payments as an original source of revenue.

4. On falling rate of profits

Now we turn to the second criticism of Adam Smith mentioned above. His treatment of the determination of the rate of profits is highly complex and confusing. An understanding of the full scope of his argument is possible

of such misinterpretations lies in accepting Marx's (1977) and also Quesnay's (1972) proposition, which establishes a one-to-one relationship between 'productive labour' and 'surplus production' as well as the idea that savings can come only from 'surplus', as universally valid for all political economy. Smith, however, did not identify 'productive labour' with 'surplus' producing labour; as he was quite clear that even though manufacturing produces no surplus (a marriage that produces only two children), the manufacturing labour is productive; and he also maintained that savings need not come from '*surplus*' as not only the bulk of savings came from profits but even wages could generate savings, as he maintained that some of the workers' consumptions could be classified as 'luxuries' such as tobacco, spirituous liquors, sugar, tea, etc., and a tax on these items would not have any effect on money wages. Vivienne Brown (1994) has also argued that Smith's 'revenue components theory was a challenge to the view that agriculture alone is productive' (1994: 176). She, however, fails to notice that Quesnay had identified productive labour with the labour that produces surplus, whereas Smith simply changed the meaning of productive labour without challenging the fundamental Physiocratic notion of surplus.

only if we succeed in separating the various abstract layers of his arguments. In Chapter VI, Adam Smith proclaimed:

> The profits of stock, it may perhaps be thought, are only a different name for the wages of a particular sort of labour, the labour of inspection and direction. They are, however, altogether different, are regulated by quite different principles, and bear no proportions to the quantity, the hardship, or the ingenuity of this supposed labour of inspection and direction. They are regulated altogether by the value of the stock employed, and are greater or smaller in proportion to the extent of this stock. (Smith 1981: I, vi, 66)

In Chapter IX, entitled 'Of the Profits of Stock', he proclaims:

> The rise and fall in the profits of stock depend upon the same causes with the rise and fall in the wages of labour, the increasing or declining state of the wealth of the society; but those causes affect the one and the other very differently. (Smith 1981: I, ix, 105)

After which he goes on to list empirical observations that suggest the economies that are growing faster have higher wages and lower rates of profits, with the notable exception of the North American and West Indian colonies where both wages and profits are high simultaneously. The exceptional case of the North American and West Indian colonies is explained on the ground that the new colonies were both under-stocked and under-populated in proportion to the extent of their territories. After putting the exception aside, the empirical evidence of an inverse relation between wages and profits is established. It should be noted that Adam Smith had already theoretically established a positive relationship between the rate of growth of the economy and the level of wages. In the current chapter he argues that the same phenomenon also imply a negative relationship between the rate of growth of the economy and the rate of profits on capital stock. In other words, rising wages imply falling profits. This proposition is established on the ground that:

> The increase of stock, which raises wages, tends to lower profit. When the stocks of many rich merchants are turned into the same trade, their mutual competition naturally tends to lower its profit; and when there is a like increase of stock in all the different trades carried on in the same society, the same competition must produce the same effect in them all. (Smith 1981: I, ix, 105)

The above argument of Adam Smith is almost universally considered to be false, as it apparently commits the fallacy of composition – what may be true for one sector taken in isolation may not be true for all the sectors taken together. It is true that if the economy is growing at a certain rate, then increase in the stocks of capital in all the sectors at that rate should not cause the crowding effect and a fall in the rate of profits due to it. But before we judge the game and set in favour of Smith's critics on this point, let us see what Smith's reasoning behind it was.

First of all, it should be re-emphasized that Smith's proposition of the falling rate of profits in a growing economy is intricately linked with rising wages:

> In a thriving town the people who have great stocks to employ, frequently cannot get the number of workmen they want, and therefore bid against one another in order to get as many as they can, *which raises the wages of labour, and lowers the profits of stock.* In remote parts of the country there is frequently not stock sufficient to employ all the people, who therefore bid against one another in order to get employment, *which lowers the wages of labour, and raises the profits of stock.* (Smith 1981: I, ix, 107; emphasis added)[9]

In his theoretical analysis, Adam Smith assumed that wage goods consisted only of 'corn' or food in general. In this case the agricultural sector and the manufacturing sector should be sharply separated and a rise in real wages should imply a rise in money wages with no increase in the money price of 'corn'. The question is: will this rise in the share of wages in the total corn produced be absorbed by a fall in profits or rents? The immediate effect of a rise in money wages with constant money price of corn would be a fall in the rate of profits in the agricultural sector. If the manufacturing sector is able to raise its money prices to compensate for the rise in money wages, then it will engender an outflow of capital from agricultural sector to manufacturing sector reducing the rate of profits in the manufacturing sector to the level of the rate of profits in the agricultural sector. The question is: why the migration of capital from agricultural sector to manufacturing sector does not create pressure on rent so that the agricultural rate of profits could be brought back to the old level? The answer to this question lies in the cause of the rise in wages in the first place. Adam Smith does not contemplate the effect of rise in real wages on either profits or rent in a static scenario. In his theoretical framework,

9 This is not to deny that Adam Smith was also of the opinion that there are natural limits to growth for every sector of the economy and thus a growing economy must eventually stagnate. He also thought that increase in capital in any sector would lead to fall in the residual monopoly powers and thus a fall in the average rate of profits. O'Donnell (1990) argues that in Smith's scheme the rate of profits fall because of rising proportion of capital over revenue in the course of historical development. But this conclusion, in my opinion, is incorrect, as Smith's proposition regarding rise in capital *vis-à-vis* revenue was predicated on the proposition regarding the falling rate of profits (see Smith 1981: II, iii, 10 & 11, 334–5).

the real wages rise because capital is growing faster than the rate of growth of population. It is the growing capital scenario that actually strengthens the bargaining position of the landlords *vis-à-vis* the farmers or the agricultural capitalists who are simply unable to shift the burden of the rise in real wages on to the shoulders of the landlords. As Adam Smith stated:

> [E]very improvement in the circumstances of the society tends either directly or indirectly to raise the real rent of land,... The extension of improvement and cultivation tends to raise it directly. (Smith 1981: I, xi.p, 264)

This point is crucial in distinguishing the impact of rising real wages on the rate of profits from the impact of a tax on real wages or wage goods. The scenario of a tax on wages or the wage goods is a static one. In this case, the migration of capital from agricultural sector to the manufacturing sector increases the bargaining strength of the farmers or the agricultural capitalists *vis-à-vis* the landlords, which eventually leads to the burden of taxes ultimately falling on the rent in the agricultural sector and a compensatory rise, to the extent of rise in the money wages, in prices of the manufacturing goods leaving the original rate of profits unchanged before and after the taxes.[10] In the light of our argument, I would suggest that Professor Hollander is mistaken in arguing that:

> there is no reason to believe that the secular rise in *per capita* wages in consequence of an increasing rate of capital accumulation was treated differently then a tax on wages or on wage goods. The increase in wage costs in this case too would be passed on in the form of higher prices and reduced rents. (1973, 181)

The static and the dynamic scenarios work differently.

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10 'While the demand for labour and the price of provisions, therefore remains the same, a direct tax upon the wages of labour can have no other effect than to raise them somewhat higher than the tax' (Smith 1981: V, ii.g, 864). And 'It [taxes on necessaries of life or wage goods] ... operates exactly in the same manner as a direct tax upon the wages of labour' (Smith 1981: V, ii.k, 871).

References

Bharadwaj, K. (1989). *Themes in Value and Distribution Classical Theory Reappraised*. London: Unwin Hyman.

Brown, V. (1994). *Adam Smith's Discourse Canonicity, Commerce and Conscience*. London: Routledge.

Dasgupta, A.K. (1985). *Epochs of Economic Theory*. Oxford: Basil Blackwell.

Dobb, M. (1973). *Theories of Value and Distribution since Adam Smith Ideology and Economic Theory*. Cambridge: Cambridge University Press.

Garegnani, P. (1984).Value and distribution in the classical economists and Marx. *Oxford Economic Papers*, 36(3): 291–325.

Hollander, S. (1973). *The Economics of Adam Smith*. Toronto: University of Toronto Press.

Marx, K. ([1905 to 1910] 1968). *Theories of Surplus Value Part II*. Moscow: Progress Press.

Marx, K. ([1867] 1977). *Capital Vol. 1*. New York: Vintage.

Marx, K. ([1884] 1992). *Capital Vol. 2*. London: Penguin Books.

O'Donnell, R. (1990). *Adam Smith's Theory of Value and Distribution. A Reappraisal*. New York: St Martin's Press.

Quesnay, F. (1972). *Quesnay's Tableau Economique*. Ed. M. Kuczynski and R. Meek. London: Macmillan.

Ricardo, David. ([1821] 1951). *On The Principles Of Political Economy And Taxation,* 3rd ed. Cambridge: Cambridge University Press.

Rosenbluth, G. (1969). A note on labour, wages, and rent in Smith's theory of value. *Canadian Journal of Economics*, 2(2): 308–14.

Samuelson, P.A. (1977). A modern theorist's vindication of Adam Smith. *American Economic Review*, 67(1): 42–9.

Smith, A. ([1776] 1981). *An Inquiry into the Nature and Causes of the Wealth of Nations Volume I and II*. Indianapolis, Ind.: Library Fund.

Sraffa, P. (1960). *Production of Commodities by Means of Commodities*. Cambridge: Cambridge University Press.

Abstract

This paper defends Adam Smith against his critics on his 'additive' theory of value as well as his theory of 'falling rate of profits'. It argues that Adam Smith did not forget the raw materials, and so forth, in his resolution of the price into wages, profits, and rent, and that the constraint binding on the total income was also taken into account by treating rent as the residual. It further argues that there is no fallacy of composition in Smith's explanation for the 'falling rate of profits'. It was explained on the basis of rising real wages and the farmers' inability to shift the burden of the rise in wages from profit to rent in the context of a growing economy.

Keywords

Adam Smith, classical economics, additive theory of value, surplus approach to economics, rent as a residual