Investment and Profit: Smith, Ricardo, Keynes

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I INTRODUCTION

Everyone knows that Keynes berated Ricardo for his adherence to something called "Say's Law", and for his denial that there could ever be a problem of deficient aggregate demand. Unlike some scholars (cf. Ahiakpor, 1998) I believe that Keynes's critique of Say's Law was substantially correct, that his argument was sound and it was not directed at a straw man. I have made that case elsewhere (Cottrell, 1998) and will not repeat it here. My concern here is with the somewhat ironic three-way relationship among Smith, Ricardo and Keynes on the topic of investment and profit, a topic which arises in connection with Ricardo's invocation of Say's Law in the *Principles*. I shall argue that although Ricardo does dismiss the problem of effective demand, in a way that is invalid in the light of Keynes's *General Theory*, nonetheless the only explicit appeal to Say's Law in Ricardo's *Principles* has the purpose of defeating an argument of Smith's that Keynes should, by rights, also have found wrong-headed.

II RICARDO ON SMITH

Ricardo makes many references to J. B. Say in the *Principles of Political Economy and Taxation* (most of them critical), but in only one case does the reference concern what we now know as Say's Law, or what Ricardo calls "M. Say's principle" (1951, p. 290*n*). This occurs in ch. XXI, "Effects of Accumulation on Profits and Interest", and it turns out to play a particular and unexpected role. Ricardo invokes Say in the course of an argument that one might almost call Keynesian: that investment "justifies itself" (in the aggregate) by creating a demand for its product.

The argument in question begins from a critique of Adam Smith, who, as Ricardo says, "uniformly ascribes the fall of profits to accumulation of capital, and to the competition which will result from it." Let us start by hearing Smith in his own words.

> 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.
>
> 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 all (Smith, 1982, p. 190).

After quoting part of this passage, Ricardo responds with the following.

> Adam Smith speaks here of a rise in wages, but it is of a temporary rise, proceeding from increased funds before the population is increased; and he does not appear to see, that at the same time that capital is increased, the work to be effected by capital, is increased in the same proportion. M. Say has, however, most satisfactorily shewn, that there is no amount of capital which may not be employed in a country, because demand is only limited by production (Ricardo, 1951, pp. 289–90).

There is a small point of interpretation to clear up here before proceeding with the main line of argument. When

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Smith talks of the "mutual competition" between capitalists as driving down profits, does he mean their competition to employ the available labour (hence driving up wages) or their competition *qua* sellers (hence driving down the price of the product)? The first clause of Ricardo's response might seem to indicate that he takes Smith to be talking of competition over the hiring of labour—in which case Ricardo's retort is that this is merely a short-run effect. But I think that the main point, for both Smith and Ricardo, concerns the idea that increased investment will, by augmenting the supply of the product, reduce its selling price: this is the (putative) channel of influence of investment on profit that is really at issue.

This is signalled in the latter part of the quotation from Ricardo above; it becomes clearer in the course of an amplification regarding the analysis of the export trade. Smith had written

> When the produce of any particular branch of industry exceeds what the demand of the country requires, the surplus must be sent abroad and exchanged for something for which there is a demand at home. Without such exportation a part of the productive labour of the country must cease, and the value of its annual produce diminish. The land and labour of Great Britain produce generally more corn, woollens and hardware than the demand of the home market requires. The surplus part of them, therefore, must be sent abroad, and exchanged for something for which there is a demand at home. It is only by means of such exportation that this surplus can acquire a value sufficient to compensate the labour and expense of producing it (Smith, 1982, p. 472).

Absent export demand, Smith is claiming, the commodities that could be produced in the home country would not be saleable at an adequate profit. Domestic demand limits production. Ricardo's response is to question Smith's implicit assumption that we are "under some necessity of producing a surplus of corn, woollen goods and hardware". Absent export markets, the capital in question could easily be otherwise employed.

> It is, however, always a matter of choice in what way a capital shall be employed, and therefore there can never, for any length of time, be a surplus of any commodity; for if there were, it would fall below its natural price, and capital would be removed to some more profitable employment (Ricardo, 1951, p. 291*n*).

Yes, says Ricardo, it's quite possible to over-produce certain basics relative to domestic demand, but why would capitalists do that, when they could instead use their capital to produce things for which there is an elastic domestic demand?

In expanding on this argument Ricardo is able to appeal to key points in Smith with which he is in agreement, thereby establishing Smith's inconsistency. Thus for instance he quotes Smith as saying "that the desire of food is limited in every man by the narrow capacity of the human stomach, but the desire of the conveniences or ornaments of building, dress, equipage, and household furniture, seems to have no limit or certain boundary" (Ricardo, 1951, p. 293). Well then, if the export markets for woollens, etc., were to be cut off, rather than idling a fraction of the workforce this should surely lead to the redeployment of that fraction in producing "conveniences and ornaments" for the home market. This might involve a lesser efficiency than the international trade option—we would be losing out on comparative advantage—but there's no reason why the sale of such alternative goods should fail to "compensate the labour and expense of producing" them.

What goes for exports goes, *mutatis mutandis*, for investment. A "shortage of demand" is always a shortage of demand for *particular* commodities; and it can always be overcome by producing the right commodities. Produce the right stuff, and investment will itself generate the demand to purchase the output that results.

It may be useful at this point to spell out Ricardo's ideas on how investment *can* have a negative effect on profitability. There are two mechanisms here, operating on different time scales. At the level of the secular long run (as is well known), Ricardo envisaged diminishing returns in agriculture—due to the extension of the margin in face of the need to feed a larger population—and thought that this would put profits under a double squeeze from wages and rents. In the shorter run, however, if the size of the workforce were relatively fixed, then an increasing demand for labour would tend to drive up the wage independently of the agricultural mechanism, and again force profit down. The only remaining possibility—namely, that investment might result in particular commodities' being produced in such quantities that they could not be sold at their natural price—is a strictly temporary effect of miscalculation on the part of the capitalists.

Thus we have Ricardo saying, against Smith's idea that the "mutual competition" of capitals resulting from investment of itself lowers the aggregate profit, that

> there is no limit to demand—no limit to the employment of capital while it yields any profit, and that however abundant capital may become, there is no other adequate reason for a fall of profit but a rise of wages, and further it may be added, that the only adequate and permanent cause for the rise of wages is the increasing difficulty of providing food and necessaries for the increasing number of workmen (Ricardo, 1951, p. 296).

III The Connection with Keynes

Having read Keynes, it is difficult to read Ricardo's critique of Smith "innocently", to assess the arguments on their merits. It is tempting to read Smith as somehow "anticipating" or groping towards Keynes's ideas on the problem of effective demand (and to read Ricardo as stubbornly refusing to recognize the problem). But on the terrain of the argument as cited above Ricardo definitely has the upper hand.

Neither is this merely a matter of polemical cleverness on Ricardo's part (exposing Smith's inconsistencies). In his critique of Smith, Ricardo is objecting to the unwarranted projection of a microeconomic conception onto the macro level—a mode of argument that ought to commend itself to

Keynes and Keynesians. Any particular commodity may be produced to the point where it becomes unprofitable: the market becomes saturated and the price falls. But *pace* Smith it is a mistake to suppose that the same mechanism operates at the macro level. Why? Although Ricardo does not spell it out in this way, I think we may say the following. When we consider the effects of the expansion of production of some commodity X we are doing partial equilibrium analysis: we are supposing that the demand curve for the commodity in question is given, and that increased production moves us out along that curve. In that case increased production means a lower price and reduced profitability. But when we consider the effects of accumulation in general such a *ceteris paribus* assumption is untenable. An economy-wide increase in investment pushes demand schedules outward: "at the same time that capital is increased, the work to be effected by capital, is increased in the same proportion".

The idea that microeconomic arguments can't simply be scaled up to the level of the aggregate economy is clearly a key theme in Keynes's *General Theory*.[1] An individual worker can always price himself into a job by accepting a lower wage, but the workforce as a whole cannot; an individual can always carry out a net accumulation of assets by saving more, the community as a whole cannot. We may add: when one firm carries out additional investment we may ignore the effect on the demand curve for its own product, but when aggregate investment rises we cannot.

IV Keynes's MEC Schedule

I have suggested that Keynes *ought* to be sympathetic to Ricardo's critique of Smith's idea that accumulation necessarily lowers the rate of profit, since that critique operates by exposing the invalid projection of a micro, partial equilibrium analysis onto the macro level. It's possible to make

[1] Clarke (1988, pp. 269–72) makes this case forcefully, arguing that the critique of the fallacy of composition is "built into the architecture of the work as a whole".

the case, however, that Keynes himself fell prey to a similar sort of equivocation, in connection with his schedule of the Marginal Efficiency of Capital (MEC).

In ch. 11 of the *General Theory* Keynes explicates the MEC schedule thus:

> If there is an increased investment in any given type of capital during any period of time, the marginal efficiency of that type of capital will diminish as the investment in it is increased, partly because the prospective yield will fall as the supply of that type of capital is increased, and partly because, as a rule, pressure on the facilities for producing that type of capital will cause its supply price to increase; the second of these factors being usually the more important in producing equilibrium in the short run, but the longer the period in view the more does the first factor take its place (Keynes, 1936, p. 136).

By aggregating schedules of this sort "for all the different types of capital", Keynes says he can "provide a schedule relating the rate of aggregate investment to the corresponding marginal efficiency of capital" (*ibid.*).

As Eatwell observes (1987, p. 318) Keynes's statement here is rather complex, involving as it does "assumptions on both the supply and demand conditions for individual capital goods in both short and long run and, finally, at both individual and aggregate levels". As he further observes, "in the longer run Keynes himself suggested that increased output will not result in any increase in cost," so the ultimate cause of a declining MEC schedule must be sought in the idea that prospective yield falls as the supply of capital increases. Echoes of Smith. Why should this be? Under partial equilibrium and *ceteris paribus*, Eatwell remarks,

> it may be argued that there is an inverse relationship between the rate of return and the quantity of capital invested in the production of a given output. But Keynes's argument is on very shaky ground when he attempts to define the relationship for the economy as a whole by simple aggregation of these partial effects, for he can no longer use the *ceteris paribus* condition to keep at bay some fundamental problems (Eatwell, 1987, pp. 318–9).

Just the issue that arises in Ricardo vs Smith. A declining MEC schedule can be given a relatively firm theoretical foundation in Fisherine terms, i.e. if one thinks in terms of continuous full employment and a diminishing marginal product of capital as more capital is employed along with a given workforce. But this is not a foundation that Keynes would have any use for. In a Keynesian economy, the general case is one where the employment of additional capital will be accompanied by the employment of additional labour, so the standard diminishing returns argument does not apply. In that case it's simply not clear that there is any theoretical basis for the downward slope—other than an invalid extension to the macro level of a partial equilibrium microeconomic argument.

V MONEY: KEYNES VS RICARDO

In concluding, let me try to clarify one point. Although I have taken Ricardo's part against Smith, have suggested that Ricardo's critique has the force of a macroeconomic argument, and have further suggested that Keynes himself may be vulnerable to such a critique in relation to the MEC schedule, I don't wish to leave the impression that Ricardo had all the answers.

Ricardo says that accumulation is limited only by profitability. With this Keynes should surely agree. In Keynes's theory aggregate production is limited by aggregate demand, of course, but *investment* in particular is not so limited. Rather, investment itself constitutes the proximate limit on aggregate demand, via the multiplier. Where the two inevitably part company, however, is over Ricardo's further claim that the only serious restriction on the profitability of investment lies in diminishing returns in agriculture. For Keynes the profitability of real investment is the combined effect of the marginal efficiency of capital and the money rate of interest, where the latter has a "life of its own" and is not merely a reflection of a pre-given level of real profitability. Keynesian unemployment arises when the configuration of the MEC and the rate of interest is such that the resulting level of investment falls short of the saving that would be generated out of the full-employment level of income.

This conception of the rate of interest as limiting investment is totally at odds with Ricardo, for whom money is "only the medium by which exchange is effected" (1951, p. 292) and the rate of interest is "ultimately and permanently governed by the rate of profit" (1951, p. 297). A strong statement of Ricardo's view is to be found in his critique of Say for failing to adhere consistently to his own principle.

> M. Say allows, that the rate of interest depends on the rate of profits; but it does not therefore follow, that the rate of profits depends on the rate of interest. One is the cause, the other the effect, and it is impossible for any circumstances to make them change places. (Ricardo, 1951, p. 300*n*)

Keynes's critique of Say's Law essentially consists in showing how it is possible for the rate of interest and the rate of profits to "change places"; this is what distinguishes his critique from the arguments of Smith (and Malthus), which Ricardo had no difficulty in defeating.

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