

## Adam Smith on Foreign Trade: A Note on the 'Vent-for-Surplus' Argument

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This note is exclusively concerned with the joint products foundation of Adam Smith's 'vent-for-surplus' argument. With relatively fixed proportions in which the joint products are produced, it cannot be presumed that these proportions match those in which the products are domestically required for use. Foreign trade is thus directly beneficial to a nation since it allows its producers to dispose of some of the superfluous amounts of the products in exchange for goods produced abroad that are demanded domestically.

### INTRODUCTION

Adam Smith is generally considered an important, perhaps even *the* most important, advocate of free trade. At the same time, he is commonly given little credit as a trade theorist. Viner (1937, pp. 108-9) suggests that all significant aspects of Smith's free-trade doctrine are already to be found in the earlier English literature. Robbins (1971, p. 191) argues that Smith's contribution lacks analytical rigour. Hollander (1973, Ch. 9) views Smith's treatment of the issue as unclear, contradictory and in parts incompatible with the rest of his analysis. The main criticism put forward against him is that he failed to elaborate the principle of comparative costs and based his explanation of the benefits from trade on absolute cost differences only.

A rather different picture of Smith's contribution is designed by authors such as Bloomfield (1975), Myint (1958, 1977) and Negishi (1985, Ch. 2). In their view, Smith's great merit is to be seen in the fact that his investigation is not restricted to static gains from trade arising from the reallocation of given resources, but is also concerned with the gains from trade in terms of economic development, i.e. the benefits derived from the international division of labour arising from increasing returns, induced innovations, the transfer of technology, etc. Reference is to what Myint (1977) called Smith's "'productivity" doctrine'.

It was also Myint who reappraised still another element of Smith's theory of international trade which has generally met with fierce criticism: his 'vent-for-surplus' argument. Myint arrived at the cautious conclusion that 'Smith's "vent-for-surplus" theory does not seem to conflict in any simple or obvious way with the allocative-efficiency interpretation of his trade theory' (1977, p. 245).

This note is concerned exclusively with one aspect of Smith's 'vent-for-surplus' argument which seems to have escaped both friend and foe. To the extent that his analysis involves the aspect under consideration, it can be shown to be both clear and consistent and immune to the objections raised against it. This aspect concerns the fact that in much of his respective reasoning Smith refers to *joint* production rather than to single production, as is implicitly assumed in all contributions dealing with his trade theory.

The structure of this Note is as follows. Section I will briefly summarize Smith's 'vent-for-surplus' argument and the criticism put forward against it. In Section II it will be shown that Smith was well aware of the case of joint production and clearly saw that with joint production the proportions in which the products are produced need not coincide with those in which they are wanted domestically. Hence there will be an excess supply of some of the joint products. Section III argues that Smith's 'vent-for-surplus' argument can be given a clear and unambiguous interpretation in the case under consideration: in the absence of foreign trade the overproduced amounts of certain joint products would be discarded, while with foreign trade there is the possibility of exchanging them for commodities produced abroad for which there is a demand at home. Section IV contains some concluding remarks.

### I. SMITH'S 'VENT-FOR-SURPLUS' ARGUMENT

The 'vent-for-surplus' argument recurs in various places in *The Wealth of Nations* (henceforth *WN*). In Chapter V of Book II, 'Of the different Employment of Capitals', Smith writes:

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 hard ware, 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 (*WN* II.v.33),

and in the first chapter of Book IV, 'Of the Principle of the commercial, or mercantile System', Smith argues:

The importation of gold and silver is not the principal, much less the sole benefit which a nation derives from its foreign trade. Between whatever places foreign trade is carried on, they all of them derive two distinct benefits from it. *It carries out that surplus part of the produce of their land and labour for which there is no demand among them, and brings back in return for it something else for which there is a demand. It gives a value to their superfluities*, by exchanging them for something else, which may satisfy a part of their wants, and increase their enjoyments. By means of it, the narrowness of the home market does not hinder the division of labour in any particular branch of art or manufacture from being carried to the highest perfection. By opening a more extensive market for whatever part of the produce of their labour may exceed the home consumption, it encourages them to improve its productive powers, and to augment its annual produce to the utmost, and thereby to increase the real revenue and wealth of the society. (*WN* IV.i.31; emphasis added)<sup>1</sup>

While the 'productivity' argument in the second part of the above passage met with approval, the 'vent-for-surplus' argument in the first part was generally rejected. Ricardo, in Chapter XXI of the *Principles*, 'Effects of Accumulation on Profits and Interest', comments on the latter as follows. He first gives Smith the credit for anticipating Say's Law in all important respects: 'No writer has more satisfactorily and ably shown than Dr Smith, the tendency of capital to move from employments in which the goods produced do not repay by their

price the whole expenses, including the ordinary profits, of producing and bringing them to market' (*Works*, vol. I, p. 291, fn.). Hence any glut of particular commodities will be only temporary: it will be overcome by an appropriate reallocation of capital and labour. Ricardo concludes that Smith's 'vent-for-surplus' doctrine 'is at variance with all his general doctrines on this subject' (p. 295).

Essentially the same objection recurs in the subsequent literature. Smith's respective view is generally regarded as a somewhat puzzling remnant of the mercantile doctrine which, as is well known, he was keen to refute. Because the 'vent-for-surplus' argument seemingly does not fit with the rest of his doctrine, various attempts were made to play down its importance. According to Hollander (1973, p. 276), Smith does not appear to have been clear about the subject and a 'mere lip-service' was paid by him to the 'vent-for-surplus' doctrine. In Bloomfield's opinion 'there still remains something of a mystery as to the exact meaning of Smith's "surplus-produce" argument... It is probable that more may have been read into this argument than Smith in fact intended' (1975, p. 472).

While it cannot be claimed that the following argument is capable of fully clearing up the 'mystery' Bloomfield spoke of, it does provide some hints as to the circumstances under which Smith's argument is both perfectly reasonable and exempt from the criticism that it represents a leftover of the (infamous) mercantile doctrine. In order to see this, we have to take a closer look at Smith's analysis of production.

## II. JOINT PRODUCTION AND THE RULE OF 'FREE' GOODS IN SMITH<sup>2</sup>

In most of the literature on Smith's approach to the theory of production and distribution of the wealth of a nation, it is implicitly assumed that his reasoning is in terms of single-product processes of production. This is understandable, given the fact that many of his examples in Book I refer to cases that are seemingly characterized by the absence of joint production. Thus, in Chapter VI of Book I, 'Of the component Parts of the Price of Commodities', Smith appears to hold, at least for one page of his book, a pure labour cost theory of value:

In that early and rude state of society which precedes both the accumulation of stock and the appropriation of land, the proportion between the quantities of labour necessary for acquiring different *objects* seems to be the only circumstance which can afford any rule for exchanging them for one another. (*WN* I.vi.1; emphasis added)

This passage is immediately followed by the famous deer and beaver example, which describes the specific rule of barter for this hypothetical economy. Smith's argument has generally been interpreted as being concerned with the exchange relationships in a system in which each process of production produces a single commodity only (see, e.g. Hollander 1973, Ch. 4, and Samuelson 1977). This interpretation is obvious, since nowhere in this chapter does Smith mention joint production. The careful reader will have noticed, however, that in the passage quoted Smith does not speak of 'commodities', as in the chapter title, but rather refers to 'objects'. Although it cannot be excluded that this choice of words is purely accidental, it is possible to try an

interpretation that suggests that it is not, i.e. that Smith, the Scottish teacher of rhetoric, used the term 'object' on purpose.

For Smith, beavers and deer may be desired to satisfy several needs. In a society of hunters (and in most other societies as well) animals are the 'source' of a multitude of use values: they provide different kinds of meat, furs, hides, bones, tendons, etc., some or all of which can be used either directly or indirectly to satisfy various wants. Each 'object' thus represents a *compositum mixtum* of different use values or 'goods' (and in addition possibly some 'bads'), which accrue as joint products in the separation process.

Adam Smith was well aware of this. Yet he presupposes a patient reader with a good memory, for it is not until Chapter XI of Book I, 'Of the Rent of Land', that the issue is taken up again:

The skins of the larger animals were the original materials of clothing. Among nations of hunters and shepherds, therefore, whose food consists chiefly in the flesh of those animals, every man, by providing himself with food, provides himself with the materials of more clothing than he can wear. *If there was no foreign commerce, the greater part of them would be thrown away as things of no value.* This was probably the case among the hunting nations of North America before their country was discovered by the Europeans, with whom they now exchange their surplus peltry for blankets, fire-arms, and brandy, which gives it some value (WN I.xi.c.4; emphasis added)

This passage is interesting for several reasons. First, it attests to Smith's clear perception of the existence of joint-product processes of production. Second, it shows his awareness of the possibility that with joint production the proportions in which the products are produced need not coincide with those in which they are wanted. Third, in it we encounter, possibly for the first time in the history of economic thought, the rule of 'free' goods, which implies that a good that is in excess supply obtains a zero price. Finally, it holds the key to an understanding of at least one aspect of Smith's 'vent-for-surplus' doctrine. In fact, trade may prove beneficial to a country because it allows the country to dispose of a part of its joint output, which would otherwise have been 'thrown away' as superfluous, in exchange for useful things produced abroad.

In the section 'Third Sort' of Chapter XI of Book I, Smith stresses that whether or not some of the joint products will be in excess supply depends on 'the extent of their respective markets', which in turn depends on the level of 'improvement' attained by society (*cf.* WN I.xi.m.1-6). To give an example, whereas in Smith's time, i.e. prior to the introduction of freezing and canning/bottling techniques, the market for meat was almost everywhere confined to the producing country, the markets for the joint products wool and raw hides were much larger. For, Smith notes, these products 'can easily be transported to distant countries, wool without any preparation, and raw hides with very little: and as they are the materials of many manufactures, *other countries may occasion a demand for them*, though that of the industry of the country which produces them might not occasion any' (WN I.xi.m.5; emphasis added). Therefore, in the 'rude beginnings' there will be a tendency to an excess supply of meat arising from an insufficient domestic demand and no foreign demand at all, combined with a relatively large foreign demand and a small domestic demand for the joint products wool and hides. In the

course of a country's development, however, the domestic demand for meat will rise as a consequence of the growth in population and, other things being equal, thus will gradually reduce the superabundance of meat. In fact, it cannot be excluded that at some stage the role of a 'free good' is passed on from meat to one (or several) of its joint products.<sup>3</sup>

The discussion of joint production in *The Wealth of Nations* is clearly dominated by animal-rearing, yet it is not confined to it. Smith discusses numerous examples of multiple-product processes of production, mostly from agriculture, fishing and mining but some even from manufacturing. The impression remains that in his view cases of joint production, far from being exceptional, are rather common, and deserve to be studied carefully; the primary sector of the economy appears in fact to be characterized by universal joint production.<sup>4</sup> He illustrates his investigation by means of historical material from Spain, Latin and North America, England, Ireland and Scotland. He reports some long-run trends of relative prices of various joint products and tries to assess the impact of tariffs, export and import restrictions and other regulations concerning a particular product on the prices and quantities traded of its joint products (cf. *WN* I.xi.m.2-14).<sup>5</sup>

### III. SMITH AND AFTER

Smith's discussion of joint production seems to have left little impression on his contemporaries and successors.<sup>6</sup> This is also reflected in the fact that, in textbooks to the history of economic thought, John Stuart Mill is generally given the credit for having pioneered the study of joint production and joint costs in Chapter XVI of Book III of his *Principles*, 'Of Some Peculiar Cases of Value'.<sup>7</sup> Interestingly, Mill, in the very next chapter, 'Of International Trade', launches an attack on Smith's 'vent-for-surplus' doctrine which he calls 'a surviving relic of the Mercantile Theory' (Mill, *Principles* III.xvii.s.4.2). It should be noticed, however, that in neither chapter is Smith's contribution to an analysis of joint production and the importance attached to this case by him, not least with respect to his 'vent-for-surplus' argument, mentioned. Hence Mill and the subsequent authors who followed him appear to have missed a crucial element in Smith's analysis. Given the lukewarm reception of the latter, it comes as no surprise that the 'vent-for-surplus' argument met with serious difficulties of interpretation and even misunderstandings.

Myint, who more recently made an important effort to vindicate Smith's argument, came perhaps closest to the answer given in the present Note. He correctly pointed out that what Smith has to say on foreign trade is not confined to the chapters on the mercantile system and the colonies in Book IV, but is scattered throughout *The Wealth of Nations*. He added: 'For instance, important elements of Smith's foreign trade theory may be found in the chapter on rent' (1977, p. 233-4). However, when Myint later in his paper scrutinizes the chapter (cf. pp. 243-5), it is in one place only, and rather incidentally, that he mentions a (relatively insignificant) case of joint products: the feeding of pigs and poultry 'on kitchen scraps or "the offals of the barn and stables"' (p. 244). This case is taken to substantiate Smith's opinion that there exists a substantial surplus productive capacity in agriculture, for, if the waste mentioned were to be used more effectively and 'unimproved wilds' were to be

employed to raise cattle and sheep, then the domestic production of meat could be increased without taking land away from corn growing. The much more direct and obvious cases dealt with by Smith in the respective chapter, in which after the opening of trade the overproduced amounts of certain joint products are channelled into exports, are apparently overlooked by Myint.

'If there was no foreign commerce', we heard in the chapter on rent, 'the greater part of them would be thrown away as things of no value' (WN I.xi.c.4). 'It gives value to their superfluities' (WN IV.i.31); this is echoed in the chapter on the mercantile system.

#### IV. CONCLUSION

With few exceptions, Smith's 'vent-for-surplus' argument has been rejected as inconclusive and contradicting the rest of his doctrine, in particular his version of what was later to become known as 'Say's Law of markets'. However, both advocates and critics of his argument seem to have overlooked the fact that much of Smith's respective argument *explicitly* refers to the case of joint production: with the relatively fixed proportions in which different products are produced, it cannot be presumed that these proportions match those in which the products are domestically required for use. Hence without foreign trade some of the joint products tend to be overproduced; superfluous amounts of these products are assumed to be disposed of freely by Smith. With the opening of trade, at least some of the products that are available in excess supply may be exchanged for goods produced abroad for which there is a domestic demand. Foreign trade is thus directly beneficial to a nation since it gives value to some of its products which would otherwise be subject to the rule of 'free' goods. To the extent that Smith's argument is actually based on the constellation just described, it appears to be perfectly sensible. Hence it should be concluded that there is a case for which Smith's 'vent-for-surplus' doctrine can be given a clear and consistent interpretation.

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#### NOTES

1. The 'vent-for-surplus' argument is also to be found in WN III.i.1 and 7, WN IV.iii.c.4 and WN IV.vii.c.4-9. As the passages referred to show, Smith applies the argument equally to the trade between town and country, the trade between sovereign nations and the trade between colony and motherland.
2. For a discussion of classical and early neoclassical economists on joint production, see Kurz (1986, 1991).
3. Smith's above observation is also interesting because it questions the rather common presupposition in much of the literature on the subject that the joint products of a process can generally be divided into a 'main product', whose acquisition is desired and because of which the productive activity is called forth, and one or several 'by-products', which may or may not be useful and which, at any rate, are of secondary economic interest. Smith's discussion makes it clear that what is the 'main product' of a joint production process cannot be ascertained *a priori*.
4. Cases of joint production are mentioned, for example, in WN I.xi.b.3, 32; c.4-5, 7, 21, 28; 1.9-11; m.2 *et seq.*

5. The continuing relevance of Adam Smith's 'vent-for-surplus' argument is well documented by the controversy about the draft conclusions to the Uruguay Round of international trade talks; see the *Financial Times* of 13 January and 20 January 1992. A major theme of these reports is the EC's opposition to the impending increase of imports from the USA of cereal substitutes, especially oilseeds. According to German newspapers, it was particularly the proposed liberalization of trade in corn-gluten feed, a by-product of whiskey production, that was fiercely criticized by representatives of European agricultural interest groups.
6. The fact that hardly any of the early authors who wrote about joint production acknowledged Smith's contribution does not imply, of course, that they were not inspired or influenced by what Smith had to say on the subject in *The Wealth of Nations*.
7. See e.g. Stigler (1965, p. 8), Blaug (1968, p. 198), O'Brien (1975, pp. 45 and 95-6) and Ekelund and Hebert (1983, p. 154). For a critical discussion of this widespread view, see Kurz (1986).

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