Munich Personal RePEc Archive

Adam Smith on Monopoly Theory. Making good a lacuna

Salvadori, Neri and Signorino, Rodolfo

University of Pisa, Department of Economics, University of Palermo

27 April 2012

Online at https://mpra.ub.uni-muenchen.de/38411/
MPRA Paper No. 38411, posted 27 Apr 2012 15:18 UTC

Adam Smith on Monopoly Theory. Making good a lacuna

Neri Salvadori and Rodolfo Signorino[1]

1. Introduction

Historians of economic analysis usually acknowledge the French 'ingénieurs-économistes' of the first half of the nineteenth century as forerunners of the formal theory of monopoly (Blaug 1997a, pp. 331 ff, Mosca 1998 and Ekelund and Hebert 1999). By the same token, Adam Smith's contribution to the monopoly subject is by and large underrated or even passed over in silence. Yet, the author of *The Wealth of Nations* (*WN* hereafter) discusses, often at length, a number of issues pertaining monopoly. Such a situation entails an exegetical dilemma. It may be the case that Smith's analysis of monopoly is worth of no particular mention since it is intrinsically defective or largely inferior to that later elaborated by the French school. Or it may be the case that Smith has left his analysis of monopoly in an embryonic form while the majority of scholars assess it starting from wrong premises. By 'wrong premises' we mean premises different from those which Smith, actually though implicitly, employed to approach the monopoly subject.[2]

In this paper we follow the latter route and propose a rational reconstruction of Smith's theory of monopoly that clashes with the conventional view that Smith had little or nothing analytically interesting to say on this subject. Our contribution may be summarized as follows. The first question we tackle concerns a problem of terminology: the word 'monopoly' is generally used by Smith to refer to a heterogeneous collection of market outcomes, besides that of a market in which there is just one seller. (Yet, Smith did not fail to analyze such a kind of market.) Moreover, while it is commonly thought that Smith's theory of monopoly, if there is such a thing, is to be found first

---

[1] University of Pisa and University of Palermo, respectively. Corresponding author: Neri Salvadori, Dipartimento di Scienze Economiche, Università di Pisa, via Cosimo Ridolfi 10, 56124, Pisa – Italy; e-mail: nerisal@ec.unipi.it We wish to thank, without implicating, Heinz D. Kurz for his comments on a previous version of this paper. Financial support from PRIN 2009 "Growth and Structural Change" is gratefully acknowledged..

[2] Exegetical dilemmas of this kind are not uncommon within the historiography of economic analysis. To make just an example, Kurz and Salvadori (2009) show that Ricardo's *Principles of Political Economy and Taxation* implicitly encompass an economic theory of exhaustible resources and even the Hotelling Rule, notwithstanding the fact that Ricardo did not treat royalties as something different from profits. Ricardian interpreters have generally been misled by their search for a Ricardian theory of exhaustible resources in the wrong place, that is, in Chapter III, 'On the Rents of Mines', of Ricardo's *Principles*. By contrast, Kurz and Salvadori's focus is on Chapter XXIV, 'Doctrine of Adam Smith concerning the Rent of Land'.

and foremost in Book I, Chapter 7, 'Of the Natural and Market Price of the Commodities', of *WN*, we show that this is actually not so. Smith devotes this chapter to illustrate his theory of natural prices and their role as attractors of market prices in all those markets where free competition obtains: monopoly is but a side-issue. By contrast, extensive discussion on monopoly issues may be found in several Chapters of Book IV, 'Of Systems of Political Economy', and Book V, 'Of the Revenue of the Sovereign or Commonwealth'. In these two books Smith takes issue with a panoply of government measures concerning international trade, colonial trade and the exclusive privileges of trade companies, measures enacted over time under the influence both of mercantilist authors and various pressure groups. Accordingly, we focus on these two books as the proper place where to look for Smith's theory of monopoly. We show that Smith's account of monopolists' behavior is a good deal richer than that provided by later theorists. In our view, Smith's monopolists follow a three-step strategy: (*i*) enforcement of their barriers to entry, (*ii*) choice of the quantity of the commodity to be brought to the market and (*iii*) market price-fixing, taking due account of the results actually achieved in the previous two steps. (Note that step (*iii*) is not redundant since Smith assumes no Walrasian-like price mechanism.) We also show that Smith was aware of the growth-retarding effect of monopoly and, accordingly, urged State regulation.

The structure of the paper is the following. In Section 2 we assess some contributions which underestimate the Classical theory of monopoly or even deny its existence: we pay attention particularly to the premises from which these contributions generally take their clue. In Section 3 we present our rational reconstruction of Smith's theory of monopoly, based on a different set of assumptions. Section 4 concludes.

2. The Classical theory of monopoly: the conventional view

To the best of our knowledge, Léon Walras has been the first to express the view that Classical economists were virtually silent on monopoly theory. In Lecture 41, 'Price fixing and monopoly', of his *Elements of Pure Economics* Walras claims that Antoine Augustin Cournot (1838 [1897]) and Jules Dupuit (1844 [1952] and 1849 [1952]) were the founders of the formal theory of monopoly. Moreover, Walras stresses that economists have usually failed to follow the analytical path opened up by Cournot and Dupuit: the consequence of such unfortunate choice has been, as far as monopoly theory is concerned, a conceptual jumble which has led to a terminological bedlam. According to Walras economists, in fact, "have given the name of monopoly to enterprises [i.e. industries] which are not under a single control, but under the [divided] control of a limited number of persons. And, by analogy, they have even applied the term monopoly to the ownership of certain

productive services that are limited in quantity like, for example, land" (Walras (1874 – 1877) [1954], pp. 435 – 436). Walras does not explicitly mention Smith or Ricardo in this context; yet, his wording seems to paraphrase sentances like the following:

The exclusive privileges of corporations, statutes of apprenticeship, and all those laws which restrain, in particular employments, the competition to a smaller number than might otherwise go into them, […] are a sort of enlarged monopolies… (*WN* I.vii.28)

The rent of land, therefore, considered as the price paid for the use of the land, is naturally a monopoly price. It is not at all proportioned to what the landlord may have laid out upon the improvement of the land, or to what he can afford to take; but to what the farmer can afford to give. (*WN* I.xi.5)

Commodities are only at a monopoly price, when by no possible device their quantity can be augmented… (*Works* I.xvii.8)

More recently, the thesis of a lack of a sound theory of monopoly in Smith and Ricardo has forcefully been supported by Stigler (1982):

Adam Smith, that great manufacturer of traditions, did not fail us in the area of monopoly, for he created or rendered authoritative three traditions that were faithfully followed in English economics for almost 100 years. The first tradition was to pay no attention to the formal theory of monopoly […] Ricardo called a price a monopoly price only if cost of production had no influence on its level − an adequate proof of the low state of monopoly theory. (Stigler 1982, pp. 1 and 2)

Also interpreters sympathetic towards Classical economics, such as Kurz and Salvadori, claim that:

Although the Classical economists were well aware of forms of market different from free competition, they dealt with them in a rather cavalier way under the heading of "monopoly". There is no doubt that their major concern was with universal free competition. (Kurz and Salvadori 1995, p. 17)

In the same vein, Dutt points out that Classical economists employed of the word 'monopoly' to refer "broadly to all restrictions on competition" (1998, pp. 141 − 142). According to Dutt, "Ricardo attaches far less importance to monopoly [than Smith], discussing it in the case of only a few commodities, such as 'peculiar wines, which are produced in very limited quantity, and those works of art, which from their excellence or rarity, have acquired a fanciful value' (*Works* I.xvii.8)" (*idem*, p. 143). Dutt concludes that "for the dominant Ricardo-Mill tradition competition is the inevitable norm, and monopolies are rare deviations from it and dealt with in terms of systemic concepts such as inelastic supply and restrictions on capital mobility" (*ibidem*).

As an explanation for the lack of a theory of monopoly in *WN*, some commentators point out that, at Smith's time, the Industrial Revolution was just at the onset: industrial sectors characterized by significant scale economies or high capital requirements were still exceptions, not the norm (Blaug 1997a, p. 35). As a consequence, in the second half of the 18th century in England "most

monopolies were the effect of collusion, which was favored either by the guild system or by the small extent of the market. Or else they were common in branches of trade dominated by regulated or joint-stock companies" (De Roover 1951, p. 523). Accordingly, it is not a mere coincidence that "[Smith's] blast against monopolies is aimed at the exclusive privileges, first, of the guilds or corporations and, next, of the regulated and joint-stock companies" (*ibidem*).

An alternative explanation is offered by those commentators who argue that (*i*) the adoption of the method of long-period positions led Classical economists to focus on the long-period consequences of actual entry and that (*ii*) the analysis of market competition in the presence of sizeable entry barriers was not high on the Classical agenda (Hovenkamp 1989, Ciccone 1999). A logical implication of such line of reasoning is the claim that Classical economists thought of monopoly basically as a short-term phenomenon, worth of only passing attention, provided that the forces of free competition are not annihilated by an explicit government measure.[3] Such an explanation is dubious in the presence of significant and persistent entry/exit barriers. Particularly in the cases of natural productions which "require a singularity of soil and situation" and of "exclusive privileges of corporations, statutes of apprenticeship, and all those laws which restrain, in particular employments, the competition to a smaller number than might otherwise go into them", Smith plainly points out that market prices stay above their relative natural levels for a very long time span or even forever (*WN* I.vii.20, 24 and 28). Hence, in these latter cases it is the very text of *WN* which bars interpreters from invoking the non-persistence argument as an excuse for a lack of a general theory of market prices.

From the above we draw the conclusion that, as regards monopoly, a lacuna exists within the Classical theory of value. In the following Section we scrutinize the text of *WN* in search for all hints which may prove valuable in order to elaborate a rational reconstruction of Smith's theory of monopoly.

3. Adam Smith on monopoly

The claim that Smith has no theory of monopoly is usually based (more or less consciously) on the following two working assumptions: (*a*) the proper definition 'monopoly' is the literal (or Cournot-

[3] As noted by Mosca (2008), since Malthus' 1815 essay, *The Nature of Rent*, Classical economists made a distinction between *natural monopolies* (due to the presence of an essential factor of production available in given quantity) and *artificial monopolies* (mainly due to a government measure). Thus, government measures and the limited supply of an essential factor of production were considered by Classical authors as the two main instances of entry barriers.

Walrasian) one, that is a form of market characterized by the presence of a single producer who does not fear any entry from outsiders and (*b*) the proper place where to look for Smith's theory of monopoly is Book I, Chapter 7, of *WN*. We think that both assumptions are unduly restrictive and stand in the way of an accurate reconstruction of Smith's views on monopoly: our interpretation thus dispenses with them.

As concerns the meaning of the word 'monopoly', it has to be stressed that Smith attaches to the words 'competition' and 'monopoly' sharply different meanings from those currently used today. In Smith's time 'competition' and 'monopoly' were not considered specific items within a well-defined taxonomy of market structures classified on the basis of number and dimensions of incumbent firms, typology of entry/exit barriers, coefficient of demand elasticity, space and timing of strategic moves etc. In *WN* the word 'competition' is synonymous with freedom of trade; while the word 'monopoly' is synonymous with restrictions to such freedom. While there is one freedom, there are many restrictions and usually (but not always) they derive from an act of government or are anyway tolerated by the government.[4] Moreover, the Smithian notion of free competition does not require, unlike the Cournot-Walrasian notion of perfect competition, a continuum of infinitesimal agents each one taking market equilibrium price as a parametric datum (Hovenkamp 1989 and Blaug 1997b).[5]

While free competition is the way market transactions are usually structured within a "system of natural liberty", as we show *infra*, for Smith the various concrete instances of monopoly are the way market transactions are usually structured within the "systems either of preference or of restraint" (*WN* IV.ix.51). From this perspective, the Smithian notion of monopoly is akin to that elaborated, long before *WN*, by the Scholastic authors. As highlighted by the De Roover (1951 and 1955), the latter employed the word 'monopoly' in relation to a heterogeneous collection of market outcomes characterized by the fact that a single agent or a cartel manage to obtain the control of the supply of a given commodity, also by means of unlawful or unethical trade practices such as engrossing, forestalling and regrating, which were considered marketing offences within English common law. (Hence the stigma of *turpe lucrum* attached to monopoly profits.) For Scholastic authors, as well as for Smith, monopolists aim at creating an artificial dearth in their own markets in order to establish

[4] To the best of our knowledge, the first Classical economist to make use of the word 'monopoly' mainly in the contemporary meaning of 'sole producer' has been William Nassau Senior, in Chapter 4, 'Distribution of Wealth', of his *Four Introductory Lectures on Political Economy*.

[5] Salvadori and Signorino (2012) provide a detailed analysis of the theoretical differences between the Classical notion of free competition and the Neoclassical one of perfect competition.

and keep prices at a higher level and thus gain higher profits than those which obtain in a situation of free competition. In Smith's words:

> The monopolists, by keeping the market constantly under-stocked, by never fully supplying the effectual demand, sell their commodities much above the natural price, and raise their emoluments, whether they consist in wages or profit, greatly above their natural rate. (*WN* I.vii.26)

> The government of towns corporate was altogether in the hands of traders and artificers; and it was the manifest interest of every particular class of them, to prevent the market from being over-stocked, as they commonly express it, with their own particular species of industry; which is in reality to keep it always under-stocked. (*WN* I.x.c.18)

Let us now turn to the second assumption: the proper place where to look for Smith's theory of monopoly. In Book I Chapter 7 of *WN*

(i) Smith refers broadly to monopolies as market outcomes resulting from a plurality of restrictions to intersectoral mobility of capital and labour,

(ii) Smith claims that the monopoly price "is upon every occasion the highest which can be got […] the highest which can be squeezed out of the buyers, or which, it is supposed, they will consent to give" (*WN* I.vii.27), and, finally,

(iii) Smith classifies the circumstances which make market price to be persistently above its natural level into three broad categories: "particular accidents" (industrial or trade secrets), "natural causes" (French peculiar vineyards) and "particular regulations of police" (legal monopoly granted to an individual or a trading company, the exclusive privileges of corporations, statutes of apprenticeship etc.).

In short, in Book I Chapter 7 of *WN* Smith's remarks on monopoly are but scattered and unsystematic. No wonder that scholars looking for a full-fledged theory of monopoly have found none there! At this juncture it must be stressed that in the text of *WN* the word 'monopoly' appears only in eleven paragraphs in the first three Books; while in Book IV, 'Of Systems of Political Economy', and Book V, 'Of the Revenue of the Sovereign or Commonwealth', it appears in eighty-four and sixteen paragraphs, respectively.[6] Within these two latter Books Smith makes use of the word 'monopoly' in relation to government measures concerning international trade, colonial trade and the exclusive privileges of trade companies, measures enacted under the influence either of

[6] The computing has been carried out by checking the on-line version of *WN* available at The Library of Economics and Liberty: http://www.econlib.org/library/Smith/smWN.html.

mercantilist authors or of various pressure groups.[7] It is Smith himself who emphasizes the strict connection between monopoly and mercantilist measures:

Monopoly of one kind or another, indeed, seems to be the sole engine of the mercantile system. (*WN* IV.vii.c.89)

Leaving aside the specific details of each single measure, the element common to all is the artificial exclusion of outsiders from a given market. At this regard the following passages concerning two of Smith's favorite instances of monopoly, the exclusive privileges of corporations and trade companies, are revealing:

The exclusive privilege of an incorporated trade necessarily restrains the competition, in the town where it is established, to those who are free of the trade. To have served an apprenticeship in the town, under a master properly qualified, is commonly the necessary requisite for obtaining this freedom. The bye-laws of the corporation regulate sometimes the number of apprentices which any master is allowed to have, and almost always the number of years which each apprentice is obliged to serve. *The intention of both regulations is to restrain the competition to a much smaller number than might otherwise be disposed to enter into the trade*. (*WN* I.x.c.5, emphasis added)

The object, besides, of the greater part of the bye-laws of all regulated companies, as well as of all other corporations, is not so much to oppress those who are already members, as *to discourage others from becoming so*; which may be done, not only by a high fine, but by many other contrivances. The constant view of such companies is always to raise the rate of their own profit as high as they can; to keep the market, both for the goods which they export, and for those which they import, as much understocked as they can: which can be done only by restraining the competition, or by *discouraging new adventurers from entering into the trade*. (*WN* V.i.e.10, emphasis added)

The consequence of such banishment is that incumbents are able to determine *in the long run* the quantity of a given commodity available at the marketplace. Consider the following passage concerning colonial trade:

Some nations have given up the whole commerce of their colonies to an exclusive company, of whom the colonists were obliged to buy all such European goods as they wanted, and to whom they were obliged to sell the whole of their own surplus produce. It was the interest of the company, therefore, not only to sell the former as dear, and to buy the latter as cheap as possible, but to buy no more of the latter, even at this low price than what they could dispose of for a very high price in Europe. It was their interest, not only to degrade in all cases the value of the surplus produce of the

[7] As is well-known, Smith charges mercantilist authors with having fallaciously equated the wealth of a nation with the quantity of gold and silver circulating in it and, accordingly, with having reccommended government measures aimed at the creation of an artificial surplus of the balance of trade. Such measures amounted to high customs duties or absolute prohibitions to discourage importation of foreign commodities and drawbacks, bounties, advantageous treaties of commerce with foreign states and the establishment of colonies to encourage exportation of domestic commodities (see *WN* IV.i.35). As to the ability of pressure groups to influence public policy Smith goes so far as to claim that the very foundation and maintenance of the British Empire is a political project "extremely fit for a nation whose government is influenced by shopkeepers" (*WN* IV.vii.c.63).

colony, but in many cases *to discourage and keep down the natural increase of its quantity*. (*WN* IV.vii.b.22, emphasis added)

Thanks to these artificial barriers to entry, incumbents may take actions which would have not been profitable in conditions of free competition. In a game theoretic jargon, it is possible to claim that the incumbents' strategy space depends, *inter alia*, on the presence or absence of artificial barriers to entry. Smithian incumbents follow a three-step strategy. In the first step incumbents invest resources in order to enforce the entry barrier created by the government measure. In the second step they choose productive capacity and determine the quantity of the commodity to bring to the market. In the third and final step they set the price of the commodity brought to the market. In what follows we examine each of these three steps in turn.

3.1. Enforcement of entry barriers

As to the first step, it must be noticed that the mere enactment of a government measure is no guaranty for incumbents that the public enforcement would be sufficient to prevent unlawful entry into the market. As a fitting case in point consider colonial trade. As is well-known, in the aftermath of the New World discovery many European countries granted to trade companies the exclusive right to carry on colonial trade. Smith underlines that the great distance between the mother country and the colonies and the extension of coasts favored colonists' smuggling, which often was an effective way to circumvent the exclusive privileges granted to trade companies (see *WN* IV.iv.10 and IV.vii.b.12. See also *WN* IV.viii.32 and 40 on illegal exportation of wool and Arabic gum, respectively.) Whenever public enforcement does not provide the incumbents' desired level of entry discouragement, incumbents must invest a part of their own resources to supplement the public enforcement of the entry barrier. Consider colonial trade again. To justify the grants of exclusive privileges to trade companies a literature flourished supporting the claim that these companies provided public goods by means of the building and maintenance of forts and garrisons yielding protection against natives and pirates' attacks. As any public good, forts and garrisons suffered from free-riding: hence the necessity to back up the companies' profits by the grant of a legal monopoly (Anderson and Tollison 1983). In the case of oceanic trade Smith is not hostile to the grant of a legal monopoly, taking due consideration of the high capital requirement and risk coefficient involved by such kind of trade and the benefits deriving to the country, but he insists that monopoly should be only temporary and forts and garrisons should come into public hands at the time monopoly right expires:

But upon the expiration of the term, the monopoly ought certainly to determine; the forts and garrisons, if it was found necessary to establish any, to be taken into the hands of government, their value to be paid to the company, and the trade to be laid open to all the subjects of the state. (*WN* V.i.e.30)

Anyway, Smith shows no sympathy for the claim that forts and garrisons are public goods. According to Anderson and Tollison (1982, p. 1248), "forts and garrisons provided a mechanism for the enforcement of the cartel rights of the chartered companies against the interlopers. […] It is not that free riding was not taking place; it was. It is that the relevant free riding was with respect to monopoly price and not company provision of public goods. A simple extension of Smith's analysis and a consideration of the historical relevance of the forts reveal the interlopers for what they surely were −competitive entrants on legally sanctioned monopoly rights". To our ends what is relevant is the fact that trade companies, notwithstanding the grant of a monopoly right, were conscious of the potential competition by outsiders (Smith's interlopers) and, accordingly, they took the decision to invest into entry-deterring activities so to privately enforce their publicly granted monopoly right.

3.2. Choice of productive capacity and produced quantity

As to the second step of the incumbents strategy, it must be stressed that, in the absence of effective entry barriers, incumbents have no control of the quantity actually brought to the market *in the long run*. In several passages of *WN* Smith iterates that, in freely competitive markets, the quantity of a given commodity actually brought to the market "naturally suits itself" to its effectual demand (see *WN* I.vii.12 and 16, IV.i.12 etc.): whenever market price is higher than the natural price new firms enter the market and, thus, overall production increases up to equate effectual demand. When the entry process comes to its end, market and natural price coincide and all producers (new and old) earn the same rate of profits: the natural rate. Hence, in order to gain extra-profits *in the long run* incumbents must keep the market price persistently above its natural level: to achieve this result they must be able to create and maintain an artificial dearth, that is, bring to the market an amount of the commodity persistently less than the effectual demand. In the absence of natural barriers (such as in the case of fine French wines) and of artificial barriers (such as in the case of legal monopolies) no incumbent has any incentive to voluntary reduce its own production in order to create an artificial dearth in the long run. Such a decision would be thwarted by outsiders' entry as soon as a market-natural price discrepancy appears.[8] By contrast, in the presence of entry barriers, given effectual demand, incumbents are able to, and thus have an incentive to, create an artificial dearth by means of a voluntary reduction of their individual production or even of their individual production capacity. In this regard consider the following passages where Smith mentions the cases

---

[8] Differences of emphasis apart, Classical economists took for granted that market and natural prices coincide on average whenever free competition obtains. Ricardo, in particular, was highly confident that "the principle which apportions capital to each trade in the precise amount that it is required, is more active than is generally supposed" (*Works* I.iv.4).

of colonial monopolists destroying plantations (and thus reducing production capacity) or burning up part of the annual harvest:

> Our tobacco planters [in Virginia and Maryland], accordingly, have shewn the same fear of the super-abundance of tobacco, which the proprietors of the old vineyards in France have of the super-abundance of wine. By act of assembly they have restrained its cultivation to six thousand plants, supposed to yield a thousand weight of tobacco, for every negro between sixteen and sixty years of age. Such a negro, over and above this quantity of tobacco, can manage, they reckon, four acres of Indian corn. To prevent the market from being overstocked too, they have sometimes, in plentiful years, we are told by Dr. Douglas, (I suspect he has been ill informed) burnt a certain quantity of tobacco for every negro, in the same manner as the Dutch are said to do of spices. If such violent methods are necessary to keep up the present price of tobacco, the superior advantage of its culture over that of corn, if it still has any, will not probably be of long continuance. (*WN* I.xi.33)

> In the spice islands the Dutch are said to burn all the spiceries which a fertile season produces beyond what they expect to dispose of in Europe with such a profit as they think sufficient. In the islands where they have no settlements, they give a premium to those who collect the young blossoms and green leaves of the clove and nutmeg trees which naturally grow there, but which this savage policy has now, it is said, almost completely extirpated. Even in the islands where they have settlements they have very much reduced, it is said, the number of those trees. If the produce even of their own islands was much greater than what suited their market, the natives, they suspect, might find means to convey some part of it to other nations; and the best way, they imagine, to secure their own monopoly is to take care that no more shall grow than what they themselves carry to market. (*WN* IV.vii.c.101)

What clearly emerges from the above is that, in Smith's view, monopolists do believe that a permanent market quantity reduction leads to a permanent market price increase. In modern terminology, this amounts to saying that Smith's monopolists clearly perceive that they face an inverse price-quantity relationship from the demand side. This result needs to be stressed since it helps clearing up common misunderstandings concerning Garegnani's controversial 1983 reconstruction of the role of demand schedules within the Classical value theory. In the light of our reconstruction of Smith's views on monopoly, Garegnani's point of effectual demand can only be an analytical tool forged to analyze market price dynamics in competitive markets outside equilibrium, given the natural values of the distributive variables. By the same token, Garegnani (1983) should not be (mis)interpreted as implying that the Classical value theory has no room left for demand schedules (though different from the well-behaved ones of Neoclassical economics).

3.3. Setting the price

Once achieved an effective enforcement of their monopoly right and once created an artificial dearth, the last step of incumbents' strategy to examine is their price setting policy. If monopolists (i) knew perfectly height and slope of their market demand function and (ii) acted as a cartel, price-fixing would be trivial, once produced quantity is given. But these are not Smith's assumptions:

monopolists decide both the quantity to bring to the market and the initial selling price while the 'market' determines whether demand equals supply or whether a shortage or a surplus obtains at the price initially fixed by monopolists. In the case of excess demand or supply monopolists will accordingly revise price upward or downward. To clarify Smith's view at this regard, we follow an indirect way, that is, we study the price setting policy of inland corn dealers in the presence of a bad harvest. Though a natural, non-artificial, form of dearth, bad harvest is anyway a form of dearth. Smith's analysis of inland corn dealers' price strategy in the years of bad harvest, we hope, may provide useful insights into Smith's view on incumbents' price setting policy in the presence of artificial dearth such as that caused by Smithian monopolists who intentionally keep their market constantly under-stocked.

The price setting policy of inland corn dealers in the presence of a bad harvest is analyzed by Smith in the course of a long Section, '*Digression concerning the Corn Trade and Corn Laws*', located in the middle of Book IV, Chapter V, 'Of Bounties'. At a first reading this Section is unfit for a rational reconstruction of Smith's theory of monopoly. In Smith's view, in fact, both supply and demand elements make the emergence and persistence of a monopoly highly unlikely in the corn market of a developed country:

As in every civilized country [corn] is the commodity of which the annual consumption is the greatest, so a greater quantity of industry is annually employed in producing corn than in producing any other commodity. When it first comes from the ground, too, it is necessarily divided among a greater number of owners than any other commodity; and these owners can never be collected into one place like a number of independent manufacturers, but are necessarily scattered through all the different corners of the country. These first owners either immediately supply the consumers in their own neighbourhood, or they supply other inland dealers who supply those consumers. The inland dealers in corn, therefore, including both the farmer and the baker, are necessarily more numerous than the dealers in any other commodity, and their dispersed situation renders it altogether impossible for them to enter into any general combination. (*WN* IV.v.b.4)

Hence, according to Smith an artificial scarcity of corn may seldom or never be intentionally created in the corn market of a developed country:[9]

[9] Smith's analysis of the corn market implies a well-defined policy prescription: since artificial dearth due to monopolists' deliberate action is unlikely, *laissez-faire* is the best policy option in the corn market. For Smith, government interventions more often than not are the real cause of the evils (corn scarcity and famines) they are intended to cure: see (*WN* IV.v.b.5 ff). Smith's positive and prescriptive views on this subject are questionable. Since Medieval ages local and national authorities all around Europe have enacted and enforced severe measures against engrossers creating artificial scarcity of victuals (see De Roover 1958, p. 428 ff), a proof of the fact that foodstuff engrossing was not so unlikely as Smith thought to be. Rashid (1980) assesses Smith's analysis of the price setting

Were it possible, indeed, for one great company of merchants to possess themselves of the whole crop of an extensive country, it might, perhaps, be their interest to deal with it as the Dutch are said to do with the spiceries of the Moluccas, to destroy or throw away a considerable part of it in order to keep up the price of the rest. But it is scarce possible, even by the violence of law, to establish such an extensive monopoly with regard to corn; and, wherever the law leaves the trade free, it is of all commodities the least liable to be engrossed or monopolized by the force of a few large capitals, which buy up the greater part of it. (*ibidem*)

Yet, what the above does not imply is that the corn market of a developed country is never plagued by any form of dearth: a great variety of natural causes, in fact, cyclically causes a bad corn harvest. How do inland corn dealers set the price of corn in the years of bad harvest? The relevant passage is the following:

It is his interest to raise the price of his corn as high as the real scarcity of the season requires, and it can never be his interest to raise it higher. By raising the price he discourages the consumption, and puts everybody more or less, but particularly the inferior ranks of people, upon thrift and good management. If, by raising it too high, he discourages the consumption so much that the supply of the season is likely to go beyond the consumption of the season, and to last for some time after the next crop begins to come in, he runs the hazard, not only of losing a considerable part of his corn by natural causes, but of being obliged to sell what remains of it for much less than what he might have had for it several months before. If by not raising the price high enough he discourages the consumption so little that the supply of the season is likely to fall short of the consumption of the season, he not only loses a part of the profit which he might otherwise have made, but he exposes the people to suffer before the end of the season, instead of the hardships of a dearth, the dreadful horrors of a famine. (*WN* IV.v.b.3)

The inland corn dealers set the price of corn so to meet these two conditions: (*i*) to sell all of their quantity of corn before the future harvest of corn become available and (*ii*) to maximize profits. To achieve these two targets inland corn dealers have to estimate accurately the relevant portion of the corn demand function and set price accordingly. The only difference between the inland corn dealers who set the price in a year of bad harvest and incumbents enjoying a legal monopoly is the different source (natural *vs.* artificial) of dearth.

3.4. Macrodynamic consequences of monopoly and the need for State regulation

In this paper we concentrate on the microeconomic side of Smith's analysis of monopoly. Yet, we are aware that Smith was greatly interested in the macrodynamic consequences of monopoly. In his view, monopolies (particularly those created by an act of government) cause a subversion of the "natural distribution" of labor and capital stock among the various sectors of a given economy, that is, an allocation of economic resources different from that which would have been established by free competition (see *WN* IV.vii.c.92 and ff). Since

---

policy of inland corn dealers and provides evidence that, at Smith's time, England corn market was not as atomistic as Smith alleged it to be.

for Smith a competitive allocation of resources is wealth-maximizing, Smith's analysis implies that economies beset by monopolies are poorer and grow more slowly than competitive economies.

Such detrimental macroeconomic consequences of monopoly (in the Smithian sense of artificial restrictions to free competition) were present to Smith's mind since the *Lectures on Jurisprudence*. There Smith maintains that

The wealth of a state consists in the cheapness of provisions and all other necessaries and conveniencies of life; that is, the small proportion they bear to the money payd, considering the quantity of money which is in the state; or in other words that they should be easily come at. Its poverty again consists in the uncomeatibleness or difficulty with which the severall necessarys of life are procured. Now all monopolies evidently tend to promote the poverty or, which comes to the same thing, the uncomeatibleness of the thing so monopolized. Thus for example if one should get an exclusive priviledge of making and selling all the silk in the kingdom, he would as he had it at his own making greatly increase the price; he would perhaps lessen the quantity made to a tenth part of that now in use; and would raise the price nearly in proportion; and by this means he would make great profit at a less expense of materials and labour than can be done when many have the same liberty. The price of the commodity is by this means raised, and the quantity of this necessary, ornament, or conveniency of life is at the same time lessend (*LJ* (A) ii.33-34)

And he adds:

The establishment of corporations and other societies who have an exclusive right is equally detrimental. The severall corporations in towns have all an exclusive priviledge of exercising that trade within the liberties of the town, (no one being allowed to take up a business but who has served an apprenticeship in the town; formerly no one but whose father had been a burgher.) Now, e.g., the corporation of butchers have the sole liberty of killing and selling all the flesh that is brought to market. Here the priviledge is not vested in the person of one man, but as the number is fixt they will readily enter into compacts to keep up the price of the commodity and at the same time supply the market but very indifferently with flesh. (*LJ* (A) ii.34-35)

Smith underlines two consequences deriving from the pervasive presence of monopolies. One is demographic. Consider a closed economy (say a given town) where several markets are monopolized. Since the expenditure flows of the various monopolists are closely interlinked − the members of each corporation sell their commodity dear, that is at a supra-competitive price, but, at the same time, they buy all other monopolized commodities equally dear − the general price level of such an economy turns out to be higher than that which would ideally obtain in a freely competitive environment. Accordingly, fewer people would choose to live in the town and many more would choose to live elsewhere (say in the countryside) thus reducing the potential outlet market for the commodities produced in the town:

Besides by these corporations the number of inhabitants is greatly diminished; and any who would settle in the city are hindered from so doing. By this means there are generally two or three large villages in the neighbourhood of every city. If a corporation lessens the number of rivalls, it also lessens the number of customers. (*LJ*(A) ii.36-37)

The other important consequence is Smith's plead for State regulation in monopolized markets:

[butchers, brewers, bakers, etc.] prevent a concourse and by that means raise the price of their commodities, accordingly there is generally a magistrate who settles the price of all these commodities. (*LJ*(A) vi.88-89)

On the contrary "as there is no corporation of the dealers in cloth there is no one who regulates the price of it" (*ibidem*). Smith adds that State regulation is aimed at achieving a kind of second best, the first best being achieved by a freely competitive economy:

> It is the same thing to a baker whether he makes £50 by making 1000 or 100000 loaves in the year. And when there are few in any branch of business they can easily agree amongst themselves to do this. There is therefore a magistrate or clerk of the market appointed who regulates the price of this according to that of corn or oats in the neighbourhood. This expedient, tho necessary where corporations are allowed, does not answer the end of a plentifull market in any shape so well as that of allowing a free concurrence. (*LJ*(A) vi.89)

It is interesting that Smith allows State regulation also for very special commodities like coined gold:

> The Master of the Mint should not however be allowed to take any price he inclined for the coinage, for it is necessary that he should be the only coiner and have a monopoly of the coinage. It is therefore necessary that here, as in all other monopolies, there should be a fixed or assized price. (*LJ*(A) vi.150-151)

The reference to the Master of the Mint makes clear that State regulation is needed also when there is a recognized public interest in preserving a monopoly. Though Smith rarely misses an occasion to report the evils of monopoly, he was not blind to the possibility that a temporary monopoly could further a social aim. In the case of patents and copyrights as well as in the case of opening new roads to international trade the grant of a temporary monopoly is envisaged by Smith as a necessary means to induce the required inflow of capital into innovative but costly and hazardous enterprises:

> When a company of merchants undertake, at their own risk and expense, to establish a new trade with some remote and barbarous nation, it may not be unreasonable to incorporate them into a joint stock company, and to grant them, in case of their success, a monopoly of the trade for a certain number of years. It is the easiest and most natural way in which the state can recompense them for hazarding a dangerous and expensive experiment, of which the public is afterwards to reap the benefit. A temporary monopoly of this kind may be vindicated upon the same principles upon which a like monopoly of a new machine is granted to its inventor, and that of a new book to its author. (*WN* V.i.e.30)

Moreover, Smith was alive to the political dangers of allowing free competition (particularly foreign competition) in all those sectors tyed to "the defence of the country":

> The defence of Great Britain, for example, depends very much upon the number of its sailors and shipping. The Act of navigation therefore, very properly endeavours to give the sailors and shipping of Great Britain the monopoly of the trade of their own country in some cases by absolute prohibitions and in others by heavy burdens upon the shipping of foreign countries. (*WN* IV.ii.24)

Finally, Smith pleaded for caution in implementing deregulation or pro-competitive policy aimed at eliminating legal entry barriers: by anticipating the sunk costs argument which was subsequently developed by Ricardo in Chapter 19, 'On Sudden Changes in the Channels of Trade', of his *Principles of Political Economy and Taxation*, Smith noted that monopolists usually employ a significant amount of fixed capital into their trades. The value of such form of capital would be highly depreciated in the case of a sudden repeal of the legal monopoly:

The undertaker of a great manufacture, who, by the home-markets being suddenly laid open to the competition of foreigners, should be obliged to abandon his trade, would no doubt suffer very considerably. That part of his capital which had usually been employed in purchasing materials and in paying his workmen might, without much difficulty, perhaps, find another employment. But that part of it which was fixed in workhouses, and in the instruments of trade, could scarce be disposed of without considerable loss. The equitable regard, therefore, to his interest requires that changes of this kind should never be introduced suddenly, but slowly, gradually, and after a very long warning. The legislature, were it possible that its deliberations could be always directed, not by the clamorous importunity of partial interests, but by an extensive view of the general good, ought upon this very account, perhaps, to be particularly careful neither to establish any new monopolies of this kind, nor to extend further those which are already established. Every such regulation introduces some degree of real disorder into the constitution of the state, which it will be difficult afterwards to cure without occasioning another disorder. (*WN* IV.ii.44)

4. Final remarks

The paper has proposed a rational reconstruction of Smith's theory of monopoly. We have started from the premise that interpreters granting low marks to Smith as a monopolist theorist have been mislead partly by the fact that Smith employs the words monopoly in a sharply different meaning than the contemporary one and partly by the fact that they have looked for a Smithian theory of monopoly in the wrong place, that is, in Chapter 7 of Book I of *WN*. We have shown that, by monopoly Smith refers to a variety of market outcomes whose common feature is that new firms entry is persistently forestalled. Moreover, we have focused on Books IV and V of *WN* as the proper place where to search for useful hints to elaborate a theory of monopoly along Smithian lines. We have shown that Smith's account of monopolists' behavior is richer than that provided by later theorists. In particular, in Smith's view, monopolists' behavior is based on a deliberate manipulation of their productive capacity and the quantity brought to the market in order to achieve a market price higher than the competitive level. Such a behavior makes sense provided that Smith's monopolists are assumed to perceive that they face an inverse price-quantity relationship from the demand side. We think that such result may help clarifying the controversial role of the demand side within rational reconstructions of the Classical theory of value.

Abstract: The paper analyzes Adam Smith's views on monopoly focusing on Book IV and V of *The Wealth of Nations* and argues that Smith has left his analysis of monopoly in an embryonic form while the majority of scholars have assessed it starting from premises different from those, actually though implicitly, used by Smith to approach this subject. We show that Smith makes use of the word 'monopoly' to refer to a heterogeneous collection of market outcomes, besides that of a single seller market, and that Smith's account of monopolists' behavior is richer than that provided by later monopoly theorists.

References

Anderson Gary M. and Robert D. Tollison (1982). Adam Smith's Analysis of Joint-Stock Companies. *Journal of Political Economy*, **90** (6), pp. 1237 − 1256.

Anderson Gary M. and Robert D. Tollison (1983). Apologiae for chartered monopolies in foreign trade 1600 − 1800. *History of Political Economy*, **15** (4), pp. 549 − 566.

Blaug, M. (1997a). *Economic Theory in Retrospect*. Fifth edition. Cambridge: Cambridge University Press.

Blaug, M. (1997b). Competition as an end-state and competition as a process. In Mark Blaug, *Not Only An Economist. Recent Essays by Mark Blaug*. Cheltenham, UK and Brookfield, US: Edward Elgar, pp. 66 − 86.

Ciccone, R. (1999). Classical and Neoclassical Short-Run Prices. A comparative analysis of their intended empirical content. In Gary Mongiovi and Fabio Petri (eds). *Value, Distribution and Capital. Essays in honour of Pierangelo Garegnani*. London: Routledge, pp. 69 − 92.

Cournot, Antoine A. (1838) [1897]. *Recherches sur les principes mathématiques de la théorie des richesses.* Translated by N. Bacon as *Researches into the Mathematical Principles of the Theory of Wealth*. London: Macmillan.

De Roover, R. (1951). Monopoly Theory Prior to Adam Smith: A Revision. *The Quarterly Journal of Economics*, **65** (4), pp. 492 − 524.

De Roover, R. (1955). Scholastic Economics: Survival and Lasting Influence from the Sixteenth Century to Adam Smith. *The Quarterly Journal of Economics*, **69** (2), pp. 161 − 190.

De Roover, R. (1958). The Concept of the Just Price: Theory and Economic Policy. *The Journal of Economic History*, **18** (4), pp. 418 − 434.

Dupuit, J. (1844) [1952]. De la mesure de l'utilité des travaux publics. *Annales des Ponts et Chaussées*. English translation by R.H. Barback as "On the Measurement of the Utility of Public Works". *International Economic Papers*, (**2**) pp. 83 − 110. London: Macmillan.

Dupuit, J. (1849) [1962]. De l'influence des péages sur l'utilité des voies de communication. *Annales des Ponts et Chaussées*. English translation by E. Henderson as "On Tolls and Transport Charges". *International Economic Papers*, (**11**) pp. 7 − 31. London: Macmillan.

Dutt, Amitava K. (1998). Monopoly. In Heinz D. Kurz and Neri Salvadori (eds). *The Elgar Companion to Classical Economics. Volume II: L ~ Z.* Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 141 − 145.

Ekelund, Robert B. and Robert F. Hebert (1999). *Secret Origins of Modern Microeconomics: Dupuit and the Engineers*. Chicago: University of Chicago Press.

Garegnani, P. (1983). The Classical Theory of Wages and the Role of Demand Schedules in the Determination of Relative Prices. *The American Economic Review*, **73** (2), pp. 309 – 313.

Hovenkamp, H. (1989). The Sherman Act and the Classical Theory of Competition. *Iowa Law Review*, **74**, pp. 1019 − 1065.

Kurz, Heinz D. and Neri Salvadori (1995). *Theory of Production. A Long-Period Analysis*. Cambridge: Cambridge University Press.

Kurz, Heinz D. and Neri Salvadori (2009). Ricardo on exhaustible resources, and the Hotelling Rule. In Aiko Ikeo and Heinz D. Kurz (eds). *A History of Economic Theory. Essays in honour of Takashi Negishi*. London: Routledge, pp. 68 − 79.

Mosca, M. (1998). *Jules Dupuit, the French "ingénieurs-économistes" and the Société d'économie politique*. In Gilbert Faccarello (ed). *Studies in the History of French Political Economy: From Bodin to Walras*. London: Routledge, pp. 254 − 283.

Mosca, M. (2008). On the origins of the concept of natural monopoly: economies of scale and competition. *The European Journal of the History of Economic Thought*, **15** (2), pp. 317 − 353.

Rashid, S. (1980). The Policy of Laissez-Faire During Scarcities. *The Economic Journal*, **90** (359), pp. 493 − 503.

Ricardo, D. (1951). *On the Principles of Political Economy and Taxation*, 3rd edn 1821, Vol. I of *The Works and Correspondence of David Ricardo*, edited by P. Sraffa with the collaboration of M.H. Dobb. Cambridge: Cambridge University Press. In the text quoted as *Works*, volume number, chapter number, paragraph number.

Salvadori, N. and Rodolfo Signorino (2012). Competition. http://mpra.ub.uni-muenchen.de/38387/, forthcoming in Gilbert Faccarello and Heinz D. Kurz (eds). *Handbook of the History of Economic Analysis*. Volume 3. Cheltenham, UK and Northampton, MA, USA: Edward Elgar.

Senior, Nassau W. (1854). *Four Introductory Lectures on Political Economy*. London: Richard Griffin and Co, 3rd edn. In the text quoted as *LPE*, chapter number, paragraph number.

Smith, A. (1978). *Lectures on Jurisprudence*. Edited by R. L. Meek, D. D. Raphael and Peter Stein, Vol. V of *The Glasgow Edition of the Works and Correspondence of Adam Smith*, edited by R.H. Campbell and A.S. Skinner. Oxford: Oxford University Press. In the text quoted as *LJ*, A or B report, manuscript number, paragraph number.

Smith, A. (1976). *An Inquiry into the Nature and Causes of the Wealth of Nations*, 1st edn 1776, Vol. II of *The Glasgow Edition of the Works and Correspondence of Adam Smith*, edited by R.H. Campbell and A.S. Skinner. Oxford: Oxford University Press. In the text quoted as *WN*, book number, chapter number, paragraph number.

Stigler, George J. (1982). The Economists and the Problem of Monopoly. *The American Economic Review*, **72** (2), pp. 1 − 11.

Walras, L. (1874 – 1877) [1954]. *Éléments d'économie politique pure, ou théorie de la richesse sociale*. English translation by W. Jaffé as *Elements of Pure Economics or The Theory of Social Wealth*. London: Allen and Unwin.