1. Introduction

Market power is "the ability of firms to influence the price of the product or products they sell" (Martin 1989: 16). This is our contemporary definition. But what do we know about the history of this notion? What do we know about when it was defined and how it was explained in the history of economic thought?

In this paper we distinguish four different fields of enquiry in which to seek a history of ideas on the causes of market power: the first concerns the history of the models of profit maximization in imperfectly competitive markets; the second, competition policies in a historical perspective; the third, the theory of competition in economic thought; and the fourth, the development of the notion of entry barriers. This paper is of an historiographical character and places this study within the existing panorama of the secondary literature; moreover, it has been written in the conviction that in the study of economic thought one cannot restrict oneself to simply narrating a history, one must also have some very good reasons for doing so.

2. Fields of enquiry

The four possible fields of enquiry in which to seek the origins of the notion of monopoly power are to be found within the pre-history and history of industrial economics and competition policies. This is the case insofar as market power is the characteristic feature of all imperfectly competitive markets, so the natural place to look to follow its historical development is in the theory of industrial economics, as well as competition policies. Nevertheless, as we shall be seeing, also the historiography of the theory of competition will provide various ideas for a history of the sources of market power.

2.1. The History of the Models

The first field of enquiry in which it would seem natural to find a theory of the causes of monopoly power concerns the attempts to calculate equilibrium prices and quantities in imperfectly competitive markets. The history of these attempts has been reconstructed by many scholars[2], who all agree on the fact that it began with the work of Cournot (1838), followed by Dupuit (1844), Bertrand (1883), Launhardt (1885), Auspitz and Lieben (1889), Edgeworth (1897), Hotelling (1929), Chamberlin (1933) and J. Robinson (1933)[3]. In these models firms may have market power for a variety of reasons, one of which is that there aren't very many of them, although the reason for their small number is not explained. In effect, these models do not consider entry of new firms, so they don't pay much attention to the causes of market power, often taking them as given[4]. These are the reasons why the history of the profit maximization models in imperfectly competitive markets has little to say about the causes of monopoly power in economic thought.

2.2. The History of Competition Policies

The second field of enquiry concerns the history of the theory behind the two main competition policies, that is to say antitrust policy and regulation[5].

2.2.1. The History of Antitrust

Since the specific purpose of the firms at which antitrust

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[2] See, among others, Schumpeter (1954), West (1978), Stigler (1982), Niehans (1990), Ekelud and Hébert (1999), Puu (2002: 1-5).

[3] The reason why I stop at the Thirties is explained further on.

[4] Modigliani for example writes that "the impossibility of entry is frequently at least implicitly assumed in the analysis of oligopoly, following the venerable example of Cournot, with his owners of mineral wells" (1958: 216). And according to Ekelund and Hébert, among all the "pioneers" they cite: "Dupuit *alone* examined in detail the sources of monopoly" (1999: 19, our italics); we mentioned this in the introduction. Clearly, in the models of monopolistic and imperfect competition the cause of market power is explicitly indicated (product differentiation) (Hicks 1935).

[5] "The main instruments of competition policy are: antitrust policy, the policy for the efficiency of financial markets, regulation, the production of public services, the policy for innovations and patents" (Grillo and Silva 1989: 501, authors'italics); here we restrict ourselves to considering the two main ones.

legislation is directed is that of obtaining and enhancing their own market power, it would be reasonable to expect to find the history of the discovery of the causes of monopoly power by analyzing the theories that have inspired antitrust legislation over the years. The history of antitrust policy starting from its origins has been the subject of a great many studies: some of these affirm that in the first decades of its activities antitrust was moved more by political and social considerations than by economic ones[6]; others argue the presence of a strong influence of economic theory right from its very beginnings[7]. This latter position[8] would involve the possibility of reconstructing the development of the ideas on the causes of market power by a comprehensive review of the theories behind the antitrust legislation; however, even if one were to accept the most extreme version of this position, we still wouldn't find here the history we are looking for, for various reasons.

The first of these is that antitrust does not consider the existence of market power illegal *per se*[9], but restricts its interest to those cases in which firms, to obtain it, adopt anticompetitive practices[10]. So we cannot find in this historiography a *general* interest in the causes of monopoly power[11], because its interest is limited just to

6 Peritz (1990) cit. in Giocoli (2009). Stigler in 1982 was still skeptical about the influence of the economists on antitrust policy (Stigler 1982).

7 See, for example, Kovacic (1992) and Meese (2003).

8 Such as for example that of Hovenkampf (1989b): "Antitrust policy has been forged by economic ideology since its inception" ([1991]: 136); or "The antitrust laws are … eternally wedded to prevailing economic doctrine (157).

9 However, there are practices considered violations *per se* that it is held necessarily procure market power (and in fact do not require an enquiry into their existence); e.g. antitrust has almost always considered price agreements illegal *per se*, holding them to be clearly a cause of market power.

10 These practices consist of: collusive behavior, mergers and takeovers, monopolization (in the USA) or abuse of dominant position (in Europe). Within the latter, practices excluding rivals take on especial significance.

11 For example, market power which all firms inevitably enjoy through the absence of perfect competition in actual markets is obviously not the object of enquiry by antitrust, as well as the one achieved due to merit, or the one deriving from natural monopolies.

those kinds of behavior[12] that generate it by restraining competition[13].

The second reason is the following: if in the evaluation of illegal behavior the *rule of reason* approach is adopted[14], judgment is based on the principle of reasonableness, according to which it is not enough that an action, to be condemned, restrains competition, it also has to restrain it *unreasonably*; by adopting this approach, therefore, an anticompetitive practice aiming at the acquisition of market power that, however, restrains competition "reasonably", would not be condemned. In this context the relevant causes of monopoly power for antitrust change according to the judgment on its reasonableness, which further explains why the historiography of ideas behind antitrust legislation cannot contain a general analysis of the causes of monopoly power[15].

The third reason is that the only economists who are believed to have influenced antitrust at its beginnings are Americans[16]; this cuts out the entire economic thought which, in the decades around the end of the nineteenth century in the rest of the world, focused on the development of a good deal of thinking on antitrust policies.

2.2.2. Industrial Regulation

Within this second field of enquiry we also need to use

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[12] The attention paid by antitrust to market *share* is explicable in that it is considered as evidence of *behavior* that could have illegally generated market power.

[13] And in the most recent approach this restraint also has to be "detrimental" (Motta and Polo 2005: xvii). A criticism of this approach is in Grillo (2006). See also the new approach put forward by Etro (2006).

[14] In carrying out antitrust legislation the *rule of reason* has been widely adopted. See Kovacic and Shapiro (2000). The various meanings attributed to the *rule of reason* in the history of antitrust are examined in Grillo (2006).

[15] On the relationship between the character of the violations and market power in a different perspective, but compatible with ours, see Krattenmaker, Lande and Salop (1987: 242).

[16] See the examination of the literature in Giocoli (2009); the author formulates convincing hypotheses on the history of antitrust in Europe, which is beyond our temporal horizon in that, as is well known, it has much more recent origins (the *Treaty of Rome* was signed in 1957).

historical perspective for the theory of regulation policies; nevertheless, since policies of this kind aim to intervene in industries characterized by natural monopoly, they are linked to just one of the causes of monopoly power, i.e. economies of scale, which are included in our reconstruction, but by no means make up the whole of it [17].

2.3 The Historiography on Competition

The third research path turns to the literature on the history of the notion of competition, with the idea of arriving at information indirectly on the non-legal sources of market power[18]. This is not an easy thing to do, both because this historiography in general does not raise the problem of implications for ideas about monopoly power, and because the two notions are not always antithetical. Only if the competition is characterized by perfect elasticity of the firm's demand curve, is it antithetical to market power: the competition thus defined necessarily implies absence of monopoly power. In this case the list of the conditions necessary for competition provides us with all the information we need on the causes of market power: the latter in fact emerges exclusively if these conditions do not occur[19]. Yet as we shall see, the notion of *perfect* competition was fully defined only in the Thirties. Before that, competition was treated as an activity[20], and to compete meant to undertake strategies precisely to obtain monopoly power, i.e. to set prices so as to make positive profits[21]: in this situation clearly there can be no antithesis between competition and market power.

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[17] On the history of the concept of natural monopoly starting from its origins see Mosca (2008).

[18] In this work we do not deal with legal sources because their recognition has never been problematic, being simply attributed to the government.

[19] Machovec (1995: 179-181).

[20] As a result the term was applied to any kind of market structure. See MacNulty (1967: 397), Backhouse (1990: 59-63), Blaug (1997: 67; 2001: 153), Bradley (2009).

[21] Which is a very different thing from assuming given prices and zero economic profit as in the model of perfect competition (MacNulty 1967: 399; 1968: 656).

On examining this literature to seek the causes of monopoly power we therefore have to be careful to distinguish between the two cases: whereas in the former the causes of market power coincide with the obstacles to perfect competition, in the latter the firms' behavior to obtain market power does not restrain competition because it is an expression of it; the latter can, however, be impeded for other reasons.

2.3.1. Competition in the Classicals

We start with an examination of the literature on competition in the classicals to find the causes of monopoly power. Beyond the legal restraints, that as we have already said do not come within the range of our present work, the uncovering of other sources of market power, such as limited knowledge, collusion, imperfect factor mobility and inelastic supply is down to Smith (1776); in addition it is held that for Smith the number of rivals in a market was important for determining market power[22]. It is stated that to Bailey (1825) we owe the interesting analyses of "monopolies" with restricted entry and *one or more* sellers, and of the markets in which the producers have a cost advantage over the new entrants, where monopoly power comes up against a restraint on potential competition[23]. Senior (1836) is cited for having worked on the impossibility of transferring capital from one use to another without incurring losses, and of the unavailability of information of profits[24]; at the same time it is thought that for Senior the number of firms was unimportant[25]. J.S. Mill (1848) is remembered for having paid attention to consumers' "custom"[26]; as for the number of firms,

[22] Stigler (1957: 2 e 1987: 531-532) and Bradley (2009). On the contrary Blaug (1997) states that "only once did Smith ever mention the number of rivals involved in competition" (68).
[23] Backhouse (1990: 60-61).
[24] Stigler (1957: 3 e 1987: 532).
[25] Machovec, (1995: 118).
[26] Backhouse (1990: 66). Schumpeter (1954 [1976]: 546), Machovec (1995: 132). L.R.P. (1894: 378) recalls in general that "much … of his treatise is devoted to showing its (of competition) limitations in practice".

the idea is attributed to J.S. Mill, as to Smith, that "concentration will inevitably lead to some 'contrivance to raise prices' or some form of 'combination among dealers'"[27]. Cairnes (1874) is described as interested specifically in cases of monopoly power within his "non-competing groups"[28].

To sum up, and in the light of the previous distinction, we can state that the classicals had singled out a series of causes from which they believed monopoly power for firms could derive: some of them (agreements, limited knowledge) are to be considered strategies *to compete*[29], others (imperfect factor mobility, inelastic input supply, custom) were seen as real obstacles to the competitive process[30]; the latter were however seen as temporary, but to this we shall be returning. On the importance of the number of firms for competition, as we have seen, there was no agreement.

2.3.2. Marginalist and Neoclassical Competition

We now seek the sources of monopoly power in the literature on competition in marginalist and neoclassical thought[31]. As we shall see, in that age the foundations are laid of the conception of competition

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[27] Bradley (2009).

[28] Stigler (1957: 3-4), L.R.P (1987: 378), Backhouse (1990: 61). We should remember that Cairnes distinguished between commercial competition (within the industry) and industrial (between industries). We just want to point out, without suggesting any continuity, that if the two kinds of competition take place without friction, they generate the two essential results of perfect competition: single price (from the first) and normal profits (from the second). We are aware that Cairnes was interested in competitive behavior, whereas here we are highlighting the end state; nevertheless, in the light of later developments the relevance of the distinction he made is striking.

[29] Hart (2001) recalls for example that for the classicals "technological change was the natural result of economic competition" (3).

[30] We do not share the idea that in the classicals' thinking the non-legal obstacles to competition were entirely absent. For example Hovenkamp (1989b) is being reductive when he sees in the classicals "the absence of any notion of barrier to entry" ([1991]: 148).

[31] In the distinction between these two categories we are referring to the idea that the construction of the neoclassical paradigm was above all the work of the generation after the marginalists (Screpanti and Zamagni 1989: 6).

seen as a specific market structure rather than as an activity, without moreover abandoning the classical idea of competition as behavior that we have just examined. Cournot (1838), as we know, paid no attention to the conditions of entry, yet in the literature on competition he is cited for one aspect that also interests us here: his theory in fact establishes that if the firms are few, they have market power[32]. Jevons (1871) is remembered for his "law of indifference"[33] and for his idea of perfect market[34]. Edgeworth (1881) is considered the first to list certain conditions without which individuals cannot compete or, in his terms, "recontract": free communication[35], divisibility of goods[36], large number of sellers[37]. Bertrand (1883) is mentioned for price competition[38], which makes the number of firms in the market irrelevant. Marshall (1890a, 1890b) is described as one who is confident that the "race" of competition can take place, on condition there is sufficient knowledge and absence of agreements [39]. Hadley (1896) is cited for the role played by custom[40], as in J.S. Mill, but above all for finding natural monopolies [41]. J.B. Clark (1887, 1901, 1904) is remembered for having held that firms operating in the market were

[32] We should remember also that it is held Cournot really believed that competition existed in most real markets (Stigler 1957: 5-6 e 1987: 533; Bradley 2009: 5).
[33] According to this law in a market there cannot be two different prices for the same good (Backhouse 1990: 66-67).
[34] A perfect market for Jevons requires perfect knowledge and a "perfectly free" competition not better defined (Stigler 1957: 6).
[35] Backhouse (1990: 77).
[36] Stigler (1957: 7 and 1987: 534).
[37] Backhouse (1990: 78).
[38] Backhouse (1990: 69).
[39] Stigler (1957: 9). In general it is held that Marshall was aware that perfect competition requires small firms and given prices, but that he didn't push his argument as far as that formulation (Peterson 1957: 72; Corley 1990: 84). In a marvelous passage Schumpeter gives an explanation for this, writing that Marshall "was bent on salvaging every bit of real life he could possibly leave in … he did not attempt to beat out the logic of competition to its thinnest leaf" (1954 [1976]: 974).
[40] Morgan (1993: 573).
[41] Morgan (1993: 593-594).

capable of preventing entry[42], and even of eliminating potential competition[43]; he is also cited (J.B. Clark 1899) for having added to those of Edgeworth two more conditions: the *instantaneous* mobility of resources and the identification of competition with stationary equilibrium[44]. Wicksell (1901) and Moore (1906) are mentioned for having provided new lists of necessary conditions for competition[45]. Wicksell (1901) is also remembered for having traced the causes of monopoly in large overhead costs, in joint supply and in location[46], while H.C. Adams (1918) is considered among those who believed that firm size was the cause of market power[47]. Finally, having made the greatest effort to set down the conditions for *perfect* competition is down to Knight (1921b)[48], and it should also be noted that he didn't believe in it[49]. It was precisely Knight who prepared the way for the reaction in the Thirties against the theory of perfectly competitive markets[50] and ironically it was Chamberlin[51] and Robinson[52] who

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42 Morgan (1993: 586-587).

43 Morgan (1993): "Successful combinations, by fixing prices and production, could limit both real and potential competition" (587).

44 Stigler (1957: 11).

45 For Wicksell "There must be a uniform product, firms must be small in size and there must be constant returns to scale" (Backhouse 1990: 70). Moore lists five conditions , but "His first two items state the conditions of price uniformity and profit maximization. Conditions III, IV and V are stated in such a way as to create doubts about the distinction between premise and consequence" (Dennis 1977: 272); see also Stigler (1957: 9).

46 Backhouse (1990: 70-71).

47 DiLorenzo and High (1988: 429).

48 Stigler (1957: 11) and Machovec (1995: 163-164).

49 Peterson (1957: 65) for example cites J.B. Clark (1899): "a static state … is imaginary". See also Stigler (1957: 11), Dennis (1977: 273-275).

50 Stigler (1957): "It was the meticulous discussion in this work that did most to drive home to economists generally the austere nature of the rigorously defined concept and so prepared the way for the widespread reaction against it in the 1930's" (11); Also Dennis (1977) writes: "Knight highlighted the severely abstract character of perfect competition in such a way that led other theorists to hunt for more plausibly realistic models of market behavior" (270).

51 Peterson (1957: 76).

52 Dennis (1977) writes: "Chamberlin [and] Robinson had to specify more precisely what the model of perfect competition itself entailed, so that a proper contrast could

perfected definitively its static notion[53]. **The "principle of excluded strategy" having prevailed[54], it is said that after this age every action undertaken to compete was considered proof of monopoly power[55]; we shall be returning to this affirmation**.

As can be seen, for the age examined here as well as for the classical age, we can divide the causes of market power into two categories: on the one hand, those due to strategic behavior (agreements, limited knowledge, product non-homogeneity), on the other, those owing to external factors (technology, indivisibility, inelastic input supply, custom). We also note that, as the definition of the conditions for *perfect* competition gradually proceeds, it is denied that those conditions can be realized[56].

In the historiography of the notion of competition there is therefore interesting material for a history of the causes of market power. Further on we shall be looking much closer at the consequences these ideas have had for our research; for the moment we shall restrict ourselves to noticing, together with most of the relevant literature, that in this period there were several concepts of competition, and they co-existed side by side.

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be drawn with the newer models" (270-271) and Machovec (1995) states "the Chamberlin/Robinson model provided the capstone for the triumph of equilibrium theory" (181).

[53] Also Blaug (1997) argues that the perfecting of the theory of perfect competition occurred in the Thirties (66-67), and adds: "Robinson and Chamberlin … created the theory of perfect competition in the course of inventing imperfect and monopolistic competition theory" (68).

[54] "The Principle of Excluded Strategy" is the colorful expression Schumpeter uses (1954 [1976]: 972) to indicate *perfect* competition.

[55] Machovec (1995): "as the neoclassical conceptions of competition and monopoly began to take hold, nearly every traditional means of competing came to be interpreted as unlawful" (180). Blaug (1997): "every act of competition … was now taken as evidence of some degree of monopoly power, and hence a departure from perfect competition" (68).

[56] Certainly this is true for the short run, as Morgan notes (1993): "imperfections in the market *delay* the effects of the working of the static laws" (589, italics added).

2.4. The History of the Notion of Entry Barriers

We continue to seek explanations of monopoly power, this time examining the field of industrial economics, and in particular the way that discipline has answered the question: which factors generate situations in which firms have market power, i.e. in which they are able to set their prices[57]? We shall examine three periods, beginning with the more recent.

2.4.1. From Bain to the present day

Starting from the contribution of Joe Bain (1956) at Harvard, industrial economics provided an answer to our question: the causes of firms' market power are entry barriers; in other words the notion of entry barrier was used to explain the existence of monopoly power. So we found the category our research was looking for in economic theory: entry barriers explain the presence of market power. We still had to ask ourselves if the history of this category had already been written; in actual fact, a history focused on the specific subject of the notion of entry barriers already exists[58], and to put it briefly, is this: everything starts from Bain, who found entry barriers in economies of scale, in product differentiation or in the absolute cost advantages for established firms; it should be noted that for Bain entry barriers allow incumbents to "persistently raise their prices above a competitive level without attracting new firms to enter the industry" (Bain 1956: 3), so for Bain, profits above the normal level were signs of the existence of

[57] For those who argue that monopoly power is generated exclusively by legal factors these question makes no sense. For example, certain exponents of the Chicago School state that "firms cannot in general obtain or enhance monopoly power by unilateral action" (Posner 1979: 928); the neo-Austrian School, basing itself on different methodological foundations, argues that: "Monopoly power … is always associated with legal, third-party restraints on either business rivalry or cooperation, not with strictly free-market activity" (Armentano 1999: 18).

[58] On entry barriers in the history of economic thought starting from Bain there are the very recent works of Keppler (2008) and Rosado Cubero (2008). However, the main information set down here can be drawn from textbooks of industrial economics.

entry barriers[59]. For our own research it is important to emphasize that independently of Bain, and in the same period, Sylos Labini (1957) studied the relation between the number of firms and market power, also using the concept of entry barriers [60].

Stigler (1968), from Chicago, attacking Bain's definition, defined entry barriers as a cost advantage of the firm already in the industry compared to those seeking to enter, thus detaching them from above-normal profits. With the two different definitions of Bain and Stigler, a controversy began[61] on which concrete situations act as entry barriers[62]. From Salop (1979) onwards non-legal entry barriers were divided up into innocent and strategic, the former of a structural type, and hence exogenous, the latter activated by existing firms, and hence endogenous[63]. Basing itself on this theoretical category, industrial economics defined the causes of market power first according to the structure-conduct-performance approach[64], and then, starting from the Eighties, to the "new industrial economics". For the former, monopoly power is a function of the degree of concentration of

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[59] In this context it is worth remembering the title of an article of his "The Profit Rate as Measure of Monopoly Power" (Bain 1941).

[60] Sylos Labini (1957) also uses the term "barriers", for example: "In concentrated oligopoly, technology creates *external* barriers between each group of firms and its potential competitors" ([1962]: 54-55 author's italics).

[61] See for example McAfee *et al.* (2004), Carlton (2004), Schmalensee (2004).

[62] As well as on the usefulness of the concept. Some exponents of the Chicago School wholly rejected the concept of entry barrier, e.g. Bork (1978: ch. 16), Demsetz (1982) and Posner (1979: 929); the latter calls entry barriers "colorful characterizations". Even more critical were the representatives of the Neo-Austrian School, for whom "most of these alleged barriers have proven to be economies and efficiencies that leading firms have earned in the market-place" (Armentano 1999: 13).

[63] "I have assembled … some 14 sources of entry barriers which the literature has identified. They derive both from "exogenous" causes (that is, basic conditions such as technology) and "endogenous" conditions (that is, voluntary actions taken by the incumbent firms so as to make entry harder)" Shepherd (1995: 303).

[64] Some (for example Shepherd 2007: 209) hold that we owe this approach to Edward Mason, and thus to an age prior to the one under consideration in this section; we shall deal with this in the next section.

an industry[65], and depends on the existence of exogenous entry barriers[66]; for the latter, it is not a function of the concentration, but of the degree of potential competition[67], and depends on endogenous and exogenous entry barriers. It is useful to notice that these latter are strategic barriers, so they imply competitive behavior by the firm, akin to the activities *to compete* found by the classicals and the marginalists of whom we spoke in the section on competition.

2.4.2. From the Thirties to the Fifties

All this is widely known, but less well known is the way in which monopoly power was explained before the introduction of the category of entry barrier; here we examine the period from the Thirties to Bain (1956). The existing historiography on this period[68], which is not devoted to the specific subject of the sources of market power, traced a good many birthplaces of industrial economics. Among them we cite only the three that seem to us the most significant: the first is in the United Kingdom with J. Robinson (1933), the other two in the United States, one at Harvard with E. Chamberlin (1933) and E.S. Mason (1939), the other at Chicago with H. Simons (1934). The interrelations between the protagonists of these three groups over the two decades would deserve an entire study to themselves; here we just try to extrapolate the answers they provided to the questions that

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[65] The degree of concentration provides indications on size (on market share) of firms present in an industry. "An industry is concentrated if a small number of firms controls a large part of the economic activity of the entire sector" (Grillo and Silva 1989: 250).

[66] The Chicago School opposed this approach, in particular Demsetz, Posner and Friedman, for whom the greater size of firms is a sign of greater efficiency, not market power (Martin 2007: 39-43). The same position was taken by the Neo-Austrian School, for which "a firm's market share is not its market power, but a reflection of its overall efficiency" (Armentano 1999: 18).

[67] Hence for this approach the number and size of firms are not necessarily correlated to market power.

[68] Grillo and Silva (1989: 28-29), Corley (1990), Martin (2007: 27-29), De Jong and Shepherd (2007) and the literature cited there. Bain (1948), Galbraith (1948) and Keppler (1994a) focused specifically on the two decades examined in this section.

interest us, i.e.: are there impediments to entry? Do the firms already in an industry have monopoly power?

To begin with we can state that the controversies between these three schools do not seem to be about the specific subject of the determinants of market power: represented by some with a downward sloping demand curve facing the firm[69], monopoly power was attributed by everyone to obstacles to entry due both to exogenous causes and endogenous factors. It is well known that in the models of J. Robinson (1933) and Chamberlin (1933) the finite elasticity of demand curve faced by the firm is due to product differentiation; and it is likewise well known that this impediment to entry has both features, exogenous and endogenous[70]. On the basis of this theory Chamberlin (1937) takes a complex position on free entry[71], while J. Robinson[72] illustrates other examples of limitations on entry, both endogenous[73] and exogenous [74]. And if it is true that Mason seeks the

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[69] It seems to us that the representation of market power through a downward sloping demand curve is already contained in the following words of Sraffa: "This necessity of reducing prices in order to sell a larger quantity of one's own product is only an aspect of the usual descending demand curve, with the difference that instead of concerning the whole of a commodity, whatever its origin, it relates only to the goods produced by a particular firm" (1926: 543). Both Chamberlin (1933) and Robinson (1933) use downward sloping demand curves for the individual firm, picking up the already well known demand curves for a monopoly. Mason (1939) rejects the analytical tools, including this representation, on the basis of their being empirically inapplicable.

[70] Shepherd (1991) in actual fact includes in the list of the factors that produce exogenous entry barriers "Product differentiation (occurring naturally among products)" (53) and in the one for endogenous entry barriers the "Selling expenses, including advertising (to increase the degree of product differentiation" (54).

[71] He states in fact that: "With respect to the *particular product* produced by any individual firm under monopolistic competition, there can be no 'freedom of entry' whatever… [but] there can be freedom of entry only in the sense of a freedom to produce substitutes; and in this sense freedom of entry is universal, since substitutes are entirely a matter of degree" (Chamberlin 1937: 567, author's italics).

[72] In her famous book she does not go beyond the observation that "the problem of the conditions influencing the entry of new firms … presents an interesting and largely unexplored field of inquiry" (Robinson 1933 [1969]: 92, fn. 1), but she does deal with it in Robinson (1934).

[73] She writes: "the existing firms may be so strong that they are able to fend off fresh competition by the threat of a price war. They may even resort to violence to prevent

cause of market power in technological factors[75], it is only because he believes that these and no others can be found empirically[76]; on the other hand Simons states that firms' size is determined by exogenous factors, such as economies of scale, as well as by endogenous factors[77]. It is not exactly surprising therefore, that Bain in 1956 considered it obvious that before him scale economies had been recognized by everyone, independently of the school they belonged to, as a deterrent to entry[78].

As for the relation between obstacles to entry and monopoly power, J. Robinson and Chamberlin both agree that firm's demand curve can be perfectly elastic also in the presence of obstacles to entry[79], whereas they disagree on the importance of the number of firms in determining profit levels[80]. And, however ironical it may seem, Mason, the founder of the structure-behavior-performance approach, shows that: "Data on numbers … tell us little regarding price and production policies" (1939: 64), whereas Simons (1936), the father of the Chicago School, attributes fundamental importance to

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fresh rivals from appearing on the scene" (Robinson 1934: 107).

[74] For Robinson entry is difficult in those industries "which require unusual personal ability or special qualifications, such as power to command a large amount of capital for the initial investment" (Robinson 1934: 107).

[75] That he calls "market control" (Mason 1939: 61-62). See also Martin (2007: 37).

[76] He writes: "The objection is not that monopoly theory is incompatible with an analysis that takes [other] considerations into account but that its constructions are irrelevant to the real problems" (Mason 1939: 64). Bain also confirms this (1948 [1953]: 183).

[77] Martin (2007) argues that if on the one hand at Harvard it was believed that also economic forces influenced market structure (32), at Chicago up until the Fifties the role of technology was recognized as determining firms' size (38).

[78] He also points out that, whereas judgment on the large firms due to these economies in the UK was positive, the USA (Chicago included) was against concentration (Bain 1956: 59-61).

[79] The subject is barely mentioned in J. Robinson (1933); "The case of a small number of firms selling in a perfect market raises some difficulties, which are not here discussed" ([1969]: 86, fn.2), whereas in Robinson (1934: 104-111) and in Chamberlin (1937: 566) they state that the impediments to entry are entirely compatible with perfect competition, on condition that the demand curve for the firm is perfectly elastic.

[80] See J. Robinson (1934: 112-120) and Chamberlin's reply (1937: 566-568 and 569 fn. 1).

firms' size in the generation of market power (Martin 2007: 33). To sum up, and reporting at the same time the situation described by Scitovsky in 1950, all of them recognize the existence of both exogenous and endogenous impediments to entry[81]; nevertheless, not all believe that they generate monopoly power[82].

It may be argued that this state of affairs was simply due to the fact that the problem of the relation between free entry and market power had not been fully focused on? This is what the three innovators in the theory of oligopoly think, when they complain about the confusion reigning in the literature on conditions of entry before they appeared on the scene[83]. Martin's thesis (2007) nonetheless seems to us more convincing; according to this, the real opposition between schools of industrial economics only really began from the mid-Sixties[84], after the attacks of the second Chicago School[85] (which, again

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[81] It is worth remembering that, before Bain, Scitovsky (1950) showed a specific interest in the sources of market power, and in particular on the role of knowledge as entry barrier.

[82] We recall other illustrious names of the age that did not think that large firms necessarily had market power, such as J.M. Clark (1940) (cit. in Machovec 1995: 293) and above all Schumpeter (1942) (cit. in Sylos Labini 1957 [1962]: 11).

[83] Bain (1956: vi) illustrates how on the subject of "condition of entry" received theory was "in extremely rudimentary form". Also Sylos Labini (1957) writes that "the analysis of the relationship between the process of concentration and market form is in a completely unsatisfactory state"([1962]: 9). And Modigliani (1958: 216): "little systematic attention [had] been paid … to the role of entry, that is, to the behavior of potential competitors". However, Modigliani alludes to a previous literature, though without specifying which, writing that the entry barriers that "Bain labels 'absolute cost advantages' … have already been extensively analyzed and understood in the received body of theory" and that the barrier "resulting from the inability of potential competitors to produce a commodity that is a perfect substitute for the product of existing firms – is again one that has received considerable attention in the past" (Modigliani 1958: 231). It will be remembered that the literature following on from the Fifties has always pointed to this period as the point of departure for the thinking on the causes of market power.

[84] This seems to us convincing despite the undeniable divergences between imperfect and monopolistic competition of which White (1936) speaks.

[85] We are referring to the above cited diatribe on the definition of entry barriers and to the attack on the structure-conduct-performance approach by Stigler, Friedman, Coase, Posner, etc.

according to Martin, the game theory approach finally proved wrong).

2.4.3. Before the Thirties

If from the historiography on industrial economics indirect references to the causes of market power can be drawn, we cannot avail ourselves of most of it for the years prior to the Thirties, which is considered the pre-history of this discipline. But since it is obvious that the ideas of the Thirties did not come from nowhere, we found some interesting references in those few works that go further back[86]. Despite the great dissatisfaction often expressed about the state of the ideas formulated up until the Thirties on the subject of the causes of monopoly power[87], we have managed to draw up a list of names who are remembered on this.

In the first place the Scholastics, for whom the causes of monopoly were: "engrossing, forestalling, regrating, illicit agreements, secret pacts, conspiracies, bidders' rings"[88]; there follows that of the Dutchman Graswinkel (1651: 158) who argues: "monopoly is not to be feared when there are many, but few"[89] and of Cantillon (1755) who on the contrary argues that the number of competitors is not essential for rivalry to occur[90]. Passing on to the classicals, Smith (1776) is cited by this historiography, too, as by that on competition, both for having shown that a small number of entrepreneurs facilitates coalitions[91], and for having highlighted their propensity to come to agreements among themselves[92]; he also identified situations where supply is

[86] These works will be cited in the course of this section, the most important being those of De Jong and Shepherd (2007).

[87] Sylos Labini (1957) explains for example that, concerning "the market power of very large industrial concerns … apart from the rather elementary observations of Smith and Marx, we are still in need of a really satisfactory theoretical analysis" ([1962]: 11).

[88] De Jong (2007a : 11, table 2.1).

[89] De Jong (2007a : 22).

[90] De Jong (2007a : 19).

[91] Smith (1776, I. 8. 12 and II. 5. 7) cit. in Sylos Labini (1957 [1962]: 8).

[92] Smith (1776, I. 8. 13, but above all I. 10. 82 and I. 10. 85); he nevertheless believes such coalitions to be unstable. Cit. in Stigler (1982: 1).

persistently scarce compared to demand[93]. We have already recalled the role attributed by J.S. Mill (1848) to "custom" as a restraint on competition[94]; he is also cited for "the baneful effect of small number on the vigor of competition"[95] and for his consideration of the influence of economies of scale[96]. There is also Marx (1867), who is cited for the idea that the conspicuous "minimum capital necessary to start up production at sufficiently low costs … creates a 'natural' obstacle to competition"[97].

As far as marginalist thinking is concerned, Dupuit (1852-53a 1852-53b) is remembered for having found some deterrents to entry in the transport sector[98], C. Menger (1871) for having considered monopoly an outcome of the limited size of markets[99] and H.C. Adams (1887) for the effects on market structure of increasing returns to scale[100]. Marshall deserves a place to himself: on the specific subject of monopoly power, on the one hand his anthropomorphic theory of the growth of the firm, and the metaphor of the trees of the forest are considered as unsuitable to deal with the phenomenon of the big industrial concentrations[101]; in addition, it is stated that his conception of competition left no room for long run worries[102]. On the other hand

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[93] "Some natural productions require such a singularity of soil and situation, that all the land in a great country … may not be sufficient to supply the effectual demand" Smith (1776, I. 7. 24) cit. in Mosca (2008: 322). On natural causes see also (I. 7. 20). In Smith there are other causes of market power that would require a separate study, for example imperfect information on prices, which he considers a temporary cause (I. 7. 21), and on technologies (I. 7. 22).

[94] J.S. Mill (1848 II. IV. 3) cit. in Sylos Labini (1957 [1962]: 14).

[95] Stigler (1982: 2) and Mosca (2008: 333 and 337).

[96] Stigler (1982: 3).

[97] Marx (1867, I, XXIII, 2) cit. in Sylos Labini (1957 [1962]: 9).

[98] In addition to the works cited in the introduction, see Ekelund and Hébert (1999: 323).

[99] Niehans (1990: 279), De Jong (2007b: 35).

[100] Hovenkamp (1989a: 123); Trebing (2007: 173- 174).

[101] For example Stigler (1950): "An anthropomorphic theory of the growth of the firm … scarcely fits our modern giants" (23) and Sylos Labini: "According to Marshall … the trees of the forest must have been saplings once" (1957 [1962]: 169).

[102] According to Chamberlin for Marshall the phenomenon of the "industries in which

he is cited on finding the causes of the slope of the firm's demand curve[103], as also for the economies of scale due to advertising expenditure and for the strategic barriers to entry[104]. We continue with Hadley (1896), remembered for having focused on the importance of fixed costs[105] and on the effects of the time necessary for new competitors to enter the market[106], and with Collier (1900) for having understood the strategic role of excess capacity[107]. Ely (1900) is remembered for having grasped the monopolistic nature of trade-marks[108], for having stated that the existence of substitutes reduces market power[109] and that economies of scale are a deterrent to entry[110]. J.B. Clark (1901, 1912, 1914) is remembered for the role he recognizes to predatory practices and, with opposite effects on market power, to potential competition[111]. Chamberlin then cites Taussig (1911)[112] again

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each firm is likely to be confined more or less to its own particular market" is exclusively "short time" (1933 [1962]: 69-70). Similarly Sylos Labini (1957) remembers that for Marshall the big industrial enterprises may not have monopoly power and cites him: "the last years of the nineteenth century and the first years of this have shown that even in these cases competition has a much greater force" ([1962: 12). Utton (2007) recalls that: "Marshall continually emphasized the fragile and conditional nature of … monopolies. They are perpetually under threat from the vigorous new entrant, the alternative source of supply and the substitute product or material" (113).

103 Joan Robinson writes, citing Marshall: "Its elasticity will depend upon many factors, of which the chief are the number of other firms selling the same commodity and the degree to which substitution is possible, from the point of view of buyers, between the output of other firms and the output of the firm in question. If there are few or no other firms producing closely similar commodities, the distribution of wealth among buyers, the conditions of supply of rival commodities, the conditions of supply of jointly-demanded commodities, and all the innumerable factors which affect the demand for any one commodity will influence the demand curve for the individual producer" (1933 [1969]: 50). Sylos Labini (1957) comments on this that, according to Marshall, with the passing of time "the demand schedule becomes more rigid" ([1962]: 51).

104 Utton (2007: 113-114).

105 Hovenkamp (1989a: 125).

106 Hovenkamp (1989a: 151).

107 Hovenkamp (1989a: 147).

108 Ely (1900: 43), cit. in Chamberlin (1933 [1962]: 59-60).

109 Ely (1900: 35), cit. in Chamberlin (1933 [1962]: 66).

110 Hovenkamp (1989a: 147).

111 Stigler (1982: 4), Hovenkamp (1989a: 147-148), Brown (2007: 175-176).

for the substitutes and Fisher (1912) for the attention he paid "to the idea of a separate market for each seller"[113]. In addition he mentions Knight (1921a, 1921b) for the statement that "every business is a partial monopoly"[114], for the analysis of the effects of "trade-marks, trade names, advertising slogans … reputations"[115], differentiated products[116], and for having *postulated* that in competition small firms must be more efficient than large ones[117]. Chamberlin also cites J.M. Clark (1923) for his emphasis on the number of firms[118], again on product differentiation[119] and on excess capacity[120]. Finally, J. Robinson recalls Sraffa (1926) for his saying that "the entry of new firms into an imperfect market must necessarily be difficult"[121]. Chamberlin mentions Sraffa for the role of increasing returns[122] and cites Hotelling (1929) both for the "circles of customers [who] make every entrepreneur a monopolist within a limited class and region", and for the statement that at the same time "there is no monopoly which is not confined to a limited class or region"[123].

As can be seen the list is not a short one and the causes of monopoly power are all there, exogenous and endogenous: strategies, economies of scale, absolute cost advantages, product differentiation, conditions of demand (elasticity and market size); there is also the idea

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112 Taussig (1911, 3rd rev. ed., I: 209 and II: 114) cit. in Chamberlin (1933 [1962]: 66).
113 Fisher (1912: 323) cit. in Chamberlin (1933 [1962]: 69).
114 Knight (1921b: 193 [1960]: 184 fn. 1), cit. in Chamberlin (1933 [1962]: 5)
115 Knight (1921b: 185 [1960]: 176 fn. 1), cit. in Chamberlin (1933 [1962]: 60).
116 Knight (1921a: 332), cit. in Chamberlin (1933 [1962]: 70).
117 Knight (1921b: 98 [1960]: 93), cit. in Chamberlin (1933 [1962]: 245).
118 J.M.Clark (1923: 417), cit. in Chamberlin (1933 [1962]: 49).
119 J.M.Clark (1923: 418), cit. in Chamberlin (1933 [1962]: 70).
120 J.M.Clark (1923: 437-439), cit. in Chamberlin (1933 [1962]: 109); it is also cit. in Hovenkamp (1989a: 148).
121 J. Robinson (1934 : 105).
122 Chamberlin (1933 [1962] : 5). Sraffa's article of 1926 is cited by all the literature. In particular it seems to us of interest to recall that Sraffa (1926) assimilates to a monopoly the firm that spends on advertising, thanks to the "protection of its own barrier" (545).
123 Hotelling (1929: 44) cit. in Chamberlin (1933 [1962]: 6).

that the number of firms may not affect market power or even that the entry barriers in the long run may not be there at all. But the things that the examined literature says about the authors of the past concerning the uncovering of the causes of monopoly power are only vague and random fragments, lacking a background of systematic study or interpretation.

3. Where to search

Despite the wealth of suggestions we have highlighted so far, the historiography on the period prior to the Thirties has never focused on the subject of the causes of market power, thereby leaving a gap that requires filling. In the light of the review we have just carried out of the literature on competition on the one hand and on the pre-history of industrial economics on the other, we may well ask ourselves at this point in which direction we should be concentrating our research.

3.1. Why not begin with the Classicals?

As we have seen, the information we have gathered from the secondary literature tells us that the causes found by the classicals were in part endogenous, due to strategies carried out in order to compete, and in part exogenous, the fruit of obstacles independent of the firms intentions. These obstacles, we have argued, were held to be mainly short run[124]; in actual fact the literature insistently recalls that in classical thinking restraints on competition had no importance in the long run[125]. The monopoly power resulting from competitive

[124] The term "mainly" refers to the fact that, for example for Smith, certain factors of production could be scarce "forever" (Smith 1776: I.7.24); J.S. Mill also believed that certain obstacles would last in the long run: for example custom, and the combinations (Schumpeter 1954 [1976]: 546), and also natural monopolies (Mosca 2008).

[125] Hovenkamp (1989a): "The analysis of classical political economists generally assumed that entry into markets was easy and could be accomplished *very quickly*" (144, italics ours). Machovec (1995): "From a classical view … harm ensued only if institutions existed to inhibit the process of competition, independent of the presence of *transitory* monopoly profits due to P > MC" (17, our italics).