Competition and Monopoly Power
in Vilfredo Pareto and Enrico Barone

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Abstract

The paper deals with the notions of competition and monopoly power in the writings of two well-known Italian economists: Vilfredo Pareto (1848-1923) and Enrico Barone (1859-1924). It investigates the reasons why, although Pareto and Barone were Marginalists (and specifically Walrasians), they nevertheless considered competition as a dynamic process. The paper also brings into focus the two economists' definitions of the sources of market power, the kind of entry barriers they identified, and the role they attributed to potential competition.

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Introduction

This paper analyses the notions of competition and monopoly power in the writings of two well-known Italian marginalists: Vilfredo Pareto (1848-1923) and Enrico Barone (1859-1924). As everybody knows, Pareto's profound impact on economics is mainly due to the concepts of "Pareto optimality", "cardinal utility", "Pareto's Law" on income distribution, and in general to the refinements of Walras' general equilibrium theory[1]. Barone, who became an economist after spending much of his life as an army officer, is known mainly for his independent discovery of the marginal productivity theory, and even more for getting the "socialist calculation" debate started[2]. Their personal and intellectual relationships were very close. One example among many that testifies to the interweaving of their lives and work can be found in this passage in a letter from Pareto to Pantaleoni: "All the theories I have set out are only the germs of theories. Economists, like Barone, who possess knowledge, culture and intelligence, should … develop these theories, and seek *new* truths" (Pareto 1962: 445). Schumpeter reminds us[3] that starting from the 1890s the economists belonging to the Italian Marginalist School took Italy into a leading position in the world of economic theory, so there are good reasons to think that their ideas played an important role not only for Italian economic thought, but also worldwide.

It sounds almost superfluous to say that the concepts of competition and market power are closely related and that they have been, and still are, pivotal issues in economics. Nevertheless, in my opinion the history of economic thought still has a lot to say about both. Much has been written about the history of the notion of competition[4], but certain historiographical ideas need to be revised, especially the one that argues that in its conception of competition neo-classical thought broke with the classical tradition. It is commonly held that the Classical economists viewed competition as a dynamic, rivalrous process, while the Marginalists, and in particular the general equilibrium theorists, introduced the static notion of competitive equilibrium (perfect competition). While I would agree that competition in classical thought is a process based on innovation and entry, I wish here to verify whether this approach really was "crowded out" by the

[1] Pareto was an engineer before succeeding Walras in Losanna (Kirman 1998).
[2] See Dooley (1998).
[3] Schumpeter 1954, ed. 1976: 855.
[4] For example Stigler (1957), McNulty (1967 and 1968), Dennis (1977), Backhouse (1990), Morgan (1993), and Machovec (1995).

neoclassical conception, or whether it can also be traced in the new paradigm. This is why I have chosen to concentrate my analysis on a period considered to be the transition stage from the process view of competition to the static view, i.e. the age of Marginalism. As far as the history of the notion of monopoly power goes, I believe that the historical analysis that still needs to be done is even greater. Historians of economics have indeed studied the history of the profit maximisation analytical models in a non-competitive setting, starting from Cournot (1838). Nevertheless they have always neglected the analysis of economists' ideas on the causes of market power. I wish to demonstrate here that the history of the theory of imperfectly competitive markets can be significantly modified if the reconstruction of the way in which the economists of the past described the sources of market power is taken into consideration. From this point of view, marginalists are very important because of the new kind of entry barriers they identified.

2. Vilfredo Pareto

In Pareto's *Cours* (1896) the first distinction between competition and monopoly is based on the role of prices in the maximization of profit: "to establish the maximum conditions – writes Pareto – one differentiates taking prices as given" (§ 46), whereas in monopoly "the trader alone or in agreement with others, devotes himself to manoeuvres aiming to change market prices" (§ 46). As we know, the hypothesis that in competition the firm is a *price taker*[5] also implies that the demand curve it faces is infinitely elastic, that the firm has no market power and that therefore the entrepreneur entirely loses his specific function. Nevertheless, none of these implications are actually expressed by Pareto in the *Cours*, in which he states that "free competition" is only an "extreme state" that "can never be seen in practice." He then examines the adjustment process toward equilibrium, explaining that what produces it is the usual reason behind entry and exit decisions, i.e. the shift of resources from less productive to more productive uses. In addition, Pareto states that in actual fact the best approximation of equilibrium consists in oscillations of prices around the cost of production[6]. What Pareto mainly analyses in the *Cours* are

[5] The American Moore (1903), a follower of Walras, attributes the paternity of this condition to characterize perfect competition to Pareto.

[6] "If, in a highly extraordinary case, […] the cost of production […] turned out to be exactly equal to the retail prices of the goods, the equilibrium would turn out to be established immediately. Generally, however, things will not turn out in this way. Certain prices […] will be higher than the corresponding costs of production, and the entrepreneurs, encouraged by the profits they earn, will develop these manufactures.

precisely the causes of such oscillations, thus concentrating on the difficulties of reaching equilibrium, rather than on the conditions presupposed by the equilibrium itself. In an example concerning an exogenous shock determining an increase in the price of service of a capital, Pareto argues that in the market of that service a profit is certainly gained, for a period that may be longer or shorter depending on how easy it is to transfer the resources towards that employment. Even more significant for our analysis is another example, in which the presence of profit is not determined by an exogenous shock, but an initiative by the entrepreneur aiming to reduce the cost of production, an initiative that could not occur if we restricted ourselves to the definition of competitive equilibrium. As with the classical vision, for Pareto profit is a phenomenon caused by the introduction of innovation, of a temporary character for the most part: "the entrepreneurs who suffer losses - he writes – may be imagined as people attacking a hill occupied by the entrepreneurs who make profits. The latter try to drive back the attackers. To this end they are forced to constantly imagine and strive to find ways to improve their production." (*Cours* § 718). Similar ideas are to be found in Pareto's *Manuale di economia politica* (1906), where we find the classical idea that resources shift according to the logic of profit and loss, until their return is rendered uniform[7]. Also present is the classical competition process activated by the introduction of innovations which reduce production costs, generating a temporary profit, and followed by the entry of new firms (*Manuale* pp.146-147). In addition there is the process through which savings in costs of innovative firms are transferred in the long term to consumers[8].

We shall now examine those situations Pareto takes into consideration where blocked entry generates monopolistic positions. As we have seen, he solves the profit maximisation analytical problem in a monopolistic regime (following Cournot), and even

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Other prices […] will be lower than the costs […] and the entrepreneurs will limits these manufactures. The quantities offered on the market will thus change, and for that reason, the entire equilibrium will be modified. A new equilibrium will be established […] etc. until equilibrium is reached definitively […] […]. In actual fact, equilibrium is never reached, since, to the extent that one tries to attain it […] it is modified continuously, because the technical and economic conditions of production are modified. The real situation is therefore one of continuous oscillations around a shifting central point of equilibrium" (p.177).

[7] "Free competition tends to make the net profits of capital that can be produced by savings equal. Savings are evidently transformed into capital that gives greater profit, until the abundance of that capital makes the profit fall to the common level" (p.255).

[8] "In this way the competing firms succeed where they had no intention of going. Each looked only to their own profits, and only thought of their consumers insofar as they could exploit them. And yet, thanks to the succession of adaptations and re-adjustments that competition forced them to make, all that hectic activity of the companies manages to benefit the consumer" (p.232).

takes up the treatment of duopoly, though we shall not be dealing with those issues here. Nor shall we get involved in the large number of well-known observations by Pareto on the inefficiencies of the monopolistic regime compared to the competitive one. We shall deal here with his reflections on the causes of market power, that he traces in the *Cours* essentially to the "difficulty, or … impossibility, that exists in transforming savings into certain kinds of capital" (§ 138). He also considers that "capital whose quantity remains virtually constant in a closed market" (*Cours* § 542). The holders of this type of capital, Pareto writes, "will enjoy a monopoly … that in some cases may be absolute. They will therefore be able to secure very considerable gains" (*Cours* § 543). In the *Manuale*, he deals with the causes of market power listing the various ways entrepreneurs may eliminate competitors: "thanks to the help of the law, or else because they are the only ones to possess certain goods, or because they see off the others through arrogant use of power, through cunning, trickery, or cleverness … Finally, it should be noted that it often happens that several individuals form an association, precisely to give themselves the power to take over the market" (*Manuale* p.119). It is worth noting a passage in the *Cours* where Pareto criticises the excess number of small firms in the retail sector, an excess that "explains the easy success of the firms that start to compete with them, the big stores and co-operative societies." Since the retail trade is a sector where "fixed costs are quite important, it follows that the reduction of the coefficients of production depend above all on the increase of the sum of sales." This is essentially a brief passing reference to the concept of increasing returns to scale. In the *Manuale*, on the other hand, he goes into the analysis of increasing returns to scale more deeply, given that it was by that time a more widespread phenomenon: "It was believed that firms were better off the more extensive their production. This idea has given rise to the theory that industry should give priority to setting up just a few big monopolies. The facts do not match up to this theory" (pp.233-234). Pareto then develops a clear-cut theory on the existence of a minimum efficient scale: "It may be admitted … that for every kind of production there is a certain volume for the firm which corresponds to the minimum cost of production" (p.234). On collusions, Pareto in the *Cours* writes: "the desire to set up a monopoly is natural for all producers" (§ 799), and explains that this is the reason they try to form cartels and trusts. He is in favour of the spontaneous formation of cartels, but is convinced that without the support of government (which he decidedly opposes) these agreements cannot last (*Cours* §§ 905-911).

He also looks favourably on consumer co-operatives, which in his opinion "have introduced free competition where it existed only in imperfect form" (*Cours* § 922). He is essentially expressing the idea that the market power that derives from cartels, trusts and associations is always open to threat from potential competition. In the *Manuale*, too, Pareto comes back to the subject of trusts: "Trusts have two aims: to give firms the size that corresponds to the minimum cost of production, and either wholly or in part escape from the pressure of free competition." Pareto's line of thought is not crystal clear, but he would appear to be in favour of the first of these aims, i.e. to the search for the minimum efficient scale. Whereas he holds the pursuit of the second objective (to escape from competition) to be futile, unless the government intervenes to help out the trusts, thereby harming the consumers (p.327-328).

3. Enrico Barone

In his 1908 essay *Il Ministro della produzione nello stato collettivista* [the minister of production in the collectivist state] Enrico Barone argues that a socialist or collectivist economy could in principle replace one founded on a free market. It is interesting to note for the purpose of our analysis that this idea presupposes the theoretical possibility of calculating equilibrium prices as a solution to a set of simultaneous equations, and hence completely disregards the analysis of the process of convergence with the equilibrium of perfect competition[9]. Also in the section on the effects of free competition in the *Principi di economia politica* (1908, ed. 1915, pp.28-29), Barone focuses mainly on the final position of the competitive process and on the characteristics of equilibrium, even though elsewhere he does not neglect consideration of possible difficulties in the transformation of savings into new capital goods (p.58). However, in the chapter on monopoly Barone's perspective is always addressed to the study of the competitive process. For example, he maintains that competition acts through "the substitution of lower cost entrepreneurs for those that produce at a higher cost" (p.287). It should also be noted that Barone often calls competition a "war", which suggests an idea of rivalry, and certainly not a static conception of equilibrium.

[9] Machovec (1995, ch. 3) writes that the analogy between market economy and planned economy is possible only if the competition is interpreted in static terms: it would never have been possible to discover this analogy if the dynamic of the competitive process had been adhered to.

As for the causes blocking entry into a market, in addition to the usual legal monopolies, it is worth remembering the cases of unique resource, which Barone dealt with in relation to rent: "Ricardo's theory on land … is applicable to all capital that cannot be reproduced" (p.56). Writing after Pareto, Barone obviously dwells at length on the effects on social welfare of the various market regimes, and explains the reasons why "monopoly represents a diminution of consumer rent, and a destruction of wealth" (p.22). However, the source of market power Barone mainly considers is the one coming from economies of scale. Barone directly faces up to the question of increasing returns to scale in the following terms: "If the cost of the unit of production indefinitely diminishes, to the extent that the quantity of the product increases, it would be advantageous for the production of every good to be concentrated in just one firm" (p.11). He thus examines the industries where the most efficient production is through a monopoly: "And this may happen whenever … there exists … a kind of firm, that at the limit of decreasing costs, its size is sufficient to saturate, at the cost of production, the entire demand of the market" (p.191). In this case, he states, the surviving firm should not be considered a truly monopolistic firm, both for its different effects on social welfare[10]. Moreover in his opinion its market power is only apparent, in that it is subject to the threat of potential competitors (p.192)[11]. Having clearly explained that the average costs curve is U shaped[12], Barone sets out with similar clarity the idea of the minimum efficient scale as follows: "competition tends … to define the size of firms; in other words the quantity produced tends to be shared out between the producing firms at the minimum cost so that each of them may produce the corresponding [quantity] at the limit of the diminishing costs" (p.15). Again with clarity he describes the way the entry of new firms may drive the price down to the minimum average cost: "competition … forces each firm to remain within the limits of the diminishing costs … making, for the part that was produced at rising costs, a new firm intervene which does go beyond the limits of the diminishing costs" (p.16). From this derives the consequence (one Barone brings out), that since the optimal quantity offered

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[10] "These single or unique firms … do not represent … a destruction of wealth: the contrary may even be true" (p.192).

[11] "These unique firms, emerging from competition, must always be in fear of the *potential* competition, … of other similar firms that might emerge; this stops them from wholly adopting the procedures of the monopolist" (p.192).

[12] The "curve [of. total costs] is always rising; … if it was reduced to a diagram with the *unit* costs of production on the y-axis, it would be diminishing until a certain point and then rising" (p.14).

by every firm, and hence its size, is given by the minimum efficient scale, it is precisely the action of competition which determines the optimum number of firms in equilibrium. Barone then goes on to denounce those cases where the firms are smaller than their minimum efficient scale, and therefore are higher in number than the optimum number: "it happens that, … because competition does not operate sufficiently, this maximum size of firms is not reached - and hence the number of these is not reduced to that minimum – to which corresponds the lowest cost of production" (p.191). In this case Barone says that it is more efficient for fewer firms to produce at less cost. The excess number of firms operating in the diminishing part of the average costs curve, and hence the chance to exploit further economies of scale, provides Barone with an argument in favour of the extension of firms' size. On this he examines the cartels, and vertical and horizontal integration. Cartels, based only on agreements, Barone judges intrinsically unstable and subject to "a latent state of war even during a peace" (p.212). The reasons for the other forms of collusion he traces to the search by firms for efficient size (p.216). In addition, he carries out an analysis of the determination of the price in the case of large firms, reiterating that their situation is quite different from that of the monopolist[13]. In present-day terms, one could re-define the case Barone examined as relating to a *dominant firm*. He brings out the fact that such a firm may be subject both to international competition and to competition from other smaller firms that produce the same good, as well as in part to potential competition[14]. In his opinion the price fixed by the dominant firm will be below that of both domestic and foreign competition, and below what could "re-awake the potential competition" (p.234)[15].

4. Competition as a process

Some [neoclassical] scholars [of neo-classicism] interpret the competition of classical thought in static terms and see in Smith a precursor of the theory of general economic equilibrium, thus denying that there was a break between the classical and neo-classical idea of competition. From an incrementalist perspective, they reconstruct the long road

[13] We should remember that in that era only those in possession of a government licence (legal monopoly), or a unique resource (natural monopoly), were considered to be monopolists.
[14] "As for the potential competition, to tell the truth it is lazy and active intermittently. The struggle to rush into the fray against a vast trust, requires very great capital and is full of risks" (p.234).
[15] The analysis of the determination of the price in this market regime, as also the welfare consideration, are treated by Barone in much greater depth that in our summary.

followed by past economists to discover the requisites of the equilibrium of perfect competition as an accomplished fact[16]. As I said above, in my opinion, the classicists viewed competition as a rivalrous process. It is worth recalling that for them, two features characterize a competitive situation: the introduction of innovations and the freedom of entry into a market, whereas the number of companies present in the industry is unimportant [irrelevant]. Moreover, from this perspective competition is not just of price, and monopoly is not antithetical to competition, because the temporary market power of the company that has innovated is part of the competitive process. The idea of competition as process of selection was the heritage of classical economic thought, to the extent that "Darwin borrowed the concept [of competition] from Malthus"[17]. In the next section we shall try to understand the reasons why two followers of Walras like Pareto and Barone also used notion of competition as process.

4.1. Competition as process in the marginalists

As we have seen, the classical idea of competition as a process survives in the writings of Pareto and Barone. It emerges in the way the two economists treated the difficulties new firms found in entry into a market, the role of potential competition, the effect of innovation, and the continual changes in firms' size. Why did the marginalists concentrate on the description of process rather than on the conditions which determine equilibrium? Marshall has repeatedly been accused of ambiguity for this kind of attitude[18]. Can the same thing be said of the Italian marginalists? McNulty is perhaps right (1968, p.648) when he states: "the leading neoclassical economists were [aware] of the dynamic aspects of competition. Their failure was in their inability to integrate these aspects systematically into their economic theory"? My own belief is that for Italian marginalists their focus on the process of competition is only a part of their ambitious project of founding the economic dynamics.

Interest in the dynamics can be seen already in 1894 in Barone's essay *On the Analysis of Dynamic Problems* (Barone 1894). He starts from Walras' theory of equilibrium

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[16] Stigler (1957) may be considered one exponent of this vision.
[17] See Stigler (1987).
[18] "Marshall's work contains a problem as regards his attitude towards competition … Marshall's algebraic analysis of competition was substantially the same as that of contemporaries such as Wicksell, but in Marshall's text we find a much looser analysis: more realistic, but not as rigorous" (Backhouse 1990, p.73).

"but to make use of it in the treatment of dynamic problems" (p.79). What Barone is actually suggesting in this essay is the method of comparative statics; in his own words: "given a market in equilibrium, and given the intervention of a disturbance to that equilibrium … one has only to determine the new equilibrium to which the market tends" (p.79). Pareto puts forward the same procedure (1896-97) in the *Cours,* where he makes use of the famous metaphor of the two men on a slope, one on foot, the other on a sledge (p.643). Through it, Pareto distinguishes two kinds of dynamic: the study of the succession of equilibriums on the one hand, and that of continuous movements on the other, and he regrets having to restrict himself to the former[19]. All this is reiterated in the *Manuale* (1906): "The study of pure economics is in three parts: One is static – one is dynamic and considers later equilibriums. – One is dynamic, and studies the movement of the economic phenomenon" (p.106)[20]. In the *Manuale*, too, Pareto believes that the analytical apparatus of the theory of equilibrium does not enable us to deal with the third part of the study.

To sum up, it may be said that however much the best known theoretical contributions of marginalist analysis remain within the context of the static, what interests them more is the dynamic, because it answers to their felt need for realism. In Pareto's words (1897, p.492): "I have endeavored to extend to dynamic questions the use of the equations given for the static equilibrium. The most accurate description possible for economic phenomenon is to be reached in this way".

4.2. Competition as process in economic theory

It is well known that the classical interpretation of competition as process merged into the Austrian tradition, in particular in Schumpeter (1942) and Hayek (1946 and 1948), up until more recent developments [i.e. then things changed?][21]. In different ways, the Chicago school, with Friedman (1953), also took up the concept of competition as process, through which the most efficient companies get//are selected[22]. It is interesting to note

[19] In economics: "we are forced to substitute the consideration of a series of static equilibriums for the consideration of dynamic equilibrium" (p.643).
[20] A bibliographical reference on the dynamic in Pareto is Donzelli (1991).
[21] See for example McNulty (1987) and Makowski and Ostroy (2001). Hayek (1946) renders homage to J.M. Clark (1940) and F. Machlup (1942) as "courageous attempts … to bring the question back onto a more concrete terrain".
[22] For references to the Chicago School see Martin (1994: ch.I)

that also in recent economic theory this awareness repeatedly continues to emerge. For example, in the words of Mas-Colell (1980): "modern Walrasian economics is a theory of perfect competition only in the sense of examining the consequences of the Hypothesis [of Perfect Competition] but not in that of giving a theoretical explanation of the Hypothesis itself". In the first place, beside the general equilibrium approach, a Marshallian tradition has always existed[23], endowed with the right instruments for examining the competitive *process* in order to deal analytically with the two features that characterize the classical vision of competition:- the introduction innovations and the subsequent entry of new companies in the market[24]. As a development of this tradition, the theory of contestable markets (Baumol, Panzer e Willig 1982) must be borne in mind, where what counts is the threat of entry by potential competitors; this also takes up the classical idea of the unimportance for competition of the number of agents present in an industry. Vickers (1995) also argues strongly for the idea that "the concept of competition as equilibrium resource allocator is not the only model of a modern microeconomist" (p.18); he writes of "incentives, selection, and innovation [as] three of the fronts on which advances are being made". Makowski and Ostroy (2001) make some very interesting points when they maintain that the identification of competition with *price taking* behavior "hides the remarkable properties of perfect competition itself". They recognize its utility, but think that the consequence is the suppression of the entrepreneurial aspect of competition. In their reformulation there is no perfect information, and the prices are not given but emerge from the **bargaining**, while the set of markets is not exogenous, but emerges from innovation.

5. Monopoly power

We have seen that the historical reconstruction of the sources of market power has been neglected. I think the reason for this neglect lies mainly in the lack of a proper explanation for the sources of market power by economists themselves: in their analyses, in fact, those sources were taken as a given – we only have to think of Cournot's mineral

[23] That the classical view of competition (in Marshall's interpretation) has not disappeared from the scene is evident in an article of Novshek and Sonnenschein (1987), who distinguish "two distinct theories of perfect competition, the Marshallian and the Arrow-Debreu-McKenzie".

[24] Arena, too, notes that for the Marshallian tradition "the working of the market processes [is] more important … then the nature of market equilibrium" (1999).

spring. To the best of my knowledge, the history of the theory of the sources of market power has not yet been written. In the handbooks of Microeconomics or Industrial Economics, indeed, one can easily find the first analytical model of profit maximization in a non-competitive setting attributed to Cournot, but it's hard to find the name of an economist, before Bain (1956), credited with the paternity of the notion of entry barriers[25]. So in this work, unlike the case of competition, it was not a case of verifying or dismantling a historiographical thesis on the sources of market power, but to begin to write the history of the ideas about those sources. This is why I thought it was useful to investigate the marginalist period, believing it to be a significant period for the issue under consideration, because it is an important phase in which new sources of market power are identified, as well as new instruments to examine it with.

As we have seen, Pareto and Barone thought of competition as a process, in which market power is only temporary because there is the continuous threat of entry of potential competitors. Relevant to this case was that both took into consideration incumbents' market power, due to the difficulties of entry of competitors, and the conviction that there could be competition also among few and large enterprises. This conception of competition goes together with the belief in the efficacy of the market and with the assumption that market structures adjust very quickly to the most efficient configuration[26]. This vision also finds confirmation when Pareto and Barone considered some causes of market power that the classicists had not. In fact, whereas for classical economic thought the only sources of market power considered were natural (resulting from the presence of scarce factors, like natural resources, location, talent), and legal (like patents, property rights, State privileges, State licenses), the marginalists develop the idea that there are also entry barriers of a technological kind (in particular scale economies and network economies), or strategic.

Barone, for example, should be cited in the historical surveys of natural monopoly, understood in its contemporary sense[27]. We have seen in fact that he puts forward Cournot's conclusion again, according to which "nothing limits the production of a

[25] For the history of the concept of barriers to entry see McAfee, Mialon, Williams (2004).
[26] On the "coincidence between viewing competition as rivalry and opposing anti-trust law" see Di Lorenzo and High (1988).
[27] Referred to firms with large-scale economies, so that market demand can be satisfied at lowest cost by one firm rather than two or more (Sharkey 1982).

commodity under conditions of pure competition if a firm's marginal cost is falling" (Marchionatti 2003: 50). This conclusion, as is well known, had been criticized by Marshall, who tried in various ways to reconcile increasing returns with competitive equilibrium (Groenewegen 1999, Hart 2004). In his *History of Economic Analysis*, Schumpeter expresses astonishment for the fact that after Marshall, discussion on this subject "took so long to explode in the press". He asks himself how it was possible that "the conclusions that could easily have been reached in 1890, were reached in 1930 and afterwards". As we have seen, Barone's work, which had very clearly identified the terms of the problem of natural monopoly and expressed unexceptionable considerations of efficiency about it, fits comfortably within that period. We should note furthermore that Barone considers this type of monopoly to be also continuously threatened by potential competition, despite the presence of high fixed costs, a position later taken by Stigler (1968).

We have noted earlier that Pareto, and even more precisely Barone, had clearly discovered the fact that the number of companies present in the mercato might not be a good indicator of the monopoly power in the industry concerned. In the presence of economies of scale, indeed, they believed that a low degree of industrial concentration was a sign of inefficiency and low-level competition, not vice-versa.

Moreover, Barone and Pareto should also be remembered for their development both of U-shaped average cost curves, and of the idea of minimum efficient scale. In the history of the theory of non-competitive markets, these are important concepts, especially for the structure-conduct-performance approach[28], since they permit the discovery of different industrial configurations. We have seen that Pareto in 1906 mentions the idea of the minimum efficient scale, whereas Barone in 1908 explicitly describes a U-shaped graph, where the average total cost is on the y-axis[29]. Scherer maintains that up until Fisher's textbook (1912): "in the important theoretical developments emerging toward the end of the 19th century, marginal cost functions continued to be emphasized, and average costs neglected, by neo-classicists" (Scherer 2001: 900). Having illustrated the contributions of Pareto and Barone on these subjects, we believe that the historical reconstructions should be modified, and that these economists should be recognized as important here too.

[28] On the various approaches to the industrial economy see *inter alia* Martin (1994: ch.I).

[29] See the quotation in note 12.

Conclusions

In this paper I have traced a continuity between classical and neoclassical thought in the conception of competition as process. I have illustrated that this conception is clearly present in the writings of the marginalists, and can be found once again in the contemporary mainstream. As far as monopoly power goes, I showed that even if Pareto and Barone did not provide original analytical contributions to the solution of the models of price determination in imperfectly competitive markets, they should still have a place in the history of the theory of non-competitive markets for their theoretical innovations concerning market power.

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