

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 Classics?*

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<sup>124</sup>; in actual fact the literature insistently recalls that in classical thinking restraints on competition had no importance in the long run<sup>125</sup>. The monopoly power resulting from competitive

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<sup>124</sup> 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).

<sup>125</sup> 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).

strategies was hence considered by the classicals to be always present, but continually threatened by competition, both actual and potential, except of course in the case of temporary exogenous obstacles<sup>126</sup>. We also need to add that such a conception was valid for the classicals in theory as well as in reality<sup>127</sup>, which means that competition was considered a very widespread phenomenon, on condition the market was free from legal restraints<sup>128</sup>. This optimism is further confirmed by the fact that in their writings the specific subject of monopoly takes up very little room<sup>129</sup>. If the market power that the firms obtained through strategic behavior did not worry the classicals because it was perpetually threatened, and if that due to exogenous obstacles did not go beyond the horizon of a short run that they judged unimportant, then it is clear that a detailed coherent examination of the causes of monopoly power cannot be found in their thinking.

### 3.2. *Why begin with the age of the marginalists?*

The reasons we have just illustrated direct us towards the age of the marginalists, and this is what the secondary literature does on subjects akin to ours<sup>130</sup>. But why this particular age?

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<sup>126</sup> Hovenkamp (1989a): "Classicism's faith that potential competition would discipline incipient monopolists was based largely on its concepts of market entry barriers. Classical political economy recognized only government restrictions as barriers to competitive market entry" (149). It would be correct to add: in the long run.

<sup>127</sup> Schumpeter (1954) "the 'classics' [were] firmly convinced that the competitive case was the obvious thing" ([1976]: 545). This conviction holds true to the extent it is believed that the impediments were temporary or of small account.

<sup>128</sup> Backhouse (1990) notes that Smith on many occasions uses the term "liberty" to indicate competition, and defines it precisely "in terms of the absence of restraints" (60). It is interesting to note that Hovenkamp (1989b) indicates among the restrictions recognized by law also "a privately created restriction on entry, either by a contract including the restricted person as a willing participant, or else by a combination directed at other people as target" ([1991]: 148).

<sup>129</sup> Stigler (1987: 532): "Demsetz has counted only one page in 90 devoted to monopoly in *The Wealth of Nations* and only one in 500 in Mill's *Principles of Political Economy*. Indeed the world 'monopoly' was usually restricted to grants by sovereign".

<sup>130</sup> For example De Jong and Shepherd write about industrial economics: "There was major pioneering from the 1870s on" (2007: xxiii). Hovenkamp (1989a), on dealing

We can certainly find an answer in economic history. New phenomena like trusts, cartels, mergers, the vertical integration of firms, public utilities, and the railways<sup>131</sup>, raised new problems. Compared to the world of the classicals the provisional character of the obstacles to competition no longer seemed to apply<sup>132</sup>; in actual fact the short run in some industries seemed to be very long, and in certain cases to enter a market turned out to be very difficult even in the absence of legal barriers<sup>133</sup>. Faced with these new phenomena economists tried to understand why in certain markets firms continued to be few, if they should be worried about their size, or if this was on the contrary an advantage<sup>134</sup>, or whether one could count on their reciprocal rivalry<sup>135</sup>. These questions gave rise to a quantity of studies on the subject of monopoly power that was obviously without precedent<sup>136</sup>, as the review of the literature already provided has shown.

From a methodological perspective, how were these problems dealt with? It is well known that the years at the turn of the century were a kind of crossroads for a variety of different positions, in which the already bitter controversies between old classical thought and the new ideas of the historical school also had to face the marginalist paradigm that was making headway. The historiography on the

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with the debates on the subject of antitrust focuses on the “waning years of the nineteenth century” (105) and also Morgan (1993), dealing with competition, concentrates on this period.

<sup>131</sup> These subjects are dealt with in Hovenkamp (1989a).

<sup>132</sup> Hovenkamp (1989a) writes that in this age doubts began to be voiced about the classical idea that the savings of big firms were transferred on to consumers, and also that potential competition was always at work (144 ff.)

<sup>133</sup> Hovenkamp (1989a: 150-151).

<sup>134</sup> Hovenkamp (1989a) reports the various positions on the controversial hypothesis of “ruinous competition” (136-137).

<sup>135</sup> The latter is the idea that DiLorenzo and High (1988) attribute to the economists of the marginalist age.

<sup>136</sup> Hart (2001) argues that the various positions of the economists reflected the popular division between supporters and opponents of the trusts due to the effect of these organizations on their business (3).

subject of industrial economics shows that for a long time in the thought of this period classical theory co-existed with historical analyses based on the examination of cases and on statistics, as it did with marginalist ideas that were slowly gaining ground<sup>137</sup>; the historians of competition also point out this co-existence<sup>138</sup>. **So we do not find a pure neoclassical theory in this period<sup>139</sup>, but rather methodological contaminations** that gave rise to a great wealth of ideas, as has already been shown through our account in the previous sectors.

One significant aspect which helps to explain why it is worthwhile concentrating our analysis on the age of marginalism concerns the history of the analytical tools used by economists. We recall that Cournot, Dupuit, Ellet, Von Thünen and others<sup>140</sup> had used mathematical tools, leaving their methods and their results to those who came after them: demand functions, cost curves, and equilibrium conditions were available at the end of the century for use in economic thinking. Some of the theoretical developments on the causes of monopoly power also came about through the logical necessity imposed by the analytical tools employed<sup>141</sup>.

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<sup>137</sup> Hovenkamp (1989a): "The earliest economic studies of the trust problem were dominated by broad, historically based inquiries" (116), while Schumpeter notes, concerning the marginalists, that: "To a surprising extent they continued to look upon the competitive case as [in the preceding period, but] they complemented this vision by an analysis that was far superior to that of the 'classics'" (1954 [1976]: 892).

<sup>138</sup> "For three decades prior to 1920 a bifurcation period existed" (Machovec 1995: 97). The many different positions on the subject of competition present in this period in the USA is the subject of Morgan (1993).

<sup>139</sup> The construction of the neo-classical paradigm was a slow process, and the "purification" of economic theory in the sense of reductionism occurred still more gradually. On reductionism in economics see Zamagni (2000).

<sup>140</sup> On which see Niehans (1990) and Ekelund and Hébert (1999).

<sup>141</sup> De Jong and Shepherd write that in this period in industrial economics "basic concepts were invented as the new 'neo-classical' microeconomic theory rapidly emerged" (2007: xix). If it is true that the formalization of the notion of perfect competition occurred only with Chamberlin and Robinson (Dennis 1977: 270 ff), and that beforehand all rigor was applied to the listing of its conditions, nonetheless mathematical tools *were* important precisely for the finding of these conditions, which

All this leads us to conclude that focus on the problem of monopoly and its causes increased a very great deal precisely in this age for two different kinds of reason. The first, linked to method, is that with the emergence of the notion of *perfect* competition, all strategic behavior of firms became a sign of monopoly, and as such caused worry. The second, on the other hand, concerns the new economic situation in which market power, whether generated by strategies or obstacles, showed itself to be long lasting and hence once again, though for other reasons, worrying. The difference between the two cases, however, should not be lost sight of: **in the first case, as we have already seen, the identification of monopoly power was due to a change only in the theoretical model<sup>142</sup>, while in the second it was to be imputed to new circumstances in the real world.**

### 3.3. *Why the Italian marginalists?*

When speaking of the marginalist age it is of course essential to quote Schumpeter: "The most benevolent observer could not have paid any compliments to Italian economics in the early 1870's; the most malevolent observer could not have denied that it was second to none by 1914"<sup>143</sup>. Having selected this age in the previous section as the most suitable one for our study, we certainly cannot neglect an examination of the economic theory whose primacy Schumpeter recognizes in such glowing terms!<sup>144</sup>

There are, however, other good reasons for studying this Italian thought, and that concern the specific subject of this work: in Italy in the marginalist age a great many studies were written on the subject of

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is the part of the history that interests us.

<sup>142</sup> This is Edgeworth's opinion, according to Machovec (1995): "Edgeworth's dissatisfaction with the concept of zero profit ... was rooted in his realization that the new package of semantics *and ideas* attending the model of perfect competition were affecting how leading economists were reasoning about the market process" (288 author's italics).

<sup>143</sup> Schumpeter (1954 [1976]: 855).

<sup>144</sup> Johnson (1956) also defines this age the "golden age of Italian economics" (506).

monopoly power<sup>145</sup>, **which was by no means specific to the USA as is sometimes held**<sup>146</sup>. Many Italian economists dealt with it<sup>147</sup>, in part as a reflection of American and European realities<sup>148</sup>, but also because of the industrial situation in Italy and the microeconomic policies followed, or not followed, by Italian governments in the decades at the turn of the century. It was the condition of Italian industry that encouraged thinking on the subject of monopoly power, characterized by “participations intersecting and in succession; holdings and groups, trade union agreements, also secret ones, interlocking directories<sup>149</sup>, with at least some big linkers; interlocking relations between industry and the big banks; concentration of activities in the industrial triangle; districts”<sup>150</sup>. The massive intervention by the government in the life of firms also provoked commentary from economists, thus revealing their idea on market power in the absence of this intervention<sup>151</sup>.

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<sup>145</sup> Let us cite the earliest: L. Cossa (1877), Boccardo (1882), E. Cossa (1888, 1901), Dalla Volta (1888, 1889-90, 1900, 1901, 1902) Supino (1893, 1902).

<sup>146</sup> Morgan (1993) seems to support it, and adds that both in the UK and in Germany the problem of competition between big firms was not raised (564, fn. 4), but De Jong, for example, recalls the German book of 1883, *Die Kartelle* by Kleinwächter (De Jong 2007c: 62-63). In this sense also Gerber (1998).

<sup>147</sup> See the historical studies of Mazzocchi (1965), Avagliano (1974), Parisi (1992), Bientinesi (2003) and Augello e Guidi (2009). There are also works on the history of industrial economics in Italy: Bianchi (2007), Marchionatti and Silva (1992), Grillo and Silva (1989: 35-37), who, however, are referring to more recent periods to the ones dealt with here.

<sup>148</sup> See for example the case of Riccardo Dalla Volta, examined by Augello and Guidi (2009).

<sup>149</sup> The sharing of administrators that allows big companies to form a network of connections.

<sup>150</sup> Ciocca (2008: 159). Economic historians in general believe that the “phenomenon of industrial concentration in the sectors of higher economies of scale emerges in Italy at the start of the twentieth century” (Amatori and Colli, 1999: 117).

<sup>151</sup> There was low competitiveness in the country in the years beginning with the victory of the Left (1876), due among other things to the collusion between the state and big firms, whereas in the age of Giolitti (1900-1913) there was “an intervention of the state against the dominant positions in crucial sectors and markets: telephones, maritime services, insurance, railways” (Ciocca 2008: 44). And furthermore: Giolitti opposed to private monopolies “the power of the state, public monopoly. He tried to counter contestability, by other private firms. He succeeded with the railways and

To these reasons taken from economic history, others can be added concerning the derivation of the ideas. The fact that the father of the theory of imperfect competition was Italian (Sraffa), as were two of the three founders of the new theory of oligopoly based on the notion of entry barriers (Sylos Labini and Modigliani) **suggests that their ideas could have an Italian derivation.** Also the wholly Italian history of the working out of U shaped average cost curves, an instrument of great importance for our subject, encourages us to continue exploring in this direction<sup>152</sup>. Moreover, the role the Italian marginalists played in the definition of the notion of natural monopoly also offers good prospects for research on the subject of monopoly power in general<sup>153</sup>.

We conclude our line of argument by recalling, together with Modigliani, that the possibility of reading Italians in their own original language “is open only to the ‘happy few’” (1958: 216); we therefore think it is a duty and a privilege of Italians to carry out historical work on their primary sources.

### 3.3.1. The economists considered

In this work I deal especially with four Italian marginalists: Vilfredo Pareto, Maffeo Pantaleoni, Antonio De Viti de Marco and Enrico Barone. Three of them were contemporaries<sup>154</sup> and three, but not the same three, died a very short time one from another<sup>155</sup>; their

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telephones ... with the foundation of INA and the exclusive state rights to life insurance” (151). “There remained those collusive forms between firms, particularly between industrial firms and banks” (153). “In the European culture of the time the concept of antitrust did not exist ... but to oppose another firm to the firm that was sole agent of maritime services meant making that market a contestable one” (155).

<sup>152</sup> Keppler and Lallement (2006). They are important in particular for the structure-conduct-performance approach, since they allow the identification of various market structures.

<sup>153</sup> Mosca (2008).

<sup>154</sup> Pantaleoni was born in 1857, De Viti de Marco in 1858 and Barone in 1859. Pareto, ten years before, in 1848.

<sup>155</sup> Pareto died in 1923, Barone in May 1924 and Pantaleoni in October of that year; De Viti de Marco lived for another two decades, dying in 1943.

biographers tell us of their deep personal ties<sup>156</sup>: for example Pantaleoni converted Pareto and Barone to economics<sup>157</sup>; we know about the brotherly friendship between De Viti de Marco and Pantaleoni; we have a wealth of correspondence between Pareto and Pantaleoni (De Rosa 1960) and between the latter and Barone (Magnani-Bellanca 1991)<sup>158</sup>. And again, it is well known that three of them (Pantaleoni, De Viti de Marco and Pareto) edited together a memorable series of the *Giornale degli economisti*<sup>159</sup>. It is precisely of our four economists that Einaudi (1934) speaks in his preface to the *First Principles* of De Viti de Marco as of those who gave: “such significant contributions to pure economic theory as to make their age rival ... the most glorious periods of the history of our science ” ([1953]: 13). The point to emphasize here is the importance, for our subject, of considering the group composed of these four figures as a single entity, since it was precisely their frequent intellectual contact and their reciprocal influence that affected the genesis and development of the ideas on market power.

It is by no means of secondary importance for the purposes of this study that they were all believers in free trade<sup>160</sup> and that all four were politically very active. They intervened in the political life of Italy,

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<sup>156</sup> We provide here only one of the many testimonies of their interrelationship in this letter of Pareto's to Pantaleoni: “All the theories I have set out are simply the *germs of theories*. Economists like Barone who have knowledge, culture and intelligence, should be the ones to develop these theories, and seek *new truths* ” (De Rosa 1960: 455, Pareto's italics).

<sup>157</sup> Pareto was an engineer, Barone was in the military (Magnani 2003: 44-45, 72; Gentilucci 2006: 21).

<sup>158</sup> The subject of the Italian marginalists seen as a group in our opinion deserves a specific study.

<sup>159</sup> Until 1897 (Magnani 2003: 211). Ugo Mazzola was also one of the leading lights of the *Giornale degli economisti*. Barone took an active part in the project, as a reviewer (Gentilucci 2006: 28). Macchioro (1996: 10) speaks of a very violent *Methodenstreit* against all economic positivism led by the *Giornale degli Economisti*. We mention as an example of the primacy of the paper that Edgeworth's study of monopoly was published for the first time in Italian in the *Giornale degli Economisti* in 1897.

<sup>160</sup> Pantaleoni and Pareto in the course of their lives abandoned *laissez faire*.

proposing reforms both in the *Giornale degli economisti*, as well as through direct participation: two were members of parliament (De Viti de Marco and Pantaleoni), and two tried to get elected (Barone and Pareto). Their period of militancy lasted from between the middle of the Eighties to the coming of fascism<sup>161</sup>, right in the middle of the time in which, as we have explained, the issues concerning monopoly power were most relevant; and since all four were free trade economists, we can expect to find thinking on competition policies in their writings.

From the scientific point of view it is perhaps unnecessary to recall the reasons for their reputations, beginning with Pareto's everlasting fame due mainly to the concepts of Paretian optimum, of cardinal utility, to his law of income distribution, and in general to his contributions to Walras' theory of general economic equilibrium. Pantaleoni is considered the first economist to have applied the marginalist analysis to public finance<sup>162</sup>, in 1883; before Marshall he was the author of a textbook of pure economics, of writings on credit and other very innovative works<sup>163</sup>. The fame of De Viti de Marco is mainly due to the foundation of *Scienza delle finanze* as a purely theoretical discipline, as well as his important contributions to the theory of banking, international economics and the history of economic thought<sup>164</sup>. Finally, Barone is known mainly for his discovery of the theory of marginal productivity and for the socialist calculation debate.

If it was unnecessary to mention the thinking that made them immortal, we do have to point out that the secondary literature did make some references to them on subjects relevant to ours;

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<sup>161</sup> After that time the only survivor of the four, De Viti de Marco, stays silent for more than a decade, drafting his textbook on *Scienza delle finanze*.

<sup>162</sup> Pantaleoni (1883) has priority over Emil Sax (1884); see Mosca (2006).

<sup>163</sup> The historiography on Pantaleoni is examined in Bini (1995). Augello and Michelini (1997).

<sup>164</sup> On De Viti de Marco's contribution to the history of economic thought see Mosca (2005a).

Schumpeter for example recalls Pareto's position on competition, as precursor of the modern duopoly theory<sup>165</sup> and, very critically, that on monopoly<sup>166</sup>; he also mentions Pantaleoni's study of industrial combinations<sup>167</sup> and Barone's on the theory of costs and the supply curve<sup>168</sup>. Sylos Labini cites Pantaleoni on the importance of fixed costs<sup>169</sup>, while Pareto is mentioned by Chamberlin for having distinguished "between acting like a monopolist and acting like a competitor", and again for his contribution to the theory of duopoly<sup>170</sup>. And it is again to Pareto that Dennis attributes the abandonment of the idea of competition as activity<sup>171</sup>, while Backhouse recalls Pareto's innovations for Walras' theory of competition<sup>172</sup>; finally, Machovec calls Pareto's description of the behavior of the monopolist "classical"<sup>173</sup>. To this list of contributions we add both De Viti de Marco's article (1890) on the telephone industry<sup>174</sup>, and the fundamental links provided by Barone to the development of U shaped cost curves (Keppeler and Lallement 2006) and to the concept of natural monopoly (Mosca 2008). As can be seen, our economists' contributions seem very promising, however no scholar has yet dealt with the specific subject of monopoly power in their thought.

### 3.3.2. The International diffusion of their ideas

Another important reason why these four Italian marginalists were chosen is that they were leading figures on the international scene, making Italy a central driving force in economic debate. For personal

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<sup>165</sup> Schumpeter (1954 [1976]: 972-973 and 981-982).

<sup>166</sup> Schumpeter (1949: 157).

<sup>167</sup> Schumpeter (1954 [1976]: 857).

<sup>168</sup> Schumpeter (1954 [1976]: 994).

<sup>169</sup> Sylos Labini (1957 [1962]: 89; 1995: 197-199). Meacci (1998: 3) emphasizes the link between Pantaleoni and Sraffa.

<sup>170</sup> Chamberlin (1933 [1962]: 16, 36-37, 40, 52, 222-223).

<sup>171</sup> Dennis (1977: 265).

<sup>172</sup> Backhouse (1990: 68-69).

<sup>173</sup> Machovec (1995: 183).

<sup>174</sup> See Petretto (2002) and Mosca (2007).

reasons they were cosmopolitan<sup>175</sup>, and this certainly helped them find a place in the cultural cross-fertilization of the period. They engaged in correspondence with economists throughout the world, and their work was reviewed in the best journals, in which they in turn published articles and reviews; their textbooks were translated into various languages<sup>176</sup>. The secondary literature confirms that Italian ideas made up a conspicuous proportion of those circulating among the economists of the marginalist age<sup>177</sup>; **there are therefore good reasons for asking ourselves if their thinking gained currency on the specific subject of monopoly power.**

**We shall also be evaluating their influence at the international level on the generations that followed them on this subject,** and the outlook is promising because there is already some encouraging evidence available. The first regards Knight who, considered as we said to be the initiator of the model of perfect competition, would appear to owe his “rigorous notion of equilibrium” precisely to Pareto and Barone<sup>178</sup>. Further evidence concerns the influence of Pantaleoni’s theory of fixed costs on J.B. Clark<sup>179</sup> and, through him, on the following theories of competition. De Viti de Marco inspired entire areas of research<sup>180</sup>; for our subject in particular there is evidence of

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<sup>175</sup> Pareto, born in Paris of a French mother, was nephew to an ambassador to Constantinople, and had one Russian and one French wife; Pantaleoni, whose mother was English, gained his qualifications from school in Germany; De Viti de Marco, whose grandmother was English, married an American; Barone had very close links with German culture.

<sup>176</sup> Pantaleoni’s textbook of 1889 was translated into English in 1898, De Viti de Marco’s of 1928 was translated into German in 1932 and into English in 1936. Pareto’s 1906 *Manuale* was translated into French in 1909, but then translated into English only in 1971; Barone’s *Principi* (1908) were translated into German in 1927 and into Spanish in 1942.

<sup>177</sup> On the diffusion of Italian thought see Asso (2001) and Asso and Fiorito (2001).

<sup>178</sup> Marchionatti (2003: 66).

<sup>179</sup> As already mentioned, as well as on Sylos Labini. Asso and Fiorito (2001: 344) argue that Clark’s theory of “overhead costs” (J.M. Clark 1923), owes a lot to Pantaleoni.

<sup>180</sup> Buchanan (2003: 283) recognized the importance of De Viti de Marco as “entry point” in the research project that led him to the Nobel Prize.

possible derivations from his ideas and the most recent theories of regulation of public utilities<sup>181</sup>. There is also a thread that from Pareto leads to Lerner, via Amoroso, and to Lerner's famous index to measure market power, even if there is no proof of direct influence<sup>182</sup>.

#### **4. Why a history of the ideas on the causes of market power?**

Why is it important to follow up historically this notion of monopoly power? Which "arcane ideas" are revealed only if it is reconstructed by making use of this category? In other words, what makes the question we have raised a good historical question? We have several times stated that there are no studies on this subject: the suspicion may arise that if this history has not yet been written it is because it is not important. We shall try to show why we think it is.

1. We have already hinted at the possible derivation of the ideas of Sraffa as well as those of Sylos Labini and Modigliani from an Italian matrix: thanks to this category one might therefore write an Italian part of the history of the theory of non-competitive markets, which has not yet been written. We have also already mentioned possible influences of the Italian marginalists on the history of the thinking beyond their national borders and on later generations in environments akin to ours; research closely focused on the subject of the causes of market power may enable us to discover new lines of thought. So going back over the history employing this category allows us to find new derivations.

2. Finding the causes of monopoly power is as useful as finding entry barriers. The reason why it is important to know the sources of market power is the same as why it is important to know what entry barriers are; both allow us to understand what causes prevent new firms from entering an industry. We know that the historiography has

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<sup>181</sup> Petretto (2002) does not trace the actual paths of the ideas, but offers useful hints on how to look for them.

<sup>182</sup> Keppler (1994b) attributes to Amoroso, a follower of Pareto, the formulation in 1930 of an index similar to the one developed by Lerner four years later (597).