

# Small Businesses As A Research Subject: Some Reflections on Knowledge of Small Businesses and Its Effects on Economic Theory\*

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**ABSTRACT.** Most economists agree in their view of small and medium-sized enterprises, or small businesses (SMEs), as a marginal scientific subject. They may go so far as to ignore them, either because they think these economic units do not lend themselves to conventional economic studies — studies which, for instance, take into account the “sacred cow” theory of economies of scale — or because they see them as being not really different from big businesses.

However, at least a few economists have recognized, first, the many characteristics differentiating SMEs from big firms, and second, their increasing importance in terms of numbers and job creation within economies. Among these few, Schumpeter was one of the first to show the importance of entrepreneurs and SMEs as the main variable of change in an economy. Simon and Lucas also explained the difference between small and big firms through the differing abilities required by managers to run them. Penrose looked at the question from another point of view by highlighting the interstices taken up by SMEs to fulfil needs that cannot be fulfilled by bigger units. Critics of the theory of economies of scale showed that such economies may be offset by a number of diseconomies, thus justifying the efficiency of many SMEs. More recently, Mills and Schumann suggested that SMEs compensate for their lack of economies of scale by their production flexibility, particularly in today’s turbulent economy.

The limits of traditional economic theory are clearly demonstrated by the fact that it does not take account of all these theories, concepts and ideas. It thus neglects a number of important economic phenomena, including the persistence and current expansion of SMEs. Consideration of such phenomena may lead to the development of a new economic theory based on the concepts of instability and contingency, together with the behaviour of entrepreneurs and small firms, thus tending to contradict, in particular, the concept of equilibrium in conventional economic theory.

## 1. Introduction

While management scientists<sup>1</sup> have shown increasing interest in small and medium-sized enterprises (SMEs)<sup>2</sup> as a research topic, the same cannot be said of most economists. Many still see SMEs as a marginal subject in economic science, and hence tend to ignore them, questioning their validity through the “sacred cow” theory of economies of scale which implies that only big firms have the capacity to be efficient and, thus, of interest. Others, despite some important economic analyses that take account of the phenomenon, still dismiss SMEs as being unimportant. The reasons given to support this are that such firms have only a transitory existence and are directly subordinated to big firms in the international division of labour. Some agree with Machlup (1967), who stated that SMEs, and even big firms for that matter, are merely economic agents to be treated as an aggregate, or a “black box” to be studied only within the general variables of economic theory.

However, the number of SMEs has increased considerably over the last fifteen years, and they have become leaders in the regeneration of many industrialized regions, to the point that many specialists now speak of a new renaissance of small businesses that is reversing the secular trend towards centralization of production. Although the data underlying this statement should be treated with care, and although further research is needed to provide confirmation, the SME revival appears to have continued unabated in recent years (Sengenberger *et al.*, 1990).

Another obstacle to the recognition of the importance of SMEs in economic theory is their extreme heterogeneity. For example, the law of

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large numbers does not play as great a role for them in terms of managerial behaviour as it does for large firms. Large firms have hundreds of managers who can be described in terms of their average or typical behaviour. However, despite their heterogeneity, small businesses still have a number of relatively common characteristics, notwithstanding their small size.<sup>3</sup> On a continuum ranging from very small, through small and medium to large enterprises, one finds

... first, a strong concentration of management<sup>4</sup> with typically relatively intuitive strategies giving SMEs a quick and effective decision-making process; second, a low specialization of production factors; and third, less formalized internal (with no or few hierarchical levels) and external information systems (the external system being based on very direct customer relations, with fast reactions to new or changing wishes).' (Julien, 1990).

Many excellent reasons exist to justify continued research into the above characteristics, and into the particular importance of SMEs in the economy. However enticing, though, such reasons, whether additive or complementary, will probably never convince researchers that small businesses will someday replace big businesses as international economic leaders, nor that SMEs will ever regain the place they held at the beginning of the first Industrial Revolution. What such reasons should do, however, is to persuade researchers that, in all probability, a new equilibrium between small and big firms will be reached, with the smaller ones taking on a much more important role.

SMEs are quite different from big firms and must be studied separately. A better understanding of their role as productive units in the economy will help in building a better economic theory to take into account not only the dynamism of their simple and flexible structures, but also their main driving force: the entrepreneurs themselves.

Initially, this paper discusses some of the main economic explanations, other than their mere existence in large numbers, justifying research into SMEs. Second, it reflects upon the theories, concepts and ideas that take account of SME characteristics, in order to demonstrate that a new economic balance must be defined between small and big firms. Finally, the behaviour of SMEs and of entrepreneurs themselves will be incorporated

as major elements in a reconstructed industrial economic theory.

## 2. Some economic explanations of small businesses

There are a number of explanations of the *uniqueness* of SMEs and their differences with respect to big firms in economic theory. Some are old, others new.

### 2.1. *The role of entrepreneurs and SMEs in economic change*

The oldest explanations of the role SMEs in economy can be found to the theoreticians of entrepreneurs as Jean-Baptiste Say and Richard Cantillon, ideas re-used in the Joseph Schumpeter's early writings during the 1930s. This one has to do with the impact of entrepreneurs on economic change, particularly in new (and small) firms.<sup>5</sup> As far as Mill's theory of the stationary state is concerned, Schumpeter anticipated the gradual end of capitalism and the corresponding rise of socialism, thus by the entrepreneur's decline and its capacity to innovate and transform the economy. Such a trend would result in the systematic domination of the economy by a few huge conglomerates. He postulated that this growing bureaucratization would kill entrepreneurship and innovation, and ultimately stop the renewal of industrial structures.

Schumpeter's early view was not given the importance it deserved. However, we now understand, as he did then, that accelerated change in the economy can be explained for the most part by the growth of entrepreneurship and the new role of the small firms created by it: we referred to this as his mechanism of "creative destruction" in today's increasingly changing economies.

### 2.2. *The stochastic distribution of managerial abilities*

The relatively steady introduction of new firms into the economy and the gradual growth of some of them into large firms has been discussed by researchers such as Simon and Bonini (1958) and Lucas (1978), and re-used by Oi (1983). They explained the presence of differently-sized firms

even within the same industry by a quasi-stochastic dispersion of managerial abilities over a kind of spectrum of small and large firms which means that some talented managers are able to control large production factors. Lucas adds that a clear relation exists between higher national wealth and average firm size.

However, this is as tautological as saying that a wide spectrum of incomes exists in economies because some individuals have more ability than others, when the impact of inheritance and other advantages from the milieu on this situation is well-known.<sup>6</sup>

These economists see entrepreneurs as having just two functions: the ability to coordinate production and the ability to monitor production factors. Yet, small or large, entrepreneurs create new ideas and, later, new opportunities on the market, thus changing market equilibrium; at the same time, they have other objectives such as independence and autonomy, and profit becomes instead a constraint for the survival and development of the enterprise, or a condition for achieving other ends (Hornaday and Aboud, 1971; Eggens, 1977). For this reason, the profits realized by young entrepreneurs, especially in the first years but often later too, tend to be lower than the salary they could have earned in their specialty areas elsewhere on the market. Thus some entrepreneurs choose to remain small, despite their considerable ability, whereas others grow, sometimes helped along by chance, by strong support from their network or by inheritance.<sup>7</sup>

Second, if the theory of the stochastic distribution of managerial size were true, then the average size of firms should be greater in richer countries than in poorer countries; however, as Table I shows,<sup>8</sup> this is not the case. Therefore, the differences in sectorial structuring cannot be explained by this theory; for example, the bakery and building sectors, highly decentralized in West Germany and highly centralized in the USA. At the same time, all data put forward by small business economists to support the present trend in decentralization of the economy also tends to back up this theory.<sup>9</sup>

We must therefore identify other reasons to explain not only the increasing numbers of new and/or small enterprises, but also their persistence and their increasing share of the economy.

TABLE I  
GNP and average size of establishments by employees in manufacturing industry of different countries, 1981

| Country     | Gross Domestic Product<br>(billions US \$) | Average of estab.<br>(no. of employees) |
|-------------|--------------------------------------------|-----------------------------------------|
| USA         | 2,907.50                                   | 51                                      |
| Japan       | 1,145.15                                   | 7                                       |
| FR Germany  | 683.23                                     | 159                                     |
| France      | 572.52                                     | 123                                     |
| UK          | 510.82                                     | 60                                      |
| Italy       | 353.26                                     | 128                                     |
| Canada      | 293.16                                     | 52                                      |
| Netherlands | 141.41                                     | 32                                      |
| Australia   | 161.64                                     | 41                                      |
| Sweden      | 112.85                                     | 84                                      |
| Belgium     | 98.06                                      | 33                                      |

Sources: IMF, *International Financial Statistics. Supplement on Output Statistics*, 1984; T. van Heesch, 'Structural change and small and medium-sized businesses', in P. A. Julien et al., *La PME dans un monde en mutation*, Québec, Les Presses de l'Université du Québec, 1986.

### 2.3. The theory of "interstices"

A possible explanation was put forward by Edith Penrose in 1959. She suggested that the economy generates a number of market spaces that are unfavourable for large-scale production. Such small markets can be created by local customs (for example, products for religious sects), by luxury needs (for example, high fashion), by special uses (racing cars), by geographical location (isolated populations) or by very new markets with as yet a weak demand. Such small markets are not accessible to big producers, nor do they yield sufficient profit to interest them.

The present multiplication of interstices in our economies can partly be explained by what marketing specialists call the increasing segmentation of markets in proportion to the growth of income in industrialized countries. Increased wealth means that more consumers can satisfy their needs for variety and differentiation, as analyzed by Veblen in 1912 for the rich Bostonians on the New England coast, and by Tibor Scitovsky in 1978 in his harsh criticism of classical consumer economic theory. This trend towards segmentation explains, for example, the multiplication of

fashions for many smaller consumer groups and the continual renewal of needs.<sup>10</sup>

However, Penrose's reasoning is not enough to explain the large number of SMEs even in very competitive sectors. For that, the theory of economy of scale must be examined.

#### 2.4. *The limits of big firms: critics of the theory of economies of scale or "economies of risks"*

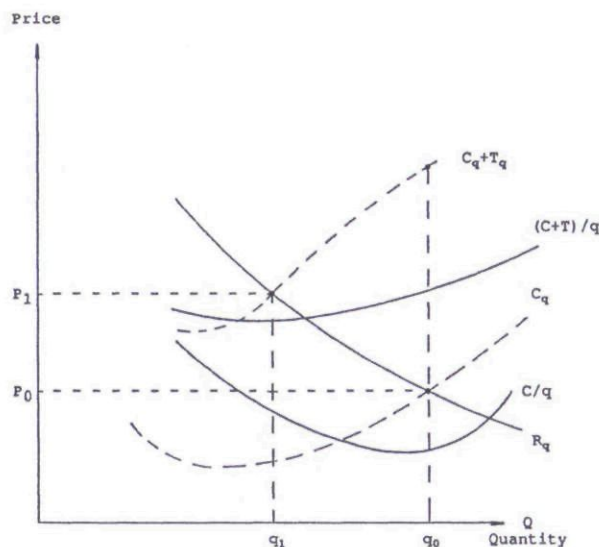
Interstices are one response to the theory of economies of scale, in markets where such economies are small or non-existent. The limited production required for these small or changing markets is facilitated by new electronic technologies which permit short production runs (Carlsson, 1984). Despite a time lag in the use of new technology in small and large firms, it nevertheless seems that such technology is currently diffused more quickly in small firms than in larger ones (Koning and Poutsma, 1988; Julien, 1991).

The theory of economies of scale has other limitations too. It is clear from studies of the interior of the big firm "black box" that such economies can be partially or totally offset by diseconomies of scale that often increase at the same rate. The same applies to economies of agglomeration, often offset by congestion and pollution in major cities.

Many economies of scale are clear (in production, management and distribution). However, size also creates countereconomies of scale. Various studies have defined such costs at the production level as "capacity costs", "switching costs" and "adjustment costs" (Gould, 1969), or at the management level as "coordination and control costs" (Scherer, 1980), "effects of slack" (March and Cyert, 1963) and "the increasing cost of information" (Scitovski, 1958), not forgetting the "effects of bureaucracy"<sup>11</sup> and the social and environmental costs that are beginning to be included in production costs.<sup>12</sup>

For all these reasons, some economists, such as Bela Gold (1987), point out that the theory of economies of scale has yet to be verified, while others, such as Shackle (1967) and Chevalier (1977), have shown that technical economies of scale obtained very quickly produce a curve resembling a straight line, where SMEs obtain the same return as bigger firms (Leroux, 1982).

But adding such costs to an increasing return ( $x_q > 0$ ,  $x_{qq} > 0$ ), for example on a king of tax fee  $T = tx(q)$  [where  $x(q)$  measure the production for the diseconomies of scale], it can be shown that bigger firms must decrease their production or their size from  $q_0$  to  $q_1$  quantity. Using the traditional codification  $C/q$  and  $T/q$  for average costs,  $C_q$  and  $T_q$  for marginal costs and  $P$  for price, we can see this effect on the traditional U curves in figure 1a or without economies of scale in figure 1b:



Limits of Large Firms

Fig. 1a.

Clearly these figures are static. Even from a dynamic point of view, the inertia effect of large size limits the possibilities for new economies to compensate for social or environmental costs (in particular because of adjustment costs) (Julien and Lafrance, 1983).

However, if economies are offset partially or completely by diseconomies of scale, or if more efficient management does not necessarily result in larger scale, as Lucas suggested, why, then, are there so many big firms? This paper proposes another explanation using a concept well-known to management scientists: risk aversion among managers.

A good way of minimizing risk is to reduce the various uncertainties on markets arising from competition, innovation, public policies, etc. Big

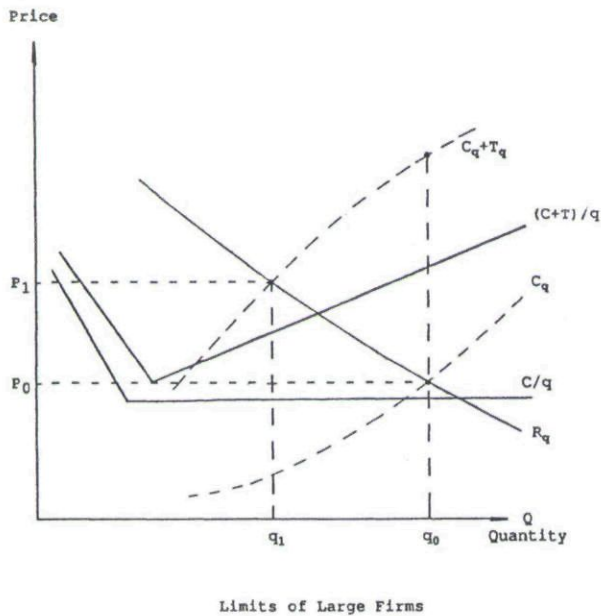


Fig. 1b.

firms do this by concentration (i.e. by increasing their size through internal or external investments and/or by cartellization), thus gaining some oligopolistic if not monopolistic advantages on domestic and international markets and reducing uncertainty and risk.<sup>13</sup>

This kind of behaviour exists even in international markets. For example, Ricardo Petrella (1989), Director of the European FAST program of various international applied studies, showed that most multinationals used their own nation state's support to reduce domestic competition, thus enabling them to face international competition. However, they also signed agreements with their international competitors to reduce competition on the world market, and thus national and international risk.<sup>14</sup>

SMEs owner-managers and entrepreneurs who eventually become "managers" also share this aversion to risk. However, the lack of entry barriers limits possibilities for control, and their lack of resources reduces their capacity to influence. Therefore, in contrast to large firms which tend to *control* their environment by coalition, SMEs try to *stabilize* their limited environment through networks (often not formal).

A good way for small firms to achieve economies of scale without producing the diseconomies

caused by large size is through cooperation. At the same time, cooperation can help stabilize the environment. As Marshall explained in a short paragraph in his "Principles of Economics" in 1919, economies of scale can be divided between a large number of small firms, for example, concentrated in particular localities or industrial districts (Beccatini, 1987). Such economies can be added to the economic and social economies of agglomeration, thus minimizing transaction costs. Transaction costs can also be minimized by building some "transaction space" (Marchesnay and Julien, 1990) within networks based on trusted relationships among local or regional agents (Sabel, 1990). Two of the three Williamson factors, uncertainty and complexity, are thus reduced by management of change in the environment.

However, a fast-changing economy limits the effects of scale, such as the two-thirds law in homogeneous production, or scientific organization of assembly lines. Instead it requires systematic adjustments and then flexibility to seize new opportunities.

## 2.5. The new need for flexibility

Flexibility is a result of the attributes of management and production technologies that allow greater output fluctuations to be accommodated. It is based on the ability to undergo change and the capacity to adapt to or cause it. It requires compatibility, divisibility and reversibility of production (Stigler, 1939; Reix, 1979; Kickert, 1985).

Flexibility demands a trade-off between time and costs. SMEs, with their centralized decision-making, organic organization (vs. the mechanistic and hierarchical organization of bigger firms) and relatively non-specialized production factors, are able to change quickly. Bigger firms, on the other hand, have the resources to adapt their production structures.

However, by using networks, SMEs can compensate for their lack of resources. Over the last few decades, new process technologies, as mentioned in section 2.4, have enabled SMEs to implant shorter production runs and thus reduce costs. Carlsson (1989) re-uses the analysis of Mills and Schumann (1985) to show that SMEs compensate in efficiency terms for their smaller size

through their flexibility, especially in turbulent economic times.

Flexibility can be observed in Italian industrial districts or other localized production systems where, over the last ten years, SMEs have taken control of European markets in traditional sectors such as clothing and shoes, when many such sectors were previously dominated by production coming from low-wage countries. They have even taken control of less traditional sectors such as the steel rod sector in Brescia.<sup>15</sup> Flexibility can also be observed in periods of crisis, since SMEs adapt more easily than large firms, as shown by Delattre and Eymard-Duvernay (1984).

Bigger firms are beginning to understand this situation, and are becoming increasingly involved in cooperation agreements with SMEs to take advantage of their flexibility and to reduce their own inertia with respect to fast-changing economies. Such cooperation can take the form of subcontracting of special services or "externalization" of a number of production activities, and has contributed to the growth in numbers of small businesses over the last few years.<sup>16</sup>

### 3. An unstable situation

In spite of all these arguments, the economic press often reports mergers and takeovers by multinationals, or coproduction agreements, for example between automobile industry giants. It would seem that an economy that is favourable for SMEs is not necessarily unfavourable for bigger firms. This state of affairs probably reflects both the inertia of the traditional long-term trend towards concentration and the internal logic of an economic system that has been dominated by big business and its economic and political powers. In other words, "economies of risk" seem to have overtaken the quest for efficiency in the economy.

The question can therefore be asked: Is the renaissance of small business over the last fifteen years simply an anomaly in the general trend, albeit a longer-lasting one than the Great Depression between the two World Wars, or is it a solution to the longstanding structural crisis in the economy?

A study of economic reality reveals that an economy based on thousands of small firms is better able to adapt to market segmentation and

accelerated change. At the same time, being well-established in the regions or towns, SMEs are better able to understand the social effects of such changes. An economy having large numbers of SMEs can be highly "self-adaptive" in the face of change. In contrast, economies centralized by the State or dominated by huge enterprises — as was the case in the recently-democratized socialist countries or in oligopolies such as the steel industry — are very difficult to move and transform.

However, the need for more flexibility is not sufficient to ensure that the economic system will continue to foster the development of SMEs at the expense of big business. First, the "interstices" concept holds good only for small markets, while most bigger markets tend to be supplied by bigger firms. Second, even the critics of the theory of economies of scale do not claim that such economies do not exist; rather, they postulate that an important proportion is lost to associated diseconomies. Nevertheless, economies of risk continue to push managers of bigger firms to enlarge their power base.

The key justification for the existence of SMEs therefore lies in the behaviour of entrepreneurs and their propensity to innovate, and in the concept of risk aversion. Both these factors enable us to penetrate more deeply into the "black box" by studying not only the organization but also the economic actors.<sup>17</sup> In a fast-changing economy, contingency theory (Lawrence and Lorsch, 1973) suggests that the need for flexibility comes from actors and organization behaviour in a decentralized economy. Such decentralization requires more entrepreneurship and more independent SMEs to increase competition and reduce risk aversion behaviour. To meet some of the needs of economies of scale, decentralization requires the establishment of networks, or localized systems, or links between SMEs and big firms for large and international markets, to generate, using Schumpeter's terminology, some "creative synergy".

Reality, however, seems to offer different signals. As both observers and participants in the process, it is not easy to recognize trends in structural evolution, nor to understand the real forces of change. As markets and production systems evolve here, many newly-industrialized

countries continue to transform the international market and oblige small and large firms in traditional industrialized countries to change their production from "mass" to "intelligent", or systematically innovative, production.<sup>18</sup> The recent changes in Eastern Europe only serve to complicate the issue further.

The horizon is far from clear. A new theory of economic change is required to achieve a deeper understanding of future developments.

#### 4. Towards an economic theory of instability or contingency

To understand economic turbulence, a new economic theory is required to explain to some degree the origins of instability and contingencies, rather than searching for partial or unattainable equilibrium. Such a theory must be dynamic rather than static or comparatively static. The behaviours of actors, in particularly entrepreneurs<sup>19</sup> and their capacity not only to organize production factors, as Lucas suggested, but also to seize opportunities in an unstable environment and then to create instability through continued innovation in terms of products, processes and organizations and through occupation of strategic positions, are important factors in this kind of theory.

Entrepreneurs must be seen as psychological actors who act globally and above all for their own interest. They "take up" (a free translation of "entreprendre" in French) new businesses as a kind of adventure (braving the "ventura" — the uncertainty and the risk), hoping or gambling on the "fortuna" (wealth, luck, chance, hazard and future: Vérin, 1982), but also seeking proof of a personal challenge that they themselves will win. Their ventures succeed only if they know how to organize resources to seize opportunities generated by the instability of a specific market. They use strategies based on a mixture of intuition and *ex post* calculations, using "praxis" in the short term and vision in the long term. If they remain entrepreneurs when their ventures grow into big businesses, they will always reserve a field of unforeseen possibilities, beyond daily management, to continue the venture.<sup>20</sup> Entrepreneurs can be compared to Bourdieu's (1987) football player who, by virtue of his talents, beyond his "habitus" of skills obtained through experience, is

always able to innovate in the face of new, varied and always different situations.

In the long term, risk aversion orients objectives and requires a well-controlled and stable environment. However, this does not necessarily imply a state of economic equilibrium or near equilibrium punctuated by relatively unstable situations for each enterprise. Actual or potential entrepreneurs will always exist in the economy to disturb equilibrium on a systematic basis, to profit from interstices or opportunities created by changing environments and to generate or accelerate such changes. Entrepreneurs and SMEs are both producers and users of instability, pursuing their own psychological interests within the constraints of the economy (contrary to big firms which tend to seek agreements to increase stability and equilibrium).

The traditional notion of equilibrium has always conditioned economic theories, despite the opposition of critics (e.g. Kaldor, 1972). Such theories, always based on the widespread availability of information, even though information is costly (the major transaction cost), form the basis of the behaviour of economic agents. This can be justified because entrepreneurs do all they can to create or obtain information before the others and control it as long as possible before putting it on the market, and even then they will transform it to reduce its interest or wait until it can be replaced by new information. Sometimes managers share only part of their information with their networks, and then on the condition that it is controlled.

If we study structuring information (which, contrary to circulating or routine and repetitive information, can create change), we can first define three kinds of economic information: public information, protected private information and shared private information (Amendola & Gaffard, 1988).

*Public information:* open information — more important in quantity, available to everyone, not very costly and yielding only small economic rent.

*Protected private information:* information that is protected, for example by patents, licenses or franchises, or specific information that is not repeatable or is disclosed too late to give rents. This is normally the more important scientific

and technological information and the most economic and least shared information, yielding more quasirent, as noted by Frank Knight. *Shared private information*: information that is shared in some space of limited transaction — based on systems of competition-cooperation with different types of networks, such as cartels, clans, cliques, clubs and so on. It is relatively limited and yields rents only to members or initiates.<sup>21</sup>

In contrast, the theory says, the behaviour of competitors or the coalition is to give a minimum of information to the market and, moreover, to give it when it is no longer of much interest (even if in the long term the market yields this information only partially through the price mechanism).<sup>22</sup> The strategy of all the actors is to try to protect the information or to give it to the market in an irregular and discontinued manner, making as much fuss as possible to try to deceive competitors (with the partial exception of competitors who are members of the network). The result is clearly a market containing a good deal of uninteresting or biased information. For entrepreneurs, two possible ways around this problem are to seek information that has escaped the system, or to create new information that systematically changes the market.

As complexity increases and instability is enhanced by growing change, the inclusion of SMEs and entrepreneurial behaviour in economic theory may help explain in greater depth the changes in the environment and the subsequent renaissance of the small firm.

Economic theory has found this difficult to understand for two reasons. First, all this has happened at a time when scientists (including economic and social scientists) are searching for natural laws of order and equilibrium. And second, the logic which has permitted the extraordinary development of science is difficult to criticize without questioning entire theoretical structures.

However, sooner or later, theorists must take account of the behaviour of economic actors and open all the "black boxes" in firms to be able to understand the economy as it really is. A better understanding of SMEs will therefore help in

understanding the new balance between small and big business.

And is not this return to the small firm also a return to the roots of economic theory — Jean-Baptiste Say or Adam Smith — or to classical economic theory, through perfect competition, when only small firms existed, or when competition existed between large numbers of small firms?

## Notes

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<sup>1</sup> H. Mintzberg (1990) is a recent example.

<sup>2</sup> The terms "small businesses" and "small and medium-sized enterprises" are used interchangeably here, as is customary, although they do not describe exactly the same thing. In this text, SMEs are considered to be small productive units controlled by one or a very few owners, or an entrepreneur with a small organization.

<sup>3</sup> I refer here mainly to small independent enterprises with less than 50 employees, since the new dynamism discussed does not necessarily apply to medium-sized firms, which seem to have had as many problems in recent years as big firms, if not more (Amar, 1987; Birch, 1987), or which have moved on into the category of big firms. On the other hand, most small businesses have remained small and have been systematically nourished by new creations.

<sup>4</sup> The term "personalization" of management could be used, given the omnipresence of the entrepreneur or owner-manager in every part of the business and its development.

<sup>5</sup> Schumpeter changed his mind in later work because he perceived more innovation in big firms due to their tremendous resources. However, he was wrong. Many recent studies show that SMEs are more innovative, or at least more efficient, than large firms in R&D (formalized or spontaneous) (Mansfield, 1981; Acs and Audrestch, 1988; Rothwell, 1989).

<sup>6</sup> Advantages or chance, such as studying in the best schools, being noticed by head-hunters from big firms, being a union member, etc. This contradicts Oi's model (1983) on page 160.

<sup>7</sup> The theory of the stochastic range of ability depends on what is said about ability. For example, in 1987 I wrote that the Chrysler Chairman, Lee Iaccoca, had considerable *political* ability in asking governments (through subsidies), unions (through wage cuts) and consumers (through higher prices thanks to quotas for foreign imports) to pay for his firm's inefficiency (Julien, 1987). *Economic* ability would have been to compete directly against Japanese production. George Bush's 1992 trip to Japan to secure the survival of the American automobile industry supported this point of view. The theory that the stochastic range of attitude towards risk

presents the same limits as the manager's ability will be discussed later in the section dealing with risk aversion. Most researchers in entrepreneurship have shown that there are no real differences in the attitude of entrepreneurs or others towards risk.

<sup>8</sup> Here global GNP is used, but the same conclusions could be reached using per capita GNP.

<sup>9</sup> Lucas gives an example drawn from a family vacation in Québec to predict an increase in the average size of restaurants in line with the increase in Québec's national income. However, he failed completely here: not only has his "small and inexpensive restaurant on the St. Lawrence river" probably remained small, even if its food has become more sophisticated and relatively more expensive, but the Canadian and American flags have probably been replaced by the Québec flag!

<sup>10</sup> Such market segmentation does not mean that mass consumption and mass production are things of the past, but rather that a greater share of consumer markets is open to other types of consumption and other types of production. A good example of such segmentation is the growing alternative medicine sector outside the traditional "scientific" system.

<sup>11</sup> See, for example, the effects of "Parkinson's laws" or the "Peter Principle".

<sup>12</sup> Some such costs were studied by G. Stigler before 1951. He showed, for example, the limits of the economies of the assembly line in the car industry.

<sup>13</sup> This theory, which uses risk aversion to explain an important part of the trend towards concentration, takes into account the need for reassurance in the face of economic uncertainty. The result is the multiplication of clubs, cartels and so on, or what William Ouchi (1980) calls "clans or cliques". Ouchi used the term "power economies" to describe this behaviour of large firms, especially during turbulent times when economic uncertainty increases.

<sup>14</sup> Adam Smith put this point over well when he said that businessmen "meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public...". Page 137 in the 1909 C. J. Bullock edition of "The Inquiry into the Nature and Causes of the Wealth of Nations".

<sup>15</sup> This revival of traditional industries in Europe is discussed in depth in Zeitlin and Totterhill (1989).

<sup>16</sup> For more information on the trend towards decentralization, see in particular Brock and Evans (1989) and Carlsson (1989), who discussed not only contracting out by big firms, but also the decreasing average size of firms in many sectors.

<sup>17</sup> The economic actors, not the economic agents. They are very different. Economic agents can be seen as merely economic variables, whereas the behaviours of economic actors are fundamental in economic change.

<sup>18</sup> For example, mass production requires Taylorism, and at the same time the increasing number of educated employees in industrialized countries cannot accept the discipline of this "scientific organization of labour", in contrast to the situation in underdeveloped or newly-industrialized countries.

<sup>19</sup> Baumol (1968) compared the tendency of economic theory to discount entrepreneurs to the exclusion of the Prince of Denmark from "Hamlet".

<sup>20</sup> I think that, in some large, dynamic firms, this kind of entrepreneurial behaviour exists in the same way that it exists in small firms, at the highest level, through decisions based mainly on intuition and a range of "ludus" (in the sense of Cotta, 1980) which justify the long working days. Calculations are made to justify *ex post* the decisions made and to organize the lower levels formally to some extent. In contrast to the neo-classical theory or the theory of limited rationality, this point of view suggests that enterprise rationality (or formalization) is weaker because the uncertainty is too great.

<sup>21</sup> Lorino (1989) explains that, even within the firm, "each key man... has a quantum of information which he shares partially, because he *cannot* (by lack of time or by weak capacity to formalize), or *does not want* to divulge the integrality". However, this is more true at the boundary of the firm. Foray (1990) adds that the availability of information is low because resources are becoming more and more specific; in dynamic markets, the Walrasian public auctioneer is usually absent or not very efficient, except in the long term.

<sup>22</sup> Although the mechanism of prices may show that a producer is able to sell more cheaply, at the same time it does not necessarily give the reasons for that situation. However, it is probable that when all the reasons are known, the entrepreneur has innovated.

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