

Critical Analysis of the potential Relationship between Innovation and Performance in SMEs

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Abstract: The ability of SMEs to innovate is generally recognized as a guarantee of their competitiveness. In our article, innovation is studied as a source of performance in the context of Small and Medium-Sized Enterprises (SMEs), by analyzing in particular the impact of innovation support. This article shows that (i) the two concepts refer to different contents; (ii) performance is mainly measured by distant (financial) indicators; (iii) the nature of the interdependence between innovation and performance is not unequivocal. Given the weight of contextual variables, we show the interest of adopting a broader view of innovation and performance in small firms, taking advantage of the diversity of performance and innovation characterizations, and by adopting an agnostic approach that will not establish a priori any relationship between them. This article proposes an extension of the concept of innovation and performance through the mobilization of specific indicators for small businesses and describes a methodology to measure and weigh and equip the researcher to better understand the interactions between these variables. In this way, we contribute to a critical denaturalization approach to empowering small businesses and, in general, public and regulatory authorities, of narrow performative standards.

Keywords: Innovation, Performance, Indicator, SME

Introduction

The ambition of this article is to enrich the characterization of the concepts of performance and innovation in research on small and medium-sized enterprises (SMEs), and to propose a diagnostic tool based on a broader meaning of these two concepts, mobilizing indicators specific to this type of organization.

Traditionally, the notions of performance and innovation are the subject of debate in the literature, and their characterization at the firm level is carried out by means of variables taken for granted, such as, for example, the budgets invested in research and development or the number of patents filed, with regard to innovation or in turnover and growth rate, for performance. To this form of naturalization which is expressed by a restrictive definition of the notions of innovation and performance and the use, in empirical approaches, of a limited number of mainly quantitative indicators based on data external to the company, we want to oppose a multiple perspective in terms of performance (social, environmental) and innovation (also relative), taking better account of the diversity of the purposes of company management and which is closer to the organizational specificities of the SME. By inviting people to free themselves from the dominant standards for evaluating performance and innovation, widely naturalized in the scientific literature as well as in managerial practice, this article contributes to the operationalization of a more responsible management.

The relationship between the dimensions of innovation and performance is also the subject of much debate in the literature: some authors highlight a causal link between the dimensions of innovation and performance (Geroski and Machin, 1992 Ledent.): innovation would then be a determinant of performance that would influence it positively (De Winne and Sels, 2010;) or negatively (Simon, Elango,). Other authors believe that it is rather a relationship of "independence": successful companies are not necessarily characterized by a high degree of innovation, and vice versa (Lallement and Wisnia-Weill, 2007;). Finally, other researchers subscribe to a contingent approach and rather consider an "inclusion approach" where innovation would be one of the performance measurement criteria (Schuler and Jackson, 1987; Miles and Snow, 1984). In this article, we choose to adopt an "agnostic" approach which aims to study these concepts, independently of each other. The choice of this approach seems to be justified by the lack of consensus around definitions and conceptual links.

We first propose to successively deepen the definitions of performance and innovation and to observe the way in which these notions are traditionally measured in empirical approaches. Secondly, we question these

measurement indicators with regard to the specific context of SMEs. Noting that they are too restrictive and inappropriate for these organizations, we propose an instrument for measuring performance and innovation specific to SMEs based on a broader definition of these concepts and integrating more qualitative indicators.

1. Notion of management performance.

Like what Gilbert and Charpentier (2004) assert, there is a “plural conceptualization of performance”. Both consider that the performance would be a “[...] sponge-word or portmanteau word [...], which covers notions whose meaning is very largely contextual and allows numerous interpretations” (p. 48-50). Indeed, in many cases, researchers in management sciences qualify performance in the company as social, financial or even environmental. Therefore, when we study the performance of an SME, we are in fact interested in its performance which, as we will show, can be diverse and varied.

Characterizing performance in SMEs

Deeply polysemous and unstable, the notion of performance in the literature on SMEs can be supplemented by a whole series of qualifiers which attempt more or less to distinguish different forms, thus giving performance a polymorphic character. However, the way to qualify these performances differs from one author to another. Therefore, the way of naming a form of performance would in fact serve only to justify groupings of indicators that would be specific to these different names. The complexity then lies in the lack of consensus around these qualifiers, whose content partially overlaps, resulting in different groupings of indicators depending on the typology used. Thus, the productivity indicator is considered as a component of organizational performance for some, and as a component of operational performance for others.

The literature review allowed us to identify nine major qualifiers of performance: social, organizational, operational, environmental, economic, financial, accountant and stockbroker, human, market and productive and global or unskilled (Allouche and Laroche, 2005, Arcand, Hitchens, Clausen, Trainor, Keil and Thankappan, 2003, Blackburn, Hart and Wainwright, 2013).

Although these nine types of performance result from the literature on SMEs, it should be noted that they are not specific to them. Indeed, by turning to the more general literature on the conceptualization of performance, we can see the use of the same qualifiers to designate the performance of companies whose size is not specified (Carroll, 1979; Morin and Savoie, 2002).

Measurement indicators

Whether it concerns SMEs or not, the literature review reflects the contextual difficulty that resides in the exercise of defining performance. This is why the majority of the authors cited above claim that a performance can only be defined through its indicators and their occurrence. From then on, the exercise of definition turns into an attempt to characterize these performances, through precise indicators, and the desire to explain the state of health – in the broad sense – of a company by quantification.

We have used more than 60 performance studies, the vast majority of which relate to SMEs, and have identified the leading indicators for each performance qualifier. It should be remembered, however, that these qualifiers are specific to each of the authors, and reflect the way in which they measure performance. The result, when compiling these different works, is a confrontation of different visions of performance which is expressed by the presence of the same indicator in several forms of performance.

Performance measurement in SMEs

Through the analysis of the indicators carried out in appendix 1, we seek to observe whether there is a way of considering the performance(s) which would be specific to small and medium-sized structures. The first observation that we make is that of a great similarity in the purpose of the indicators between SMEs and non-SMEs, namely, a desire to verify or evaluate one or more quantifiable results.

Another observation is that of the proliferation of financial or economic indicators to define the performance of SMEs (Gronum, Verreynne and Kastle, 2012), thus suggesting that talking about the performance of the company actually amounts to dealing with its capacities and its financial results. While this also applies to non-SMEs, there is however a greater diversity of indicators of a different nature (Ducrou, 2008; Morin and Savoie, 2002). The difference seems particularly marked on the side of the indicators relating to work organization and working conditions, and by extension, the presence and use of human resources management practices³. Thus, in the performance measures of the SMEs studied, the indicators relating to satisfaction, motivation, management of jobs and skills, the presence of work regulations or a charter or even the social climate are rare. On the other hand, the rate of absenteeism or staff turnover are sometimes considered, because it is a cost likely to directly affect economic or financial results. Conversely, many studies question the link between HR practices and the performance of SMEs (Arcand et al., 2004;), but do not include HR

indicators in their performance measurement. Therefore, we plead for the integration of these elements in order to enrich the measurement of the performance of SMEs.

Finally, the third and final observation is that of the existence of indicators specific to SMEs and which would seek to contextualize and/or relativize the nature of performance in these companies. In this regard, a distinction should be made between indicators relating to internal factors and those relating to external factors. Among these, we find the scope of the SME, which can range from the most local to the international. Some authors, such as St-Pierre, Janssen, Julien and Therrien (2005) explain that depending on the size of the SME, the competitive context differs. We also find the institutional and economic context (Bouabdallah and Tholoni, 2006;). To illustrate the point, let's take the case of Belgium where differences appear between the North (Flanders) and the South of the country (Wallonia) both in terms of corporate culture (De la Croix, Docquier, Mainguet, Perelman and Wasmer, 2002), investments in R&D, or public support for companies (Ajzen, 2013). In addition, there are disparities relating to sectoral dynamics. Indeed, some sectors turn out to be more competitive than others or even others are more sensitive to the effects of the crisis (Winn, MacDonald and Zietsma, 2008). Finally, among the external factors, it is necessary to take into account the "social consultation" dimension. Indeed, depending on the country, from a certain number of workers, consultation bodies must be set up, which can also affect the life of the company. In addition, the company is required to take into consideration the various laws and national or sectoral joint agreements which may be more or less restrictive depending on the company.

As for internal factors, many authors show that the size of the company has an influence on its ability to react, adapt to change and solve problems (Jack, Hyman and Osborne, 2006). Others suggest taking the age of the business into consideration. Moreover, the specificity of HRM is also often singled out as a specific element of SMEs. Often informal and close to a discretionary convention (Nizet and Pichault, 2013), it increasingly tends to become strategic (Ait Razouk and Bayad, 2010). Finally, when we talk about SMEs, we also talk about its leader – or its management for larger ones. Some studies show that there is a link between the performance of these companies and the characteristics and skills of the manager (Watson, 2012). Indeed, studies show that the personal values of the manager, his strategic vision, his ability to make decisions, the family or non-family structure of the company, are all determining factors for an SME (Arrègle and Mari, 2010). Moreover, the way in which the leader conceives performance can also be mobilized as one of the explanatory factors of the growth trajectory and the development strategies implemented within SMEs. Therefore, it is a question of integrating this diversity of objectives pursued by the managers of SMEs in the measurement of performance. Marcati, Guido and Peluso (2008) come to the same conclusion with regard to innovation: according to these authors, it is indeed a question of taking into account the personality of the manager in the adoption of innovations in SMEs.

The different indicators and contextual factors presented and discussed earlier show the complexity of characterizing the different performances, but also the importance of integrating contextual dimensions and extending the measurement to indicators relating to the organization and working conditions, work, or environmental aspects. Moreover, the absence of usual generic definitions does not allow the establishment of groupings which would tend to offer an immediate tool for detecting types of performance. Therefore, it is necessary to make groupings via two distinct but complementary channels: by the indicators and by the performances themselves. The goal is to offer a model combining series of indicators with groupings of performance and vice versa. Thus, it would be possible to check the consistency of the gathering of indicators in relation to performance, and vice versa. The review work carried out previously makes it possible to identify dimensions of indicators, the presence of which is widespread: organization and working conditions, labor standards and regulations, environmental accounting, environmental standards, social accounting, product quality and development, productivity and production costs, financial accounting, growth and profitability, and transversal.

Each of these dimensions was constructed by grouping together indicators which themselves come from the different types of performance. However, the number of dimensions, still relatively large, is an obstacle in the conceptualization of new categories leading to the (re)qualification of performance. This is why we establish a second grouping based on the three types of indicators proposed by Arcand et al. (2004): proximal, intermediate and distal, which we call "categories of indicators". Concretely, where the proximal indicators are most directly related to people management practices in the workplace, the distal indicators are the most distant. The use of this approach would thus make it possible to broaden the contours of the concept of performance as it presents itself in the SME and to enrich the panoply of indicators generally mobilized to measure it.

In this way, the defined dimensions relate logically to the categories of indicators. Thus, the category of proximal indicators includes the dimensions: organization and working conditions, labor standards and regulations, and social accounting. As for the category of intermediate indicators, it includes the dimensions: environmental standards and productivity and production costs that we propose to group together, because they

explicitly reflect the objectification of the results linked to the environment, and the quality and development dimensions of products and environmental accounting that we also include elsewhere, because they express a more global view of the production process. Finally, the “financial accounting, growth and profitability” dimension is part of the distal indicators.

This new categorization makes it possible to highlight sets of performance that should allow us to identify a typology and therefore make the measurement more coherent and complete. To do this, we will first observe the occurrence of performance in each of the dimensions. Then, based on their primary designations, their meanings and their consistency with the dimensions and indicators concerned, we will attempt to (re)qualify these performances. Trade-offs between the different indicators will however be necessary when certain performances are found in several categories of indicators.

When looking at performance related to the category of proximal indicators, only the elements related to people management seem relevant. Moreover, if we take a closer look at the dimensions that concern this grouping, we notice the strong social and organizational imprint they cover. Also, we choose to name this first form of performance: “socio-organizational performance”. The second group corresponds to the category of intermediate indicators. In this, two major elements stand out both through the dimensions and the indicators: the environmental aspect, which will become “environmental performance” and the productivity aspect, which will be called “productive performance”. And finally, performance relates almost exclusively to what we will call: “financial performance”.

Then, it is necessary to define the key indicators for each of the three performances defined, while considering the dimensions as well as the categories of indicators in which they overlap (Figure 1). To do this, we have selected those that meet two conditions: a high frequency of appearance in the literature (above average) and those that translate in an isolated or aggregated way, a quantifiable result for the organization (results). Finally, as we have shown, the performance of an SME cannot be considered independently of the context in which it finds itself. Therefore, Figure 1 must be nuanced, relativized or simply contextualized through the prism of internal and external factors.

Figure 1: Typology of performance and key indicators

Dimensions	Types of indicators	Performance	Key indicators	
Organization and working conditions Labor standards and regulations Social accounting	<p>Proximal indicators</p>	Socio-Organizational	-Satisfaction rating -Assessment of motivation -Assessment of the social climate -Presence of a GPEC -Accreditations -Legal recourse -Work rules -Absenteeism - Evolution of the workforce	
Productivity and production costs Quality and product development Standards, codes of conduct and commitments Environmental accounting			Productive	-Productivity assessment -Analysis of production costs - Growth of the range of products/services -Investments in R&D
Financial accounting, growth and profitability			financial	-Return on investment -Evolution of turnover - Return on sale - Profit / loss of the exercise -Sales growth - Return on capital -Market share - Self-financing capacity

2. The study of innovation in management

The notion of innovation is a concept that is both multidisciplinary and polysemous (Leymarie, 2003) which is close to other notions such as change, creativity, invention, or even entrepreneurship. Some authors choose to include creativity upstream of innovation, in a more global analysis model (Woodman, Sawyer and Griffin, 1993). Most works devoted to innovation define it either according to the exploration/exploitation distinction of March (1991), or according to the nature of the innovation (OECD, 2005).

Characterization of innovation

Since the work of March (1991), the idea that the success of the company is based on its ability not only to optimize existing knowledge and improve the efficiency of the company, but also to explore radically new opportunities, widely used in the management literature. In the field, this balance between exploration and exploitation proves difficult to implement (Sheremata, 2000; Jouini, Charue-Duboc and Fourcade, 2006), and is reflected in the very structure of the organization. Although interesting, we will not retain this approach, insofar as it does not consider the empirical identification of innovation activities upstream of an in-depth organizational analysis and therefore proves to be not very actionable in the methodological device of sampling, length for which we opt in our study.

The dominant approach to carrying out such an exercise is recorded in the OECD Oslo Manual (2005, p. 46), according to which innovation consists of "the implementation of a product (good or service) or a new or significantly improved process, a new method of marketing, in workplace organization practices or in external relations". These words are in line with the work of Schumpeter (1935), who defines innovation as the execution of new combinations of means of production and highlights the figure of the innovative entrepreneur. This author points out five types of innovation: the launch on the market of a new product (of better quality or designed in response to a new demand), the introduction of a new production method or marketing, the conquest of a new source of raw materials, the opening of a new market or the implementation of a new organization. Overall, Schumpeter's definition of innovation encompasses technological, commercial and organizational innovations (Boer and During, 2001). While some authors, such as Damanpour and Evan (1984), limit themselves to distinguishing between technological innovations (designating both product and process innovations) and administrative innovations (including organizational innovations), other authors, such as Tidd, Bessant and Pavitt (1997) or even Boer and During (2001) identify three types of innovation: product, process and organizational innovations.

Some authors also adopt a cumulative approach to innovation: in their view, there is indeed innovation when we observe a change at the level of the product, the technology (or the process) and the organization. This is notably the position adopted by Ait Razouk and Bayad (2010) or Allani-Soltan, Arcand and Bayad (2005). Based on the definition of Coutrot (2000) which they enrich, they distinguish, within the "innovation" variable, three sub-variables, whose labels are "technological innovation" (designating a technological change occurring in within the company studied over the past three years), "organizational innovation" (i.e. an organizational change that has occurred over the past three years, such as, for example, the existence of work groups, autonomous teams or even the "just-in-time" implementation), and "product innovation" (which refers to the introduction of a new product within the last three years). In their measurement of innovation, these three sub-variables are treated in a single index, in an additive manner, based on the postulate that these innovations most often go hand in hand (Coutrot, 2004). This triptych distinction is the most frequently encountered. More specifically, we propose to characterize the content of innovation according to:

- Process innovations, understood as any transformation or rationalization of the production process, or new combinations of processes, such as, for example, automation, standardization, savings in raw materials or the use of an alternative raw material. This first type of innovation also includes new marketing processes, i.e. new ways of marketing a product.
- Product innovations, designating the invention of new products or services, the transformation, diversification or personalization of existing products or services, thus including the opening of new markets or the response to new demands.
- Organizational innovations, understood as any transformation in the organization of work, in the knowledge management system, in the method of mobilizing creativity as well as new forms of relations between companies and their economic environment.

It should also be noted that the second part of the OECD definition (2005, p. 46), which specifies that innovation is recognized as such when "the product, the process, the marketing method or the method of organization [is] new (or significantly improved) for the firm", brings an important nuance, to which we subscribe: the relativity of innovation. This, understood as a change between an old object (the product) or a process (manufacturing, marketing, or work organization process) and a new one, is indeed assessed on the scale of the 'business. We will come back to this point later, when we discuss how to define the indicators for measuring innovation.

In the same vein, several works develop the idea of a change, the intensity of which can vary. Authors such as Amara and Landry (2005) or Harbor and Blackman (2006) conceptualize innovation as a continuum, the two extremes of which are incremental innovation (or continuous improvement; Roulet, 2006) on the one hand, radical innovation, on the other hand. Amara and Landry use in this regard the terms of

"degree of novelty of the innovation" and rebel against most of the studies which, to operationalize the

notion, question companies in a binary mode: "during the last 3 years, has your company offered (goods or services) new or significantly improved? Yes or no" and "During the last three years, has your company introduced new or significantly improved (production) processes? Yes or no", and calculate the percentage of innovation on this sole basis. We agree with the argument of these authors, who plead for an extension of the understanding of innovation to a greater number of explanatory variables than the sole object (product or process) of the innovation, and also to consider time. required to develop these innovations, the resources needed to do so, the frequency measured in number of innovations launched on the market, and the degree of novelty of these innovations. Therefore, it is not a question of categorizing innovative vs. non-innovative companies, but into more or less intensely innovative companies, measuring this degree of novelty on a scale, the items of which place it on a global scale, at nationally or company-wide.

At the end of this first tour of the literature, it thus appears that the concept of innovation does not present itself in a unambiguous and stable way: the way of considering innovation and defining it seems in fact closely linked to the way of identify and measure it within the company, or even the type of company in which we are interested (large company or SME). In other words, the definition of innovation that we adopt depends on the methodological choices made for its analysis, and its measurement is inseparable from the context in which it is considered.

Measurement of innovation in SMEs

Once the contours of the concept of innovation have been mentioned, let us now consider the different ways of approaching its measurement. The specification of the innovation variable and its breakdown into different indicators is indeed a challenge: the literature thus reveals a great diversity of indicators. Garcia and Calantone (2002) identify more than fifty distinct measures of this notion. This diversity notably raises the question of the comparability of the results of studies carried out on the issue of innovation.

It appears, in the literature, that the information most frequently used to qualify the innovation of a company are tangible elements such as the research and development budget, the ownership of trademarks or patents, the research staff or again the rate of introduction on the market of new products. This type of indicator is commonplace in the major institutional surveys carried out at national or even international level, such as the CIS (Community Innovation Survey) surveys carried out in Europe, the EISE (Survey on innovation and business strategies) or the American BRDIS (Business R&D and Innovation Survey). However, argue Maravelakis, Bilalis, Antoniadis, Jones and Moustakis (2006), the application of such measures to SMEs is a source of many difficulties and leads to biased conclusions. Other approaches such as the NESTA (National Endowment for Science, Technology and the Arts) innovation index, developed in the United Kingdom, as well as the report "Measuring innovation: a new perspective" of the OECD (2010), mobilize new indicators in addition to those mentioned above, in an attempt to better understand the reality of innovation in companies by taking into account more qualitative dimensions, or certain sectoral specificities. However, these various indicators also only partially correspond to the reality of SMEs (Rammer, Czarnitzki and Spielkamp, 2009), due to the limited resources available to them in terms of R&D (Halilem and St-Jean, 2007), the small number of people attached to these operations (Storey, 1994) and the relatively diffuse or informal nature of these processes in their organization, or their orientation towards imitation or the transfer of a new technology rather than towards the production of innovation (Julien, St-Pierre and Beaudoin, 1996; Raymond and St-Pierre, 2004). In addition, patent regulations vary from one country to another, innovations produced by SMEs are not always patentable, or this patenting operation sometimes turns out to be too costly, complex or burdensome from an administrative, to be undertaken by SMEs (Archibugi and Sirilli, 2000).

Moreover, if we consider the contextual specificity of SMEs, there is reason to wonder about its influence on the emergence of an innovation (Rosenbusch, Rauch and Bausch, 2011): the small size and flexibility of SMEs would make it conducive to changing rapidly and adjusting more quickly than large companies to changes in demand (Nooteboom, 1994; Vossen, 1998); but on the other hand, the limited nature of the SME's resources and its greater vulnerability to failure (Eisenhardt and Martin, 2000) or to temporary unprofitability (Block and MacMillan, 1993) would hamper its investment or risk-taking in innovation.

• Factual or declarative indicators

The innovation measurement variables used in the literature are sometimes factual, sometimes declarative indicators. The factual indicators (essentially centered on innovation in terms of product and technology) are represented through figures, in particular budgets allocated to activities promoting innovation (budget for R&D, acquisition of external knowledge, equipment , design activities, etc.), or measures of the evolution between annual budgets or revenues. The declarative indicators, for their part, are based on the declarative practices of companies, collected through surveys of them (for example, the RESPONSE survey of Dares (Professional Relations and Business Negotiations, 1998-1999 2004-2005, or the START 2003 survey,

funded by the Flemish Ministry of Economic Affairs) They also include organizational innovation through questions relating to the implementation of new forms of organization (teams autonomous, just-in-time), for example. These indicators designate any technological or organizational change implemented within the company over the past three years, for example, or the new product in the same period of time. Although this second type of indicator is subjective in nature since it is based on the judgment of the respondents, it is frequently used for a number of reasons (cost of production collection of data, size of companies, sector and heterogeneity of HRM practices according to the different locations of companies) (Wall et al., 2004), and their validity has been established by various works (Aït Razouk, 2011) which put highlight significant correlations between the objective and subjective measurement of performance, in which innovation is included (Dess and Robinson, 1984). Insofar as we include organizational change in our discussion as one of the constituent variables of innovation, the choice to use declarative type indicators in addition to factual indicators seems self-evident.

- **Absolute or relative indicators**

It is frequently observed that works devoted to innovation measure it in an absolute way, for example by means of an indicator raising the rate of introduction of new products (Cosh, Hugues and Wood, 1996). However, this way of proceeding does not take into account the relativity of best practices, as expressed by Freel (2000a, 2000b), who substitutes for this indicator its relative counterpart, and thus asserts that it is more appropriate to consider the companies in terms of "most innovative" or "least innovative", and thus identify best practices, based on an innovation rate measured in number of new products introduced in proportion to the company's product base. business. This second approach is thus based on the hypothesis that innovation is not an exclusive dimension within which we are situated or not, but rather a matter of degrees, of a gradation between the least innovative companies and the most innovative, located on a continuum (Goffin, 1998). By virtue of this conception, we propose to broaden the definition of innovation by including relative indicators, as mentioned above.

- **Direct and indirect indicators**

Many studies mention the growth of the firm as an indicator of innovation (Roper et al., 1996; Roper, 1997; Moore, 1995), as well as employment or profitability as empirical evidence of growth and therefore of the innovation (Geroski and Machin, 1992). These studies are thus based on the hypothesis of a causal relationship between innovation and the performance of a company. In addition, the lapse of time that will be considered to estimate this growth can strongly influence the observations, in due in particular to the economic situation, the impacts of which vary according to the sectors of activity. These indicators therefore present the risk, in our opinion, of over-representing certain sectors compared to others. Moreover, notes Freel (2000b), they are quite ambivalent, insofar as other studies (Kalantaridis and Pheby, 1999) present contradictory empirical results. Therefore, and also to avoid any confusion with performance indicators, we do not include growth in the innovation indicators.

Other indirect indicators can be used. Bachelard (2003), for example, explains that many studies in the economics of innovation are based on the analysis of clusters, seeking in these territorial structures the causes and the conditions for the emergence of innovation. The link between innovation and participation in knowledge networks and territorial structures aimed at business collaboration around innovation is the subject of several works, among which we can cite Mancinelli and Mazzanti (2009) or Huggins and Johnson (2009). The study of competitiveness clusters reveals that they are thus the crucible of social innovation and innovative HRM practices (Defélix, Culie, Retour and Valette, 2006; Bassot, Ezvan and Koeltz, 2008). Therefore, insofar as cluster policies have as their stakes the production of innovation and, beyond that, the revitalization of companies and territories, it can be postulated that the participation of a company in such an initiative, engaged in a partnership approach intended to generate synergies around innovative projects carried out jointly in the direction of one (or more) given market(s)⁴, constitutes a sign of innovation. We therefore include this dimension as a new, indirect indicator of innovation.

Similarly, obtaining a prize rewarding an innovation, or filing a dossier with a view to receiving an innovation bonus, can also constitute a form of external validation of the existence of an innovation within of the company. More generally, although there is no literature, to our knowledge, which comes to support this intuition, we postulate that the reputational aspects linked to the innovative nature of a company do not constitute an indicator in their own right. , but their identification (by means of a professional and specialized press review, for example) can lead to a presumption of innovation, potentially interesting in the constitution of our sample. These indirect indicators have another interest in our view, in that their consideration induces a moderating effect on the subjective nature of the declarative indicators that we will use elsewhere. These various considerations allow us to end up using different indicators for identifying innovation in SMEs (Table 1).

Table 1: Summary table of innovation indicators

Categories of indicators	Indicators used
Factual	Number of patents Evolution of R&D budgets
Declarative	Technological change implemented in the last three years Number of new products/processes/services brought to market in the last three years (compared to the company's product/service base)
Relative	Participation in a cluster or competitiveness pole Obtaining a prize for innovation Submission of an application to receive an innovation bonus Reputation for innovation (visits by foreign delegations, mentions in the press)

3. Discussion and conclusion

We should now focus on the contributions and research perspectives that this article provides. On the one hand, the contribution presented here is threefold: in terms of approach, first, it was a question of testing a framework of critical analysis in management to the study of constructs particularly significant in research in management : innovation and business performance. We have contributed to denaturalizing the way in which these notions are apprehended and associated with each other, by revealing the hegemony of a single (financial) purpose of the company. In theoretical terms, then, our article presents an original synthesis of indicators and forms of innovation and performance that can be applied in the specific context of SMEs and VSEs. Finally, in empirical terms, we propose an operational diagnostic approach. On the other hand, this article opens stimulating empirical research perspectives, aiming to complete and test the diagnostic tool, but also to extend the implications of such a broadening of perspective in terms of human resources management or public policies. . These contributions and perspectives are documented below.

Back to research contributions

A first contribution stems from the critical posture adopted. The performative purpose considered from an exclusively economic angle of management practices is a managerial evidence rarely questioned nowadays: the management tools deployed within the company are supposed to contribute positively to the economic performance of the firm.

Our project to question the nature of performance and innovation as well as the way of measuring them in SMEs is therefore part of a denaturalization approach specific to critical research in management (Alvesson and Willmott, 2012; Golsorkhi , Huault and Leca, 2009;; Taskin and de Nanteuil, 2011).

We first showed how “traditional” performance measurement mobilized distal indicators, i.e. essentially financial ones, ultimately offering a very incomplete view of the company's performance. Therefore, the use of proximal and intermediate indicators as identified by Arcand et al. (2004) makes it possible to integrate qualitative dimensions specific to the company (in terms of organization and HRM, in particular) in the measurement of performance. Similarly, the indicators generally used to identify or measure innovation only partially correspond to the reality of SMEs.

Our critical contribution to management can be considered in at least two different ways. It is, first, to denounce the functionalist stupidity (Alvesson and Spicer, 2012) of the dominant perspective which evaluates companies and, a fortiori, SMEs, on the basis of simplistic criteria, revealing only part of the reality and therefore presenting a truncated view of the innovation and performance of SMEs. The establishment of such standards and such causal relationships ("the survival and success of companies depend on their ability to innovate") certainly produces a reassuring framework for action, avoiding doubt and uncertainty, but it also prevents both the entrepreneur and the political decision-maker from being reflexive, from questioning these measurement criteria and their justifications.

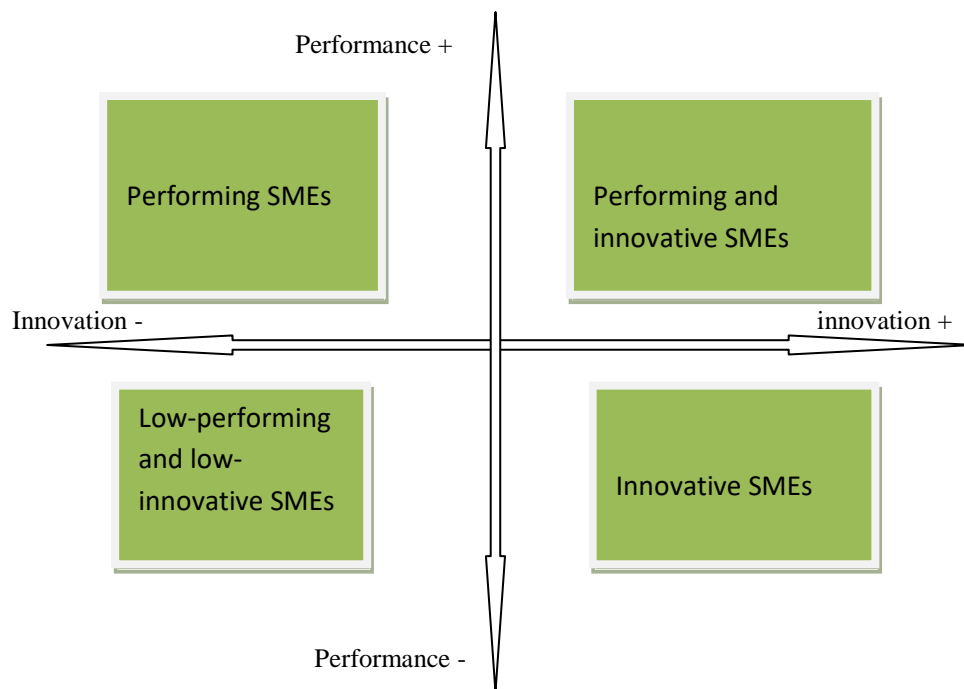
We thus intend to contribute to the debate on performativity in critical management studies. The notion of anti-performativity, that is to say the affirmation of a purpose of research in management which does not aim to improve management practices, is considered as one of the principles of a critical approach in management (Fournier and Grey, 2000). Spicer, Alvesson and Kärreman (2009) believe that this claim is incompatible with the project of promoting social change, now at the heart of critical management perspectives (Willmott, 2013): it keeps critical researchers in a cynical attitude, making them therefore incapable of defining a social and business project. By offering a broader understanding of the characterization of innovation and the performance of VSEs and SMEs, our ambition is to provide researchers, as well as entrepreneurs and political leaders, with a richer framework for evaluating these criteria. .

We thus think of “freeing” the researcher from certain presuppositions, by allowing him to take a fresh look at the question in the context of SMEs/VSEs. Rather than favoring gap-spotting in this area – namely the tendency, dominant in management sciences, to identify “holes” in the literature, which it would then be a question of filling by developing questions of targeted research – we intend to contribute to the development of an “interesting” problematization, in the sense of Alvesson and Sandberg (2013). This type of problematization requires breaking with usual research practices and adopting a reflective posture, where the researcher questions his own position in the field and his contribution to societal transformation, by targeting audiences other than traditional academic circles.

A second contribution is of a theoretical nature. It is, in fact, a question of proposing a state of the art of the considerations and measures of innovation and performance, in the specific context of SMEs and VSEs. Moreover, by opening the “black box” that constitutes the relationship between performance and innovation, this study shows that these two variables do not necessarily go hand in hand. The results of our denaturalization approach indeed open the way, heuristically, to a matrix of potential relationships between innovation and performance (Figure 2).

The exercise makes it possible to emphasize that all innovative companies are not necessarily successful and, conversely, performance does not always come from innovative companies. Certain preconceived ideas can thus be challenged, in particular that which consists in considering that the innovative and successful company would necessarily belong to certain sectors of activity such as IT.

Figure 2: Matrix of potential relationships between innovation and performance in SMEs



This diagnostic approach also makes it possible to explore the conditions that lead certain companies to combine performance and innovation, but also the factors that prevent certain innovative companies from performing well. These may be variables of a contextual nature (sector of activity, shareholding structure, state of the market, degree of export, regulatory constraints, etc.), but also of a procedural nature (profile of the manager, management style, stakeholder involvement, power play dynamics, etc.). Models based both on institutional pressures from the context (DiMaggio and Powell, 1983) and on the institutional work carried out by certain actors (Lawrence, Suddaby and Leca, 2009) can shed light on these observations. Be that as it may, the link often presented as obvious and “natural” between innovation and performance has been called into question and new avenues of research have been identified.

A third contribution is empirical or pragmatic. It is a question of proposing concrete ways to support a new grammar of the performance of the company. By systematically presenting all the dimensions for evaluating innovation and the performance of SMEs, and then grouping them into a new classification, we have built a diagnostic tool (more than a statistical measurement) of a political nature. Such a tool includes and operationalizes proximal and intermediate indicators reflecting not only people management and work organization practices, but also social responsibility initiatives as well as qualitative and “reputational”

evaluation criteria. intended to enrich the understanding and measurement of business innovation. According to our approach, the more a company encounters high levels of performance and/or innovation with regard to the various indicators used, the more efficient and/or innovative it will prove to be. Our diagnostic approach is thus intended to be both cumulative, but also relative insofar as it does not claim to give any prevalence to one category of indicators over another, all categories of indicators therefore having the same weight. : socio-organizational performance receives, for example, the same weight as financial performance; or the number of patents filed weighs as much as the technical or organizational changes implemented within the company.

We have thus been able to appreciate on several occasions how much the fact of highlighting the four boxes of the matrix of potential relationships between innovation and performance arouses the strong interest of the media, political decision-makers and managers of SMEs.

The media are indeed fond of a different discourse on innovation and the performance of SMEs, in a context of industrial redeployment (Wallonia) which follows decades of deindustrialization and the recent subprime crisis.

Political decision-makers, for their part, are keenly interested in the possibility of rethinking their actions in terms of supporting innovation. If the political intention is to support SMEs that are both innovative and efficient, it is now a question of taking into consideration a battery of new indicators. In addition, the fact that support for innovation does not necessarily lead to performance does not fail to enrich the public debate on the relevance of the aid granted.

Finally, SME managers see in the diagnostic tools that we have presented a means of broadening the criteria for assessing their activities when they interact with their stakeholders, whether shareholders, customers, public authorities, local residents, etc.

Perspectives for research and action

Two empirical research perspectives can be drawn from this proposal. The first, obvious, stems from the testing of the reading grid developed here, on a sample of SMEs and VSEs. This involves characterizing the levels of innovation and performance on the basis of a questionnaire derived from the aggregated dimensions in the proposal presented here. Multiple comparisons and statistical analyzes can result from this: compare this characterization with the traditional characterization of innovation and the performance of SMEs and VSEs, analyze in greater depth the relationships between innovation and performance indicators, identify the conditions causing high levels of performance to be associated with high levels of innovation, etc.

The second perspective would favor a qualitative approach, based on case studies, making it possible to identify the organizational dynamics at work in SMEs and VSEs considered to be innovative and/or efficient. In particular, one of the interesting questions to explore would be that of HRM systems likely to support the innovation and/or performance of these companies. Such an approach would make it possible to finely characterize the institutional environment, the organizational context, the management systems (in terms of HRM, therefore) and the links that these maintain with the levels of performance and innovation, in a comprehensive perspective (Janssen and Taskin, 2012). Let us recall that the notions of performance and innovation are characterized here in a broader way, including organizational and social elements, which precisely justify a qualitative apprehension. A systematic back-and-forth approach between quantitative approaches, using the diagnostic tool proposed in the context of this article, and qualitative ones, based on case studies, will make it possible to progress in the understanding of the explanatory factors of innovation and performance.

Such an opening of the game seems to interest the managers of SMEs/VSEs themselves. This is a third promising research perspective.

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