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The economic impact of SMEs: Novel versus established entrepreneurs

NERY ELENA RODRÍGUEZ VALENCIA¹
YANCY VAILLANT²

Abstract

SMEs play a central role in the business world due their important influence on social and economic development. Hence the aim of this study is to identify when SMEs make their greatest economic contribution in terms of employment, innovation and export, asking whether this is during their first year after creation or later, when they have become more consolidated. Contrasting Neo-Schumpeterian theory with Organizational Learning theory, this paper will try to identify when the SMEs make the highest economical contribution in matters of employment, innovation (products, process and strategic innovation) and export. To do this we used data collected from the Adult Population Survey (APS) for Spain extracted from the Global Entrepreneurship Monitor (GEM), to analyze the six-year period from 2005 to 2010. The results showed that recently created Spanish SMEs do not necessarily have a higher economic impact, entrepreneurs with older companies are just as important as newly created SMEs.

Keywords: SMEs, Entrepreneurship, Employment, Innovation, Export.

Resumen

Las empresas PyMEs desempeñan una función clave y significativa en el mundo de los negocios debido a su gran influencia en el desarrollo económico y social. Por lo anterior, el presente trabajo pretende identificar cuándo logran las PyMEs hacer su mayor contribución económica en cuestión de empleo, innovación y exportación, si es durante su primer año de creación o posteriormente cuando ya están establecidas. Contrastando la teoría Neo-Schumpeteriana con la teoría del Aprendizaje Organizacional, este trabajo pretende identificar cuándo logran las PyMEs su mayor contribución económica en Empleo, Innovación (productos, procesos y estrategia) y exportación. Para esto, se utilizaron los datos de la encuesta anual a la población adulta (APS) del *Global Entrepreneurship Monitor* (GEM) España, analizando un periodo de seis años del 2005-2010. Contrario a lo encontrado en la literatura, los resultados muestran que las empresas de reciente creación en España no son necesariamente las de mayor impacto económico.

Palabras Clave: PyMEs, Creación de Empresas, Empleo, Innovación, Exportación.

¹ Universidad Tecnológica Metropolitana-PhD Student Universitat Autònoma de Barcelona

² Universidad Autònoma de Barcelona.

1. Introduction

In recent decades, small and medium enterprises (SMEs) have gained particular importance in the business world. Such prominence is due to their influence on social and economic development, whereby they are making increasingly greater contributions and acting as agents of change (Acs & Audretsch, 1990; Carrée & Thurik, 2010). Such ventures have also been considered an essential source of business innovation and employment, and this, in turn, helps to foster competitiveness (Kirchhoff & Phillips, 1988; Carré & Thurik, 1998). Birch's study (1979) showed that SMEs created much more employment than other kinds of business (Baldwin & Picot, 1995). SMEs have a major positive impact on productivity and efficiency, not only in domestic markets but also abroad (Vesper, 1984; Beck, T., Demirguc-Kunt, A. & Levine, R., 2005).

Based on Schumpeter theory was born the Neo-Schumpeterian approach, which say that the new companies are considered agents to introduce the innovation in the market (Kirchhoff & Phillips, 1988). The assumption being that greater business creation leads to higher levels of innovation, employment and productivity in markets (Schumpeter, 1934; Acs & Audretsch, 1990; Carrée & Thurik, 2010).

However, it has also been argued that SMEs make their greatest economic contribution some time after their creation, when they have gained experience, become more settled in the market and achieved financial strength (Carr, J., Haggard, K., Hmieleski, K. & Zahra, S., 2010). This is the view supported by what is known as Organizational Learning theory, which highlights the importance of learning processes in companies, and the benefits that these offer in the future (Kolb, 1984). This opposing view sustains that it can be very difficult for companies to survive in their first few years of existence. This due to the high level of uncertainty and their lack of experience or domain in the market, which puts them in a more vulnerable position in comparison with longer established companies (Carter, N., Reynolds, P., Stearns, T. & Williams, M., 1994; Audretsch & Thurik, 2001).

As a result of the theoretical division mentioned, the main research question of this study is as follows: which SMEs contribute more economically, the recently formed ones or the ones that are already established? Contrasting Neo-Schumpeterian theory with Organizational Learning theory, this paper will try to identify when the SMEs make the highest economical contribution in matters of employment, innovation (products, process and strategic innovation) and export. We wish to ascertain if it is during the first year of operation or in the following years, when the SMEs have had greater time to better consolidate themselves. To achieve this, we used data from the Adult Population Survey (APS) for Spain, extracted from the Global Entrepreneurship Monitor (GEM), to analyze the six-year period from 2005 to 2010.

It is important to note that this study do not intend to analyze the moment of highest economic contribution in the lifecycles of these companies. Instead, we wish to make a contrast between companies that have been in business for less than a year and those that are more established. Likewise, the results of this study will help in the design of new and more effective policies that will be able to support new business owners, and also to redirect the support provided to help existing businesses to stay active and avoid an early demise.

This paper is organized as such following: a review of the literature and a presentation of the hypotheses. Then there will be the methodology section, followed by a presentation of the results and a discussion of the findings. The paper ends with the conclusions, implications, and future lines of research. There is also a bibliography.

2. Literature review and hypotheses

A growing number of studies have shown that large companies are no longer the favorite economic figure, and instead it is SMEs that are assuming the leading role (Wennekers & Thurik, 1999). This is particularly true of Spain, where SMEs make up 99% of the business sector³.

Newly created SMEs are considered an important source of job creation (Fritsch, 2008), because they make a major contribution to technological progress through innovative activities as the introduction of new products and services and the application of new organizational processes and business strategies (Dutta & Evrard, 1999; Mulhern, 1995; van Stel, A., Carrée, M. & Thurik, R., 2005). They also have the capacity to increase competitiveness and productiveness in domestic and foreign markets (Vesper, 1984; Fritsch, 2008). Schumpeter (1950) comments that new companies have been identified as being responsible for innovation, whereby established companies are replaced in the market by newer ones, which therefore boosts economic growth.

Schumpeter (1934), cited by Morgan (p.174, 1987), highlights the connection between the entrepreneur and innovation throughout the evolution and development of his economic theory, which states that it is entrepreneurs who, by creating innovative activities, initiate the process of economic upheaval and development (Audretsch & Fritsch, 1994; Kirchoff & Phillips, 1988). Likewise, Neo-Schumpeter suggested that the company is the realization of new and different combinations of production media and that the entrepreneur is the dynamic, active and innovative element that tips the balance of the market

³ DIRCE. Directorio Central de Empresas. Since January 1st 2011, in Spain there were 3,246,986 enterprises, of these 3,243,185 (99.88%) were represented by SMEs (between 0 and 249 employees).

system (García & Calantone, 2002; Wong, P., Ho, Y. & Autio, E., 2005; Peneder, 2009). Finally, the entrepreneur is perceived as a person capable of promoting innovations (Schumpeter, 1950).

This innovative activity, according to Schumpeter's theory, is what unintentionally feeds a creative process of destruction, causing constant economic disturbance to the balance of the system, as well as creating opportunities for increasing economic benefits (Wong et al., 2005). It is therefore considered that economic development primordially resides in the innovative functions and productive combinations produced by entrepreneurs when they create new companies and thus interrupt the routine of economic life. In short, new companies are considered to be the instigators of the modernization process and economic development.

In recent decades, the Organization Learning theory has attracted attention due to its applicability to both companies and entrepreneurs. It suggests that organizations are stronger when they have more capacity to learn and to correct errors, and have accumulated the experience, knowledge and learning that influences the future performance of the company (Levitt & March, 1988). The importance of organizational learning is that it helps to improve competitiveness, productivity and innovation under certain technological and market circumstances (Dogson, 1993).

Organizational Learning theory perceives that organizations are capable of processing, acquiring, interpreting, distributing and storing information that helps them to improve their future performance (Huber, 1991). Hence the study of Organizational Learning seeks to respond to the challenges arising in business within a constantly changing environment, and it helps companies to cope with the long-term difficulties for survival. It helps these companies to achieve competitive advantage through the capacity to learn and to absorb knowledge (Levitt & March, 1988; Real, J., Leal, A. & Roldán, J., 2006). However, the most important thing is not for them just to accumulate knowledge, but for these companies to genuinely be able to learn continuously through the creation of new knowledge (Ahumada, 2002; Real et al., 2006; Argote, 2011).

In this study, the economic contribution made by SMEs entrepreneurs is analyzed in terms of employment, innovations of products, processes and strategies, and also in terms of export. The relationship between SMEs and each of these contributions is presented in the following topics.

2.1 Employment

Business creation has become a more serious factor in socioeconomic terms, particularly in a time of rapid changes and a constant search for business opportunities. It also plays an important role in global, social and economic policy, as well as being a robust indicator of economic performance (Carrée, M., van

Stel, A., Thurik, R. & Wennekers, A., 2002; Marulanda, J., Correa, G. & Mejía, L.F., 2009; Sánchez & Gutiérrez, 2011; Carrée & Thurik, 2010). The evolution of employment in newly created SMEs has been characterized by two main effects, jobs creation is the most common. That is why companies, whether large or small, have always been measured by their contribution to employment, their size or by the number of jobs they create (van Praag & Versloot, 2007).

Birch's study (1979) titled "The Job Generation Process", was one of the first attempts to highlight the importance of SMEs in economic growth in terms of the creation of employment. Studies in different countries, such as Davis, S., Haltiwanger J. & Schuh, S. (1996) and Neumark, D., Wall, B. & Zhang, J. (2011) confirm Birch's earlier findings by asserting that SMEs contribute most to the growth of employment through job creation. This has led entrepreneurs to be characterized as a group that mobilizes resources to generate jobs, hence suggesting that business start-up plays an important role for this, both in the short and long term (Audretsch & Fritsch 2002; van Stel & Storey 2004). This is because new companies have the capacity to create an initial number of jobs, but once they have reached a state of maturity, the number of jobs they generate will depend on their capacity to grow.

The economic impact of job creation through the formation of new businesses will vary with respect to each entrepreneur (Audretsch & Thurik, 2001). They will face different difficulties due to the varying nature of companies. We should not forget that new companies refer to different management processes in order to set up and start running their operations, such as the hiring of new employees, administrative processes and decision making, which are frequently presented as obstacles that have to be dealt with (Fritsch & Mueller, 2008). As previously mentioned, it is important to stimulate the creation of new businesses, due to the jobs created by this. However, the jobs are not always created at the conception of the firms, but sometimes at a later stage.

According to the literature review on this topic, it may be stated that Novel SMEs can contribute more to employment than those which are already established. However, in the same stream of research, other studies propose that established SMEs can generate greater employment. As a result of the literature discussion, the following hypothesis emerges is:

H1: During the first year of operation SMEs will present higher levels of employment than those that are already established.

2.2 Innovation

According to Schumpeter and as mentioned by Peneder (2009), entrepreneurship plays a particular economic function by introducing innovation to the system. By far the most significant study to have

related the creation of businesses with innovation was that by Drucker (1985). Following on from that, different studies have focused on the substantial advantages that entrepreneurship can generate in terms of employment and innovation (van Praag & Versloot, 2007) and the positive relation between innovation and economic progress (Rodeiro & López, 2007). From here, a growing interest has derived in innovation and the substantial effects that it more often than not has on economic activity.

According to the existing literature on this topic, there are different kinds of innovation, but we will use one of the best known and most widely accepted classifications, as proposed by Damanpour (1991): technical and administrative. The former includes new processes, new products and new services, while the latter includes administrative innovation with regard to new procedures, policies and forms of organization.

Product innovation: Studies such as Audretsch (1991) and Lewin & Massini (2003) comment product innovation is considered to be another way to enter the market in order to increase the possibility of survival and attracting new clients. However, according to Grant (2006), product innovation is no more than the initial commercialization of an invention. SMEs play an important role within the economy as agents of change due to the rapid pace of innovative business activity and the stimulation of industrial development (Acs & Audretsch, 1990; Carrée & Thurik, 2010). On the other hand, studies such as that by Tether (1998) comment that between 1980 and 1990, SMEs started to participate even more in innovation than they did in job creation, and they were not only more innovative but also more efficient than larger companies (Pavitt, K., Robson, M. & Townsend, J., 1987). Therefore, product innovation provides benefit to the company as well as to the economy.

Many studies reveal that newly created SMEs perform better in terms of innovation in more innovative industries that require a qualified workforce, and are a key element of technological change (Acs & Audretsch, 1990). One of those studies examined the factors that determine the advantages in terms of innovation in new companies as opposed to those that are already established by Audretsch (1995). Although other studies such as the Gort & Klepper (1982) have revealed that the innovation through time generated a knowledge advantage.

In terms of product innovation, already established SMEs have the advantage of knowing the market, and the channels of commercialization and distribution that can make the introduction of products an immediate success, and they are also likely to face far fewer financial restraints (Lewin & Massini, 2003). According to Organizational Learning theory, established companies possess organizational knowledge and dynamic capacities that make it easier to introduce and administer innovation. However, we cannot forget that bureaucratic processes often tend to become a major obstacle for established companies, while

for newly created SMEs, such affairs are often smoother and more dynamic. This is because they are new, more flexible, less bureaucratic and more adaptable to changes in the market.

As the literature suggests, R & D has the tendency to decrease with age and for that reason new businesses are more innovative in relation to products than those which are already established. On the other hand, already established companies are likely to have bureaucratic processes that could hinder product innovation, meanwhile new SMEs are more dynamic because they have a higher flexibility and can adapt to the changing market. According to this, the next hypothesis is as follows.

H2a: Product innovation is greater during the SMEs first year of operation, as compared to older SMEs.

Process innovation: One of the main goals of the innovation of processes is to reduce the marginal production costs through the adoption of new technologies (Barkema & Vermeulen, 1998). Unlike product innovation, new technologies present an existing challenge to both new companies and those that are already established. This is because the sectors in which competition is based on innovation and the application of new technologies provide some of the most fascinating and complex competitive environments (Almus & Nerlinger, 1999; Grant, 2006).

Both in emerging sectors and in those in which technologies provide the main foundation for competition, business development and the generation of process innovation is the fundamental source for competitive advantages. It lies at the core of the formulation of strategies (Grant, 2006; Keskin, D., Diehl, J.C. & Molenaar, N., 2012). This competitive advantage usually arises more easily in newly created SMEs because they are so flexible and dynamic, while established companies tend to be slower in responding to changing contexts.

SMEs have sometimes encountered limitations with respect to the technological aspect, which has obliged them to search for whatever means they can to acquire technology, often with great difficulty (Merino & Villar, 2007). Changes in this respect have confirmed that the inclusion of process innovation plays an important role in business processes (Leibenstein, 1968). Recently created companies have more freedom to apply new technological solutions to their processes because they are supported by start-up subsidies (Niosi, 2002). However, the financing of technological investments can sometimes represent a bigger problem for newer SMEs than more established ones, because the latter tend to have gained a reputation in the market that gives them access to such funding.

From this general point of view, if they have sufficient access to technology, then newly created SMEs will possess more tools than established companies that they can exploit in order to gain a competitive position in their economic context (García & Calantone, 2002). On the other hand, some literature

suggests that business activity in relation to process innovation plays an important role within company processes. Newly created firms have more freedom and financial backing to produce innovative process solutions. We therefore propose the following hypothesis:

H2b: Process innovation is greater during the SMEs first year of operation, as compared to older SMEs.

Strategic innovation: Strategic innovation is described as the creation of growth strategies, using new categories of products, services or business models that change the ‘rules of the game’ and generate significant value for the consumers, clients and corporation partners (Palmer & Kaplan, 2007). The search for innovation requires an entrepreneurial organization to have the freedom to experiment and the capacity to learn (Grant, 2006), which implies that strategic innovation involves much more than merely reformulating strategies.

Therefore, strategic innovation is the foundation of competitive advantage in sectors where the potential to construct such advantages appears limited. Ultimately, the essence of strategic innovation is the reconciliation of quality alternatives, variety and swiftness (Palmer & Kaplan, 2007).

So, strategic innovation would generally be a new way of doing business, by changing the rules of the game in order to continue to do the same thing, but differently. These it is harder to accomplish for established companies because their little interest in new business models due to their highest cost. Contrarily, newly created companies are able to adopt new organizational shapes without additional costs.

Studies such as Markides (1998) confirm it is more difficult for established companies innovate strategically, due resistance to change. Therefore, established SMEs tend to have little interest in adopting new business models, and often try to avoid any strategic innovation, as this might create greater levels of uncertainty, questioning of the current model and concerns about whether the new model might have brought more success in the past.

The idea of higher costs can often also be a factor affecting established companies (Niosi, 2002), while this is not an issue for recently created ones because they can freely adopt new forms of organization without incurring any additional costs (Dosi, 1988). Given the above, we propose the following hypothesis:

H2c: Strategic innovation is greater during the SMEs first year of operation, as compared to older SMEs.

2.3 Export

New firms are able to learn and develop processes and routines to comply with the requirements of internationalization. However, they will probably suffer some resources restrictions which make it difficult for them to enter foreign markets. Since the 1970s, the internationalization of SMEs has been considered part of a gradual process of growth on the basis of the Uppsala model. It begins in accordance with the amount of knowledge a company has of its market, starting with sporadic foreign sales, later leading to gradual and increasingly larger commitments to markets abroad. The more the company learns, the larger these commitments will be, and so on successively (Cavusgil, 1980; Kalinic & Forza, 2012).

Export has been considered the first step into international markets, and then serves as a platform for future expansion, which is why internationalization has been based for several years on two main theories, the internationalization process (Johanson & Vahlne, 1990) and the product life cycle theory (Vernon, 1966). However, these theories have been displaced by an increasing focus on internationalization in the form of what have been dubbed 'born global companies' (McDougall, P., Shane, S. & Oviatt, B., 1994; Knight & Cavusgil, 1996). Studies of internationalization and entrepreneurship have found that some SMEs are able to internationalize faster than other more gradualist models (McDougall et al., 1994; Rialp, A., Rialp, J. & Knight, G., 2005a; Rialp, A., Rialp, J., Urbano, D. & Vaillant, Y., 2005b; Kalinic & Forza, 2012). This leads them to play a more active role in international markets (Oviatt & McDougall, 1994; Lu & Beamish, 2001).

In the literature, the aforesaid 'born global' companies are considered to be those that from their very creation seek to obtain a significant competitive advantage by utilizing resources and selling products in several countries (Knight & Cavusgil, 1996; McDougall et al., 1994; Rialp, et al., 2005b). However, we should note that such companies are still very much the exception from the norm. The internationalization of new ventures has come to play a significant role in the issue of international growth (Rialp, et al., 2005a). However, many established companies still consider internationalization to be a slow way to evolve, while some newer and more dynamic companies manage to internationalize from their foundation or only very shortly after (McDougall et al., 1994). Different studies claim that gradual internationalization not only enables companies to grow, but also to learn in advance about their capacities and needs for international expansion (Eriksson, K., Johanson, J., Majkgård, A., & Sharma, D., 1997). Given the above, an SME should achieve higher levels of commitment to international growth after becoming more settled and accumulating experience in earlier stages.

According to Organizational Learning theory, companies that internationalize gradually have a greater chance of success because they first gain experience that enables them to develop organizational routines

in domestic markets, which later helps them to cope more efficiently with the internationalization process (Carr et al., 2010). Moreover, companies that have operated in the market for more than one year have a higher level of knowledge and legitimacy, which fosters opportunities for successful alliances (Delmar & Shane, 2004). Established companies have greater access to external funding, which helps to prevent new commitments from putting existing operations at risk (Carr et al., 2010). Even when new companies are able to learn and develop the necessary processes and routines to comply with the requirements for internationalization, there is still the likelihood that they will face restrictions in terms of resources (Carr et al., 2010). Therefore, the following hypothesis is formulated:

H3: Exports of newly created SMEs is lower than the older ones.

3. Methodology

3.1 Data

With the aim of testing the above hypotheses, the study uses data collected from the Adult Population Survey (APS) for Spain, extracted from the Global Entrepreneurship Monitor (GEM), to analyze the six-year period from 2005 to 2010.

3.2 Description of Variables

Employees, Product Innovation, Process Innovation, Strategic Innovation and Export were used as response variables. All the aforesaid variables are binaries, with the exception of Employees. The numeric Employees variable was taken from the number of employees that actually work for a given company. All companies with more than 250 employees were discarded, because our intention was only to analyze SMEs. The Product Innovation, Process Innovation, Strategic Innovation variables were converted into binaries as we were only seeking information on whether companies innovate or not. The Export variable was also converted into a binary figure.

For this analysis we used the “Novels” category provided by GEM. This variable was converted to binary, where first-year companies were given the value of 1, and those older than one year received a value of 0.

To contrast the stated hypotheses, a series of three models have been developed, each using the same data sample. The first model adopts employment as its dependent variable and applies a linear regression to find out which types of SMEs generate the greatest employment: novels or incumbent firms. The second model uses innovation as the dependent variable. A logistic regression was used to find out which SMEs make the greatest contribution in products, processes and strategic innovation. The third model uses

export as the dependent variable and applies a logistic regression in order to test whether established SMEs have the greatest levels of internationalization with regards to export sales.

Additionally, two groups of control variables have been used. The first is related to industry: extraction, transformation, business services and consumer services. This group tries to identify if any industry sector has some influence on the moment of highest economic impact for each model. The second group of control variables relates to the year when the entrepreneurs were surveyed. This group is included to identify any economic cycle effects of these companies in the analysis.

3.3 Models

As mentioned earlier, the statistical methods used in this study to test the presented hypotheses used two models:

a) Linear regression model

To describe the number of employees in the companies included in the study, we used the following model:

$$\begin{aligned} \text{Employees} = & \hat{\beta}_0 + \hat{\beta}_1 \text{Novel} + \hat{\beta}_2 \text{ExtractionS} + \beta_3 \text{TransformationS} + \hat{\beta}_4 \text{BusinessServS} \\ & + \text{Sur_Yr_2006} + \hat{\beta}_5 \text{Sur_Yr_2007} + \hat{\beta}_6 \text{Sur_Yr_2008} + \hat{\beta}_7 \text{Sur_Yr_2009} \\ & + \hat{\beta}_8 \text{Sur_Yr_2010} + e_i \end{aligned}$$

[1]

Where $\hat{\beta}_i$ are the coefficients that will be estimated on the basis of the selected sample. We used the coefficient of determination R2 to identify the amount of variability that the linear regression model is able to explain; also we did not identify any problems with heteroskedasticity.

b) Binary logistic regression model

With respect to innovation, it was defined that:

the likelihood of innovating in products is $p_{inpd} = p(\text{ProductInnovation})$

the likelihood of innovating in processes is $p_{inpc} = p(\text{ProcessInnovation})$

the likelihood of innovating in strategy is $p_{ines} = p(\text{StrategicInnovation})$

Where the model that describes the likelihood of innovation is:

$$\ln\left(\frac{p_{in}}{1-p_{in}}\right) = \hat{\alpha}_0 + \hat{\alpha}_1 Novel + \hat{\alpha}_2 ExtractionS + \hat{\alpha}_3 TransformationS + \hat{\alpha}_4 BusinessServS \\ + \hat{\alpha}_5 Sur_Yr_2006 + \hat{\alpha}_6 Sur_Yr_2007 + \hat{\alpha}_7 Sur_Yr_2008 + \hat{\alpha}_8 Sur_Yr_2009 \\ + \hat{\alpha}_9 Sur_Yr_2010$$

[2]

Where p_{in} represents the likelihood of innovating in any of the three types analyzed in this study: products, processes and strategy. For Export, we recurred to the same procedure, using the following model to describe a company that exports:

the likelihood of being a company that exports is $p_{ex} = p(\text{export})$

$$\ln\left(\frac{p_{ex}}{1-p_{ex}}\right) = \hat{\alpha}_0 + \hat{\alpha}_1 Novel + \hat{\alpha}_2 CompanyAge + \hat{\alpha}_3 ExtractionS + \hat{\alpha}_4 TransformationS \\ + \hat{\alpha}_5 BusinessServS + \hat{\alpha}_6 Sur_Yr_2006 + \hat{\alpha}_7 Sur_Yr_2007 + \hat{\alpha}_8 Sur_Yr_2008 \\ + \hat{\alpha}_9 Sur_Yr_2009 + \hat{\alpha}_{10} Sur_Yr_2010$$

[3]

Where $\hat{\alpha}_i$ are the coefficients that will be estimated on the basis of the selected sample.

As per the binary logistic regressions applied to the previous models, we used the Maximum Log Likelihood and the Pseudo R2 methods to find out how much variability these models can explain.

In both the linear regression and the binary logistic models, we eliminated the likelihood of suffering multicollinearity issues by applying the Variance Inflation Factor (VIF), using the criterion that this value is not higher than 3. No model in the study indicated the presence of multicollinearity (Greene, 2008).

4. Results and discussion

Table 1 presents the results obtained from the models used in this research. The *Stata* statistics program was used to generate the models.

Table 1. Regressions

	Linear Regression	Logit Regression			
VARIABLES	MODEL 1	MODEL 2			MODEL 3
	Employment	Prod Inn	Proc Inn	Stra Inn	Export
	β	β	β	β	β
Novels	-0.9493*** (0.2919)	0.0194 (0.0858)	-0.6828*** (0.1173)	0.0856 (0.1203)	-0.0153 (0.0919)
Extraction S.	0.6889 (0.6589)	-0.2916 (0.1811)	-0.4275 (0.3008)	0.2748 (0.2118)	0.0172 (0.1686)
Transformation S.	0.4501 (0.2782)	-0.0602 (0.0972)	0.2030 (0.1366)	-0.2915** (0.1419)	-0.0212 (0.1051)
Business Services S.	0.0412 (0.3754)	-0.0487 (0.1044)	0.1053 (0.1504)	-0.1437 (0.1460)	0.3338** (0.1071)
Survey Year 2006	0.3578 (0.4300)	0.3879 (0.1472)	-0.4953 (0.2868)	0.0075 (0.2009)	0.8922*** (0.1506)
Survey Year 2007	0.5368 (0.3805)	0.7978** (0.1346)	1.0130*** (0.2009)	0.3219 (0.1812)	1.0747*** (0.1395)
Survey Year 2008	0.2054 (0.3301)	0.3494*** (0.1376)	0.5252** (0.2053)	-0.0763 (0.1889)	1.0282*** (0.1354)
Survey Year 2009	-1.1472*** (0.3090)	-0.0126** (0.1763)	1.0503*** (0.2237)	0.0135 (0.2254)	0.6106** (0.2772)
Survey Year 2010	-1.0527** (0.4760)	-0.5390** (0.2297)	-2.7330 (0.2842)	-0.1417 (0.2648)	1.0765** (0.3753)
Constant	4.1079***	-1.9161***	-2.7330***	-2.5278***	-1.4255***
N	4564	4574	4532	4610	2528
VIF	1.45	1.51	1.51	1.51	1.51
F - Test	5.65	80.14	113.80	17.46	90.41
Log Likelihood		2020.2624	-1135.474	-1229.9539	-1621.5062
R2	0.0079				
Pseudo R2		0.0194	0.0477	0.0070	0.0271
R – Adjusted	5.55				

Source: Author's own research

This table reports the non standardized β coefficients. In parenthesis the standard error. The significance levels * : $p < 0,1$; ** $p < 0,05$; *** $p < 0,01$

Model 1 Employment.

H1. It was hypothesized that novel entrepreneurs have a greater impact on employment than entrepreneurs with more established SMEs. However, according to the results no evidence was found to confirm the existence of any comparatively superior effect over employment of Spanish SMEs during their first year of existence. This agrees with the results from Audretsch and Thurik study (2001) regarding the management of resources when companies are started, as well as their contribution.

Also, contrary to the hypothesis, it was observed that when an SME gets older, the number of employees increases. So, we can deduce that entrepreneurs have a tendency to hire more employees once they have gained some experience and operational knowledge in their industry. This would support the organizational learning postulation.

We did not identify any effect in the group of control variables categorized as ‘industry’. As for the second group of control variables, identified as ‘survey year’, we were able to note the effects of the economic downturn of the last two years.

It is important mention, even when we tried to obtain better results using different techniques, the data sample did not allowed identify the real contribution to employment in this analysis. So, this model represents a weakness that we will use as a future line of research on this document.

Model 2. Innovation

a) Product Innovation

The results from the second model, using product innovation as dependent variable, did not generate any evidence that support **H2a**, so it cannot be confirmed.

As opposed to the literature, the results led us to deduce that product innovation is equally as likely to occur within novels SMEs as with entrepreneurs with incumbent SMEs. This is because the absence of significant differences in the results, where product innovation is the same for both types of firms. Therefore features of both Neo-Schumpeterian and Organizational Learning theories would seem to influence product innovation when analyzing our Spanish sample.

In this model, the control group variables by sectors do not present any heterogeneity effect to indicate that there is any influence by product innovation. However, when controlling by survey year, the presence of the economic cycle is noted.

b) Process Innovation

In this second model, using processes innovation as dependent variable gives a significant and negative result. This would mean that process innovation is more frequent among incumbent SMEs. These results therefore fail to confirm hypothesis H2b, which proposed that process innovation for entrepreneurs with SMEs in its first year of operation is higher.

It is assumed that this negative effect could be due to an insufficient management of technology acquisition, even though recently created companies are free to apply new technological solutions. Another issue could be cost limitations, because the investments financing sometimes can represent a bigger problem for newly created firms (García & Calantone, 2002); being, therefore, the Organizational Learning theory which stands for this variable.

The control variables, identified as a 'survey year', suggest a behavior defined by a high degree of heterogeneity. For the group of control variables by sectors do not present any heterogeneity effect to indicate that there is any influence by process innovation.

c) Strategic innovation

For the final approach using the second model, strategic innovation was used as the dependent variable. This variable did not generate any evidence that could give support to the hypothesis **H2c**, which states that novels entrepreneurs have a greater impact on strategic innovation than entrepreneurs with more established SMEs.

However, it cannot be identified from the data presented whether the higher contribution comes from novels or established entrepreneurs, this lead us to deduce that novels and incumbent entrepreneurs have the same level of strategic innovation. Again, results support the evidence that both novels and incumbent firms are guided by Neo-Schumpeterian and Organizational Learning theory.

For the different industrial sectors, only the transformation industry sector showed effects related to strategic innovation. As for survey year, the control variables did not confirm any tendency for strategic innovation or the presence of economic cycles.

Model 3. Export

The results from the third model, using Export as dependent variable, did not produce any evidence supporting hypothesis **H3**. This state that novel SMEs entrepreneur have a lower impact than incumbent entrepreneurs on export activities.

However, for this model, the results showed there are no differences between the novels SMEs and incumbent entrepreneurs. This is due to the high level of homogeneity shown in the results.

In this last model, the control group variables by sector only the business sector industry showed effects related to export activity. However, the variables controlling by survey year, indicate the presence of an economic cycle.

5. Conclusions and implications

This study tries to determine when entrepreneurs promoting SME ventures make their biggest economical contribution in relation to employment, innovation (product, processes, strategic) and export. Is this during their first year of operation or at a later stage?

In order to do this, we used data collected from Global Entrepreneurship Monitor (GEM) Spain, considering a six-year period between 2005 and 2010. Linear and logistic regression techniques were used to analyze the data.

From the sample analyzed, the results showed that recently created Spanish SMEs do not necessarily have a higher economic impact. Entrepreneurs with older companies are just as important as newly created SMEs. This is contrary to what is often stated in the literature.

Different studies have included innovation as part of process of business creation and hence assume that they are innovative from the outset and they will immediately create jobs. However, this study suggests that this is not the case for the Spanish SMEs sample. It confirms that for Spanish SMEs, their economic contribution is often a long-term process.

However, this finding does not reject the fact that the SMEs are a primordial element for the country's economic engine. Therefore, the postulates toward the economic impact of business creation of the Neo-Schumpeterian theory are complimented by those forwarded by Organization Learning theory.

From a policy perspective, attention should spread beyond the startup stage to also take incumbent entrepreneurs into consideration. Making a particular perspective, a more enduring assistance should be offered to entrepreneurs in order to ease the process associated with starting a company, as well as for the post-creation process.

This is because in many instances, public administrations are focusing most of their resource on novel SMEs entrepreneurs. However, the studies finding indicate the incumbents also have a strong contribution to make.

Finally, as for future studies related to this research, it would be interesting to replicate the methodology used in other countries, in order to identify synergies with the behavior found for the Spanish sample. It may be interesting to verify whether the industrial sector has any influence on the moment when SMEs have the greatest economical effect. Also, it would be important to identify whether the regional level has some influence.

To measure the same tendency in a microeconomic context would provide the opportunity to analyze the profiles of entrepreneurs and identify whether this has an influence on the economic contribution made by recently created and longer established companies.

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