

Full Length Research Paper

The evaluation of public policy for the creation of businesses: An empirical study for the Spanish case

María Jesús Alonso-Nuez* and Carmen Galve-Górriz

Department Economía y Dirección de Empresas Universidad de Zaragoza, Spain.

Accepted 30 July, 2016

The promotion of greater entrepreneurial dynamism through an increase in the rate of business creation has become one of the primary concerns of those local and national authorities who use policies of support for new entrepreneurs as a central instrument in achieving their objectives of employment and economic growth. Such policies are among the most important instruments of government action for job creation, in addition to assuming a significant source of expenditure. The importance of the objective, and its associated costs, are of enormous significance in evaluating whether governments are achieving their stated goals; that is, whether they are really taking full advantage of these investments to create businesses and to assure their future survival. This article analyzes the influence of public subsidies, among other variables, in the survival of companies from a specific region - the Autonomous Community of Aragon - representative of the Spanish economy.

Key words: Public policy, subsidies, business creation, survival.

INTRODUCTION

In recent decades, there has been great interest in encouraging the dynamism and economic growth of a geographical area through the creation of small and medium-sized companies. These companies are considered to be one of the main sources of job creation since, according to studies by Audretsch and Beckman (2007) and Neumark et al. (2007), job creation is increasingly concentrated in small businesses rather than large companies. These companies contribute to consolidation of the industry, giving it greater flexibility to introduce and adapt technology. They also increase the entrepreneurial capacity of a society, by providing people able to generate new ideas necessary to meet the current demands of the constantly changing economic order (Alam et al., 2010; Olawale et al., 2010). The presence of significant imperfections in the market hinders access to financial resources, above all for new companies (Stiglitz and Weiss, 1992; Brewer and Minton, 2000; Scuibba, 2005; Alonso et al., 2008). Uncertainty and inexperience often mean numerous problems in acquiring financing for entrepreneurial companies in the start-up phase and, once granted, it is

especially costly. This could indicate that financial restrictions have a negative impact on the possibilities for start-up companies (Foxcroft et al., 2002; FinMark, 2006; Liang et al., 2010; Cappers and Goldman, 2010). These imperfections, together with the structural character of unemployment at the beginning of the 1990s, prompted the need for public authorities to develop multiple initiatives that attempted to compensate for these limitations. Among the initiatives developed is the establishment of policies that give an incentive to the creation of new companies through the granting of public subsidies. These subsidies are assigned conditioned on prior fulfillment by the subsidized company of a series of procedures and requirements that guarantee the quality of the product, and are completely subject to the will and discretion of the Public Sector (Barea and Monzón, 1996).

Nevertheless, the evaluation and subsequent continued improvement in policies of support for new entrepreneurs is one of the most neglected areas (Parker, 2005), given that methodologies of evaluation are practically nonexistent. In spite of its importance, this type of investigation has rarely been tackled in the scientific literature, which has focused more on justifying the reasons for the intervention of government in this activity, or occasionally arguing to the contrary (Arain and Tipu, 2007). The lack

*Corresponding author. E-mail: jalonu@unizar.es.

of an evaluative culture throughout public entities also generates many difficulties in carrying out this type of work, due to the scarcity of data (Araujo et al., 2001). It makes difficult to derive practical conclusions and regulatory implications regarding public policy aimed at the creation of business (Stam et al., 2006).

To alleviate this and, given the necessity for evaluation and continued improvement of public programs, the current work studies a sample of small companies operating in the Autonomous Community of Aragon (Spain), which were set up through public subsidies during the period 1997 to 2001 and analyzing their survival over the first five years¹ of their existence, while also considering other variables² such as type, size, financial autonomy and profit margin².

The difficulty involved in obtaining data from small companies made it necessary to redirect the field of analysis of the study and reduce it to a specific region. In Spain, in accordance with the Constitution of 1978, the right of self-government is recognized and guaranteed in addition to the mutual solidarity among the different regions. Currently, Spain is made up of 17 Autonomous Communities, which enjoy varying degrees of autonomy. The selection of the Autonomous Community of Aragon, although specific, is representative since it is comparable in economic terms with the European average (of the 15 original EU countries) and a productive structure (services-industry-agriculture) with values approaching that of Europe. In addition it is an open economy, perfectly integrated into Europe, as reflected in the volume of its exports (National Institute of Statistics, 2005)³.

The article is composed of the following sections: First, it presents a review of the literature regarding the evaluation of public policies that promote entrepreneurial activity, establishing the main arguments for and against state intervention. Then, an analysis of public policies is carried out, specifically in the Community of Aragon during the period 1997 to 2001. Later, the article describes the sample of selected companies by sector, specifically from Cooperatives and Labour Societies⁴, while also carrying out a comparative analysis of survival rates among companies established with - and without - public subsidies, using a logit model. Finally, the article concludes and presents the most relevant results.

¹The choice of a five-year period is due to the fact that, since 2005 is the last year for which there is information available, the maximum period of time that a company could survive, having been set-up in 2001, was five years.

²Variables most commonly used to explain the survival of companies (García-Tabuenca and Crespo, 2008; Pfeiffer and Reize, 2000)

³In 2005, the volume of exports from the Autonomous Community of Aragon totaled 7.118 billion euros, of which 4.314 billion euros were equipment, 593 million euros were capital goods and 2.211 billion euros were intermediate goods. The GDP of Aragon that same year was 27.956 billion euros.

⁴The Labour Societies, regulated by the Law 4/1997 of March 24, are defined as those merchant societies where the majority of the equity capital is in the hands of the employees. The aim of the Cooperatives, as well as of the Labour Societies, is to maintain businesses in crisis, job creation and workers' access to the means of production.

PUBLIC POLICY FOR THE CREATION OF BUSINESSES: A REVIEW OF THE LITERATURE

The search for business opportunities is one of the basic pillars of the achievement of government objectives of generating employment and stimulating economic growth. This has spurred many countries to implement enterprising policies to boost the creation and support of businesses, such as measures destined to eliminate unnecessary obstacles to business tasks⁵, notably increasing budgetary efforts in this field (Alam and Hoque, 2010; Olawale and Garwe, 2010). The institutional justification for most public policies and initiatives of support and promotion of entrepreneurial spirit has focused, historically, on the high rates of unemployment in the last two decades of the 20th century in Europe. In this regard, Spain is no different from the other countries in the European Union. Successive central, autonomous and local governments have attempted to combat unemployment through the promotion and support of the creation of new businesses. Since the middle of the 1980s, the decline in regional policies of development based on relocation of large companies has driven practically all of the western economies in Europe to take decisions that favour the regeneration of productive organizations through structural effects linked to the creation of businesses.

One must consider that all policies that stimulate the creation of small businesses, and improve their capacity for survival, are thought to be an effective measure not only for entrepreneurs but for the economy as a whole. Public policy aimed at the creation of companies has become one of the fields of activity that has evolved the most in recent decades, in the heart of developed countries, as well as in developing economies and those in transition from planned systems to free competition (Box, 2008). This expansion is a consequence not only of the opening up of a range of situations susceptible to intervention, but also of the volume of resources dedicated to that end, more and more frequently focused on the promotion of new companies among marginalized groups - women, young people and the jobless.

The advisability of State intervention in the economy to promote business investment has not been without controversy, whether in the form of direct financial assistance (subsidies) or indirect assistance (fiscal incentives).

The arguments in favour of institutional support for the creation of businesses focus on the following:

- (1) An environment in which an abundance of companies

⁵France was the first country to introduce measures promoting self-employment: in 1979 it began a program ACCRE (*Aide aux Chômeurs Créateurs ou Repreneurs d'Entreprises*) that supports the creation of companies by the unemployed, and was the model adopted by the United Kingdom and Germany (Lohmann et al., 1999).

exists, or where there are entrepreneurial models to follow, produces an imitative effect that stimulates the creation of new businesses (Baron, 2000). The presence of experienced business people in the area, and of successful entrepreneurial role models in the community, has an equally noticeable effect on the decision to establish a business. On the contrary, and for the same reason, an elevated rate of unemployment would serve to inhibit business activity, thus generating a vicious circle. In this context, public efforts would be justified in those environments with high rates of unemployment, authors such as Ritsilä and Tervo (2002), Thurik and Verheul (2002) and Blanchflower (2004) testify to this. These authors show that an elevated rate of unemployment does not affect the creation of businesses, and when it does, the correlation is negative, that is, the greater the level of unemployment, the lower the rate of business creation. Their results indicate that those countries or regions with greater social and labour problems should make a greater effort to promote entrepreneurial activity.

(2) The creation of new businesses can also stimulate the economic development of countries (Fritch and Mueller, 2005). For this reason, some authors consider that the creation of institutions favoring entrepreneurial activity is a fundamental responsibility of governments, justified by the fact that policies encouraging the creation of businesses become one of the essential tools of economic growth (Gilbert et al., 2004; Boettke and Coyne, 2006).

Some authors state openly that public intervention in the creation of new businesses can have harmful effects on other existing businesses (Lotti et al., 2001). Others, such as Martí (2004), consider that the long-term effects of these policies on the total group of companies are negligible; that is, while policies that reduce the barriers to entry increase the rotation of markets, those that favour business survival reduce it. There are even cases in which the distinction between companies begun with, or without, public subsidies does not exist, according to results (Nolan, 2003), hence the justified evaluation of government policies, although it is possibly one of the most neglected areas in the field. The principal motives behind the evaluation of public policies that favour the creation of businesses would be, in the first place, to establish whether or not the policy had contributed to correcting or improving the problem it set out to solve (as, for example, the insufficient availability of financing, competition, advice and technologies); then, to show the taxpayer and the business community whether or not the program makes profitable use of public funds, and finally, to achieve continuous improvement in the design and administration of the programs (Storey and Potter, 2008).

Although rare, research does exist that evaluates the global effect that public programs have on the economy (Meager et al., 2003, Van Stel and Storey, 2004) without a detailed follow-up of the obtained results. There is very little literature that specifically evaluates the direct effect

of public policies and the results obtained are not homogeneous and can even be contradictory.

Griggs and Weaber (1997) state that public support had a positive effect on the creation of businesses, and thus lowered unemployment, in Scotland. However, Glas and Cerar (1997) obtained the opposite results from the Slovenian economy.

Other authors, such as Almus (2004) and Cowling and Hayward (2000), in studying active employment policies, demonstrated that those companies enjoying public subsidies significantly improved their rate of employment growth compared to those not receiving that initial support, while Meager (1993) stated that the job creation rate of subsidized companies was insignificant.

Studying the rate of survival of those companies that received public subsidies, we find that this indicator varies according to the country, the year of participation, and the period considered. In general, over the course of a year, survival rates are about 90% and diminish over time (Wiebner, 1998; O'Leary, 1999), although Wilson and Adams (1994) obtain a much lower ratio. On the other hand, Pfeiffer and Reize (2000) found that in Germany, ratios of survival did not differ significantly between companies begun with, or without, public subsidies.

On other hand, the existence in some countries of extensive availability of programs promoted by local, regional and national institutions supporting the creation of new businesses has resulted in problems of duplication of programs and developed actions. One conclusion from this variety of results can be that there must be coordination among programs of business creation in order to monitor, manage and compare the different programs, so that the entrepreneur will not be discouraged (Velasco and Saiz, 2007; Alam, 2009a)

Finally, and as an adjunct to the self-regulatory market forces, it is necessary to carry out public policies that develop a wide range of incentives to create businesses and to offer employment with the objective of contributing to the wealth and value of the economy of a country. Both for the significance of the objective of these initiatives, as well as for their monetary volume, it is singularly important to verify whether or not these government efforts are achieving their proposed goals, although in the existing literature it appears that measuring the real impact of these policies of business creation is a difficult task.

Public policy for the creation of businesses and promotion of employment in the Autonomous Community of Aragon

In Spain, institutional measures for the creation of businesses are backed by a benign constitutional framework and a decentralized model of autonomous governments. Since the Royal Decree 567/1995, authority in matters of support and creation of employment employment were transferred from the Central Government to

the Aragonese Community. These activities are included within the principles and programs developed by the European Social Fund for those actions exclusively directed toward promoting and encouraging entrepreneurial spirit, providing incentives for the generation of employment, and access to the labour market by the most disadvantaged groups, through the establishment of programs of assistance to small and medium-sized companies, including Cooperatives and Labour Societies, and excluding companies dedicated to the production, first transformation or commercialization of agricultural, livestock or allied products related to Annex I of the European Union Treaty. This public program incorporates the following:

- (i) Technical Assistance (TA) aimed at supporting the financing of contracting directors or technicians (to carry out directive tasks or organizational tasks within the company), of technical studies (of viability, organization, commercialization, diagnosis and so on), and of management specializing in the diverse tasks of entrepreneurial management (provided that they are not of an ordinary and continuing character within the company).
- ii) Interest subsidies (IS), whose aim is to finance a portion of loan interest granted for investment in fixed or current assets.
- iii) Subsistence Income (SI), whose aim is to guarantee minimum income during the initial activity.
- iv) Subsidy for the creation of companies made up of young people under thirty years old (J).
- v) Assistance for incorporation of members (M) whose aim is to subsidize the Cooperatives and Labour Societies that add new workers or that convert workers contracted by the company into worker members.
- vi) Subsidies for investment in fixed assets (FA) necessary for the creation of Cooperatives and Labour Societies.
- vii) Subsidies for the creation of Cooperatives and Labour Societies by women (W).

The analysis of subsidies granted from 1997 to 2001 allows a first approximation of the demand of this type of assistance for the creation or promotion of employment. To this end, information published in the Official Bulletins of Aragon (BOA) is compiled that corresponds to those years⁶. This information only provides the relationship of beneficiaries that have availed themselves of the program, the different types of assistance sought and the amount of subsidy received for the type of help sought.

To show the reach of this assistance, Table 1 reflects the temporal distribution of the subsidies, as well as their amounts in thousands of euros to constant prices of 1997. In both cases a growing tendency is observed during the period 1997-2001. In the last year, the number of subsidies granted was more than seven times the

number in 1997, and the amounts granted quadrupled in that same period. Thus, the increase of public spending in the Aragonese Community with regard to its objectives of encouraging and promoting the entrepreneurial spirit is evident⁷. From 1999, subsidies for the "incorporation of members" and for "subsidy of interests" comprised the largest number granted. Subsidies for "the creation of businesses by women" and "investment in fixed assets" only began to be awarded in 2001 and 2002 respectively.

Table 2 reflects the growing tendency in the number of subsidized companies throughout the period analyzed. Specifically, the greatest increase experienced in the number of subsidized businesses was in 1999 (122 more companies compared to 1998, of which 105 were Labour Societies and 17, Cooperatives). An analysis of all businesses and years shows that after 1999 the percentage of Labour Societies subsidized surpassed that of Cooperatives, possibly by being reaffirmed as businesses promoting self-employment, after being established by Law in March, 1997.

EVALUATION OF PUBLIC POLICY FOR THE CREATION OF BUSINESSES: AN ANALYSIS OF SURVIVAL

Data and sources

The aim of this section is to carry out a comparative analysis of survival between those companies that were established with public subsidies and those that began without such subsidies, in Aragon. To analyze both groups of companies, three data sets are used:

(1) Data set prepared from the information in the Official Bulletins of Aragon pertaining to the years 1997 to 2001, referring to companies that have received subsidies.

(2) Census of companies prepared by the Chamber of Commerce during the years 1997 to 2005. This census provides information relating to the dates of establishment and of the dissolution of these companies, which allows for an analysis of their survival.

(3) Data base SABI-Infirma, which provides empirical and qualitative information regarding companies that register their financial statements in the Commercial Registry. The last available date of the study is 2005.

As is reflected in Table 2, 766 companies⁸ (Cooperatives and Labour Societies) were recipients of public subsidies in the period 1997-2001. From this total of companies only those newly created are selected; that is, those companies that received some type of subsidy but that were already established, were excluded. The total sample is thus reduced to 532 companies. Later, in order to carry out an economic analysis, the data base SABI was used, further reducing the sample to 305 companies.

In addition, and with the aim of comparing companies, the information gathered from the Chamber of Commerce is contrasted with the first data base created from the Official Bulletins of Aragon, obtaining a new sample of companies created without such subsidies. Thus the sample of Cooperatives and Labour Societies

⁶ BOA n°27, March 7, 1997; BOA N°24, February 25, 1998; BOA n°25, March 3, 1999; BOA n°30, March 10, 2000; BOA n°56, May 14, 2001.

⁷ As a concept the "subsistence income" subsidy was the most granted until 2000 when it ceased.

⁸ Comparing tables 1 and 2, it is observed that the number of subsidies granted over time does not coincide with the number of companies receiving them, since a company may receive more than type of subsidy

Table 1. Subsidies granted.

Subsidy	1997	1998	1999	2000	2001
SI	19	34	38	7	-
W	-	-	-	-	24
J	3	3	2	15	28
IS	11	15	71	78	72
FA	-	-	-	-	-
TA	5	9	18	15	6
M	7	22	142	200	208
Total number of subsidies	45	83	271	315	338
Total amounts in thousands of Euros	439,09	873,86	1.738,05	1.695,02	1.927,55
Average amount per subsidy	9,76	10,53	6,41	5,38	5,70

Source: Own elaboration.

Table 2. Number of companies receiving public subsidies during the period 1997-2001, by legal corporation and years granted.

Year	Cooperative	%	Labour society	%	Total	%
1997	28	11,34	10	1,93	38	4,96
1998	43	17,41	23	4,43	66	8,62
1999	60	24,29	128	24,66	188	24,54
2000	58	23,48	174	33,53	232	30,29
2001	58	23,48	184	35,45	242	31,59
Total	247	100	519	100	766	100

Source: Own elaboration.

established without public subsidies is now 323 companies. With the use of the data base SABI, the sample was again reduced to 118 non-subsidized companies.

Once the final sample of companies is determined, a sectorial classification is carried out according to the NACE classification¹⁰-Rev.1.1 (to two digits) in order to group them later in nine large sectors, as shown in Table 3. In analyzing this table, it can be said that the predominant sectors of businesses established with public subsidies are Trade and Repairs (29.8%) and Construction (19%). An analysis of the Trade sector reveals that more than half of the companies in that sector are dedicated to retail, possibly due to the lack of obstacles to entry in this sector. Similarly, an analysis of non-subsidized companies shows that the predominant sector is Construction (28.8%) and Trade and Repairs (23.7%).

Empirical analysis

By means of the econometric model based on the logit analysis, the probability of survival of companies in a five-year period is examined through a series of determinants. The dependent variable is designated *Survival* and is instrumented through a binary variable which takes the value 1 if the company survives over a period of five years, and zero in the opposite case.

For the solution of the model, the following specification is considered:

$$S_i = f(DT, DS, DGender, DSubsidies, Size, Financial Autonomy, Margin)$$

¹⁰ NACE: Classification of Economic Activities in the European Union.

$$\text{where } Prob(Survival_i = 1) = F(x_i \beta) = \frac{e^{x_i \beta}}{1 + e^{x_i \beta}} \quad \text{with } i = 1, \dots,$$

423 companies

The independent variables, both qualitative and quantitative, correspond to those factors that can influence the survival of companies. Some of these independent variables will be considered dummy variables, such as those related to the receipt of subsidies, gender, year established and sector. The list of variables used, the notation used, their description and the source from which they were obtained, is detailed in Table 4.

Tables 5 and 6 present respectively, the matrix of Pearson's correlation coefficient¹¹ and the descriptive statistics of the variables.

¹¹ The existence of significant correlations among the variables might give problems of multicollinearity. For this reason, we calculate the "Variance inflation factor" or VIF, that represents the increase of the

variance due to multicollinearity and is equal to $VIF = \frac{1}{1 - R_j^2}$, being $R_j^2 = R^2$ the coefficient of determination in the regression of every explanatory variable on the rest of explanatory variables. The obtained values are lower than one and are inside the considered acceptable limit (lower than 10) demonstrating thus the absence of multicollinearity (Maddala, 1996).

Table 3. Distribution by sector of subsidized and non-subsidized companies

	Sector	NACE-Rev. 1.1.	Subsidized Companies	%	Non-subsidized companies	%
Manufactures	Metal products	27,28	28	9.2	5	4.2
	Durable goods	29,30,31,32,33,34	6	2.0	3	2.5
	Other manufactured goods	15,17,18,19,20,22,24,25,26,36	23	7.5	7	5.9
Services	Construction	45	58	19.0	34	28.8
	Trade and repairs	50,51,52	91	29.8	28	23.7
	Hospitality	55	25	8.2	6	5.1
	Transport and telecommunications	60,63,64	10	3.3	4	3.4
	Business activities	65,67,70,71,72,73,74	44	14.4	22	18.6
	Other services	80,84,85,90,92,93	20	6.6	9	7.6
	Total Companies		305	100	118	100

Source: Own elaboration.

Table 4. Notation, description and source of the variables used

Variable	Description	Source
DT	Dummy Variable that represents the years established of companies $t = 1997, \dots, 2001$	Chamber of Commerce Census of Companies
DS	Dummy Variable that represents the different sectors to which the companies belong	Chamber of Commerce Census of Companies
DGender	Dichotomy Variable with a value of 1 if the company is led by a woman and 0 in the opposite case	SABI
DSubsidies	Dichotomy Variable with a value of 1 if the company is established with public subsidies and 0 in the opposite case	Official Bulletin of Aragon (BOA)
Financial autonomy	Quotient between Initial equity capital and initial investment	Financial Statements-SABI
Size	Variable referring to the size of the company at the beginning of its activity, considered as the natural logarithm of total assets	Financial Statements -SABI
Margin	Quotient between the average in five years benefits before interests and taxes and operating incomes	Financial Statements -SABI

EMPIRICAL RESULTS

In Table 7, results obtained from the estimation by means of the econometric logit model are gathered for the model previously proposed. This model is globally significant to 99% ($\chi^2 =$

72,126***).

From the results shown in Table 7, it can be said that:

- i) The fact that companies have received subsidies neither favours nor hinders their survival

- in the five years after their creation, since no significant differences are observed from this variable with regard to non-subsidized companies. The receipt of public subsidies does not mean that those companies are less likely to survive.
- ii) The coefficient of the gender variable is negative,

Table 5. Matrix of coefficients of Pearson's correlation

	Financial autonomy	Size	Margin
Financial autonomy	1		
Size	0.26***	1	
Margin	0.10***	0.13***	1

*** p<0,01; ** p<0,05; * p<0,10.

Table 6. Descriptive statistics

	Total		Subsidized companies		Non-subsidized companies	
	Mean	SD	Mean	SD	Mean	SD
Financial autonomy	0.305	1.526	0.307	1.418	0.300	1.809
Size	3.572	1.147	3.597	1.163	3.498	1.100
Margin	-0.079	0.364	-0.084	0.396	-0.065	0.252

Table 7. Logit estimations.

Standard variable	Logit result
Subsidies (Subsidies=1)	0.481 (0.350)
Gender (Women=1)	-0.664* (0.352)
Size	0.354** (0.156)
Financial autonomy	0.464*** (0.133)
Margin	1.852*** (0.601)
Constant	1.476 (0.080)
Chi ²	72.126***
R ² (%)	28.50
Observations	423

The values in parenthesis are standard errors. The levels of significance of the coefficients in accordance with the Wald statistic are: *** p<0.01; ** p<0.05; * p<0.10.

although significant only to 90%. Those companies directed by women have a lower survival rate than those directed by men.

The coefficient of the size variable is positive and significant to 95%, thus indicating that the larger size of a company will give it a greater chance of survival. The larger the company created, the greater its financial capacity, as well as its power to negotiate with providers

and customers, which could presumably translate to a higher probability of survival.

With regard to initial financial autonomy, the coefficient is positive and significant to 99%. The financial structure of a company having a clear determinant of higher probability to be among survival companies that have a greater amount of equity capital, being able to finance their investments in fixed assets in their first year will survive for a longer period

The coefficient of the margin variable is positive and significant to 99%. This variable indicates that the companies that present greater entrepreneurial margins, over the five years considered, will have a higher probability of survival.

DISCUSSION AND CONCLUSIONS

One of the most neglected fields in the sphere of policies of support for the creation of businesses, and promotion of employment, is their subsequent evaluation. The dearth of studies and of arguments for and against public intervention in promoting entrepreneurship require more and better evaluation of these programs, which would help policy-makers learn how to improve them (Roper and Hewitt, 2001).

Given the scarcity of works related to those concepts, the importance of this article lies in evaluating whether companies created with, or without, public subsidies differ in terms of their survival rates. In this regard, the results obtained show that subsidized businesses do not differ significantly from those not subsidized. Two facts could predictably explain the obtained results in terms of survival:

(1) The design of programs for creating businesses can favour the appearance of opportunism, despite the fact that the subsidies are not granted until after the

submission of an economic plan to guarantee the initial solvency of the company.

(2) It could also be due to a lack of vision of the future by the people to whom these public subsidies are granted, which makes them incapable of correctly managing their company. It must also be noted that the results do not support arguments by the critics of public assistance, since the subsidized companies do not survive at a lower rate than those created by private initiative without this type of help.

In addition, a relevant but unobservable factor - that would help significantly to explain the efficiency of programs of support for business creation in terms of survival - is the human capital of the entrepreneur. The economic literature on business creation has shown, irrefutably, that entrepreneurs who have a good general education are more successful in consolidating their projects than are those with less training (Alam, 2009b; Anugwom, 2009; Rao and Jani, 2009). Thus, public institutions are more and more sensitive to the training of potential entrepreneurs, once they have appeared with a project in mind, adapting the methods of instruction to the nature of the participants, and to the objectives of the program or programs in question (Lee et al., 2005). Nevertheless, in our sample of companies there is no available information regarding academic training, professional experience and level of motivation of entrepreneurs, from either group of companies. If this information were available, the conditions that determine the process of launch and start-up of companies could be analyzed more rigorously which would be especially important when determining their survival rates, thus opening a future line of investigation.

The fact that, for companies in the sample directed by women, exists a significant negative influence on the survival rate of companies provokes an interesting discussion about the causes of this coefficient and adds to the existing literature on the topic which does not offer a conclusive result, (Clayton, 1998; Cliff, 1998). One explanation for this could be that companies led by women are more concentrated in the Trade sector¹⁴, characterized by its considerable entrepreneurial dynamism. However, this fact does not explain our particular result, since the proposed econometric model corrects the sector effect through corresponding dummy variables. On the other hand, the existence of latent variables, such as academic training, could mask the obtained results. Although women, in general, possess better academic training than men¹⁵, which could result in a greater effectiveness of companies directed by this group, it would be necessary to be able to establish whether this

circumstance is also given in our sample of companies directed by women. The obtained result could also be due - as some research reflects - to the existence of greater difficulties among female entrepreneurs in obtaining financial resources (Koreen, 2000; Marlow and Patton, 2005), as well as greater difficulties in reconciling their professional development with their family commitments (Hup and Richardson, 1997, Shelton, 2006), which could also result in a lower survival rate of these companies.

With regard to the other quantitative variables considered in the Logit analysis, the size as well as the initial financial autonomy and the average margin of benefits significantly influence the higher probability of company survival. Larger companies that are established with a higher proportion of equity capital tend to increase their probability of survival (Audretsch et al. 2000; Segarra and Callejón, 2002).

On viewing the results, in practice a measurement of the real impact that business creation policies have on the survival of companies should be carried out, although it is possible that it would be a complex task, especially for smaller companies. The relevance of the role of evaluation of public policies has been recognized as being of vital importance in contributing to the improvement of the quality of those policies (Osuna and Bueno, 2007). Every policy-maker has a vested interest in knowing the effects of its policies, and an appropriate model of evaluation would generate a great deal of detailed and objective information (Garde, 2005).

Thus, the evaluation of public policy should be used as a basis for dialog among responsible parties, with the aim of being able to improve it. In our case, it would be not only to promote the creation of new companies, but also to assist them to survive over time, and not forgetting them in their phase of growth and consolidation, which is when they need the most support to survive. The decision to continue with programs of support to the labour market also has a political dimension (OECD, 2007; Alam et al., 2009). These programs are more imperative than optional during a period of instability and job insecurity, where the evidence confirms that there are many people who enter into entrepreneurship with modest prospects of success, making it difficult for the creation of other more viable enterprises (Curran and Storey, 2002). For this reason, it is recommended that public subsidies should be given to those entrepreneurs whose projects create added value and employment stability.

ACKNOWLEDGEMENT

This article has been possible to the funding of the Spanish Ministry of Science and Innovation (MICINN), Project: ECO2009-13158ECON

REFERENCES

Alam GM (2009a). Can governance and regulatory control ensure

¹⁴Source: National Institute of Statistics (2005).

¹⁵Source: Active Population Survey (EPA, 2005) done by the National Institute of Statistics.

- private higher education as business or public goods in Bangladesh?. *Afr. J. Bus. Manage.* 3 (12): 890-906.
- Alam GM (2009b). The role of science and technology education at network age population for sustainable development of Bangladesh through human resource advancement, *Sci. Res. Essays*, 4(11): 1260-1270.
- Alam GM, Hoque KE, Khalifa TB, Siraj SB, Ghani MF (2009). The role of agriculture education and training on agriculture economics and national development of Bangladesh. *Afr. J. Agric. Res.*, 4(12): 1334-1350.
- Alam GM, Hoque KE (2010). Who gains from "Brain and Body Drain" Business -Developing/developed world or individuals: A comparative study between skilled and semi/unskilled emigrants. *Afr. J. Bus. Manage.* 4(4): 534-548
- Alam GM, Hoque KE, Gyanendra K, Rout GK, Priyadarshani N (2010). Who gains from EFA – State business of education or private higher education business in Developing Nations? A study to understand the policy impact in Bangladesh. *Afr. J. Bus. Manage.* 4(5): 770 - 789
- Almus M (2004). Job Creation through public start-up assistance? *Applied Economics*. 36, nº 18: 2015-2024.
- Alonso MJ, Galve C, Salas V, Sánchez J (2008). Dinámica emprendedora en España. Fundación Alternativas. DT: 133/2008
- Anugwom E (2009): Women, education and work in Nigeria. *Educ. Res. Rev.*, 4(4): 127-134.
- Arain F, Tipu S (2007). Emerging trends in management education in international business schools. *Educ. Res. Rev.*, 2(12): 335-331
- Araujo A, Baterretxea I, González A, Simon L, Saiz M (2001). Situación del empleo en Vizcaya: estrategias para afrontar el paro. Servicio editorial de la universidad del País Vasco, Leioa.
- Audretsch DB, Houweling P, Thurik AR (2000). Firm Survival in the Netherlands. *Rev. Ind. Organ.*, 16: 1-11.
- Audretsch DB, Beckman I (2007). From Small Business to Entrepreneurship Policy in Handbook of Research on Entrepreneurship Policy: a survey of the literature edited by Audretsch, D., Grilo I. and Thurik, R., UK, pp.36-54
- Barea J, Monzón JL (1996). Informe sobre la situación de las Cooperativas y las Sociedades Laborales en España. Ciriec-España.
- Baron R (2000). Psychological Perspectives on Entrepreneurship: Cognitive and Social Factors in Entrepreneurs' Success. *Curr. Dir. Psychol. Sci.*, 9: 15-19.
- Blanchflower DG (2004). Self-Employment: More may not be better. NBER Working Paper No. 10286
- Boettke P, Coyne C (2006). "Entrepreneurship and Institutions" en Minniti, M. (ed.). *The Entrepreneurial Process: Volume 1*. Praeger Perspectives Series, Praeger Press, Westport, CT.
- Box M (2008). The death of firms: exploring the effects of environment and birth cohort on firm survival in Sweden. *Small Bus. Econ.* 31: 379-393.
- Brewer E, Minton B (2000). Interest-rate derivatives and bank lending. *J. Bank. Finan.*, 24 (2000): 353–380.
- Cappers P, Goldman C (2010): Financial impact of energy efficiency under a federal combined efficiency and renewable electricity standard: Case study of a Kansas "super-utility", *Energy Policy*. 38(8):3998-4010.
- Clayton K (1998). Women's work. Success in small business. Australian CPA, Melbourne, Nov. pp.36-39.
- Cliff J (1998). Does one size fit all?. Exploring the relationship between attitudes towards growth, gender, and business size. *J. Bus. Ventur.*, 13: 523-542.
- Cowling M, Hayward R (2000). Out of Unemployment. Research Centre for Industrial Strategy. University of Birmingham Business School.
- Curran J, Storey DJ (2002). Small business policy in the United Kingdom: the inheritance of the Small Business Service and implications for its future effectiveness. *Environment and Planning C: Gov. Policy*, 20(2): 163-177
- FinMark Trust (2006). *FinScope Small Business Survey Report* [online] <http://www.finmarktrust.org.za>.
- Foxcroft M, Wood W, Kew K, Herrington M, Segal N (2002). *Global Entrepreneurship Monitor South African Report* [Online]. Available: <http://www.gbs.nct.ac.za/gbswebb/userfiles/gemsouthafrica2000pdf>
- Fritch M, Mueller P (2005). The Persistence of Regional New Business Formation – Activity over time- Assessing the Potential of Policy Promotion Programs. Discussion Papers on Entrepreneurship, Growth and Public Policy, 2005-02, Max Planck Institute of Economics, Group for Entrepreneurship, Growth and Public Policy, Jena (Alemania).
- García-Tabuenca A, Crespo-Espert JL (2008). Credit guarantees and SME efficiency. *Small Business Economics*, online version, <http://www.springerlink.com/content/p6542qr860228156/fulltext.pdf>
- Garde JA (2005). La agencia estatal de evaluación de la calidad de los servicios y de las políticas públicas: reflexiones y propuestas de creación. Informe comisión expertos. Madrid, Ed. Instituto Nacional de Administración Pública.
- Gilbert BA, Audretsch DB, Mcdougall PP (2004). The emergence of Entrepreneurship Policy. *Small Bus. Econ.*, 22(3-4): 313-323.
- Glas M, Cerar M (1997). Self-employment in Slovenia: evaluation of results and agenda for improvement. *Frontiers of Entrepreneurship Research*, Babson College. Babson Park. Wellesley (Massachusetts).
- Griggs R, Weaber R (1997). An evaluation on the effectiveness of government intervention in developing entrepreneurship and creating new ventures. A scottish study. *Frontiers of Entrepreneurship Resesarch*, Babson College. Babson Park. Wellesley (Massachusetts).
- Hup A, Richardson P (1997). Business ownership as an economic option for middle income educated urban women in Bangladesh, in *Frontiers of Entrepreneurship. Research*. Babson Park. Wellesley (Mass).
- Koreen M (2000). Financing for Women-Owned Businesses. *Women Entrepreneurs In SMEs: Realising the Benefits of Globalisation and the Knowledge-Based Economy*. Workshop nº 3, OCDE. París.
- Lee S, Chang D, Lim S (2005). Impact of entrepreneurship education: A comparative study of the U.S. and Korea. *Int. Entrepreneurship Manage. J.*, 1(1): 27–43.
- Liang LW, Shih KH, Chung YH (2010). Financing instruments and strategies of agribusiness: Evidence from Taiwan. *Afr. J. Bus. Manage.*, 4(3):320-332.
- Lohman H, Luber S, Müller W (1999). Who is Self-Employed in France, the United Kingdom and West Germany? Patterns of Non-Agricultural Self-Employment. *Arbeitspapiere – Mannheimer Zentrum für Europäische Sozialforschung*. nº 11.
- Lotti F, Santarelli E, Vivarelli M (2001). It is Really Wise to Design Policies in Support of New Firm Formation? *Rivista di Politica Economica*, 4(5): 145-162
- Maddala GS (1996). *Introducción a la Econometría*. Segunda Edición. Prentice-Hall.
- Marlow S, Patton D (2005). All credit to men? *Entrepreneurship, Finance and Gender*. *Entrepreneurship Theory Pract.*, 29: 717-739
- Martí FP (2004). Promoting the entry of new firms. *Small Bus. Econ.*, 22(3-4): 209-221
- Meager N (1993). Self-employment and Labour Market Policy in the European Communit. WZB discussion paper FS, Berlin. pp 193-201.
- Meager N, Bates P, Cowling M (2003). Business start-up support for young adults delivered by the Prince's Trust: a comparative study of labour market outcomes. Ed. Charlesworth Group, Huddersfield, UK.
- Neumark D, Zhang J, Wall B (2007). Employment Dynamics and Business Relocation: New Evidence from the National Establishment Time Series. *Res. Labor Econ.*, 26(2007): 39-83.
- Nolan A (2003). Entrepreneurship and local economic development: programme and policy recommendation. OCDE. Paris.
- OECD (2007): *Framework for the Evaluation of SME and Entrepreneurship Policies and Programmes*. OECD publishing. www.oecd.org/publishing.
- Olawale F, Herbst G, Roberts-Lombard M (2010). An investigation into the impact of the usage of debt on the profitability of small and medium enterprises in the Buffalo city municipality, South Africa. *Afr. J. Bus. Manage.*, 4(4): 373-381.
- Olawale F, Garwe D (2010): Obstacles to the growth of new SMEs in South Africa: A principal component analysis approach. *Afr. J. Bus. Manage.*, 4(5): 729-738.
- O'Leary CJ (1999). Promoting self-employment among the unemployed in Hungary and Poland. W.E. Upjohn Institute for Employment Research. <http://www.upjohninst.org/publications/wp/99-55.pdf>
- Osuna JL, Bueno C (2007). La evaluación de las políticas públicas: el

- caso de las políticas de fomento al empleo estable. ICE, Mayo-Junio, 835: 75-83.
- Parker S (2005). The economics of entrepreneurship: what we know and what we don't. *Foundations and Trends in Entrepreneurship*, 1(1):1-54.
- Pfeiffer F, Reize F (2000). Business start-ups by the unemployed-an econometric analysis based on firm data. *Labour Econ.* 7: 629-663.
- Rao R, Jani R (2009): Spurring economic growth through education: The Malaysian approach. *Educ. Res. Rev.*, 4(4): 135-140.
- Ritsilä J, Tervo H (2002). Effects of Unemployment on New Firms Formation: Micro-Level Panel Data Evidence from Finland. *Small Bus. Econ.* 19: 31-40
- Roper S, Hewitt DN (2001). Grant Assistance and Small Firm Development in Northern Ireland and the Republic of Ireland. *Scott. J. Polit. Econ.*, 48(1): 99-117.
- Scuibba E (2005). Asymmetric Information and Survival in Financial Markets. *Econ. Theory*, 25(2): 353-379.
- Segarra A, Callejón M (2002). New Firm's Survival and Market Turbulence. *New Evidence from Spain. Rev. Ind. Organ.*, 4: 1-14.
- Shelton L (2006). Female Entrepreneurs, Work-Family Conflict, and Venture Performance: New Insights into the Work-Family Interface. *J. Small Bus. Manage.*, 4: 285-297.
- Stam E, Suddle K, Hessels S, van Stel A (2006). Los emprendedores con potencial de crecimiento y el desarrollo económico. *Políticas públicas de apoyo a los emprendedores. Ekonomiaz*, 62(2): 124-149.
- Stiglitz JE, Weiss A (1992). Asimetric information in crédito markets and its implications for macroeconomics. *Oxf. Econ. Pap.* 44: 694-724.
- Storey DJ, Potter J (2008). *OECD Framework for the Evaluation of SME and Entrepreneurship Policies and Programmes.* OECD, Paris.
- Thurik R, Verheul I (2002). The Relationship between Entrepreneurship and Unemployment: The case of Spain. *Centre for Advanced Small Business Economics. Faculty of Economics, Erasmus University Rotterdam.*
- Van SteL AJ, Storey DJ (2004). The link between Firms Births and Job Creation: is there a Upas Tree effect? *Reg. Stud.*, 38(8): 893-909.
- Velasco R, Saiz M (2007): *Políticas de Creación de Empresas y su Evaluación.* Fundación Alternativas. DT: 118/2007.
- Wiebner F (1998). The Bridging Allowance as an Instrument of Labour Market Policy – a Provisional Appraisal. *IAB Labour Market Research Topic*, p.30.
- Wilson S, Adams AV (1994). Self-employment for the Unemployed. Experience in OECD and Transitional Economies. *World Bank Discussion Papers*, p.263.