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## **Can Public Policy Help to Promote Micro-Enterprises Success in the Context of an Economic Downturn? The Case of Argentina**

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Revista de Economía y Estadística, Cuarta Época, Vol. 47, No. 2 (2009), pp. 67-94.

<http://revistas.unc.edu.ar/index.php/REyE/article/view/3946/3780>



La Revista de Economía y Estadística, se edita desde el año 1939. Es una publicación semestral del Instituto de Economía y Finanzas (IEF), Facultad de Ciencias Económicas, Universidad Nacional de Córdoba, Av. Valparaíso s/n, Ciudad Universitaria. X5000HRV, Córdoba, Argentina.

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### Cómo citar este documento:

Gertel, H., Giuliadori R., Bernard L. y Meiners E. (2009). Can Public Policy Help to Promote Micro-Enterprises Success in the Context of an Economic Downturn? The Case of Argentina. *Revista de Economía y Estadística*, Cuarta Época, Vol. 47, No. 2 (2009), pp. 67-94.

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## **Can Public Policy Help to Promote Micro-Enterprises Success in the Context of an Economic Downturn? The Case of Argentina\***

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### **ABSTRACT**

*The paper introduces the question of micro enterprises success in Argentina in the context of the 2007-2008 international financial crisis that overlaps with the lagged effects of the previous domestic downturn of 2001-2002. The work focuses on three aspects of the micro enterprises that have not been sufficiently studied in the literature on emerging economies: entrepreneurial profile of the firm-owner, performance and profile of the micro-entrepreneurs benefited by public policies. Results: according to the entrepreneurial profile four groups were identified, the performance in each group was directly related to entrepreneur's degree of dedication*

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\*A previous version of the paper was read at the 9th Arnoldshain Seminar hosted by Universidad de la República in Montevideo (Uruguay). October, 2009. The authors acknowledge financial support from Ministry of Science and Technology of Province of Córdoba, under Grant "PID 2008" No 53.

*and inversely related to condition of being previously unemployed and public policies were found to be pro-poor biased.*

Keywords: micro enterprise, entrepreneur, public policies, Argentina.

JEL Classification J4, C1.

## RESUMEN

*El trabajo aborda la temática de la micro-empresa exitosa en Argentina en el contexto de la crisis financiera internacional de los años 2007 y 2008, cuyos efectos se superponen con los de la crisis local de 2001-2002. El estudio analiza tres aspectos de las microempresas, no suficientemente estudiados en la literatura sobre economías emergentes: perfil empresarial del propietario, desempeño en cada grupo y perfil de los micro-emprendedores beneficiarios de las políticas públicas. Resultados: cuatro grupos fueron identificados, el desempeño en cada grupo estuvo relacionado directamente con el grado de dedicación e inversamente a la condición de desempleado y las políticas públicas tuvieron un efecto pro-pobres.*

Palabras Clave: micro-empresa, emprendedor, políticas públicas, Argentina.

Clasificación JEL: J4, C1.

## I. INTRODUCTION

The paper scrutinizes the question of micro enterprises success in Argentina, in the context of the 2007-2008 securitization and the subprime international economic crisis that overlaps with the lagged effects of the previous -severe- domestic economic downturn of 2001-2002. There is a growing body of literature which stressed that, in this context, small and medium businesses are not only competitive economically but also they have demonstrated their ability to survive in adverse conditions, therefore it is highly desirable to stimulate the spread of them across the country by means of appropriate public policies. They are an important element of regional stability and productive autonomy in any country because they do not tend to migrate and produce negative monetary externalities. These enterprises are also labor intensive, so they employ generally important number of local people, help develop training in different kind of jobs and expand entrepreneurship across the country. Finally, small and medium business counterbalances the high concentration of economic activities around the big cities, because they are more spread across the territory

(Donato and Barbero, 2008: 12-13, Zevallos, 2003). During the last decades Argentina has indeed been making progress in promoting small and medium businesses through specific public policies.<sup>1</sup>

Public policies adopted in Argentina after the episode of economic disruption and social polarization that peaked in 2001-2002 were centered on the promotion of micro enterprise initiatives among the unemployed through a variety of mechanisms like training courses, subsidies, loans, and coaching activities in “incubator”. These mechanisms are suggested in the literature as a way of overcoming the negative effects on the level of employment associated with financial and economic crises (Cranwell and Kolodinsky, 2002), however this is a contested terrain because there is still very limited academic literature testing the range of reactions by small business owners to public policies (Kuratko et al., 1999). This paper seeks to provide preliminary empirical evidences of the effect of public policies supporting small business in Argentina, to contribute to the present debate on the role of government in promoting entrepreneurial activities in the small business sector.

Some of the relevant questions addressed are: *(i)* Is the package of public policies recently adopted in Argentina efficient enough to promote economic opportunities to escape from poverty? *(ii)* Assuming it is efficient, is it sustainable in the long run? *(iii)* Do public policies centered on the unemployed cover all micro-enterprises that should be promoted by the State? Similar questions are informing a renewed debate around the world as can be seen through the rapid multiplication of call for papers during the last years.<sup>2</sup>

In order to answer these questions, it is important to analyze the following three aspects of the micro enterprises that could affect the impact of the public policies on emerging economies and have not been

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1. Matta (2008).

2. Examples of this are: (i) The International Workshop on Support Systems for Microenterprises organized by YABT – Young Americas Business Trust Organization of American States, The Golda Meir Mount Carmel International Training Center (MCTC) Haifa, MASHAV Center for International Cooperation Ministry of Foreign Affairs. Israel. Jerusalem. September 1st – 15th, 2009, to discuss the position of young entrepreneurs at times of global economic crisis; (ii) A Seminar on “Microenterprise Development to Lead the Economic Recovery in Your Community”, sponsored by CDC Grant of the Ohio Housing Trust Fund Ohio CDC Association 2009 Microenterprise, September 22th - to 24th , 2009; (iii) Microfinance Event: XII Foromic 2009, Inter-American Forum on Microenterprises Inter-American Development Bank. Peru. Arequipa. September 30th – October 2nd, 2009, that was focused on the current economic and financial crisis and how it affects the microenterprise sector in Latin America and the Caribbean.

sufficiently studied in the specialized literature: characteristics of the micro-enterprises and entrepreneurial profile of the firm-owner, performance of the micro-enterprises and profile of the micro-entrepreneurs benefited by public policies (Capelleras-Segura and Rabertino, 2008). The paper will focus on these three aspects to contribute to the growing debate on the role of public policies in promoting and facilitating the expansion of genuine employment opportunities through the creation of micro-enterprises.

The paper is organized as follows: the next section introduces the relevant literature. Section 3 develops the empirical model, section 4 reports and discusses the results in relation to the possibilities of alternative approaches of public policy to support the multiplication of innovative micro-enterprises in Argentina. Section 5 includes a short summary of the findings of the paper.

## **II. REVIEW OF THE LITERATURE**

A necessary brief description of the literature on this topic provides an updated and concise overview of the debate over the above-mentioned issues.

According to Blanchflower and Oswald (1998), the simplest way of expressing entrepreneurship is self-employment. The authors have shown that in an analysis of a group of highly industrialized countries, the number of individuals with entrepreneurship willing to start up a new business is 3 to 4 times higher than the number of actual entrepreneurs in an economically active population (approximately 15%). Lack of liquidity is mentioned among the factors identified by the study as significant constraints for the increase in the proportion of entrepreneurs in the labor supply and, therefore, it is possible to predict that all things being equal, the individuals with greater family assets are more likely to switch from being employed to becoming entrepreneurs. The substitution of leisure time for work time to generate own capital is analyzed, but it is assigned less significance. Finally, the availability of family assets associated with gifts and inheritance may condition the decision of younger individuals to remain in the family business. Undoubtedly, these three factors equally affect the micro enterprise performance. However, Blanchflower and Oswald also consider the significance of the psychological characteristics behind people's decisions to become entrepreneurs, and reach the conclusion

that there is no conclusive evidence of its probable influence (Blanchflower and Oswald, 1998).

Cranwell and Kolodinsky (2002) observe that in the United States, low income individuals, both in inner cities and in rural areas, are highly likely to be self employed and wonder whether this modality is a viable option to build up social human capital and to contribute, through this strategy, to the alleviation of poverty, particularly strong in the rural areas of Vermont they analyzed. This study identified stagnation in the creation of job positions and low flow of human capital as contributors to the creation of small businesses within disadvantaged families. They conclude that public policies must affect mainly the entrepreneurial training, a positive tool to make the enterprises of this segment of the population sustainable.

Servon (2006), for example, observed that public programs for the support of micro enterprises have been running for 20 years now in the US, and it is through them that training and credit (under U\$S 35,000) is provided to businesses with 5 or fewer employees. To what extent this aid has strengthened the presence of this sector in the economy? The author points out that while there seems to be a generalized consensus about the nature of the problems faced by micro-enterprises (little systematic information about them, decrease of funding from key sectors, increase of competition from larger businesses, and difficulties in achieving the market target), there is no agreement about the strategies to be followed in the next years. According to Servon, public policies towards micro enterprises in the US should be based on three strategic issues to ensure their survival: restructuring, innovation and standards certifications.

Lichtenstein and Lyons (2006) have recently proposed a model to help make decisions for investing in the creation of entrepreneurship as a way to optimize their contribution to economic growth. They assume that in society there is a continuum of individuals offering their main asset: entrepreneurship, and other representing entrepreneurial opportunities to establish business locally. The challenge lies in finding an adequate market segmentation of business opportunities in the community so as to identify different entrepreneurs according to their potential contribution to the growth of the local economy. They suggest three public intervention strategies for client selection: observation of the potential improvement in the results, incubator strategies, and selection of incentives to attract entrepreneurs.

Donato and Barbero (2009) rebuilt the history of 25 small and medium enterprises of Argentina that have survived many crisis during the last decades, and concluded that the owner's entrepreneurship capacity was a remarkable trait and common denominator that let all of them to resist, to adapt and to generate the most adequate response to the macro-economic volatility and institutional instability. Among the main features identified as complementing entrepreneurship capacity, the study also found that the condition of being immigrant, the role of the family and the social networks, the increasing inter-generation professionalization that facilitated technological innovation and the support from co-ops and public banks (up to 1977), contributed to the success of the firm.

From the above literature review, it can be concluded that the papers by Cranwell and Kolodinsky, Servon and Lichtenstein and Lyons dealt with small firm sustainability in the context of poverty, but none of them addressed directly the questions of entrepreneurial profile of the firm-owner, micro-enterprise performance and profile of the micro-entrepreneurs benefited by public policies. Donato and Barbero provides an analysis of the micro-entrepreneurs, but public policy is not discussed despite being a valuable instrument, when it is oriented to promote those micro-enterprises more able to survive. Thus, the question to what extent the recent package of public policies implemented in Argentina during this new century were targeted on the group of the most innovative entrepreneurs or on a different one, remains unanswered.

In an attempt to provide a response to this question in this paper, a multiple linear regression model has been applied by which the entrepreneur's perception of their business performance in the market, is associated with explanatory variables that capture: human capital variables (education and years of work experience as self employed), dedication to the enterprise, innovation, family environment, location, motivation to become entrepreneur, and public policies. If public policies have supported the promotion of innovation and economic growth, the expected sign for the coefficient of the variable is positive. On the other hand, if the policies have emphasized the approach of employment compensation to mitigate extreme poverty situations, the resulting sign of the relationship should be negative, i.e., the impact of the public policy should be expressed more strongly among entrepreneurs who run less successful micro enterprises.

### III. EMPIRICAL MODEL

#### III. 1. Definition of innovative micro enterprise

The innovative character is associated with the concept of innovation used by Schumpeter<sup>3</sup> to describe the key role of the entrepreneurs as factors of economic development. In this sense, innovation is focused not only on the output, but also in the process of creation itself, from the origination of an idea up to its transformation into something useful (product or service) that can be traded in the market. Then it includes developments such as a new product or service, a new production technique, a new presentation or appearance, a new packaging, a new mode of trading, a new lay-out, etc.

Innovation is widely recognized in the economic literature as a factor of increasing the productivity (OECD, 2000; Rao et al., 2001; Crépon et al., 1998), and there are many examples of innovative micro entrepreneurs that were the seed of big enterprises (e.g. in USA: Dell, Apple, HP; in Argentina: Arcor), so the study of these kind of businessmen is an important matter that could help to improve public policies addressed to promote them.

The definition of micro-enterprise is an empirical issue, and in this sense there are quantitative as well as qualitative criteria. For example, recently, the parameters adopted by a trade chamber (CAME, Bulletin dated May 21st, 2008) for a study of the micro enterprises in the province of Buenos Aires considered it as one with fewer than 10 employees and an annual invoicing of less than \$240,000 per year (about US\$ 80,000.00), while the 2004 National Economic Census differentiates business with 5 or fewer employees from the rest. As regards qualitative criteria, they make reference both to the means of production and the management style, that in this type of businesses are essentially different from those observed in large corporations. An objective criterion has been adopted in this work, supported in the division made by the National Economic Census, under which micro enterprises are those businesses with 5 or fewer employees at their start-up. According to this criteria, there were 77.4 thousand small business in the Province of Córdoba in 1994, and about 90 thousand in 2004, as it was reported by the national economic censuses collected in those years. This implied that the annual grow rate was 1.15%, approximately.

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3. Schumpeter (1934: 88-89).



### III. 2. Data

With regard to the data required to conduct the research, this was collected through a survey during the second semester of 2007 and the first semester of 2008. For this purpose, a random sample of micro-enterprises located in the Province of Córdoba, Argentina, was chosen from a register prepared specifically for the study. It is important to mention that, at the time of the study, there was no official register of all the enterprises located in the area of the research (nor in Argentina as a whole) that could be used as a framework sample (population). Such data should have been taken from the last National Economic Census performed in 2004, but it was not available at the time of the study. So the first task was to build the special register containing as many micro-enterprises as possible by identifying them through all the different means available: information from government and non-governmental organization programs that provide either micro-credits and subsidies or training courses and aid in general to small production businesses was collected for this purpose.<sup>4</sup> Applying this methodology, a special register was obtained with a total of about 4200 micro-enterprises, which was sufficient for generating the random sample.

Activities related to college degree liberal professions were not included in the special registry, since they bear distinct characteristics that, generally speaking, make them clearly distinguishable from innovative micro enterprises. On the other hand, small agri-business activities have been added, since they have a significant weight in the special register, and are of interest for the study given their potential for innovation embedded in them.

After observing in the special registry of micro-enterprises that some branches of activity are more dynamic –in the sense of Schumpeter– and then, more favorable for innovation than others, an initial distinction was introduced to make the design of the sample to capture this feature. The dynamic group includes, for example, “information and related services”, “food and beverage production”, and the non dynamic “retail businesses” and “construction”. Accordingly, the total sample size of 294 micro-enterprises was allocated as follow: 253 (86%) to dynamic branches and 41 (14%) to non dynamic branches.

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4. Even advertisements in newspapers and telephone directories were consulted.

### III. 3. Questionnaire Used

To collect the survey data, a 42-question questionnaire was devised to enquire into the following aspects: (i) data for identification and characterization of the micro-entrepreneur and his/her micro enterprise, (ii) main branch of activity of the micro enterprise, (iii) work background of the entrepreneur, (iv) circumstances related to the start-up of the micro enterprise (motivation and support received), (v) evolution of the enterprise, and (vi) entrepreneur's future vision. The surveys were conducted by duly trained pollster who held interviews in situ with the individual responsible for the micro enterprise.

### III. 4. Multivariate Techniques Used

To characterize the micro enterprises located in the city of Córdoba, and in the inland regions of the Province, a combination of hierarchical and no hierarchical cluster technique was used to differentiate homogeneous groups of micro enterprises, on the basis of a set of relevant variables. The performance of the micro enterprises was analyzed on the basis of the micro entrepreneurs' perception of the business, using a multiple linear regression model, with explanatory variables capturing information on the attributes and the innovative behavior of the individuals who manage them. Finally, a logistic model was applied to perform an analysis of risk on the group of micro entrepreneurs who were recipient of public policies benefits, with the aim of identifying directions in the public policies used in Argentina to promote micro enterprises.

### III. 5. Definition of variables

The following variables were used:

#### *i) Performance*

*Performance perception index.* In order to directly measure the micro enterprise performance, objective information on a set of variables - including sales turnover, profitability, costs, market share, etc. - are needed. Given the nature of the small businesses surveyed, it is difficult to have access to this type of data, that is why the proxy variable for performance used was the performance perception index created on the basis of the opinion of those interviewed on the following aspects of the evolution of their business: sales turnover, earnings, number of employees, and image or social prestige of the enterprise, and to what degree the activity makes it

possible to meet living expenses.<sup>5</sup> This index was standardized with a lower limit of zero, and an upper limit of one.

## **ii) Education and Work Experience**

*Educational level*, as proxy for human capital stock. The construction of this variable is the result of taking into account the highest level of education attained (complete/incomplete) as stated by the individual interviewed.

*Number of courses lasting more than three months*. It is a proxy of additional educational training.

*Work experience as self-employed*. It is measured in number of years.

*Formality/informality*. Dichotomy variable with *Informality*=1, based on Social Security contribution.

*Hours devoted to the micro enterprise*. It is a proxy variable to measure the degree of engagement of the entrepreneur in the business.

*Tasks given priority in the daily work*. A list of tasks was codified differentiating those related to routine administrative, on the one hand, and to production and quality control, on the other, and the interviewed had to rank his priorities

## **iii) Own capital and technological innovation**

*Intensity of use of own capital*. A ratio between the number of items in which own capital was used to the total number of items considered (equipments, buildings, training, technologies and raw materials)

*Degree of innovation*. It is measured with an index created on the basis of the following aspects: development of new processes/new quality control methods, adjustment/manufacture of machinery and equipment, innovation in marketing, development of new variety of products or services, innovation in the business organization and design of proprietary franchises.

## **iv) Public policies**

Public policies usually come in packages that include a combination of training courses, subsidies, loans and coaching activities, whose impact

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5. Data about sales turnover and earnings were collected through the survey but it had to be discarded because of their inconsistencies.

is difficult to measure separately. Consequently, in this paper the impact of the policy will be treated as a package.

*Receiving support.* Dichotomy variable with yes=1. It was constructed using the responses to each of the dichotomy variables included in the questionnaire for each kind of support. When the micro-enterprise received one or more kind of support, the constructed variable adopted value 1, and 0 otherwise.

*Insufficient support.* Equal 1 when the support received was reported by the interviewed not sufficient and 0 otherwise.

*With negative consequences on the micro enterprise.* Equal 1 when the support received was reported not sufficient and had negative consequences on the development of the enterprise, and 0 otherwise.

*Institutional support received* is a dichotomous variable, made out of the product of the variables *Receiving support* (*yes=1*), *Insufficient support* (*yes=1*), and *With negative consequences on the micro enterprise* (*yes=1*). In the first tests, only the dichotomous variable for the effect of receiving institutional support was used. Due to the heterogeneity of the existing support channels, and the modalities each one uses (focused aid; national, provincial, municipal subsidies; training programs; incubators; soft credits; etc) a definition was later adopted for the variable to capture to some extent and with certain sensitivity, the combined effect of this complexity. That is why the variable finally used was created taking into account the three aspects mentioned.

#### **v) Location of the micro enterprise**

*Location.* It is a dummy variable with inland = 1.

#### **vi) Initial occupation status**

*Motivation: being unemployed.* This specific variable was included to capture the significance (in a scale between 0 and 1) of the micro entrepreneur status as unemployed at the moment of planning the micro enterprise.

#### **vii) Control variable**

*Age of the micro-entrepreneur, Gender, Marital Status, Household size and Proportion of family members in the enterprise,* were used as control variables.

## IV. RESULTS

To analyze the question of micro enterprises success in Argentina, three sets of results are presented:

First, the cluster analysis shows that four groups of micro-entrepreneurs with different potential to succeed can be identified. Next, OLS results illustrate about the relative weight of the explanatory variables in the micro-enterprise's success, showing that public policy has a significant effect. Finally, a logit regression model shows the odds of successful of the micro-entrepreneurs in being the beneficiary of public policies.

### **Are all Micro enterprises equal?**

The degree of heterogeneity of the surveyed micro enterprises was an area of interest within the study. The empirical analysis indicated that it is possible to make a significant differentiation among micro enterprises, based on their performance and some aspects related to the micro-entrepreneur<sup>6</sup>, as suggested by the Cunningham and Maloney's work (2001), for Mexico. In particular, the attributes examined were educational level, number of courses taken lasting more than 3 months, the motivation that led to the start-up of the micro enterprise, performance, gender, proportion of family members, and intensity of use of their own capital. Other variables, such as age, dedication to the micro enterprise, and marital status were also tested but did not prove to be statistically significant. Table 1 shows the results obtained after performing cluster analysis and the Appendix includes the statistical descriptors of these variables and the corresponding ANOVA table.

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6. The existence of a significant differentiation among micro enterprises was also confirmed by the surveyors' opinion expressed in the Focus Group, held to gather the main experiences they underwent during the interviews conducted as part of the survey.

**Table 1**  
**Final centers of the clusters**

| VARIABLES  | CLUSTER |      |      |      |
|--|---------|------|------|------|
|  | 1       | 2    | 3    | 4    |
| EDUCATIONAL LEVEL                                | 0.48    | 0.45 | 0.52 | 0.45 |
| NUMBER OF COURSES LASTING MORE THAN THREE MONTHS | 0.53    | 0.26 | 0.23 | 0.39 |
| MOTIVATION: BEING UNEMPLOYED                     | 0.12    | 0.88 | 0.10 | 0.89 |
| PERFORMANCE PERCEPTION INDEX                     | 0.79    | 0.68 | 0.76 | 0.64 |
| GENDER (FEMALE=1)                                | 1       | 0    | 0    | 1    |
| PROPORTION OF FAMILY MEMBERS IN THE ENTERPRISE   | 0.30    | 0.27 | 0.27 | 0.37 |
| INTENSITY OF USE OF OWN CAPITAL                  | 0.68    | 0.59 | 0.70 | 0.54 |
| NUMBER OF MICRO-ENTERPRISES                      | 62      | 43   | 131  | 58   |

Number of cases: 294

There are four clearly differentiated groups which may be described as follows:

**Cluster 1:**

Micro enterprises managed by females with an educational level slightly lower than the mean but with strong additional training in courses with a duration of over three months, who became micro-entrepreneur for reasons not linked to unemployment, with participation of other family members in the micro enterprise slightly higher than the mean, and with significant use of their own capital. The performance of these micro enterprises is the best of all surveyed groups. This group could be called “The trained pink-collar micro enterprise”

**Cluster 2:**

Micro enterprises managed by males who became micro-entrepreneurs due to unemployment, with low educational level and training, with participation of family members lower than the mean and low intensity of use of their own capital. The performance of these micro enterprises is in the lowest bracket within the surveyed groups. This cluster seems to be representative of “The pushed male micro enterprise”.

**Cluster 3:**

Micro enterprises managed by males whose main motivation to start as micro-entrepreneurs was not unemployment, with high educational level and relatively low subsequent training, with moderate support in their work from family members, and with the highest level of capital use intensity. The performance of these micro enterprises is very high. The characteristic of cluster 3 indicates the existence of a class of “The entrepreneurial male micro enterprise”

**Cluster 4:**

Micro enterprises managed by females whose main motivation for becoming micro-entrepreneurs was strongly based on unemployment status, with education quite lower than the mean, and training slightly over than the mean, accompanied by a significant group of family members who cooperate in the enterprise, and with low intensity of use of their own capital. The performance of these micro enterprises is lower than the mean. This group could be called “The pushed pink-collar micro enterprise”.

**On Which Variables Does the Micro-enterprise Performance Depend?**

In the previous section four groups of micro enterprises were identified with different mean values of the performance index. An additional interesting question concerns the determinants of the performance perception shown by each micro-entrepreneur surveyed. This issue was analyzed with the following linear regression model:

$$Y = X\beta + \mu$$

where:

$Y$  is the vector of the performance perception index for the sample micro enterprises, and  $X$  is a vector containing the explanatory variables which are standardized between 0 and 1 to facilitate the analysis of the impacts by making them directly comparables.

$\beta$  is the vector containing the coefficients associated to the explanatory variables and the constant term.

$\mu$  is the vector of error terms, which comply with the usual assumptions.

The variables related to the micro-entrepreneur and the micro enterprise included in X for the different tests performed were the following as they were defined above:

*Educational level.* The intention was to verify if there is a positive association between human capital accumulated by the micro-entrepreneur and his/her perception of success of the enterprise started. The sign expected for this variable coefficient in the regression is positive.

*Work experience as self-employed (in years).* This variable is included to determine if the micro-entrepreneur maturity contributes positively to the success of the current enterprise. As proposed by Blanchflower and Oswald (1998), the expected sign for this variable is positive.

*Formality/informality.* Evidence related to the relatively less developed countries indicates that informality is extensive, mainly in the economic activities carried out by small businesses. A discussion present in business and government levels is precisely linked to the constraints that informality poses to the access to institutional support. There is no prior hypothesis on the relationship between these aspects of formality/informality and the perception the entrepreneur has of the performance of his/her production activity; however, it is possible to imagine that a higher degree of informality restricts the possibility of having access to institutional support programs, since their requirements demand certified accounting records, evidence of up-to-date taxes, evidence of up-to-date social security payments, etc.

*Degree of dedication to the enterprise.* A positive association is expected between dedication and performance.

*Tasks given priority in the daily work.* It is interesting to determine whether micro-enterprises owned by micro-entrepreneurs who give more priority to tasks related to production and quality control are more linked to success. There is no prior hypothesis as to the sign of the coefficient of this variable.

*Intensity of use of own capital.* Within possible financing sources, the bibliography coincides in highlighting that the lack of assets (own



capital, inheritance, gifts, etc.) constitutes the main restriction on development and success of the micro enterprise; therefore, the anticipated sign for this variable coefficient is positive, in the sense that the larger their own capital, the better the performance.

*Degree of innovation.* The theory indicates that success is positively associated with innovation; therefore, the expected sign for this variable is positive.<sup>7</sup>

*Institutional support received.* A direct relationship between the success indicator and institutional support is expected, being the later focused on promoting innovation in its widest sense. On the contrary, the relationship of this variable with the success perception indicator would be the reverse if the policy bias is “pro-poor”.

*Location (Inl. = 1).* It was introduced to capture the probable differences on the effect the location in the Capital city or in the inland regions of the province may have.

*Motivation: being unemployed.* This specific variable was included to test the push hypothesis advanced in Storey (1994:71) suggesting that unemployed individuals are more likely to become entrepreneurs by necessity rather than motivation.

Table 2 shows the results obtained for the regression with the best goodness of fit and the list of variables that were significant. The variables *Work experience as self-employed (in years)*, *Formality/informality* and *Tasks given priority in the daily work* were not significant and are not shown in the table.

The performance of the micro-enterprises studied seems to be positively associated with the level of education as proxy for human capital of the entrepreneur managing it, and the effect is statistically significant. When this variable is supplemented with information gathered on the training courses taken by the micro-entrepreneur, it was observed in different tests, that their contribution was not relevant to the enterprise performance, which leads to some questions as to the relevance of the studies in relation to the entrepreneurship training necessary to manage

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7. H. Binz and M. Reichle (2007) provides a method for the calculation of the success potential and the degree of innovation.

small businesses.<sup>8</sup> On the other hand, performance was positively influenced by the degree of dedication of the entrepreneur to the company, the intensity of use of their own capital, and the degree of innovation, variables which were statistically significant. On the other hand, the performance of the micro-enterprise has a negative relationship, which is statistically significant, in relation to the institutional support received, and to the unemployment status of the micro-entrepreneur at the moment of starting up the enterprise, i.e., involuntarily becoming an entrepreneur, confirming the push hypothesis. Besides, it was observed that the perception small entrepreneurs of the inland regions of the province have on the performance of their micro-enterprise is somewhat more positive than that of entrepreneurs in the capital city.

**Table 2**  
**Regression Coefficients**

| VARIABLES   | NON-STANDARD.<br>COEFF. |                 | STANDARD.<br>COEFF |        | SIG.  |
|---|-------------------------|-----------------|--------------------|--------|-------|
|   | B                       | STAND.<br>ERROR | BETA               | T      |       |
| (CONSTANT)  | 0.175                   | 0.068           |                    | 2.577  | 0.100 |
| EDUCATIONAL LEVEL<br>(4 CATEGORIES_N)   | 0.074                   | 0.043           | 0.089              | 1.730  | 0.085 |
| DEGREE OF DEDICATION TO THE<br>MICRO ENTERPRISE   | 0.477                   | 0.060           | 0.395              | 7.987  | 0.000 |
| INTENSITY OF USE OWN_CAP  | 0.083                   | 0.040           | 0.111              | 2.066  | 0.040 |
| DEGREE OF INNOVATION  | 0.118                   | 0.040           | 0.154              | 2.962  | 0.003 |
| INSTITUTIONAL SUPPORT<br>RECEIVED (RECEIVING SUPPORT<br>X INSUFFICIENT SUPPORT X<br>WITH CONSEQUENCES =1) | -0.043                  | 0.020           | -0.108             | -2.190 | 0.029 |
| MOTIVATION: BEING<br>UNEMPLOYED   | -0.108                  | 0.022           | -0.242             | -4.855 | 0.000 |
| LOCATION (INL.=1)   | 0.035                   | 0.018           | 0.098              | 1.970  | 0.050 |

Dependant variable: Performance perception index

Corrected R squared = 0.336; F=22.181; Sig = 0.000; DW= 1.646. Valid cases: 294

8. Some authors indicate that innate skills have a significant role in explaining the success of an enterprise, although this view is not fully tested. See Blanchflower and Oswald (2001), Silva (2006), Lazear (2004), Backes-Gellner and Moog (2008).

The significant positive effect of degree of dedication of the micro-entrepreneur to the business was verified by observing that, in general, a large majority of successful micro-enterprises are managed by individual highly dedicated to them, while low performance micro-enterprises are concentrated in the few cases of low dedication.

The variable intensity of use of their own capital measures the self-financing capacity applied to areas such as property, machinery and equipment, vehicles, training, technology acquisition (rights or patents), and acquisition of supplies. As predicted by the theory, it is positively correlated to performance, and it was statistically significant in all tests run.

Likewise, successful enterprises were found to be positively associated with the usual application of innovation in areas such as: development of new production processes, new quality control and quality assurance methods, systematic incorporation of machinery and equipment, development of new marketing, organizational and administrative techniques, diversification of products, and design of franchises.

As expressed, the effect of the public policies on the micro-enterprise performance was captured through a dummy variable with a value of one when the micro-enterprise receives (or received) support, it was insufficient, and it restricted the development possibilities; and a value of zero in all other cases. The coefficient sign associated with this variable was negative and statistically significant, indicating that the public programs to which the interviewed micro-entrepreneurs has access, had in average a negative impact on the business performance, since they were insufficient and did not contribute to their development. This result confirmed the hypothesis on the existence of a “pro-poor” bias in public policies supporting micro-enterprises. This finding is in line with conclusions obtained by other studies around the world which has shown that entrepreneurs view government support and political involvement as relatively unimportant to their success (Cynthia Benzing et al., 2009).

The latter conclusion is reasserted when considering the reasons that led the micro entrepreneur to the development of a business idea. Of the wide list of possible motivations given in the survey, the variable because I was unemployed was the only statistically significant and with

negative effect. This may be interpreted in the sense that the sole motivation of not having a job is not sufficient incentive for a good performance in the business started, but rather there are other latent factors difficult to measure, that the current status of the discussion has not incorporated yet in the modeling of this phenomenon. The next related question is focused on determining if the public policies supporting the sector were focused on a particular subset of the population.

### **Who do the Public Policies Providing Support to Micro enterprises Benefit?**

As suggested above, the unemployed individual who becomes a micro-entrepreneur does so involuntarily, and he/she does not necessarily have some of the specific skills required or enough capital, whether from savings, family aid or gifts. This is a class of micro-entrepreneurs that the theory calls “push” micro entrepreneurs (Storey, 1994; Tongue, 2001). In this sense, then, if public policies were directed to the promotion of micro-enterprises among the unemployed - the most frequent case quoted in the literature - its effect would be redistributive in favor of lower income sectors, what is usually called pro-poor bias.

An additional and related question to explore concerns the level of innovation existing among push micro-entrepreneurs and whether the location makes any difference among them in terms of their inclination to innovation. Table 3, shows the distribution of the micro-enterprises by branch of activities (Non innovative / Innovative) and location. The chi-square test indicates that the variables *Branch of activity (Innovative/Non-Innovative)* and *Location* were statistically associated, being observed that the weight of innovative micro enterprises is significantly higher in the inland regions of the Province compared to the Capital city. This aspect was taken into account to incorporate both variables in separate logistic regressions

**Table 3**  
**Branch of activity per location**

| BRANCH OF ACTIVITY |                        | LOCATION (INL.=1) |                                | TOTAL |
|--------------------|------------------------|-------------------|--------------------------------|-------|
|                    |                        | CAPITAL CITY      | INLAND REGIONS OF THE PROVINCE |       |
| NON INNOVATIVE     | NUMBER                 | 28                | 14                             | 42    |
|                    | % OF LOCATION (INL.=1) | 24.6              | 7.8                            | 14.3  |
| INNOVATIVE         | NUMBER                 | 86                | 166                            | 252   |
|                    | % OF LOCATION (INL.=1) | 75.4              | 92.2                           | 85.7  |
| TOTAL              | NUMBER                 | 114               | 180                            | 294   |
|                    | % OF LOCATION (INL.=1) | 100               | 100                            | 100   |

Pearson's chi square = 16.235. Signif. 0.000

Logistic regression served to identify in this work the factors which characterize the population subsets more likely to *receive* institutional support for micro-enterprises, so as to verify if in Argentina these policies have a pro-poor bias. The dichotomous dependent variable used was Receiving support meaning it had/it did not have institutional support, and as co variables the effects associated with *Motivation: being unemployed, Formal/Informal, Gender, Location*, and Degree of Innovation were stable for the model. The effect of considering *Age, Level of Education and Household size* did not improve the results. Three different versions of the model are presented below in which the variables *Motivation: being unemployed, Formal/Informal, Gender* are always present. The first version includes also the variable *Location*, the second version includes the variable *Degree of Innovation* but not *Location*, and the third version does not include any of them. Tables 4, 5 y 6 report the results.

Table 4 summarizes the results of version 1 of the logistic model, in which the odds of receiving (or not receiving) institutional support were positively correlated with the variable *Motivation: being unemployed*, which was highly significant, and negatively affected by *Condition of*

informal labor, the condition of being a Female, and the fact of being Located in the inland regions, although the latter did not reach statistical significance.

Those results would indicate that the male micro-entrepreneurs, pushed by unemployment, acting in the formal labor market in the capital city of the province, are more likely to be recipients of public policies, something which would corroborate the prior hypothesis of pro-poor bias.

**Table 4**  
**Logistic Regression. Version 1**

| EXPLANATORY VARIABLES           | B      | E.T.  | WALD  | GL | SIG.  | EXP(B) |
|---------------------------------|--------|-------|-------|----|-------|--------|
| MOTIVATION:<br>BEING UNEMPLOYED | 0.944  | 0.343 | 7.558 | 1  | 0.006 | 2.570  |
| FORMAL/INFORMAL<br>(INFORMAL=1) | -0.455 | 0.268 | 2.880 | 1  | 0.090 | 0.635  |
| GENDER (FEMALES=1)              | -0.491 | 0.263 | 3.497 | 1  | 0.061 | 0.612  |
| LOCATION (INL.=1)               | -0.203 | 0.257 | 0.627 | 1  | 0.429 | 0.816  |
| CONSTANT                        | 0.750  | 0.325 | 5.337 | 1  | 0.021 | 2.118  |

Dependant variable: Receiving institutional support (Yes=1)

-2 log likelihood = 373.731. HL Test signif 0.344

**Classification Table**

| OBSERVED           |     | ANTICIPATED        |     | CORRECTED<br>AVERAGE |
|--------------------|-----|--------------------|-----|----------------------|
|                    |     | HAVING AID (YES=1) |     |                      |
|                    |     | NO                 | YES |                      |
| HAVING AID (YES=1) | NO  | 50                 | 67  | 42.7                 |
|                    | YES | 43                 | 134 | 75.7                 |
| GLOBAL PERCENTAGE  |     |                    |     | 62.6                 |

Cutoff value = 0.500

In version 2 of the model, the variable Location was replaced by Degree of Innovation, confirming the results obtained previously in relation to the significant explanatory power of the remaining variables Motivation: being unemployed, Formal/Informal, Gender. Table 5 presents these results.

**Table 5**  
**Logistic Regression. Version 2**

| EXPLANATORY VARIABLES           | B      | E.T.  | WALD  | GL | SIG.  | EXP(B) |
|---------------------------------|--------|-------|-------|----|-------|--------|
| MOTIVATION:<br>BEING UNEMPLOYED | 0.912  | 0.342 | 7.092 | 1  | 0.008 | 2.489  |
| FORMAL/INFORMAL<br>(INFORMAL=1) | -0.412 | 0.268 | 2.373 | 1  | 0.123 | 0.662  |
| GENDER (FEMALES=1)              | -0.511 | 0.264 | 3.747 | 1  | 0.053 | 0.600  |
| DEGREE OF INNOVATION            | -0.564 | 0.546 | 1.068 | 1  | 0.301 | 0.569  |
| CONSTANT                        | 0.915  | 0.391 | 5.463 | 1  | 0.019 | 2.497  |

Dependant variable: Receiving institutional support (Yes=1)  
-2 log likelihood = 373.284. HL Test signif = 0.310

**Classification Table**

| OBSERVED           |     | ANTICIPATED        |     | CORRECTED AVERAGE |
|--------------------|-----|--------------------|-----|-------------------|
|                    |     | HAVING AID (YES=1) |     |                   |
|                    |     | NO                 | YES |                   |
| HAVING AID (YES=1) | NO  | 45                 | 72  | 38.5              |
|                    | YES | 36                 | 141 | 79.7              |
| GLOBAL PERCENTAGE  |     |                    |     | 63.3              |

Cutoff value = 0.500

The signs of the coefficients corresponding to the variables Location (table 4) and *Degree of Motivation* (Table 5) is negative in both cases, reinforcing the idea that public policies supporting micro-enterprises was less directed to the inland regions of the province, where the weight of the innovative branch of business is higher (Table 3)

Finally, Table 6 shows the results of running version 3 of the logistic regression model with the only three co variables which were statistically significant in the previous versions.

**Table 6**  
**Logistic Regression. Version 3**

| EXPLANATORY VARIABLES           | B      | E.T.  | WALD  | GL | SIG.  | EXP(B) |
|---------------------------------|--------|-------|-------|----|-------|--------|
| MOTIVATION:<br>BEING UNEMPLOYED | 0.925  | 0.342 | 7,322 | 1  | 0.007 | 2.522  |
| FORMAL/INFORMAL<br>(INFORMAL=1) | -0.436 | 0.266 | 2.676 | 1  | 0.102 | 0.647  |
| GENDER (FEMALES=1)              | -0.485 | 0.262 | 3.429 | 1  | 0.064 | 0.615  |
| CONSTANT                        | 0.663  | 0.305 | 4.739 | 1  | 0.029 | 1.941  |

Dependant variable: Receiving institutional support (Yes=1)

-2 log likelihood = 373.284. HL Test signif = 0.310

**Classification Table**

| OBSERVED                  |     | ANTICIPATED        |     | CORRECTED<br>AVERAGE |
|---------------------------|-----|--------------------|-----|----------------------|
|                           |     | HAVING AID (YES=1) |     |                      |
|                           |     | NO                 | YES |                      |
| RECEIVING SUPPORT (YES=1) | NO  | 49                 | 68  | 41.9                 |
|                           | YES | 42                 | 135 | 76.3                 |
| GLOBAL PERCENTAGE         |     |                    |     | 62.6                 |

Cutoff value = 0,500



The right column shows the odds ratios obtained for the significant variables. The value 2.522 indicates the odds that an entrepreneur, who was unemployed at the time of starting his business, is eligible to receive public support. Being a worker in the informal sector rather than in the formal ones, reduces by 35% the odds of receiving public support. Similarly, the condition of being female reduces by 38% the odds of being eligible for public support. The three odds ratios shown in table 6 almost replicate the values observed in table 4 and 5, confirming the robustness of the estimations.

Finally, in the three versions of the logistic regression model, the coefficients of the significant variables remained stable, with Motivation: being unemployed, showing the highest contribution to explain the pro-poor bias of the public policies. In all cases, the overall quality of the regressions herein presented is satisfactory, as reported by the 2LL, HL test and the corresponding classification tables.

## V. CONCLUSIONS

The main conclusions obtained from the survey of 294 entrepreneurs who own micro-enterprises in Córdoba, Argentina, are the following:

Not all micro-enterprises respond to uniform characteristics; on the contrary, a cluster analysis performed by using personal characteristics of the micro-entrepreneur and the performance of his micro-enterprise revealed the possibility of differentiating four dominant clusters. To highlight the presence of the essential traits that contributes to entrepreneurship, they were denominated trained pink-collar micro-enterprise, pushed male micro-enterprise, entrepreneurial male micro-enterprise, and pushed pink-collar micro-enterprise.

The performance of micro-enterprises in the group of trained pink-collar micro-entrepreneurs was at the top of all surveyed groups, while the worst performance corresponded to the micro-enterprises in the group of pushed male micro-entrepreneurs.

According to the survey's results the pushed male micro-enterprises and the pushed pink-collar micro-enterprises have obtained the highest support from public policies. Consequently, one important finding in

the paper is the pro-poor bias which characterized the public policies implemented in Argentina, which is consistent with the need to promote social inclusion in a context of recovering from the severe 2001-2002 economic downturn.

Finally, the research did not find clear evidences that policies help innovative micro-enterprises to achieve mid-term sustainability, rather, the study found that policies were addressed to support micro-enterprises arising from unemployment that are low performing, less innovative, and located in the Capital city.

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## VII. APPENDIX

### Statistical descriptors of the variables used in the cluster analysis

| VARIABLE   | MINIMUM | MAXIMUM | MEAN   | STAND.DEV |
|--|---------|---------|--------|-----------|
| EDUCATIONAL LEVEL                                    | 0.10    | 1.00    | 0.4901 | 0.21081   |
| NUMBER OF COURSES OF MORE THAN 3 MONTHS STANDARDIZED | 0.00    | 1.00    | 0.3277 | 0.36061   |
| MOTIVATION: BEING UNEMPLOYED                         | 0.00    | 1.00    | 0.3735 | 0.39343   |
| PERFORMANCE PERCEPTION INDEX                         | 0.07    | 1.00    | 0.7318 | 0.17630   |
| PROPORTION OF FAMILY MEMBERS                         | 0.00    | 0.88    | 0.2980 | 0.28794   |
| INTENSITY OF USE OWN_CAP                             | 0.00    | 1.00    | 0.6483 | 0.23539   |
| N VALID (UNDER THE LIST)                             |         | 294     |        |           |

**Cluster Analysis: ANOVA**

| VARIABLE   | CLUSTERS |    | ERROR |     | F       | SIG.  |
|--|----------|----|-------|-----|---------|-------|
|  | RMS      | GL | RMS   | GL  |         |       |
| EDUCATIONAL LEVEL                                    | 0.101    | 3  | 0.044 | 290 | 2.295   | 0.078 |
| NUMBER OF COURSES OF MORE THAN 3 MONTHS STANDARDIZED | 1.435    | 3  | 0.117 | 290 | 12.312  | 0.000 |
| MOTIVATION: BEING UNEMPLOYED                         | 13.329   | 3  | 0.019 | 290 | 720.228 | 0.000 |
| PERFORMANCE PERCEPTION INDEX                         | 0.293    | 3  | 0.028 | 290 | 10.323  | 0.000 |
| GENDER (FEMALES=1)                                   | 23.673   | 3  | 0.000 | 290 | .       | .     |
| PROPORTION OF FAMILY MEMBERS                         | 0.142    | 3  | 0.082 | 290 | 1.729   | 0.161 |
| INTENSITY OF USE OWN_CAP                             | 0.421    | 3  | 0.052 | 290 | 8.163   | 0.000 |