

## Firms Landscape of a Region of Southern of Colombia, Creation and Survival Behavior

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**Abstract:** The creation and permanence of firms are fundamental pieces for the development and economic growth of a region. The stability of the firms is an evident and determining factor of the competitiveness and sustainability that impacts directly the unemployment rates, the gross domestic product and the quality of life of the inhabitants. This study analyzes the business behavior based on the renewal of the mercantile registry with a cut in 2017 of the firms constituted from 2010-2016 in the State of Huila (Colombia), describing them by type of personality, size, sector and localization.

**Key words:** Business survival, economic development, new firms, firm behavior, domestic, sustainability

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### INTRODUCTION

The creation and survival of companies is a fundamental factor for the economic development of a region (Audretsch and Keilbach, 2004). Likewise, the social welfare and wealth of a country is closely related to business success (Wennekers *et al.*, 2005).

Different studies have been conducted with periods of study between 5 and 10 years, to identify the factors that allow the emergence, survival and success of new ventures; made with studies between 5 and 10 years in length. These investigations have aimed to identify the determinants of the companies' results which lead to them remain active over time or to failure (Gonzalez-Loureiro and Puig, 2015).

Many of these studies have determined that more than 50% of new businesses fail during the first 5 years of business activity (Johnson, 2005; Mills and Timmins, 2004). In the same way, studies carried out in countries which are part of the OECD (2014) (Organization for Economic Co-operation and Development) have found that a portion of half of the new companies fail within the first 2 years of life and the remaining part survives during the following 7 years of operation (Bartelsman *et al.*, 2005; Santerelli and Vivarelli, 2007). There are several factors that determine business survival: the macroeconomic conditions and the innovation capacity of the company (Audretsch, 1991, 1995; Cefis and Marsili, 2006; Etchebarne *et al.*, 2008; Highfield and Smiley, 1987;

Holmes *et al.*, 2010; Huggins *et al.*, 2017) growth rate, size and age of companies (Navaretti *et al.*, 2014; Bentzen *et al.*, 2012; Dunne *et al.*, 1988; Evans, 1987; Hall, 1987; Pervan *et al.*, 2017) level of concentration and reactivity to market changes (Audretsch and Mahmood, 1994; Hannan and Carroll, 1992) and making strategic decisions (Levinthal, 1997; Rauch and Rijdsdijk, 2013; Shepherd, 2015; Montoya *et al.*, 2010; De Comercio-Confeamamas, 2017).

This scenario is not different in Latin America. According to Colombia's National Association of Chambers of Commerce more than half of the new companies in different Latin American countries fail in the first 5 years; on average, they disappear at a rate between 20 and 30% in the first year with a gradual increase, of 10 points per year. Evidence shows that <50% of companies survive the 50 year. Additionally, only 40% of Colombian firms remain open after this period, evidencing a low company survival reflected in low productivity and business competitiveness (Shwab, 2017).

However, in Colombia, the business success panorama is not clear. Different studies are being carried out in various cities (Angel and Pulido, 2010; Sandoval and Marin, 2008; Hernandez, 2013; Rincon-Guio *et al.*, 2018) and only a few of them described survival determinants in specific economic sectors (Jose *et al.*, 2006; Martinez, 2006; Parra, 2010; Manrique *et al.*, 2017). Although, these studies have established a baseline in Colombia, they cannot be considered current, since,

economic conditions change rapidly over time. Therefore, the objective of this study is to describe the survival factors of companies that were included in the National Market Registry between 2010 and 2017 in a state in Southern Colombia.

## MATERIALS AND METHODS

A retrospective observational descriptive study was performed, the source of information was the Registro Unico Comercial y Social or RUES, National Database. The study took into account companies registered between 2010-2017, their economic activity, size and location.

Data analysis was restricted to projects with dates of completion between the study period. The analysis was performed for the UNINAVARRA Research Department team using the statistical program IBM-SPSS®, Version 24.

Central tendency and dispersion measurements were used for the quantitative variables; in addition, bivariate analysis was performed to correlate registration, continuous renewal, economic activity, size and location. Various statistical confidence tests were applied such as Spearman's Rho and  $\chi^2$ .

**Inclusion and exclusion criteria:** Company creation dates were determined in the registration database and company closure was determined to be the date the company disappeared from database, whether for cancellation of the registration or due to no new updates of its registration in the following years. Missing data information for the companies was not considered for the study.

## RESULTS AND DISCUSSION

Between 2010 and 2017 a total of 40,137 companies were registered. From these productive units 22.18% were legal entities and the constitution average was 24.02% with constitution means ranged between 14.64-35.68% (Fig. 1).

For the period of 2017 a total of 74.14% of companies were found registered and with an updated commercial registry. Between 2010 and 2016 69.61% (n = 4,464) updated their commercial registry, forming 85.10% of the total active companies for 2017. Also, data showed that during the 2010-2016 period, the updating of the Merchant Registry was decreasing and increasing in time (Table 1).

Between 2010 and 2016, 66.39% of the companies registered were created in the northern region of the state

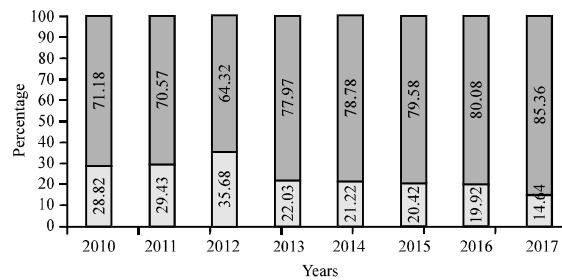


Fig. 1: Type of company registration by period

Table 1: Updating of the merchant registry

Period	Registered	Renewed and registered in 2017 (Y)	Renewed and registered in 2017 per period (%)	Renewed and registered to 2017 on the total (%)
2010	473	314	66.38	6.28
2011	610	379	62.13	8.09
2012	833	540	64.83	11.05
2013	1044	622	59.58	13.85
2014	1111	752	67.69	14.74
2015	1045	770	73.68	13.87
2016	1297	1087	83.81	17.21
2017	1123	1123	100	14.90
Total	6413	4464	74.14	100.00

Table 2: Companies registered during 2010-2016 periods by geographical zone and size

Subregion	Registered	Renewed	Renewed (%)
Center	720	494	68.61
North	4258	2907	68.27
West	453	373	82.34
South	982	690	70.26
<b>Size</b>			
Large company	5	5	100
Medium company	52	47	90.38
Micro company	6000	4089	68.15
Small company	356	323	90.73

and 68.27% of the companies were still active at the end of 2017-presenting the lowest renovation rate compared to the other zones of the state. The other regions of the state presented different behavior. Additionally, a total of 93.55% companies were micro-companies where 68.15% remained active until the end of the 2017 period while 90.73% of the small-companies renewed their title in 2017 (Table 2).

During the study period, 66.38% of the registered companies in 2010 renewed their registration title for the year 2017. The companies registered between 2010-2016 also presented a different average of renovation, ranging between 59.58 and 83.81% (Table 3).

Most of the companies registered between 2010-2016 (64.84%) renewed their registration at all periods. Just 14.19% of the companies did not renewed their registration (Table 4 and 5).

At the end of 2017, only five economic sections represented 75.61% of the total companies registered

Table 3: Company register updating by period

Period	Renewed by period					
	2011 (%)	2012 (%)	2013 (%)	2014 (%)	2015 (%)	2016 (%)
2010	95.14	93.87	91.12	87.32	82.66	74.42
2011		87.87	86.23	83.11	77.70	71.48
2012			90.28	84.87	78.03	68.07
2013				81.32	73.28	64.37
2014					81.19	72.82
2015						79.62
2016						

Table 4: Company register updating following creation

Period	Registeres	Renewed at 2017 (%)	Continpus renewal (%)	Some renovation (%)	Without renovation (%)
2010	473	66.38	58.35	95.14	4.86
2011	610	62.13	48.69	87.87	12.13
2012	833	64.83	59.54	91.60	8.40
2013	1044	59.58	55.56	82.47	17.53
2014	1111	67.69	63.37	82.99	17.01
2015	1045	73.68	68.71	84.59	15.41
2016	1297	83.81	83.81	83.81	16.19
Total	6413	69.61	64.84	85.81	14.19

Table 5: Distribution of companies by size and economic sector

Description	Registered companies				
	Large	Medium	Micro	Small	Total
Artistic, entertainment and recreation activities		2	37	4	43(0.67)
Human health care and socia assistance activities	3	4	202	27	236 (3.68)
Administrative and support services activities		4	325	18	347 (5.41)
Financial and insurance activities			77	4	81 (1.26)
Real estate activities		1	96	12	109 (1.69)
Professional, scientific and technical activities		3	660	31	694 (10.82)
Public administration and defense; compulsory social security plans			40	1	41 (0.63)
Agriculture, livestock, hunting, forestry and fishing		6	520	22	548 (8.54)
Accommodation and food services		1	150	13	164 (2.55)
Wholesale and Retail; repair of motor vehicles and motorcycles	1	5	886	72	964 (15.031)
Building	1	15	622	76	714 (11.13)
Water distribution; evacuation and treatment of wastewater, waste management and environmental sanitation activities		1	73	5	79 (1.23)
Education		1	83	3	87 (1.356)
Exploitation of mines and quarries		1	61	3	65 (1.01)
Manufacturing industries		3	347	32	382 (5.95)
Information and communications			158	3	161 (2.51)
Other service activities		2	1493	8	1503 (23.43)
Transportation and storage		3	170	22	195 (3.04)
Total	5	52	6000	356	6413
<b>Renewed companies at 2017 (%)</b>					
Artistic, entertainment and recreation activities		100%	72.97%	75.00%	32 (0.716)
Human health care and socia assistance activities	100%	100%	70.30%	92.59%	174 (3.89)
Administrative and support services activities		100%	52.62%	88.89%	190 (4.27)
Financial and insurance activities			79.22%	100%	65 (1.45)
Real estate activities		100%	67.71%	91.67%	76 (1.72)
Professional, scientific and technical activities		100%	65.00%	93.55%	461 (10.32)
Public administration and defense; compulsory social security plans			80.00%	100%	33 (0.73)
Agriculture, livestock, hunting, forestry and fishing		100%	78.85%	90.91%	435 (9.76)
Accommodation and food services		100%	56.00%	84.62%	96 (2.15)
Wholesale and retail; repair of motor vehicles and motorcycles	100%	100%	64.90%	93.06%	648 (14.51)
Building	100%	86.67%	67.85%	85.53%	501 (11.22)
Water distribution; evacuation and treatment of wastewater, waste management and environmental sanitation activities		100%	72.60%	100%	58 (1.32)
Education		100%	73.49%	100%	58 (1.32)
Exploitation of mines and quarries		100%	70.49%	100%	47 (1.05)
Manufacturing industries		66.67%	64.55%	87.50%	253 (5.68)
Information and communications			70.25%	100%	114 (2.55)
Other service activities		50.00%	71.60%	87.50%	1077 (24.12)
Transportation and storage		66.67%	64.71%	100%	134 (3)
Total	100%	90.38%	68.15%	90.73%	100%

and renewed for that year. These companies were registered in other activities at 24.12%, wholesale trade in 14.51%, 10.32% in professional, scientific and technical activities and 11.22% in construction while agriculture, livestock, hunting, forestry and fishing comprised 9.76%, plus manufacturing industries an additional 5.68% (Table 5).

The objective of this study was to describe the behavior of companies in the Department of Huila, Colombia. The analysis was carried out for companies created between 2010 and 2017 and which remained active at the end of the study period. The results obtained showed that there is a relationship between the size of the companies and the probability of survival. The companies registered as "micro" and "small" reflected a greater propensity for failure during the period of study, in addition to being the majority size of companies created in the same time. Companies cataloged as average size were found to survive in greater degree (Angel and Pulido, 2010; Hernandez, 2013; Martinez, 2006; Melgarejo-Molina *et al.*, 2012).

In addition, a direct relationship was found between the size of the companies and the registered economic activity, since, the registration of micro and small companies was concentrated in other activities, wholesale trade, professional, scientific and technical activities and construction. This scenario is the same as that of non-renewed companies, since, the companies in these same activities demonstrated cessation of operations in equal proportions. This finding shows that companies registered in the most preferred sub-sectors have a greater risk of leaving the market (Angel and Pulido, 2010; Hernandez, 2012; Martinez, 2006; Rincon-Guio *et al.*, 2018).

## CONCLUSION

The results found in the study contribute enormously to the theory and practice of business administration, organizational management and economic behavior, in addition, they favor political and administrative fields in both a regional and national scope. Lastly, the results serve as a national and international baseline for future studies related to business development and entrepreneurship in developing countries.

Additionally, these guidelines may aid in the design, development and implementation of projects, programs and strategies that propitiate the creation of companies and guarantee their permanence, growth and development in the market.

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