

EMPLOYEE-OWNED ENTERPRISES IN TECHNOLOGICAL SECTOR: INFLUENCE OF THEIR SOCIAL AND PARTICIPATORY PROFILE IN THEIR PERFORMANCE.

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Abstract:

One of the elements that identifies the most successful technology companies in the world, many of them based in Silicon Valley, is their ability to create collaborative and team work spaces, and to give participation to all the company's personnel. Employee-Owned Firms, that stems from the fact that they are at the same time owners of the company, could be an interesting example for business model innovation as one of their objective is to contribute to satisfying the general needs of the community in which they are located through social and economic development.

In this work a profile of the Spanish workers owned enterprises is done, compared to limited companies. Secondly, Robotnic, a Spanish workers owned enterprise is presented, which will allow us to establish and analyze what differential aspects stemming from its social profile, contribute to success and to a better perform of technological companies.

Keywords: Workers owned enterprises, technology, robotics, social innovation, stakeholders.

1. Workers owned Enterprises, social economy companies in the market subsector.

Social economy includes 2 million enterprises in Europe, representing 10% of all businesses in the EU, and employ more than 11 million people— about 6% of the EU's employees. The social economy unites a large and rich variety of organisational forms shaped by diverse national and welfare contexts but with shared values, characteristics and goals. (European Commission, 2019)

Its importance and commitment with some of key EU objectives, including the achievement of smart, sustainable and inclusive growth, high-quality employment, social cohesion, social innovation, local and regional development and environmental protection, has made this sector an important pillar in terms of employment and social cohesion across Europe, being also key to achieving the goals of the Europe 2020 Strategy. (Council of the European Union, 2015)

Among the variety of entities included in the market-subsector of the social economy there are the employee-owned enterprises, set up in order to create or maintain stable employment for their members. Workers own the majority of shares, who also control the governing bodies. While these companies often take the form of public limited companies or limited companies, the workers' equity is equally divided among them, so these companies are actually characterized by democratic decision-making processes and equitable distribution of profits. The best-known example of this type of company is the labour company (Sociedad laboral) in Spain. (Monzón and Chaves, 2012).

The employee-owned enterprises (EOE) operate in Spain under their own legal structure defined in Law 44/2015, and must respect a number of limitations (Fernandez-Guadano, 2015 and Law 44/2015), that entitles them to be considered as social economy entities:

- Their capital must belong mainly to employees with indefinite contracts, and shares must be nominative.
- A limitation on the distribution of equity between partners: no partner can have more than one third of the capital, unless it is a public entity or a non-profit organisation, in which case it can be extended up to 50%.
- A limitation in the capital that can be owned by one member (no more than 1/3 of the total capital)
- A limitation on the work that can be done by the non-member workers: there is a limit to the total number of hours per year worked by the non-partner workers that are hired for an indefinite period, that will not exceed 49% of the total of hours of the member workers.
- A limitation on the transferability of securities: securities are freely transferable to member workers and non-member workers with indefinite contracts. In other cases, there is an order of preference (first the non-partner workers that are hired for an indefinite period, second the member workers, third general members, and finally outsiders)
- A limitation on the distribution of results: in addition to the appropriate legal or statutory reserves, labour companies are required to establish a Special Reserve Fund with an additional profit percentage (10% of the net income until the special reserve reaches an amount greater than double the share capital).

Furthermore, in Spain the employee-owned enterprises were recognized by Law 5/2011, of 29 March, as Social Economy entities (art. 5). This Law recognizes 4 guiding principles for social economy entities:

a) Primacy of the individual and of the social purpose over capital, which materializes in an autonomous and transparent, democratic and participative management, which leads to prioritizing the taking of decisions according to individuals over their contributions to the capital.

b) Profits obtained from the economic activity shall be distributed mainly according to the work contributed or the service or activity performed by its partners or by its members.

c) Promotion of solidarity internally and with society, promoting commitment with local development, equal opportunities between men and women, social cohesion, the insertion of persons with the risk of social exclusion, the generation of stable and quality jobs, the conciliation of private, family and work life and sustainability.

d) Independence with regard to the public authorities.

2. Economic and financial profile of workers owned enterprises in Spain versus limited companies.

There are currently 8,725 workers owned enterprises in Spain (last quarter of 2018 data, Dirección General de Trabajo Autónomo, de la Economía social, y de la Responsabilidad Social de las Empresas, 2019), and employ 62,175 workers. They are located mainly in Andalucía (21% of the total), Madrid (11.3%), followed by Castilla La Mancha, Catalonia and the Valencian Community with percentages lower than 10%.

However, we must recognize that the number of workers owned enterprises and the number of workers they employ has decreased in recent years. Compared to the 17,650 existing entities in 2009, in 2018 there are only 8,725, which means a reduction of 50,5% of entities in the last decade, having been reduced the number of employees by 38% (going from 101,331 in 2009 to 62,175 in 2018) (CEPES, 2019). With regard its activity, 60% of them operate in the services sector, 26% in the industry, 14% in the construction

sector, and 1% in agriculture.

In order to realize a profile of the workers owned companies in Spain, information from the Spanish companies of both legal forms has been extracted from the data base SABI, according to the data of the last registered financial year. This will enable their comparison with limited companies, which are the non- social economy legal form that constitutes its most probable alternative by size and characteristics.

Thus, information has been obtained from 607,285 limited companies and 7,696 working owned companies in Spain. The indicators and ratios analysed are shown in table 1.

We can indicate that workers owned enterprises generally have a smaller size than the limited companies (92% have a turnover below 1 million €, in contrast with 85% in the case of limited companies). There are none with a turnover above 50 million €, when on the contrary there are 715 limited companies.

Similar conclusion is reached if we analyse their number of employees, total assets, equity and profit, which in all the sections by turnover analysed present a lower value. On the other hand, it should be pointed out that the workers owned enterprises develop their activity with a higher level of indebtedness than limited companies. In fact, except the group with higher turnover (between 10 and 50 million €), the workers owned enterprises have a higher indebtedness, which can be indicative of their partners (also workers) lower financial capability, with respect to the partners of limited companies, that in some cases have a profile closer to the capitalist investor partner.

However, if we analyse the return on assets and the return on equity, it can be observed that except group of enterprises with the lower turnover (below 1 million euros turnover), workers owned enterprises show higher levels of performance than those of limited companies, both return on assets and return on equity, that is the members performance for their investment in the enterprise. These better performance of worker owned

companies is surely related to the greater involvement of workers (owners of the company at the same time), with respect to that obtained in limited companies, in which their role is strictly linked to their labour contract.

Table 1. Characterization of limited companies (LC) and workers owned enterprises (WOE) (median)

| Turnover (mill €) | Number of enterprises | | Number of enterprises (%) | | Turnover | | Total assets | | Equity | |
|----------------------|--------------------------|---------|---------------------------------|-------|---------------------|--------|--------------|-------|------------------------|-------|
| | WOE | SL | WOE | SL | WOE | SL | WOE | SL | WOE | SL |
| <1 | 7.022 | 518.191 | 92,2% | 85,3% | 158 | 136 | 137 | 200 | 35 | 50 |
| 1-5 | 565 | 74.044 | 7,4% | 12,2% | 1.522 | 1.754 | 862 | 1.233 | 261 | 434 |
| 5-10 | 22 | 9.186 | 0,3% | 1,5% | 6.242 | 6.403 | 3.840 | 3.889 | 981 | 1.354 |
| 10-50 | 8 | 5.149 | 0,1% | 0,8% | 14.024 | 15.804 | 6.025 | 9.769 | 2.511 | 3.208 |
| >50 | 0 | 715 | 0,0% | 0,1% | | | | | | |
| | Profit | | Return on assets | | Return on equity | | Indebtedness | | Number of employees | |
| | WOE | SL | WOE | SL | WOE | SL | WOE | SL | WOE | SL |
| <1 | 1 | 2 | 1,06 | 1,46 | 6,21 | 6,63 | 71,51 | 65,01 | 3 | 2 |
| 1-5 | 30 | 39 | 4,35 | 4,21 | 15,63 | 12,87 | 67,95 | 60,29 | 11 | 12 |
| 5-10 | 121 | 155 | 5,76 | 5,27 | 13,16 | 15,67 | 71,26 | 61,6 | 26 | 24 |
| 10-50 | 314 | 398 | 8,51 | 5,55 | 27,56 | 16,95 | 58,52 | 63,82 | 141 | 44 |

Source: Elaborated from the data base SABI, with the data of the last registered financial year. (consulted on 10/5/2019).

3. Employee owned enterprises as a vehicle for social innovation

The *Oslo Manual* for measuring innovation (OECD, 2005) defines **innovation** as the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a **new organizational method in business practices, workplace organisation or external relations**.

However as The European Commission argued at the Green paper on Innovation, **"Innovation is not just an economic mechanism or a technical process. It is above all a social phenomenon**. Through it, individuals and societies express their creativity, needs

and desires. By its purpose, its effects or its methods, innovation is thus intimately involved in the social conditions in which it is produced”.

According to this, as proposed by Breuer and Lüdeke-Freund (2015), **technological innovation must be accompanied by values innovation**, so that as a result of integrating environmental and social issues into corporate strategy organizations could achieve considerable business innovations (Fiorina 2004).

Thus, according to the study carried out by Herrera (2015), in order to achieve this integration, the participation of the stakeholders is essential as well as the involvement of the employees. As Wagner (2010) stated there is a significant positive association between innovation and social performance.

Regarding to this, favouring relations with stakeholders can help to generate a value creation network for innovation (Calabrese et al. 2018), and using stakeholder networks could enlarge the business ecosystem, brand image and corporate social responsibility (Hsieh et al. 2017) establishing strong relationships with organizations and individuals that allow improving the understanding of business opportunities and possible innovations.

At this point we can talk about **social innovation, which not only refers to the satisfaction of human needs but also to the relations between different social groups in the entrepreneurial process** (for example users, workers and volunteers) and to the empowerment of users themselves trying to fulfil their needs (Defourny and Nyssens, 2013).

Bouchard (2015) defines Social innovation as “an intervention initiated by social actors to respond to an aspiration, to meet specific needs, to offer a solution or to take advantage of an opportunity for action in order to modify social relations, transform a framework for action, or propose new cultural orientations. ”The social innovation process requires attention to the individual persons; more specifically, to what they think,

Commenté [j1]: *The international handbook on social innovation Jacques Defourny and Marthe Nyssens*

to what they value, to how they behave, and to how interrelations between actors and social systems take place (Harrison and Laberge 2002, Cavalli 2007, Cajaiba-Santana 2014).

In that sense, if we consider that one of the main aims of the social economy is to serve its members and the community, therefore social economy can be an important vector for the different types of innovations as stimulates a new sort of social or collective entrepreneurship (Bouchard, 2012).

We must keep in mind that social innovation is quite often either locally or regionally specific, or/and spatially negotiated between agents and institutions that have a strong territorial affiliation (Mac Callum et al. 2009), so social economy enterprises and specifically employee owned enterprises could be a good alternative as they have strong links with the territory and the social agents in which they are locate.

4. Robotic sector and its development through workers owned enterprises

The global technology sector has enjoyed rapid economic growth in last decades, being its impact in the market is very significant. According to the report 'The State of the Global Technology Economy (APPTIO, 2018)', Technology spending worldwide hit more than \$6.3 trillion in 2016. So, were it an independent nation, the global technology sector would be the third largest economy on Earth in GDP terms, surpassed only by the United States at \$18.57 trillion and China at \$11.20 trillion" (Middleton, 2017).

Within technological sector, robotics industry sector is one the most promising. It is expected to create 3 million additional jobs between 2014 and 2020, led by consumer electronics and the electric vehicle industry. By 2020 robotics is expected to be a \$100 billion industry (Deloitte, 2014). With regard to the different activity segments of economy, the projected compound annual growth rate of the global robotics market

Commenté [j2]: N. Cavalli, *The symbolic dimension of innovation processes*, *Am. Behav. Sci.* 50 (2007) 958–969.
[98] D. Harrison, M. Laberge, *Innovation, identities and resistance: the social construction of an innovation network*, *J. Manag. Stud.* 39 (2002) 497–521.
Social innovation: Moving the field forward. A conceptual framework
Giovany Cajaiba-Santana *Technological Forecasting & Social Change* 82 (2014) 42–51

Commenté [j3]:

Commenté [JCV4]: Social innovation, an analytical grid for understanding the social economy: the example of the Québec housing sector
Bouchard, M.J. *Serv Bus* (2012) 6: 47

Commenté [JCV5]: MACCALLUM, D., MOULAERT, F., HILLIER, J. & VICARI HADDOCK, S. (eds.) *Social innovation and territorial development*. Surrey: Ashgate Publishing Limited

between 2000 and 2025 goes from 21,9% in the consumer segment to 7,6% in the industrial (Boston Consulting group 2014).

Table 2. Global robotics market per segment- Compound annual growth rate 2000-2025

| | | | |
|------------|-------|------------|------|
| Consumer | 21,9% | Industrial | 7,6% |
| Commercial | 13.2% | Overall | 10% |
| Military | 7,7% | | |

Fuente: BCG. (Boston Consulting group 2014).

The company profile of a technological enterprise is commonly a limited company, being very unusual to find enterprises created through social economy formulas such as cooperatives or employee-owned enterprises. The reasons can be found in aspects such as the need of funding, and the reluctance of investors to have management and decisions taking detached from equity. They are still very scarce technological entrepreneurship through social economy formulas. In this sense, social enterprises are still struggling to find the right funding opportunities due to the lack of understanding of their functioning and their small size (European Commission, 2015)

In fact, in Spain there are 371 active companies that include “robotics” or “robots” in the description of their activity (according to a search in SABI database). In 92% of the cases they take the form of limited company, having chosen only 10 of them (2,6% of the total) the form of workers owned enterprises (table 3).

Table 3. Enterprises dedicated to robotics in Spain, by legal form

| | |
|--|-----|
| Public limited companies (Sociedades anónimas) | 19 |
| Unipersonal Public limited companies (Sociedades anónimas unipersonales) | 6 |
| Limited liability company (Sociedades limitadas) | 276 |
| Unipersonal Limited liability company (Sociedades limitadas unipersonales) | 59 |
| Workers owned enterprises (Sociedades laborales) | 10 |
| Total | 360 |

Source: SABI database

The profile of the workers owned enterprises dedicated to robotics is that of a small sized company, with an average turnover of 583,000€ (having the one with the highest turnover an income of 2,6 millions €), employing on average 7 workers. They present an average total asset of 755.000 €, an equity of 179,000 €, and a positive average return on assets and return on equity (12% y 30% respectively).

Table 4. Economic and financial profile of workers owned companies dedicated to robotics in Spain.

| | Mean | Median | Maximum | Minimum |
|----------------------|------|--------|---------|---------|
| Turnover (mil €) | 583 | 244 | 2.620 | 52 |
| Profit (mil €) | -38 | 7 | 167 | -592 |
| Total Asset (mil €) | 755 | 171 | 4.011 | 17 |
| Equity (mil €) | 179 | 70 | 886 | 4 |
| Return on assets (%) | 12 | 4 | 67,31 | -14,77 |
| Return on equity (%) | 30 | 7 | 265,68 | -10,54 |
| Indebtedness (%) | 139 | 77 | 787,61 | 48,84 |
| Number of employees | 7 | 4 | 24 | 1 |

Source: SABI database

5.- ROBOTNIK. A workers owned Enterprise, example of a technological company with values.

Robotnik is a company established under the legal formula of a labour society in 2002 by two young engineers. Since its beginnings focused its activity on product development through research and development in the high-tech industry of mobile service robotics, specializing in robots and autonomous mobile manipulators. Over time they have established commercial partnerships with leading companies in the robotic sector worldwide (Universal Robots, Barret Technology, Schunk, Kinova, Gaitech, Robotis, Yujin Robotics, ...). Its global distribution network covers the most technologically developed regions, from Europe to North America, Southeast Asia and Australia, and it is a good example of the reputational level reached by this firm, in which

the owners are its workers, most of them highly qualified, which undoubtedly allows us to speak of a knowledge-intensive social economy company.

In fact, Robotnik has a workforce of 40 employees, 35 of them with an indefinite contract, being 17 of them partners (50% of the workers with indefinite contracts).

This company, as a workers owned enterprise in accordance with Spanish legislation, is a social economy company (Article 5 of the Social Economy Act 5/2011), which fully shares the values and principles that identify them, not only from the formal compliance of its substantive regulatory framework, but also by the assumption in their daily practice of these principles and values, highlighting their strong commitment to knowledge and innovation. According to the company directors, the following elements are essential in their management:

- The primacy of the persons and social objectives over capital.
- Democratic and participative management and governance. Although there is a defined chart, any member of the company can contribute its opinion to improve the work process. Moreover, all strategic decisions are agreed upon by the partners.
- Equitative and social distribution of profits. If the company is successful, it must affect all the people involved in it-
- Commitment to the generation of stable and quality employment, with equal opportunities, to the insertion of people at risk of exclusion, and work and family reconciliation policies. Currently, in the staff of Robotnik, there are several cases of reduction of working time for the care of children under 12 years old, persons with disabilities (with indefinite contract and being partners), etc.
- Primacy of the collective over the individual. According to its CEO "It must be clear that the collective is ahead of individual interest. We try to ensure

that decisions taken ensure the best continuity and sustainability of the company”.

Indeed, this company, as a workers owned enterprise in accordance with Spanish legislation, is a social economy company (Article 5 of the Social Economy Act 5/2011), which fully shares the values and principles that identify them, not only from the formal compliance of its substantive regulatory framework, but also by the assumption in their daily practice of these principles and values, highlighting their strong commitment to knowledge and innovation.

It should be noted that the mobile robotic sector in which this company operates is a competitive environment made up of technologically advanced companies, which are oriented towards the manufacture of products and services for large companies worldwide, as we will see when we refer to some of their main customers and collaborators.

Within the group of 360 active companies in Spain dedicated to robotics, identified in section 4, Robotnik is ranked in the second quartile by turnover volume, and within the 10 labour companies is the second by turnover and the first by number of employees.

With these data, it can be stated that to date it has been unusual in Spain that companies of this corporate profile form part of sectors of activity as intensive in knowledge and technology as it is the case of robotics, which makes Robotnik a truly unique company, which undoubtedly constitutes an interesting case study.

Currently Robotnik, an SME and a workers owned company, after fifteen years of activity and continuous growth, has established itself as a leading company in its field, which undoubtedly has been mainly because of its continuous technological and innovative effort and the commitment of a highly qualified workforce, integrated almost entirely by its partners. This has allowed them to offer a range of technologically advanced products of high quality, becoming a benchmark company in its business segment, which

deserves the confidence of some of the leading technology companies as can be seen reviewing the list of its main customers in recent years (Table 6). Their robots and autonomous mobile manipulators are contributing to a greater efficiency in the activities related to the logistics operations.

Table 6. ROBOTNIK main customers.

| | | | |
|---------|---------------------------------|---------|---------|
| ACCIONA | DISNEY | HONDA | REE |
| AREVA | GMV | HP | SACYR |
| BMW | GOOGLE | INTEL | SENER |
| BOSCH | Grupo ID Logistics ESpaña | PIONEER | SIEMENS |

Source: ROBOTNIK 2019

It is important to highlight the firm commitment to R & D over the years, which has led them to work and develop activities with some of the organizations with the highest R & D in this technological field worldwide, including leading universities and research centers in the field of technological knowledge.(Table 7).

Table 7. R&D partners

| | | |
|---|-----------------------|----------------------------|
| Aachen University | IIT | RWTH Aachen University |
| Carnegie Mellon University | INRIA | University of Bedfordshire |
| Consejo Superior de Investigaciones Científicas | KAIST | University of Leeds |
| CSIRO | King'S College London | University of Oxford |
| DLR | MIT | US Navy |
| Fraunhofer | Leipzig University | Tecnalia |
| Georgia Tech | MTC UK | |
| Hochschule Rhein-Waal | Onera | |

Fuente: ROBOTNIK 2019

Robotnik has had since its creation a continuous incorporation of young professionals with talent to its workforce, and many of them have been converted into company partners, increasing their commitment with the enterprise. Currently, after 15 years of activity, most of its 40 workers are highly qualified staff (university graduates and technicians), which has helped to develop an important R+D+i, expanding thoroughly their activity at a global level. With a turnover above 2 million €, Robotnik has turned to be an example in its sector and one of the leader workers owned companies.

Today Robotnik is a firm recognized and valued by many of the leading technological companies at an international level and a close collaborator of some of the most reputable institutions dedicated to R+D+i related with its sector.

6. Conclusion

As final conclusion, we can say that Robotnik case serves us to confirm that it is possible to create a successful company in a technologically advanced and highly competitive sector as robotics, with the attributes of social economy entities, as it is the case of this workers owned company.

No doubt its experience shows that from companies like this one, managed under the principles of economic democracy and the participation of workers, we can advance towards a more intelligent and value-based economy. This company constitutes a clear commitment to the generation of quality and stable employment, highly qualified, developing also a social policy highly valued by its workers through conciliation and employment of disabled persons policies. Its identity characteristics are not only an attribute of social value but also strengthen its human capital commitment with the company's objectives, and improves competitiveness and stakeholder confidence.

In fact, it is a successful company, a benchmark among top technologies companies, with relationships with the most reputed research centres (MIT, OXFORD, etc.), and other companies (Google, HP, Intel, Siemens, etc). We have without a doubt a company not only intelligent but also with values, example of what Joseph Stiglitz demanded in his work "Globalization and its discontents".

The promotion of companies like this one, that base their growth on innovation and seek sustainable growth in economic, social and environmental terms, can be considered a challenge for all advanced countries in the knowledge society. We must recall that in Spain, the Law 5/2011 of Social Economy explicitly expounds the interest to promote and develop technological innovation through social economy companies.

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