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PROFILE OF SENIOR BUSINESS FAILURE

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ABSTRACT. ***Demographic change and labour market challenges for senior professionals have made senior entrepreneurship one of the pillars for the older generation. Despite the fact that entrepreneurial activity is the engine of growth and development of modern economies, not enough attention is paid to business failure and the need to generate a sustainable entrepreneurial fabric over time. In this sense, the academic literature has not yet addressed in sufficient depth the factors that characterise senior entrepreneurs who fail.***

The aim of this paper is to identify the main socio-demographic features that characterise senior entrepreneurs who fail in their business activity, differentiating between the expansionary and contractionary stages of the economic cycle, which has been revealed as an important factor to be taken into account in the literature on business failure. The case of Spain, one of the countries in the world with the highest life expectancy and the greatest importance of senior professional connectivity, has been taken as a case study.

For this purpose, based on micro-data from the Spanish Labour Force Survey and for the period from March 2005 to December 2022, logistic regression models have been developed to identify key socio-demographic factors in the probability of failure: the sector and region of activity, the existence of a spouse and whether or not he/she has his/her own professional career, educational level, sex, nationality, and the existence of dependent children in the family home.

The results allow us to understand the factors that are related to senior entrepreneurial failure in order to define public policies (education, sectoral or regional cohesion policies, for example) that help entrepreneurs generate sustainable projects over time, beyond the stage of the economic cycle.

KEYWORDS: elderly entrepreneurship, business failure, economic cycle, labor force survey, sociodemographic profile

JEL classification: L26, G33.

Introduction

Given the environment characterised by continuous change and the need to adapt to it, the growth and economic development of countries depend, either directly or considering institutional development and other factors, on correct development of entrepreneurial activity (Bosma *et al.*, 2018; Stoica *et al.*, 2020; Urbano *et al.*, 2002; Munyo, Veiga, 2022), especially if they are developed countries (Van Stel *et al.*, 2005; Doran *et al.*, 2018). In this environment,

innovation becomes one of the main accelerators of growth and development and one of the main outcomes of entrepreneurial activity (Hana, 2013; Khatami *et al.* 2022; Khan *et al.*, 2022; Maâlej, 2022; Gladevic, 2022; Li *et al.*, 2023; Machova *et al.*, 2023).

This is why, over recent decades, there has been an increased interest in promoting entrepreneurial activity (Aparicio *et al.*, 2019; Kučera, Fiľa, 2022; Sreenivasan, Suresh, 2023), as well as in the study of the factors that enable its dynamisation from various disciplines (Hall *et al.*, 2022; Chhabra *et al.*, 2023; Dvorsky *et al.*, 2023).

However, the focus has been on entrepreneurial activity in general, and there is even a misconception that entrepreneurial activity is an effort made by young people (Schøtt *et al.*, 2017; Matricano, 2018; Bartczak, 2022). Quite the contrary, the segment of professionals who decide to undertake an entrepreneurial project in their fifties or older is one of the most dynamic segments in business creation. Fachinger (2019) points out that the ageing of the population implies a greater number of healthy older people who have human capital, financial resources and time available to contribute to the economy through entrepreneurial activity. Likewise, authors such as Fernández-López *et al.* (2022) point out the importance of senior entrepreneurial activity to reduce unemployment and lengthen people's professional careers.

In this sense, the prominence of senior entrepreneurs should not be seen as an isolated phenomenon or as a passing fad, but as a phenomenon derived from the main socio-demographic trends that are evident in developed economies. In this regard, the evolution of life expectancy is a clear indicator of this trend. In the case of developed OECD countries, life expectancy at birth has risen from 67 years in 1960 to 81 in 2019. Spain stands out as one of the countries in the world with the highest life expectancy, with 83.3 years in 2021 and an increase of 14 years since 1960.

However, the increased longevity of people does not only have implications for demographic composition. In fact, the increase in life expectancy influences the social behaviours of individuals throughout their life cycle, although a priori there seems to be no relationship. As shown by Domínguez *et al.* (2020), longevity "pushes up" the occurrence of certain life milestones, such as the completion of studies, the beginning of a professional career, the emancipation from the family home or the formation of a family. Thus, individuals delay these decisions while anticipating their exit from the labour market, always in a context in which they live longer and in better health.

The growing importance of the senior segment of society should therefore be considered as a consolidated trend that is complemented by increased longevity and an increasingly complex and changing work environment (Gratton & Scott, 2016). This leads to a growing recent interest in the topic with 60% of publications analysed after 2012, as noted by Biron & St-Jean (2019) after conducting a study on the interest of the scientific literature on senior entrepreneurship.

Therefore, in this context, entrepreneurship is a path followed by many senior professionals who can add value to a professional project (Fachinger, 2019). In Spain, many senior professionals decide to turn their professional careers around and undertake business projects based on their extensive professional experience (Socci *et al.*, 2020; Pérez-Encinas *et al.*, 2021). One of the most common forms of entrepreneurship in Spain is through the figure of the self-employed entrepreneur. This figure allows business projects to be developed with flexibility and better adaptation to changes in the environment. In fact, the figure of the self-

employed entrepreneur (regardless of whether or not he or she generates jobs) is fundamental in the Spanish business structure (Del Olmo, Crecente, 2021).

However, just as entrepreneurial activity is important, so is its failure. There is no doubt about this fact given the growing interest in this area in the literature in recent years (Kücher & Feldbauer-Durstmüller, 2019; Lee *et al.*, 2022; Zambrano *et al.*, 2021; Giordano, Restaino, 2022; Michalkova *et al.*, 2022), studying in detail how even failure processes generate experience for re-entrepreneurship (Pan *et al.*, 2022).

There is no doubt that the development of an economy not only comes from solid entrepreneurial activity but also from an environment and appropriate policies that allow this entrepreneurial activity to be sustainable over time and generate wealth in the economy as a whole and for entrepreneurs.

In fact, if entrepreneurial activity is weak and its survival rate is low, the economic implications are important for the economy, such as unemployment, economic and social vulnerability, psychological consequences, etc. (Berryman, 1983; Altman, 1983; Watson, Everett, 1993; Ucbasaran *et al.*, 2010; Cope, 2011; Ucbasaran *et al.*, 2013).

In this regard, the Spanish case is particularly interesting. If we compare the data for the last quarter of 2022 with that of 2002, we can see how in the last twenty years the number of unemployed who were previously engaged in a business activity that generated employment has fallen by 19%, while the number of unemployed who were previously working as self-employed entrepreneurs who did not generate employment has practically doubled. Likewise, while the differences by gender are not significant in the case of the unemployed who previously worked as entrepreneurs who did not generate employment, in the case of men, unemployment among the group of entrepreneurs with workers has increased by 153% in the last twenty years, while in the case of women, there has been a reduction of 68%.

Thus, given the growing importance of senior entrepreneurs and also the interest in business failure processes, this paper studies the profile of Spanish senior entrepreneurs who have failed in their projects and the importance of the economic environment as a determinant of this failure. In this way, a contribution is made to the literature that allows the definition of structural economic policies that help senior entrepreneurs have a greater chance of success. This contribution is particularly relevant in cases such as Spain, characterised by increasing longevity and a growing role of the senior population in the labour market.

With regard to the structure of the paper, the first section focuses on analysing the theoretical framework of senior entrepreneurship and the causes of failure. Secondly, the working hypotheses are specified, followed by a description of the analysis sample used and the definition of the failure variables and the variables representing the factors of the entrepreneurs who have failed. The results obtained from the models developed for the expansionary and recessionary economic cycles are then shown, thus considering the importance of the economic environment in the failure of entrepreneurial activity.

Finally, we point out the main conclusions reached in the work, the limitations of the approach taken and the future lines of research that will complete the results achieved.

1. The Theoretical Framework of Senior Entrepreneurship Failure

The first issue to address when conducting a review of previous literature on senior entrepreneurship is the definition of senior entrepreneurship itself. In general, there is some

consensus in the literature to consider senior entrepreneurs as those who are fifty years old or older (Maâlaoui *et al.*, 2013; Kautonen, 2013; Isele, Rogoff, 2014; Clegg, Fifer, 2014; Schøtt *et al.*, 2017; Biron, St-Jean, 2019; OECD, 2019; Soto-Simeone, Kautonen, 2021; Zhu *et al.*, 2022). However, other authors put a higher limit (e.g. Tornikoski *et al.* (2012) or Torres *et al.* (2021) at fifty-five years), while other authors set a lower limit (Figueiredo, Paiva (2019) or Maalaoui, *et al.* (2023) at forty-five years or Ahmad *et al.* (2014) at forty, for example).

In relation to the abandonment of entrepreneurial activity, a distinction must be made in the literature between abandonment due to withdrawal and abandonment due to failure. On the one hand, the literature has addressed the decision of entrepreneurs to withdraw. Authors such as DeTienne (2010), Wennberg, DeTienne (2014), Singh *et al.* (2015), Chevalier *et al.* (2018), Bonsdorff *et al.* (2019), Nagore Garcia *et al.* (2019), Lindblom *et al.* (2020) or Morris *et al.* (2020) study the factors that lead entrepreneurs to the decision to retire, giving importance not only to individual decision factors, as is the case of age, but also to external ones, such as the size of their social networks (Kaciak *et al.*, 2021) or institutional environment factors (Widz, Kammerlander, 2023). Likewise, authors such as Wainwright & Kibler (2014) point to the importance of senior entrepreneurship as a response to poor retirement planning.

On the other hand, in relation to entrepreneurial failure, Ucbasaran *et al.* (2009) identified in their study that the ratio of failed businesses to the number of businesses owned by entrepreneurs and the opportunities identified in a given period have an inverted "U"-shaped relationship. Thus, they suggest that experience in business failures may stimulate entrepreneurs to identify new opportunities. Indeed, Hsu *et al.* (2017) note that although business failure affects entrepreneurs' self-efficacy, numerous entrepreneurs are willing to re-enter entrepreneurship, while Damaraju *et al.* (2021) find that entrepreneurs' motivation to develop new ventures is higher in the face of a strict bankruptcy policy, while Pan *et al.* (2022) emphasise the importance of family as support for re-entry into entrepreneurship, along with entrepreneurs' own motivation and learning ability. However, as suggested by Nefzi (2018), business failure affects the morale and health of entrepreneurs. Finally, age is also a factor to consider in entrepreneurs who have failed and seek to re-enter entrepreneurship (Lin, Wang, 2019).

Likewise, the literature considers educational level as an important factor in the propensity to entrepreneurship and also in the probability of failure. On the one hand, Jiménez *et al.* (2015) conclude from their study that having higher education increases the propensity to formal entrepreneurship, due to greater human capital, self-confidence, and lower risk perception. Secondary education also shows this effect. However, having higher education also reduces informal entrepreneurial activity, due to increased awareness and sensitivity to the negative consequences of these activities, while in the case of secondary education, the effect is not significant.

On the other hand, Sonfield, Lussier (2014) note that there seems to be a positive relationship between the higher educational level of an entrepreneur and the higher level of innovation in the firm, albeit preferably with lower risk. Similarly, Cervený *et al.* (2016) suggest that educational level, among other socio-economic characteristics, is one of the factors that influence senior entrepreneurship. On the other hand, Grigorescu *et al.* (2020) conclude that unemployment increases entrepreneurship rates in people with low educational attainment.

Finally, from the perspective of entrepreneurial failure, Vidayana *et al.* (2020) point out that educational level has an indirect relationship with re-entry into entrepreneurship after failure.

Also, according to OECD data (2019), fear of failure among European senior professionals (aged 50–64) is less of a barrier to entrepreneurship than for the average European adult population. Furthermore, according to data reported by OECD (2021), neither fear of failure nor a perceived lack of entrepreneurial skills are disproportionate barriers to entrepreneurship. However, more important barriers for senior entrepreneurs, compared to younger ones, are health problems, the opportunity cost of time, and the shorter time to grow a sustainable business.

Therefore, age is a factor to consider in the study of business failure. For example, Harada (2007) points out that a small business is more likely to go out of business if the entrepreneur is a relatively young man, the company has bank debt, and sales have a downward trend.

For the Spanish case, Álvarez & Otero (2006) study the determinants of the probability of the failure of Spanish entrepreneurs using a gender approach. In their conclusions, they highlight the importance of gender, family responsibilities, the sector of activity, the existence of a spouse and his or her employment situation, and human capital in the case of women. Age was also significant, although the authors only considered a population up to 45 years of age in their study, concluding that there was a greater propensity to fail at younger ages. Del Olmo & Crecente (2020) study the propensity of Spanish self-employed entrepreneurs to fail, concluding that socio-demographic factors such as gender, sector of activity, spouse's employment, marital status, maximum age of training in human capital, the fact of creating or not creating employment, and the age of the entrepreneur are significant, concluding in this last case that the probability of failure in entrepreneurial activity is reduced in older segments of the population when compared with younger entrepreneurs.

The age of the entrepreneur has been a socio-demographic characteristic studied in the analysis of business failure in other geographical areas (Arasti, 2011; Mueller & Shepherd, 2014; Al-Ghamri, 2016; Días, Teixeira, 2017). Particularly interesting are the findings of Mayr *et al.* (2020) who point out that firms led by older entrepreneurs are less likely to fail due to lack of capital.

The literature has also studied the costs of failure (Ucbasaran *et al.*, 2013) and, on the other hand, the case of entrepreneurs who, after failing in their project, have restarted a business project, highlighting the importance of formal or informal institutions in the probability of re-entry into entrepreneurship (Simmons *et al.*, 2014; Uriarte *et al.*, 2023). For Baù *et al.* (2017), the main factor for re-entry after business failure is the age of the entrepreneur, although gender also plays a role. However, Lin, Wang (2019) also point out that the older the entrepreneur, the longer it takes to restart a business. Likewise, Costa *et al.* (2023) point out that there are characteristics of entrepreneurs such as family, gender, discrimination or age that influence business failure and also the likelihood of re-entry into entrepreneurship.

Finally, many authors have emphasised the impact of the economic cycle on the propensity to fail. Thus, several authors have found evidence of the importance of economic growth (measured by GDP) in the study of business failure (e.g. Dunis, Triantafyllidis, 2002; Benito *et al.*, 2004; Halim *et al.*, 2008; Santoro, Gaffeo, 2009; Del Olmo, Crecente, 2020).

However, interest in the influence of the business cycle on business failure has led to the analysis of alternatives to GDP as a variable. Thus, other authors have included the effect of the business cycle in their analyses by including the output gap as a macroeconomic variable (Vlieghe, 2001; Hol, 2007; Carling *et al.*, 2007; Bruneau *et al.*, 2012; Abid *et al.*, 2018; Sousa *et al.*, 2022). Therefore, numerous authors recognise the importance of the economic cycle in business failure analysis models. In this context, Garcia *et al.* (2019) conclude from their study that the financial crisis increased the probability of business failure. In fact, evidence confirms the better health of firms and lower probability of business failure in economic expansions compared to downturns in the business cycle (Camska, Klecka, 2020). This evidence is important in order to develop public policies that help firms strengthen their competitiveness in times of economic expansion and thus cope better in times of recession.

However, there is a significant gap in the academic literature on the subject. On the one hand, the literature on the analysis of business failure has been abundant for decades, although it has mostly focused on the analysis from the perspective of firms (e.g. through the information contained in their financial statements). The same attention has not been paid to the failure of entrepreneurs and the factors involved in this dynamic, although the studies mentioned above stand out, in which age is one of the main factors detected.

On the other hand, demographic change and the reality of the labour market have contributed to an increased interest in the analysis of senior entrepreneurship (Kautonen, 2008; Kenny, Rossiter, 2018; Figueiredo, Paiva, 2019; Del Olmo *et al.*, 2023).

However, insufficient attention has been paid in the academic literature to both phenomena combined: the failure of senior entrepreneurial activity, and the failure of senior entrepreneurship. There is no doubt that encouraging senior entrepreneurship is one of the main strategies for changing labour dynamics in societies with longer life expectancy. However, no attention has been paid to the factors that can lead to the failure of this entrepreneurial activity, with very negative consequences on the vulnerability of senior professionals.

Furthermore, although empirical evidence has recognised the importance of considering the business cycle in business insolvency analyses, this factor has not been widely considered in the literature on the failure of senior entrepreneurship.

Indeed, the stage of the business cycle may be an important determinant of the failure of business projects launched by senior professionals, although there is a significant gap in the literature on this aspect.

2. Hypotheses

Given the objective of studying the factors that are related to the failure of senior entrepreneurial activity in the various phases of the economic cycle, the hypotheses to be tested focus on factors on which there is a certain consensus in the general literature on business failure.

In this regard, first of all, the literature has given importance to the sector of activity of the company. On the one hand, Garcia *et al.* (2019) develop their analyses separating the service sector and the manufacturing sector, admitting that the sector context can influence the effects of the economic recession on business failure. Likewise, authors such as Calabrese (2023) point out the importance of considering the sector of activity in the study of business

failure and its contagion effects. This is why the first hypothesis is based on the sectorial perspective of the failure of senior entrepreneurs.

H1: The Sector of Activity is Related to the Propensity of Senior Entrepreneurs to Fail

On the other hand, although much of the literature has analysed the individual or environmental characteristics of entrepreneurs, little attention has been paid to family factors. For example, authors such as Owens *et al.* (2013) point out the importance of partner support in times of declining entrepreneurial confidence. In this sense, Frota Vasconcellos Dias, Martens (2019) admit that emotions related to failure can be influenced or even triggered by the entrepreneur's social environment, as is the case with the partner. Therefore, greater support woud be expected from couples who share an entrepreneurial career, as pointed out in the second hypothesis:

H2: Entrepreneurs whose Partner also Undertakes a Project are Less Likely to Fail

Likewise, the literature has emphasised the importance of educational level on the propensity of entrepreneurs to fail. In fact, Asoni, Sanandaji (2016) conclude that, regardless of cognitive skills, a college degree reduces the probability of failure. However, controlling for this factor, having a college degree is not significant, as it is cognitive skills that impact entrepreneurial survival. Likewise, Hunady *et al.* (2018) suggest that higher education is a determinant factor in the success of entrepreneurial projects. That is why the third hypothesis is based on assuming that senior entrepreneurs with higher education have a lower probability of entrepreneurial failure:

H3: Senior Entrepreneurs with Higher Education are Less Likely to Fail

The regional perspective as a factor related to failure has also been studied in the literature. For example, authors such as Calabrese (2023) develop their analysis of business failure based on geographical relationships, while Calabrese *et al.* (2019) give importance to spatial relationships. In the case of Spain, Maté-Sánchez-Val *et al.* (2018) also contribute to show the importance of the regional factor in an urban environment. That is why the fourth hypothesis focuses on incorporating the regional perspective in the propensity to failure of senior entrepreneurial activity.

H4: The Region is Related to the Propensity of Senior Entrepreneurs to Fail

On the other hand, having or not having children may influence entrepreneurial failure through emotional factors (Frota Vasconcellos Dias, Martens, 2019), so the fifth hypothesis is related to having or not having children:

H5: Entrepreneurs without dependent children are more likely to fail.

In relation to the probability of failure of projects launched by foreign entrepreneurs, authors such as Irastorza & Peña-Legazkue (2018) show, that although immigrants are more active than natives from an entrepreneurial activity point of view, immigrant entrepreneurs are also more likely to abandon their business projects earlier than native entrepreneurs. However, Neneh (2020) points out that in the case of women, the effect is the opposite, so that immigrant female entrepreneurs are less likely to abandon their projects than native female entrepreneurs. Hence, the sixth hypothesis is:

H6: Foreign entrepreneurs are more likely to fail.

From a gender perspective, authors such as Álvarez & Otero (2006) have studied the profiles of business failure differentiating under the gender perspective, concluding that women are more likely to abandon business activity because they have greater family burdens. Likewise, Neneh (2020) points out that interferences between business and family have a significant positive influence on the exit intentions of women entrepreneurs. In

contrast, Corral (2022) concludes from her study that women-led firms have a lower propensity to fail than those led by men. In fact, as Simmons et al. (2019) point out, the gender gap remains practically unchanged from entry into entrepreneurial activity to re-entry into business activity after failure, concluding that the probability of re-entry is lower in women than in men. Likewise, Yang & Triana (2019) point out that there are gender beliefs that disfavour female leadership. Finally, Lago et al. (2018) point out that the gender factor influences risk propensity more in non-entrepreneurs than in entrepreneurs, with non-entrepreneur men showing less risk aversion than non-entrepreneur women. Likewise, in the case of entrepreneurs, the risk propensity is less solid than expected. To sum up, and given that gender is a factor on which literature has focused efforts when analysing entrepreneurial activity and its failure, the seventh hypothesis studies the importance of gender in the failure of senior entrepreneurship.

H7: The gender of entrepreneurs is related to the propensity of senior entrepreneurs to fail.

Likewise *et al.* (2020) point out the importance of age as an important factor in the emotional impact of failure. On the other hand, Baù et al. (2017) conclude that age is the main factor in restarting a project after a business failure. On the other hand, Harada (2007) points out that a young entrepreneur with bank debt and declining sales is more likely to fail compared to an older entrepreneur. In fact, as Mayr et al. (2020) conclude, older entrepreneurs are less likely to fail due to lack of capital, while senior entrepreneurs give importance to some factors more characteristic of their age such as health problems or the cost of time, which implicitly entails differences by age between entrepreneurs (OECD, 2021).

This is why, within the segment of senior entrepreneurs, it is necessary to differentiate by age, as proposed in the last hypothesis:

H8: The age of entrepreneurs is related to the propensity of senior entrepreneurs to fail.

3. Sample, Methodology and Variables

The study to be carried out in this work requires an adequate sample and variables of analysis to understand the phenomenon of business failure of senior entrepreneurs in Spain. After contextualising the objective of the study and having analysed the previous literature, we proceed in this section to describe in detail the data and methodology used to achieve the objectives of the study.

3.1 Sample

In order to obtain an adequate sample containing information on the socio-demographic characteristics of Spanish senior entrepreneurs, the micro-data files of the Labour Force Survey published by the Spanish National Statistics Institute were used. This database has been used by other authors in the literature who have made contributions to the study of entrepreneurial failure in Spain, such as Álvarez, Otero (2006) or Del Olmo, Crecente (2020).

The Labour Force Survey is administered quarterly to a sample of approximately 65,000 households throughout the country, obtaining information on each and every member of the household, regardless of their age or situation with respect to economic activity, even though the questionnaire is completed by only one person in the dwelling (Garrido *et al.*, 2000). Therefore, information is available not only on the person completing the survey

(reference person) but on all members of the household, which increases the availability of socio-demographic information.

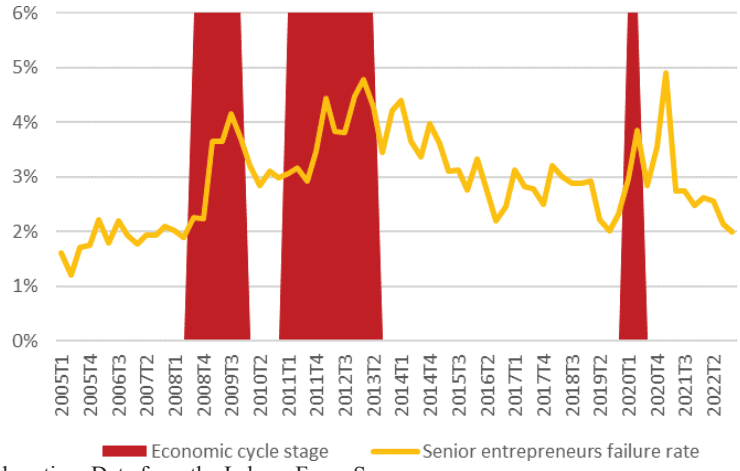
Based on this source of information, the study focuses on the reference persons in each household who, being 50 years of age or older, exercise a professional activity as entrepreneurs with employees or entrepreneurs without employees – self-employed workers and who have exercised, at the time of analysis, their activity for twelve months or more; or who are currently unemployed but have exercised over the last twelve months as entrepreneurs with employees or entrepreneurs without employees – self-employed worker before being in this situation.

The sample therefore filters out those senior entrepreneurs who have left their activity during the last year to become inactive due to retirement or a permanent disability.

The study covers all available quarters from March 2005 to December 2022, which makes it possible to reflect the effect of the different stages of the economic cycle that the Spanish economy has gone through during this period.

Likewise, the failure rate evolves unevenly throughout the period studied, showing an upward trend in times of contraction of the economic cycle and an opposite trend in times of expansion, as shown in *Figure 1*, which represents the evolution of the failure rate of senior entrepreneurs throughout the period 2005 to 2022, also showing the stages of contraction of the economic cycle, using as an objective indicator of the economic cycle the dating performed by the Dating Committee of the Spanish Economic Association (2015).

As can be seen in *Figure 1*, the failure rate of senior entrepreneurs reaches higher peaks in the contractionary stages of the economic cycle, centred on the long crisis of 2008 and the brief (but historically intense) recession of COVID-19.



Source: own elaboration. Data from the Labour Force Survey.

Figure 1: **Senior Entrepreneurial Failure Rate Evolution (2005-2022)**

When interpreting the data, it should be borne in mind that the failure rate of senior entrepreneurial activity is calculated over a time window of twelve months, i.e., it shows information on the early stages of business failure. Likewise, the evolution of the variable implicitly takes into account the consequences of economic policies aimed at protecting entrepreneurial activity, such as those implemented to combat the effects of the COVID-19

pandemic, without which the failure rate of senior entrepreneurs would have been much higher.

3.2 Methodology

The nature of the data used leads to the need to apply consistent methodologies that have also been contrasted in previous literature. Over recent decades, some of the main advances in business failure research have been made from a methodological perspective. In fact, the way of measuring the phenomenon under study is key to the methodological decision. In the case of business failure, this phenomenon can be represented by a dichotomous variable representing the failure state and the non-failure state.

To model this type of dichotomous variable, methodologies based on Logit and Probit models are the most common options in the literature. In the case of Logit regressions, which assume a logistic distribution, Ohlson (1980) pioneered their use in order to study business failure, while Zmijewski (1984) pioneered the use of Probit models, which assume the existence of a cumulative normal distribution. However, in terms of application, Logit regression has been more widely used in the literature than Probit models (Balcaen, Ooghe, 2006). Thus, logistic regression models have been a widely used methodology in business failure analyses over recent decades (among many others by Martín, 1977; Santomero, Vinso, 1977; Ohlson, 1980; Collins, Green, 1982; Zmijewski, 1984; Laffarga *et al.*, 1985; Somoza, 2001; Pozuelo *et al.*, 2013).

Therefore, and conditioned by the nature of the variable to be explained and the data used, the methodology followed in this work focuses on the use of binary logistic regression techniques, given that the phenomenon to be studied is binary in nature: failure (value 1) or success (value 0) of senior entrepreneurs. Once the study sample and methodology have been described according to the structure of the sample, this section proceeds to define the dependent variable and the independent factors used in the development of the models.

In this way, the probability of belonging to one state or another is obtained based on independent variables of a socio-demographic nature. In a simplified form and assuming a single independent variable, the model can be represented as follows:

$$Prob(Y = 1|x) = P_i = \frac{e^{\beta_0+\beta_1 x_i}}{1 + e^{\beta_0+\beta_1 x_i}} = \frac{1}{1 + e^{-(\beta_0+\beta_1 x_i)}}$$

3.3 Dependent Variable and Explanatory Variables

Once the study sample and methodology have been described according to the structure of the sample, this section proceeds to define the dependent variable and the independent factors used in the development of the models.

3.3.1 Dependent Variable: Failure of Senior Entrepreneurship

Given the dichotomous nature of the dependent variable, the two possible values it can take are as follows:

1: The senior entrepreneur (50 years or older) has failed in his business project over the last twelve months, being unemployed as of the date of analysis.

0: The senior entrepreneur (50 years or older) continues to exercise a business activity that began at least twelve months prior to the date analysis.

Entrepreneurs are considered to be those persons 50 years of age or older who have a business, regardless of whether or not they generate employment.

In this way, and with the aim of constructing the variable, first of all, the reference person of the dwelling surveyed by the Labour Force Survey has been identified, taking into account only those reference persons who are 50 years of age or older (senior entrepreneurs) and who carry out a professional activity as "Entrepreneur with employees" or "Self-employed or entrepreneur without employees".

It is also required that such entrepreneurs have been in business for at least twelve months, a period consistent with the case of persons who have abandoned their business activity during the last twelve months and whose last professional status must have been "Entrepreneur with employees" or "Self-employed or entrepreneur without employees".

In short, it is considered a business failure to have exercised a business activity that has ended in the last twelve months, while the person was unemployed during the week.

In this way, it is naturally not considered as business failure to move to situations of inactivity such as retirement or a permanent disability, eliminating such cases from the study sample.

3.3.2 Independent Socio-demographic Variables

The variables considered in the models were as follows:

- Economic cycle stage: Variable that indicates the different stages of the economic cycle, according to the dating carried out by the Dating Committee of the Spanish Economic Association (2015). This variable was not included in the models but allows the development of two different samples that give rise to two models.
- The sector of activity in which the senior entrepreneur carries out the activity: This is a categorical variable that indicates the sector of activity in which the business activity is carried out:
    - Primary: Includes the agriculture, livestock, forestry and fishing sectors (CNAE- 09 codes 01, 02 and 03).
    - Industrial and construction: This includes the food, textile, leather, wood and paper industry sectors (CNAE-09 codes 10 to 18), the extractive industries, oil refining, chemical, pharmaceutical, rubber and plastics industries, electricity, gas, steam and air conditioning supply, water supply, waste management, metallurgy (CNAE-09 codes 05 to 09, 19 to 25, 35 and 36 to 39), as well as the machinery, electrical equipment and transport material construction sectors. Industrial installation and repair (CNAE-09 codes 26 to 33).
    - This category also includes construction activities (CNAE-09 codes 41 to 43).
    - Commercial distribution services: This includes service activities related to wholesale and retail trade and its installations and repairs, automobile repair, and hotel and restaurant services (CNAE-09 codes: 45 to 47, 55 and 56).
    - Other services: These include transportation and storage services,

information and communications (CNAE-09 codes 49 to 53 and 58 to 63), financial intermediation, insurance, real estate activities, professional, scientific, administrative and other services (CNAE-09 codes 64 to 66, 68, 69 to 75 and 77 to 82), public administration, education and health activities (CNAE-09 codes 84, 85 and 86 to 88), as well as other services (CNAE-09 codes 90 to 93, 94 to 96, 97 and 99).

Table 1 shows the distribution of the categories for both phases of the cycle:

Table 1. Distribution of activity sector

	Expansion			Contraction		
Variable	Total	Failure	Failure rate	Total	Failure	Failure rate
Other services	43,946	1,086	2.5%	18,205	657	3.6%
Commercial distribution services	53,000	1,691	3.2%	13,470	383	2.8%
Industry & construction	30,690	991	3.2%	10,702	623	5.8%
Primary sector	24,905	383	1.5%	8,481	167	2.0%

Source: own elaboration. Data from the Labour Force Survey.

- Existence or non-existence of spouse in the family household and, in the case of spouse, employment held: Categorical variable constructed from the data on the spouse of the main person, according to the kinship relationship with the reference person as reported by the Labour Force Survey. Thus, the variable takes the following values:

  - No spouse: The senior entrepreneur does not live with a spouse in the home.
  - Not working: The senior entrepreneur has a spouse, but that person is not gainfully employed.
  - Salaried spouse: The spouse has a remunerated professional activity and receives a salary from the public or private sector.
  - Self-employed: The spouse performs a self-employed activity, whether entrepreneurial or otherwise as a member of a cooperative or assists in a family business.

Table 2 shows the distribution of the categories for both phases of the cycle:

Table 2. Distribution of spouse employment

	Expansion			Contraction		
Variable	Total	Failure	Failure rate	Total	Failure	Failure rate
Does not work	51,192	1,614	3.2%	16,605	778	4.7%
Non-spouse	37,885	1,411	3.7%	12,990	558	4.3%
Salaried worker	31,207	793	2.5%	9,946	334	3.4%
Self-employment	32,257	333	1.0%	11,317	160	1.4%

Source: own elaboration. Data from the Labour Force Survey.

- Level of education of the senior entrepreneur: Categorical variable that indicates the level of education attained by the senior entrepreneur. It takes the following values:

- Illiterate: If the senior entrepreneur has no formal education.
- Unfinished primary education: The reference person started basic education, but did not complete it.
- Primary education: If the senior entrepreneur has primary education.
- Secondary Education: The senior entrepreneur has a secondary education, whether it is related to the first stage of secondary education, the second stage of secondary education with general orientation or the second stage of secondary education with professional orientation.
- Higher education: The senior entrepreneur has higher education.

Table 3 shows the distribution of the categories for both phases of the cycle:

Table 3. Distribution of education level

	Expansion			Contraction		
Variable	Total	Failure	Failure rate	Total	Failure	Failure rate
Secondary education	78,898	2,248	2.8%	12,589	492	3.9%
Primary education	28,303	786	2.8%	24,391	921	3.8%
Higher education	39,942	856	2.1%	11,735	264	2.2%
Incomplete primary education	5,027	227	4.5%	2,009	140	7.0%
Illiterate	371	34	9.2%	134	13	9.7%

Source: own elaboration. Data from the Labour Force Survey.

- Region in which the business activity is carried out: Categorical variable that indicates the Spanish region where the entrepreneur's activity is located. It can take the following values:
  - South and Canary Islands: Region that includes the Autonomous Communities of Andalusia, the Canary Islands and the autonomous cities of Ceuta and Melilla.
  - Community of Madrid.
  - East: Region that includes the Autonomous Communities of Valencia, Catalonia and the Balearic Islands.
  - Northwest: Region that includes the Autonomous Communities of Galicia, Cantabria, Principado de Asturias and Comunidad Foral de Navarra.
  - Northeast: Region that includes the Autonomous Communities of Aragon, La Rioja and the Basque Country.
  - Centre: Region that includes the Autonomous Communities of Castilla La Mancha, Castilla & León and Extremadura.

Table 4 shows the distribution of the categories for both phases of the cycle:

Table 4. Distribution region

	Expansion			Contraction		
Variable	Total	Failure	Failure rate	Total	Failure	Failure rate
Northeast	17,406	406	2.3%	5,623	157	2.8%
Centre	35,698	821	2.3%	11,310	390	3.4%
East	32,607	910	2.8%	11,036	434	3.9%
South & Canary Islands	29,752	1,097	3.7%	9,936	482	4.9%
Northwest	30,825	737	2.4%	11,031	286	2.6%
Madrid	6,253	180	2.9%	1,922	81	4.2%

Source: own elaboration. Data from the Labour Force Survey.

- The senior entrepreneur has children in the family home: Dichotomous variable that indicates whether the senior entrepreneur has children living with him/her in the home. Therefore, the values to be taken will be Yes or No.

Table 5 shows the distribution of the categories for both phases of the cycle:

Table 5. Distribution of the dependent children

	Expansion			Contraction		
Variable	Total	Failure	Failure rate	Total	Failure	Failure rate
NO	67,724	2,119	3.1%	23,443	879	3.7%
YES	84,817	2,032	2.4%	27,415	951	3.5%

Source: own elaboration. Data from the Labour Force Survey.

- Nationality of the senior entrepreneur: A dichotomous variable that indicates whether the senior entrepreneur is Spanish or has another nationality. The case of having dual nationality is also considered.

Table 6 shows the distribution of the categories for both phases of the cycle:

Table 6. Distribution of nationality

	Expansion			Contraction		
Variable	Total	Failure	Failure rate	Total	Failure	Failure rate
Spanish	147,246	3,839	2.6%	49,370	1,728	3.5%
Other or double nationality	5,295	312	5.9%	1,488	102	6.9%

Source: own elaboration. Data from the Labour Force Survey.

- Sex of the senior entrepreneur: A dichotomous variable that indicates whether the reference person is male or female.

Table 7 shows the distribution of the categories for both phases of the cycle:

Table 7. Distribution of sex

	Expansion			Contraction		
Variable	Total	Failure	Failure rate	Total	Failure	Failure rate
Woman	40,924	1,656	4.0%	14,361	632	4.4%
Man	111,617	2,495	2.2%	36,497	1,198	3.3%

Source: own elaboration. Data from the Labour Force Survey.

- Age of senior entrepreneur: Dichotomous variable that indicates the age range of the senior entrepreneur, taking the following values:
  - From 50 to 65 years old
  - 65 years of age or older.

Table 8 shows the distribution of the categories for both phases of the cycle:

Table 8. Shows the distribution of the categories for both phases of the cycle

	Expansion			Contraction		
Variable	Total	Failure	Failure rate	Total	Failure	Failure rate
From 50 to 60 years old	102,207	2,646	2.6%	34,691	1,216	3.5%
65 years or more old	50,334	1,505	3.0%	16,167	614	3.8%

Source: own elaboration. Data from the Labour Force Survey.

4. Results

With the sample and variables described in the previous section, two models have been developed to understand the profile of senior entrepreneurs who have failed in their business activity in Spain in the period 2005–2022. Thus, and taking into account that the aim is to understand the differences in the profile depending on whether the business failure occurs in stages of an expansive economic cycle or in stages of a recessive economic cycle, a model has been developed for the period in which the economic cycle is expansive and another model for the period in which the economic cycle has been dated as recessive.

In order to have an objective indicator of the stage of the economic cycle, the dating performed by the Dating Committee of the Spanish Economic Association (2015) was used.

In this way, it is possible to analyse whether the socio-demographic characteristics of senior entrepreneurs who have failed in their business project vary significantly in one or another stage of the economic cycle.

The results obtained suggest interesting evidence in several respects. Firstly, taking into account the sector of activity in which the senior entrepreneur carries out his or her business activity, it can be observed that, in the first place, the sector of activity is significant with respect to the propensity to fail, so that the first hypothesis of this work cannot be rejected. Specifically, entrepreneurs working in services, industry and construction are more likely to fail than those working in the primary sector, with the sector with the lowest relative probability of failure being services other than commercial distribution. Likewise, in times of economic contraction, belonging to the service sectors (regardless of whether they are related to commercial distribution or not) or to the industry or construction sector increases the probability of failure compared to belonging to the primary sector, although the probability is greater in the case of construction and industry than when compared to expansive stages of the economic cycle.

If we look at the employment of the senior entrepreneur's spouse, if he or she has one, we can see how, both in times of expansion and contraction, the probability of failure of senior entrepreneurs is greater, compared to entrepreneurs who have a spouse who is also an entrepreneur, if he or she works as a salaried employee or is unemployed. Likewise, the probability is higher if the senior entrepreneur does not have a spouse. This is important, since entrepreneurs with family support have greater economic support, either directly through resources or through guarantees or collateral needed to finance their projects. In addition, the

fact that the spouse is self-employed often provides direct support for the senior entrepreneur's own business project, which contributes to its sustainability and growth and allows us not to reject the second hypothesis of this study.

Table 9. Models of socio-demographic characteristics according to the stage of the economic cycle

		Expansion		Contraction	
Variable	Category	Odd ratio	Sig.	Odd ratio	Sig.
Activity sector (REF = Primary sector)	Industry and construction	2.369	0.000	3.287	0.000
	Commercial distribution services	1.962	0.000	1.784	0.000
	Other services	1.620	0.000	1.568	0.000
Spouse employment (REF = Self-employment)	Non-spouse	3.310	0.000	3.010	0.000
	Does not work	3.174	0.000	3.145	0.000
	Salaried worker	2.866	0.000	2.550	0.000
Education level (REF = Higher education)	Illiterate	3.655	0.000	3.992	0.000
	Incomplete primary education	2.230	0.000	3.076	0.000
	Secondary education	1.455	0.000	1.759	0.000
	Primary education	1.452	0.000	1.803	0.000
Region (REF = Center)	South and Canary Islands	1.479	0.000	1.356	0.000
	Madrid	1.182	0.050	1.237	0.098
	East	1.119	0.023	1.145	0.063
	Northwest	0.967	0.524	0.784	0.003
	Northeast	0.956	0.466	0.818	0.039
Dependent children (REF = YES)	NO	1.190	0.000	1.048	0.370
Nationality (REF = Other & double nationality)	Spanish	0.464	0.000	0.486	0.000
Sex (REF = Men)	Women	1.926	0.000	1.689	0.000
Age (REF = 65 or more years old)	50 to 64 years old	0.971	0.400	1.008	0.881
Intercept		0.006	0.000	0.007	0.000

Source: own elaboration. Data from the Labour Force Survey.

From the point of view of the educational level, as expected when specifying the third hypothesis, the probability of failure is lower the higher the educational level of senior entrepreneurs, so that those with higher education show the lowest probability of failure.

Likewise, while the results suggest that in the stages of economic expansion, there is hardly any difference between entrepreneurs with secondary and primary education, in the contractionary stages of the cycle there is clearly a higher probability of failure as the educational level is lower, so that education becomes a key factor in business failure in times of an economic crisis.

On the other hand, from a regional perspective, and considering the regions of central Spain as a reference, interesting results are obtained. On the one hand, while in times of economic crisis, the regional factor is a significant factor regardless of the territory in which the activity is carried out, during periods of expansionary cycle, carrying out the activity in the north-west and north-east of Spain is not statistically significant compared to carrying out the business activity in the regions of central Spain. Likewise, the greatest probability of failure occurs in the areas of southern Spain and the Canary Islands, followed later by Madrid, regardless of the stage of the economic cycle considered.

On the other hand, the fact that the senior entrepreneur has dependent children in the family home is also significant in the probability of failure, so that senior entrepreneurs who do not have children are more likely to fail than those who do, although this probability is reduced in times of contraction of the economic cycle. This allows us not to reject the fifth specified hypothesis.

On the other hand, gender and nationality do have a relationship with the failure of senior entrepreneurship, which allows us not to reject hypotheses 6 and 7. In the case of the first variable, men are less likely to fail than women, regardless of the stage of the economic cycle studied. However, senior entrepreneurs who have a nationality other than Spanish or who have dual nationality show a higher probability of failure than that observed in Spanish senior entrepreneurs, with hardly any differences throughout the economic cycle.

Finally, if we distinguish by age bracket within the senior group, we can see how hypothesis 8 must be rejected since age is not statistically significant in the propensity to fail in any of the stages of the economic cycle.

5. Discussion

The academic literature is clear on the importance of entrepreneurial activity as a factor in economic growth and development. However, high entrepreneurial mortality rates would not allow the expected levels of economic growth and development to be achieved, since it is not only important to consider entrepreneurial activity but also sustainability over time. Furthermore, the demographic change that characterises a significant percentage of countries in the world is leading to older segments of the population gaining prominence in the labour market.

This prominence, which grows year after year as life expectancy increases and the population gets older, leads to the entrepreneurial activity generated by these professionals being considered as an increasingly likely alternative. Furthermore, the literature has also studied the effect of the economic cycle on the dynamics of business failure, pointing out that business mortality is higher in the recessionary stages of the cycle compared to the expansionary stages.

In the case of Spain, the results obtained are interesting from the point of view of public policies that could improve the sustainability of senior entrepreneurial projects. On one hand, the results show a better performance of entrepreneurs who carry out their activity in the services and primary sectors compared to industry and construction, highlighting the intensity of the economic cycle in this fact. Therefore, the results are aligned with previous literature that emphasises the importance of the sector in the propensity of companies to fail (García *et al.*, 2019; Calabrese, 2023). This result is consistent with the Spanish economic structure, with a high percentage of activity in services, while entrepreneurship in this sector does not

generally require large investments in physical capital. In the case of agriculture, the ease of entrepreneurship is similar, although more capital investment may be necessary.

In this context, public policies should be oriented towards facilitating entrepreneurial activity in these sectors, which show greater propensity and facilities. Policies aimed at facilitating access to finance (bank or non-bank) are essential to maintain the capitalisation of enterprises. For example, through reciprocal guarantees, they can help to raise the necessary financing to maintain the sustainability of the business and to make the necessary recurrent investments.

It was also significant whether or not the spouse has his or her own professional career, with the probability of failure being lower in cases where the spouse has a salaried job (of a public or private nature) and, mainly, self-employment in comparison. Not having a spouse is the status with the highest associated probability of failure. This behaviour is influenced, as the literature points out, by family support in moments of lower confidence (Owens *et al.*, 2013; Frota Vasconcellos Dias, Martens, 2019), with financial support also being important in the form of guarantees or directly with the professional collaboration of the spouse of senior entrepreneurs. Public policies aimed at more favourable taxation for families with several entrepreneurial members would help to generate more sustainable projects and encourage entrepreneurial activity itself. Indeed, the importance of the professional career of spouses is a factor to be taken into account in the design of regulations and measures for the reconciliation of personal and professional life that help families to develop their careers without this being an impediment to the proper development of family life. With a better reconciliation of both spheres, not only are the professional careers of individuals enhanced, but also the long-term sustainability of the entrepreneurial projects of their own spouses.

Education also shows its importance in the probability of failure of senior entrepreneurs, highlighting the importance of having higher education in general, although with more intensity in times of economic crisis (in line with authors such as Hunady *et al.*, 2018). This is why economic policies aimed at the acquisition of training and skills by senior entrepreneurs could be appropriate to maintain the sustainability of entrepreneurial projects.

For example, given the importance of the senior group in the unemployed population, active employment policies could not only be improved but also expanded to groups of senior entrepreneurs to consolidate their projects and encourage the hiring of other senior unemployed people.

From a regional perspective, the literature has emphasised the geographical factor when studying business failure (Maté-Sánchez-Val *et al.*, 2018; Calabrese *et al.*, 2019; Calabrese, 2023). The results support the findings of the literature, mainly in times of economic contraction and should encourage public authorities to work for territorial cohesion in economic and social terms, encouraging senior entrepreneurial activity in those regions where the financial situation of social security is more deficient and where unemployment is a major problem.

On the other hand, the fact that the senior entrepreneur has dependent children in the family home reduces the probability of failure in stages of expansion (not contraction). This result is consistent with the findings of authors such as Frota Vasconcellos Dias & Martens (2019), who emphasise emotional factors linked to failure and related to the family. The need to provide resources to the family likely leads entrepreneurs to a greater entrepreneurial survival effort than if they did not have this responsibility.

Likewise, the results show lower probability of failure in men with respect to women (consistent with contributions from the literature such as Alvarez & Otero (2006) or Neneh (2020), based on the interrelationships between the entrepreneurial sphere and the family) as well as in senior entrepreneurs who hold Spanish nationality in relation to those who hold another nationality or have dual nationality, so that the results in this aspect are also consistent with previous contributions from the literature (Irastorza & Peña-Legazkue, 2018). Likewise, a more in-depth analysis of the problems experienced by women entrepreneurs and foreign entrepreneurs will help to design policies aimed at improving their business environment and pursuing the goal of long-term business sustainability. In the case of women, once again it seems appropriate to implement measures and aid for work-life balance, given the importance of having children as a factor in the greater probability of business failure, a phenomenon that undoubtedly affects women to a greater extent.

Finally, within the senior group, age does not seem to be a factor that influences the probability of failure. Although it has been analysed whether being older is related to a higher or lower probability of business failure, this fact does not seem to have statistical significance. This fact contradicts, a priori, previous contributions such as those of Mayr *et al.* (2020) or Lattacher & Wdowiak (2020), although it is true that these contributions analyse general entrepreneurial activity, while our study that has been conducted already discriminates by age when studying the group of senior workers. Therefore, the results show that, within this group, there are no differences by age bracket.

Therefore, the results obtained allow us to encourage the implementation of public policies to help senior entrepreneurs develop sustainable projects over time and reduce the propensity to fail.

These economic policies, which encompass actions from various perspectives, are an essential complement to the policies that must be implemented in developed countries (and especially in Spain) to extend the active stage of an increasingly important segment of the population and with extensive experience that should not be lost, while at the same time helping public pension systems to alleviate their financial situation.

Conclusions

The increased longevity experienced in developed countries, together with the social behaviours that derive from this increased longevity and that affect people's main life milestones make senior entrepreneurship an increasingly common professional alternative in a group that still has much added value to contribute to the economy and society (Fachinger, 2019; Fernández-López *et al.*, 2022).

Although there is a certain general perception that entrepreneurial activity is focused on younger generations (Schøtt *et al.*, 2017; Matricano, 2018), in reality, the older population segments are the ones that show greater dynamism in business creation, due to the fact that they have more experience and human capital, but also greater financial resources (Fachinger, 2019). The Spanish reality is a clear reference in this regard, showing greater entrepreneurial dynamism in the most senior segments of the population (Socci *et al.*, 2020; Pérez-Encinas *et al.*, 2021).

In this context, the objective of this work has focused on understanding, the different stages of the economic cycle (expansion and contraction), which are the socio-demographic traits that characterise Spanish senior entrepreneurs and that can shed light on the profile of

the Spanish senior entrepreneur on which specific economic policies can be developed in order to enhance the sustainability of business projects.

Thus, using the information from the micro-data of the Labour Force Survey provided by the Spanish National Statistics Institute, which collects information on the socio-demographic characteristics of Spanish households, a sample has been constructed containing information on senior entrepreneurs who have failed in their business initiatives in the last twelve months or who continue with their projects in operation, which are at least twelve months old.

Based on this information and the socio-demographic characteristics of these entrepreneurs, including the sector of activity, region, the existence of a spouse and the spouse's employment, gender, age, nationality, educational level or having dependent children, two logistic regression models have been developed to differentiate between the expansionary phases of the economic cycle and the contraction phases of the activity.

The results obtained are consistent with previous contributions from the literature (Rodriguez, 2018; Calabrese *et al.*, 2019; García *et al.*, 2019; Calabrese, 2023; Maté-Sánchez-Val *et al.*, 2018) and allow us to understand the importance of the sector of activity and the region in the propensity to fail of senior entrepreneurs (with differences between whether failure occurs in stages of expansion or recession, mainly if the activity is carried out in the regions of the north-west or north-east of Spain).

On the other hand, having an entrepreneurial partner entails a lower probability of failure than if the couple is an employee or, mainly, if they do not have a job or the entrepreneur does not have a partner. Therefore, the family network is important when deciding whether to close a business or not (in coherence with the previous literature such as Owens *et al.* (2013) or Frota Vasconcellos Dias, Martens (2019)). Likewise, in stages of economic expansion, not having children increases the probability of closing the business, although this factor does not seem to be significant in times of crisis.

Likewise, there appear to be differences by gender and nationality (in line with authors such as Alvarez, Otero (2006), Neneh (2020) or Irastorza, Peña-Legazkue (2018)), with men and national entrepreneurs showing lower rates of business failure. Finally, having higher education reduces the propensity to fail in relation to lower educational levels (results in line with other authors such as Hunady *et al.*, 2018).

It is also interesting that the age difference between senior entrepreneurs does not generate differences in terms of failure, given the relative importance of the rest of the factors analysed. In this way, it is possible to understand not only the profile of senior entrepreneurs who fail in their business initiative but also the importance of the economic cycle in the effect of the socio-demographic factors that characterise this profile.

Therefore, the contribution of this study to the literature focuses on gaining a better understanding of the profile of senior entrepreneurs who fail in their business initiatives and helps in the design of economic policies aimed at developing a business environment more conducive to business survival regardless of the time of the economic cycle. Given the growing importance of this group and the scant attention it has received in previous literature, this contribution helps to develop a necessary debate in both the academic and economic policy arenas.

However, the limitations of the study must also be pointed out, which are centred on the fact that the study only covers the Spanish case. It is true that the case of Spain is a good example for such a study, as it combines various factors that boost senior entrepreneurial

activity. On the one hand, it is one of the countries with the highest life expectancy in the world. On the other hand, senior unemployment has increased significantly in recent years, as have early retirement programmes in large companies. This generates the need for senior professionals to develop entrepreneurial projects and the need to develop public policies that favour the sustainability of these projects and reduce their propensity to fail.

Likewise, the use of socio-demographic variables enriches the contributions made by the literature, but the lack of information of an economic nature is an important limitation of the work. In addition, an in-depth study of this area should involve longitudinal case studies, so that the trajectories of failed senior entrepreneurs are better understood.

For this reason, future lines of research should focus on extending the analysis to other countries in which longevity is a phenomenon of growing importance and on including factors of a complementary nature, such as economic information.

Future lines of research could be developed from two points of view. On the one hand, by delving into the socio-demographic and socio-economic factors that characterise senior entrepreneurs who fail, in order to obtain conclusions from a European perspective and analyse the capacity of a public policy. At a European level that allows the sustainability of senior entrepreneurial projects to improve in a context of demographic change. On the other hand, it is necessary to analyse the differences that occur in the behaviour and economic-financial factors of failure in companies created by senior professionals. Therefore, both lines of research are complementary and allow us to study the more personal perspective of entrepreneurs and the perspective based on the business information of the projects.

References

Abid, I., Mkaouar, F., Kaabia, O. (2018), "Dynamic analysis of the forecasting bankruptcy under presence of unobserved heterogeneity", *Annals of Operations Research*, Vol. 262, pp.241-256. DOI: https://doi.org/10.1007/s10479-016-2143-2.

Ahmad, N.H., Nasurdin, A.M., Halim, H.A., Taghizadeh, S.K. (2014), "The Pursuit of Entrepreneurial Initiatives at the "Silver" Age: From the Lens of Malaysian Silver Entrepreneurs", *Procedia - Social and Behavioural Sciences*, Vol. 129, pp.305-313, DOI: https://doi.org/10.1016/j.sbspro.2014.03.681.

Al-Ghamri, N.S. (2016), "Causes of Small Businesses' Failure: An Exploratory Study within Jeddah's Governorate in Saudi Arabia", *International Journal of Small Business and Entrepreneurship Research*, Vol., 4 No 2, pp.1-35.

Altman, E. I. (1983), "Why businesses fail", *Journal of Business Strategy*, Vol. 3 No 4, pp.15-21. DOI: https://doi.org/10.1108/eb038985.

Álvarez, G. Otero, M.S. (2006), "Abandono de la actividad empresarial en España: un enfoque de género", *Revista Europea de Dirección y Economía de la Empresa*, Vol. 1, No 4, pp.69-86.

Aparicio, G., Iturralde, T., Maseda, A. (2019), "Conceptual structure and perspectives on entrepreneurship education research: A bibliometric review", *European Research on Management and Business Economics*, Vol. 25, No 3, pp.105-113. DOI: https://doi.org/10.1016/j.iedeen.2019.04.003.

Arasti, Z. (2011), "An empirical study on the causes of business failure in Iranian context", *African Journal of Business Management*, Vol. 5, No 17, pp.7488-7498.

Asociación Española de Economía (2015), "Fechado del ciclo económico español", *Spanish Business Cycle Dating Committee*, available at, http://www.asesec.org/CFCweb/index.php/archivo-historico-del-ciclo-economico-espanol/, referred on 02/12/2023.

Asoni, A., Sanandaji, T. (2016). "Identifying the effect of college education on business and employment survival", *Small Business Economics*, Vol. 46, No 2, pp.311-324. DOI: http://www.jstor.org/stable/43895707.

Balcaen, S., Ooghe, H. (2006), "35 years of studies on business failure: an overview of the classic statistical methodologies and their related problems", *The British Accounting Review*, Vol. 38, No 1, pp.63-93, DOI: https://doi.org/10.1016/j.bar.2005.09.001.

Bartczak, K. (2022), "Changes in business models implied by the use of digital technology platforms", *Entrepreneurship and Sustainability Issues*, Vol. 9, No 4, pp.262-281. http://doi.org/10.9770/jesi.2022.9.4(14).

Baù, M., Sieger, P., Eddleston, K.A., Chirico, F. (2017), "Fail but Try Again? The Effects of Age, Gender, and Multiple–Owner Experience on Failed Entrepreneurs' Reentry", *Entrepreneurship Theory and Practice*, Vol. 41, No 6, pp.909-941. https://doi.org/10.1111/etap.12233.

Benito, A., Delgado, F.,Pages, J. (2004), "A synthetic indicator of financial pressure for Spanish firms", *Banco de España Working papers*, No 411.

Berryman, J. (1983), "Small Business Failure and Survey of the Literature", *European Small Business Journal*, Vol. 1, No 4, pp.47-59. DOI: https://doi.org/10.1177/026465608300100404.

Biron, D., St-Jean, E. (2019), "A Scoping Study of Entrepreneurship Among Seniors: Overview of the Literature and Avenues for Future Research", in: A. Maâlaoui (ed.), Handbook of Research on Elderly Entrepreneurship, Springer Nature Switzerland AG, pp.17-41. DOI: https://doi.org/10.1007/978-3-030-13334-4.

Bonsdorff, M.E., Lahtonen, J., von Bonsdorff, J., Varamäki, E. (2019), "Entrepreneurs' Exit and Paths to Retirement: Theoretical and Empirical Considerations", in: Maâlaoui, A. (eds.), *Handbook of Research on Elderly Entrepreneurship*, Springer, Cham. DOI: https://doi.org/10.1007/978-3-030-13334-4_4.

Bosma, N., Content, J., Sanders, M., Stam, E. (2018), "Institutions, entrepreneurship, and economic growth in Europe", *Small Business Economics*, Vol. 51, pp.483–499. DOI: https://doi.org/10.1007/s11187-018-0012-x.

Bruneau, C., Bandt, O., El Amri, W. (2012), "Macroeconomic fluctuations and corporate financial fragility", *Journal of Financial Stability*, Vol. 8, No 4, pp.219-235, DOI: https://doi.org/10.1016/j.jfs.2012.02.002.

Calabrese, R., Andreeva, G., Ansell, J. (2019), "Birds of a Feather" Fail Together: Exploring the Nature of Dependency in SME Defaults", *Risk Analysis*, Vol. 39, No 1, pp.71-84. DOI: https://doi.org/10.1111/risa.12862.

Calabrese, R. (2023), "Contagion effects of UK small business failures: A spatial hierarchical autoregressive model for binary data", *European Journal of Operational Research*, Vol. 305, No 2, pp.989-997. DOI: https://doi.org/10.1016/j.ejor.2022.06.027.

Camska, D., Klecka, J. (2020), "Comparison of Prediction Models Applied in Economic Recession and Expansion", *Journal of Risk and Financial Management*, Vol. 13, No 52, pp.1-219, DOI: https://doi.org/10.3390/jrfm13030052.

Carling, K., Jacobson, T., Lindé, J., Roszbach, K. (2007), "Corporate credit risk modeling and the macroeconomy", *Journal of Banking & Finance*, Vol. 31, No 3, pp.845-868, DOI: 10.1016/j.jbankfin. 2006.06.012.

Cervený, J., Pilková, A., Rehák, J. (2016), "Senior entrepreneurship in European context: key determinants of entrepreneurial activity", *Ekonomický časopis*, Vol. 64, pp.99-117.

Chevalier, S., Fouquereau, E., Gillet, N. Bosselut, G. (2018), "Unraveling the Perceived Reasons Underlying Entrepreneurs' Retirement Decisions: A Person-Centered Perspective", *Journal of Small Business Management*, Vol. 56, No 3, pp.513-528, DOI: 10.1111/jsbm.12312.

Chhabra, M., Hassan, R., Shah M.A., Richa Sharma (2023), "A bibliometric review of research on entrepreneurial capacity for the period 1979 to 2022: Current status, development, and future research directions", *Cogent Business & Management*, Vol. 10, No 2178338, pp.1-28, DOI: 10.1080/23311975.2023.2178338.

Clegg, A., Fifer, S. (2014), "Senior Self-Employment and Entrepreneurship—A PRIME Perspective", *Public Policy & Aging Report*, Vol. 24, pp.168-172, DOI: 10.1093/ppar/pru042.

Collins, R.A. Green, R.D. (1982), "Statistical methods for bankrupcy forecasting", *Journal of Economics and Business*, Vol. 34, No 4, pp.349-354, DOI: https://doi.org/10.1016/0148-6195(82)90040-6.

Corral, S. (2022), "Gender influence on business failure: aim for five european countries", Estudios de Economía Aplicada, Vol. 40, No 2, pp. 1-17, DOI: https://doi.org/10.25115/eea.v40i2.6709

Cope, J. (2011), "Entrepreneurial learning from failure: An interpretative phenomenological analysis", *Journal of Business Venturing*, Vo. 26, No 6, pp.604-623. DOI: https://doi.org/10.1016/j.jbusvent.2010.06.002.

Costa, P.L., Ferreira, J.J., Torres, R. (2023), "From entrepreneurial failure to re-entry", *Journal of Business Research*, Vol. 158, No 113699, pp.1-17. DOI: https://doi.org/10.1016/j.jbusres.2023.113699.

Damaraju, N.L., Barney, J.B., Dess, G.G. (2021), "Do Stringent Bankruptcy Laws Always Deter Entrepreneurial Activities? A Study of Cultural Influences", Entrepreneurship Theory and Practice, Vol. 45, No 2, pp.418–439. DOI: https://doi.org/10.1177/1042258720913017.

DeTienne, D.R. (2010), "Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development", *Journal of Business Venturing*, Vol. 25, No 2, pp.203-215. DOI: https://doi.org/10.1016/j.jbusvent.2008.05.004.

Del Olmo-García, F., Crecente Romero. F.J. (2020), "El fracaso de la actividad empresarial por cuenta propia. Factores regionales, macroeconómicos e institucionales", *Anuario Jurídico y Económico Escurialense*, Vol. LIII, pp.199-244.

Del Olmo García, F., Crecente Romero, F.J. (2021), "Analysis of the tendency towards entrepreneurship in Spain. A perspective based on the economic and institutional environment", *Esic Market Economics and Business Journal*, Vol. 52, No 1, pp.69-101. DOI: 10.7200/esicm.168.0521.2.

Del Olmo García, F., Crecente Romero, F., Sarabia, M., del Val, M.T. (2023), "Longevity trends in entrepreneurial activity. An analysis of the characteristics of senior entrepreneurship in Spain", International Journal of Entrepreneurial Behaviour & *Research*, Vol. 29 No. 7, pp.1541-1567. https://doi.org/10.1108/IJEBR-06-2022-0547

Dias, A., Teixeira, A. (2017) "The anatomy of business failure: A qualitative account of its implications for future business success", *European Journal of Management and Business Economics*, Vol. 26, No 1, pp.2-20, DOI: https://doi.org/10.1108/EJMBE-07-2017-001.

Domínguez, I., Del Olmo, F. Herce, J. A. (2020), "Reinventing Social Security: Towards a Two-Step Mixed Pension System", in: M. Peris-Ortiz, J. Álvarez-García, I. Domínguez-Fabián & P. Devolder (eds.), *Economic Challenges of Pension Systems. A Sustainability and International Management Perspective*, pp.441-472.

Doran, J., McCarthy, N., O'Connor, M. (2018), "The role of entrepreneurship in stimulating economic growth in developed and developing countries", *Cogent Economics & Finance*, Vol. 6, No 1442093, pp.1-14. DOI: 10.1080/23322039.2018.1442093.

Dunis, C.L., Triantafyllidis, J.A. (2002), "Alternative Forecasting Techniques for Predicting Company Insolvencies: The UK Example (1980-2001)", *Neural Network World*, Vol. 13, No 4, pp.326-336

Dvorsky, J., Petrakova, Z., Hudakova, M., Bednarz, J. (2023), "National support and legislative change in the business environment of V4 countries: Business sectors view", *Journal of Business Sectors*, Vol. 1, No 1, pp.42–52. https://doi.org/10.62222/EQDP3972

Fachinger, U. (2019), "Senior Entrepreneurship. Self-employment by Older People – an Uncharted Territory", *Zagreb International Review of Economics & Business*, Vol. 22, Special Conference Issue, pp.95-106, DOI: 10.2478/zireb-2019-0007.

Fernández-López, S., Rodeiro-Pazos, D., Zapata-Huamaní, G.A., Rodríguez-Gulías, M.J. (2022), "Senior and technology entrepreneurship: An analysis for OECD countries", Strategic *Change*, Vol. 31, No 4, pp.447-460. DOI: https://doi.org/10.1002/jsc.2514.

Figueiredo, E., Paiva, T. (2019), "Senior entrepreneurship and qualified senior unemployment: The case of the Portuguese Northern region", *Journal of Small Business and Enterprise Development*, Vol. 26, No3, pp.342-362. https://doi.org/10.1108/JSBED-01-2018-0006.

Frota Vasconcellos Dias, T.R. Martens, C.D.P. (2019), "Business failure and the dimension of entrepreneurial learning: study with entrepreneurs of micro and small-sized enterprise's", *Revista de Administração da Universidade Federal de Santa Maria*, Vol. 12 No 1, pp.107-124.

Garcia, M., Zouaghi, F., Garcia, T., Robinson, C. (2019), "What drives business failure? Exploring the role of internal and external knowledge capabilities during the global financial crisis", *Journal of Business Research*, Vol. 98, pp.441-449. DOI: https://doi.org/10.1016/j.jbusres.2018.07.032.

Garrido, L., Requena, M., Toharia, L., (2000), "La Encuesta de Población Activa desde la perspectiva de los hogares", *Estadística Española*, Vol. 42, No 146, pp.115-152.

Giordano, G., Restaino, M. (2022), "Business Failure Prediction Models: A Bibliometric Analysis", in: Pilz, *et al.* (ed.), *Mindful Topics On Risk Analysis And Design Of Experiments*. ICRA8, pp.62-77 Springer. DOI: 10.1007/978-3-031-06685-6_5.

Gladevich, J. (2022), "Assessment of the innovation potential of the regions of Latvia, Lithuania and Belarus", *Entrepreneurship and Sustainability Issues*, Vol. 10, No 1, pp.293-327. http://doi.org/10.9770/jesi.2022.10.1(16).

Gratton, L., Scott, A.J. (2016), *The 100-Year Life Living and Working in an Age of Longevity*, Bloomsbury Publishing.

Grigorescu, A., Pîrciog, S., Lincaru, C. (2020), "Selfemployment and unemployment relationship in Romania – insights by age, education and gender", *Economic Research-Ekonomska Istraživanja*, Vol. 33 No 1, pp.2462-2487, DOI: 10.1080/1331677X.2019.1689837.

Halim, A., Ahmad, H., Daud, S.N.M., Marzuki, A. (2008), "Macroeconomic determinants of corporate failures in Malaysia", *International Journal of Business and Management*, Vol. 3, No 3, pp.3-10. DOI: 10.5539/ijbm.v3n3p3.

Hall, J.R., Savas-Hall, S., Shaw, E.H. (2022), "A deductive approach to a systematic review of entrepreneurship literature", No. 3/2020, *Management Review Quarterly*. DOI: https://doi.org/10.1007/s11301-022-00266-9

Hana, U. (2013), "Competitive advantage achievement through innovation and knowledge", *Journal of competitiveness*, Vol. 5, No 1, pp.82-96. DOI: 10.7441/joc.2013.01.06.

Harada, N. (2007), "Which Firms Exit and Why? An Analysis of Small Firm Exits in Japan", *Small Business Economics*, Vol. 29, pp.401–414. https://doi.org/10.1007/s11187-006-9001-6

Hol, S. (2007), "The influence of the business cycle on bankruptcy probability", International Transactions in Operational Research, Vol. 14, No 1, pp.75-90, DOI: https://doi.org/10.1111/j.1475-3995.2006.00576.x

Hsu, D.K., Wiklund, J., Cotton, R.D. (2017), "Success, Failure, and Entrepreneurial Reentry: An Experimental Assessment of the Veracity of Self–Efficacy and Prospect Theory", *Entrepreneurship Theory and Practice*, Vol. 41, No 1, pp.19-47. DOI: https://doi.org/10.1111/etap.12166.

Hunady, J., Orviska, M., Pisar, P. (2018), "The Effect of Higher Education on Entrepreneurial Activities and Starting Up Successful Businesses", *Inzinerine Ekonomika-Engineering Economics*, Vol. 29, No 2, pp.226-235. DOI: https://doi.org/10.5755/j01.ee.29.2.19069.

Irastorza, N., Peña-Legazkue, I. (2018), "Immigrant Entrepreneurship and Business Survival during Recession: Evidence from a Local Economy", *The Journal of Entrepreneurship*, Vol. 27, No 2, pp.243–257. DOI: https://doi.org/10.1177/0971355718781248.

Isele, E., Rogoff, E.G. (2014), "Senior Entrepreneurship: The New Normal", Public Policy & Aging *Report*, Vol. 24, pp.141-147, DOI: 10.1093/ppar/pru043.

Jiménez, A., Palmero-Cámara, C., González-Santos, M.J., González-Bernal, J., Jiménez-Eguizábal, J.A. (2015), "The impact of educational levels on formal and informal entrepreneurship", *BRQ Business Research Quarterly*, Vol. 18, No 3, pp.204-2012, DOI: 10.1016/j.brq.2015.02.002.

Kaciak, E., Koladkiewicz, I., Thongpapanl, N., Wojtyra, M. (2021), "The role of social networks in shaping entrepreneurial exit strategies", International Entrepreneurship and Management *Journal*, Vol. 17, pp.1619-1655. DOI: https://doi.org/10.1007/s11365-020-00668-9.

Kautonen, T. (2008), "Understanding the older entrepreneur: Comparing Third Age and Prime Age entrepreneurs in Finland", *International Journal of Business Science & Applied Management*, Vol. 3, No 3, pp. -13

Kautonen, T. (2013), *Senior Entrepreneurship, OECD Centre for Entrepreneurship, SMEs and Local Development*, available at, https://www.oecd.org/cfe/leed/senior_bp_final.pdf, referred on 02/12/2023

Kenny, B., Rossiter, I. (2018), "Transitioning from unemployment to self-employment for over 50s", *International Journal of Entrepreneurial Behaviour & Research*, Vol. 24, No 1, pp.234-255. https://doi.org/10.1108/IJEBR-01-2017-0004

Khan, K.A., Akhtar, M.A., Vishwakarma, R.K., Hoang, H.C. (2023), "A sectoral perspective on the sustainable growth of SMEs. Empirical research in the V4 countries", *Journal of Business Sectors*, Vol. 1, No 1, pp.10-21. https://doi.org/10.62222/CVFW6962.

Khatami, F., Scuotto, V., Krueger, N., Cantino, V. (2022), "The influence of the entrepreneurial ecosystem model on sustainable innovation from a macro-level lens", *International Entrepreneurship and Management Journal*, Vol. 18, pp.1419–1451. DOI: https://doi.org/10.1007/s11365-021-00788-w.

Kücher, A., Feldbauer-Durstmüller, B. (2019), "Organizational failure and decline – A bibliometric study of the scientific frontend", *Journal of Business Research*, Vol. 98, pp.503-516, DOI: https://doi.org/10.1016/j.jbusres.2018.05.017.

Kučera, J., Fiľa, M. (2022), "R&D expenditure, innovation performance and economic development of the EU countries", *Entrepreneurship and Sustainability Issues*, Vol. 9, No 3, pp.227-241. http://doi.org/10.9770/jesi.2022.9.3(14).

Lago, M., Delgado, C., Castelo Branco, M. (2018), "Gender and propensity to risk in advanced countries: Comparison between entrepreneurs and non-entrepreneurs", *PSU Research Review*, Vol. 2, No 1, pp.24-34. DOI: https://doi.org/10.1108/PRR-09-2017-0040

Laffarga, J., Martín, J.L., Vázquez, M.J. (1985), "El análisis de la solvencia de las instituciones BANCARIAS: propuesta de una metodología y aplicaciones a la banca española", ESIC-Market, Vol. 48, pp.51-73.

Lattacher, W., Wdowiak, M.A. (2020), "Entrepreneurial learning from failure. A systematic review", *International Journal of Entrepreneurial Behaviour & Research*, Vol. 26, No 5, pp.1093-1131. DOI:

https://doi.org/10.1108/IJEBR-02-2019-0085.

Lee, C.K., Wiklund, J., Amezcua, A., Bae, T.J., Palubinskas, A. (2022), "Business failure and institutions in entrepreneurship: a systematic review and research agenda", *Small Business Economics*, Vol. 58, pp.1997–2023. DOI: https://doi.org/10.1007/s11187-021-00495-4.

Li, S., Gao, L., Han, C., Gupta, B., Alhalabi, W., Almakdi, S. (2023), "Exploring the effect of digital transformation on Firms' innovation performance", *Journal of Innovation & Knowledge*, Vol. 8, No 1, pp.1-10. DOI: https://doi.org/10.1016/j.jik.2023.100317.

Lin, S., Wang, S. (2019), "How does the age of serial entrepreneurs influence their re-venture speed after a business failure?", *Small Business Economics*, Vol. 52, pp.651–666. DOI: https://doi.org/10.1007/s11187-017-9977-0.

Lindblom, A., Lindblom, T., Wechtler, H. (2020), "Retail entrepreneurs' exit intentions: Influence and mediations of personality and job-related factors", *Journal of Retailing and Consumer Services*, Vol. 54. DOI: https://doi.org/10.1016/j.jretconser.2020.102055.

Maâlaoui, A., Castellano, S., Safraou, I., Bourguiba, M. (2013), "An exploratory study of seniorpreneurs: a new model of entrepreneurial intentions in the French context", *International Journal of Entrepreneurship and Small Business*, Vol. 20, No 2, pp.148-164. DOI: https://doi.org/10.1504/IJESB.2013.056276.

Maalaoui, A., Partouche, J., Safraou, I., Viala, C. (2023), "Senior entrepreneurship: how subjective age affects seniors' entrepreneurial intentions", Review of Managerial Science, Vol. 17, pp.443-465 (2023), DOI: https://doi.org/10.1007/s11846-022-00537-5.

Maâlej, A. (2022), "The role of entrepreneurship and innovation in the environmental and economic dimensions of growth", *Insights into Regional Development*, Vol. 4, No 2, pp.85-95. https://doi.org/10.9770/IRD.2022.4.2(7).

Machova, R., Korcsmaros, E., Csereova, A., Varga, J. (2023), "Innovation activity of Slovak ICT SMEs", *Journal of Business Sectors*, Vol. 1, No 1, pp.32-41. https://doi.org/10.62222/HTPI2054.

Maté-Sánchez-Val, M., López-Hernandez, F., Camilo Rodriguez Fuentes, C. (2018), "Geographical factors and business failure: An empirical study from the Madrid metropolitan area", *Economic Modelling*, Vol. 74, pp.275-283. DOI: https://doi.org/10.1016/j.econmod.2018.05.022.

Matricano, D. (2018), "Grey vs. Young Entrepreneurs: Are They Really That Different in Terms of Entrepreneurial Intentions? Empirical Evidence from Italy", *International Journal of Business and Management*, Vol. 13, No 2, pp.76-86. DOI: https://doi.org/10.5539/ijbm.v13n2p76

Martín, D. (1977), "Early warning of bank failure", *Journal of Banking and Finance*, Vol. 1, No 3, pp.249-276, DOI: https://doi.org/10.1016/0378-4266(77)90022-X.

Mayr, S., Mitter, C., Mitter, A., Duller, C. (2020), "Entrepreneur characteristics and differences in reasons for business failure: evidence from bankrupt Austrian SMEs", *Journal of Small Business & Entrepreneurship*, Vol. 33, No 5, pp.539-558. DOI: 10.1080/08276331.2020.1786647.

Michalkova, L., Kovacova, M., Cepel, M. & Belas, J. (2022), "Insolvency prediction and corporate bankrupcy model in visegrad group countries", *Transformations in Business & Economics*, Vol. 21, No 2A, pp.529-548.

Morris, M.H., Soleimanof, S., White, R.J. (2020), "Retirement of Entrepreneurs: Implications for Entrepreneurial Exit", *Journal of Small Business Management*, Vol. 58, No 6, pp.1089-1120. DOI: https://doi.org/10.1111/jsbm.12476.

Munyo, I., Veiga, L. (2022), "Entrepreneurship and Economic Growth", *Journal of the Knowledge Economy*, DOI: https://doi.org/10.1007/s13132-022-01032-8

Nagore García, A., Rossi, M., van Soest, A. (2021), "Retirement of the self-employed in the Netherlands", *Small Business Economics*, Vol. 56, pp.385-402. DOI: https://doi.org/10.1007/s11187-019-00179-0.

Nefzi, N. (2018), "Fear of failure and entrepreneurial risk perception. International Journal of Entrepreneurial Knowledge", Vol. 6, No 2, pp.45-58. DOI : 10.2478/IJEK-2018-0013.

Neneh, B.N. (2020), "Why foreignness matters: The impact of business-family interference on the exit intentions of women entrepreneur", *Journal of Small Business Strategy*, Vol. 30, No 1, pp.83-96.

OECD (2019), The Missing Entrepreneurs 2019. Policies for Inclusive Entrepreneurship. OECD, available at, https://www.oecd-ilibrary.org/industry-and-services/the-missing-entrepreneurs-2019_4d1096ee-en, referred on 02/12/2023

OECD (2021), The Missing Entrepreneurs 2021. Policies for inclusive entrepreneurship and self-employment. OECD, available at, https://www.oecd.org/industry/smes/inclusive-entrepreneurship/PH-ME2021-Final.pdf, referred on 02/12/2023.

Ohlson, J. (1980), "Financial ratios and the probabilistic prediction of bankruptcy", *Journal of Accounting*

Research, Vol. 18, No 1, pp.109-131.

Owens, G., Scott, J.M., Blenkinsopp, J. (2013), "The impact of spousal relationships on business venture success", *to be presented at Institute for Small Business & Entrepreneurship conference*, Cardiff, November.

Pan, L-Y., Tsa, I-C., Popan, S-H., Chang, S-C. (2022), "Entrepreneurial business start-ups and entrepreneurial failure: How to stand up after a fall?", *Frontiers in Psychology*, Vol. 13, No 943328. DOI: 10.3389/fpsyg.2022.943328.

Perez-Encinas, A., Bueno, Y., Santos, B., Nieto-Mejia, C. (2021), "Are There Differences and Complementarities between Senior and Young Entrepreneurs? An Intergenerational Perspective", *Sustainability*, Vol. 13, No 5202. DOI: https://doi.org/10.3390/su13095202.

Pozuelo, J., Labatut, G., Veres, E.J. (2013), "Validez de la información financiera en los procesos de insolvencia", *Cuadernos de Economía y Dirección de la Empresa*, Vol. 16, No 1, pp.23-40.

Santoro, E., Gaffeo, E. (2009), "Business Failures, Macroeconomic Risk and the Effect of Recessions on Long-Run Growth: a Panel Cointegration Approach", *Journal of Economics and Business*, Vol. 61, No 6, pp.435-452. DOI: https://doi.org/10.1016/j.jeconbus.2009.05.001.

Santomero, A.M., Vinso, J.D. (1977), "Estimating the probably of failure for commercial Banks and the banking system", *Journal of Banking and Finance*, Vol. 1, No 2, pp.185-205, DOI: https://doi.org/10.1016/0378-4266(77)90006-1.

Schøtt, T., Rogoff, E., Herrington, M., Kew, P. (2017), *GEM Special Report on Senior Entrepreneurship 2017. Global Entrepreneurship Research Association*, available at, https://gemconsortium.org/report/gem-2016-2017-report-on-senior-entrepreneurship referred on 02/12/2023.

Singh, S., Corner, P.D., Pavlovich, K. (2015), "Failed, not finished: A narrative approach to understanding venture failure stigmatization", *Journal of Business Venturing*, Vol. 30, No 1, pp.150-166. DOI: https://doi.org/10.1016/j.jbusvent.2014.07.005.

Simmons, S. A., Wiklund, J., Levie, J. (2014), "Stigma and business failure: implications for entrepreneurs' career choices", *Small Business Economics*, Vol. 42, pp.485–505. DOI: https://doi.org/10.1007/s11187-013-9519-3.

Simmons, S.A., Wiklund, J., Levie, J., Bradley, S.W., Sunny, S.A. (2019), "Gender gaps and reentry into entrepreneurial ecosystems after business failure", *Small Business Economics*, Vol. 53, pp.517–531. DOI: https://doi.org/10.1007/s11187-018-9998-3.

Sreenivasan, A., Suresh, M. (2023), "Twenty years of entrepreneurship education: a bibliometric analysis", *Entrepreneurship Education*, Vol. 6, pp.45–68. DOI: https://doi.org/10.1007/s41959-023-00089-z.

Stel, A.v., Carree, M., Thurik, R. (2005), "The Effect of Entrepreneurial Activity on National Economic Growth", *Small Business Economics*, Vol. 24, pp.311–321. DOI: https://doi.org/10.1007/s11187-005-1996-6.

Socci M., Clarke D., Principi A. (2020), "Active Aging: Social Entrepreneuring in Local Communities of Five European Countries", *International Journal of Environmental Research and Public Health*, Vol. 17, No 7, DOI: https://doi.org/10.3390/ijerph17072440.

Somoza, A. (2001), "La consideración de factores cualitativos, macroeconómicos y sectoriales en los modelos de predicción de la solvencia empresarial", *Papeles de Economía Española*, Vol. 89/90, pp.402-426.

Sonfield, M., Lussier, R.N. (2014), "The Influence of the Entrepreneur's Education Level on Strategic Decision Making", *Journal of Small Business Strategy*, Vol. 24, No 1, pp.19–28.

Soto-Simeone, A., Kautonen, T. (2021), "Senior entrepreneurship following unemployment: a social identity theory perspective", *Review of Managerial Science*, DOI: https://doi.org/10.1007/s11846-020-00395-z.

Spanish Economic Association (2015), PIB y fechado histórico del ciclo económico español, available at,https://www.asesec.org/CFCweb/index.php/archivo-historico-del-ciclo-economico-espanol/

Stoica O., Roman A., Rusu V.D. (2020), "The Nexus between Entrepreneurship and Economic Growth: A Comparative Analysis on Groups of Countries", Sustainability, Vol. 12, No 3, Doi: https://doi.org/10.3390/su12031186.

Sousa, A., Braga, A., Cunha, J. (2022), "Impact of macroeconomic indicators on bankruptcy prediction models: Case of the Portuguese construction sector", *Quantitative Finance and Economics*, Vol. 6, No 3, pp.405-432.

Tornikoski, E.T., Kautonen, T, Le Loarne-Lemaire, S. (2012), "Le rôle de l'âge dans l'intention entrepreneuriale. Quelles leçons sur les seniors?", *Revue française de gestión*, Vol. 227, pp.95-109.

Torres, A. M., Leporati, M., Roses, S.D. (2021), "Factors influencing senior entrepreneurship in Chile. A GEM perspective", *Esic Market Economics and Business Journal*, Vol. 52, No 2, pp.45-74, DOI:

10.7200/esicm.169.0522.1.

Ucbasaran, D., Westhead, P., Wright, M. (2009), "The extent and nature of opportunity identification by experienced entrepreneurs", *Journal of Business Venturing*, Vol. 24, No 2, pp.99-115, DOI: 10.1016/j.jbusvent.2008.01.008.

Ucbasaran, D., Westhead, P., Wright, M., Flores, M. (2010), "The nature of entrepreneurial experience, business failure and comparative optimism", *Journal of Business Venturing*, Vo. 25, No 6, pp.541-555, DOI: https://doi.org/10.1016/j.jbusvent.2009.04.001.

Ucbasaran, D., Shepherd, D.A., Lockett, A., Lyon, S.J. (2013), "Life After Business Failure: The Process and Consequences of Business Failure for Entrepreneurs", *Journal of Management*, Vol. 39, No 1, pp.163–202. DOI: https://doi.org/10.1177/0149206312457823.

Urbano, D., Audretsch, D., Aparicio, S., Noguera, M.. (2020), "Does entrepreneurial activity matter for economic growth in developing countries? The role of the institutional environment", *International Entrepreneurship and Management Journal*, Vol. 16, pp.1065-1099, DOI. https://doi.org/10.1007/s11365-019-00621-5.

Uriarte, S., Espinoza-Benavides, J., Ribeiro-Soriano, D. (2023), "Engagement in entrepreneurship after business failure. Do formal institutions and culture matter", *International Entrepreneurship and Management Journal volume*, Vol. 19, pp.941-973. DOI: https://doi.org/10.1007/s11365-023-00829-6.

Vidayana, S. Burhanudin, B., Adiningrum, T.S. (2020), "The role of Entrepreneurs Experience Age and Education On Re-Entry after Business Failure A Path Analysis", *Academy of Entrepreneurship Journal*, Vol. 26, No 4,

Vlieghe, G.W. (2001), "Indicators of Fragility in the UK Corporate Sector", *Bank of England Working Papers*, No 146.

Wainwright, T., Kibler, E. (2014), "Beyond financialization: Older entrepreneurship and retirement planning". *Journal of Economic Geography*, Vol. 14, No 4, pp.849-864.

Watson, J., Everett, J. (1993), "Defining Small Business Failure", *International Small Business Journal*, Vol. 11, No 3, pp.35-48. DOI: https://doi.org/10.1177/026624269301100302.

Wennberg, K., DeTienne, D. R. (2014), "What do we really mean when we talk about 'exit'? A critical review of research on entrepreneurial exit", *International Small Business Journal: Researching Entrepreneurship*, Vol. 32, No 1, DOI: https://doi.org/10.1177/0266242613517126.

Widz, M., Kammerlander, N. (2023), "Entrepreneurial exit intentions in emerging economies: a neoinstitutional perspective", Small Business *Economics*, Vol. 60, pp. 615-638. DOI: https://doi.org/10.1007/s11187-022-00606-9.

Yang, T., del Carmen Triana, M. (2019), "Set Up to Fail: Explaining When Women-Led Businesses Are More Likely to Fail", *Journal of Management*, Vol. 45, No 3, pp.926-954. DOI: https://doi.org/10.1177/0149206316685856.

Zambrano Farias, F., Valls Martínez, M.d.C., Martín-Cervantes, P.A. (2021), "Explanatory Factors of Business Failure: Literature Review and Global Trends", *Sustainability*, Vol. 13, No 10154. DOI: https://doi.org/10.3390/su131810154.

Zmijewski, M.E. (1984), "Methodological issues related to the estimation of financial distress prediction models", *Journal of Accounting Research*, Vol. 22, pp.59-86.

Zhu, Y., Collins, A., Xu, Z., Deepak, S., Cavusgil, T. (2022), "Achieving aging well through senior entrepreneurship: a three-country empirical study", *Small Business Economics*, Vol. 59, pp.665–689. DOI: https://doi.org/10.1007/s11187-021-00564-8.

VYRESNIO AMŽIAUS VERSLO NESĖKMĖS PROFILIS

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SANTRAUKA

Vyresnio amžiaus asmenų verslumas tapo vienu iš vyresnės kartos ramsčių dėl demografinių pokyčių ir darbo rinkos iššūkių vyresnio amžiaus specialistams. Nepaisant to, kad verslumas yra šiuolaikinės ekonomikos augimo bei plėtros varomoji jėga, nekreipiama pakankamai dėmesio į verslo žlugimą ir poreikį sukurti tvarią verslo struktūrą. Šiuo atžvilgiu akademinėje literatūroje dar nėra pakankamai nuodugniai išnagrinėti veiksniai, kurie yra būdingi vyresnio amžiaus verslininkams, kurių verslo veikla žlugo.

Šio straipsnio tikslas yra įvardyti pagrindinius sociodemografinius bruožus, būdingus vyresnio amžiaus verslininkams, kurių verslo veikla žlunga, išskiriant ekspansijos ir susitraukimo ekonominio ciklo etapus, išskirtus kaip svarbius aspektus, į kuriuos reikėtų atsižvelgti literatūroje apie verslo nesėkmes. Analizei buvo pasirinktas Ispanijos atvejis. Tai viena iš pasaulio šalių, kurioje ilgiausia vidutinė gyvenimo trukmė ir didžiausia vyresnio amžiaus žmonių profesinių ryšių svarba.

Šiuo tikslu, remiantis Ispanijos darbo jėgos tyrimo nuo 2005 m. kovo mėn. iki 2022 m. gruodžio mėn. laikotarpio mikroduomenimis, buvo sukurti logistinės regresijos modeliai, skirti nustatyti pagrindinius socialinius ir demografinius veiksnius, lemiančius nesėkmės tikimybę: veiklos sektorių ir regioną, antrosios pusės buvimą ir jo / jos profesinę karjerą, išsilavinimo lygį, pilietybę ir išlaikomų vaikų buvimą namie.

Rezultatai leidžia suprasti veiksnius, susijusius su vyresnio amžiaus asmenų verslo veiklos nesėkme, kad būtų galima apibrėžti viešąją politiką (pvz., švietimo, sektorių ar regioninės sanglaudos politiką), kuri laikui bėgant padėtų verslininkams kurti tvarius projektus, nepriklausomus nuo ekonominio ciklo etapo.

REIKŠMINIAI ŽODŽIAI: vyresnio amžiaus žmonių verslumas; verslo nesėkmės; ekonominis ciklas; darbo jėgos tyrimas; sociodemografinis profilis.