Entrepreneurship in Portugal in relation to other European Union countries from 2010 to 2014

Are we far from or close to the tipping point?

Susana C. Santos and António Caetano

ABSTRACT: This study analyses the dynamics of entrepreneurship in Portugal and other European Union countries from 2010 to 2014. We used the Global Entrepreneurship Monitor (GEM) data collected through representative samples of the population of each country to analyze three main areas: entrepreneurial activity, entrepreneurial attitudes and entrepreneurial aspirations. Our results show that in 2010, 2011, 2012 and 2013, the total early-entrepreneurship rate in Portugal was the same as the average in EU countries but in 2014 it was higher. However, this rise in entrepreneurial activity in Portugal in 2014 was mainly necessity-driven and not improvement-driven. The results also show that despite the fact that Portugal was perceived to have poor opportunities for new business during this period, Portuguese people believe more strongly than people in other countries that they have the required knowledge and skills to start a business. In general, although entrepreneurial attitudes in Portugal are characterized by average entrepreneurial intentions, lower perceived opportunities, higher perceived capabilities to start a business, their fear of failure would prevent them from starting a business. These results are relevant with regard to rethinking the promotion of entrepreneurship in Portugal.

Key words: Entrepreneurship; Early-Stage Entrepreneurial Activity; Portugal; European Union

TÍTULO: Empreendedorismo em Portugal em comparação com os países da União Europeia entre 2010 e 2014: Estaremos perto (ou não) do ponto de viragem?

RESUMO: O presente estudo analisa a dinâmica do empreendedorismo em Portugal e noutros países da União Europeia entre 2010 e 2014. Foram utilizados os dados do Global Entrepreneurship Monitor (GEM), recolhidos através de amostras representativas da população de cada país, para analisar três áreas principais: atividade empreendedora, atitudes empreendedoras e aspirações empreendedoras. Os resultados mostram que, em 2010, 2011, 2012 e 2013, a taxa de atividade empreendedora «early-stage» em Portugal foi igual à média nos países da União Europeia mas mais elevada em 2014. No entanto, este aumento da atividade empresarial em Portugal, neste último ano, foi principalmente motivado não pela oportunidade mas pela necessidade. Os resultados mostram também que, apesar do facto de em Portugal existir a perceção de que há poucas oportunidades para a criação de empresas, neste período, os portugueses estão, simultaneamente, convictos de que possuem as competências e os conhecimentos necessários à criação de uma empresa. Em geral, apesar das atitudes empreendedoras em Portugal serem caracterizadas por intenções empreendedoras de nível médio, por menos oportunidades percebidas e por maiores capacidades percebidas para a criação de empresas, o

medo do fracasso impediria a criação de empresas. Estes resultados são importantes para a reflexão da promoção do empreendedorismo em Portugal.

Palavras-chave: Empreendedorismo; Atividade Empreendedora Early-Stage; Portugal; União Europeia

TÍTULO: Emprendimiento en Portugal en comparación con los países de la Unión Europea 2010-2014: Estaremos cerca (o no) del punto de inflexión?

RESUMEN: El presente estudio analiza la dinámica del emprendimiento en Portugal y otros países de la Unión Europea en 2010, 2011, 2012, 2013 y 2014. Fueron utilizados los datos de Global Entrepreneurship Monitor (GEM), recogidos a través de muestras representativas de la población de cada país para analizar tres áreas principales: actividad emprendedora, actitudes emprendedoras y aspiraciones emprendedoras. Los resultados muestran que, en 2010, 2011, 2012 y 2013, la tasa de actividad emprendedora early-stage en Portugal fue igual a la media de los países de la Unión Europea, aunque más elevada en 2014. Sin embargo, este aumento de la actividad empresarial en Portugal, en 2014, fue principalmente motivada no por la oportunidad, sino por la necesidad. Los resultados también muestran que, a pesar del hecho de que en Portugal existe la percepción de que hay pocas oportunidades para la creación de empresas, en este periodo, los portugueses están simultáneamente convencidos de que poseen las habilidades y conocimientos necesarios para la creación de una empresa. En general, a pesar de que las actitudes emprendedoras en Portugal sean caracterizadas por intenciones emprendedoras de nivel medio, por menos oportunidades percibidas y por mayores capacidades percibidas para la creación de empresas, el miedo al fracaso impediría la creación de empresas. Estos resultados son importantes para reflexionar sobre la promoción del emprendimiento en Portugal.

Palabras clave: Emprendimiento; Actividad Emprendedora Early-Stage; Portugal; Unión Europea

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Entrepreneurship has been broadly conceptualized as critical to social, educational, regulatory and economic development (Holcombe, 1998; Acs and Szerb, 2007; Acs and Amorós, 2008). Today, most economists, politicians and decision makers acknowledge the important role entrepreneurs play in society. Economic development is associated with the introduction and implementation of innovative ideas, whether that be with regard to a product, a process, a market or organizational innovations. When new ventures are successfully launched, new jobs are also created and consequently, during times of economic crisis, reliance on entrepreneurship is even greater (e.g., Kotsios and Mitsios, 2013; Papaoikonomou et al., 2012).

Bygrave and Hofer (1991) clearly stressed the relevance of revealing the entrepreneurship process and model for society in general: "If researchers could develop a model or theory to explain entrepreneurial processes, they would have the key that unlocks the mystery of entrepreneurship. (...) With that kind of predictive power, we would have the key to economic growth! (...) Entrepreneurship would be the giant of the business sciences, perhaps all the social sciences!!" (p. 16). Hence, discovering the dynamics of entrepreneurship in a specific country or context can contribute towards clarifying the mysteries of entrepreneurship.

In this study, we aim to describe the dynamics of entrepreneurship in Portugal and other European Union (EU) countries from 2010 to 2014. These five consecutive years include the period when the economic, financial and social crises were at their most dramatic in Portugal (2010 to 2012) and the two subsequent years when there was a slow recovery from the crisis (2013 and 2014). We will focus on the indicators of entrepreneurial activity, entrepreneurial attitudes and entrepreneurial aspirations in Portugal and in other EU countries.

This paper contributes to understanding the evolution of entrepreneurship in Portugal during the crisis, in comparison to other EU countries. Theoretically, we contribute to the conceptualization of entrepreneurship indicators at a national level. In practice, our study allows us to analyse the strengths and weaknesses of entrepreneurship in Portugal during the years of crisis and slow recovery. We analyse the position of Portugal in relation to other EU countries, and how close or far away it is from the "tipping point" of entrepreneurship, compared with those countries.

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The tipping point was described by Malcolm Gladwell (2000, p. 12) as "the moment of critical mass, the threshold, the boiling point" of the transformation of opportunities, social aspirations or tendencies into real action – that is: the launching of new businesses, changing of mentalities and innovating cultures. We borrow the expression "tipping point" as a metaphor for the transformation of entrepreneurial spirit into real entrepreneurial activities and cultures that are required in Portugal in order to contribute towards overcoming the crisis.

Entrepreneurship activity and economic growth

Literature repeatedly suggests that entrepreneurial activity leads to economic growth, both at national and local level (Kreft and Sobel, 2005). More specifically, research conducted using the most relevant data – the worldwide barometer of entrepreneurship (Global Entrepreneurship Monitor – GEM) – showed that the level of entrepreneurial activity in a country can explain a significant part of the differences in economic growth rates (Reynolds et al., 1999).

In general, there is a U-shaped relationship between national entrepreneurship levels and economic growth (Wennekers et al., 2005). Nevertheless, there are several variables that influence this relationship. These include the different types of entrepreneurship: necessity vs. opportunity entrepreneurship – (Wong et al., 2005); types of economic development – emerging vs. developed countries (e.g., Valliere and Peterson, 2009); characteristics of export orientation (Hessels and van Stel, 2009); or income distribution (Martin et al., 2010).



Despite the relevance of the moderators in the relationship, the outcomes of entrepreneurial activity are, by themselves, highly associated with economic growth, since they are capable of fostering job creation, increasing income and wealth, opening new markets or establishing connections between local and global economies (e.g., Minniti, 1999; Bygrave and Cowling, 2007; Koellinger and Minniti, 2009).

In the context of the economic and financial crisis, entrepreneurship is considered to be one of the most promising engines that can help foster the dynamics of the system.

The entrepreneurship barometer

GEM is a joint research initiative of Babson College in Wellesley (USA) and the London Business School. The first GEM data wave was collected in 1997. At that time, GEM focused on the G7 countries (i.e., Canada, France, Germany, Italy, Japan, United Kingdom and United States) and on Denmark, Finland, and Israel. Nowadays, GEM comprises 99 economies (Xavier et al., 2013).

The GEM defines entrepreneurship as "any attempt at new business or new venture creation, such as self-employment, a new business organisation, or the expansion of an existing business, by an individual, a team of individuals, or an established business" (Bosma et al., 2012, p. 9). The entrepreneurship process defined by the GEM comprises several phases. The first phase focuses on the intention to start a business and involves potential entrepreneurs. Following this, the process includes the nascent entrepreneurial activity, including those who are actually starting a business, or running new businesses; i.e., businesses with more than three months but less than three and a half years. Together, nascent and new business owners are part of the TEA in an economy. TEA is the main index of GEM research and represents the percentage of adults in the population who are involved in either nascent or new firms. The difference between nascent and new firms is that the first are those that have survived the start-up phase, i.e., they have been active for over twelve months. The next stage refers to established businesses, which includes those that have been in existence for more than three and a half years (Xavier et al., 2013).

The entrepreneurship process is embedded in an institutional environment that affects entrepreneurship and economic development, which explains how entrepreneurship is affected by national conditions. This institutional environment includes entrepreneurial framework conditions that influence individual decisions and entrepreneurship profiles across economies (Bosma et al., 2009; Xavier et al., 2013).

Using the typology suggested by Porter et al. (2002), GEM classifies countries according to their economies that can be targeted for different purposes: factor-driven economies, efficiency-driven economies and innovation-driven economies. In factor-driven economies, the basis of economic development is still largely dependent on agricultural activity and progression of this economy is realized through the gradual migration of labour to the secondary and tertiary sectors. Some countries that are part of this group and participate in the GEM study include the Middle East and North Africa (e.g., Algeria, Egypt, Iran and Palestine), sub-Saharan Africa (e.g., Angola, Botswana, Ethiopia, Ghana, Malawi, Nigeria, Uganda and Zambia) and Asia Pacific and south Asia, Pakistan (Xavier et al., 2013).

In economies predominantly oriented towards efficiency, the industrial sector is already developed and new companies can enter the market to enhance economic productivity and generate capital investment. The efficiency-driven economies are in the regions of Latin-America and the Caribbean (e.g., Argentina, Barbados, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Panama, Peru, Trinidad and Tobago, and Uruguay), in the Middle East and North Africa, such as Tunisia; in sub-Saharan Africa (e.g., Namibia and South Africa), in the Asia-Pacific region and South Asia (e.g., China, Malaysia, and Thailand), some countries in the European Union (e.g., Estonia, Hungary, Latvia, Lithuania, Croatia, Poland and Romania) and non-European Union countries (e.g., Bosnia and Herzegovina, Macedonia, Russia, and Turkey) (Xavier et al., 2013).

Finally, the innovation-driven economies are based on a large increase in the services sector, while the development of industry and agriculture undergoes considerable change and improvement. The fact that these economies take a gamble on innovation and R&D projects, promotes the growth of entrepreneurial activity that seeks to optimize the opportunities for innovation and is oriented to the needs of an increas-

ingly demanding population. In the Middle East and North Africa, Israel is the innovation economy country. In the Asia--Pacific region and South Asia the four countries which are considered to be innovation-driven are: Japan, Republic of Korea, Singapore, and Taiwan. In addition, the European Union (e.g., Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Slovakia, Slovenia, Spain, Sweden and United Kingdom), non-European union countries (e.g., Norway and Switzerland) and the United States are also integrated in this category of economic development (Xavier et al., 2013).

In addition to economic indicators, the GEM also takes into account three components of entrepreneurship: *entrepreneurial activity, entrepreneurial attitude*, and *entrepreneurial aspirations*. Entrepreneurial activity is the degree to which people actually implement their business ideas. *Entrepreneurial attitude* is the position of individuals in relation to entrepreneurship, which is to say – their perception of existing opportunities, or the perception of risk that individuals are willing to take. Finally, *entrepreneurial aspiration* reflects the qualitative nature of business opportunities with regard to its development, internationalization, and product innovation, among others.

To our knowledge, there are still a lot of questions regarding the impact of entrepreneurship in a context of crisis. Some exceptions include a study about the role of entrepreneurship in the Greek economy (Kotsios and Mitsios, 2013); and the role of entrepreneurial small and medium enterprises in times of crisis (Papaoikonomou et al., 2012).

In this paper, we describe the dynamics of entrepreneurship in Portugal and the other European Union countries in 2010, 2011 and 2012 – three years when the economic, financial and social crisis were more dramatic – and in 2013 and 2014 – two years when there was a slow recovery from the crisis. In the next section, we describe the measures and results of the entrepreneurship activity, entrepreneurial attitudes and entrepreneurial aspirations in Portugal and other European Union (EU) countries from 2010 to 2014. We focus our analysis on 2010, 2011 and 2012 because this time span is integrated in the Eurozone crisis (Quarterly Report on the Euro Area, 2010), and 2013 and 2014 as this is a time span characterized by a slow recovery from the crisis. In Box 1 we describe the European socio-economic environment during the period under analysis **(see Box 1, p. 42)**.

Method

Sample

We used the GEM data based on representative samples, at the national level, from EU countries in 2010 (Kelley et al., 2011), 2011 (Kelley et al., 2012), 2012 (Xavier et al., 2013), 2013 (Amorós and Bosma, 2014) and 2014 (Singer et al., 2015). A total of 23 EU countries were included in our sample.

The GEM data were not collected in Bulgaria, Cyprus, Luxembourg, the Czech Republic and Malta for more than two years during this period, thus our analysis does not include these countries. Furthermore, some countries did not collect data in the five years we are interested in. Table 1 presents the countries and correspondent years on which we based our results **(see Table 1, p. 43)**.

Measures

Over a five-year period, we analysed entrepreneurship activity, entrepreneurial attitudes and entrepreneurial aspirations in the countries included in our study.

The entrepreneurship activity indicators

The main entrepreneurship activity indicators following the GEM model are: the TEA, necessity, and opportunity-driven entrepreneurs.

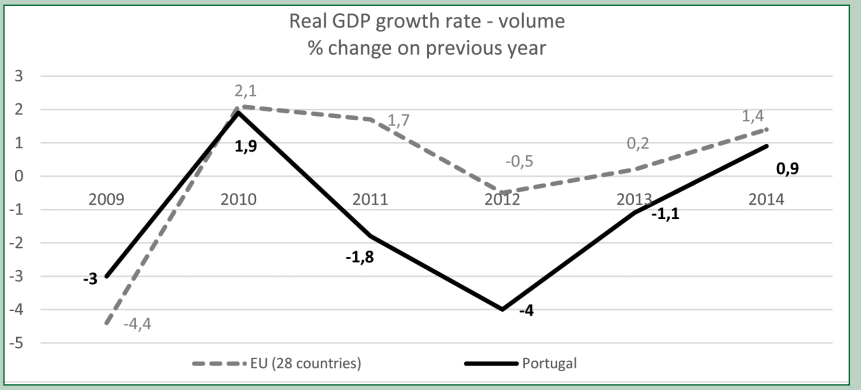
The TEA measures the proportion of adults (18 to 64 years old) in an economy who are nascent and new entrepreneurs. The TEA is, then, an analysis of entrepreneurial businesses which are up and running in the year in which the country is analysed (Bosma et al., 2012; Xavier et al., 2013).

The GEM also differentiates the individuals who start their own business in answer to their need for an income to support themselves and families; from those individuals who start their businesses as an answer to an opportunity they identified and decided to exploit. The former are named necessity entrepreneurs, and are driven by necessity motives such as no better job option, or a need to make a living to support families. The latter – named *improvement-driven opportunity entrepreneurs* – are driven by an opportunity

Box 1
An outlook on the economic and labour indicators in the European Countries (EU-28) and Portugal between 2010 and 2014

The European Union started facing a global financial crisis in mid-September 2008 as a consequence of the intense financial tensions and increased spread of the real economy worldwide (BCE, 2008). A severe recession in most countries in 2009 was followed by a partial recovery in 2010, 2011, and 2012 (Eurostat Pocketbooks, 2012). In 2009, there was a contraction of the real GDP growth rate in the European Union (EU-28) to -4.5%; in 2010 it increased to 2.0%; in 2011 to 1.7%, in 2012 the rate contracted to -0.5%, in 2013 it increased to 0.2% and 1.4% in 2014 (Eurostat Statistics, 2015). Graph 1 depicts the real GDP growth rate, as a volume percentage change on the previous year, in the EU 28 countries and Portugal.

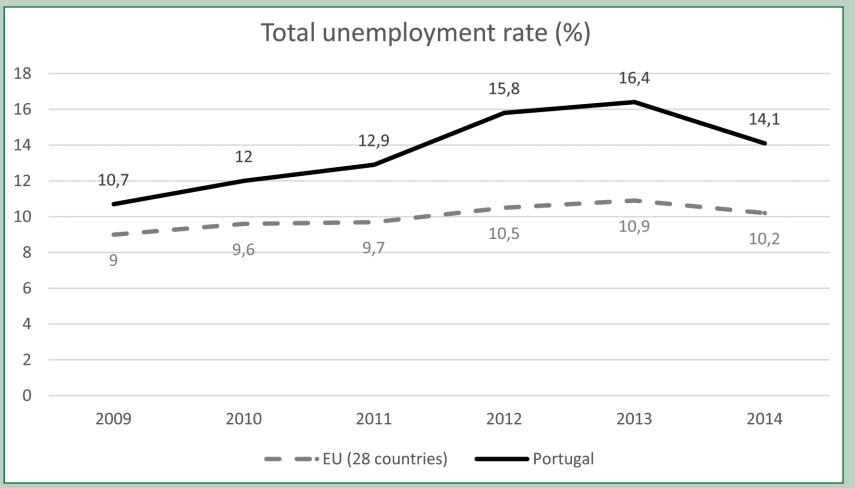
Graph 1
GDP growth rate, as a volume percentage change on the previous year, in the EU 28 countries and Portugal from 2009 to 2014



Source: Eurostat Statistics, 2015

As a result of the financial and economic crisis, the level of unemployment climbed in the EU-28. The total unemployment rate represents the unemployed as a percentage of the labour force. This comprises people aged between 15 to 74 who were without a work (Eurostat Statistics, Unemployment Bulletin, 2014). In 2010 and 2011 the unemployment rate in EU-28 was 9.7%, but in 2012 it climbed to 10.5%, 10.9% (2013) and 10.2% (2014) (Graph 2). In Portugal, the total unemployment rate is systematically higher than in EU-28.

Graph 2
Total unemployment rate in the EU 28 countries and Portugal from 2009 to 2014



Source: Eurostat Statistics, 2015

Table 1
EU countries and years included in the data analisys

	2010	2011	2012	2013	2014
Austria	No data available	No data available	✓	✓	✓
Belgium	✓	✓	✓	✓	✓
Croatia	✓	✓	✓	✓	✓
Denmark	✓	✓	✓	No data available	✓
Estonia	No data available	No data available	✓	✓	✓
Finland	✓	✓	✓	✓	✓
France	✓	✓	✓	✓	✓
Germany	✓	✓	✓	✓	✓
Greece	✓	✓	✓	✓	✓
Hungary	✓	✓	✓	✓	✓
Ireland	✓	✓	✓	✓	✓
Italy	✓	No data available	✓	✓	✓
Latvia	✓	✓	✓	✓	No data available
Lithuania	No data available	✓	✓	✓	✓
Netherlands	✓	✓	✓	✓	✓
Poland	No data available	✓	✓	✓	✓
Portugal	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✓	✓
Slovakia	No data available	✓	✓	✓	✓
Slovenia	✓	✓	✓	✓	✓
Spain	✓	✓	✓	✓	✓
Sweden	✓	✓	✓	✓	✓
United Kingdom	✓	✓	✓	✓	✓

[a] *Except measure of innovative orientation*



they have identified, and what motives them is a desire for greater independence and a higher income.

Thus, the necessity-driven entrepreneurs correspond to a percentage of those involved in total early-stage entrepreneurial activity who are involved in entrepreneurship because they had no other work option. The opportunity-driven entrepreneurs, on the other hand, correspond to the percentage of those involved in total early-stage entrepreneurial activity who: (i) claim to be driven by opportunity, as opposed to finding no other work option; and (ii) who indicate that the main driver for being involved in this opportunity is to become independent or increase their income, rather than merely maintain their income (Bosma et al., 2012; Xavier et al., 2013).

The entrepreneurial attitude indicators

The entrepreneurial attitude indicators include four measures: opportunity perceptions, capability perceptions, fear of failure and intention to start a business. These indicators, which refer to individual assessments based on perceptions, allow us insight into national beliefs on entrepreneurial attitudes.

Opportunity perceptions assess the perception of good opportunities to start a business in the area you live in and is operationalized by a question "In the next six months, will there be good opportunities for starting a business in the area where you live?" (e.g., Kelley et al., 2011). This refers to the percentage of 18-64-year olds who see good opportunities to start a firm in the area where they live.

Capability perceptions are a measure of whether someone has the required knowledge and skills to start a business. Capability perception is assessed through the question "Do you have the knowledge, skill and experience required to start a new business?", and refers to the percentage of 18--64-year-olds in the population who believe they have the required skills and knowledge to start a business.

Fear of failure is a measure of fear regarding the launch of a business and is assessed by means of the item "Would fear of failure prevent you from starting a business?". It corresponds to the percentage of 18-64-year-olds in the population with positive perceived opportunities who indicate that fear of failure would prevent them from setting up a business.

The intention to start a business is measured by the item "Are you, alone or with others, expecting to start a new business, including any type of self-employment, within the next three years?" and relates to an individual's intention to launch a business. It refers to the percentage of the 18-64--year-old population (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years (Kelley et al., 2011; Bosma et al., 2012; Xavier et al., 2013).

The entrepreneurial aspiration indicators

Besides entrepreneurial activity and attitudes, the GEM model also includes entrepreneurial aspirations in order to assess the aspiration levels of the individuals involved in the entrepreneurial activity. Entrepreneurial aspirations involve three main indicators: growth expectations, new product or innovative orientation; and international orientation. These indicators can assess the qualitative nature of entrepreneurial activity, such as the growth in human resources, the introduction of new products or processes, or their entrance to foreign markets (Bosma et al., 2009).

Growth expectation early-stage entrepreneurial activity refers to the percentage of TEA that expect to employ at least five employees five years from now. This is assessed through the question "How many people will be working for this business, not counting the owners but including all exclusive subcontractors, when it is five years old?".

The new product early-stage entrepreneurial activity, or innovative orientation, refers to the percentage of TEA that indicate their product or service is new to at least some customers. The item which allows us to assess the innovative orientation is "Will all, some, or none of your potential customers consider this product or service new and unfamiliar?".

The international orientation early-stage entrepreneurial activity is the percentage of TEA that indicate that at least 25% of the customers come from other countries, as the answer to the question "What proportion of your customers will normally live outside your country?".

In the next section, we present the results of our analysis, organized in three topics: entrepreneurship activity, entrepreneurial attitudes and entrepreneurial aspirations.

Results

Entrepreneurship activity results in Portugal in comparison with other European Union countries from 2010 to 2014

In 2010, Portugal evidenced a TEA index of 4.5%, showing that there were 4 to 5 early-stage entrepreneurs per 100 people aged between 18-64. In 2011, Portugal evidenced a TEA index of 7.5%. The 2012 TEA for Portugal was 7.7%, showing that there were 7 to 8 early-stage entrepreneurs per 100 people. In 2013, this increased to 8.2% and, in 2014, to 10%. Amongst the eighteen European Union (EU) countries participating in 2010, Portugal ranked 12th, preceded by Slovenia (TEA=4.7%) and followed by Romania (TEA=4.3%) and Spain (TEA=4.3%). Latvia had the highest early-stage entrepreneurial activity in 2010 (TEA=9.7%) and Italy the lowest (TEA = 2.3%). In 2011, data were collected in twenty countries and Portugal was ranked 8th, with Slovakia being ranked 1st (TEA=14.2%), and Slovenia the last (TEA=3.7%). Portugal was between Greece (TEA=8%) and Croatia (TEA=7.3%). In 2012, there were twenty-three countries involved. Estonia was the highest in the early stage entrepreneurial activity (TEA=14.3%) and Italy was the lowest (TEA=4.3%). Portugal occupied 11th position in the ranking, between Croatia (TEA=8.3%) and Lithuania (TEA=6.7%). Table 2 describes the early-stage entrepreneurial activity in the EU countries in the five years of analysis **(see Table 2, p. 46)**.

Another entrepreneurship activity indicator refers to the motivation underlying the entrepreneurial activity: necessity (see Table 3) and improvement-driven opportunity entrepreneurship (see Table 4). In 2010, 22% of the Portuguese early-stage entrepreneurial activity was driven by necessity, while in 2011 and 2012 the percentage went down to the 18%. However, in 2013 and 2014 Portuguese necessity-driven entrepreneurial activity increased to 22% and 28%, respectively. In 2010, the necessity-driven result for Portugal was between Spain (25%) and Hungary (20%), with Croatia having the highest percentage (32%) and the Netherlands the lowest (8%). In 2011, the necessity-driven rate in Finland was equivalent to that of Portugal (18%), while the United Kingdom (UK) was slightly lower (17%). In 2012, Belgium, Estonia, France, Portugal and the UK all showed the same necessity-driven rate (18%), and the EU countries results varied between 41% in Poland and 7% in Sweden. In 2013, the necessity-driven result of Portugal ranked 11th, between Lithuania (Necessity-driven=23%) and Latvia (Necessity-driven=21%), with Poland having the highest percentage (48%) and the Netherlands and Denmark the lowest (8%). In 2014, the necessity-driven TEA of Portugal occupied the 10th highest position in the ranking, between Romania (29%) and Slovenia (25%). But necessity-driven entrepreneurship cannot be dissociated from improvement-driven opportunity entrepreneurship. In fact, the results of both complement each other **(see Tables 3 and 4, pp. 47-48)**.

The results of the improvement-opportunity driven early-stage entrepreneurial activity in Portugal were quite stable over four of the five years under analysis. More specifically, these were: 52% in 2010, 58% in 2011, 53% in 2012, and 51% in 2013. In 2014, the improvement-opportunity driven entrepreneurs in Portugal was 71%. In 2010, the highest improvement-driven opportunity rates were in Sweden (72%), in 2011 in Belgium (72%), in 2012 in Denmark (71%), in 2013 in Finland (66%) and in 2014 in Denmark (91%). Conversely, the lowest improvement-driven opportunity rates were in Ireland in 2010 (33%), in Hungary in 2011 (29%), in Italy in 2012 (22%) and 2013 (18%), and in Croatia in 2014 (51%).

It is interesting to note that in Portugal the percentage of improvement-opportunity driven entrepreneurship was always higher than the percentage of necessity-driven entrepreneurship. This is the most recurrent pattern amongst the EU countries under analysis.

It is interesting to note that in Portugal the percentage of improvement-opportunity driven entrepreneurship was always higher than the percentage of necessity-driven entrepreneurship. This is the most recurrent pattern amongst the EU countries under analysis. Nevertheless, there are some exceptions, such as Poland, Romania, Croatia and Hungary in 2011; and Poland in 2012, where necessity-driven entrepreneurship was higher than that of improvement-opportunity.



Table 2

Early-stage entrepreneurial activity (TEA) in Portugal and the EU countries in 2010, 2011, 2012, 2013 and 2014

	2010	TEA 2010
1st	Latvia	9.7
2nd	Netherlands	7.2
3rd	Hungary	7.1
4th	Ireland	6.8
5th	United Kingdom	6.4
6th	France	5.8
7th	Finland	5.7
8th	Croatia	5.5
9th	Greece	5.5
10th	Sweden	4.9
11th	Slovenia	4.7
12th	**Portugal**	**4.5**
13th	Romania	4.3
14th	Spain	4.3
15th	Germany	4.2
16th	Denmark	3.8
17th	Belgium	3.7
18th	Italy	2.3

	2011	TEA 2011
1st	Slovakia	14.2
2nd	Latvia	11.9
3rd	Lithuania	11.3
4th	Romania	9.9
5th	Poland	9
6th	Netherlands	8.2
7th	Greece	8
8th	**Portugal**	**7.5**
9th	Croatia	7.3
10th	United Kingdom	7.3
11th	Ireland	7.2
12th	Finland	6.3
13th	Hungary	6.3
14th	Spain	5.8
15th	Sweden	5.8
16th	Belgium	5.7
17th	France	5.7
18th	Germany	5.6
19th	Denmark	4.6
20th	Slovenia	3.7

	2012	TEA 2012
1st	Estonia	14.3
2nd	Latvia	13.4
3rd	Netherlands	10.3
4th	Slovakia	10.2
5th	Austria	9.6
6th	Poland	9.4
7th	Hungary	9.2
8th	Romania	9.2
9th	United Kingdom	9
10th	Croatia	8.3
11th	**Portugal**	**7.7**
12th	Lithuania	6.7
13th	Greece	6.5
14th	Sweden	6.4
15th	Ireland	6.2
16th	Finland	6
17th	Spain	5.7
18th	Denmark	5.4
19th	Slovenia	5.4
20th	Germany	5.3
21st	Belgium	5.2
22nd	France	5.2
23rd	Italy	4.3

	2013	TEA 2013
1st	Latvia	13.3
2nd	Estonia	13.1
3rd	Lithuania	12.4
4th	Romania	10.1
5th	Hungary	9.7
6th	Slovakia	9.5
7th	Netherlands	9.3
8th	Poland	9.3
9th	Ireland	9.2
10th	Croatia	8.3
11th	**Portugal**	**8.2**
12th	Sweden	8.2
13th	United Kingdom	7.1
14th	Slovenia	6.5
15th	Greece	5.5
16th	Finland	5.3
17th	Spain	5.2
18th	Germany	5
19th	Belgium	4.9
20th	France	4.6
21st	Italy	3.4

	2014	TEA 2014
1st	Lithuania	11.3
2nd	Romania	11.3
3rd	Slovakia	10.9
4th	United Kingdom	10.7
5th	**Portugal**	**10**
6th	Estonia	9.4
7th	Hungary	9.3
8th	Poland	9.2
9th	Austria	8.7
10th	Croatia	8
11th	Greece	7.9
12th	Belgium	7.4
13th	Netherlands	7.1
14th	Sweden	6.7
15th	Ireland	6.5
16th	Slovenia	6.3
17th	Finland	5.6
18th	Denmark	5.5
19th	Spain	5.5
20th	France	5.3
21st	Germany	5.3
22nd	Italy	4.4

Table 3

Necessity-driven entrepreneurial activity (% of TEA) in Portugal and the EU countries in 2010, 2011, 2012, 2013, and 2014

	2010	Necessity TEA 2010
1st	Croatia	32
2nd	Ireland	31
3rd	Romania	31
4th	Greece	28
5th	Latvia	27
6th	Germany	26
7th	France	25
8th	Spain	25
9th	**Portugal**	**22**
10th	Hungary	20
11th	Finland	18
12th	Slovenia	16
13th	Italy	13
14th	Sweden	13
15th	United Kingdom	11
16th	Belgium	10
17th	Denmark	8
18th	Netherlands	8

	2011	Necessity TEA 2011
1st	Poland	48
2nd	Romania	41
3rd	Croatia	35
4th	Hungary	31
5th	Ireland	29
6th	Lithuania	28
7th	Slovakia	28
8th	Latvia	26
9th	Spain	26
10th	Greece	25
11th	Germany	19
12th	Finland	18
13th	**Portugal**	**18**
14th	United Kingdom	17
15th	France	15
16th	Slovenia	12
17th	Belgium	10
18th	Netherlands	9
19th	Denmark	7
20th	Sweden	6

	2012	Necessity TEA 2012
1st	Poland	41
2nd	Slovakia	36
3rd	Croatia	34
4th	Hungary	31
5th	Greece	30
6th	Ireland	28
7th	Spain	26
8th	Latvia	25
9th	Lithuania	25
10th	Romania	24
11th	Germany	22
12th	Belgium	18
13th	Estonia	18
14th	France	18
15th	**Portugal**	**18**
16th	United Kingdom	18
17th	Finland	17
18th	Italy	16
19th	Austria	11
20th	Denmark	8
21st	Netherlands	8
22nd	Slovenia	7
23rd	Sweden	7

	2013	Necessity TEA 2013
1st	Poland	48
2nd	Slovakia	40
3rd	Croatia	38
4th	Romania	32
5th	Spain	29
6th	Belgium	29
7th	Hungary	28
8th	Slovenia	24
9th	Greece	24
10th	Lithuania	23
11th	**Portugal**	**22**
12th	Latvia	21
13th	Germany	19
14th	Italy	19
15th	Ireland	18
16th	Finland	18
17th	United Kingdom	16
18th	France	16
19th	Estonia	15
20th	Sweden	10
21st	Netherlands	8

	2014	Necessity TEA 2014
1st	Croatia	467
2nd	Poland	37
3rd	Greece	35
4th	Hungary	33
5th	Slovakia	33
6th	Belgium	31
7th	Spain	30
8th	Ireland	30
9th	Romania	29
10th	**Portugal**	**28**
11th	Slovenia	25
12th	Germany	23
13th	Lithuania	20
14th	France	16
15th	Netherlands	16
16th	Finland	16
17th	Estonia	15
18th	Italy	14
19th	United Kingdom	13
20th	Austria	11
21st	Sweden	8
22nd	Denmark	5

Table 4

Improvement-driven opportunity entrepreneurial activity (% of TEA) in Portugal and the EU countries in 2010, 2011, 2012, 2013, and 2014

	2010	Opport. TEA 2010
1st	Sweden	72
2nd	Netherlands	64
3rd	France	56
4th	Italy	55
5th	Belgium	54
6th	Denmark	54
7th	Finland	54
8th	Slovenia	54
9th	**Portugal**	**52**
10th	Latvia	51
11th	Croatia	49
12th	Germany	48
13th	Romania	47
14th	Hungary	43
15th	United Kingdom	43
16th	Spain	42
17th	Greece	39
18th	Ireland	33

	2011	Opport. TEA 2011
1st	Belgium	72
2nd	France	71
3rd	Sweden	68
4th	Denmark	64
5th	Netherlands	62
6th	Finland	59
7th	**Portugal**	**58**
8th	Germany	55
9th	Slovenia	51
10th	Lithuania	47
11th	Latvia	46
12th	United Kingdom	46
13th	Spain	39
14th	Greece	37
15th	Ireland	37
16th	Romania	34
17th	Slovakia	34
18th	Poland	32
19th	Croatia	31
20th	Hungary	29

	2012	Opport. TEA 2012
1st	Denmark	71
2nd	Netherlands	66
3rd	Slovenia	64
4th	Belgium	62
5th	Finland	60
6th	France	59
7th	**Portugal**	**53**
8th	Germany	51
9th	Lithuania	51
10th	Estonia	49
11th	Sweden	49
12th	Latvia	46
13th	Slovakia	43
14th	United Kingdom	43
15th	Ireland	41
16th	Austria	38
17th	Romania	38
18th	Croatia	36
19th	Hungary	35
20th	Spain	33
21st	Greece	32
22nd	Poland	30
23rd	Italy	22

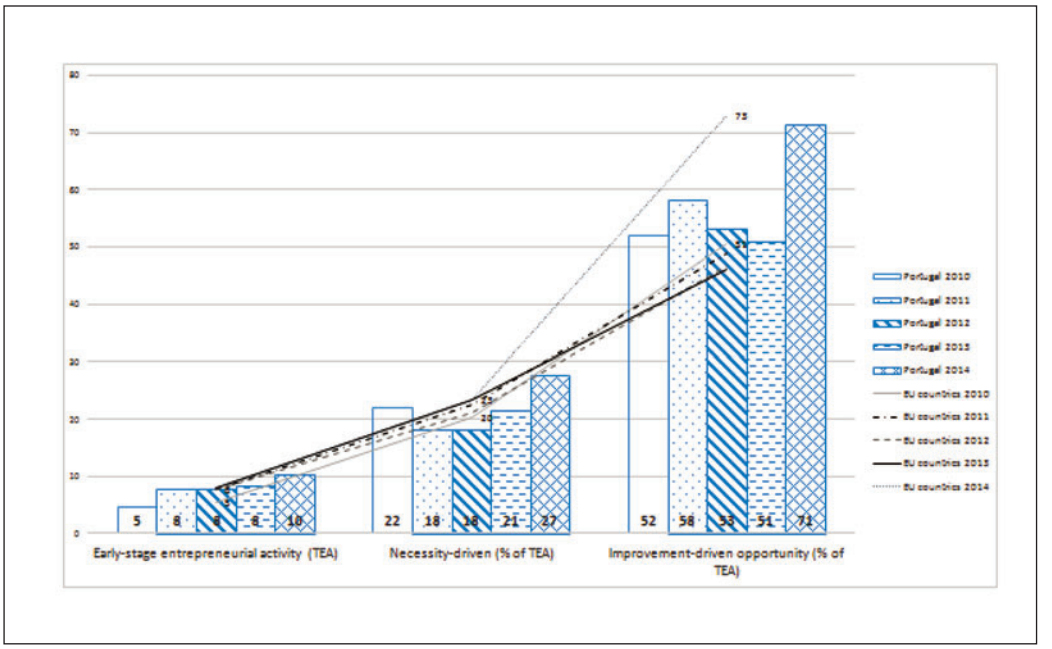
	2013	Opport. TEA 2013
1st	Finland	66
2nd	France	61
3rd	Sweden	58
4th	Germany	56
5th	Lithuania	55
6th	Netherlands	55
7th	Slovenia	53
8th	Latvia	53
9th	**Portugal**	**51**
10th	Estonia	50
11th	United Kingdom	45
12th	Belgium	44
13th	Ireland	44
14th	Slovakia	40
15th	Hungary	39
16th	Greece	36
17th	Spain	33
18th	Poland	33
19th	Romania	32
20th	Croatia	30
21st	Italy	18

	2014	Opport. TEA 2014
1st	Denmark	91
2nd	Sweden	84
3rd	United Kingdom	84
4th	France	82
5th	Austria	82
6th	Finland	81
7th	Netherlands	81
8th	Lithuania	80
9th	Italy	78
10th	Germany	76
11th	Estonia	75
12th	Slovenia	71
13th	**Portugal**	**71**
14th	Romania	70
15th	Ireland	68
16th	Spain	66
17th	Hungary	65
18th	Slovakia	64
19th	Belgium	63
20th	Greece	62
21st	Poland	59
22nd	Croatia	51



Graph 3

Entrepreneurial activity indicators in Portugal and the EU countries average in 2010, 2011, 2012, 2013 and 2014



The results from the indicators of the entrepreneurial activity (TEA; necessity-driven entrepreneurship and improvement-driven opportunity entrepreneurship) showed that Portugal's results improved, albeit modestly, from 2010 to 2014. In general, this was the pattern throughout the EU countries: there was an increase in the early-stage entrepreneurial activity from 2010 to 2014 (e.g., Belgium, Croatia, Denmark, Hungary, Italy, Latvia, the Netherlands, Poland, Slovenia, Spain, Sweden and the United Kingdom). Nevertheless, it is relevant to stress that the TEA of Portugal was either below (2010) or equal (2011, 2012 and 2013) to the average TEA in the other EU countries. In 2014, the TEA of Portugal was slightly higher than the TEA in the other EU countries ($TEA_{Portugal2014}$=10; TEA_{EU2014}=8).

The behaviour of the necessity-driven entrepreneurship does not show a particular trend amongst the EU countries. The necessity-driven entrepreneurship in Portugal was above the EU average (M_{EU2010}= 20.22%) in 2010, but was below the EU average in 2011, 2012 and 2013 (M_{EU2011}=23%; M_{EU2012}=21%; M_{EU2013}=23%). In 2014, necessity-driven entrepreneurship in Portugal was above the EU average (M_{EU2014}= 23% in EU countries and 27% in Portugal). The behaviour of the improvement-driven opportunity entrepreneurship is quite similar. The percentage of improvement-driven opportunity in Portugal in 2010, 2011, 2012 and 2013 was always above the EU average (M_{EU2010}=51%; M_{EU2011}=49%; M_{EU2012}=47%; M_{EU2013}=46%), but in 2014 it was below the EU average (M_{EU2014}=73%). Graph 3 presents the position of Portugal's indicators of entrepreneurial activity from 2010 to 2014 and the EU countries average.

Entrepreneurial attitude results in Portugal in comparison with other European Union countries from 2010 to 2012

From 2010 onward, perceived opportunities **(see Table 5, p. 50)** in Portugal were successively at the tail end of the EU countries. In 2010, Portugal had a score of 20%, in 2011 it was 17%, in 2012 it was 16%, in 2013 it was 20% and in 2014 it was 23%. These values pushed Portugal to the bottom of the EU ranking, and were in stark contrast to the highest scores for perceived opportunities that were evidenced in Sweden (2010=66%; 2011=71%; 2012=66%; 2013=64%; and 2014=70%). Also at the bottom of the EU ranking were



Table 5

Perceived opportunities in Portugal and the EU countries in 2010, 2011, 2012, 2013, and 2014

	2010	Perceived Opport. 2010
1st	Sweden	66
2nd	Finland	51
3rd	Denmark	46
4th	Netherlands	45
5th	Belgium	40
6th	France	34
7th	Hungary	33
8th	United Kingdom	29
9th	Latvia	29
10th	Germany	29
11th	Slovenia	27
12th	Italy	25
13th	Croatia	23
14th	Ireland	23
15th	**Portugal**	**20**
16th	Spain	19
17th	Romania	18
18th	Greece	16

	2011	Perceived Opport. 2011
1st	Sweden	71
2nd	Finland	61
3rd	Netherlands	48
4th	Denmark	47
5th	Belgium	43
6th	Romania	36
7th	France	35
8th	Germany	35
9th	Poland	33
10th	United Kingdom	33
11th	Ireland	26
12th	Latvia	24
13th	Lithuania	23
14th	Slovakia	23
15th	Croatia	18
16th	Slovenia	18
17th	**Portugal**	**17**
18th	Hungary	14
19th	Spain	14
20th	Greece	11

	2012	Perceived Opport. 2012
1st	Sweden	66
2nd	Finland	55
3rd	Austria	49
4th	Estonia	45
5th	Denmark	44
6th	France	38
7th	Romania	37
8th	Germany	36
9th	Netherlands	34
10th	Belgium	33
11th	Latvia	33
12th	United Kingdom	33
13th	Ireland	26
14th	Italy	20
15th	Poland	20
16th	Slovenia	20
17th	Slovakia	18
18th	Croatia	17
19th	**Portugal**	**16**
20th	Spain	14
21st	Greece	13
22nd	Hungary	11
23rd	Lithuania	3

	2013	Perceived Opport. 2013
1st	Sweden	64
2nd	Estonia	46
3rd	Finland	44
4th	United Kingdom	36
5th	Latvia	35
6th	Netherlands	33
7th	Belgium	32
8th	Germany	31
9th	Romania	29
10th	Lithuania	29
11th	Ireland	28
12th	Poland	26
13th	France	23
14th	**Portugal**	**20**
15th	Hungary	19
16th	Croatia	18
17th	Italy	17
18th	Slovakia	16
19th	Slovenia	16
20th	Spain	16
21st	Greece	14

	2014	Perceived Opport. 2014
1st	Sweden	70
2nd	Denmark	60
3rd	Estonia	49
4th	Netherlands	46
5th	Austria	44
6th	Finland	42
7th	United Kingdom	41
8th	Germany	38
9th	Belgium	36
10th	Ireland	33
11th	Romania	32
12th	Lithuania	32
13th	Poland	31
14th	France	28
15th	Italy	27
16th	Slovakia	24
17th	Hungary	23
18th	**Portugal**	**23**
19th	Spain	23
20th	Greece	20
21st	Croatia	18
22nd	Slovenia	17

Table 6

Perceived entrepreneurial capabilities in Portugal and the EU countries in 2010, 2011, 2012, 2013, and 2014

	2010	Perceived Opport. 2010
1st	Slovenia	56
2nd	Croatia	53
3rd	Greece	52
4th	**Portugal**	**52**
5th	United Kingdom	52
6th	Latvia	51
7th	Spain	50
8th	Ireland	49
9th	Netherlands	46
10th	Belgium	45
11th	Hungary	43
12th	Italy	42
13th	Sweden	42
14th	Germany	42
15th	Denmark	41
16th	Finland	40
17th	Romania	38
18th	France	37

	2011	Perceived Opport. 2011
1st	Slovakia	53
2nd	Poland	52
3rd	Slovenia	51
4th	Spain	51
5th	Greece	50
6th	Croatia	49
7th	Latvia	47
8th	**Portugal**	**47**
9th	Ireland	46
10th	Belgium	44
11th	Netherlands	42
12th	Romania	42
13th	United Kingdom	42
14th	Hungary	40
15th	Sweden	40
16th	France	38
17th	Finland	37
18th	Germany	37
19th	Denmark	35
20th	Lithuania	35

	2012	Perceived Opport. 2012
1st	Poland	54
2nd	Slovenia	51
3rd	Austria	50
4th	Greece	50
5th	Slovakia	50
6th	Spain	50
7th	**Portugal**	**47**
8th	United Kingdom	47
9th	Ireland	45
10th	Croatia	44
11th	Latvia	44
12th	Estonia	43
13th	Netherlands	42
14th	Hungary	40
15th	Romania	38
16th	Belgium	37
17th	Germany	37
18th	Sweden	37
19th	France	36
20th	Finland	34
21st	Denmark	31
22nd	Italy	30
23rd	Lithuania	4

	2013	Perceived Opport. 2013
1st	Poland	52
2nd	Slovenia	52
3rd	Slovakia	51
4th	**Portugal**	**49**
5th	Latvia	48
6th	Spain	48
7th	Croatia	47
8th	Greece	46
9th	Romania	46
10th	United Kingdom	44
11th	Ireland	43
12th	Netherlands	42
13th	Estonia	40
14th	Sweden	39
15th	Germany	38
16th	Hungary	38
17th	Lithuania	35
18th	Belgium	34
19th	Finland	33
20th	France	33
21st	Italy	29
22nd	Poland	52

	2014	Perceived Opport. 2014
1st	Slovakia	54
2nd	Poland	54
3rd	Austria	49
4th	Slovenia	49
5th	Romania	48
6th	Spain	48
7th	Ireland	47
8th	**Portugal**	**46**
9th	United Kingdom	46
10th	Croatia	46
11th	Greece	46
12th	Netherlands	44
13th	Estonia	43
14th	Hungary	41
15th	Sweden	37
16th	Germany	36
17th	France	35
18th	Denmark	35
19th	Finland	35
20th	Lithuania	33
21st	Italy	31
22nd	Belgium	30

Table 7

Perceived fear for failure in Portugal and the EU countries in 2010, 2011, 2012, 2013, and 2014

	2010	Fear Failure. 2010
1st	Greece	51
2nd	Hungary	42
3rd	Romania	41
4th	France	41
5th	Latvia	40
6th	Italy	37
7th	Spain	36
8th	Belgium	35
9th	Germany	34
10th	Ireland	33
11th	Denmark	32
12th	Croatia	31
13th	United Kingdom	30
14th	**Portugal**	**30**
15th	Sweden	29
16th	Finland	29
17th	Slovenia	28
18th	Netherlands	24

	2011	Fear Failure. 2011
1st	Poland	43
2nd	Germany	42
3rd	Belgium	41
4th	Denmark	41
5th	Latvia	41
6th	Lithuania	40
7th	**Portugal**	**40**
8th	Spain	39
9th	Greece	38
10th	France	37
11th	Romania	36
12th	United Kingdom	36
13th	Hungary	35
14th	Netherlands	35
15th	Sweden	35
16th	Croatia	34
17th	Ireland	33
18th	Finland	32
19th	Slovakia	32

	2012	Fear Failure 2012
1st	Greece	61
2nd	Italy	58
3rd	France	43
4th	Poland	43
5th	Germany	42
6th	**Portugal**	**42**
7th	Spain	42
8th	Belgium	41
9th	Romania	41
10th	Denmark	39
11th	Slovakia	38
12th	Finland	37
13th	Latvia	37
14th	Austria	36
15th	Croatia	36
16th	United Kingdom	36
17th	Ireland	35
18th	Estonia	34
19th	Hungary	34
20th	Sweden	33
21st	Netherlands	30
22nd	Slovenia	27
23rd	Lithuania	7

	2013	Fear Failure 2013
1st	Greece	49
2nd	Italy	49
3rd	Belgium	47
4th	Poland	47
5th	Hungary	45
6th	Latvia	42
7th	Lithuania	42
8th	France	41
9th	Ireland	40
10th	**Portugal**	**40**
11th	Estonia	39
12th	Germany	39
13th	Romania	38
14th	Finland	37
15th	Netherlands	37
16th	Spain	37
17th	Sweden	37
18th	United Kingdom	36
19th	Croatia	35
20th	Slovakia	33
21st	Slovenia	30
22nd	Greece	49

	2014	Fear Failure 2014
1st	Greece	62
2nd	Poland	51
3rd	Belgium	49
4th	Italy	49
5th	Lithuania	49
6th	Hungary	42
7th	Estonia	42
8th	Romania	41
9th	France	41
10th	Denmark	41
11th	Germany	40
12th	Ireland	39
13th	**Portugal**	**38**
14th	Spain	38
15th	Finland	37
16th	United Kingdom	37
17th	Sweden	37
18th	Slovakia	36
19th	Austria	35
20th	Netherlands	35
21st	Croatia	30
22nd	Slovenia	29

Table 8

Perceived entrepreneurial intentions in Portugal and the EU countries in 2010, 2011, 2012, 2013, and 2014

	2010	Entrep. Intention 2010		2011	Entrep. Intention. 2011		2012	Entrep. Intention 2012		2013	Entrep. Intention 2013		2014	Entrep. Intention 2014
1st	Latvia	21	1st	Latvia	25	1st	Romania	27	1st	Romania	24	1st	Romania	32
2nd	France	14	2nd	Romania	25	2nd	Latvia	22	2nd	Latvia	23	2nd	Croatia	20
3rd	Hungary	14	3rd	Poland	23	3rd	Poland	22	3rd	Lithuania	22	**3rd**	**Portugal**	**16**
4th	Greece	13	4th	Hungary	20	4th	Croatia	19	4th	Croatia	20	4th	Poland	16
5th	**Portugal**	**9**	5th	Croatia	18	5th	France	17	5th	Estonia	19	5th	France	14
6th	Slovenia	9	6th	France	18	6th	Estonia	16	6th	Poland	17	6th	Hungary	14
7th	Romania	9	7th	Slovakia	18	**7th**	**Portugal**	**14**	7th	Slovakia	16	7th	Italy	11
8th	Sweden	9	8th	Lithuania	17	8th	Hungary	13	8th	Hungary	14	8th	Lithuania	11
9th	Belgium	8	**9th**	**Portugal**	**12**	9th	Slovenia	13	9th	France	13	9th	Slovenia	11
10th	Croatia	7	10th	Belgium	11	10th	Slovakia	12	10th	Ireland	13	10th	Belgium	11
11th	Germany	6	11th	Greece	10	11th	Italy	11	**11th**	**Portugal**	**13**	11th	Estonia	10
12th	Ireland	6	12th	Sweden	10	12th	Spain	11	12th	Slovenia	12	12th	Greece	10
13th	Denmark	6	13th	Netherlands	9	13th	Sweden	11	13th	Italy	10	13th	Netherlands	9
14th	Finland	6	14th	Slovenia	9	14th	Greece	10	14th	Sweden	10	14th	Sweden	9
15th	Spain	6	15th	United Kingdom	9	15th	United Kingdom	10	15th	Greece	9	15th	Austria	8
16th	Netherlands	6	16th	Spain	8	16th	Austria	9	16th	Netherlands	9	16th	Finland	8
17th	United Kingdom	5	17th	Denmark	7	17th	Belgium	9	17th	Belgium	8	17th	Ireland	7
18th	Italy	4	18th	Finland	7	18th	Netherlands	9	18th	Finland	8	18th	Slovakia	7
			19th	Ireland	6	19th	Finland	8	19th	Spain	8	19th	Spain	7
						20th	Lithuania	8	20th	Germany	7	20th	Denmark	7
						21st	Denmark	7	21st	United Kingdom	7	21st	United Kingdom	7
						22nd	Germany	6	22nd	Romania	24	22nd	Germany	6
						23rd	Ireland	5						

countries such as Greece (2010=16%; 2011=11%; 2013=14%), Lithuania (2012=3%) and Slovenia (2014=17%).

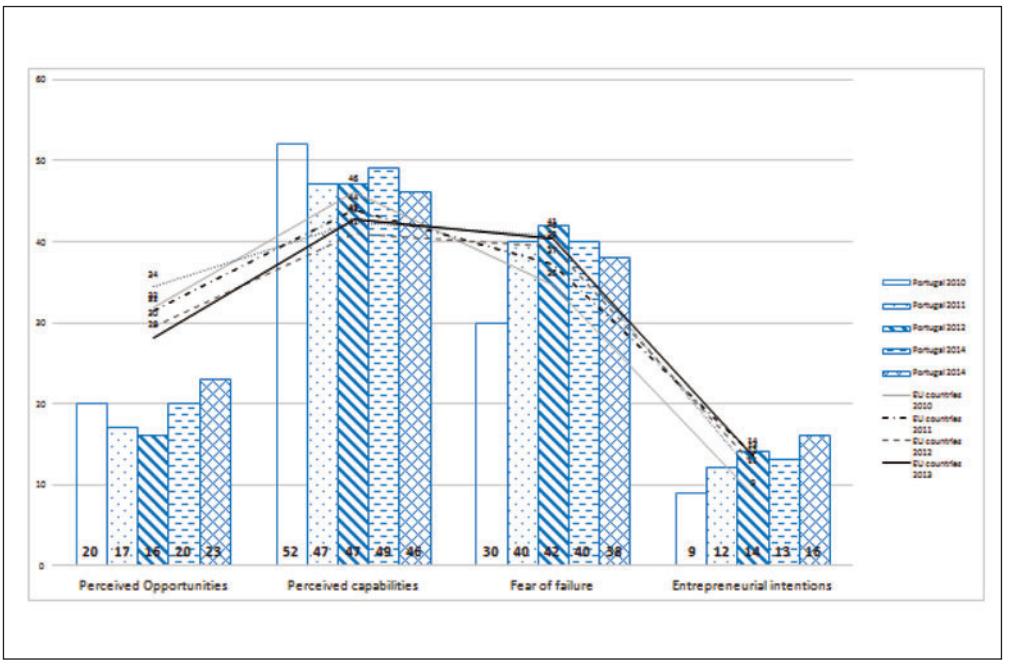
The results for perceived capabilities (see Table 6) in Portugal were among the top EU countries. For example, in 2010, 52% of the Portuguese population believed they had the required skills and knowledge to start a business. Only Croatia, Greece and Slovenia reported higher scores. At the tail end for their perceived capabilities for starting a business in 2010 were countries such as Finland, Romania and France (37%). In 2011, the Portuguese percentage went down to 47%, but it was still the 8th highest of the EU countries. In that year, Slovakia ranked top with 53%, and Lithuania was in the lowest position with 35% of the population believing they had the required skills and knowledge to start a business. In 2012, 47% of the populations in both Portugal and the United Kingdom believed they had the required skills and knowledge to start a business. Percentages above this were found in Poland (54%), Slovenia, Austria, Greece, Slovakia and Spain. Lithuania again registered the lowest value with a small percentage of 4%, in contrast to Italy the second lowest, with 30%. In 2013, Portugal was ranked 4th with 49% of people confident of their perceived entrepreneurial capabilities. In 2014, the value decreased slightly to 46% (down to 8th position). These results are presented in detail in Table 6.

Fear of failure **(see Table 7, p. 52)** is another critical measure of entrepreneurial attitudes, and the behaviour of Portugal in this indicator showed changes from 2010 to 2014. In 2010, Portugal had one of the lowest scores in fear of failure (30%), with the Netherlands having the lowest value (24%). This meant that in Portugal in 2010, 30% of the population who perceived opportunities indicated that fear of failure would prevent them from setting up a business. In 2011, this percentage rose to 40% and in 2012 it rose to 42%. These results took Portugal to among the top ranked EU countries, with Poland having the highest result in 2011 (43%), and Greece in 2012 (61%). In 2013, Portugal decreased to 40% and then to 38% in 2014, which placed the country in middle position regarding fear of failure.

Entrepreneurial intentions **(see Table 8, p. 53)** in Portugal grew from 2010 to 2014. In 2010, 9% of the population intended to start a business within three years. In 2011, the percentage rose to 12%, in 2012 it was 14%, in 2013 it was

Graph 4

Entrepreneurial attitude indicators in Portugal and the EU countries average from 2010 to 2014



13% and in 2014 it was 16%. The highest scores were in Latvia in 2010 (21%), and 2011 (25%), and in Romania in 2012 (27%), 2013 (24%) and 2014 (32%). The lowest scores were 4% in Italy 2010, 6% in Ireland 2011 and 2012, and Germany 2014 (6%).

Portugal's scores in 2011, 2012, 2013 and 2014 increased to 20%, 24%, 27% and 23% respectively, showing greater aspiration in the growth of the early-stage entrepreneurs.

The position of Portuguese entrepreneurial attitudes in relation to the other EU countries was not consistent over the four indicators. With regard to perceived opportunities, Portugal was below the EU average during the five years under analysis (M_{EU2010}=32%; M_{EU2011}=32%; M_{EU2012}=30%; M_{EU2013}=28%; M_{EU2014}=34%). As far as perceived capabilities are concerned, Portugal was above the EU average from 2010 to 2014 (M_{EU2010}=46%; (M_{EU2011}=44%; M_{EU2012}=41%; M_{EU2013}=43%; M_{EU2014}=42%). In 2010, Portugal reported a lower fear of failure than the EU average (M_{EU2010}=35%), but this tendency was inverted in 2011 and 2012, when Portugal was above the EU average (M_{EU2011}=37%; M_{EU2012}=38%). In 2013 and 2014, the Portuguese fear of failure was again below the EU average (M_{EU2013}=40%; M_{EU2014}=34%). The position of entrepreneurial intentions in Portugal was the same as the EU average in 2010 (M_{EU2010}=9%), 2011 (M_{EU2011}=14%), 2012 (M_{EU2012}=14%), and 2013 (M_{EU2013}=13%), but was above the average in 2014 (M_{EU2014}=11%). Graph 4 presents the entrepreneurial attitude indicator scores in Portugal and the EU countries average from 2010 to 2014.

Entrepreneurial aspiration results in Portugal in comparison with other European Union countries from 2010 to 2012

Entrepreneurial aspirations comprise three main measures: growth expectations (see Table 9), innovative orientation (see Table 10), and international orientation (see Table 11). The highest growth expectations in 2010 amongst the EU countries was registered in Latvia (36%), with Portugal being far below that value with a modest 12% of early-stage entrepreneurs who expected to employ at least five employees five years from that time. Portugal's scores in 2011, 2012, 2013 and 2014 increased to 20%, 24%, 27% and 23% respectively, showing greater aspiration in the growth of the early-stage entrepreneurs. From 2011 to 2014, Portugal was ranked in about the middle of the EU countries. Croatia was ranked 1st in 2011 (40%), Lithuania in 2012 (40%), Romania in 2013 (44%) and 2014 (47%). At the bottom of the EU countries was Spain in 2010 and 2011 (6% and 7%, respectively), Belgium in 2012 (8%), and Greece in 2013 and 2014 (8% and 12%), accordingly.

The pace of Portuguese growth expectation was accompanied by the innovative orientation of early stage entrepreneurs. In 2010, while Portugal's innovative orientation of 16% was one of the lowest values amongst the EU countries, the highest percentage was that of Latvia (40%). In 2011, although Portugal increased to 20%, it was again amongst the lowest percentages among the EU countries, followed by Finland (18%), Belgium (16%) and Greece (15%). The highest percentage in 2011 was, again, that of Latvia (47%). In 2012, innovative orientation in Portugal grew to 26% and reached a higher ranking; the lowest value was 13% in Spain. Once again, the highest score in innovative orientation in 2012 was that of Latvia (53%). In 2013, innovative orientation in Portugal grew to 54%, achieving 5th position in the ranking. In 2014, however, Portugal dropped dramatically to 18th place, with innovation orientation of 34%. These results showed that innovative orientation in Portugal peaked in 2013.

International orientation in Portugal also increased from 2010 to 2012. In 2010, although international orientation in Portugal was 28%, it was the third lowest amongst the EU countries, with Hungary (27%) and Croatia (25%) just below. This score contrasted with the two highest, which were Denmark with 60% and Ireland with 52%. In 2011, despite increasing to 32%, Portugal was the lowest amongst the EU countries. In 2012, however, international orientation in Portugal rose to 43% and the country took 13th place in the ranking. In 2013, international orientation in Portugal was the 4th highest among the EU countries, but reported a value of 30%, and in 2014 the value went down again to 22%, and Portugal was ranked 11th.



Table 9

Growth expectations in Portugal and the EU countries in 2010, 2011, 2012, 2013, and 2014

	2010	Growth Expect. 2010		2011	Growth Expect. 2011		2012	Growth Expect. 2012		2013	Growth Expect. 2013		2014	Growth Expect. 2014
1st	Latvia	36	1st	Croatia	40	1st	Lithuania	40	1st	Romania	44	1st	Romania	47
2nd	Croatia	29	2nd	Romania	39	2nd	Croatia	39	2nd	Latvia	42	2nd	Hungary	41
3rd	Romania	27	3rd	Belgium	37	**3rd**	Romania	39	**3rd**	Poland	39	3rd	Croatia	41
4th	Belgium	25	4th	Latvia	30	4th	Latvia	32	4th	Lithuania	36	4th	Slovak Republic	34
5th	Hungary	23	5th	Hungary	29	5th	Slovenia	32	5th	Slovenia	35	5th	Lithuania	34
6th	Ireland	23	6th	United Kingdom	26	6th	Estonia	30	6th	Croatia	31	6th	France	31
7th	United Kingdom	23	7th	Ireland	24	7th	France	30	7th	Slovak Republic	29	7th	Slovenia	29
8th	Slovenia	22	8th	Lithuania	23	8th	Austria	26	**8th**	**Portugal**	**27**	8th	Poland	28
9th	Netherlands	15	9th	Slovenia	22	**9th**	**Portugal**	**24**	9th	Hungary	27	9th	United Kingdom	24
10th	Finland	14	10th	Denmark	21	10th	Sweden	22	10th	Estonia	27	**10th**	**Portugal**	**23**
11th	Germany	14	**11th**	**Portugal**	**20**	11th	Denmark	21	11th	United Kingdom	24	11th	Estonia	22
12th	France	13	12th	Germany	19	12th	Finland	21	12th	France	21	12th	Denmark	22
13th	Italy	13	13th	Slovak Republic	18	13th	Greece	21	13th	Belgium	21	13th	Sweden	22
14th	**Portugal**	**12**	14th	Poland	17	14th	Slovak Republic	21	14th	Finland	21	14th	Netherlands	20
15th	Denmark	11	15th	France	16	15th	Poland	19	15th	Netherlands	15	15th	Spain	19
16th	Greece	10	16th	Greece	16	16th	Hungary	18	16th	Spain	15	16th	Belgium	17
17th	Sweden	10	17th	Sweden	15	17th	Italy	17	17th	Sweden	14	17th	Finland	16
18th	Spain	6	18th	Netherlands	13	18th	Netherlands	14	18th	Italy	12	18th	Austria	15
			19th	Finland	12	19th	Spain	14	19th	Greece	8	19th	Italy	14
			20th	Spain	7	20th	United Kingdom	13				20th	Greece	12
						21st	Belgium	8						

Table 10

Innovative orientation in Portugal and the EU countries in 2010, 2011, 2012, 2013, and 2014

	2010	Innov. Orient. 2010
1st	Latvia	40
2nd	Hungary	34
3rd	Croatia	33
4th	Ireland	33
5th	Romania	33
6th	Denmark	28
7th	Italy	27
8th	Netherlands	27
9th	Slovenia	27
10th	Germany	21
11th	United Kingdom	21
12th	France	20
13th	Sweden	19
14th	**Portugal**	**16**
15th	Finland	14
16th	Greece	13
17th	Belgium	12
18th	Spain	11

	2011	Innov. Orient. 2011
1st	Latvia	47
2nd	Romania	45
3rd	Slovenia	44
4th	Poland	43
5th	Ireland	40
6th	Hungary	38
7th	Lithuania	37
8th	Croatia	34
9th	France	32
10th	Slovak Republic	31
11th	United Kingdom	27
12th	Sweden	26
13th	Denmark	24
14th	Netherlands	22
15th	Spain	21
16th	**Portugal**	**20**
17th	Finland	18
18th	Belgium	16
19th	Greece	15

	2012	Innov. Orient. 2012
1st	Latvia	53
2nd	Lithuania	50
3rd	Romania	49
4th	Estonia	38
5th	Slovak Republic	34
6th	Hungary	33
7th	Denmark	32
8th	United Kingdom	31
9th	Croatia	30
10th	Poland	30
11th	France	26
12th	**Portugal**	**26**
13th	Slovenia	25
14th	Belgium	24
15th	Finland	20
16th	Netherlands	18
17th	Italy	17
18th	Sweden	17
19th	Greece	14
20th	Austria	13
21st	Spain	13

	2013	Innov. Orient. 2013
1st	Estonia	59
2nd	Slovenia	57
3rd	France	55
4th	Croatia	55
5th	**Portugal**	**54**
6th	United Kingdom	52
7th	Sweden	51
8th	Netherlands	50
9th	Belgium	50
10th	Latvia	49
11th	Spain	49
12th	Greece	47
13th	Lithuania	42
14th	Romania	39
15th	Hungary	38
16th	Italy	36
17th	Finland	34
18th	Slovak Republic	33
19th	Poland	33

	2014	Innov. Orient. 2014
1st	Italy	69
2nd	Poland	64
3rd	Slovak Republic	63
4th	Slovenia	58
5th	Denmark	57
6th	France	51
7th	Lithuania	49
8th	Belgium	48
9th	Austria	47
10th	Estonia	47
11th	Sweden	45
12th	Finland	43
13th	Hungary	41
14th	Netherlands	40
15th	Spain	39
16th	Greece	37
17th	Romania	37
18th	**Portugal**	**34**
19th	United Kingdom	31
20th	Croatia	27

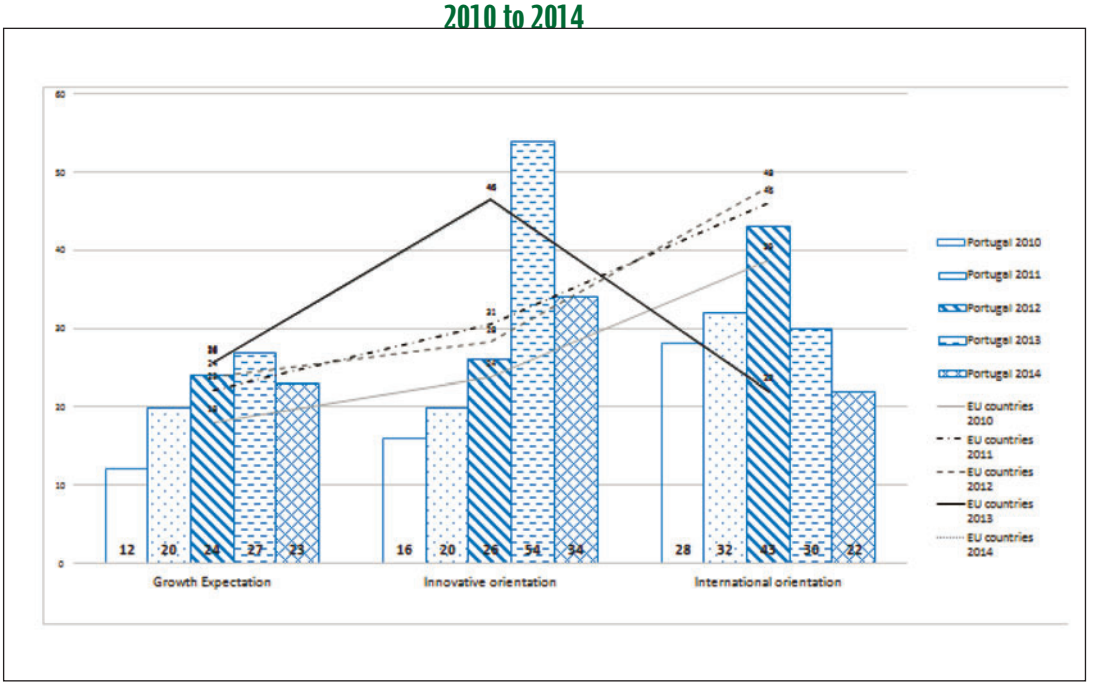
Table 11

International orientation in Portugal and the EU countries in 2010, 2011, 2012, 2013, and 2014

	2010	Internat. Orient. 2010		2011	Internat. Orient. 2011		2012	Internat. Orient. 2012		2013	Internat. Orient. 2013		2014	Internat. Orient. 2014
1st	Denmark	60	1st	Poland	75	1st	Italy	79	1st	Croatia	41	1st	Croatia	38
2nd	Ireland	52	2nd	Denmark	67	2nd	Poland	72	2nd	Latvia	33	2nd	Belgium	33
3rd	France	50	3rd	France	53	3rd	France	69	3rd	Romania	32	3rd	Slovenia	32
4th	Greece	45	4th	Latvia	52	4th	Denmark	61	**4th**	**Portugal**	**30**	4th	Romania	29
5th	Latvia	45	5th	Netherlands	52	5th	Belgium	53	5th	Slovenia	26	5th	Sweden	27
6th	Slovenia	45	6th	United Kingdom	52	6th	Slovak Republic	52	6th	Estonia	26	6th	Austria	25
7th	Sweden	42	7th	Slovenia	51	7th	Estonia	51	7th	Lithuania	26	7th	Estonia	24
8th	Belgium	41	8th	Ireland	49	8th	Latvia	49	8th	Poland	24	8th	Hungary	23
9th	Italy	40	9th	Hungary	47	9th	Slovenia	49	9th	Hungary	22	9th	Lithuania	23
10th	Germany	38	10th	Finland	44	10th	Austria	48	10th	Sweden	22	10th	France	22
11th	Netherlands	36	11th	Greece	43	11th	Romania	48	11th	Slovak Republic	21	**11th**	**Portugal**	**22**
12th	Finland	34	12th	Romania	43	12th	Finland	44	12th	France	19	12th	Italy	21
13th	Spain	31	13th	Slovak Republic	42	**13th**	**Portugal**	**43**	13th	Italy	17	13th	Slovak Republic	19
14th	United Kingdom	30	14th	Sweden	41	14th	Netherlands	42	14th	United Kingdom	17	14th	Greece	18
15th	Romania	29	15th	Croatia	38	15th	Spain	42	15th	Belgium	14	15th	Netherlands	16
16th	**Portugal**	**28**	16th	Lithuania	37	16th	Greece	40	16th	Netherlands	14	16th	United Kingdom	15
17th	Hungary	27	17th	Spain	36	17th	United Kingdom	38	17th	Greece	13	17th	Poland	15
18th	Croatia	25	18th	Belgium	34	18th	Hungary	36	18th	Finland	11	18th	Spain	14
			19th	Germany	34	19th	Sweden	36	19th	Spain	9	19th	Denmark	13
			20th	**Portugal**	**32**	20th	Lithuania	31				20th	Finland	13
						21st	Croatia	30						



Graph 5
Entrepreneurial aspiration indicators in Portugal and the EU countries average from 2010 to 2014



Once again, these results show a peak for Portugal in 2013, which is not in line with the results in the other years under analysis. Despite this atypical year, Portugal systematically ranked in the lower or middle positions in the EU countries.

The entrepreneurship activity in Portugal kept up with the EU average from 2010 to 2013. In 2014, despite the fact that Portugal had more entrepreneurial activity than the other EU countries, these were mainly necessity-driven and not improvement-driven.

Despite the fact that Portugal peaked in all the indicators of entrepreneurial aspirations in 2013, the results for the country were consistently below (or coincident with), the EU countries average in the other years. In 2010, the growth expectation average in the EU was 18%, in 2011 it was 22%, in 2012 it was 24%, and in 2013 and 2014 it was 26%. Similarly, the innovative orientation average amongst the EU countries was also higher than the scores found in Portugal for all the years under analysis, expect for the atypical 2013 (M_{EU2010}=24%; M_{EU2011}=31%; M_{EU2012}=28%; M_{EU2014}=46%). The same pattern was evidenced in the international orientation average, which was consecutively higher than the scores of Portugal in 2010, 2011, 2012 and 2014 (M_{EU2010}=39%; M_{EU2011}=46%; M_{EU2012}=48%; M_{EU2014}=22%). In Graph 5, we can analyse the position of the Portuguese results in the indicators of entrepreneurial aspirations in relation to the EU countries average.

Discussion

Is entrepreneurship in Portugal far from or close to the tipping point?

The economic, financial and social crises that Portugal has been facing since 2009, is still taking its toll on the country today. In order to overcome this, entrepreneurship has been encouraged as a critical mechanism for contributing to economic development, following the evidence from scientific research (e.g., Wennekers and Thurik, 1999; Reynolds et al., 1999).



Despite this effort, there were several questions about the effective behaviour of Portuguese entrepreneurship indicators during the economic and financial crisis. To clarify these issues, we analysed the indicators of entrepreneurial activity, attitudes and aspirations in Portugal and the other European Union countries in the years of economic and social crisis (2010, 2011 and 2012) and in the two years that showed a slight recovery (2013 and 2014).

In general, the entrepreneurial activity results in Portugal from 2010 to 2014 kept pace with the trend in the rest of Europe. In 2010, 2011, 2012 and 2013, the TEA rate in Portugal was equivalent to the EU countries average. However, in 2014, it was higher, showing increased entrepreneurial activity in Portugal. Necessity-driven entrepreneurship in 2010 was slightly higher in Portugal than the EU countries average, but was lower in 2011, 2012 and 2013. In 2014, Portugal had more necessity-driven entrepreneurial activity than the average of the European countries.

This result suggests that the increase in the TEA rate in Portugal in 2014 was mainly due to necessity-based entrepreneurship, probably as a self-employment solution and income substitution, due to the high unemployment rates. Accordingly, there was less opportunity-driven entrepreneurship in 2014 in Portugal than in the average of the EU countries. However, the trend from 2010 to 2013 was that Portugal had more improvement-driven opportunity entrepreneurship than the average of the EU countries.

In sum, the entrepreneurship activity in Portugal kept up with the EU average from 2010 to 2013. In 2014, despite the fact that Portugal had more entrepreneurial activity than the other EU countries, these were mainly necessity-driven and not improvement-driven.

Perceived opportunities in Portugal were also consistently lower than the EU average. This would suggest that in Portugal, there is a perception of less good opportunities to start a business in the area they live than in the other European countries. This result can be potentially explained by the crisis and by the insecure environment perceived in Portugal during the economic crisis years. Despite the fact that Portugal was perceived to have low opportunities for new business during this period, this was also the country where there was a higher belief among the population that they had the required knowledge and skills to start a business. Indeed, with regard to the perception of its entrepreneurial capabilities, between 2010 to 2014 Portugal had higher results than the average EU countries.

Entrepreneurial aspirations in Portugal were consistently lower than in the other EU countries. Overall, this pattern of entrepreneurship results suggests that Portugal is far from the EU countries tipping point.

The perception of fear of failure in 2010 was lower in Portugal than the average in the EU countries, but was equivalent in 2011, 2012, 2013 and 2014. This result shows that from 2011 onwards, fear of failure would prevent Portuguese entrepreneurs from setting up a business, as in the other EU countries. Entrepreneurial intentions in Portugal in 2010 and 2013 were coincident with the EU average, slightly lower in 2011 and slightly higher in 2012. The most interesting results were in 2014, when entrepreneurial intentions in Portugal were higher than the average of the EU countries. In general, entrepreneurial attitudes in Portugal are characterized by average entrepreneurial intentions, lower perceived opportunities, higher perceived capabilities to start a business, although fear of failure would prevent them from actually starting a business.

Compared to the EU countries average, entrepreneurial aspirations in Portugal were constantly lower in the three indicators and over time, except for 2013. This trend was consistent with growth expectation, innovative orientation and international orientation. Thus, Portugal in 2010, 2011, 2012 and 2014 revealed lower entrepreneurial aspirations than the average of the EU countries in growth expectation, in new product, and in international orientation early-stage entrepreneurial activity.

In general, these results indicate that Portugal has entrepreneurial activity that corresponds to the average of the other EU countries, as much at the total early entrepreneurship stage, as in necessity and improvement driven entrepreneurship. Surprisingly, and not congruently, there is a lower

perception about the availability of good business opportunities in the area they live and a higher fear of failure that would prevent individuals from launching a business. There is a higher perception of the individual skills and knowledge that are required to launch a business, so Portugal shows a national belief in its entrepreneurial skills and capabilities. Nevertheless, and probably due to the crisis environment, entrepreneurial aspirations in Portugal were consistently lower than in the other EU countries. Overall, this pattern of entrepreneurship results suggests that Portugal is far from the EU countries tipping point.

In general, the success or failure of entrepreneurship does not depend on a set of individual, sporadic or surgical activities conducted at a national or local level. They will rely rather on combined intra and inter level strategies that trigger a shift towards an entrepreneurial culture, climate and method.

As a consequence of this result, we suggest that Portugal should promote entrepreneurial attitudes and growth. National and international policy decision-makers refer to entrepreneurship as one of the main mechanisms driving economic development (e.g., Acs and Szerb, 2007; Acs, 2006; Martin et al., 2010; Stel et al., 2005; Wong et al., 2005), and thus attitudes, aspirations and growth gain a critical relevance. For instance, entrepreneurship can be conceptualized as a method, analogous to the scientific method, which can help to promote the necessary conditions for developing capacity for enterprise (Ventakaraman et al., 2012). The inclusion of curricula focused on developing entrepreneurial skills from the early school years would, by the generational effect, unleash the entrepreneurial potential of human nature.

By leveraging the generational process, entrepreneurship would solidify as an agent of transformation for careers, communities, and political, economic and social systems. This paradigm shift is ambitious, challenging and progressive. The contributions made by research and activities for entrepreneurship that we observe today are only the beginning. And on their own, and as temporary and hitherto unframed policies, they will not have the desired effect. Entrepreneurship needs to be fostered and integrated in our culture as action, method and strategy.

Furthermore, at the macro and societal level, society needs to be culturally prepared to generate innovative ideas and effective and efficient management of resources. At the intermediate and group level, organizations, private and public institutions have to urgently start the process of intrapreneurship by encouraging employees to take risks, to accept and learn from failure and to be responsible for the development of innovative products or services for their businesses. Individually, each person chooses to engage in entrepreneurship and to stimulate their ability to recognize business opportunities, participate in business idea competitions (Santos and Caetano, 2014), and consider entrepreneurship as a stage in their active working life (Costa et al., in press). In general, the success or failure of entrepreneurship does not depend on a set of individual, sporadic or surgical activities conducted at a national or local level. They will rely rather on combined intra and inter level strategies that trigger a shift towards an entrepreneurial culture, climate and method.

In the present social and economic context in Portugal, specifically, and in Europe, in general, entrepreneurship appears as a "ray of light" (e.g., Caetano et al., 2012). It is perceived as a way to deal with countries' main socio-economic problems such as unemployment, economic downturn and deep changes in employment patterns.

This study has several limitations. It was not possible to include all European Union countries, as data was not available. Thus, the description in our study is restricted to the countries and variables that were available. A second limitation refers to the period of time selected. At the present moment it is only possible to analyse data up to 2014. In future research, we will also integrate data from 2015 and 2016, when the Eurozone crisis is expected to be resolved.

This research aimed to be a first step towards developing systematic and analytical research on the entrepreneurial activity, attitudes and aspirations in Portugal. It would be interesting to extend this in future research in order to identify the determinants of these changes over time and across countries. ■

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