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Dreamers and starters: how disappointing are the results of ecosystem creation in Portugal?

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Abstract

This work analyses the variation in start-up creation across the Portuguese NUT3 regions, using data available from two different sources. In the period 2014-2017, the birth of startups is measured through notary acts of new company creation and activity start is measured through the first submission of payrolls to ministério do trabalho, solidariedade e segurança social (MTSSS).
This data is analyzed with other social and economic variables trying to ascertain environmental factors that help explain the large differences between the regions.
Particular attention is focused on measuring the so called "entrepreneurial ecosystems" (Boutillier, Carré and Levratto, 2016; Alvedalen and Boschma, 2017; Kuckertz, 2019).
Results show a huge difference between startups "dreamed" and startups actually "starting". Data also shows a spike in dreamers in the Lisboa region, but low figures in actual starters in the regions with the most visible ecosystems (Lisboa, Porto and Braga). This can be a considered a seriously disappointing result of all the investment put into Lisboa's ecosystem.

Keywords: Entrepreneurship, Ecosystems, Regional development, Innovation.

Introduction

Entrepreneurship's importance has been frequently highlighted in the literature and five reasons have been mostly pointed out: it contributes to the creation of jobs, it contributes to innovation, it thus increase the creation of wealth, and it contributes to the development of the economy and of the society in general, and, finally, it constitutes an increasingly important career option for a good part of the workforce (Gaspar, 2009).
The concept of entrepreneurial ecosystem (EE) is relatively new in the entrepreneurship literature (Blasi and Sedita, 2019). It is one approach used to try to explain the differences in entrepreneurial activity among regions (Colombelli, Paolucci and Ughetto, 2019).

The concept has attracted a lot of attention but clearly needs to be further developed and refined (Alvedalen and Boschma, 2017). It was defined as "an interconnected group of actors in a local geographic community committed to sustainable development through the support and facilitation of new sustainable ventures" (Cohen, 2006, p. 3) and it also serves the purpose of compensating for the traditional focus of entrepreneurship literature on the individual entrepreneurs' or startups' actions, motivations and limitations (Alvedalen and Boschma, 2017). It is seen not as a formal institution or organization "but rather an informal plexus of relations… based on regional proximity" (Cunningham, Menter and Wirsching, 2019, p. 552).

In fact, one of the advantages of the EE concept comes from assuming that opportunities may not be exogenous and may be the result of the interactions between EE actors (Alvedalen and Boschma, 2017). "Performance of EE is perceived to depend on interactions between three components: individuals, organizations and institutions" (Alvedalen and Boschma, 2017, p. 6).

The influence of EE in the process of creation and in the success of startups has nevertheless been documented in the literature (Auschra *et al.*, 2019), stressing the concept's importance for the development of entrepreneurship. One of EEs' major contributions to the success of startups may be the stock of social capital it puts at the entrepreneur's disposal (Alvedalen and Boschma, 2017), one of the most important success factors for startups (Gaspar, 2009).

The literature on EEs may be considered an extension to previous studies on the role of regional determinants in explaining the differences in entrepreneurial activity between different regions (Gaspar and Pinho, 2007; Bosma and Schutjens, 2011). It may also be seen as an extension to studies on technology transfer policies, even though focused only in that specific part of an EE (Cunningham *et al.*, 2019).

The literature on EEs presents an undefinition about how to measure and evaluate any specific EE (Boutillier, Carré and Levratto, 2016) and this limits its usefulness. What cannot be measured will hardly be improved by management or by policy actions.

Since the EE is composed of many actors (Audretsch and Belitski, 2017; Sarma and Marszalek, 2019; Walsh, 2019) and since they play different roles and make the different components of the EE (Auschra, Schmidt and Sydow, 2019; Pugh *et al.*, 2019; Stam and van de Ven, 2019), it would be in the interest of local authorities willing to improve entrepreneurship to measure their local EEs and its components so that they can put their efforts and resources on the components where the EE scores the lowest or on the components they consider the most important. Some actors focus on stimulating entrepreneurial intentions, while others focus on helping entrepreneurs test their ideas and eventually take them to market in the form of a startup's products/services, other actors focus on accelerating the startups' entry and growth, others focus on funding different stages, others still focus on helping startups go international and scale up,… there are many roles to be played in an EE and the only way to know where time and resources should be invested is by measuring. Thus, all the attempts to develop EE measuring instruments (Bell-Masterson and Stangler, 2015; Stam, 2018).

In this effort to measure EEs, most studies see it as a network (Alvedalen and Boschma, 2017), therefore in this work we'll consider the value of the EE to be, in part, the result of the number of nodes (actors) it contains. One important actor in all EEs is the successful entrepreneur, someone who has created a startup and then contributes to the motivation of new entrepreneurs (Audretsch and Belitski, 2017; Spigel and Harrison, 2018). In this light, the successful EE "produces" startups and entrepreneurs but also needs successful startups as one of its components.

The motivation for the development of EEs mostly comes from the will to create jobs, increase innovation, and have larger numbers of successful startups in a geographical region. In an open economy, like the Portuguese, there is also an intention to increase exports (Gaspar and Pinho, 2007; Boutillier, Carré and Levratto, 2016) and special focus must be put in this variable when analyzing Portuguese EEs. All these reasons add to the need to study Portuguese EEs.

This research is therefore based on a simple research question: do Portuguese EEs provide a positive contribution to the development of entrepreneurship?

In the journey of doing the research, we collected data about two realities: starters and dreamers, both of which will be better explained in the following section but offer a new contribution to the knowledge about EEs.

Methodology

A model was adopted in the empirical work. One that assumes EEs actions (resulting from the work of all its actors) make support services available to entrepreneurs and then persuade them to use those services. This support focuses on different subjects (coming from different actors) in different phases of entrepreneurs' route to start up success. This is summarized in Figure 1.

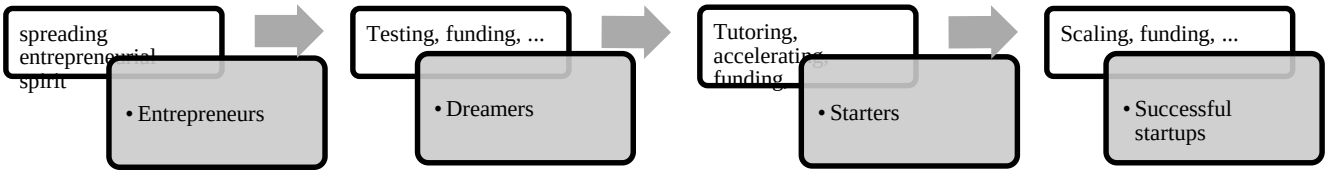

Figure 1 - Model of EEs support actions along the entrepreneurial route

The hypothesis being tested in this empirical study are two:

h1. the larger EEs in the country (notably Lisboa) will register more startups than the smaller and less visible ones;

h2. this difference will increase along the period being analysed.

Portugal is a highly asymmetric country (Gaspar, 2007) with a huge concentration on Lisboa and (in a lesser degree) in Porto, Braga and Coimbra. This asymmetry is also found in entrepreneurial activity, hence h1.

Plus, Lisboa's EE was the first to gain public visibility, something actually enhanced by the latter move to Lisboa of a high-profile annual tech/entrepreneurial event called *WEBSUMMIT* (not reflected on the data analysed in this paper). Lisboa actually received recognition from the EU for the creation of it's EE, in the form of an award from European Regions Committee.

This "first starter advantage" leads us to expect h2.

Data was gathered on startup creation, from notary acts of new company creation, and on starting activity, measured through the first submission of salaries lists to MTSSS. The idea is that creating a new company in the notary only

represents a dream that has already passed several tests and assembled some partners (maybe only one) to invest in the formal creation of a company. Actually starting up a company is more than that. It requires passing more tests, assembling a lot of other resources and having people working and receiving a salary. That is the variable we built: when a company first pays salaries (even if it's just one salary to one person, maybe the entrepreneur) it is required to submit a payroll list to the proper authorities: MTSSS (ministry of work, social security and solidarity)[1]. That's when we consider it to be a startup. It may yet fail (probably will) but at that point it is already a member of the entrepreneurial ecosystem.

Both series (dreams/startup creation and startups/activity start) were compared at national level and at nut3 regional level. These were also compared using both aspects of entrepreneurial activity.

Data for these variables was collected for the years 2014-2017, period chosen due to discontinuities in the records available. The discontinuities area a result of changes in methodology adopted by MTSSS along the years.

Results and Discussion

Data shows (Figure 2**Error! Reference source not found.**) a national level decrease in start-ups submitting their first payroll in the period under analysis, whilst the number of new companies created in notaries increases steadily. More dreamers, less starters. This period corresponds to the post "troika crisis", when the country was recovering from the major recession it suffered in the early part of the decade, when it was bailed out by the IMF, the EU and European Central Bank. This "troika" forced major "austerity" measures as precondition to the bailout. In this 4-year period immediately after the bailout program was completed, the economy recovered at good pace, with a major drop in unemployment and a GDP growth above EU average.

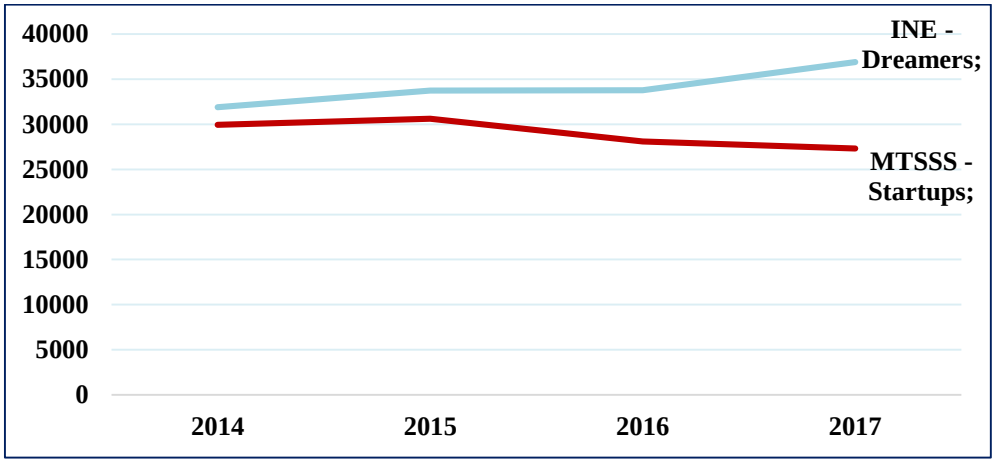

Figure 2 - Dreamers and Starters

Source - GEP/MTSSS, Quadros de Pessoal and Pordata.pt

This drop in starters is unexpected. It looks like the "hype" around entrepreneurship kept growing all along this period, with more and more dreamers coming out and creating companies but the actual startups were less and less every year.

To compare the different nut3 regions (and its ecosystems) one must set a comparison standard. The literature uses two standards: number of startups per 1000 inhabitants (labour-market approach) and startups per 100 existing companies (ecological approach) (Nekolová, Novosák and Hájek, 2018).

Using the labour-market approach, we can see Lisboa, Algarve and Porto lead the country in dreamers (companies created), while in the ecological approach, Lisboa, Porto and Madeira are the leaders (Figure 3Figure 2).

[1] Source: GEP/MTSSS, Quadros de Pessoal

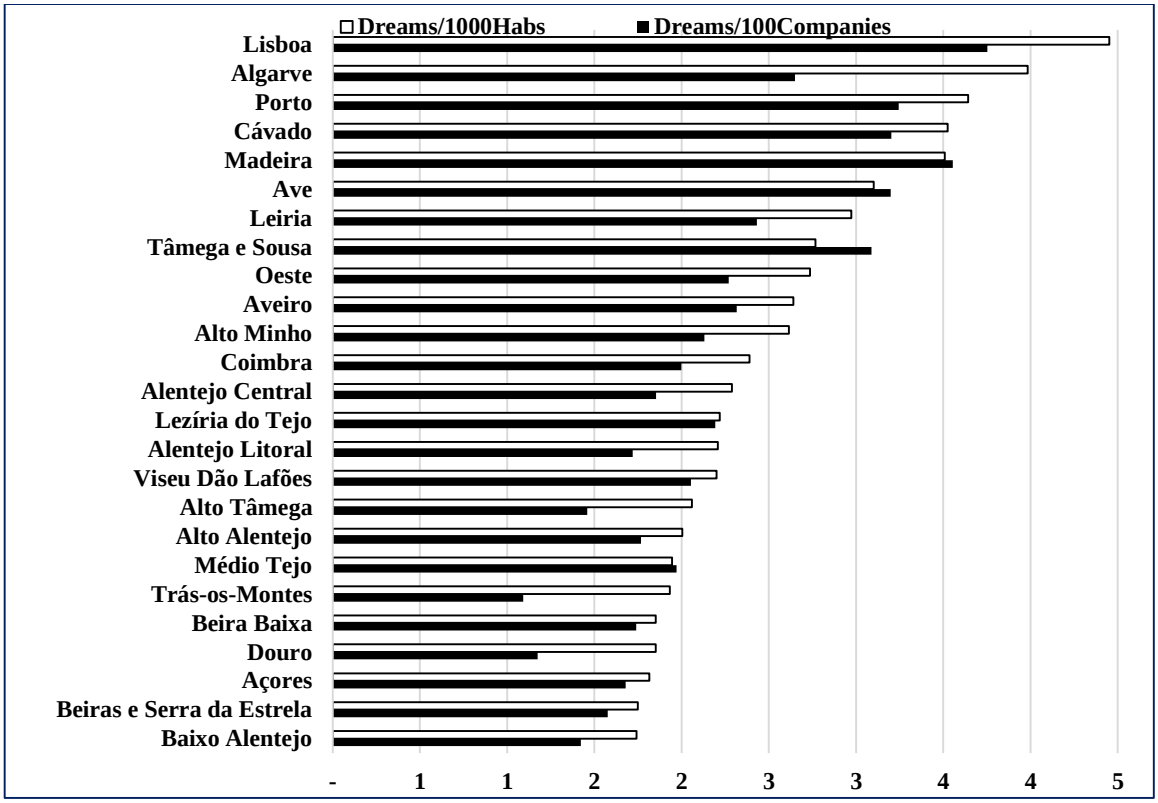

Figure 3- Dreamers per 1000 inhabitants and per 100 companies

Source – Pordata.pt

However, looking at starters (startups submitting their first payroll), the picture is quite different (Figure 4). Algarve leads the labour-market approach, while Tâmega e Sousa leads the ecological approach. Lisboa, Porto and Braga, the larger and more visible ecosystems all show disappointing figures by either approach.

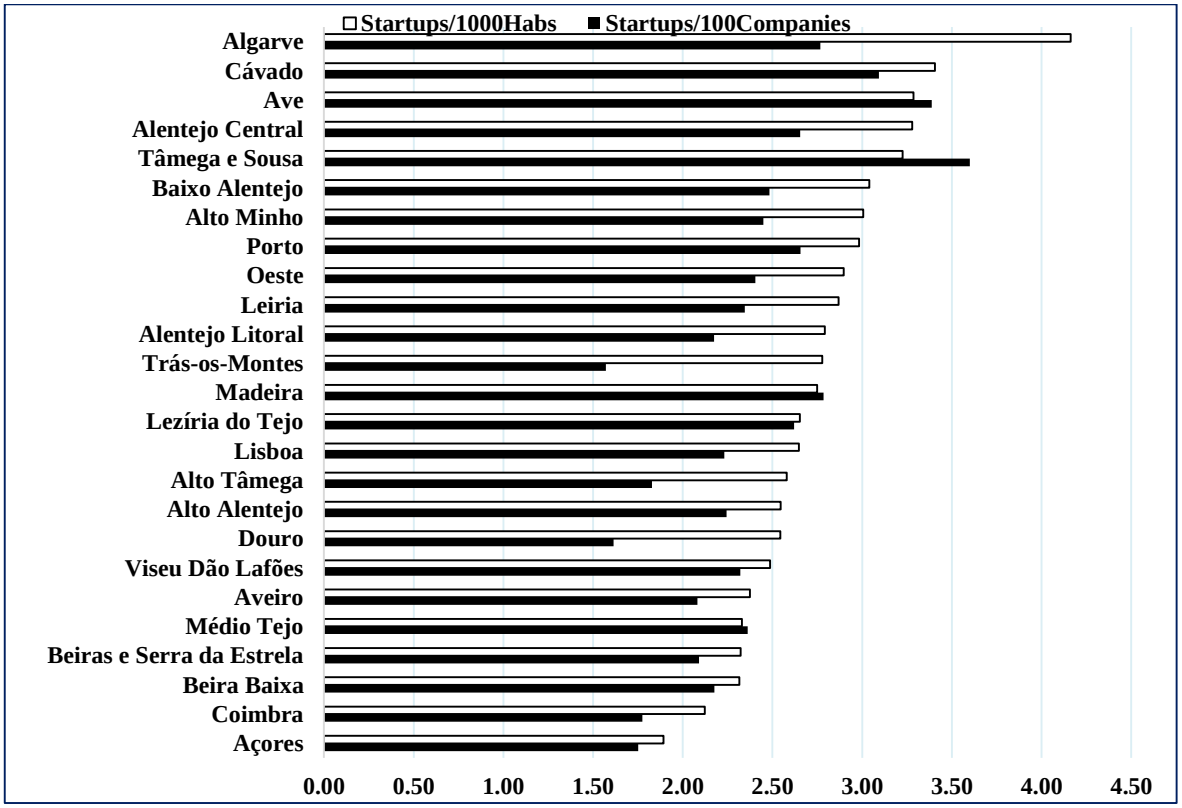

Figure 4 - Startups per 1000 inhabitants and per 100 companies

Source - GEP/MTSSS, Quadros de Pessoal

Comparing the yearly average (2014-2017) of dreamers and starters by nut3 (Table 1), we can see the difference is substantial and largely negative in Lisboa, Porto and Madeira. There are substantially more companies being created in notaries than startups submitting their first payroll.

Many more dreamers than starters, particularly in Lisboa. This is an indication that many wannabe startups are created on paper but, in reality, never actually start, or they start much after they were created. Many dreamers never become starters or they do it much, much later.

On the opposite side, some interior regions, like Baixo Alentejo show a 4-year average of 7 starters for every 4 dreamers. Either they were created in other regions and then moved there and/or they were created a long time ago and only in this period they actually started up, submitting their first payroll.

2014-2017	INE - Dreams	MTSSS - Startups	Difference	Variation
Baixo Alentejo	205	358	- 153	175%
Trás-os-Montes	210	302	- 92	144%
Alentejo Central	354	507	- 153	143%
Douro	356	489	- 133	137%
Beiras e Serra da Estrela	378	502	- 124	133%
Alto Alentejo	215	273	- 58	127%
Alentejo Litoral	207	262	- 55	126%
Alto Tâmega	180	225	- 45	125%
Beira Baixa	152	190	- 38	125%
Médio Tejo	456	547	- 91	120%
Lezíria do Tejo	530	633	- 104	120%
Tâmega e Sousa	1 159	1 351	- 192	117%
Alto Minho	607	698	- 91	115%
Viseu Dão Lafões	560	633	- 73	113%
Ave	1 284	1 360	- 77	106%
Oeste	979	1 037	- 58	106%
Algarve	1 751	1 830	- 78	104%
Açores	443	462	- 19	104%
Cávado	1 424	1 376	48	97%
Leiria	851	821	30	96%
Aveiro	959	862	97	90%
Coimbra	1 044	928	117	89%
Porto	6 265	5 130	1 135	82%
Madeira	892	699	193	78%
Lisboa	12 616	7 501	5 115	59%

Table 1 - Dreamers and starters

Source - GEP/MTSSS, Quadros de Pessoal and Pordata.pt

Companies can be created in notary in one place (i.e Lisboa) and then when they start actually working they relocate to their intended location, where they submit their payrolls. This looks like the most probable explanation to the small EEs that actually register more starters than dreamers. Eventually some of them may have been created in notary in the years prior to this period and only actually started paying salaries during the analyzed years. Both situations should explain the negative numbers in the table: 18 EEs registered 1.632 more starters than dreamers.
The other 7 EEs registered 6.735 more dreamers than starters. These may actually become starters later, out of this time period. Some of them may be part of the 1.632 starters who did not create their companies in the smaller EEs. Some, likely most of them, may never actually become starters, because they may end up closing before submitting their first payroll.

These dreamers are actually a product of the EE. The combined action of all actors in the EE led to the formation of these new companies.

When they become starters, they continue to be a product of the EE. That combined action probably had some role in this (partial) success. These dreamers went on to be starters. Very soon many of them will become active actors in this EE, helping motivate entrepreneurs to become dreamers with their own success stories.

So, we theorize that EEs produce Dreamers and Starters. Only Starters become actors in the EE, in a later stage. This way future research should include Starters as one of the variables to assess the strength of the EE, but with a time lag.

Unlike previous research in Portugal (Gaspar and Pinho, 2007), exports did not assume a significant role in the regression analysis performed with variables representing regional wealth, unemployment, market (internal and external) demand and the rising of Dreamers as a proxy for the influence of the local EE.
The later proved to be, in this analysis, the most significant influence in the creation of starters (Table 2 and Table 3).

R quadrado	F	Sig. F	Durbin-Watson
0,540	4,464	0,007	1,208

Table 2 - regression analysis

Dependent variable: starters/Population average 2014-17.

Variables	Padronized Beta	t	Sig.	Tolerância	VIF
(Constant)	1,479	1,290	0,212		
Wealth (purchasing power) 2014	-0,003	-0,280	0,783	0,285	3,506
unemployment 2014	0,048	0,955	0,351	0,875	1,143
Dreamers/Pop Average 2014-17	0,475	4,360	0,000	0,834	1,200

Table 3 - regression analysis

On the other hand, looking at these four years, we can see (Figure 5Figure 5) how there were a lot more dreamers than starters and how this difference widened year after year.

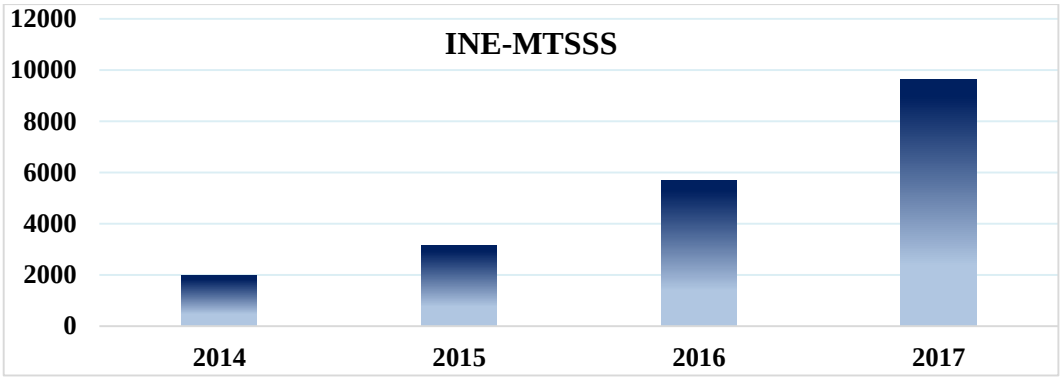

Figure 5 - Widening gap between dreamers and startups

Source - GEP/MTSSS, Quadros de Pessoal and Pordata.pt

At the nut3 regional level (Figure 6Figure 6), the evolution clearly shows the origin of this widening gap: Lisboa.

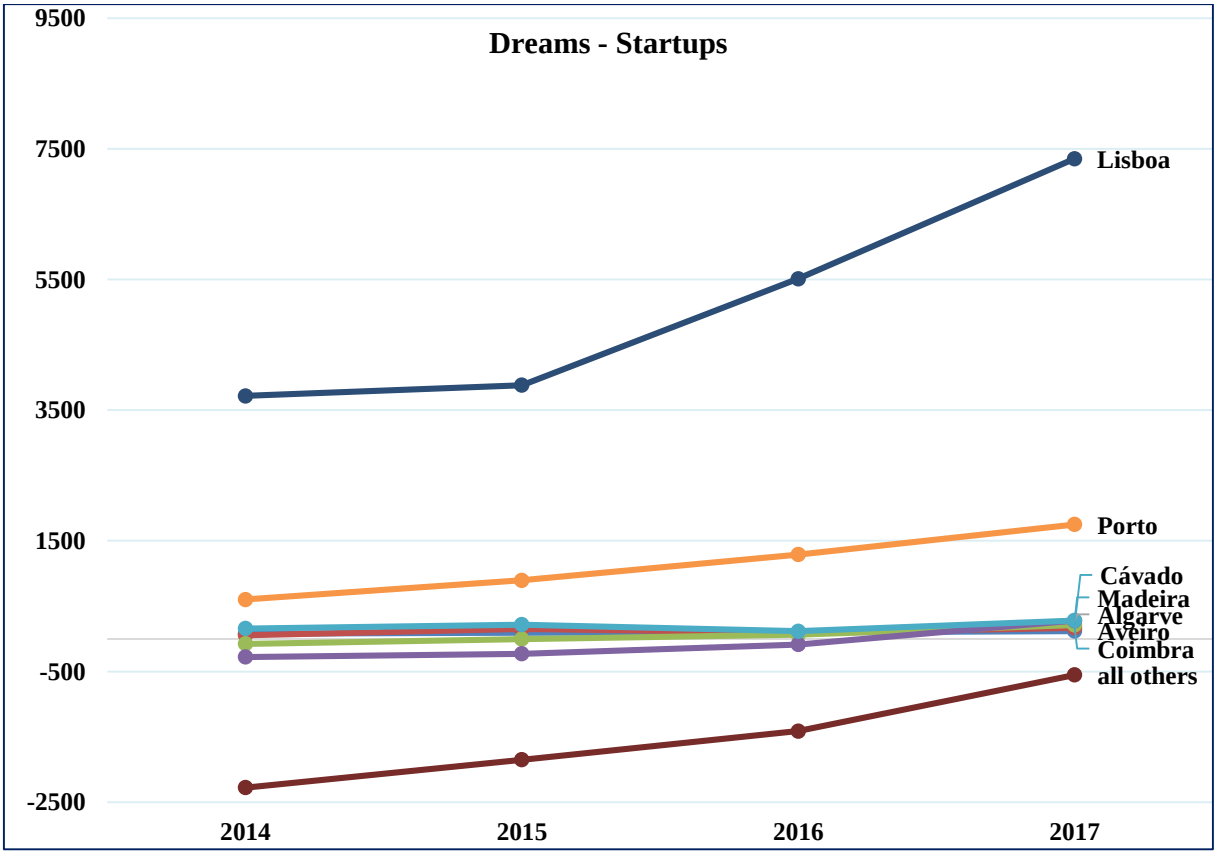

Figure 6 - The gap has a main origin

Source - GEP/MTSSS, Quadros de Pessoal and Pordata.pt

This evolution further confirms the above analysis. Lisboa shows a large increase in Dreamers but fails to convert them into Starters. Some may become Starters somewhere else; some may become Starters later; but most never actually submit their first payroll. This particular conversion rate is clearly lower than expected and lower than should be.

This research does not have the data to evaluate whether Lisboa excels at generating Dreamers (motivate entrepreneurs) or fails at converting Dreamers into Starters (support entrepreneurs along their route to getting their startups successfully to the market), or both. This should subject to future research.

Conclusions

Neither of our initial hypothesis was confirmed.

The period in analysis came immediately after the external financial aid by IMF and the "troika", alongside a deep recession. In this period, on the contrary, the economy grew every year above EU average, and the "black years" were gone. Unemployment took a dramatic dive and some markets (particularly tourism) grew very fast.

The entrepreneurship "cause" was being highly promoted by public authorities, particularly in the country's capital where a very dynamic (or at least a highly visible) ecosystem emerged from the efforts of public authorities, private investors, universities, researchers, incubators, accelerators, hundreds of committed actors.

Similar efforts were put to build highly visible ecosystems in Porto, Braga and Coimbra. The results shown above, however, tell a story of high dreams and low realization of those dreams. The number of dreamers (startups being created) stood out in Lisboa and, to a lesser degree, in Porto. Neither, however show above average levels of starters (startups submitting their first payroll). This completely unconfirms h1.

It looks like most dreams are not resulting in working startups. When a startup is working (and paying salaries) that doesn't mean it is going to succeed. Actually, it is likely to fail. In Lisboa, however, most startups don't even reach that point, they fail before submitting first payroll.

There is a clear increase in dreamers (startups created), but that is not resulting in an increase in starters. Let alone an increase in successful startups.

Actually the difference between Dreamers and Starters increases over time and that gap clearly results from Lisboa's figures. This may be seen as unconfirmation of h2, since it postulated a positive difference, not a negative one.

After performing a simple regression analysis with the data, we could see no influence of exports in the creation of Starters, unlike previous research done 10 years before in the same regions.

Another important issue with this results is the huge difference between companies created (something that signals the entrepreneur is so committed to create a startup she actually spends the time and the money to create a company) and companies submitting their first payroll to MTSSS (something that signals the startup is actually working and paying at least one salary). There are no comparative figures from other countries, but these figures seem to show that a huge percentage of projects never actually start. It is known that most of the ones who actually start will fail in the market, but apparently many more actually fail before that.

However, this may actually be a good thing, if it means bad projects are cut before entering the market and failing. We would need further research on this.

To promote and to support entrepreneurship of the century XXI is to help entrepreneurs follow the road from idea generation to market success. The role of entrepreneurial ecosystems in this process can be extremely important and need to be further researched.

Acknowledgment

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Works Citation

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