

Cultural and Creative Entrepreneurs in Financial Crises: Sailing Against the Tide?

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Abstract

We focus on a number of idiosyncrasies of cultural and creative entrepreneurs (CCEs) to study CCEs' capacity of resilience under times of downturn (economic, financial and debt crisis). We analyse CC firms' demography (born and dead), trends and performance and the association between subsidies received and firm survival. We look at mostly micro firms in a country where CCEs are particularly challenged from the financial perspective, namely Portugal. We exploit the unique availability of accounting micro data at private firm level in a time span of 8 years (2004-2011), which allows to include the effects of the latest financial crisis, and to understand the evolution of the economic success criterion. The obtained results about the impact of subsidies on survival are interesting in both CCEs and policy perspectives, suggesting a positive impact of subsidies in periods of downturn, and negative impact of subsidies in periods of growth of the economy. Further, CC firms revealed to be more dynamic than other firms in other sectors.

Keywords: cultural and creative entrepreneurship; resilience; policy.

JEL classification: L26; Z11; L82.

1. INTRODUCTION

Current policy calls for entrepreneurship, creativity and innovation as key drivers of the economy, growth and jobs (United Nations/UNDP/UNESCO, 2013; European Parliament, 2013; European Commission, 2010 and 2012) at international, European, national, regional and local levels. Although the cultural and creative (CC) economy is widely believed to bear benefits in terms of quality of life, social integration and regional attractiveness, these are difficult to quantify and so the literature has instead relatively focused on the cultural and creative industries' potential to promote growth. Studies have praised the CC economy's ability to innovate (Lee and Rodriguez-Pose, 2014) and have

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called it one of Europe's most dynamic sectors (EY, 2014). On the other hand, some studies have presented a downward economic development for the CC economy (Eurostat, 2016). According to Eurostat (2016) the value added generated by cultural enterprises at EU level has dropped as well as its turnover: In most EU Member States the cultural sector in 2013 had yet to return to 2008 performance levels.

In such a context, cultural and creative entrepreneurs (CCEs) present idiosyncrasies of significant interest not only for other, more general entrepreneurs, but also for their overall impact on the wider economy and society (Lazzaro, 2017). Even if CCEs share with general entrepreneurs the fact of starting and running a new business, as well as initiative and experimentation with the aim of innovation and venture creation, CCEs differ in a number of other aspects, such as micro size (Beck and Demirguc-Kunt, 2006), degree of for-profit orientation and types of compensation (Frey, 2000), work conditions, regulation, firm creation and growth patterns and resilience (Ellmeier, 2003), dependence on public funding, access to finance as a core barrier to growth for many businesses within the sector (European Commission, 2010), performance assessment (McKelvey and Heidelmann-Lassen, 2013), lack of managerial skills (European Commission, 2013), uncertainty and risk attitude (Klamer, 2011), type of innovation, dominance of intangible assets over tangible assets in many subsectors, networking and overall societal impact (Bagwell, 2008; Konrad, 2013).

The emergence of CCEs seems also to respond to a generalised shrinking of public funds in the cultural and creative sector (CCS), hence increasing the importance of self and alternative economic sustainability (including profit orientation, crowd-funding, etc.). More in general and beyond the CCS, CCEs seem to reflect and account for the higher value of flexibility and resilience facing the recent crisis in the general economy. Cheap access to capital could be one more general reason for this, however smaller CCEs also show declining path-dependent lock-in patterns (Lazzeretti and Cooke, 2017) which suggest a peculiar behaviour. The relation between austerity and crisis and the development and performance of CCEs have received too scarce attention from research so far, whereas a 'stress test' is widely used in the context of e.g. the analysis of financial markets and institutions (see e.g. Langley, 2013). Pratt (2017) is one of the few exceptions. Focusing on the UK case; he studies how and why culture seems to "have survived and thrived under conditions of economic austerity, and apparent state withdrawal from support" (2017, p. 127). Lazzeretti and Cooke (2017) analyse several cases of local resilience to external pressures and revitalisation of spaces. Hausman and Johnston (2014a, 2014b) study the role of innovation in a general context and during the financial crisis in the US and the crucial contribution the consequences for job creation, growth and profitability.

There is also a gap of empirical literature on funding patterns of the CCEs (Konrad, 2015). More in general, in terms of data sources and representativeness, the few empirical studies on CCEs are generally based on small survey-data (mostly gathered online), case studies or macro data per regions from Eurostat. For instance, Konrad (2015) does an online survey of 1,014 stakeholders in Germany and details the study of 414 start-ups. Antoncic and Hisrich (2001) survey 145 medium and large (hence oversized for the CCS) firms in Slovenia and 51 in the US. Porfirio *et al.* (2016) survey online a total of 123 CCEs from four countries. Examples of case-studies using semi-structured interviews include 21 Belgian furniture designers (Jacobs *et al.*, 2016) and seven entrepreneurs observed longitudinally (Hanage *et al.*, 2016). Lazzeretti *et al.* (2016) and Piergiovanni *et al.* (2012) use Eurostat data from regions.

In this paper we study the capacity of resilience of CCEs under times of downturn (economic, financial and debt crisis). To answer this question, we analyse the CC firms demography (born and dead), and performance dynamics and the association between subsidies received and firm survival.

Our paper significantly contributes evidence to the understanding of CCEs in at least *four* ways. First, it provides empirical evidence about a number of idiosyncrasies of CCEs, such as: a) firm creation, growth patterns and resilience; b) CCEs' survival to shrinking public subsidies. Second, it highlights the importance of these CCEs' idiosyncrasies not only for the CCS but also for the wider economy and society (crossovers). Third, it empirically justifies and provides recommendations for both CCEs and policy-makers, in terms of, respectively, a more strategic financing and sustainability (for CCEs) and a more focused and hence more efficient public support through subsidies (for policy-makers). Fourth, it sheds light on and exploits unique empirical accounting micro data from a country not belonging to the "usual suspect ones", namely Portugal.

According to the [European Commission \(2013\)](#), European CCEs seem characterised by diverse levels of financial health in terms of long-term solvency ratio¹, where Portugal, Italy, Latvia, Luxemburg, Malta and Romania score the lowest levels. Further, CCEs in Cyprus, Lithuania, Portugal, Spain and Slovenia were on average neither operational nor financially profitable. In this perspective resilience in times of crisis should therefore represent an even more crucial dimension for Portuguese CCEs.

Portugal does not border the Mediterranean Sea and frequently is not included in studies and programs of Mediterranean regions ([UNCTAD, 2010](#)). Only two Portuguese regions (Algarve and Alentejo) are included in the Med-program ([European Commission, 2014](#)). Yet Portugal is a very diversified cultural area with a Mediterranean identity similar to that of other more studied countries like Italy or Spain. Remarkably, differences between Mediterranean countries and North European countries were found also on the factors that impact on entrepreneurship: risk aversion and other soft conditions are more important in Mediterranean countries and hard conditions (e.g. business maturity, qualification of entrepreneurs) are more relevant in the other countries ([Porfirio et al., 2016](#)).

The period under study includes an economic downturn with a deep decrease of investments (public and private) and disposable income, and a large increase of unemployment. In Portugal, similarly to other countries, a policy of austerity was followed to overcome the debt problem and the restrictions to public expenditure affected all the economy. Therefore, this particular situation has potential for the study of the resilience of CCEs in an adverse context, as in many other European countries there were credit restrictions, decrease on consumption and restrictive policies of subsidies ([Hausman and Johnston, 2014a, 2014b](#)).

We use accounting micro data in a time span of 8 years (2004 to 2011) (Integrated Business Accounts System, SCIE Statistics Portugal). Our empirical analysis of Portuguese CCEs exploits a unique accounting firm-level database available under a research protocol established between the authors and Statistics Portugal. To our best knowledge this is the first contribution exploiting accounting and private firm-level data of CCEs, covering all the universe of firms (the delivery of accountings is mandatory by law). In particular, we fill the gaps of micro level, so far less investigated than the macro level ([Jeffcutt and Pratt, 2002](#); [Jacobs et al., 2016](#)) and of accounting data ([Denis, 2004](#)) about the scarcity of information about financial resources in CCEs. Finally, we also contribute to more detailed knowledge on the expenditures in creativity ([Hausman and Johnston, 2014a](#)).

In [Section 2](#) we deepen some less straightforward idiosyncrasies of CCEs for the purpose of our analysis. In [Section 3](#) we present our data and in [Section 4](#) the survival analysis. [Section 5](#) concludes the paper.

2. CCEs' FUNDING, DRIVERS AND SURVIVAL

In the introduction we have mentioned a number of peculiarities of CCE as compared to other forms of entrepreneurship. Peculiarities of CCE's business models in this context are: size, internal organisation, growth patterns, risk and uncertainty related to the prevalence of intangible assets.

The sources of funding for CCEs can be grouped into two broad categories: internal and external. Internal sources are the financial resources of the owners of the firms. External financial resources can have very diverse sources like family and friends, banks, public institutions, crowd-funding etc. [Klamer and Zuidhof \(1998\)](#) indicate three different spheres in which the arts can operate and the corresponding associated values: market (associated with objectivity, rationality, individuality, consumer sovereignty) government (associated with equity, solidarity, accessibility and national identity) and a third sphere corresponding to a voluntary contribution by individuals and corporations (associated with trust, honour, love and generosity). At present these three spheres coexist frequently in the same firm or project in art and culture and the ways of evaluation also vary. Subsidies can be received from central or local institutions and can assume a financial or a non-financial form (for example tickets as gift with impact on real participation in a festival or an exhibition). The assessment process and criteria used for acceding to government funding vary: subsidies based on bureaucratic and political assessment ([Klamer and Zuidhof, 1998](#)), a committee of art and culture experts do the selection based on aesthetic valuation, etc. The types of subsidies are: multiannual, institutional, by project, specific to an artist, etc.

In the context of contemporary public economics, CCEs must increasingly rely on private funding (both internal and external, [Konrad, 2015](#)) to complement the shrinking of public subsidies. Correspondingly, the pressure on monetary measures of success, such as revenues and profitability, increases. Monetary measures of success are direct measures that presume short term and explicitly measureable outcomes. On the other hand, public policy enacts measures to stimulate the broader economic and societal effects of CCEs, which combine the benefits of entrepreneurship with those of the CCS. These benefits correspond to externalities or indirect and wider effects that are more or less explicitly referred to as "spillovers" (see e.g. [Bendixen, 2000](#); [Jeffcutt and Pratt, 2002](#) and [Konrad, 2013](#)).

In such a context CCEs are faced with the complex issue of being at the same time accountable for their economic survival, as well as for their societal contribution in order to obtain both private and public funding. Both these aims can be considered in relation to two success criteria, one economic and one non-economic or societal ([Jacobs, 2012](#)). These are however interrelated, since a higher societal contribution will enhance the probability of public subsidies, hence enlarging the probability of economic survival, and vice versa. Furthermore, when allocating public funds policy makers often consider a higher economic independency as a criterion. On the other hand, profit-making seems to be a more limitedly inherent or compulsory aim for CCEs since they are compensated by alternative and complementary forms of satisfaction. According to Schumpeter, entrepreneurs are not necessarily motivated by profit but regard it as a standard for measuring achievement or

success. Schumpeter defines innovation as the act of putting a novel idea into operation and the entrepreneur is the innovator, and in the innovation process Schumpeter differentiates the entrepreneur from either the inventor or the capitalist (Baumol, 1968). Most of the CCEs have the characteristics of Schumpeter innovators. However, compared to general entrepreneurs, CCEs are more exposed to risk and have a particularly strong positive attitude toward risk. This questions whether CCEs' rate of survival or success relatively to general entrepreneurs is lower. CCEs have some challenges and characteristics that 'traditional' entrepreneurs do not necessarily have. These can constitute hindering factors when trying to access funding, but might also be leveraged upon when doing so.

In a perspective of wider socio-economic effects engendered by CCEs, CCEs are challenged by making such effects endogenous in their business models. Hence the question arises of when should a CCE invest in either monetising the end output, or enhance her societal contribution, and in particular of how entrepreneurial dynamics influence these two kinds of success criteria in the context of multiple funding possibilities.

Good entrepreneurs are aware of risk exposure and mitigate risk by incorporating it in their business models, for instance by doing market research or feasibility studies. This way of mitigating risk is however more difficult if not impossible for CCEs, who must rely on trial-and-error, experimentation an iterative processes in order to mitigate that risk. One of the reasons for this is that the value proposition of CCEs is mostly symbolic rather than functional in nature. For instance, from a marketing perspective, whereas it is possible to predict with some margin of validity the consumers' needs in terms of a new feature of a kitchen or of a car, it is more difficult to predict whether a consumer will like one particular lighter version of a colour or a straighter design than another one. Two straightforward consequences of this is that resources are not optimally allocated and traditional financing based on sound research is not always possible.

Reasons for the suboptimal resource allocation problem can also be found in the particular motivations that drive CCEs. To this regard CCEs typically do not consider themselves as being entrepreneurs (Jacobs, 2012). This is because of the utilitarian and somewhat materialistic meaning of the term "entrepreneur". This cultural type of barrier is fading in a context of fierce competition where only market-oriented entrepreneurs survive, but it still is an important explanatory factor of the sub-optimal allocation of a CCE's resources. CCEs' aims and motivations differ from those of general entrepreneurs, since those of the latter are not only direct and objective (hence directly measurable) but also indirect and intangible or measurable. This idiosyncrasy of creative entrepreneurship leads for instance to difficulties in setting prices (Throsby, 2001). Also the fact that the value of creative outputs is strictly linked to the 'zeitgeist' (Swedberg, 2006) makes that the monetary, objective value is unpredictable which leads to the impossibility of CCEs to set prices according to the expected demand (see e.g. Throsby, 2001).

Adopting the distinctions between creativity and innovation proposed by Mumford and Gustafson (1988), the entrepreneur, the owner and the manager in an individual or micro (less than 10 employees) CC firm is often a creative and an innovator: a creative because she generates novel ideas, and an innovator because she transforms the ideas in new products or services. Some literature stresses the conflict between creativity and control and the bohemian lifestyle associated with self-entrepreneurs in the sector (Eikhof and Haunschild, 2006). A recent report based on a survey carried out by the European

Commission (2013) also identifies the shortage of managerial skills in CC firms as one of the reasons for the difficulty to access to finance.

Finally, the final product or service of the CC firms is often unique, because usually its production is by project and project-based firms. This uniqueness is another reason why it is likely that the usual measures of performance (e.g. survival rate after x years of being created) are not fully accurate in this case. Frequently some firms are created to produce a specific event of short duration (e.g. a yearly music festival) or to participate in a short duration consortium (for example an application to a public call).

3. DATA

The changes in the definition of cultural and creative industries, as well as the shift in terminology from cultural to creative industries have implications also for policy (Garnham, 2005). That also explains the variation in the amount of definitions. Some examples of current classifications include: European Commission (KEA, 2006), UNCTAD (2008), UNCTAD (2006), Department of Culture, Media and Sports in UK (DCMS, 2007; DCMS, 2009; DCMS, 2013); the European Cultural Foundation (Wiesand and Soendermann, 2005); the OECD (Gordon and Beilby-Orrin, 2006); the UNCTAD (2008), the European Statistical System Network on Culture (ESSnet-Culture) (Bina *et al.*, 2012; Lazzaro and Lowies, 2015; Amez *et al.*, 2017).

The European Statistical System Network on Culture (ESSnet-Culture) currently used by Eurostat is the classification system used in this article. *The European Statistical System Network on Culture developed* aims to harmonize the European statistics in the sector. It considers ten cultural domains and six functions taking into account several aspects (e.g. economic, social and some other aspects linked to audience, consumption and financing). The ten cultural domains are: Heritage; Archives; Libraries; Book & Press; Visual arts; Performing arts; Audiovisual & Multimedia; Architecture; Advertising and Art crafts. The six functions are: Creation; Production/Publishing; Dissemination/Trade; Preservation; Education; and Management/Regulation.

In the 2010-2012 period, according to the first Cultural Satellite Accounts published for Portugal (Statistics Portugal, 2015) 66,276 units participated in the activities related to culture (CCS) employing 88,749 individuals and producing (Gross Added Value, GAV) 2,667 million of euros. This corresponds to 1.7% of the national GAV. This percentage is similar to sectors like Telecommunications (1.9%) and Manufacture of Food Products (1.6%). About 2% of the total employment belongs to the CCS, receiving 2.2% of the total income of employees. The distributions by functions and domains following the ESSnet-Culture final report stress the relevance of some domains within the CCS (Table no. 1). About one third of the units of activities of the sector are in the Performing Arts, one third of the employment and production is represented by Books & press.

Compared with other European countries, Portugal is at the bottom of the list of contributions from the budget to Culture. For example, in 2011 the Ministry of Culture received 0.4% of the total Budget corresponding to 216 million of Euros and in 2013 the contribution from the State to Culture decreased to 0.11% of the budget. These figures reflect the strong financial restrictions in the CCS and the crucial role of the private sector. Our study is about firms in the private sector, which correspond to the large majority of the units in the CCS in Portugal.

Table no. 1 – Structure of the CCS by sub-sectors (2010-2012)

Domains	Units of Activity % in CCS	Employment % in CCS	Production 10⁶ Euros
Heritage	0.9%	5.7%	5.5%
Archives	0.1%	1.3%	1.0%
Libraries	0.1%	2.8%	2.1%
Books & press	13.8%	36.6%	33.2%
Visual arts	9.8%	6.7%	5.0%
Performing arts	30.9%	11.6%	8.1%
Audiovisual & multimedia	5.1%	11.7%	22.6%
Architecture	13.4%	5.0%	4.5%
Advertising	11.5%	7.5%	9.0%
Inter-sector	14.4%	11.1%	9.1%
CCS	100%	100%	100%

Source: Cultural Satellite Accounts 2010-2012 (Statistics Portugal, 2015)

Performing Arts is the sub-sector with more firms followed by Books & press. Together with Retail sale of newspapers and stationery in specialised stores and Artistic and literary creation, they correspond to 69% of the firms in 2004 and 66% in 2011. Some activities show a tendency to an increase of the share of the total number of firms and a relevant increase in the number of firms: Cultural Education, Translation and interpretation activities, Specialised design activities.

Our empirical analysis of Portuguese CCEs exploits a unique accounting firm-level database available under a research protocol established between the authors and Statistics Portugal, the Portuguese statistical office (INE, Instituto Nacional de Estatística). It corresponds to *all the universe of private firms* because is built on fiscal information. It includes firms of sizes starting with firms with one single person (in Portuguese “sociedades unipessoais” or “empresas em nome individual”). The available variables depend on the size of the firms, because there are different fiscal and accounting rules for firms with less than 10 employees or larger. For example, the value for subsidies only exists for the non-micro firms.

From the original raw data new files were built by the authors. Adopting the classification of Essnet-Culture, the selection of 33 subsectors belonging to the CCS from the global base is based on a detailed examination of all the sectorial codes at 5 digits in the Portuguese Classification of Economic Activities CAE – Rev. 3 (INE, 2014), which is similar to Statistical the NACE, the Classification of Economic Activities in the European Community – Rev. 2. For the period 2004-2011, the selected firm-based data includes 100,122 observations² belonging to cultural and creative industries (CCI). Table no. 2 presents the 33 subsectors.

Table no. 2 – CCS composition (2004; 2008; 2011)

NACE code	No. Firms 2004	% 2004	No. Firms 2008	% 2008	No. Firms 2011	% 2011
*91030.00 Activities of historic sites and monuments	43	0.1	79	0.1	58	0.1
*91020.00 Museum activities	86	0.2	89	0.2	69	0.1
91010.00 Library and archives activities	43	0.1	52	0.1	39	0.1
*90040.00 Operation of arts facilities	77	0.2	86	0.1	84	0.2
*90030.00 Artistic and literary creation	4,528	9.4	4,742	8.2	5,349	10.0
*90020.00 Support activities to performing arts	157	0.3	219	0.4	381	0.7
*90010.00 Performing arts	12,820	26.7	16,722	28.8	14,826	27.8
85520.00 Cultural Education	63	0.1	121	0.2	215	0.4
77220.00 Rental of video tapes and disks	138	0.3	204	0.4	109	0.2
74300.00 Translation and interpretation activities	1,682	3.5	2,824	4.9	2,914	5.5
74200.00 Photographic activities	2,252	4.7	2,482	4.3	2,310	4.3
74100.00 Specialised design activities	1,307	2.7	2,697	4.6	3,233	6.1
73110.00 Advertising agencies	3,397	7.1	4,073	7.0	3,762	7.1
71110.00 Architectural activities	9,020	18.8	10,365	17.8	8,715	16.4
63910.00 News agency activities	90	0.2	93	0.2	75	0.1
60200.00 Television programming and broadcasting activities	56	0.1	69	0.1	115	0.2
60100.00 Radio broadcasting	271	0.6	281	0.5	274	0.5
59200.00 Sound recording and music publishing activities	716	1.5	1,230	2.1	423	0.8
59140.00 Motion picture projection activities	190	0.4	163	0.3	117	0.2
59130.00 Motion picture, video and television programme distribution activities	168	0.4	174	0.3	120	0.2
59120.00 Motion picture, video and television programme post- production activities	198	0.4	224	0.4	221	0.4
59110.00 Motion picture, video and television programme production activities	1,357	2.8	1,567	2.7	1,484	2.8
58210.00 Publishing of computer games	7	0.0	23	0.0	15	0.0
58100.00 Publishing of books, journals, newspapers and other periodicals	1,429	3.0	1,607	2.8	1,527	2.9
47630.00 Retail sale of music and video recordings in specialised stores	270	0.6	256	0.4	216	0.4
47620.00 Retail sale of newspapers and stationery in specialised stores	6,905	14.4	7,017	12.1	6,033	11.3
47610.00 Retail sale of books in specialised stores	694	1.4	686	1.2	578	1.1
TOTAL	47,964	100.0	58,145	100.0	53,262	100.0

Note: *These sub-sectors are included in a group of activities in the Portuguese accounts named R-Artistic, Sporting, Recreational Activities.

Figure no. 1 shows the distribution by size categories of firms in the CCS: micro (less than 10) and the total of firms belonging to the CCS. The micro firms dominate the structure

of the CCS during all period. In 2004, there were 47,278 micro firms corresponding to 98.6% of the total and in 2011 the number increased to 52,579, corresponding to 98.7% of the total in the sector. Noticeably, trends (in dotted lines) are clearly positive.



Figure no. 1 – Number of micro and all enterprises in the CCS (2004-2011)

Figure no. 2 compares trends of CC firms with the total of firms (even if the former represents only less than 5% of the total or all firms in the economy). The variation of the number of firms is different between CCS and Total, and CCS shows a slightly earlier recovery of (Figure no. 2). Overall, CC firms present a more positive behaviour in times of recovery.

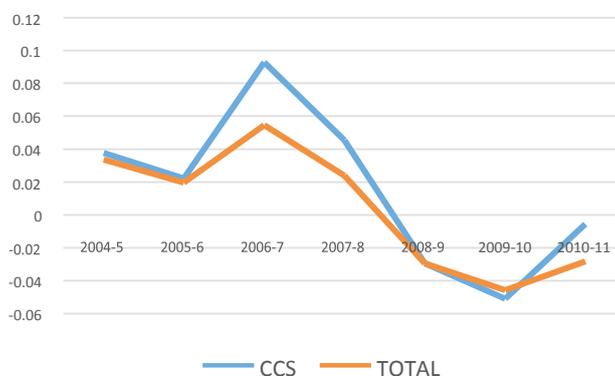


Figure no. 2 – Variation of the number of firms in the CCS and Total (2004-2011)

The micro size of most of the CC firms is also revealed when the average size per year is compared for three categories of firms: new firms (born), firms that end (death) and firms that remain (Figure no. 3).³ On average, the firms that continue to operate are larger than the others. They have about two individuals per firm vs. 1.1/1.2 in the other two groups.⁴ This average size of firms is also frequent in many other sectors in the economy in Portugal.

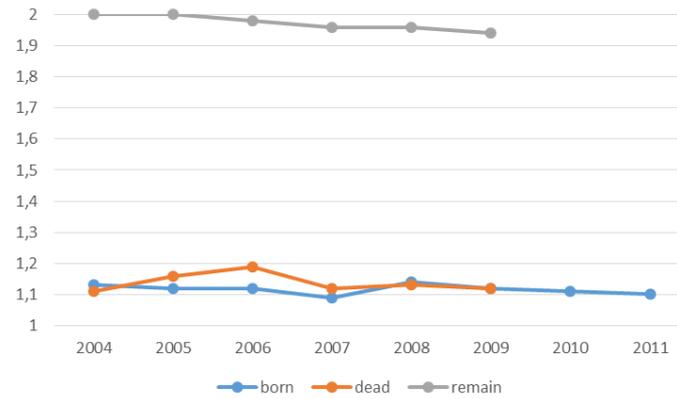


Figure no. 3 – Average size of born, dead and remained CC enterprises (2004-2011)

Figure no. 4 highlights how newborn enterprises in the sector were strongly affected by the recession. Their number fetched a peak in 2006-2007, collapsed afterwards and in 2011 recovered to a value higher than in 2004. Notice that, on the contrary, after a decrease in 2009 (-3%), the real Portuguese GDP continued to decrease also in 2011 (-1.7%), and the general unemployment rate increased during the whole period 2009-2011. This shows that despite the period of crisis there was an overall increasing trend of the number of CC firms.

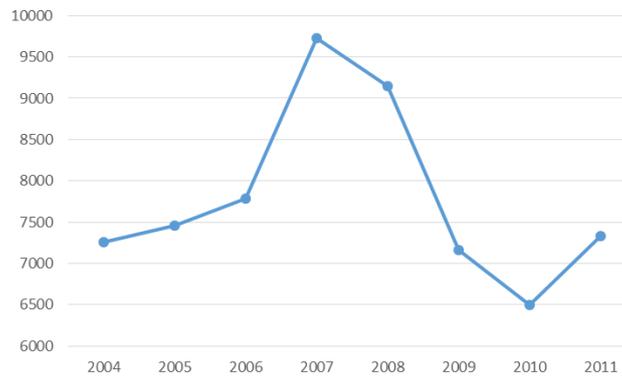


Figure no. 4 – Number of new (born) enterprises in the CCS (2004-2011)

Table no. 3 illustrates the dynamic demographics of CC firms. In the whole period the natality rate is higher in the CCS compared with the total. The mortality rate is lower in 2006, 2007 and 2008. Excluding year 2009, in the rest of the period the mortality rate is lower compared to the total.

Table no. 3 – Firm demographics - CCS and Total (2004-2011)

		2004	2005	2006	2007	2008	2009	2010	2011
No. of firms CCS		47,964	49,779	50,885	55,616	58,145	56,434	53,556	53,262
Born:	No. firms	7,254	7,456	7,785	9,726	9,151	7,164	6,498	7,326
	Ave. employees per firm	1.13	1.12	1.12	1.09	1.14	1.12	1.11	1.10
	SD	1.40	1.22	0.73	0.61	1.07	0.85	0.75	0.63
Dead:	No. firms	5,456	6,184	5,382	6,712	8,590	11,191		
	Ave. employees per firm	1.11	1.16	1.19	1.12	1.13	1.12		
	SD	1.49	1.10	4.26	1.05	1.61	1.83		
Continuing:	No. firms	36,676	37,675	39,052	41,089	42,458	40,316		
	Ave. employees per firm	2.00	2.00	1.98	1.96	1.96	1.94		
	SD	10.39	10.27	10.08	9.9	10.62	9.37		
Nativity Rate (%) CCS		15.12	14.98	15.30	17.49	15.74	12.69	12.13	13.75
Nativity Rate (%) TOTAL		13.00	13.36	14.05	15.19	14.35	12.27	11.84	12.33
Mortality Rate (%) CCS		11.38	12.42	10.58	12.07	14.77	19.83		
Mortality Rate (%) TOTAL		10.31	12.05	10.88	12.56	14.83	15.57	15.27	18.36
Nativity Rate (%) R Group*		18.52	19.51	18.91	20.27	17.39	14.25	13.27	14.71
Mortality Rate (%) R Group*		13.61	13.92	11.87	12.93	15.17	17.24	16.87	

Note: (*) See note in Table no. 1 for the definition of this R Group of sectors.

Source: Authors' calculation based on SCIE micro-data and Statistics Portugal, INE (2014).

Table no. 4 shows the distribution of the mean value of public subsidies per CC sub-sector. Notice that the available information about the received amount of subsidies is restricted to firms with 10 or more employers. There was a decrease in subsidies per firm from 2004 to 2011. Firms in Motion picture, video and television programme distribution activities and Cultural Education were those that received more subsidies on average. The total shows an overall decrease before 2008, and a slight increase after.

Table no. 4 – Mean of subsidies (in euros) by firm (2004, 2008 and 2011)

Sub sector	Mean	No. firms	Mean	No. firms	Mean	No. firms
	2004	2004	2008	2008	2011	2011
Activities of historic sites and monuments	9,326.0	17	45,900.7	24	15,978.8	34
Museum activities	34,520.8	24	63,070.6	26	6,630.8	28
Library and archives activities	7,383.6	5	5,222.2	5	0.0	7
Operation of arts facilities	95,281.2	29	986.6	35	1,249.5	42
Artistic and literary creation	1,486.1	119	1,009.6	149	2,465.5	176
Support activities to performing arts	4,905.5	121	6,107.8	181	8,557.5	249
Performing arts	12,176.2	529	12,047.4	604	22,200.1	685
Cultural Education	29,168.9	28	31,860.6	66	30,210.4	124
Rental of video tapes and disks	127.1	83	0.1	109	39.1	45
Translation and interpretation activities	616.4	89	24.2	147	588.5	189
Photographic activities	227.8	679	185.4	702	234.9	719
Specialised design activities	560.2	317	582.7	564	1,282.6	902
Advertising agencies	257.1	2,096	355.9	2,539	530.2	2,537
Architectural activities	981.9	2,607	437.4	3,009	655.0	2,998
News agency activities	3,600.5	44	3,844.3	44	2,616.8	38
Television programming and broadcasting activities	0.0	15	879.1	22	389.7	34
Radio broadcasting	4,103.5	271	1,197.1	281	1,480.3	274
Sound recording and music publishing	1,090.0	111	4,578.5	140	4,382.7	131

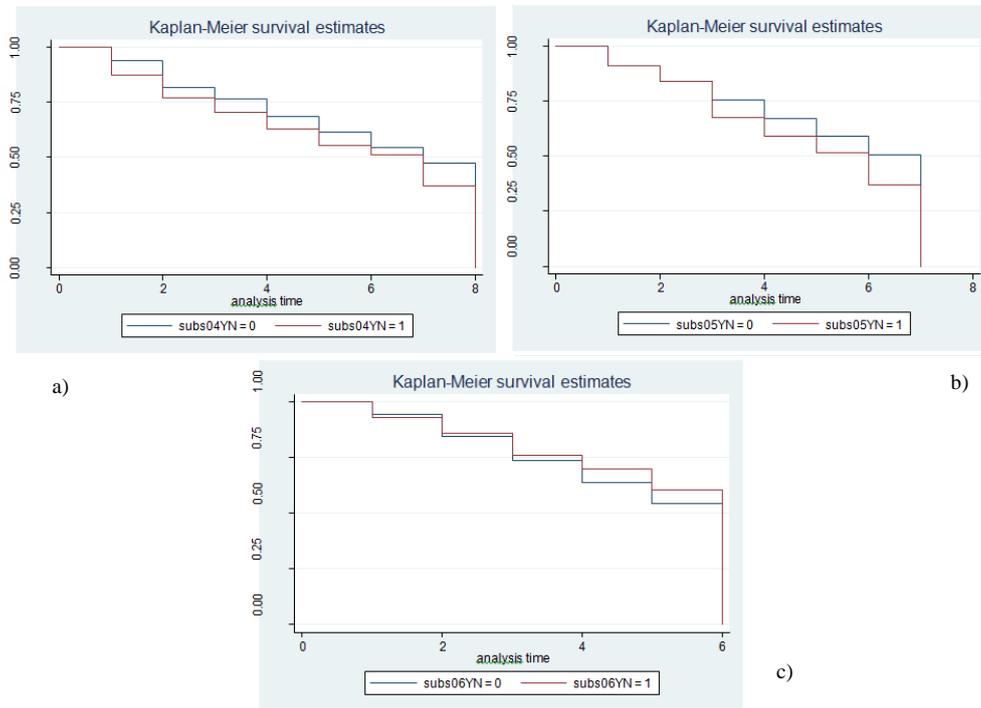
Sub sector	Mean 2004	No. firms 2004	Mean 2008	No. firms 2008	Mean 2011	No. firms 2011
activities						
Motion picture projection activities	16,598.6	96	9,522.1	81	15,202.8	58
Motion picture, video and television programme distribution activities	19,276.5	65	7,718.4	65	37,491.3	53
Motion picture, video and television programme post-production activities	3,643.2	47	4,359.0	49	2,308.9	58
Motion picture, video and television programme production activities	8,831.0	677	10,190.5	760	7,771.0	833
Publishing of computer games	0.0	1	0.0	9	2,382.9	11
Publishing of books, journals, newspapers and other periodicals	1,295.2	1,150	2,612.2	1,297	1,807.5	1,242
Retail sale of music and video recordings in specialised stores	9.4	111	21.7	92	8.1	76
Retail sale of newspapers and stationery in specialised stores	98.9	2,020	92.7	2,225	114.8	2,131
Retail sale of books in specialised stores	314.9	324	331.8	334	377.5	312

4. SURVIVAL ANALYSIS

Survival analysis here is used to analyse data where the outcome variable is the time (measured in years) until the occurrence of the death of the firm (the death is ‘the event of interest’ and the ‘survival time’ is the number of years until the firm ends). Because of data restrictions (only 8 years were available but no information about firm death for the last two years) the survival study is made only for the firms born in 2004, 2005 and 2006. The duration (survival) of the firms is analysed considering that the observations are right-censored. This censoring means that the information is incomplete. The firms that were born respectively in 2004, 2005 or 2006 are observed for a given period of time, and those that do not experience the ‘event of interest’ (death) during the observation period are right censored.

The Kaplan Meier method is a nonparametric estimator of the survival function, and estimates and graph the survival probabilities as a function of time. It can be used to compare the survival experience for two or more groups of subjects. In this research the two groups are defined based on binary variable ‘receiving or not subsidies’. Figures no. 5 (a, b, c) show the results of Kaplan Meier curves estimated for subsidised (red line) and non-subsidised (blue line) firms for, respectively, each year of birth (2004, 2005 and 2006).

For the firms born in 2004, receiving subsidies did not affect survival positively. On the contrary, those that received subsidies survived less years. For the firms born in 2005 there was no difference between the subsidised and non-subsidised firms during the first three years of firm life (2005-2007); after that the pattern is similar to those born in 2004. Finally, among the firms born in 2006, the subsidised firms showed a slightly higher, although increasing, survival rate than non-subsidised firms. It is likely that this qualitative change (since 2009 the subsidised firms born in 2006 had a higher survival rate) results from the crisis situation. Furthermore, it can be assumed that the improvement of the firms’ survival is related to the subsidies only in periods of downturn.



Figures no. 5 – Kaplan Meier nonparametric estimation of survival probability over time

In brief, among firms born in 2004 the non-subsidised ones had a higher survival expectation than the subsidised ones. Among firms born in 2005, non-subsidised ones had a higher survival expectation those subsidised after two years. Among firms born in 2006, subsidised ones had an increasingly higher survival expectation than non-subsidised ones.

Additionally to the impact of the subsidies on the firms’ survival, the evolution of the transfers from the state to CC firms and the taxes paid by the CC firms to the state (i.e. the transfer from/to State) are shown in Figure 6 (the mean per year of subsidies and taxes).⁵

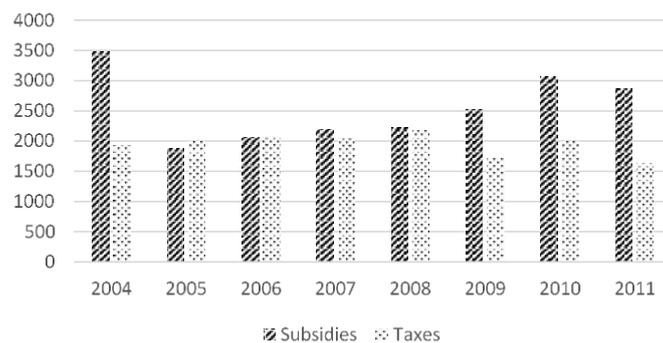


Figure no. 6 – Subsidies received and Taxes paid 2004-2011 Mean per firm (in Euros)

There was a dramatic decrease of subsidies from 2004 to 2005, and from 2005 on the mean of subsidies tended to increase. The taxes paid had a different evolution with a tendency to decrease after 2008, probably explained by a worse financial situation of CC firms.

5. CONCLUSIONS

In this paper we have focused on a number of idiosyncrasies of cultural and creative entrepreneurs (CCEs) to study CCEs' capacity of resilience under times of downturn (economic, financial and debt crisis). In order to address this issue, we have analysed the CCS firms demography (born and dead), dynamics and performance and the association between subsidies received and firm survival. We have looked at mostly micro firms in the cultural and creative sector in a country where CCEs are particularly challenged from the financial perspective, namely Portugal. The unique availability at private firm level of accounting micro data in a time span of 8 years (2004-2011) – therefore including the latest financial crisis –, has allowed us to better understand the evolution of the economic success criterion.

Main results have shown that financial crisis affected CCEs temporarily. They have also shown that CC firms are more dynamic than other firms in other sectors. In particular, CCEs seemed to recover quickly and general positive trends persisted over the observed period. The trend observed among new-born CC firms was higher than in the whole private sector. Furthermore, CCEs showed to resist to crisis by slightly downsizing already “nano” enterprises. Growth periods were characterised by higher rates of natality compared to mortality – hence presenting a more positive behaviour in times of recovery –, while the opposite held in periods of downturn.

We have contributed to the call for a systematic approach to studying CCEs by showing that the evolution of the economic success criterion, also in relation to interventions like subsidies and taxes, is not as linear and predictable as it might be expected by looking at general entrepreneurship theory. Overall, CCEs tend to show a higher volatility in terms of survival and extinction rates: positive in times of recovery, negative in times of economic downturn.

We have further studied the effects of subsidies received and taxes paid on CCEs. We have shown that public subsidies increased CCEs' expected survival only in periods of downturn, while the opposite held in periods of growth. This suggests a more detailed and ad-hoc approach to consider the effectiveness of policy interventions as CCEs present a peculiar response to such interventions when compared to more general enterprises.

Overall, the accounting micro data proved to be very useful for evidence-based studies of the CCS firms and their trends in times of recession.

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Notes

¹ “The solvency ratio assesses a company’s ability to meet its long-term obligations and thereby remain solvent and avoid bankruptcy.” It is computed by the ratio between shareholder funds and total assets (European Commission, 2013, p. 69).

² Note that the number of firms included in the sample is smaller because each firm can be observed during several years.

³ There is no information in the original data about the death of the firms because there is a window of time of several years to verify whether it is a real death or missing data.

⁴ The European average is about 3 employees (Eurostat, 2016).

⁵ Unfortunately we do not know if these taxes, as well as subsidies, were ad-hoc for this sector, or general. More detailed analysis could give further insight into the effectiveness of specific policy measures.

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