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PUBLIC POLICIES FOR CINEMA IN PORTUGAL: THE NON-COMMERCIAL FILM EXHIBITION SECTOR

Marta Maria Araújo Miranda

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Supervised by
Helena Maria de Azevedo Coelho dos Santos
Luís Delfim Pereira Moreira dos Santos

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Biographic note

Marta Miranda was born in May 1994, in Esposende.

After attending the bachelor's in economics at the Faculty of Economics of the University of Porto, she enrolled in the master's in economics at the same University. Due to a strong interest in culture and cinema, it was with great appreciation that this dissertation started being developed in the scope of the master's degree.

She is currently working as an intern at Pordata – Fundação Francisco Manuel dos Santos.

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Abstract: The need for state aid in the cultural sector has been acknowledge by several authors over time, with cinema and audiovisual policies representing one of the main focus of European cultural policies. This sector still lacks investigation, both in our country and in the European Union. Film production incentives remain the main target of public policies and they must be articulated with distribution and exhibition. Our research focuses on non-commercial film exhibition in Portugal, as part of a research project on the topic (A exibição não comercial de cinema em Portugal, 2020). The main objective of this dissertation is to contribute to the knowledge regarding non-commercial film exhibition through the analysis of official data from the Portuguese Institute of Cinema and Audiovisual (ICA) between 2007 and 2017. The statistical analysis will present the main characteristics of non-commercial exhibition, as well as some determinants of demand (through an econometric model). Statistical data is contextualized by a general picture of ICA support programmes for non-commercial film exhibition and some major European national models of public policies for cinema. This research aims at contributing to the knowledge on cultural economics of cinema and especially regarding Portuguese cultural policies.

JEL codes: Z10, Z18, L82

Keywords: cultural economics; economics of cinema; non-commercial film exhibition networks; film distribution and exhibition; cultural audiences (film demand); cultural policies (film and audiovisual)

Resumo: Ao longo do tempo, vários autores reconheceram a necessidade de aplicação de políticas públicas no setor cultural, sendo que as políticas para o cinema e audiovisual representam um dos principais focos das políticas culturais Europeias. O sector ainda carece de investigação, tanto no nosso país como na União Europeia. Os incentivos à produção cinematográfica continuam a ser o principal alvo das políticas públicas, devendo ser articulados com a distribuição e exibição. A nossa pesquisa concentra-se na exibição não comercial de cinema em Portugal, estando integrada num projeto de investigação sobre este mesmo tópico (A exibição não comercial de cinema em Portugal, 2020). O principal objetivo desta dissertação, será contribuir para o conhecimento sobre a exibição não comercial de cinema através da análise de dados oficiais facultados pelo Instituto do Cinema e do Audiovisual (ICA) entre 2007 e 2017. A análise estatística irá apresentar as principais características da exibição não comercial, bem como alguns determinantes da procura (através de um modelo econométrico). Os dados estatísticos serão contextualizados através de um quadro geral de programas de apoio do ICA para o sector não comercial de cinema e alguns modelos Europeus de políticas públicas para o cinema. Esta pesquisa irá contribuir para o conhecimento sobre economia da cultura e do cinema, e especialmente sobre políticas públicas culturais portuguesas.

Classificação JEL: Z10, Z18, L82

Palavras-chave: economia da cultura; economia do cinema; redes alternativas de exibição cinematográfica; exibição e distribuição de cinema; públicos culturais (procura de cinema); políticas culturais (cinema e audiovisual)

Table of contents

Biographic note ii

Acknowledgments iii

Abstract iv

Resumo v

Table of contents vi

List of figures vii

1. Introduction 1

2. Literature review: from Cultural Economics to cinema studies 4

2.1. Disciplinary affiliation: brief considerations on Cultural Economics 4

2.2. Economics of Cinema 6

2.3. The exhibition dilemmas and the need for public policies 11

3. Methodology 18

4. Public policies for cinema: European framework and the Portuguese case 21

4.1. Public policies for cinema – a broad European framework 21

4.2. Public Policies for cinema in Portugal 28

4.2.1. Before Democracy 30

4.2.2. After 1974 33

4.2.3. Support to exhibition in alternative circuits 39

5. Non-commercial film exhibition sector in Portugal from 2007 to 2017 43

5.1. Financial aid to non-commercial exhibition, 2007-2017 43

5.2. General description of the non-commercial exhibitors, 2007-2017 (ICA database, entities with digital ticket system) 45

5.3. Econometric analysis about the demand determinants in non-commercial exhibition 49

5.3.1. Development of the model 49

5.3.2. Regression Results 51

6. Final remarks and further developments 57

Bibliographic References 60

Webgraphy 67

Legislation 68

Annexes 70

Annex 1 – Selected studies with insights regarding measures of cinema attendance 70

Annex 2 – Evolution of funding criteria from 2007 to 2017 77

Annex 3 – Main characteristics of the non-commercial film exhibition sector 79

Annex 4 – Eviews outputs 87

List of figures

Table 1 - Top 10 markets worldwide by number of feature films produced 2014-2018......28

Table 2 - Films released and admissions by origin, 2015-2018 (%) 29

Graph 1 - Amount of public support to the cinema and audiovisual sector between 2007 and 2020 37

Figure 1 - Support programmes included in decree-law n. 25/2018 38

Table 3 - ICA sub-programmes over the years (2001-2017) 40

Table 4 - Descriptive statistics of the variables, 2007-2017 (mean) 51

Table 5 - Regression results 52

Table 6 - Regression results, considering location 54

1. Introduction

The film industry is acknowledged for its strong impact and economic reach. Even though it is often seen as an unstable sector, it comprises large investments and generates substantial revenues, especially in Hollywood and due to the globalized distribution and exhibition of more entertainment films ("mainstream") at multiplexes (Chisholm et al., 2015).

Film exhibition is fairly essential when it comes to culture. However, the available information about it is still scarce, especially concerning the non and semi-commercial circuits, or "alternative" exhibition[1], i.e. a subsector which tends to be publicly supported in European countries, as a mean of promoting cultural diversity (world minority and national filmographies, film heritage, etc., and thus counteract market forces that make American films hegemonic (Crane, 2014; Newman-Baudais, 2011). In the last decades, alternative exhibition (re)gained importance, regarding not only European cultural policies but also national policies all over the world, the main reason being the way technological changes are affecting film exhibition, as digital is permitting to reconsider traditional theatrical film exhibition and the conditions for cultural access through cinema (Aveyard, 2016; Barratt & Jones, 2014).

In some countries, alternative exhibition represents a quite solid subsector (the French art house network is probably the most well-known case) (Arnal & Salson, 2016; Olsberg SPI & Kern European Affairs, 2001). In Portugal, film exhibition is territorially asymmetric and concentrated (1/3 of the population without regular exhibition) (Barbosa et al., 2016). The alternative circuit is still a minority sector with insufficient support for programming, exhibition and attracting audiences, despite the efforts of public institutions like Instituto de Cinema e Audiovisual (ICA) and Cinemateca Portuguesa (Barbosa, 2020; Barbosa & Santos, 2018a).

[1] We will refer to alternative exhibition as non-commercial exhibition, using ICA technical definition for "support programmes", which proposes: "alternative exhibition circuits" cover film festivals and the "alternative exhibition network", the latter being our strict object. It must also be referred the notion of "semi-commercial exhibition", which concerns regular theatrical exhibition programming minority filmographies (according to ICA supporting program for exhibition: "national, European, or other countries filmographies whose distribution in Portugal is less than 5% of the market share, in relation to the number of spectators"). For further details, consult: https://www.ica-ip.pt/en/contests/. All three segments would compose the common concept of alternative exhibition, mostly referred to as independent, i.e. exhibition outside the major distribution circuits, mostly of films produced outside the major production system (in which Hollywood is hegemonic).

Considering what was mentioned above, the main goal of this dissertation and focus of research is to add knowledge to the non-commercial film exhibition sector in Portugal, by providing its main characteristics and contextualization under European cultural policies.

Our motivation comes from the lack of information and data about alternative film exhibition circuits (Barbosa & Santos, 2018a), and the fact that this research is part of a larger project about non-commercial film exhibition in Portugal (A exibição não commercial de cinema em Portugal, 2020). Besides, as mentioned above, there have been changes in cinema and audiovisual policies (especially concerning digitization), which are central when it comes to European cultural policies (European Audiovisual Observatory, 2019). In sum, the main objective of this dissertation is to contribute with some insights about this domain, while comparing different European models and the effects public policies have on cinema, especially in the European Union.

The major empirical source of our research is the database of the Portuguese "alternative exhibition network" made available by the Portuguese Institute of Cinema and Audiovisual (ICA)[2], which contains extensive information about the circuit since 2004, and is regularly updated. Our analysis is limited to the period 2007-2017, for reasons of consistency, and, of course, adequacy to the time of our research (section 5).

ICAs database registers every single exhibition feature. As so, it consists of a large and diversified set of variables, going from general characteristics (e.g. exhibitors, date and location of sessions, facilities, screens technical details, box-office, spectators) to details about the films (e.g. name, nationality, producers, distributors, commercial release in Portugal). This is the first time that a database from ICA is subject to treatment and analysis, so one major part of our work consisted in making the original document ready for statistical analysis, as the exploration of statistical data and interpretation of results do not come per se (section 3). In order to better comprehend data concerning the Portuguese non-commercial film exhibition sector, a synthesis of the Portuguese supporting schemes and their evolution has been made, via the main legal documents[3] (section 4). Additionally, we provide an insight of the European framework regarding public policies and the

[2] As ICA calls it, since 2001, which denotes the policy goal of granting support to non-commercial exhibition.
[3] The main support for cinema comes from the central state, so ICA is the major institution regarding policies for cinema. It is worth noting that exhibition is a complex segment, especially when it comes to the circuits outside commercial exhibition, where municipalities (might) play different roles. Their main municipal support in Portugal comes from facilities' arrangements (municipal venues) and eventually from the support for cultural associations' activities in general (meaning that cinema is eventually part of them), but there are not municipal policies for film exhibition.

dimensions different countries encompass. It is important to remark that changes in state aid and policies regarding art, cinema and digitization are quite frequent, hence it is of interest to explore and compare, how public funding evolved over the years (section 4).

This dissertation will grant a deeper knowledge about cultural economics plus an outlook on non-commercial film exhibition and its importance to the society, culture and economy in general.

This report is structured as follows. First, a contextualization of the theme is developed through an initial literature review (section 2). Section 3 presents the methodology, followed by the empirical analysis in section 4 which provides a broad picture of current European public policies for cinema, through selected countries while also revising the Portuguese framework for public support for cinema and non-commercial film exhibition in particular. Section 5 provides an outline of the non-commercial film exhibition sector between 2007 and 2017, through ICA's database, and in section 6 an econometric model is proposed, essaying to test some main factors for film attendance in the Portuguese non-commercial film exhibition sector. Final Remarks will be made, in order to briefly synthetize our main achievements, limitations and further potentialities of this research.

2. Literature review: from Cultural Economics to cinema studies

2.1. Disciplinary affiliation: brief considerations on Cultural Economics

The disciplinary affiliation of this research is Cultural Economics, one of the economic science domains where interdisciplinary dialogues are commonly argued for, due to the plasticity of the concept of culture and its traditional conflict with mainstream Economics (Towse, 2010). Throsby (2001) described Culture and Economics as two areas that were unlikely to walk hand in hand. The dominant economic perspective (neoclassic paradigm) reflects individualistic intents, such as utility maximization by consumers and profit maximization by producers, unlike the cultural perspective, which reflects collective goals and thus, the consideration of symbolic representations, attitudes and practices. When joining the two fields together, as value is an expression of worth, it can work as the connection between Culture and Economics (Throsby, 2001b).

It is assumed that the domain of Cultural Economics, that was previously known as Economics of the Arts, surfaced with the publication of "Performing Arts: The Economic Dilemma" by Baumol & Bowen (1966), where Baumol's cost disease (also known as Baumol Law) was introduced, acknowledging the need for support in the cultural sector (Baumol & Bowen, 1966). According to this concept, the productivity of an artist is unlikely to increase (e.g. musicians cannot play a piece faster and a dancer cannot dance faster), but ticket prices and wages will increase to keep up with the rest of the economy[4]. This work is commonly recalled as the foundation of the discipline, as well as one of the most discussed, but over the years renowned economists have reflected not only upon the economic aspects of art, but also about the wider subject of culture and more attention started being paid to the history of economic thought regarding the arts and culture (Frey, 2000; Ginsburg & Throsby, 2006; Goodwin, 2006).

Cultural Economics has been establishing itself as an autonomous subject and area of specialization within Economics. It has its own conferences, concepts, JEL codes and an international organization, the Association of Cultural Economics International, responsible for the publication of the Journal of Cultural Economics since 1977 (Throsby, 2001b).

[4] With their seminal study, Baumol & Bowen (1966) sought to identify the central economic challenge of the performing arts, its financial problems, what characterized the audience (in terms of education and geographic distribution, for example) and the impact of technological innovations. The final part of their study covers fund sources and how they are used to diminish existing deficits in this sector.

Among the specific theoretical discussions, Cultural Economics has been developing a specific concept which is of particular interest for our research regarding cinema and non-commercial exhibition, as it was proposed to respond to the difficulties of interrelating culture and economics (see above), thus helping to clarify and operationalize the economic approach to culture: the concept of cultural capital. It was defined by Throsby (2001) as "an asset which embodies, stores or provides cultural value in addition to whatever economic value it may possess" (Throsby, 2001a, p. 46). It is distinct from the said "ordinary capital", as it encompasses both economic and cultural value, representing tangible and intangible demonstrations of culture (as artworks or music). It has significative importance while studying and characterizing cultural activities or goods, as every cultural demonstration accumulates value, from which members of society can benefit from (Throsby, 2011).

Considering Throsby's proposal, each country and region may be distinguished by its own cultural capital, and it may be seen as a driver o competitive advantage. If there is a constant exchange of culture flowing across different territories, this will encourage the accumulation of cultural capital, so global relations must be fostered. Additionally, it is possible to observe that developed economies have a predisposition to accumulate cultural capital and to contribute to its dissemination, which is not the case for developing economies (Bellandi et al., 2020; Throsby, 2001a).

On account of what was mentioned above, and due to its interdisciplinary character, the field of Cultural Economics has attracted researchers from several areas, such as Sociology, Anthropology and Psychology. By approaching the cultural and artistic sector using economic theory, as well as empirical evidence, new and innovative ideas are introduced which contribute to the development of new activities and the expansion of existing ones, as culture leads to the widening of the economy as a whole (Greffe, 2016; Towse, 2010).

Besides, the concept of cultural capital helps to consider that culture must be taken into consideration when analysing economic decisions and practices, since it plays a significant role in urban development by attracting tourism and as a source of economic growth, even though there are some concerns that this increase in economic value might lead to the loss of cultural value (Throsby, 2011). Given this, culture is considered as a driver of economic growth and expansion, and it is being more and more argued that cultural policies must assume the goal of encouraging regional development, as the characteristics of each region must be taken into consideration, in order to avoid an unbalanced development between regions, in terms of capital accumulation and cultural flows (Bellandi et al., 2020).

In line with European policies, in Portugal it is assumed that culture has significant importance in terms of growth – despite the vulnerability of Portuguese cultural policies (Garcia et al., 2018; Menger, 2010). Cultural activities contribute to urban and economic development, and the cultural sector is deeply intertwined with economics, for instance, when it comes to production and distribution activities, as they generate cumulative synergies that lead to more investment and employment opportunities. Furthermore, with this interconnection between the two fields, cultural content tends to shape the production, distribution and consumption of economic goods and services (Mateus & Associados, 2010).

Despite the significance of the discipline, Cultural Economics is still an emergent sub-discipline of Economic Science, and several fields require attention as they are often disregarded. That is the case for the cinema sector (Blaug, 2001), despite its clear interconnection with economics, as it is a quite successful industry all over the world, considering its market dimension which is dominated by the globalized American and Hollywood Industry (Chisholm et al., 2015).

2.2. Economics of Cinema

The concept of cultural capital presented above permits to address cultural goods, which are described as experience goods, depending on taste, that is socially constructed: it evolves and changes over time, and is influenced by consumers' sociocultural backgrounds and social interactions, current environment, educational levels and income. Movies are also considered as experience goods, but if a movie has a large opening in several theatres, that represents an increase in terms of supply, not necessarily demand. If the outcome of a certain movie is not the one that was expected, the movie will quickly be dropped, what might eventually lead certain theatres to substitute movie-exhibition with some other activity. This is not an unusual scenario, since many theatres, mostly the ones that were once included in the non-commercial network, are now used for other purposes, despite being equipped and having full capacity to exhibit motion pictures (Blaug, 2001; Ginsburg & Throsby, 2006; Ginsburgh & Throsby, 2006). Moreover, cultural policies for cinema, particularly in Europe, are clearly directed towards cultural capital, as they assume cinema as cultural heritage and an identity generator (the main reason for protecting it against American hegemony and, at the same time, promoting intra-European circulation of domestic European film productions) (European Audiovisual Observatory, 2019).

Indeed, the history of cinema industry is a mesh of culture and economy. The first activities revolving around cinema surfaced in 1895 in Paris, when the Lumìere brothers presented their *cinématographe* in one of the first cinema sessions, where the payment of a ticket fee was required. The contribution of Thomas Edison, in the United States, must also be noted as one of the preliminary technical developments that originated the emergence of the 7th art, as he was responsible for the introduction of the *kinetograph* or motion picture camera (Musser, 2018). In Portugal, the first steps regarding cinema exhibition took place almost immediately, in 1896, when the first films were exhibited in the country (Costa, 1978).

The first decades of the 20th century, were marked by a fast-paced development of the movie industry, as it is depicted as a period of deep experimentation that consequently led to the Golden Age of Hollywood (which is presumed to have commenced by the end of the first decade of the century) and characterized by the vertical integration of studio systems until the early sixties (Musser, 2018). This period of experimentation included some major transformations, such as the introduction of sound and colour, and the movie industry never ceased to introduce technological developments, as shown in contemporary cinema (Benghozi et al., 2015).

The USA soon became the dominant player in the film market, due to the organization of the studio systems (with a strong control over distribution) and the way public policies were applied, as since the last decade, movie exports started being encouraged through the elimination of film quotas. According to Crane (2014), this strongly contributed to globalization, as films circulated more freely (Crane, 2014). In parallel, European countries' industry configuration was characterized by a "fragmentation of production and financing", made up by small and nationally based studios, which, combined with the impacts of two World Wars in the 20th century, did not allow the film industry (as happened with other cultural industries) to become competitive in terms of international, and then global, market forces: "the core of the EU film industry consists of nationally based companies, many of which are relatively small and focused on one segment of the value network" (Alaveras et al., 2018; Katsarova, 2014, p. 3). North American culture was penetrating foreign markets all over the word through films from the very beginning of the industry.

Eventually, during the 1950's American Studios started collapsing and this contributed to the end of the Golden Age of Hollywood. This mostly occurred due to the antitrust laws which regulated theatrical exhibition, as it was common for major Hollywood studios to buy movie theatres and control the films that were to be exhibited, favouring their own productions (Storper & Christopherson, 1987). Another motif was the proliferation of TV, which strongly contributed to the decline of cinema attendance after the II World War (Belson, 1958). It is a fact that theatrical cinema demand has been exposed to direct substitutes since then (watching films on TV and DVD, and more recently streaming), as well as to reconfigurations on the supply side (concentration of venues in dense urban territories, integration of multiplexes on shopping malls and dominance of blockbusters and entertainment films). General trends in European and USA film theatrical attendance show that cinema-going remains a relatively frequent activity amongst young people (Eurostat, 2019; National Endowment for the Arts, 2018). Consequently, these trends denote that mainstream cinema remains a popular, prosperous industry, from the commercial side. From the cultural side, cinema faces some difficulties, when it comes to combining powerful market forces (global competition, industrial concentration, American hegemony…) with specific cultural goals (heritage, identities, diversity) – we will get to this topic in section 2.3.

From the above considerations, it results that the "Economics of Movies" (Chisholm et al., 2015; McKenzie, 2012) should attract Economic Science. Nevertheless, it has been casuistically studied, more due to its "financial" dimension, and, recently, due to the technological and innovative business processes (digital in particular), than to its cultural importance (Benghozi et al., 2015).

The film industry circuit – production, distribution and exhibition – has its own particularities, and it has anticipated some major industrial changes, such as the post-Fordist system (the Hollywood transformation from the studio system to a high flexible industrial profile). Film production alone usually includes several phases. We can quickly pin it down to pre-production, production and postproduction, but just the first phase that was mentioned includes the acquisition of rights (to the idea or story), collecting funds to cover the costs and contracting and putting together the team that will be involved in the project (Gil, 2008). After production activities are concluded, distributors are used by producers to supply their movies. Distribution, the intermediary phase, makes the movies available to consumers, but distribution deals are also crucial to finance the entire filmmaking process, often involving oligopolies. With high production costs and low distribution costs, the mean cost will decrease, promoting economies of scale. With economies of scale, barriers to the entry of new competitors are created which leads to oligopolies (Muñoz & Ferrer-Roca, 2017). This means that the firms involved in the process, control and fix production costs in order to obtain higher returns. Additionally, distributors are also responsible for marketing campaigns and all the promotion efforts around the films. After these processes, movies are exhibited, and the exhibitors may decide for how long the films are available, if they are not vertically integrated with distribution companies (Coe & Johns, 2004; Gil, 2008; Gil & Lafontaine, 2012).

Production and distribution are the usual steps a movie has to go through and before exhibition ,most often, all the costs involved are sunken: the movie industry is a prototype industry, involved in complex "quality races" that make production costs escalate, and consequently, distribution costs increase too, in order to achieve scale economies (Bakker, 2012). These processes tend to be quite complex, often arising economic problems due to contractual and financing deals on the production side or due to problems relating to release dates and marketing campaigns on the distribution side (Chisholm, 2011; McKenzie, 2012). Demand patterns are very unpredictable, as the elements that influence consumers' preferences towards a certain movie tend to vary with time. Delivery format as well as international trade flows also tend to influence demand patterns, and, as previously mentioned, since the end of the First World War film trade has clearly been dominated by Hollywood films (Chisholm et al., 2015; Dastidar & Elliott, 2020; Scott, 2004).

As stated in the beginning of the present section, during the Golden Age of Hollywood, there was full vertical integration regarding the production process, while distribution and exhibition were fully controlled by five major studios (i.e. Paramount Pictures, MGM, Twentieth Century Fox, RKO and Warner Brothers). Until the late 1940's, these major companies focused on production and distribution, but they also owned extensive theatre chains. This often led to conflicts and monopolistic practices, that mostly damaged the alternative exhibitors. Vertical integration of distribution and exhibition allows the distributors to secure contracts that are established with producers. Consequently, producers will be able to finance their films more easily. Distribution contracts mostly concern how box-office revenues will be split between distributors and exhibitors. The way the contract is drawn depends on numerous aspects, for instance the genre of the film and other characteristics that might influence its popularity and for how long it will be available at the theatres (Cameron, 2011; De Vany, 2006; Scott, 2004).

Today, the film industry is still controlled by major Hollywood studios, but they no longer fully control production and distribution, as independent studios also tend to specialize in those segments (Scott, 2004). Over time, these activities stopped being vertically integrated as many tasks related to filmmaking were externalized, especially after anti-trust laws in the USA put an end to the Hollywood studio system (full vertical integration). Production is now much more diffused, with a variety of independent firms working together and formulating arrangements that permit to coordinate the process. This generates both economies of scale and scope, which end-up resulting on competitive advantages for the firms involved, as they mobilize resources which might lead to the creation of barriers to the entry of new competitors. Nevertheless, according to Scott (2004), these changes did not represent a threat to the Hollywood market. It continues to dominate the sector due to its attractiveness and organization, even though the outflow of capital and work seems to stimulate the emergence of new competitors, trying to face Hollywood hegemony through the establishment of new multinational media companies, in particular in Europe and Asia (Arnal & Salson, 2016; Scott, 2004).

Distribution is also conducted independently. Transaction costs may be high but independent distributors take positions in the films they handle. Competition among distributors is fierce, as exhibitors can choose to stop exhibiting a film in order to start exhibiting a new one distributed by a different distribution company, when they keep the totality of the revenue obtained from concession sales. This is why distributors prefer vertical integration regarding exhibition, as besides receiving the totality of box- office and concession sales revenues, they also control the movies that are to be exhibited and for how long they will be available (Gil, 2008; Gil & Lafontaine, 2012; Scott, 2004), i.e. they manage to better control the risks associated to exhibition: in general, they will prefer films that are less risky and with higher expected revenues, such as blockbusters/entertainment films (Chisholm, 2011).

Nowadays, distributors establish revenue sharing contracts with exhibitors, and said contracts specify how revenue is shared between the counterparts, without determining a minimum period of exhibition for each film. Following this scenario, exhibitors chose the minimum time the movie will be available for, as usually demand starts falling after the first week, and the number of cinemas where the movie will be available is gradually reduced after the first month of exhibition. The number of theatres where the movie is available is chosen both by exhibitors and distributors, even though distributors could persuade exhibitors to show their films in a considerable number of theatres, what would lead to smaller theatre elasticity (Gil, 2008; Prieto-Rodriguez et al., 2015), distributors tend to acquire movie theatres, and with the vertical integration of exhibitors by distributors, the latter will retrieve the full box-office and concession sales recipients. With vertical integration, the uncertainty around movie-run length created by revenue sharing contracts is resolved, as in this case, the distributors who own the theatre tend to maintain the movies they distribute available for a longer period (Gil, 2008).

2.3. The exhibition dilemmas and the need for public policies

The broad picture presented above, supports the important role of the conditions for exhibition, as it impacts the possibilities of consumers' choices. Besides which films are made available by distributors, it is crucial to consider where they are exhibited, as movie theatres can be distinguished by their characteristics, from size, to location, programmes, ownership or funding. Here we highlight three different types of exhibition circuits: commercial exhibition, non-commercial exhibition and semi-commercial exhibition.

Multiplexes have dominated the market since the 1970s, with a wider and supposedly more diverse offer, even though consumption is not so varied, since diversity occurs, in general, inside the major category of entertainment films, i.e. mainstream films, mainly targeted to younger and more popular audiences. Several authors signal the effects of multiplexes in narrowing the characteristics of the demand (Chisholm, 2011; Park, 2015). Besides, the fact that multiplexes are mostly located in shopping malls, contributes to make cinema an element of a larger consumer and entertainment culture. Consequently, it is consensual that multiplex theatres have contributed to the disappearance and decrease in the number of alternative exhibitors, as they struggle to imitate their strategy and compete with powerful exhibitors, which, in turn, establish complex contracts with distributors (Barnett, 2015; Gil & Lafontaine, 2012).

Considering the films that are usually exhibited in the non-commercial networks, it is often cogitated as only being suitable for certain tastes or audiences, while on the other hand multiplexes are seen as "mainstream". This is also associated with the characteristics of the audiences, mainly age and level of education, as younger spectators are particularly attracted by these contents, as referred in the previous section.

For the case of non-commercial film exhibitors, it is still difficult to define the segment and to identify the exhibitors, as it covers an ambiguous domain, from not legal local screenings to publicly funded exhibitors, thus information about it is scarce (Barbosa et al., 2016).

Digitization of screens is making alternative exhibition a target of public policies, especially in the EU, as it draws attention to new potentialities for cultural accessibility through cinema. By providing screenings in peripheral territories, it permits, not only the enlargement of film supply, but also the availability of other arts, as long as they have been filmed (performative arts events such as theatre, dance, opera, etc, and visual arts, such as museums' exhibition), which is now increasing in commercial theatrical venues (Santos, 2020).

Barratt & Jones (2014), described the non-commercial sector as "traditional film societies screening films to members with a common interest in film appreciation, to pop-up screening events in non-traditional venues and village hall screening programmes offered by local groups for social and recreational purposes" (Barratt & Jones, 2014, p. 3). Though this definition is presented in the framework of British Rural Community Film Exhibition, it is generally applicable to the remainder of the sector and to other contexts. Non-commercial exhibitors plan to easily provide cultural content to isolated areas, as well as more diverse programmes, offering a form of public service and filling lacunas the commercial sector is unable to. Non-commercial exhibitors are characterized by their predominant informal organization, being mainly film-societies and cultural associations using cinema for educational and social purposes. Despite their reduced number within the exhibition circuits, they perform an important role in cultural accessibility, and they are being progressively recognized by cultural institutions and policies, as the British Community Film program signals. In Portugal, it is starting to be identified as a main actor for getting cinema to territories where there is no regular film exhibition (Barbosa & Santos, 2018b).

Semi-commercial exhibition is, as the name suggests, an in-between circuit, proposing alternative filmographies in a commercial basis, although mostly publicly funded. One of the main semi-commercial networks is Europa Cinemas network, an initiative supported by the European Commission and the Centre National du Cinéma et de l'image animée (CNC), since 1992. The aim of this programme is mostly to provide funding to these exhibitors, in order to encourage the exhibition of European films, and consequently disseminating European culture, as through additional programmes this network has expanded to other continents, as a way to consolidate the European film industry globally (Europa Cinemas, 2020).

It has been widely argued that commercialization of culture through international trade might lead to homogeneity (Schulze, 2011; Throsby, 2010). As referred in section 2.1., that is a concern regarding the film industry and the US global dominance, and the above-mentioned Europa Cinemas network initiative illustrates the addressing of European cultural policies towards the film industry's cultural capital. Nevertheless, it is not just a non-American concern, as most countries maintain the conception that tariffs might be applied over foreign (imported) cultural products, in order to protect their own. The USA pressures for free cultural trade, as a means to maintain or reinforce its privileged position (Crane, 2014). Local strategies to adapt foreign contents (from TV popular contests to McDonald's ingredients), along with the increase of global multimedia conglomerates (such as Facebook), and the fact that American film industry internationalized since its very beginning, evidences how the US movie industry leads consumers' preferences all over the world (Newman-Baudais, 2011).

Cultural trade is strongly influenced by market size and cultural discount, as consumers show a clear preference for national goods, and as explained by Park (2015) "Cultural discount occurs when cultural goods cross cultural borders and their value diminishes because of the preference for familiarity" (Park, 2015, p. 86). A good example of the effects of cultural discount, is that of the Indian film industry. With its immense dimension and elaborate productions, Indian films still struggle to compete in the foreign market especially due to matters of familiarity, and the culture shock.

Technological changes and innovations also affect how cultural goods are consumed and distributed, with the format of the movie being one of the factors that strongly influences the habits and practices of film audiences. We have already mentioned some large transformation regarding traditional theatrical attendance (section 2.2.), as well as the crucial role of exhibition regarding cultural accessibility and diversity, highlighting the intertwining of economic and cultural dimensions in the movie industry, well-illustrated by interest of governments, especially in the European Union.

In fact, technological and business changes cannot be separated from wider cultural transformations that impact social relations with the film industry. The introduction of the VCR, the DVD and recently, streaming platforms, led to the substitution of theatrical attendance for domestic and individual film watching through various portable devices. Consumers are more involved with media, especially younger generations, often contributing to the production of cultural media products in order to express their own creativity. The use of the internet, especially social media platforms, influences taste formation, and amplifies the power of word of mouth and popularity mechanisms[5] (Arnal & Salson, 2016; Aveyard, 2016; Seaman, 2009).

At the same time, distribution models are changing quite fast. Despite mainstream formats (which we have addressed in the previous section), many independent filmmakers are now selling directly to broadcasters, straight reproducing their films in DVD format or making them available on the internet (e.g. video on demand platforms - VOD). Although competition is strong (eventually even stronger) it becomes easier to target large and/or specific audiences and increase visibility, which often leads to quicker and unexpected successes, even without a theatrical premiere (Tzioumakis, 2012). In parallel, other issues arise, namely piracy and copyright which covers unauthorized copies and distribution rights (Aveyard, 2016; Cameron, 2011).

Under these complex circumstances, understanding cinema demand is crucial, both for the industry and culture. Many, and interrelated, factors influence film final consumers' behaviours and preferences, requiring multidisciplinary approaches: consumers' social backgrounds and demographic characteristics, the characteristics of the films (such as their

[5] Nonetheless, there are also some advantages, as the distribution of films through the internet increases the number of films available while also increasing the proximity between cinemas and their audiences. For example, through social networks, cinemas are able to announce special events and reach larger audiences, especially in more isolated areas (Arnal & Salson, 2016).

origin, genre, language or stardom actors and directors), and the configuration of the market, like supply size, its accessibility and diversity (regarding cinema and other cultural-artistic goods), marketing mechanisms, etc., related in turn with the existence (or not) of public policies to encourage cinema attendance and art-house films (e.g. the well-known *cinéma d' art et d' essai* French Cinemas Network, the British Rural Cinema scheme and Europa Cinemas network) (Aveyard, 2016; Barratt & Jones, 2014; Harris, 2018; McKenzie, 2012).

We will now go through those factors in detail, given the scope of this research (*vide* Introduction), aiming at empirically focusing on the longitudinal analysis of non-commercial exhibition in Portugal (section 5) from the perspective of cultural policies for cinema (section 4). We decided to take the opportunity to develop an econometric model with the statistical data available, in hopes of identifying the main demand determinants within our specific exhibition segment (section 6). Under these circumstances, we have privileged to present the following revision of selected studies to propose the measure of cinema attendance. Apart of being researches that contributed to our own estimation (under different contexts and research goals), they in fact denote the recent growing interest of economics on the topic. A synthesis of each study is presented in Annex 1.

When referring the economics of cinema ("economics of movies", according to some authors, e.g. Chisholm (2015) or Mckenzie (2012)), we affirmed that the interest of economics has been occasional, and due more to the financial dimension than to the cultural dimension of the cinema industry. With the so-called "creative turn" in cultural policies in the last decades of the 20th century (Menger, 2013), quite driven by technological (digital) changes, cultural and artistic activities have been valued more through their economic performance and contribution, than their cultural value (economic rather than cultural capital, as discussed above (Throsby, 2011)). As previously mentioned, (section 2.2), cinema is one of the industries that is subject to high global economic competition (under the US/Hollywood dominance), but at the same time its cultural importance increasingly justifies the intervention of governments all over the world. European policies for cinema, in particular are explicit in financing co-productions, aiming at high production budgets and efficient distribution (so as to support European exhibition), as a mean of preserving and reinforcing the European cultural identity and values in general.

Although not always very transparent, systematic data about the film industry is becoming available, allowing for various analysis of supply and demand, as well as transaction flows, public support, and so on. In Europe, the European Audiovisual Observatory provides regular data and specific analysis and redirects for national organizations and government bodies, including non-European countries (European Audiovisual Observatory, 2020). Different sources are thus available, national and international, private and public, with different scopes and registration criteria, (so not always directly comparable). Films produced and released (number, genre, nationality, type, etc.), production and distribution budgets, revenues and admissions (box office registers, ticket prices included), number of seats, screens and cinemas' location, are commonly used when trying to obtain different explanations regarding film performance, business strategies and public policies. The seven studies we selected propose econometric models to respond to specific questions regarding the industry and its "behaviour" at different territorial scales. They have in common the focus on film exhibition and demand, and our main interest has been to understand the existing possibilities, in order to propose our own econometric model for the Portuguese non-commercial exhibition data. The less recent study was published in 1994 and focuses on a sample of 12 EU countries. It is one of the first attempts at understanding European Exhibition, promoted by the Media Programme. It includes a case study about the UK, with a sample of films exhibited at Regional Film Theatres' (RFT), which are supported cinemas outside London (London Economics et al., 1994). The other six were published between 2005 and 2018, and the time periods covered vary according to specific aims and data availability. Two of them have national range (Australia and Germany – (Dewenter & Westermann, 2005; McKenzie et al., 2018)), two studies are regional (Catalonia, Spain, and Boston and South Florida metropolitan areas in the USA (Chisholm & Norman, 2012; Ros, 2017)) and two have an international scope (selected OECD countries (Governo & Teixeira, 2011), three European "major markets" – Germany, UK and Spain, (Von Rimscha, 2013)).

Regarding the research goals, the scope is also heterogeneous. The Australian and Catalan researches explore the performance of the respective markets: the latter intends to identify the main factors that may induce the success of Catalan films, while the first one targets the effects of direct public support on the success of Australian films (considering public support granted by two distinct agencies, the (former) FFC and (current) Screen Australia). Both essay the international performance of the films. The European Exhibition study is oriented by cultural policies' concerns: it presents a general characterization of the exhibition sector in selected countries (compensating the lack of data), and the case study aims at testing the importance of supporting exhibition. The research conducted by Chisholm and Norman (2012), targets specific exhibition issues as they approached the effects of spatial competition and agglomeration effects on attendance in two metropolitan US areas. Dewenter and Westermann (2005) essayed to characterize and explain cinema demand in Germany. The two remaining studies have a wider intention: Governo & Teixeira (2011) aimed to identify and explain the demand for American and domestic (non-US) films through a cross-country analysis. As for Von Rimscha (2013), his research goal was to test the relations between the state of the economy and cinema entertainment (supply and demand), i.e. the explanatory power or weakness of economic growth on cinema.

The explanatory variables were selected through the analysis of the above-mentioned papers, as well as their role (namely the use of proxies and dummies). We will not discuss their theoretical assumptions, but it is important to note that they differ in the selected studies, namely the use of previous researches (sometimes multidisciplinary) for hypothesis proposals and statistical tests, all this in addition to the characteristics of available data sources for each case. Under these necessary cautions regarding generalization, they all provide interesting clues and suggestions for further research, as we are proposing by using them to develop our econometric analysis. In particular, issues of demand elasticity regarding the cinema sector (e.g. ticket prices, number of seats and screens, various characteristics of films released, technological developments, public support, etc.) and sociodemographic characteristics of the population and countries' patterns (e.g. age, income, residence, economic growth) – detailed information for each study is presented in Annex 1, as referred.

Our literature review essayed to signal different domains of the cinema industry, starting by defining it in terms of scientific affiliation and ending with a brief review of quantitative empirical researches related to our goals. It has been a quite large panoramic regarding the cinema sector, which we find justified by the fact that this is not a commonly researched domain, and even less our specific object non-commercial exhibition, so a broad contextualization was needed to clarify the contents of the next sections.

3. Methodology

The main objective of this dissertation is to understand how the Portuguese non-commercial film exhibition “sector” operates and how it is financed, while reflecting upon public policies concerning cinema, both at the Portuguese and European level.

As discussed in the literature review, despite the economic and cultural importance of the film industry, there is still no systematic research regarding this theme in social sciences, economics included. The first step of our research was to conduct a preliminary analysis essentially based on the existing literature, official documents and legislation[6], which was quite extensive as the information is disperse and directed towards objectives different from our own. Under these circumstances, we had to widely picture the film industry, in order to contextualize our segment, as it is a minor segment of the industry, despite being culturally recognized.

From the point of view of the empirical research, documentary analysis was a key approach. A series of official reports by the European Audiovisual Observatory were analysed in order to understand the main characteristics, existing policies and funding models in Europe. Additionally, and as our main focus is the Portuguese case, official documents regarding Portuguese public policies for cinema and their evolution, available on ICA’s website, were analysed and summarized. Legislation was retrieved, so as to build the framework of evolution of film exhibition policies in Portugal, which also encompasses the “alternative” exhibitors, for whom internet searches were also performed (using Google), namely their websites. This documental exploration permitted to summarize current cultural policies and how they evolved over time in Europe and Portugal (in order to contextualize the Portuguese case), as one of our goals was to give an insight about the evolution of cinema and public funding for film. Consequently, it was crucial to combine these documents and official yearly subsidization rules with quantitative data (Instituto do Cinema e do Audiovisual, 2020).

To better comprehend and study how the non-commercial film exhibition sector operates, data provided by ICA was analysed. This encompasses two distinct databases: one containing information about the exhibitors and the sessions that were held, with regular registration since 2004, and another with information regarding public funding. Based on the partnership between the Portuguese Non-Commercial Exhibition project and ICA, we

[6] Regarding the legislation, the citations presented are our own translations.

not only accessed the main data but could discuss and understand the respective processes of funding and respective policies. The main database is available in ICA's website (Instituto do Cinema e do Audiovisual, 2020c), while financial data was directly retrieved from ICA's management information system, under a curricular internship programme hosted by ICA, under a partnership with the project. In this particular case, financial data was gathered and organized by Ana Costa, an economics student, between February and May 2019. Through the financial data system, it was possible to differentiate and analyse active, suspended and finished funding processes and to identify the different entities involved. The non-commercial exhibition database allowed to characterize the entities and their film sessions. It's important to remark that this a dynamic database, subject to frequent updates and corrections (especially regarding the films exhibited), and therefore it was necessary to prepare it to subsequent analysis. This process was quite heavy, i.e. a considerable amount of time was needed to prepare the original database for statistical analysis, as its preparation and empirical analysis were conducted in the scope of this dissertation. Given its size and its rich information (to which we added some data), it would be impossible to use the whole data in this dissertation. Key findings for the general characterization of non-commercial exhibition are presented in section 5.

Initially, the databases were organized using excel and data visualization, and subsequently SPSS was utilized. Several control tests were performed in order to detect possible incongruencies, and to develop the main descriptive statistical analysis. This exploratory analysis was essential, not only to guaranty the consistency of the original data, but also to reconstruct several variables and to create additional ones (which was the case, for example, of the variable "funding", identifying whether the exhibitors were financed or not by year).

The original database contains information from 2004 to 2017, but information prior to 2007 was excluded, since most of the data available concerns the period from 2007 to 2017, and therefore this analysis was focused on this period. A new sample was obtained with 14742 film sessions organized by 47 entities. With the registered unit being film session, the variables cover an important range of categories about the exhibition entities and detailed characteristics of the programmed films (e.g., IMDB codes, released dates in Portugal, directors, producers, national and international distributors, types and lengths of films) and the sessions (e.g. date and hour, geographical information, cultural facilities, audiences, revenues). In the end, the working file prompts for more than 60 variables. It was possible to obtain these official statistics due to the ticket digitization system that was created in 2003. (Decree-law n. 125/2003, July 20). For non-commercial film exhibition, digital ticket software could be provided by ICA.

Under these circumstances, digital box office statistics have been progressively available since 2004, and those are the ones in ICA's database. It must be noted, though, that there is no exact coverage, i.e., film sessions may not be complete for some entities (some years may be missing), and there can be more exhibitors in some years than those registered in the database: this digital ticketing system has not been fully adopted, and film sessions registration is not performed by all entities.

In sum, the analysis of ICA's database and the interpretation of its results must be performed with caution regarding extrapolation. We have the opportunity of using a big, longitudinal, database, with very rich information that is far from being limited to "box offices" and is now ready for further analysis (for example about the programmed films).

The characteristics of the database justified the exploration of an econometric analysis. An econometric model was estimated in order to better comprehend the demand for non-commercial exhibition, given by the number of spectators, and consequently the factors that will influence demand, by using panel data techniques to estimate the model, for the period between 2007 and 2017 (Cameron & Trivedi, 2009; Wooldridge, 2010). By using panel data, it is possible to analyse multiple observations from different time periods, which concern the same exhibitors. The estimations were obtained through Eviews.

All in all, our methodological strategy was mixed, triangulating qualitative and quantitative tools for secondary analysis (as primary information is residual in our research, limited to some data about the exhibitors), thus assuming that the interaction between both is the most adequate to our objective (Jerabek, 2006). Just to give an example: all the work with the original database could not have been performed without understanding the object and the possibilities of the analysis, from defining descriptive analysis variables to the econometric estimation.

4. Public policies for cinema: European framework and the Portuguese case

4.1. Public policies for cinema – a broad European framework

The need for state aid for the cultural sector has been acknowledged by several authors, and it is one of the main topics within Cultural Economics (Towse, 2010). In the European Union, public policies are regarded as important specially to promote cultural consumption and to facilitate the access to culture in non-dense urban areas, as the existing asymmetries are intense. Out of dense urban areas, supply is scarce and therefore demand is not met – this applies to cinema, as exhibition tends to be concentrated in multiplexes located at shopping malls (Pasikowska-Schnass, 2017).

The International Journal of Cultural Policy, and as cited by Throsby (2010), formally defines cultural policies as "the promotion or prohibition of cultural practices and values by governments, corporations, other institutions and individuals. Such policies may be explicit in that their objectives are openly described as cultural, or implicit, in that their cultural objectives are concealed or described in other terms" (Throsby, 2010, p. 8). Since the positive relation between culture and economic growth was acknowledged under globalization and the digital transformation (Menger, 2013), incentives to the cultural industries have been broadened, cinema being one of the core concerns of European economies and culture – specially to gain competitiveness in face of the American industry and also to reinforce cultural capital as mentioned in section 2 (Hill & Kawashima, 2016; McKenzie et al., 2018; Seaman, 2009).

Public support can be granted trough different mechanisms and organization levels, from direct financing (e.g. national film production subsidies) to indirect orientations and rules (e.g. regulation of international trade, such as the case for cultural goods, as referred in section 2). Each country tends to have a specific amount of spending to allocate to the arts, but it's quite difficult to make an international comparison due to differences in the amounts and guidelines followed by each country. The case of the USA tends to be distinctive since support is given indirectly through tax concessions, while also frequently relying on philanthropy. Even the organization of these administrative structures responsible for this area tend to vary from ministries of culture to art councils (Ginsburg & Throsby, 2006).

National differences are important for comparing different existing models while keeping in mind that well-established institutions and traditional art forms are usually favoured when it comes to public funding, with others that are more experimental often being left behind. When outlining film policies (as happens with other cultural industries), the mixing of private and public interests generates specific complexities (Hill & Kawashima, 2016; Kerrigan & Özbilgin, 2004; Towse, 2011). Policy makers must seek full employment and inward investment, while at the same time defending national culture and supporting the film artistic/experimental production. As filmmaking is linked to private commercial interests, it is often not acknowledged as being central when it comes to public funding.

Funding institutions are recognized as the oldest and most prevalent tool of public support for the film and audiovisual sectors. The main support to film industry is directed to production, which leads to the argument of unbalanced policies in many countries. Without proper distribution and exhibition, many subsidized films do not meet potential audiences. Support in terms of production versus distribution and exhibition is unbalanced in several countries, usually influencing the engagement by the public. The case of Norway is an interesting example of the role attached to decentralized distribution and exhibition, combining public and private interests: a publically-funded exhibition and distribution municipal system has been developed for the last 100 years (Harris, 2018). Public policies covering distribution and exhibition help to broaden film-diversity by including independent and experimental movies and thus protecting particular cultures – this has been an assumed goal of European film policies, for example through incentives to co-productions (leveraging production and distribution budgets, among other expected effects) and the circulation of European films, inside Europe in the first place (Newman-Baudais, 2011)

Technological progress and policy changes affect film and media industries in terms of supply and demand, and naturally costs (Aveyard, 2016; Towse, 2010). The recent process of digitization is especially costly for the non-commercial sector, which can end up by threatening its existence – the digitization of screens is one well-known example of difficult trade-offs between private and public sectors, public policies aiming to combine the potential of digitization regarding cultural accessibility with private economic interests of distributors and exhibitors (Think Tank on European and Film Policy, 2010)

Despite the complexity of the topic, profound differences between countries, and many changes along time, essaying a broad framework for European film policies might contribute to contextualize our approach to Portuguese non-commercial exhibition. The European Audiovisual Observatory has produced information on public funding for film and audiovisual since 2002 and has published several reports since 2004 (for a synthesis between 2010 and 2014, see (Kanzler & Talavera, 2018)). Using some of those reports (they will be cited as needed), we will present a synthetic analysis with the purpose of understanding how public policies for cinema and audiovisual evolved, specifically the European framework (Newman-Baudais, 2011).

In Europe, the first efforts to protect and encourage the 7th art date from the 1920's. At the time, the main concern was (like today, at least partially) to limit America's dominance over European film markets while giving prominence to national productions, by imposing film quotas. Germany, Italy and the UK are just some of the countries that introduced these quotas. Subsequently, public intervention in the cinema sector evolved, taking the form of direct economic aid, granted according to the different models that were established by specific goals (Newman-Baudais, 2011).

These first interventions regarding public aid in Europe were the beginning of what can be seen as a collective goal, contributing to the homogeneity of the economic and cultural market. The aim was to protect the cultural sector while disseminating cultural identities and facilitating the access to culture (Cucco, 2018; Newman-Baudais, 2011). Other initiatives started surfacing during the 1920's, such as more or less informal groups aiming at affirming cinema (also) as an art, exhibiting experimental and artistic films, that were not usually included in commercial circuits. The first film societies were founded in Paris, and rapidly spread around Europe (Dickinson, 1969). The primary goal of film societies was to promote what we call today alternative exhibition and encourage discussions amongst members.

It is worth noting, though, the early association between public intervention for cinema and political regimes (dictatorships in particular), as cinema was soon perceived as a powerful mean for indoctrination and manipulation (propaganda). The 1930s decade saw the rise of propaganda in cinema and radio as fascist regimes were rising: Italy, Germany, Spain, France, and others, like Portugal, where the situation was quite similar (see next section)[7]. Overall the cinema sector was extremely damaged by the II World War in European countries, as exhibition was often prohibited, and production was stagnant. Film societies did not escape this dark period, as they were often connotated as a mean of gathering political opponents, which frequently led them to be closed by the authorities (Dickinson, 1969; Newman-Baudais, 2011).

After the II World War, there was a huge rise of cultural industries and entertainment culture in general, specially from the US, where production had not been interrupted during the war. Many film societies appeared, playing an important role in disseminating the 7th art, and, at the same time, in creating a clear division between popular (Hollywood) films and artistic/experimental films. In 1947 the International Federation of Film Societies was created (Dickinson, 1969).

Public efforts to recover and consolidate the film industry in Europe started right after the end of the II World War, mainly through production incentives. The first types of formal support that were introduced were automatic (for example, in 1951, the UK started charging a fee over cinema tickets in order to obtain funds for the sector, while, in 1952, Germany granted bank credit guarantee schemes), but selective support schemes were also introduced during the 1950's[8]. Over the years most western European countries adopted either automatic or selective support programmes, and occasionally a combination of both (Cucco, 2018; Newman-Baudais, 2011).

In 1957, the creation of the European Economic Community was a step further in terms of contributing to the establishment of a single market and, according to the European Audiovisual Observatory (2011), "to prohibit restrictive agreements and state aids which can affect trade between member states and whose objective is to prevent, restrict or distort competition" (Newman-Baudais, 2011, p. 134), but culture was not foreseen in European agreements until the Maastricht Treaty, in 1992.

The 1950's also mark the beginning of the generalized use of television. Owning a TV set was becoming common, as it was easier to have access to this type of device. Inevitably,

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[7] It must be noted that the phenomenon is far from being restricted to war times and/or dictatorships. US propaganda through different media along the first half of the 20th century and during Cold War has been widely studied.

[8] According to the European Audiovisual Observatory (2016), automatic funding can be defined as "cumulative funding provided by national film funds to which a producer has an absolute entitlement so long as they (or the firm) meet certain prescribed conditions", while selective funding is described as "cumulative funding granted by national film funds at the discretion of the relevant issuing body" (Kanzler, 2018, p. 166).

television became a hard competitor against cinema, and as attendance diminished and movie theatres were forced to close down (Boyd, 1998). As the "big screen" was being replaced by the "small screen" and TV film productions started to surface[9], concerns regarding European TV productions start to arise. Nevertheless, the first support schemes to fund TV productions were implemented during the 1980's (Cucco, 2018; Newman-Baudais, 2011).

All in all, the efforts to publicly stimulate European cinema (and audiovisual production) started early but initiatives were scarce and often unbalanced until the last decades of the 20th century. The Council of Europe acknowledged the need for support for the film industry in the late 70's and a special committee was assembled, mostly to study and release measures which planned to encourage film production. In 1988, "a European support fund for the co-production and distribution of creative cinematographic and audiovisual works" was implemented, (known as "Eurimages fund"), which is still in force nowadays (Newman-Baudais, 2011, p. 133). Eurimages fund is aimed at promoting the European film industry by encouraging the production and distribution of films and fostering co-operation between professionals. It includes several programmes to incentive co-production, distribution, exhibition, promotion and gender equality, and it is especially crucial to disseminate European works in Europe and the world (Council of Europe, 2020).

As referred in the literature review, there was a clear perception that European cinema industry had to growth in scale and robustness, regarding both the market and the culture, assuming the need to get the means to face the American hegemony (Crane, 2014).

Following this context, it is important to mention the Media programme, that was launched in 1991 and is currently one of the sub-programmes of Creative Europe (since 2013). This programme supports the cinema and audiovisual sector and encourages the dissemination of European works across the globe. The Media Programme encourages production, exhibition and distribution activities, as well as film festivals and video on demand platforms (Blázquez et al., 2019). In parallel, the need to manage data concerning the film and audiovisual sector to inform policies was reflected in the creation of the European Audiovisual Observatory (EAO) in 1992, which since then

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[9] It is generally assumed that the first "made for TV film" was released in 1964, entitles "See How They Run", by Universal Studios (USA).

develops an intense policy-driven activity, through data gathering and analysis, information for stakeholders (private and public), public policies, etc. As already mentioned, circulation of European films in Europe is a notorious priority, aiming at overcoming the excessive fragmentation of European film production, as well as facilitating bigger investments for production, distribution and exhibition. Reinforcing the internal market is believed to impact international/global competitive advantages (Cucco, 2018; Newman-Baudais, 2011). Balancing national singularities and European collective goals (cohesion policies), as well as economic and cultural objectives, it is an intricate process, and the film industry is especially complex (European Comission, 2014). Frequently, arguments of excessive market-driven policies come from the field, highlighting the risks for replacing the reputation standards of the so-called European cinema by entertainment drivers – this is a well-known trade-off in the cultural industries, and many authors alert for the risks of cultural homogenization (Crane, 2014; Towse, 2010). Many changes and adjustments take place all the time, in general guidelines and legal issues regarding support frameworks, and the effects on national policies can be higher or lower, depending on many factors. As we will see in the next section, Portugal is an interesting case under these circumstances: on the one hand, it is a typical small and peripheral European country, with high international reputation acknowledge to its cinema in all genres and types (feature and short films, documentary, fiction and animated movies) mostly by experimental/artistic directors. On the other hand, cultural policies (as the welfare state in general) had a late implementation, in comparison with most developed European countries (after democracy in 1974 and particularly after entering the EU in 1986). The country adjusted its policies for cinema quite casuistically until 2004, when the so-called "Cinema Law" defined a reasonably stable framework for subsequent changes.

One of the latest by the European Audiovisual Observatory about film funding was conducted in 2014, and included 35 European countries, which surpasses the number of members of the European Union (Milla et al., 2016). 249 public funds were identified, operating at national/federal, sub-national and supranational levels (accounting for 25%, 67% and 8% of the total funds, respectively). Sub-national funds usually operate at community, regional and local levels, while national or federal funds are controlled by the central and federal government, even though they often operate as a government department or independent agency. Supranational funds are granted to member states and non-member states, covering production, distribution, exhibition, digitization and co-production (between member states or with non-member states). They include the Eurimages fund, Media sub-programme, Nordisk Film and TV fund, amongst others. When it comes to exhibition support, supranational funds implementation is usually associated with the network Europa Cinemas (part of the Media sub-programme), essentially aiming to promote the exhibition of European Films (European Audiovisual Observatory, 2019; Milla et al., 2016).

It is possible to enumerate the following types of public support for European films and audiovisual works: public film and audiovisual funds, fiscal incentives (tax shelters, rebates and tax credits), financing obligations on industry stakeholders, and guaranteeing facilities. This large range of types of funds available, supports the idea that the policies applied in each country tend to be quite different, and, as mentioned above, the process of defining and achieving European collective goals is complex (European Audiovisual Observatory, 2019; Kanzler, 2018)

France, Germany and Austria are the countries where most funds were identified. There seems to be no connection between the size of the country and the number of funds available, but the highest grossing markets are usually the ones with more funding institutions (Crane, 2014). The table below evidences the top ten worldwide markets by number of feature film production since 2014, and it includes five European countries (in bold).

By observing the table, it is possible to conclude that markets like India, China and Japan, surpass the number of American productions. In these top film producing markets, and also in South Korea, demand for national films is quite high, especially for reasons of cultural affinities, so the potential for exportation is limited. China has been trying to contradict this scenario with an increase investment in co-productions (in order to facilitate the penetration in the global market).

These countries illustrate (by contrast) the competitive advantages of US films, as their early internationalization (amongst other factors) contributed to spread American culture all over the world. Another interesting remark is the fact that the difference in the number of feature film production in European countries and in the USA, does not explain the differences in market-share, as measured by gross box-office. The number of films produced is not that distant while the gross box-office revenue tends to be much higher in the USA (Kanzler & Simone, 2019).

Table 1 - Top 10 markets worldwide by number of feature films produced 2014-2018

Rank. 2018	Country	2014	2015	2016	2017	2018
1	India	1966	1845	1903	1986	1813
2	China	618	686	944	970	1082
3	Japan	615	581	610	594	613
4	US	482	495	511	549	576
5	South Korea	232	232	339	494	454
6	**France**	**258**	**300**	**283**	**300**	**300**
7	**Italy**	**201**	**185**	**224**	**234**	**272**
8	**Spain**	**224**	**254**	**254**	**279**	**264**
9	**Germany**	**234**	**236**	**256**	**247**	**247**
10	**UK**	**364**	**361**	**327**	**315**	**202**
	Total	7455	7648	7893	8026	8204

Source: Focus 2019 – World Film Market Trends

This preliminary reflection around European Public Policies for the cinema and audiovisual sector has shown there has been a general effort to encourage and expand the sector at supranational level. Nevertheless, it is rather consensual (starting with the European Audiovisual Observatory itself) that the efforts are still insufficient to reach stability, as support is usually unbalanced in favour of production, lacking articulation (and consistency) regarding distribution and exhibition.

The following section focuses on the evolution of public policies for cinema and audiovisual in Portugal, plus the national non-commercial exhibition sector.

4.2. Public Policies for cinema in Portugal

An overview of the Portuguese public policies for cinema is presented, considering the legislation and main regulations regarding the support of film production, distribution and exhibition. Although exhibition cannot be separated from the other two segments, production has always been the core target of national public policies, leaving distribution and exhibition more dependent of market forces, and according to Crane (2014) and Park (2015), this has led to the progressive dominance of US productions all over the world (Crane, 2014; Park, 2015). American hegemony is also the result of an efficient distribution system, that other countries struggle to compete with. In terms of production, several competitors have surfaced in Europe, Japan and India, while major media corporations have been established both in Europe and Japan, but the US still clearly dominate the "economics of films" (Scott, 2004). Additionally, notwithstanding US liberal economy, its public policies are aggressively oriented towards the establishment of foreign trade agreements that guarantee American films will penetrate foreign markets (Crane, 2014). In other countries, public policies are still inefficient to fight the American dominance (id., ib). Portugal is not an exception. It is a small country, i.e. with a small market (c. 10 million inhabitants), where films from the US represented 71,3% of the market share in 2018 measured by the number of admissions. The five main Portuguese exhibitors represent almost the whole market, with 94% of the market share, as measured by admissions by exhibitor, and the four main Portuguese distributors represent 96% of the market share, based on admissions by distributor. Table 2 shows the magnitude of US films, when comparing number of films released and admissions: a significant portion of non-American films were released (especially European), however American films represent the majority of the films exhibited in Portugal.

Table 2 - Films released and admissions by origin, 2015-2018 (%)

	2015		**2016**		**2017**		**2018**	
	Adm. (%)	**Films (%)**	**Adm. (%)**	**Films (%)**	**Adm. (%)**	**Films (%)**	**Adm. (%)**	**Films (%)**
USA	70%	39%	79%	42%	79%	42%	71%	42%
Europe	20%	47%	9%	44%	11%	44%	8%	43%
Co-prod. Europe/USA	9%	9%	11%	7%	9%	10%	20%	10%
Others	1%	5%	1%	7%	1%	4%	1%	5%
Total	100%		100%		100%		100%	

Source: ICA's yearbook 2019

We will present Portuguese national policies for cinema through the lens of our (Portuguese) particular history. Subsection 4.2.1., depicts the scenario for cinema and film exhibition in Portugal during the fascist regime. The subsequent section presents the major changes brough by the revolution of 1974, while section 4.2.3. presents a revision regarding support to exhibition in alternative circuits in Portugal.

4.2.1. Before Democracy

According to Costa (1978), the first Portuguese films were exhibited in Porto in 1896, just a year prior the first public cinema session, soon after the presentation of the cinematographer by the Lumière brothers in Paris, in 1895 (Costa, 1978).

During the first years of the 20^{th} century, the Portuguese market was clearly dominated by foreign films, but several distribution and production companies were soon founded in Portugal. The first production and distribution company, Portugal-Film, was founded in 1899, and its activity was focused on documentary films. In 1910, Alfredo Nunes de Matos founded Nunes de Matos & C. in Porto, which was later known as Invicta Film. Invicta Film, mostly produced films based on great Portuguese literary works, as it was believed that would ensure the commercial success of the films. As for exhibition, most movie theaters were operating in Lisbon and Porto and in 1924, the first Portuguese film society was founded in the northern region[10] (Costa, 1978; Granja, 2007).

Between 1926 and 1933, Portugal was under a military dictatorship, and the first effort to intervene in the cinema sector dates from 1927. It is evident that the first strategies to encourage the cinema sector in Portugal, were related to the regime which was in force or "Estado Novo", similarly to what was happening in the remainder of the European countries, as stated in the previous section (Ferreira, 2018). Thus, Decree-law n. 13564[11] from May 6th, 1927, was published, approximately 30 years after the invention of cinema by the Lumière brothers, and around 15 years after the establishment of the Hollywood studios. According to this decree-law, every cinematographic show should exhibit a Portuguese film with a minimum length of 100 meters, which meant exhibition programmes had to include a minimum of 100 meters of national productions. As an early form of censorship, it was already foreseen in this decree-law the contents that could be included in the films exhibited. This decree-law also predicted the reduction of custom duties over films that were to be printed in the country (Granja, 2007).

Decree-law n. 22966 from August 14th, 1933, acknowledged the importance of sound cinema and, as a result, the Portuguese film company Tobis-Klangfilm (founded in 1932 with the objective of fostering Portuguese film industry), was exempt from paying

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[10] Associação dos Amigos do Cinema, in Porto, founded in 1924. See Granja (2007).

[11] All the citations that will be presented in this subsection were retrieved from official legislative documents. Consult the section "legislation" for more details.

contributions for 5 years, as well as import duties. It also established that importers of foreign sound films were obliged to buy films produced in national studios.

Decree-law n. 23054 from September 25th, 1933, established the creation of "Secretariado Nacional da Informação" (National Information Secretariat), which according to article number 4 of said article "utilizes radio, cinema and theatre as indispensable means to prosecute its mission". The primary goal was to control cultural and artistic content based on what was established by the dictatorship, while ensuring it helped spreading the ideals of the regime. As we know, this was the general scenario in Europe, as the dominant totalitarian regimes, saw cinema and its encouragement, as a way to exalt national cultures and compete with the American dominance. This was the case in Italy, Germany and Spain.

The state recognized the importance of cinema and its reach, and it rapidly started being used as an instrument of propaganda. In 1935, "Secretariado Nacional de Informação" created a travelling cinema, that moved across the country in order to share "popular culture". At the time, some filmmakers were associated with the dictatorship, creating films that included the ideal Portuguese image, while reminding the importance and greatness of the regime. The same was happening in other European countries that were under the governance of dictatorships. "As Pupilas do Senhor Reitor" (1935) and "Canção de Lisboa" (1933) are good examples of films that shared the ideals of nationalism (Torgal, 1996).

The movement of Film Societies or Alternative Cinema exhibition "officially" began in 1945 with the foundation of Clube Português de Cinematografia in Porto and Belcine in Parede. The movement continued to develop with the foundation of the International Federation of Film Societies in 1947, whose action was often limited due to lack of funds. Still, the work of these exhibitors was extremely limited due to the intervention of the state (Granja, 2007; Pereira, 2010).

Law n. 2027, from February 18th, 1948, created the National Cinema Fund (Fundo Nacional do Cinema) in order to "protect, coordinate and stimulate the production of national films, while acknowledging their social and educational role and their artistic and cultural aspects". The fund planned to cover the following expenses and activities: cost of the films produced by Portuguese companies, payment of loans granted to these companies by Caixa Nacional de Crédito (bank owned by the Portuguese government), to distinguish films with high artistic and technical value and the intervenient staff, to grant subsidies to conduct subsequent studies that lead to technical and artistic developments, to intensify the production of short films, to create the National Cinematheque and for the payment of gratifications to members of the Cinema board and inspection charges.

According to this law, every film required an exhibition license, that was only approved after analysis by the censorship committee. It also included the definition of "Portuguese Movie". The definition clarifies that in order to be considered as a Portuguese movie, the spoken language of the film must be Portuguese, and it must be produced at studios or laboratories that are property of the state or Portuguese companies, while also representing Portuguese culture. Every movie theatre has the obligation of exhibiting Portuguese movies, with a ratio of one week (minimum) of national cinema for every five weeks of foreign cinema. This law also instituted the establishment of partnerships between Portugal and other countries, in order to encourage the artistic and commercial exchange of films.

Decree-law n. 48686, from November 15th, 1968, extinguished the National Secretariat of Information, Popular Culture and Tourism, which started being dependent on the recently established State Secretariat of Information and Tourism. The decree-law established that "the State Secretariat of Information and Tourism is responsible for overseeing services and activities, related to information, tourism and sound and visual broadcasting, theatre, cinema and other shows and forms of popular culture". This decree-law was established in the aftermath of the May 1968 events in France, which arose from political tribulations. Consequently, the French Cultural Revolution influenced several domains including cinema, from film making (revolutionary cinema, characterized by the use of "raw" footage) to film festivals.

The Portuguese Institute for Cinema was established in 1971 (Law n. 7/71), to promote and encourage the production, distribution and exhibition of films, while also representing Portuguese cinema in international organizations and promoting it abroad in the cultural, financial and economic domains. The law determined that funding towards the production of Portuguese films would increase as cinema was acknowledged as being culturally relevant for our patrimony. This law also created exhibition fees and distribution fees as additional sources of income to support cinematographic activities and guaranteed the attribution of an ad hoc support scheme (non-refundable), which was attributed upon jury evaluation, much like happens nowadays. Still regarding exhibition, this law established

"The Portuguese Institute for Cinema may assist the installation of cinema venues in locations where they do not exist or have closed down, and where the number of inhabitants or other circumstances justify their operation".

4.2.2. After 1974

The democratic revolution of 1974 was followed by an extremely unstable period for the arts and culture, especially for cinema. The Portuguese Institute for Cinema continued to award ad hoc funding as mentioned, and there was a reevaluation of the policies regarding this sector, followed by years of intensive adjustments (Lourenço & Centeno, 2019).

In 1978, Federação Portuguesa de Cineclubes (Portuguese Federation of Film Societies) was created with the goal of representing film societies in Portugal and abroad, while also promoting a range of activities related to the 7th art (Federação Portuguesa de Cineclubes, 2018).

The period after the revolution of 1974, was one of rapid change. Decree-Law n. 391/82 revisits law n. 7/71, "giving more autonomy to the Portuguese Institute of Cinema and providing the necessary tools to respond to the numerous solicitations it receives", but still, law n. 7/71 continued to regulate all the policies regarding cinema until 1993. In the aftermath of the revolution, the Portuguese economy was quite fragile and closed. As an appeal to overcome this situation, Portugal was integrated in the European Economic Community in 1986, which amongst other directives, led to the implementation of several changes in terms of circulation and trade, which also concerned cultural goods. This ended up influencing general consumption patterns: after some years of being attracted by foreign films (many European) whose exhibition had been forbidden before the revolution (occasionally illegally shown by film societies), as well as the acknowledgement of Portuguese directors, American films became dominant again, With no substitute for the popular films promoted by Estado Novo in the 1930s-1940s (e.g. "Canção de Lisboa", referred above (Diogo, 2001)), the relationship between Portuguese films (a small market, mainly reputed films, publicly supported and internationally awarded – e.g. films by Manoel de Oliveira) and audiences became more and more difficult.

Following the integration in the European Union, Portuguese film policies started to adapt to European standards, goals and regulations. Decree-law n. 350/93 implemented some changes in terms of circulation of cinematic works. According to this decree-law, in order for cinematographic works to circulate between member states, the government had to classify them as "national works". This is crucial since the state started acknowledging "the social, economic, and cultural relevance of cinematographic and audiovisual activities as a mean to promote the image of the country", as stated in decree-law n. 350/93. Additionally, the government also guaranteed financial support to encourage the participation in international film festivals, as similarly to what happens nowadays, it was a form of disseminating Portuguese films abroad (and Portuguese films had high probabilities to be awarded, as already referred). The was also responsible for the promotion of Portuguese cinema in the European Union. Co-productions were encouraged, especially when established with member states that Portugal already collaborated with (in terms of programmes or funds to support production). This decree-law also comprised several types of support to encourage production: automatic support system (from the income which results, for example, from ticket fees charged during the exhibition period); direct support system (financial contribution obtained directly by the producers); selective support system.

As for distribution, films from European member states benefited from distribution quotas and the connection with exhibition must be regulated by law, so as to ensure independent exhibition was encouraged. Still concerning decree-law n. 350/93, article number 22 specified the government had to work in collaboration with city halls to "ensure the functioning of exhibition spaces, especially if said spaces play a relevant role in the area where they are inserted".

Due to the prominence of the audiovisual sector, in 1994 the Portuguese Institute for Cinematographic and Audiovisual Art (IPACA) was created, as established in Decree-Law 25/94. The uncertainty regarding the sector is clearly visible in the constant change in the name (and general attributions) of the Institute (Ferreira, 2018) – without the establishment of a ministry of Culture in Portugal until 1995. IPACA resulted from the merger between the Portuguese Institute of Cinema (IPC) and "Secretariado Nacional para o Audiovisual" (National Secretariat for Audiovisual), aimed at "guaranteeing global and coherent policies for the audiovisual sector, which is interconnected with the cinema sector". This fusion originated an entity that was capable of representing Portugal in European support programmes, to encourage the cinema and audiovisual sector since it had the capacity to act in both domains.

In this sense "public support must be applied in order to create self-sufficient industries that are part of a European economy". Subsequently, in 1998, Decree-Law 408/98 established the creation of the Institute of Cinema, Audiovisual and Multimedia (ICAM). The need to create this new institution came from the emergence of the multimedia sector and due to the on-going technological developments.

The National Culture Board (Conselho Nacional de Cultura) was established by decree-law 215/2006, and it included the Cinema and Audiovisual specialized section (SECA), with the intent of advising the Government with the definition and development of national policies concerning the sector. The National Cultural Board worked in direct collaboration with the Government and according with what was later specified in article number 22 of the decree-law, SECA "must support the members of the government who are responsible for culture, especially in terms of questions that concern the definition and development of cultural policies for cinema and audiovisual."

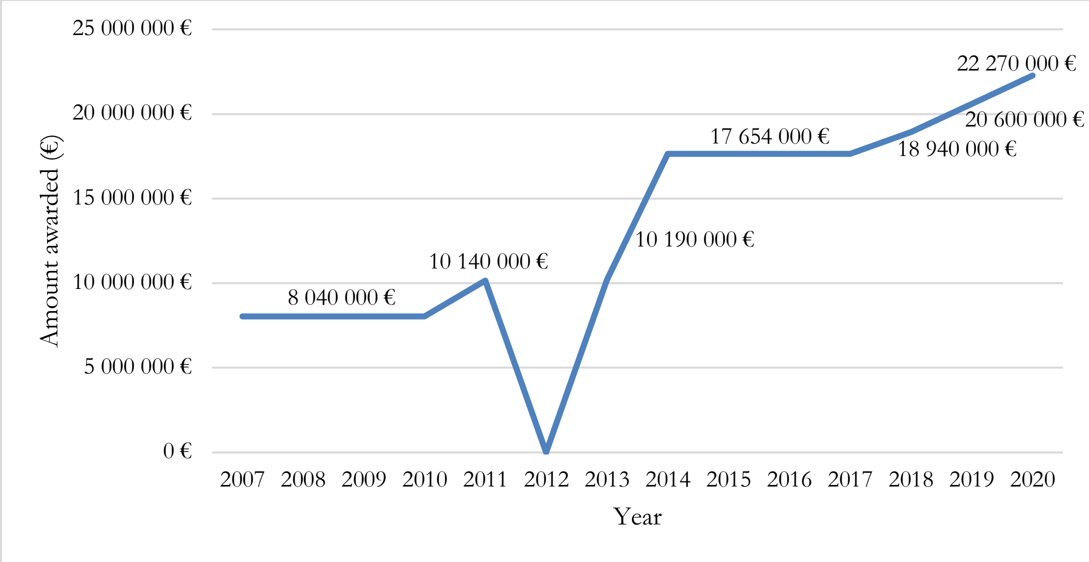
The actual Institute of Cinema and Audiovisual (ICA) was established by decree-law 95/2007, replacing the above-mentioned entities. It is the main institution responsible for the development of cinematographic and audiovisual activities, under indirect administration by the state and with administrative and financial autonomy (Instituto do Cinema e do Audiovisual, 2020e).

The main legal framework regarding film and audiovisual support was established in 2004, the so-called "Cinema Law" (law n. 42/2004). Cinema Law was further revised by law number 55/2012 and recently by decree-law n. 25/2018 (Instituto do Cinema e do Audiovisual, 2020d). The 2004 law predicted the creation of an investment support programme, to support and encourage audiovisual activities. As a result, FICA (Fundo de Investimento para o Cinema e Audiovisual) was established by decree-law n. 227/2006, an autonomous fund where state intervention was limited to the supervision of its strategic objectives. It recognized the economic relevance of the sector and the need to promote its sustainability, by stimulating the participation of the private sector. The fund was implemented to foresee its structural development, due to its high importance and potential, as in comparison with other sectors it seems to expand quite fast. It involves creativity and qualified employment, especially due to the introduction of new technologies, but with inequalities amongst its several subsectors. It encouraged the production of national works, as well as the diffusion of independent productions in order to stimulate demand. Revenues utilized towards the financing of the cinema and audiovisual sector mostly come from advertising revenues. FICA was the first effort to tackle the decrease of these revenues. In the past, revenues came mostly from exhibition licenses (before 1974) and after from, for example, television advertising revenues, box-office revenues, fees defined by law or revenues from the state budget. FICA did not function as expected, and was extinct, as described in article 27 in the decree-law n. 55/2012: "decree-law n. 42/2004 and decree-law n. 227/2006 will apply until there is full liquidation of the fund, namely, for framing the compliance of the obligations predicted in the pluriannual investment contracts that are due until the present law is implemented".

The latest "Cinema Law" (Decree-law 25/2018) was issued in order to simplify the contest system regarding public funding (e.g. shorter application deadlines as an efficiency gain). It institutes new rules to the attribution of subsidies, clarifies how the audiovisual exhibition fees are charged, while also focusing on audiences. This decree-law also proclaims that ICA's pluriannual strategic plan should be more accurate. Additionally, it reformed the cinema section of the National Cultural Board, reinforcing the presence of specialized film professionals. Furthermore, it designs new support programmes that will be analysed below. Still in 2018, decree-law n. 45/2018 or "Support Fund for Cinema and Tourism" was implemented, in order to encourage cinematographic activities by reinforcing Portugal's role as a touristic destination, and as the perfect scenario for shooting films.

The rules and procedures of each contest are published yearly and made available on ICA's website (Instituto do Cinema e do Audiovisual, 2020b). In 2018, the amount available for these contests came up to 19 million euros, to cover different activities and programmes (divided into sub-programmes, modalities and categories) for production, distribution, exhibition, festivals, internationalization or writing and development (Gonçalves, 2020). Graph 1 shows the evolution of the total amount between 2007 and 2020. In general, there has been a reinforcement of the available amount, especially since 2014, as in 2013 the amount awarded was a reset of the 2011 amount, with 2012 being the "year zero", when no funding was awarded at all, due to troika (Coelho, 2012, October).

Graph 1 - Amount of public support to the cinema and audiovisual sector between 2007 and 2020

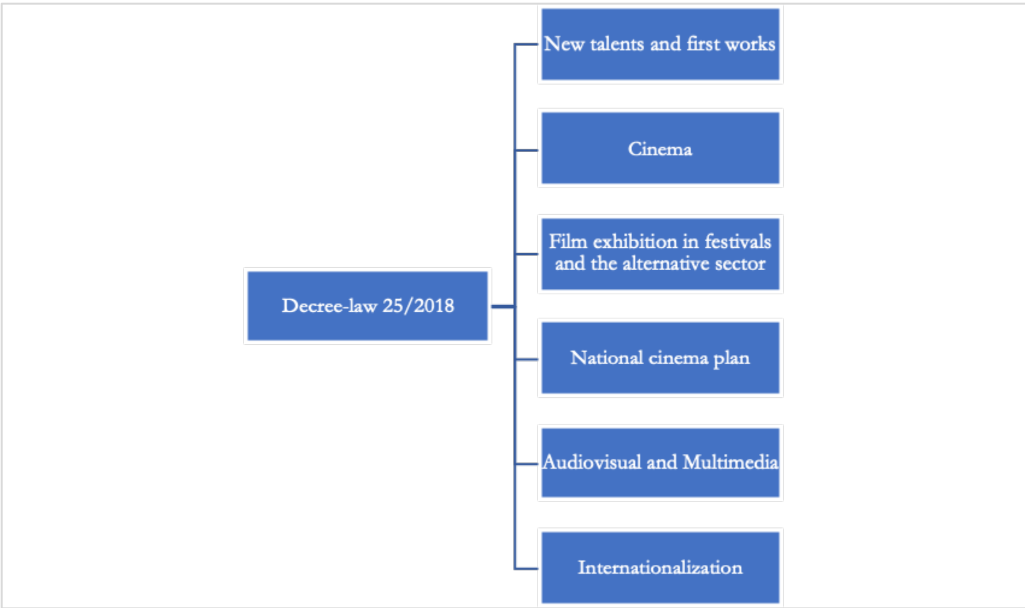


Source: Paulo Gonçalves (2020)

Similarly to what occurs in other European countries there are relative limits to the amount of support that can be granted, thus, according to decree-law n. 25/2018, support cannot exceed 80% of the total cost of the project and it includes the following support programmes: support programme for new talents and first works, cinema support programme (support to writing and development, production, co-production, distribution and exhibition), audiovisual and multimedia support programme (support to writing and development of audiovisual and multimedia works, innovation and production), audience formation programme (young audiences, promotion of Portuguese cinema at schools, support for students in specialized courses), internationalization support programme (international promotion of national works, international promotion of national works through associations of the sector, support to the distribution of national works in international markets), support programme for exhibition at film festivals and the alternative sector, support programme to complementary projects that contribute to the development of the cinema and audiovisual sector – see Figure 1 for the general framework (Gonçalves, 2020). All in all, the support programmes have been diversifying their particular targets, which is expected to make the system more efficient in terms of partnerships with private and international investors. The vast majority of the Portuguese film production is supported by ICA – in 2018, 78 out of 87 films produced in Portugal received public money through ICA's programmes (Instituto do Cinema e do

Audiovisual, 2019). Some of those films were produced through the new film and TV production cash-rebate system that is part of the new Fund for Tourism and Cinema, established by decree-law 45/2018. Overall, investment in national film productions has increased but there was no significative increase on the number of admissions and total gross box office.

Figure 1 - Support programmes included in decree-law n. 25/2018



Source: Paulo Gonçalves (2020)

The Portuguese system for applying the funds is based on the constitution of different external juries for each contest, after their validation by SECA. Although there is no explicit definition of cultural criteria, culture is always one of the essential elements when applications are analysed. Support may be granted for the creation, production, distribution, exhibition, diffusion and promotion of cinematographic works but they must be an expression of national identity, while also promoting the language, encouraging international co-productions and encouraging cooperation between Portuguese-speaking countries. The Cinema Support Scheme (an automatic support programme) is an exception, as it implies some cultural requirements: the original script must be in Portuguese, the action must take place essentially in Portugal, amongst others.

The explicit mention of the cultural dimension is clearer in distribution and exhibition supports, aiming to increase circulation (thus the audiences) of national works, European works and of the so-called minority filmographies from all over the world (films from countries whose distribution represents less than 5% of the Portuguese market share). There are no specific requirements regarding theatrical release, performance and visibility on VOD, but a distribution and promotion plan must be included in the application. In the next section we will focus on exhibition in alternative circuits.

4.2.3. Support to exhibition in alternative circuits

As previously specified (subsection 4.2.1.), alternative exhibition circuits emerged in Europe as a first effort to acknowledge cinema as art, especially after the II World War. Vogueish Portugal, film societies had a crucial role in terms of showcasing cinematic culture by not only exhibiting films, but also for all the other cinema related activities they usually put together (Granja, 2007; Pereira, 2010). Their role before the democratic revolution was very important, given censorship and high surveillance policy. Alternative exhibition aimed at filling a cultural lacuna, as well as film festivals, targeted to quality and art films (as happened in other cultural industries (Santos & Abreu, 2002)). Portugal is not an exception, despite its delay regarding the long dictatorship and European integration. Therefore, supporting non and semi-commercial exhibition is vital to guarantee cultural accessibility and diversity, and to make public support to production more efficient.

As presented in the previous section, ICA support programs regarding exhibition target "alternative circuits" (exhibition and festivals), as well as "semi-commercial" exhibition. We already mentioned (section 2.3.) the "semi-commercial" exhibition sector, part of Europa Cinemas network, presented as "the first network of cinemas focusing on European films" and which main objectives include "to provide operational and financial support to cinemas that undertake to give a significant part of their screenings to non-national European films and to put in place activities for young audiences". This network was founded in 1992, and in Portugal includes a total of 19 screens, spread out across eight venues, four of which are located in Lisbon, two in Porto, one in Setúbal and another in Cascais (Santos & Barbosa, 2019, October). As already stated, our research does not focus on this segment, nor will it address film festivals (for an analysis see Ferreira (2018)).

The support to non-commercial exhibition is clearly justified by market failure. It is meant to promote the circulation of films, mostly produced with public money, for whom market rules failure: they are not profitable regarding attendance (box office revenues), so commercial distributors and exhibitors tend to exclude them. The same justification prompts for the territorial organization of commercial supply: it is not present where population density and characteristics (e.g. age) are not advantageous, so there is an imbalance regarding accessibility. In Portugal, as already mentioned, around one third of the population does not have a cinema nearby (Barbosa et al., 2016). As we will see in the next section, despite the nationwide coverage of municipal theatres and cine-theatres, regular (commercial and alternative) cinema exhibition is not guaranteed (Santos & Barbosa, 2019, October).

Non-commercial exhibition support is targeted to non-profit entities only, and a set of programming rules are pre-defined. Changes have been made over time (we will refer to them through table 3), but the general requirements are: mainly the exhibition of minority filmographies (national, European, and international works whose distribution in Portugal is inferior to 5% of the market share, measured by attendance); a minimum of 30 different films exhibited per year; and some indication regarding the Portuguese language or the weight of Portuguese films, as well as balancing feature and short films, and fiction, animation and documentary. Additionally, each entity is allowed to apply one project only, and, as for other programs, financial aid cannot exceed 80% of the whole cost of the projects submitted (for a preliminary analysis of the programming of non-commercial exhibitors, see Lemos (2017)).

The sub-programme that awards support to the 'alternative' exhibition will now be presented. The first thing to notice is that its name has changed over the years (as well as specific criteria and respective weight for evaluation and selection by the juris), depending on the contests (see table 3 below and Annex 2, for a synthesis of the framework)

Table 3 - ICA sub-programmes over the years (2001-2017) [12]

Year of the contest	Name of the sub-programme
2001-2011 (Annual)	Alternative Cinematographic Exhibition Network (Rede de Exibição Alternativa Cinematográfica)
2013	Non-commercial Exhibition (Exibição não commercial)
2014-2015; 2016- 2019 (Biennial)	Alternative Exhibition Circuits (Exibição em Circuitos Alternativos)

Source: ICA

[12] Based on the contest's information available on ICA'S website; The name attributed to the sector was verified in each contest (https://ica-ip.pt/pt/arquivo-de-concursos/2018/)

The second issue worth noting is that contests have been biennial since 2014. Although these changes reflect the efforts for better adequacy, and even (the biennial regularity is a good example), they also denote the opposite, i.e. the difficulties of a segment of the film industry that is complex, under permanent transformations (technological in particular) and, as referred in section 2 and above in this section, facing the difficulties of dealing with economic and cultural goals.

Typically, non-commercial exhibition is addressed to the latter type of policy aims, but budgets tend to privilege the first (not only due to film production high budgets, but also given powerful private interests). From 2016 to 2019, 220.000€ were available to distribute (yearly amount of 110.000€), with a maximum value per project of 5000€, which means aiding around 20 projects (see graphs 3.2., 3.3. and 3.4. in annex 3). Therefore, the amount attributed to alternative exhibition represents a very residual percentage of the total amount attributed to the cinema and audiovisual sector (see previous section).

As already mentioned, internal criteria for evaluation and selection of the granted projects have changed over the years, pressuring the candidates to become more organized and subject to evaluation and monitoring procedures by formal entities, ICA in the first place. Although this is a consensual goal regarding public policies and especially public financing systems and procedures, it does not always go easily with the fragilities of the entities involved. In particular, the absence of a territorial criteria tends to benefit the entities localized in more central territories, with resources to better respond to formal procedures. A territorial incentive would contribute to de-concentration regarding urban areas, where synergies are potentiated through agglomeration effects (cultural facilities, audiences, even local governments more sensitive to cultural policies).

The application must include several details concerning the curriculum of the candidate, the exhibition programme and the description of the films that will be exhibited (name, origin, length, type, language and target audiences). A promotion strategy must also be included, specifying the periodicity of the sessions, genre of the films (if it is a documentary, fiction film, animation, etc), and thematic cycles or special sessions when applied. The applicants have to estimate a budget plan according to the model approved by ICA and it is also crucial to ensure that the exhibition facilities have an informatized ticketing system, as established by decree-law n. 125/2003, from June 20th (it must be noted that ICA provides the equipment for ticket digital system for free). If these requirements are met, funding will be granted to a number of entities defined by the available budget and paid in different instalments if the beneficiary complies with the conditions stipulated in contract. 80% of the total grant is paid upon signing of the contract and the remaining 20% are paid after the presentation of the annual execution of the project (verified through the digital ticketing system since 2003).

Complying with these apparently basic requirements is far from being easy for a "sector" composed by film societies and other non-profit organizations, for whom this support is vital. It contributes to dealing with distribution problems, as well as to establish local partnerships (mainly with the municipal governments) to achieve (when possible) adequate conditions for their activities, namely cultural facilities for exhibition. Besides, the non-commercial exhibition sector is more than the set of entities that manage to get ICA support, and they configure a very vulnerable "sector", anchored on fragile organizations, relying on voluntary work, highly motivated by cultural goals and in some cases performing an effective public service in the territories they operate, struggling to keep up regular activity (Barbosa, 2020). In the next section, we will detail the financial data for non-commercial exhibition, as well as present a general profile of the non-commercial entities registered in the ICA database.

5. Non-commercial film exhibition sector in Portugal from 2007 to 2017

The characterization of the non-commercial exhibition sector in Portugal is our main goal, as refereed in previous sections. We got access to ICA's database, as well as financial data about public support to this supply segment. In this section, we will go through the analysis of financial data, then the main descriptive variables of the database (from 2007 to 2017, for reasons of quality and consistency of the registers – see Introduction), and finally we will estimate an econometric model to test demand determinants in this segment. For reasons of space, all the figures refereed in section 5.1 and 5.2 are presented in Annex 3[13].

5.1. Financial aid to non-commercial exhibition, 2007-2017

The following analysis is based on financial data provided by ICA, regarding its support to non-commercial exhibition. Depending on the characteristics of the exhibitors, they may obtain other funding for their activities, eventually through cultural or artistic applications to public funds (e.g. educational initiatives; artistic activities). Most of them get some support, at least indirect, from the municipalities, such as using municipal venues for their exhibition programs. All in all, as already mentioned, in Portugal the main support for film exhibition comes from ICA.

At the time of our research, the period of available data was larger, but we restricted our analysis to the same period of the database: 2007-2017[14]. The financial database includes 34 exhibitors, all those selected and granted support through the respective subprogramme (see previous sections) between 2007 and 2017. On average, 20 entities (per year) received public support during the period under consideration (graph 3.1.). This number remained quite constant over the years, oscillating between 21 entities in 2007 and 22 in 2016[15]. Except for three years with more excluded than granted entities (2007, 2009 and 2010), all the applicants were granted.

When applying for funding, exhibitors request a certain amount which, in all cases during the period, is not distinctive from the maximum amount set to be awarded, around 5000€

[13] Annex 3 (Descriptive analysis of non-commercial exhibition in Portugal, 2007-2017) contains the data used in this section and in the next one.

[14] We added some financial information to the main database, nevertheless getting a general portrait is important.

[15] There are, occasionally, incongruences regarding these numbers, as some financing was cancelled, frequently due to breach of contract.

per year. The value effectively attributed can differ from the one which was initially defined, due to several motives, for example accepted justifications of changes in the original project that can result from situations the exhibitors cannot control. Changes are not very relevant, as shown in graph 3.2.: a minimum of 4761,71€ in 2010 and a maximum of 5283,67€ in 2007 (2012 was the "zero year", no funding was awarded). In line with this information, graph 3.3. presents the total amount of funding over the years: the values oscillated between 95.106€ (2007 – 19 entities, as shown in graph 3.1.) and 109.720,30€ (2016 and 2017 – 22 entities selected under the biennial contest). A slight increase (around 10.000€) is visible in the last contest (2016-2017) since it became biennial (2014). The money attributed to this "sector" is clearly short, although vital for the entities, as discussed in the previous section. Graph 3.4. shows the global amount of funding that was attributed to the cinema and audiovisual sector and the amount attributed to exhibition, which includes non-commercial exhibition: exhibition has not been accompanying the growth of the money available, especially since 2014, when the total amount clearly reached a higher level (750.000€ in 2013, 1.050.000€ in 2014, 1.135.000€ in 2017). From 2014 onwards, the amount of funding granted to the whole exhibition sector included in ICA support programmes represented around 6% of the total amount of funding.

As mentioned in the previous section, there is no territorial criterion in the applications' pre-set rules. It is thus interesting to look at the geographical variable, the region where the entities are located (graphs 3.5. and 3.6.). More than half of the exhibitors funded between 2007 and 2017 are located in the Centre (10) and the Northern Regions (8) (graph 3.5.) The total amount of funding awarded to each region is of course influenced by the number of entities funded, but it depends also on the stability of the entities awarded. Considering the total amount of funding, the highest values went to the Northern and Centre Regions, followed by Algarve (graph 3.6.). Even though there are only three entities in Algarve, two of them were awarded funding continuously during the period of analysis. Due to this fact, this region comes in third in terms of total funding, more than the amount presented by Porto and Lisbon Metropolitan Areas. Over the whole period, 9 entities were funded uninterruptedly, except in 2012 (See table 3.1.).

5.2. General description of the non-commercial exhibitors, 2007-2017 (ICA database, entities with digital ticket system)

The financial data we briefly analysed in the previous section includes 34 exhibitors: all that have been granted public funding between 2007 and 2017. The non-commercial exhibition database registers 47 entities, those who have a digital ticket system, allowing for automatic registers (see section 3 for contextualization). This section draws a general description of the data, selecting its main characteristics, previously to the econometric estimation[16]. Although we will refer to "non-commercial exhibition/exhibitors", generalisation must be caution, for reasons presented in section 3.

The majority of non-commercial exhibitors are film societies and other cultural associations dedicated to cinema activities (33, 70,2%) – see table 3.2. The remaining 14 entities are equally divided between cultural-artistic activities (7), and "other type" (7), the latter including local development, social initiatives, municipal activities and sports, where the role of cinema is quite variable. It is thus a heterogeneous universe, ranging from historic film societies to sports associations. The majority of the exhibitors registered in the database have received financial aid from ICA, in some years at least, and this is important regarding their qualification as "alternative" exhibitors (see table 3.3., which also shows that, after 2013, the number of non-financed exhibitors is higher, as the financed ones remains more stable).

The geography of the exhibitors is in line with the results of previous sections: the northern region shows the highest number of entities (17 – 36,2% –, of which 11 are film societies), followed by the centre region (14 – 29,8% –, including 7 film societies), both regions corresponding to two thirds of the universe (66%) (graph 3.7.). These numbers closely relate to the number of sessions held by each exhibitor: the centre and northern regions together represent 68,4% of the total number of sessions. The specific location of the associations reveals that they are concentrated in urban areas, most of them in the municipal major city.

[16] As inferred from the considerations in section 3, this is a very large longitudinal database, whose preparation for statistical analysis took a substantial part of the empirical work. It could not be fully explored here, for reasons of space, but also of pertinence, i.e. the topics largely surpass the main focus of this thesis. We will go through a selection of variables, mostly aggregated for the whole period. Full analysis is being concluded, as an autonomous output of the research project. Occasionally, in order to reinforce or clarify some facts, we may refer to results not included in Annex 3, as they were considered as being secondary for the actual purposes.

The exhibition venues used by the exhibitors (see table 3.4.) show part of their structural vulnerability, as referred in section 4: only about one fifth of the entities have their own screen (19%, 9), being the majority (4) "other type" of organizations, i.e., associations not primarily engaged in cinema activities that own some kind of physical equipment with film projection devices. Film societies (18 out of 29, 62%) tend to resort to municipal theatrical venues (they represent 57% of the cultural facilities used for film exhibition). Other public facilities are used (8 cases, 17%) which include schools and cultural institutions with local/regional facilities (e.g. public libraries, monuments and schools, the Portuguese Youth Institute, the Northern Regional Directorate of Culture). Private venues (used by 5 entities, 11%) refer to different partnerships established with local institutions (church, the independent film circuit, the city council). These general results demonstrate that alternative regular exhibition remains highly dependent on other institution activities, especially the municipal cultural activities' programme (which is one common claim of these entities (Barbosa, 2020)). As mentioned in section 4 (section 4.2), as there exists at least one theatrical public venue in most municipalities, we infer that cinema (even commercial) is not (yet) considered as a schedule priority for municipal cultural policies.

The 47 exhibitors have held 14742 sessions between 2007 and 2017, more than one thousand (1340) sessions per year, in a total of 3753 different "titles", when counting both individual films (full length) and multiple film sessions – the latter being mainly short films sessions, that also include quite diverse thematic sessions, going from the celebration and in-memoriam sessions of renowned people (directors, actors, producers, musicians, etc.) to socio-political topics, historical events, and festivals extensions that, when counted individually (without duplicates) represent a total of 126 different names/titles. These multiple or thematic sessions represent 2,7% (399) of the total number of sessions. Considering the individual film sessions only (feature films and documentaries), there is a total of 3753 films, which account for 97,3% of the sessions between 2007 and 2017 (see table 3.5.). These results support the hypothesis that many non-commercial exhibitors compensate the absence of cinema supply (commercial namely) in the territories they operate in (see previous section). In parallel, they need to program films that contribute to attracting audiences, and that imposes trade-offs between "art" films from minority filmographies (as required by the support sub-program) and the number of spectators permits to infer how audiences are engaging with the alternative sector (table 3.6.). There was an average of 46 spectators per session, and the northern region (excluding Porto

Metropolitan Area) presents the highest average number of spectators (83 spectators per session) and the highest total number of spectators (168.991 – 24,7%). Porto and Lisbon Metropolitan Areas had an average of 54 and 60 spectators per session, respectively. These numbers reflect a quite high demand, reinforcing the idea that many of these exhibitors perform an important role, meeting a probably stable audience.

"Box-office" revenue is an interesting variable in this circuit, and an economic variable per excellence. It must be addressed with special caution, because charging ticket fees or not, and how to charge, are decisions closely related to other than economic factors. In fact, not all the exhibitors charge fees (6, four film societies and two cultural associations dedicated to cinema activities, see table 3.8.) and ticket prices, when applicable, are symbolic (maximum of 3,82€ table 3.7., estimated by the ratio revenue/number of spectators, a regular cinema ticket in the commercial circuit is 6€). Regularity of exhibition (measured by their regular presence over the analysed period), for example, might influence demand differently, as well as the number of sessions. Seniority and reputation of the exhibitors and their local anchorage, for example, are very important factors: two of the film societies with "better performance" regarding the number of spectators do not charge ticket fees.

The programming of films can also help us understand the strategies of non-commercial exhibitors[17]. As presented in table 3.9. the majority of films exhibited are fiction films (76,9%, 2286 films over the 11 years), followed by documentaries (16,5%, 620 films) and animated movies (6,8%, 230 films). This is in line with the characteristics of production. The vast majority of the sessions include full length films (92%, see graph 3.8.), as short films are residual, with 5% only. It must be noted that outside the commercial circuit short films are programmed exceptionally so, it was expectable to find a higher percentage of shorts. The "antiquity" of the films exhibited (according to their release date, give us an interesting insight, already signalled in the preliminary analysis of the year of premiere in Portugal) (Lemos, 2017). Table 3.10. shows that 47,6% of the films exhibited between 2007 and 2017 were released in Portugal after 2008. 11% of them in 2016-2017 (417 films, which is almost half the number of films exhibited from 2012 on). Among other factors, this may be explained by the referred trade-off between an alternative circuit, strictu sensu, the need

[17] There are many factors that affect the decisions about what to exhibit, beyond each exhibitor's mission and objectives. First of all, for publicly financed entities, there are pre-set rules (minority filmographies, a quota of national films, orientations regarding films' length and genre, etc.). Among other restrictions, the access to distributors (both the contact and the costs) is of major importance for this circuit. Technologic limitations of the facilities used, sociodemographic characteristics of the territory, etc. also condition the programs.

to compensate scarcity or inexistence of commercial supply, and the efforts to attract audiences. In line with these considerations, our final highlight goes to the origins of the films exhibited (graphs 3.9. and 3.10.). Here, we find reasonable cultural diversity when compared to commercial exhibition (see section 2). When pitching the participation of the different countries in the production/co-production of the films exhibited, 61 countries were listed, although 10% of them (6) are present in 84,5% of the films (graph 3.9.): USA leads, but with a modest position than in the commercial circuit (32% of the films), Portugal comes in second position (21,6%), then France (18,7%), Germany (7,5%), and finally Italy (2,4%) and the UK (2,3%). European countries, as a whole, account for 52,5% of the films exhibited. More important to note is that these results seem to point to the qualification of "alternative", applied to this segment. Finally, it is worth referring the presence of Portuguese films. In Portugal, as all over the world, production (including co-production) remains the main priority of public policies, and the most expensive segment of the film industry (see section 4). One common claim from non-American film industry (and independent industry, film societies, and several culturally engaged social groups) is the need to articulate production with distribution and exhibition, as many films produced with public money do not meet audiences that would justify the public investment, and some do not meet any audience at all, out of the closed circuits of festivals, media and other high restricted social groups, inside and outside the cinema industry. Films produced in Portugal represent 16% (602) of the totality of films exhibited between 2007 and 2017 and Portuguese co-productions represent 6% (33). These co-productions where established mostly with EU-members and Portuguese-speaking countries. Signalling the peripheral position of Portugal in the film industry, its role in the co-productions exhibited is that of main producer, never of secondary producer: directors and producers seek for alliances and specific collaborations in other countries (some for prestige, other for financial and market functioning reasons). If the policies for attracting foreign co-productions will work (e.g. Fundo do Turismo, created in 2018, which is an economic incentive, rather than a cultural one – see section 4), the situation might be altered – but it will depend on the "quality" market evaluation of the films produced whether they will be exhibited in the commercial or the alternative circuit. Having present the main traces of the non-commercial exhibition "sector", through a large description of the data made available by ICA, the next section will present the econometric exercise we have developed, based on the database introduced in this section.

5.3. Econometric analysis about the demand determinants in non-commercial exhibition

In section 2 we discussed some econometric analysis in order to identify the demand determinants for cinema. Annex 1 presents the main characteristics of the selected studies. Based on that specific literature review, we developed a model, using panel data, aiming to analyse how different characteristics of exhibition might influence the number of spectators attending film sessions in the non-commercial film exhibition network. All the variables used are internal to the database.

5.3.1. Development of the model

Based on the studies reviewed, our objective was to estimate a model which would permit to infer how the number of spectators in the non-commercial film exhibition sector is influenced by the characteristics of the movies and of the entities responsible for exhibiting the film. The main findings and conclusions will be analysed in this section.

The variable chosen to represent demand was the number of spectators. More specifically, the dependent variable of the model, $spectators_{it}$, represents the number of spectators which attended film sessions in exhibitor i (i=1,2,…,47) during year t (t=2007, 2008,…, 2017).

In order to comprehend demand for exhibition in the non-commercial circuit and based on the analysis conducted in the previous section, a series of explanatory factors were selected, which correspond to the set of variables that will be included in the estimation.

These factors are:

- **Ticket price**, as there was no direct information available regarding ticket prices, the variable *ticket_price* was utilized as proxy, since it corresponds to the ratio between total revenue, in euros, during a specific year, and number of spectators, during that same year.

- **Nationality of the film**, in order to distinguish national films from foreign films and essentially to identify the presence of Portuguese films exhibited by each entity during the time period under consideration. This factor is translated by the variable *portug*, which identifies the percentage of Portuguese movies that were exhibited by each exhibitor during a specific year.

- **Type of film** permits to distinguish the films exhibited according to their type (fiction, animation, documentary, NA (e.g. session)). The variables *fict*, *anim* and *docum*, disclose the percentage of films of each type, exhibited by each entity, during a specific year.

- **Movie length** distinguishes the films exhibited according to their length, which can either be full-length films, short films or others (series, mixed length, NA). The factor is translated by the variables *short* and *full*, which permit to disclose the percentage of full-length films, short-films and others, exhibited by each entity during a specific year.

- **Funding**, allows to differentiate the entities that received public funding during a specific year, from the ones that did not, and it is identified by the variable *funding*.

Considering these characteristics, the following general model was estimated:

$$spectators_{it} = \beta_1 + \beta_2 ticket_{price_{it}} + B_3 portug_{it} + \beta_4 anim_{it} + \beta_5 fict_{it} + \beta_6 full_{it} + \beta_7 funding_{it} + \mu_{it} \quad (1)$$

Where:

Spectators is the total number of spectators per exhibitor and year of exhibition.

Ticket_price$_{it}$ is the ratio between total revenue and number of spectators, in euros, obtained by exhibitor *i* during year *t*.

Anim$_{it}$ is the percentage of animation films exhibited by exhibitor *i* during year *t*.

Docum$_{it}$ is the percentage of documentary films exhibited by exhibitor *i* during year *t*.

Fict$_{it}$ is the percentage of fiction films exhibited by exhibitor *i* during year *t*.

Short$_{it}$ is the percentage of short films exhibited by exhibitor *i* during year *t*.

Full$_{it}$ is the percentage of full-length films exhibited by exhibitor *i* during year *t*.

Funding$_{it}$ assumes the value "1" if exhibitor *i* received public funding during year *t*, and "0" otherwise.

Before further exploring the estimation, it is necessary to remark that the sample was divided, in order to differentiate the exhibitors who, charge ticket fees from the ones with free attendance. Table 4 includes the mean of the variables used in the estimation, and those values permit an interesting comparative analysis between the exhibitors who charge ticket fees and the ones that do not, in line with the considerations in the previous section. A subsequent analysis will be conducted, comparing the exhibitors located in Porto/Lisbon and other municipalities (for the urban density effect). For the case of the exhibitors who do not charge ticket fees, the sample of exhibitors was not separated, because when considering Porto/Lisbon, only two observations were obtained. As it did not represent a substantial number of entities, for the case of these exhibitors, the estimation will be conducted using the entire sample of exhibitors.

Table 4 - Descriptive statistics of the variables, 2007-2017 (mean)

	Charge ticket fees			**Do not charge ticket fees**
Variables	**Porto/Lisbon**	**Others**	**All exhibitors**	**All exhibitors**
spectators	2620	2273	2331	3582
ticket_price	1,82	2,09	2,04	
portug	0,34	0,23	0,25	0,48
anim	0,01	0,05	0,05	0,14
docum	0,30	0,15	0,17	0,15
fict	0,64	0,78	0,76	0,70
short	0,13	0,03	0,05	0,15
full	0,81	0,96	0,93	0,79
funding	0,69	0,65	0,66	0,82
N(observations)	36	181	217	50
N(exhibitors)	8	33	41	9

Two considerations emerge from the observation of the means in table 4, thus reinforcing the results in the previous section. Fiction and full-length films represent the most substantial fraction of the films exhibited in the non-commercial exhibition sector, and funded exhibitors are in majority.

5.3.2. Regression Results

The following estimation was conducted using panel data, which permits to control for unobserved heterogeneity, while also reducing the collinearity among explanatory variables. Panel data models are usually associated with random and fixed effects estimations. Considering the present sample, both estimations were conducted, and subsequently the

Hausman Test was applied in order to infer which one of the estimations was more favourable (Cameron & Trivedi, 2009; Wooldridge, 2010).

By using the Hausman test it is possible to compare the estimates of the fixed effects and random effects models, in order to determine if there is any correlation between the innate characteristics of the individuals and the vector of explanatory variables of the model, assuming that the idiosyncratic errors and explanatory variables are uncorrelated across all time periods. After applying the Hausman test, it was possible to conclude that a random effects estimation was preferable (see annex 4).

Different specifications of the model were estimated, considering distinct combinations of the variables. The variable *fict*, was maintained in all the specifications that were rehearsed, as this movie type represents a considerable fraction of the films exhibited. The specification presented above was found to be the best version of the obtained model.

As already mentioned, the estimates are separated, distinguishing exhibitors who charge ticket fees from the ones that do not, and the difference in terms of results will now be analysed. Considering the general model presented above (1), the following estimates were obtained:

Table 5 - Regression results
Dependent variable = spectators

	Exhibitors who charge ticket fees	**Exhibitors who do not charge ticket fees**
c	2211,92**	5966,405***
ticket_price	-292,92**	-
portug	-1444,52***	-4534,70***
anim	1751,90	939,43
fict	295,09	236,17
full	259,23	-1030,14
funding	463,03**	115,6
R^2 (weighted statistics)	0,10	0,19
R^2 (unweighted statistics)	0,09	0,37
N (observations)	217	50
N (exhibitors)	41	9

***, ** and * identify the variables that are significant at 0.1 (p<0.1), 0.05 (p<0.05) and 0.01 (p<0.01), respectively

The variables *ticket_price*, *portug* and *funding*, were found to be statistically significant. The variable *portug* is found to be statistically significant at a level of 1%, for both the exhibitors who charge ticket fees and the ones who do not. If an exhibitor, during a specific year, exhibits only Portuguese movies, on average, the number of spectators decreases by approximately 1445 for the exhibitors who charge ticket fees, and by 4535 for the exhibitors who do not charge ticket fees, in comparison with a scenario where all the movies exhibited are foreign. The variable *ticket_price* is statistically significant at a level of 5%, which implies that if ticket prices raise by 1€, on average, the number of spectators attending sessions at a specific exhibitor will decrease by 293, during the year when the price increase occurred. For the exhibitors who charge ticket fees, the variable *funding* is found to be statistically significant, as if an exhibitor is awarded public funding, on average, that exhibitor will have more 463 spectators during a specific year of exhibition, than an exhibitor who does not receive funding.

These results evidence that the exhibition of Portuguese movies will influence the number of spectators negatively, for both the entities who charge and who do not charge ticket fees. The variable *funding* is shown to be significant for the exhibitors who charge ticket fees, influencing the number of spectators positively. However, for the entities who do not charge ticket fees, this variable is not relevant. This is possibly a result from the characteristics of the global supply as the exhibitors who do not charge tickets are very important cultural agents in their own territories (see tables 3.7. and 3.8., Annex 3).

Subsequently, the sample was separated according to the location of the exhibitors. Different estimations were obtained, considering exhibitors located in the cities of Lisbon and Porto, and then considering exhibitors located in the remaining municipalities. This separation was found to be necessary as the exhibitors are predominantly located in urban areas and that tends to influence attendance. The estimation results are shown in table 6. The sample is still differentiated considering the charge of ticket fees.

Table 6 - Regression results, considering location
Dependent variable = spectators

	Exhibitors who charge ticket fees	
	Porto/Lisbon	Other municipalities
c	2488,06***	4183,10**
ticket_price	-840,23***	-255,81*
Portug	-2671,70***	-2136,14***
Anim	-15906,31**	1495,29
Fict	-1345,56	91,88
Full	2434,61**	-1281,71
Funding	2293,92***	81,11
R^2 (weighted statistics)	0,44	0,11
R^2 (unweighted statistics)	0,44	0,12
N (observations)	36	181
N (exhibitors)	8	33

***, ** and * identify the variables that are significant at 0.1 (p<0.1), 0.05 (p<0.05) and 0.01 (p<0.01), respectively

The variable *ticket_price* is found to be statistically significant for both the exhibitors located in Porto/Lisbon and in other municipalities. This implies that if ticket prices increase by 1€, on average, the number of spectators attending sessions at a specific exhibitor will decrease by 840 in Porto/Lisbon, and by 256 in other municipalities, during the year when the price increase occurred.

The variable *portug* is also found to be statistically significant, and if an exhibitor, during a specific year, exhibits only Portuguese movies, on average, the number of spectators will decrease by 2672 in Porto/Lisbon and by 2136 in other municipalities, in comparison with a scenario where all the movies exhibited were foreign.

Regarding the variable *funding*, it's possible to observe it is statistically significant at a level of 1% for the exhibitors located in Porto/Lisbon. If an exhibitor receives public funding, on average, it will have more 2294 spectators during a specific year than an exhibitor who does not receive funding.

Still considering the exhibitors located in Porto/Lisbon, the variables *anim* and *full*, were found to be statistically significant at a level of 5%. This implies that if an exhibitor, during a specific year, exhibits only animation films, on average the number of spectators will decrease by 15906. Regarding the variable *full*, if an exhibitor, during a specific year, exhibits only full-length films, on average the number of spectators will decrease by 2435.

According to the obtained results, some characteristics of the films and the exhibitors will influence demand for cinema in non-commercial film exhibition circuits. Given the results presented on table 6, and by analysing these estimations, it is possible to conclude they are quite similar. The variables *ticket_price* and *portug* were found to be statistically significant for the exhibitors located in Porto/Lisbon and other municipalities. The prices charged tend to be relevant, as this highly influences consumer choices, but it might also result from the general characteristics of supply and demand. In Porto and Lisbon cinema attendees may be more sensitive to prices, given the diversity of possible other cultural choices, including cinema, and the higher probability of more exigent cultural consumers, while in some other municipalities, although with a much more scarce cultural offer, cultural consumption tends to be less sensitive to the specific characteristics and more sensitive to price. Regarding the variable *portug*, it is evident the presence of Portuguese movies is still very residual, as spectators tend to prefer foreign films (that are often more "mainstream").

The variable *funding* is statistically significant for the exhibitors located in Lisbon and Porto, as the amount of public funding received by these exhibitors will influence the number of spectators positively. Due to the location of these exhibitors, they tend to provide a regular programme of exhibition, and, therefore, funding will permit to dynamize their activities (even though, as seen in section 4, the funding amounts attributed to non-commercial exhibition are quite modest). This is an important finding of this analysis, as it proves the existence of funding, and consequently increases in its amount, will positively affect the demand for cinema in the non-commercial film exhibition sector, possibly because it conditions the type of programme, as seen in the previous section.

By analysing the obtained results, it is possible to conclude that the characteristics of the films (nationality), and specificities of the exhibitors, for instance, ticket price and funding, are factors which influence the number of spectators.

When observing variable means, and in regards to the variable *funding*, most exhibitors have received funding (over 50%), which in general will generate a positive impact. In terms of the nationality of the films, Portuguese movies still represent a residual percentage of the total films exhibited, and it tends to impact the number of spectators negatively. Demand for Portuguese films in the non-commercial exhibition sector is still scarce. Portuguese films are in general experimental and artistic films, for which many are awarded in reputed festivals, so they tend to keep away younger audiences and the common film attender, looking for more popular films. This is important regarding other European countries, with larger markets, then more capable of reaching a segmented domestic supply market (popular and experimental).

Variables referring to film type or length, were generally not found to be statistically significant, as these characteristics do not tend to impact the number of spectators.

As expected, the variable *ticket_price*, has a negative effect on the number of spectators (when considering exhibitors who charge ticket fees), as they are generally price sensitive. This follows the results that were obtained by Dewenter & Westermann (2005) and London Economics, et al. (1994), as prices proved to have a negative impact on cinema demand. Nevertheless, considerations made above regarding the characteristics of exhibitors that do not charge ticket fees are important to relativize these results (Dewenter & Westermann, 2005; London Economics et al., 1994).

6. Final remarks and further developments

The main goal of this dissertation was to study the non-commercial film exhibition sector, in order to contribute to the knowledge regarding this exhibition segment, that still lacks investigation. This research is essentially focused in the Portuguese case, but a substantial amount of information was analysed regarding the European framework, specifically to reflect upon the existing public policies for cinema at both levels.

This research surfaced from the opportunity of working with a quite extensive, longitudinal and dynamic database, in articulation with other information from the Portuguese Institute of Cinema and Audiovisual (ICA). This information, combined with other official documents and the existing literature, permitted to address a series of topics regarding the film industry and the non-commercial film exhibition sector in Portugal, with some insights into the European framework.

It is of interest to study the cinema sector especially due to both its economic and cultural dimensions. It is necessary to analyse it, not only as an industry that encompasses massive investments and returns, but due to its contribution to culture (symbolic aspects, identities, values, heritage…), as culture potentiates and widens the economy. This leads us back to the concept of cultural capital, as presented by Throsby (2011) and discussed in section 2. When studying and characterizing cultural activities or goods (in this case, film exhibition), it is essential to keep this concept in mind as every cultural demonstration accumulates value, from which members of society will benefit from, besides being a source of economic growth and urban development (Throsby, 2011)

Bellandi et al. (2020) reinforced Throsby's arguments and proposes, by seeing culture as a driver of economic growth and expansion, that permits to distinguish each country and region, besides being a driver of competitive advantage. In fact, this applies also to the hegemony of Hollywood in the global film market: in addition to being a powerful (economic) industry, it has allowed the American culture to penetrate globally (Bellandi et al., 2020). This has been a strong argument, not only for national but for European public policies, in order to encourage regional development and specifically to direct public support towards cultural capital, as cinema is recognized as cultural heritage and as an identity generator (European Audiovisual Observatory, 2019).

Still, the major segments encompassed by the cinema sector (production, distribution, exhibition) are increasingly attracting the interest of Economic Science more due to its financial dimension and technological innovations, than due to its cultural relevance (Benghozi et al., 2015)

Given the importance of the cinema sector (at an economic and cultural level), we can highlight the significance of the non-commercial film exhibition sector, especially in promoting cultural diversity, as it essentially aims at sharing national filmographies and film heritage, by putting together programmes that are distinct from those available at multiplexes. The sector is characterized by its uneven geographical distribution (often aiming at promoting easy access to cinema in more isolated areas) and fragility, as film exhibition is often an intermediary activity. The exhibitors often rely on volunteer work and memberships, since they operate with no intention of charging ticket fees. With this characteristics, public funding is essential, in order to permit non-commercial exhibitors to continue operating. This need for support is even more highlighted nowadays, with the impacts of digitization, and changes in consumption patterns since the introduction of the VCR and DVD, and more recently with the use of streaming platforms, as consequently theatrical exhibition is being replaced by "home cinemas". It must be noted, however, that for the same reasons, digitization can be an important driver for enlarging cultural accessibility through cinema.

Support to the non-commercial film exhibition sector is crucial, even though it is still insufficient, as, in Portugal as seen, the amounts of funding awarded have not increased in over ten years. Given this, our aim with this research was to provide an important contribution to cinema and existing public policies, as this is the first time a database from ICA regarding this domain is subject to treatment and analysis. As it is a very rich and detailed database, through our preliminary analysis it was possible to better understand and characterize the sector, from the films exhibited to specificities regarding the film sessions. This statistical analysis was taken even further, with the estimation of an econometric model. It permitted to retrieve relevant conclusions, as it reinforced the role of public funding which positively impacted the number of spectators.

As this dissertation has significative potential to generate further developments, it is crucial to overcome some of its limitations.

This preliminary analysis of the database was conducted in order to prepare it for subsequent analysis (which consumed a substantial amount of time). It is important to point out, though, that we presented just the most relevant information, and a significant fraction of the database is yet to be presented.

Information about exhibition and public policies for cinema is still scarce, even when considering European Unions' framework. Some contributions regarding the theme were selected, in order to initiate a preliminary comparison that will be essential, in order to continue this research in the future.

The econometric model permitted to further analyse the data available, but was still a preliminary approach as, in the future, we plan to optimize and improve it, by including additional variables and to increase the scope of our results, so as to compare it with other cinema demand estimations.

As this dissertation is part of a broader project research, this first analysis may lead to subsequent explorations, namely of other materials made available by ICA, that can be contextualized in the scope of cultural economics. To sum up, it was possible to conclude how culture, and cinema, are relevant to the enrichment of the economy and society. We emphasized the role of the non-commercial film exhibition sector, in disseminating exhibition to more isolated areas, especially Portuguese films, which are often unknown to national audiences. However, and even considering there are countries that are more culturally aware, generally public support granted to film exhibition, and specifically to non-commercial film exhibition, is still insufficient and needs to be more adequate to the other industry segments, as well as to the territories where the non-commercial exhibitors operate.

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Annexes

Annex 1 – Selected studies with insights regarding measures of cinema attendance

Cit.[19]	Paper	Main goal, empirical object, period, main data sources	Model	Dependent variable	Independent variables	Main results
London Economics, et al. (1994).	White Book of the European Exhibition Industry	Study of the cinema exhibition industry in the EU (main characteristics; 12 countries). Primary data gathered through national sample field surveys to exhibitors, distributors and public authorities and screens, carried out in 1993. Model analyzed: The "success [of publicly-supported cinemas in making films available and in attracting audiences" – UK case-study with a sample of 680 films exhibited in the RFT (regional film theaters) network (supported cinemas outside London), from September to December 1992. Source: British Film Institute, National film official statistics.	$\ln(ADM) = \alpha_0 + \alpha_1 \ln(price) + \alpha_2 \ln(days) + \alpha_3 \ln(cinemas) + \alpha_4 N_F + \alpha_5 R_{FR} + \alpha_6 R_{FRL}$	ADM – number of admissions	Price – average ticket price Days – average number of days the film was shown in each cinema Cinemas – number of cinemas in which the film has been shown N_F– dummy for French Nationality R_{FR}– dummy for first-run release R_{FRL}– dummy for first-run release by a large distributor	-Admission prices and the circulation of the film are significant when determining the success of the film, as measured by the number of admissions; -Second run releases and films with wide circulation, tend to be the most successful type of films exhibited at RFTS.

[19] Papers are presented according to the date of publication

Dewenter,R., & Westermann, M. (2005).	Cinema Demand in Germany	German film demand, 1950-2002, using time series data. Film Statistics published by Spitzenorganisation der Filmwirtschaft	Demand Equations	Demand I ATTR – cinema demand	P – real ticket price Y – income UNION – captures the effect of German reunification (=1 1990-2002) VID – captures the creation of the VCR (=1 1970-2002; =0 prior to 1970) PRIV- market share of private TV stations TV-number of registered tv sets	-A strong connection between cinema attendance, real income and prices was found; -Attendance has a positive effect on cinema supply, while TV and VCRs tend to have negative effects; -Cinema demand was found to be price elastic; -Prices of other cultural goods are positively related to cinema demand; therefore, movies and other leisure activities are substitutes.
				Demand II ATTR – cinema demand	P – price Y – income UNION – captures the effect of German reunification (=1 1990-2002) GMOV – number of German movies released in a specific year VID – captures the creation of the VCR (=1 1970-2002; =0 prior to 1970) PRIV- market share of private TV stations	
			Simultaneous equation specification	Demand ATTR – cinema demand	P_{t-1} Y - income Pother – prices of substitutes or complements SEAT – number of seats GMOV – number of German movies released in a specific year VID – captures the creation of the VCR (=1 1970-2002; =0 prior to 1970) PRIV- market share of private TV stations	
				Supply SEAT – number of seats	$ATTR_{t-2}$– cinema demand $Load_{t-2}$– ratio of number of tickets sold to number of seats available each year Y - income POP – population VID – captures the creation of the VCR (=1 1970-2002; =0 prior to 1970) PRIV- market share of private TV stations	

Governo, F., & Teixeira, A. (2011).	Marketing and technology sophistication as hidden weapons for fostering the demand for 'art house' cinema films	Demand for "art house" (domestic films, non-US) and mainstream films (American films). 30 OECD countries (those accessioned until 2000). Cross-country analysis, with data gathered from different sources for 2007 (depending on the variables, e.g. OECD, EU, governments, cinema statistics in place in the selected countries", European Audiovisual Observatory).	$\log\left(\frac{prob(art-house)}{prob(mainstream)}\right) = \beta_0 + \beta_1 experiential_{motivation} + \beta_2 consumption_{patterns} + \beta_3\, production_{concentration} + \beta_4 distribution_{concentration} + \beta_5\, marketing_{investment} + \beta_6\, Education + \beta_7\, Occupations + \beta_8\, Per_{Capita_{Income}} + \varepsilon_i$	Demand for art-house versus mainstream films (dummy variable): Log((prob(art-house))/(prob(mainstream))	Variable and proxy description: Experiential motivation – choice behavior as proxy for experiential motivation ("market share in the top ten box-office admissions by country") Consumption patterns – assessment of different patterns of film consumption ("domestic films released, available screens for domestic films, average admissions per capita) Production quality – assessed by the size of the budget in film production ("average budget of domestic films") Distribution concentration – measures the degree of concentration that addresses the inequality dimension ("market share of top distributors") Marketing investments – "marketing effort"or share of marketing expenditure in production budget ("marketing expenditure in overall production budget") Education levels – high education as proxy for artistic taste Field of graduation – graduation group ("% of graduates from tertiary type A and advanced research programmes in total population") Occupational class – creative employment as proxy for occupational class ("creative employment in total employment") Income ("GDP per capita") Technological sophistication – degree of technological development of a country ("ratio of research and development in GDP")	-Cinema tastes diverge across countries; -"Production quality"(as proxied by the average budget of a film) of domestic films will contribute to the increase in demand for such films; -Technological level and marketing investments strongly contribute to the consumption of art house films

Chisholm, D. C., & Norman, G. (2012).	Spatial competition and market share: an application to motion pictures.	Spatial competition and agglomeration effects on attendance, regarding Metropolitan US areas (Boston and South Florida). Data was specifically gathered and prepared for the research (includes first run theaters only), concerning the period from 1995-2000, but the analysis was limited to the year 2000.	Spatial competition and agglomeration effects were studied using two-stage least squares: $attend_i = \beta_0 + \beta_1 location_i + \beta_2\ attributes_i + \beta_3\ relativeattributes_i + \beta_4 demographis_i + \varepsilon i$ i – each theatre i	Movie theater attendance is calculated according to: Attend$_i$ = (per capita annual box-office revenues in 2000)/(theatre ticket price)	Location – local theatre clustering Attributes – theatre's attributes (e.g. stadium seating, surround sound or digital projection) Relative attributes – measures theater attributes in relation to its nearest neighbor's Demographics – controls demographic characteristics Distance1 – Euclidean distance from each theatre to its nearest first-run neighbor Theatre count – number of theatres within a defined radius R of the theatre Screens – number of screens in a theater %Urban – percentage of the population living within a 5-mile radius of the theatre Population 1990 – population levels from 1990 Digital – presence of digital sound %Age10to24YRS – population aged between 10 and 24 (percentage) %Age25to39YRS - population aged between 25 and 39 (percentage) %INC35.000+ - percentage of the population whose income is above $35.000 Open*months – equal to 1 if a theatre experienced an opening event in 2000 Close*months – equal to 1 if a theatre experienced a closing event in 2000	-Considering two effects, a negative competition effect and a positive agglomeration effect, the authors concluded the competition effect tends to dominate movie theatre demand; - Theater attendance tends to be greater if there is a reduced number of theaters in the surroundings of the main theater.

Von Rimscha, M. B. (2013).	It's not the economy, stupid! External effects on the supply and demand of cinema entertainment.	Impact of economic growth in 3 "major European markets"(Germany, UK and Spain). Period covered: 1st quarter of 2000 – 4th quarter of 2010. Main sources (for different variables, see p. 440): OECD, Directorate-General for Economic and Financial Affairs of the EU commission, German GFF (General Federal Film Board), Internet Movie Database (IMDb) and Rentrak.	VAR model	Movie quality (as assessed by the audience) Movie supply (in published titles) Movie demand (Box-office)	Gross domestic product Consumer prices (indexed) – evolution of consumer prices during the time period under consideration Disposable household income Consumer confidence (indexed) – permits to analyze consumers reactions and it is expected to change synchronously with movie demand Cinema ticket price	-Demand is not related with the state of the economy, as it is not influenced by indicators such as GDP, consumer confidence and consumer prices; -Distributors are less concerned with profit maximization, as they tend to release more movies than those in demand; -Distributors in the art-house sector are less concerned with profit maximization and blockbuster distributors are less sensitive towards external effects.

Ros. R.C. (2017).	Determinants de l'èxit cinematogràfic. Model d'anàlisi de la producció catalana 2008-2014.	Films were classified by the Catalan Institute of cultural enterprises (ICEC) and the Institute of cinematography and audiovisual (ICAA) as "Spanish Films"and they were either produced or distributed by companies based in Catalonia. This information was complemented with data from the Yearbook of Cinema and Memory (from ICAA), Lumiere database, the European Audiovisual Observatory and ICEC'S activity report. Through an empirical model, the author planned to observe the behavior and success of Catalan cinema.		Internal success (differentiates the spectators in each of the territories): spectCAT (Catalonia), espectESP (rest of Spain), espectTOTESP (the two territories together (multiple linear regression) External success (measured by the number of European countries that have exhibited a Catalan movie): paisEUR (logit regression)	Genre – identifies movie genre TipusCOPINT - type of international coproduction AIE – group of economic interest participates in the production – dichotomous variable orgACTOR - actors' country of origin valorCRITIC - influence of reviews Sequel – if the movie has a sequel or not participCOPINT - participation of international coproducer GOYA/GAUDI - nominations and prizes attributed by the national academies of cinema participTV - identifies the purchase of antenna rights grupEMP- company group PRSSPST - budget recDIRCT - directors' popularity recACTOR - actors' popularity DISTR - distribution company EMPROD - type of producing company prodctTV - participation of television channel operators valorESPECT - viewers rating paisESTR[20] - number of European countries where the movie has premiered (excludes Spain) subvAMORT - nominal value of the subsidies by one film for amortization VERORG - original version or language of the film orgDIRCT - directors' country of origin participCAT - categories of participation tipusPRODC - types of production dataESTR - release date Qualif - age rating Fest - presence at festivals Animac - animation movies Subvproject - grants received by a film	-There is a small connection between the Catalan Cinematographic production and the spectators; -Films that are to be distributed in international markets, usually include elements that facilitate their internal success; -Budget factors tend to induce cinematographic success as well as production companies' characteristics and awards.

[20] Due to its values, the variable was converted into a binary variable, so it becomes dependent on the measure of external success. This variable is paisEUR and it assumes the value 1 if the movies were released in, at least, one European country (excluding Spain) or the value 0 if the Movies have only been released in Spain.

McKenzie, J., et al. (2018).	For love or money? Assessing outcomes from direct public investment in film."	Effects of direct public investment in the "performance" (success) of films (considering "major markets", in the case UK and US). Australia: all "films receiving direct investment support from the (former) FFC and (current) Screen Australia agencies, as well as films not receiving this support. Investment data was compiled from FFC and Screen Australia annual reports, covering the (financial) years 1995/1996-2016/2017" (p. 462). Source: Motion Picture Distributors Association of Australia (MPDAA)	$Y_i = \alpha_{FFC} DI_{FFC,i} + \alpha_{SA} DI_{SA,i} + X'_i \beta + \varepsilon_i$ Y_i – outcome of film *i*	To compare film performance under two policy regimes (FFC and Screen Australia), the following variables were used: **Box-office ROI**: Log(ROI) **Festival screenings:** Number of festival screenings $Y \in \{0,1,2,3,4\}$ **IMDB user critic rating:** IMDB user review (scored out of 10) and IMBD critic (score out of 100) **International success:** UK/US release $Y = \{0,1,2\}$	$DI_{FFC,i}$ – direct investment in film *i* by FFC (Film Finance Corporation Australia) $DI_{SA,i}$ – direct investment in film *i* by Screen Australia Considered in two ways: (1) Dummy variable if any investment was received (presence) (2) Investment as ratio of maximum investment granted during the financial year (confidence) Vector X*i* is a vector of control variables connected with film *i*. It includes budget, genre, rating, year controls	-"Evaluation films"(financed through selective funding mechanisms – Screen Australia policy era) tend to outperform "marketplace films"(financed through automatic funding mechanisms – FFC policy era)

Annex 2 – Evolution of funding criteria from 2007 to 2017

<table>
<tr><th>Year</th><th>Funding Criteria</th></tr>
<tr><td>2007-2013[21]</td><td>ICA grants support to the exhibition of national, European, and international works whose distribution in Portugal is inferior to 5% of the market share.

Non-profit entities can apply if their goal is to promote cinematographic culture.

Projects are approved if they comply with the following requirements:
• Minimum of 30 sessions per year.
• Programme must include Portuguese or international works, in a percentage not inferior to 80% of the total. A minimum of 30% is destined towards works supported by ICA.

-Support may not exceed 80% of the total cost of each annual project.
-A maximum of 30% of the total value must be used to cover promotion expenses.
-Each entity must only present one project per contest.
-The sessions that are part of the project must not be included in film festivals or any extension of said festivals.

The application must include:
• Curriculum of the candidate,
• Exhibition programme and origin of the films
• Promotion strategy and indication of the target demographic of the events
• Budget plan
• Exhibition spaces must have an informatized ticketing system, as established by decree-law number 125/2003, from June 20th.

Selection criteria is based on:
• Quality
• Programme
• Consistency of the budget
• Promotion strategy
• Periodicity of exhibition
• Curriculum of the candidate
• Activities previously developed in the course of the support program</td></tr>
</table>

[21] Anexo XVII - https://ica-ip.pt/fotos/downloads/programa_de_apoio_a_exibicao_nao_comercial-xvii_475949626561fcbc6655ba.pdf

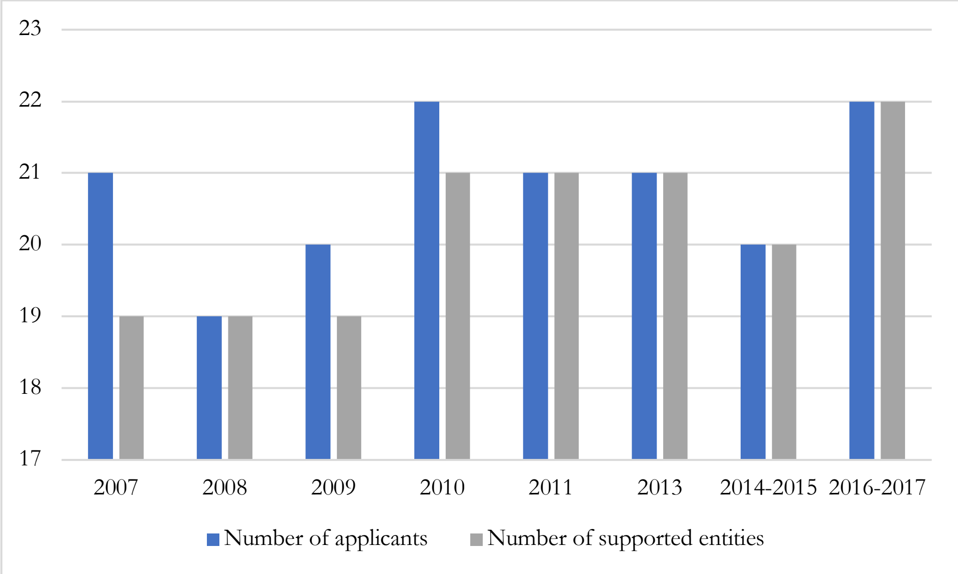
2014-2017[22]	-ICA supports the exhibition in alternative sectors, of national and international works, when the distribution in Portugal is inferior to 5% of the market share, in terms of number of spectators, verified in the year prior to the opening of the contest. -Non-profit entities can apply if their goal is to promote cinematographic culture. -In 2014 the support considered in this sub-programme started being pluriannual and each entity can only apply with one project. Projects are approved if they comply with the following requirements: • The exhibition programme includes Portuguese and international works, whose distribution in Portugal is inferior to 5% of the market share, in terms of number of spectators, verified in the year prior to the opening of the contest. The percentage must not be inferior to 80% and at least 30% is destined towards works in Portuguese. • Minimum of 30 sessions per year. • The sessions that are part of the programme, must not be part of film festivals or any extensions of said festivals. -Support may not exceed 80% of the total cost of each annual project. The application must include: • Curriculum of the candidate, • Exhibition programme and origin of the films. Starting from 2016, applications must also include a description of the films that will be exhibited including their length, type of work, language and target demographic • Promotion strategy and indication of the target demographic of the events • Budget plan • Exhibition spaces must have an informatized ticketing system, as established by decree-law number 125/2003, from June 20th. Selection criteria is based on: • Quality • Programme • Consistency of the budget • Promotion strategy • Curriculum of the candidate • Periodicity of exhibition • Percentage of documentaries, short films and animated films that will be exhibited, per total number of works exhibited

Source: ICA

[22] Anexo XXIII - https://ica-ip.pt/fotos/downloads/23_anexo-exibicao_em_circuitos_alternativos_2016_final_20188468256bc83e0a21b5.pdf

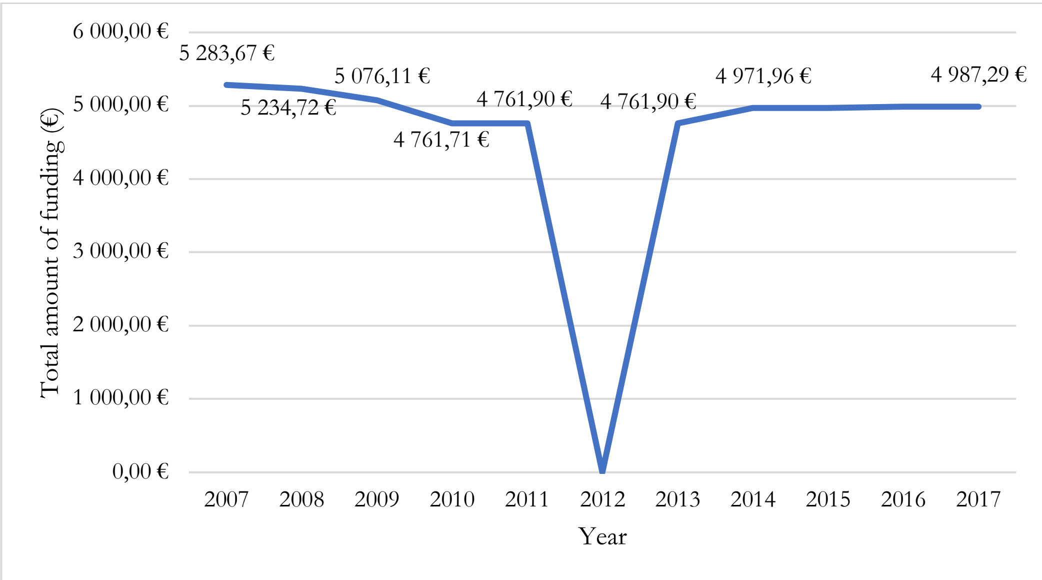
Annex 3 – Main characteristics of the non-commercial film exhibition sector[23]

Graph 3.1. - Number of applications and number of supported entities per year (2007-2017)



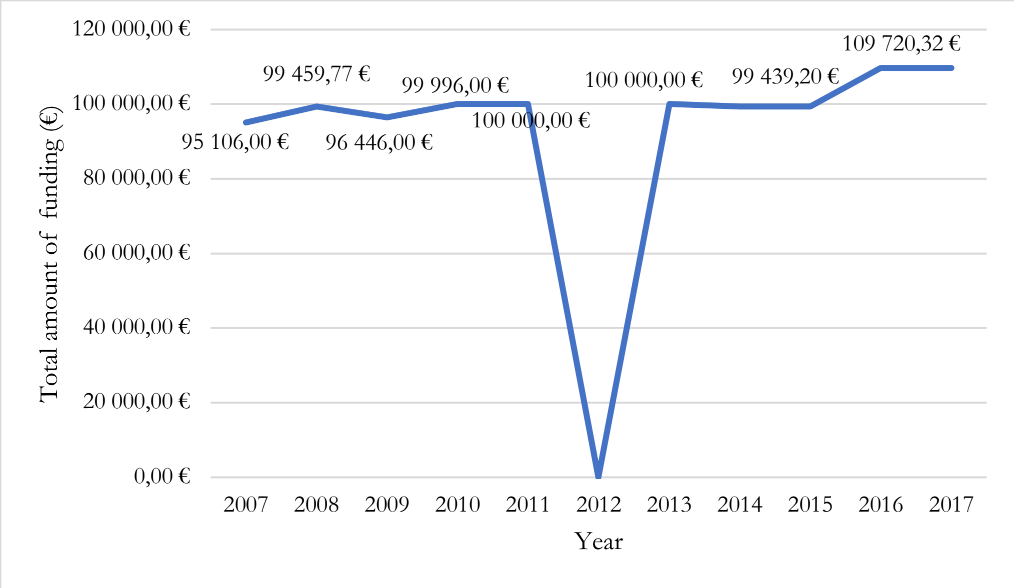
Source: ICA, Contests' archive[24]

Graph 3.2. - Average amount of funding awarded per entity and per year

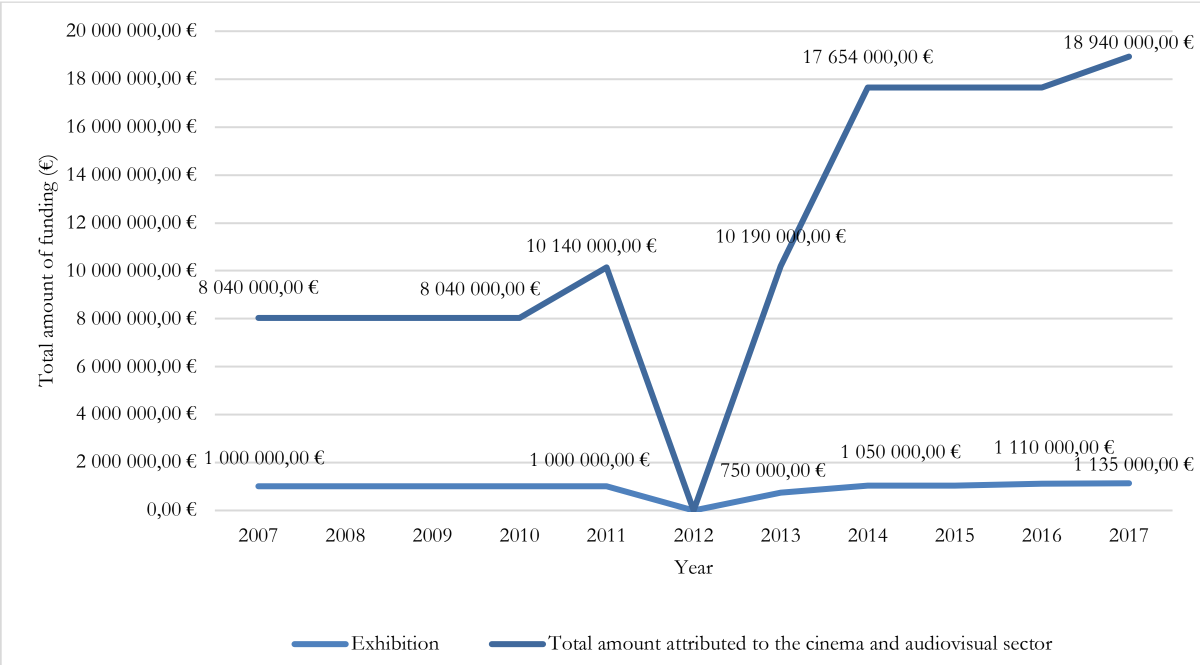


[23] Explicit mention, the source of all data is Instituto de Cinema e Audiovisual (ICA)
[24] https://ica-ip.pt/pt/arquivo-de-concursos/2018/

Graph 3.3. - Total amount of funding awarded per year to non-commercial film exhibition

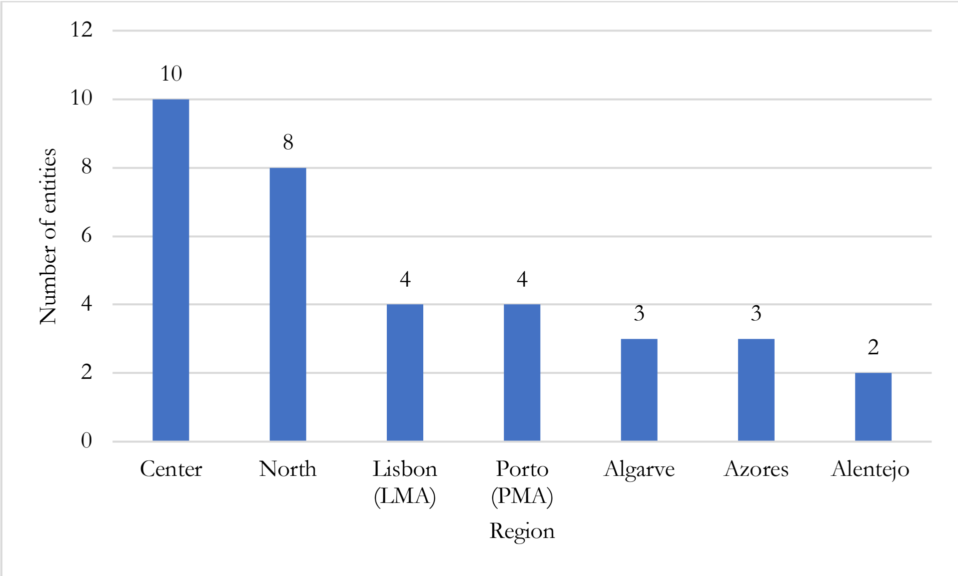


Graph 3.4. - Total amount attributed to the cinema and audiovisual sector and to exhibition, per year



Source: Paulo Gonçalves

Graph 3.5. - Number of financed entities according to region (N=34)



Graph 3.6. - Amount of funding granted according to region

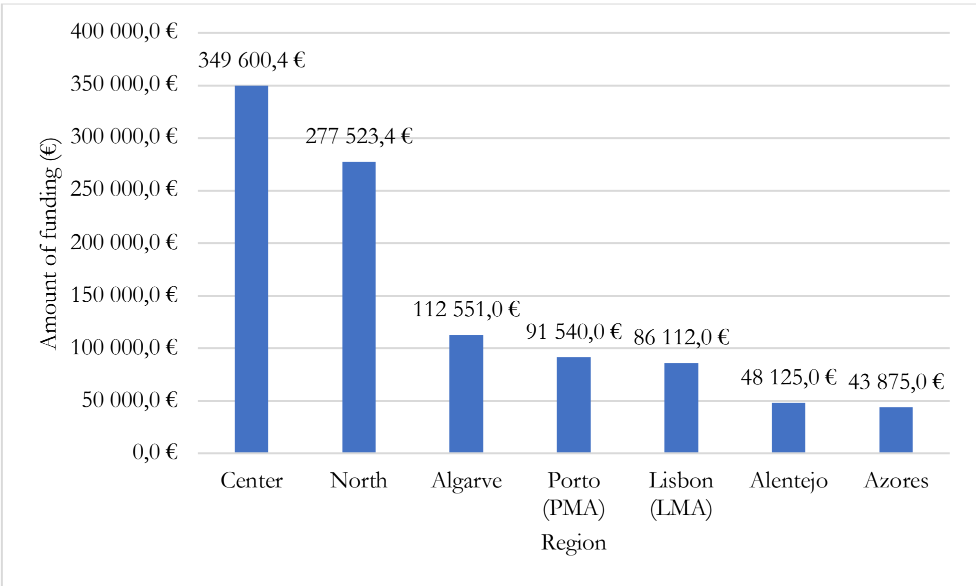


Table 3.1. - Entities which received continuous funding from 2007-2017

Exhibitor	**Region**	**Total**
Cineclube de Viseu	Center	55 246,00 €
Cineclube de Avanca	Center	52 841,00 €
ABC Cineclube	Lisbon	52 288,00 €
Cineclube de Joane	North	51 899,00 €
Cineclube de Faro	Algarve	51 825,00 €
Cineclube de Vila do Conde	North	51 432,00 €
Ao Norte	North	51 315,00 €
Palha de Abrantes	Center	49 574,00 €
Cineclube de Tavira	Algarve	48 252,04 €

Table 3.2. - Exhibitors: types and film sessions, (N and %)

	Types		Film sessions	
	N	%	N	%
Film Society	28	59,6	10065	68,3
Cinema	5	10,6	1028	7,0
Cultural-Artistic	7	14,9	1000	6,8
Other	7	14,9	2649	18,0
Total	47	100	14742	100

Table 3.3. – Number of financed/non-financed exhibitors

Year	Number of financed exhibitors	Number of non-financed exhibitors
2007	17	2
2008	18	2
2009	16	4
2010	20	2
2011	19	3
2013	17	3
2014	16	13
2015	19	11
2016	18	14
2017	15	15

Graph 3.7. – Total number of exhibitors according to region (%, N=47)

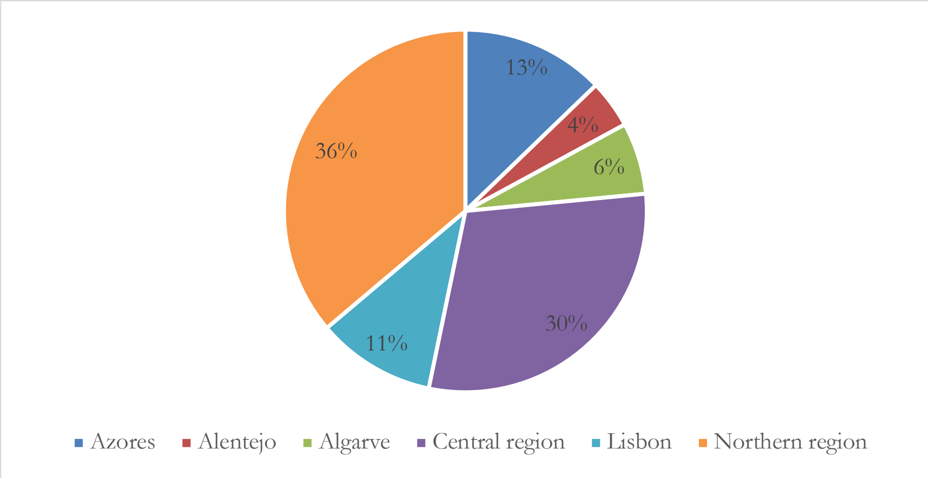


Table 3.4 – Types of venues/screens used by the exhibitors (% of total exhibitors, N=47)

Type of exhibitor	Own venues	Municipal venues	Other public institutions' venues	Private venues	Other type of venue	Total	N
Film society	4,3	38,3	14,9	6,4	6,4	70,2	28
Cinema		6,4		4,3	2,1	12,8	5
Cultural-artistic	6,4	6,4	2,1			14,9	7
Other	8,5	6,4				14,9	7
Total	19,1	57,4	17,0	10,6	8,5	100	
N	9	27	8	5	4		47

Table 3.5. - Total number of sessions and individual titles, 2007-2017

Movie titles (full length)	N	Number of sessions	%
	3753	14343	97,3
Multiple or thematic sessions (without identification of movie titles)		399	2,7
Total		14742	100%

Table 3.6. – Number of sessions and spectators according to region, 2007-2017

Region	Sessions	Sessions (%)	Spectators	Spectators (%)	Average number of spectators per session
North	2048	13,9	168991	24,7	83
Azores	562	3,8	38318	5,6	68
Lisbon Metropolitan Area (LMA)	1104	7,5	66436	9,7	60
Porto Metropolitan Area (PMA)	2363	16,0	128242	18,7	54
Alentejo	1217	8,3	58716	8,6	48
Algarve	1771	12,0	67801	9,9	38
Centre	5677	38,5	156293	22,8	28
Total	14742	100	684797	100	46

Table 3.7. – "Top five" exhibitors, by revenue and by number of spectators, 2007-2017

	Exhibitor	Total revenue	Total number of spectators	Revenue per spectator	Number of years of exhibition	Number of sessions	N. of sessions (% of the total number of sessions, N= 14742)
Top five exhibitors, by *total revenue*	Cineclube de Tavira	*105 972,00 €*	30637	3,46 €	11	986	6,7
	ADFP Miranda do Corvo	*70 176,50 €*	20859	3,33 €	9	1941	13,2
	Cineclube de Faro	*78 033,10 €*	32972	2,37 €	11	632	4,3
	Cooperativa Praia Cultural	*54 467,50 €*	20463	2,66 €	3	171	1,1
	Cineclube de Aveiro	*52 446,50 €*	13739	3,82 €	6	642	4,4
Top five exhibitors, by *total number of spectators*	Cineclube de Guimarães	0,00 €	*85183*	0,00 €	11	507	3,4
	Abc Cineclube	40 512,00 €	*63341*	0,64 €	11	870	5,9
	Cineclube da Universidade de Évora	37 827,00 €	*46320*	0,82 €	10	860	5,8
	Ao Norte	0,00 €	*45342*	0,00 €	11	547	3,7
	Cineclube de Faro	78 033,10 €	*32972*	2,37 €	11	632	4,3

Table 3.8. – Exhibitors with total revenue equal to 0

Exhibitor	Total Revenue	Number of spectators	Number of sessions
Cineclube de Guimarães	0,00 €	85183	507
Ao Norte	0,00 €	45342	547
Cineclube de Avanca	0,00 €	17689	255
Centro de Estudos Cinematográficos	0,00 €	6659	277
Clube de Cinema da Ribeira Grande	0,00 €	3462	73
Zona Livre	0,00 €	72	6

Table 3.9. – Type of films exhibited 2007-2017 (films and sessions)

	Films		Sessions	
Type of film	A.V.	%	A.V.	%
Animation	230	6,1	997	6,8
Documentary	620	16,5	1902	12,9
Fiction	2886	76,9	11518	78,1
NA (eg.: session)	17	0,5	325	2,2
Total	3753	100	14742	100

Graph 3.8.– Length of the films exhibited, 2007-2017 (% per total number of sessions, N=14742)

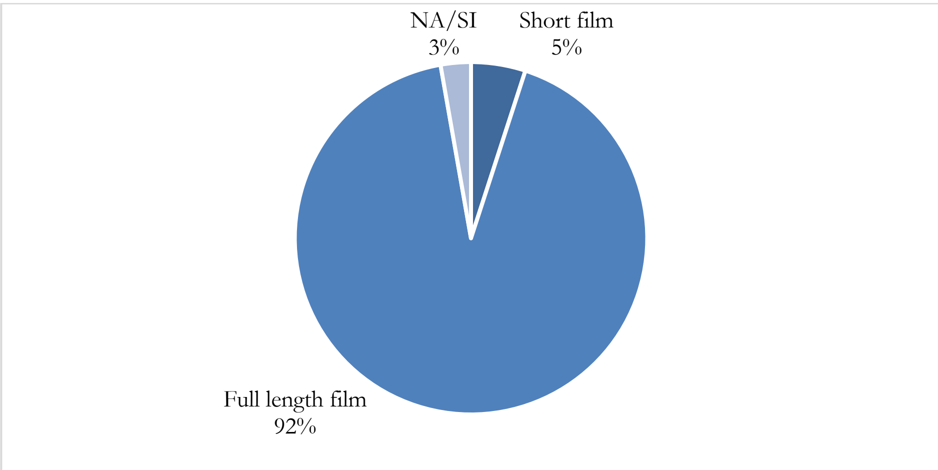
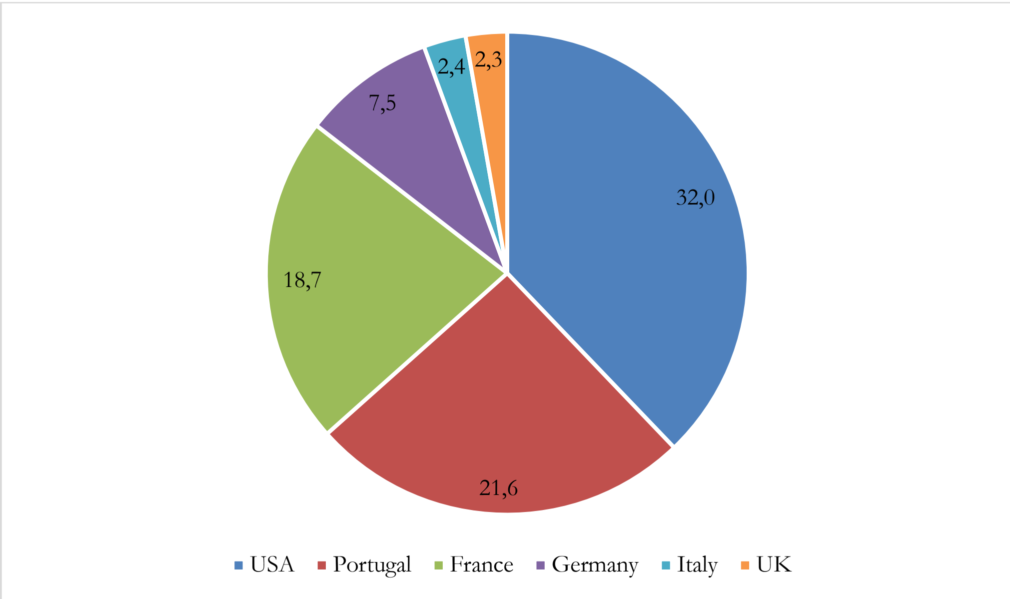


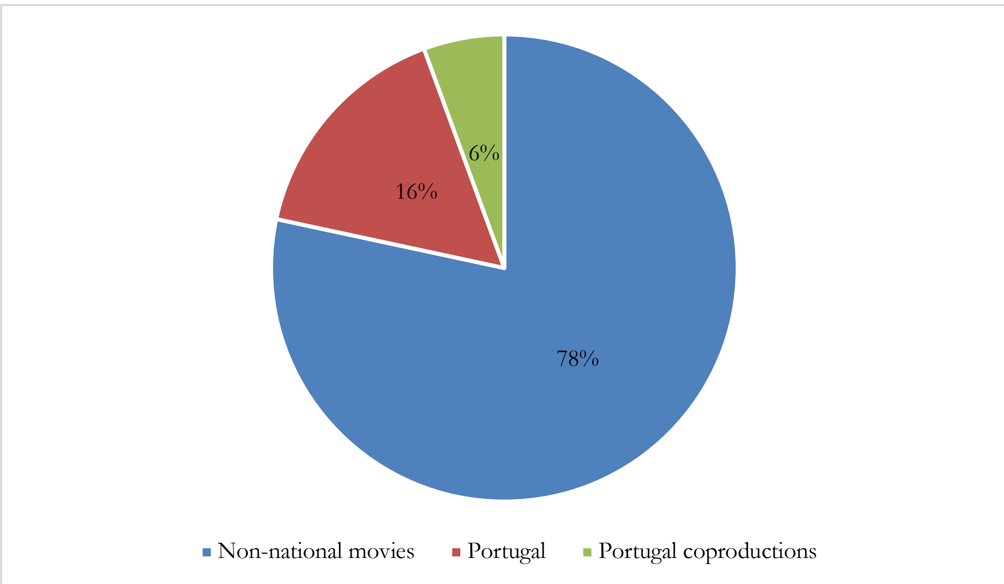
Table 3.10. – Total number of films that premiered in Portugal (Aggregated by year)

Year of release in Portugal (aggregated)	A.V.	%
Until 1980 (1914-1980)	262	7,0
Between 1981 and 2000	238	6,3
Between 2001 and 2007	441	11,8
Between 2008 and 2012	868	23,1
After 2012	920	24,5
NA (i.e. session; did not premiere in Portugal)	1024	27,3
Total	3753	100

Graph 3.9. – Six main participant countries in the production/co-production of the films exhibited, 2007-2017 (% per total of movies, N=3753)



Graph 3.10. – Portuguese movies (% per total number of movies, N=3753)



Annex 4 – Eviews outputs

Figure 4.1. – Fixed effects estimation (considering all municipalities and exhibitors that charge ticket fees)

Dependent Variable: SPECTATORS
Method: Panel Least Squares
Date: 07/16/20 Time: 10:20
Sample: 2007 2017
Periods included: 11
Cross-sections included: 41
Total panel (unbalanced) observations: 217

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2002.886	863.3255	2.319966	0.0215
TICKET_PRICE	-295.5656	167.0461	-1.769366	0.0786
PORTUG	-1032.794	612.7636	-1.685470	0.0937
ANIM	1269.356	1453.215	0.873481	0.3836
FICT	659.1415	732.5154	0.899833	0.3695
FULL	237.0678	953.5363	0.248620	0.8040
FUNDING	617.0166	275.7937	2.237240	0.0266

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.656150	Mean dependent var	2330.516
Adjusted R-squared	0.563108	S.D. dependent var	1721.806
S.E. of regression	1138.076	Akaike info criterion	17.10115
Sum squared resid	2.20E+08	Schwarz criterion	17.83320
Log likelihood	-1808.474	Hannan-Quinn criter.	17.39686
F-statistic	7.052214	Durbin-Watson stat	1.558395
Prob(F-statistic)	0.000000		

Figure 4.2. – Random effects estimation (considering all municipalities and exhibitors that charge ticket fees)

Dependent Variable: SPECTATORS
Method: Panel EGLS (Cross-section random effects)
Date: 07/16/20 Time: 10:22
Sample: 2007 2017
Periods included: 11
Cross-sections included: 41
Total panel (unbalanced) observations: 217
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2211.924	846.1999	2.613950	0.0096
TICKET_PRICE	-292.9154	131.9573	-2.219773	0.0275
PORTUG	-1444.516	561.0528	-2.574653	0.0107
ANIM	1751.903	1302.270	1.345268	0.1800
FICT	295.0932	668.8628	0.441186	0.6595
FULL	259.2282	916.8971	0.282723	0.7777
FUNDING	463.0260	239.1625	1.936031	0.0542

Effects Specification

	S.D.	Rho
Cross-section random	1097.695	0.4819
Idiosyncratic random	1138.076	0.5181

Weighted Statistics

R-squared	0.095089	Mean dependent var	835.9091
Adjusted R-squared	0.069234	S.D. dependent var	1180.536
S.E. of regression	1162.189	Sum squared resid	2.84E+08
F-statistic	3.677823	Durbin-Watson stat	1.248789
Prob(F-statistic)	0.001703		

Unweighted Statistics

R-squared	0.093573	Mean dependent var	2330.516
Sum squared resid	5.80E+08	Durbin-Watson stat	0.610248

Figure 4.3. – Hausman test[25]

Correlated Random Effects - Hausman Test
Equation: FICANILG
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	11.589655	6	0.0718

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
TICKET_PRICE	-295.5655...	-292.915384	10491.656...	0.9794
PORTUG	-1032.794...	-1444.5162...	60698.968...	0.0947
ANIM	1269.356...	1751.902903	415924.93...	0.4543
FICT	659.141502	295.093176	89201.391...	0.2229
FULL	237.067801	259.228223	68531.085...	0.9325
FUNDING	617.016625	463.025952	18863.463...	0.2622

[25] As the p-value is equal to 0,0718, the null hypothesis is not rejected for the levels of significance of 5% and 1%, therefore, the random effects estimation is preferable.