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Abbreviations

ACA – Agency for Cultural Affairs [of Japan]

BECR – Bureau for External Cultural Relations [of the People’s Republic of China]

CADPA – China Audio-Video and Digital Publishing Association

CCIs – Cultural and Creative Industries

CERO – Computer Entertainment Rating Organization

CESA – Computer Entertainment Supplier's Association

CGDC – China Game Developers Conference

CODA – Content Overseas Distribution Association

CPC – Communist Party of China

DCAJ – Digital Content Association of Japan

DCEXPO – Digital Content Expo

DiGRA – Digital Games Research Association

EMA – Content Evaluation and Monitoring Association

GAPP – General Administration of Press and Publications [of the People’s Republic of China]

GDP – Gross Domestic Product

GEGIA – Guangdong Games Industry Association

GFF – Game Factory’s Friendship

GPCI – Global Power City Index

IP – Intellectual Property

IPHQ – Intellectual Property Strategic Headquarters

JAMMA – Japan Amusement Machinery Manufacturers Association

JeSU – Japan e-Sports Union

JETRO – Japan External Trade Organization

JOGA – Japanese Online Game Association

JPSA – Japan Personal Computer Software Association

JSQA – Japanese Social Game Association

METI – Ministry of Economy, Trade and Industry [of Japan]

MEXT – Ministry of Education, Culture, Sports, Science and Technology [of Japan]

MLIT – Ministry of Land, Infrastructure, Transport and Tourism [of Japan]

MII – Ministry of Information Industry [of the People's Republic of China]

MOC – Ministry of Culture [of the People's Republic of China]

NPPA – National Press and Publication Administration [of the People's Republic of China]

NRTA – National Radio and Television Administration [of the People's Republic of China]

OCT – Overseas Chinese Town

OGA – Shanghai Online Game Association

RCGS – Ritsumeikan Center for Game Studies

SAPPRFT – State Administration of Press, Publication, Radio, Film and Television [of the People's Republic of China]

SEZ – Special Economic Zone

SHCCIO – Shanghai Cultural Creative Industries Office

SMACT – Shanghai Municipal Administration of Culture and Tourism

STCSM – Science and Technology Commission of the Shanghai Municipality

TGS – Tokyo Game Show

TMG – Tokyo Metropolitan Government

1. Introduction

1.1. Background

In the 21st century, creative industries started to play an increasingly important role in the eyes of policymakers around the world. Incidentally, 2021 has been declared the International Year of Creative Economy for Sustainable Development by the United Nations (UNESCO 2021, unpaginated). According to the latest report of UNCTAD *Creative Economy Outlook*, not only have the cultural and creative industries (CCIs) been significantly contributing to the growth of the world economy, but they have also promoted sustainable development and innovation across different sectors (UNCTAD 2018, 3- 10). The cultural economy is quickly becoming the third largest sector of the Western urban economy and is rapidly gaining momentum in East Asia (Fung 2018, 51).

It has been noted by many researchers that CCIs tend to agglomerate in urban areas, forming creative clusters (Scott 2000, 2). In recent decades, such agglomerations have gained a spotlight both among academia and policymakers. UNESCO defines a creative cluster as “a local concentration of firms producing a particular product or service”. This co-location, in turn, results in the enhancement of these firms’ creative potential, their ability to innovate and compete due to the exchange of tacit knowledge and decreased transaction costs, among other benefits (UNESCO and UNDP 2013, 29).

With the industrial production being relocated to regions with lower labour costs, taxes, and land prices, more attention has recently been paid to the role of creative and cultural industries in urban revitalisation. Today, creative cluster development is increasingly used as a strategy for transforming cities and regions from “industrial capitals into new creative capitals”, thus mitigating the negative effects of deindustrialisation and helping national and local governments deal with globalisation, digitalisation, and other challenges (Komorowski and Picone 2020, 3-4). This strategy is taking the form of a wide range of cultural and urban regeneration policies, “with cities subsidising cultural flagships, special events, or artists’ housing in the hopes that arts investment will lead to arts-led revitalisation and redevelopment” (Chapple et al. 2010, 226).

Creative clusters tend to attract the creative class, i.e. qualified innovative individuals, which contributes to the overall talent attraction policy of the country and the vibrancy of the urban centres, improving the image of a place and enhancing the quality of life (Florida 2002). Furthermore, they generate multiplier effects in other industries, especially those directly related to them, and act as a supporting base for small- and medium-sized enterprises (SMEs) by developing business support linkages and facilitating cross-sectoral networking, among other advantages (Sharma 2016, unpaginated).

However, the creative economy operates differently from the traditional economy and hence requires specific policies to support these sectors. The CCIs rely on local governments for development support, as they are unevenly spread and concentrated in certain towns and metropolitan areas. In addition, local institutions are meant to make up for the lack of organisational coordination in loosely networked companies (Hanzawa and Yamamoto 2017, 62).

Creative and cultural industries have become more prominent in the last few decades and are, therefore, increasingly viewed by governments as commercially valuable industries that can drive economic development and innovation. National and local governments have started to show interest in promoting these industries “due to both their export potential and their reputed ability to catalyse spill-over effects within regional economies” (Johns 2010, 2). As a result, many governments have launched creative cluster development policies at both national and local levels as, from the point of view of a policymaker, the creative economy can be planned and used to reap various benefits related to social and urban development (Evans 2009, 1003).

This is particularly true for East Asia, where “the state plays a visible role in the market in the name of cultural policy, by regulating domestic production, promoting export overseas, and erecting barriers to entry” (Fung 2016b, 5). However, most of the research has focused on Western creative clusters (Jacobs 2016; Pratt 2009; Pilon and Tremblay 2013; Darchen 2017, etc.), making it difficult to adjust policies to the local context elsewhere. There are surprisingly few comparative case studies of East Asian creative clusters and policies for their development, which offers a research gap for this study to explore.

1.2. Research question

This paper will thus narrow in on the cultural and urban regeneration policies that are used to guide the development of creative clusters in Japan and China. It will try to answer the following research question:

To what extent do different cultural and urban regeneration policy instruments constitute the creative cluster governance system at the national and local levels in Japan and China, and how are they utilised to encourage creative cluster development within the video game industry?

The significance of the video game industry and game clusters has often been overlooked by both policymakers and academia. Despite the input of games in the national and local economies, few studies have focused on them as scholars seem to view games as “marginal, peripheral, and frivolous”, and policymakers often dismiss them as trivial and even dangerous (Fung 2018, 2).

Nevertheless, gaming has become one of the most dominant and profitable forms of entertainment, with East Asia alone generating dozens of billions of dollars each year (Fung 2018, 2-3). Consequently, in East Asia, there is a great variety of economic and cultural policies aimed at promoting and regulating the video game industry: from the Cool Japan initiative to strategic plans of the People's Republic of China (PRC) (Fung 2016b, 4-5).

Initially, video games only referred to console games and PC games, but gaming has spread over to our smartphones, tablets, and the Internet, leading to the emergence of new subcategories of mobile games and social games (Rushton 2018, unpaginated). Therefore, in this study, the umbrella terms “games” and “video games” will incorporate all of the above, although individual subsections will also be addressed where relevant. It is important to point out, however, that, although the focus of this paper will remain on video games, the results of this research can also be applied to other digital creative industries, i.e. “creative industries that are closely linked to the use and development of digital technology” (Ernkvist and Ström 2018, 269) and hits-based industries in particular due to the similarities in their production processes (Hanzawa 2004, 596).

1.3. Relevance

The relevance of researching and comparing policies for game cluster development in Japan and China can be explained by the goals the paper will aim to accomplish. First, the paper aims to escape generalisation across regions and industries by narrowing its focus on the game industry in Japan and China as it will allow it to provide concrete policy recommendations with a specific context and creative actors in mind. Furthermore, in contrast to most studies, this research will avoid focusing on the urban regeneration policies and, instead, will formulate a comprehensive assessment framework that incorporates both cultural and urban development strategies. As games play a visible role in the economies of the target countries, providing a framework for analysing policies relevant for their development will help policymakers boost the growth of the overall economy by addressing the shortcomings of such policies. Consequently, game enterprises (especially small companies), creative intermediaries and other creative agents will benefit from this study since it will allow them to learn more about the different support measures they can access and help them better formulate their demands and communicate them to the national and local governments.

There is a tendency to overgeneralise the concepts related to creative clusters among both researchers and political agents, which can mislead policymakers in their choice of strategies. Theoretical concepts and, therefore, the policies that are based on them are often generalised both

across the regional and industrial spectrum (Gu 2014; Pratt 2009; Tschang 2009). Thus, the paper will maintain a focus on a specific region and narrow in on one industry, which holds a particular economic significance in this region.

First, policies for clusters and their characteristics are rarely adjusted to the local realities. Although the idea of creative clusters was born in the West, since the beginning of the 21st century, the clustering model of urban cultural and economic development has been proliferating across East Asia (Lee and Lim 2014, 3). A common theme among researchers of East Asian (as well as other non-Western) creative clusters has been calling for careful consideration of the local context and subsequent adjustment based on empirical evidence and carefully gathered statistics (O'Connor and Kong 2009; Pratt 2009; Tschang 2009, etc.). Therefore, as the paper focuses on the comparison between the cultural and urban regeneration policies for video game clusters in Japan and China, it will be possible to examine the strategies in East Asian countries and show how different the approaches can be even in countries belonging to the same region. This will allow the author to provide a comprehensive policy assessment and, consequently, policy recommendations that would benefit the policymakers and, consequently, the creative agents in these countries in particular.

Second, creative clusters tend to be generalised across the wide spectre of industries included in the umbrella term “CCIs”, despite them ranging from cartoons to ballet (Pratt 2009, 9). Therefore, one of the advantages of this research is that it narrows in on a single creative industry – the game industry. This choice can be explained by three main reasons. Firstly, this sector was chosen as video games tend to have fewer national specificities compared to other creative and cultural industries like music, theatre, and traditional arts, which allows for more easily comparable policies and more transferable results. Secondly, as UNCTAD noted in its report, “[g]ame development and film studios are on the rise” in a number of regions around the world and significantly contribute to national gross product (UNCTAD 2018, 10). The total size of the industry stands at \$162.32 billion as of 2020 and is expected to reach \$295.6 billion by 2026 (Mordor Intelligence 2021, unpaginated). Therefore, examining the policies that affect the development of the gaming clusters merits the overall economic growth agenda. Thirdly, although the production of games has traditionally been dominated by Japan and the US, with their companies having dominated the sales around the world for decades, China is becoming a leading player in the global video game industry as well as the biggest market for its production (Fund 2016, 43). This provides an opportunity to compare two countries where the video game industry plays an important role not just among CCIs but in the overall economy.

The scope of this research goes beyond the usual constraints of urban regeneration, which is just one aspect of cluster development policy, thus offering a new comprehensive perspective on cultural policy. The framework is designed in a way that makes it flexible and universal as it can be used for analysing individual cases or performing cross-country analysis with certain adjustments if needed. Although the paper avoids generalisation, it is designed in a way that allows its results to hold practical value, and its analytical methodology can also be adjusted to draw conclusions about other creative industries. For instance, R&D support would be far less critical in the context of traditional cultural industries, although it might still play a crucial role in the development of other digital content industries, such as animation and film. Therefore, the results of this study will make an important contribution to the research of cultural policy in East Asia, paving way for new studies in the future.

Answering the research question will benefit not only scholars working in the spheres of cultural policy, creative clusters, and video games research, but also policymakers and creative agents. As the game industry plays a visible role in the economies of both target countries, this research will help them not just promote the development of the creative sector but leverage the growth of the overall economy.

As of today, the video game industry is by far the largest contributor to the GDP of Japan among the creative industries with annual revenue of over \$18.6 billion (Newzoo 2020, unpaginated). This country has “a long history in pioneering and developing video game hardware and software” (Netherlands Enterprise Agency 2018, 1), with two of the oldest Japanese companies Sony (over \$18 billion in annual revenue in the Game and Network Services segment) and Nintendo (over \$12 billion in annual revenue) consistently being listed in the top-5 (Newzoo 2019, unpaginated; Statista 2021b, unpaginated; Statista 2021c, unpaginated). After a period of stagnation, the consoles market is currently on the rise again, following the success of the Nintendo Switch launched in 2017 (Netherlands Enterprise Agency 2018, 1). Despite Japan’s mature video game industry, experts note that the emergence of online games is calling for a stronger state policy, which makes it important to examine the existing strategies and address their shortcomings (Koizumi 2021, 173).

Meanwhile, China became the largest video game market in the world in under two decades with an annual output of almost \$41 billion (Statista 2021, unpaginated). It also headquarters the largest video game company in the world - Tencent, which alone constitutes one-third of the country’s video game market (Fung 2008, 57; Newzoo 2019, unpaginated). In 2019, the company generated around \$58 billion in revenues (Tencent 2020, 2). Other giant game corporations include NetEase Games, Shanda Games, Changyou.com, Perfect World, Giant Interactive Group, GY

Games, etc., most of them having been established fairly recently - between 1995 and 2005 (Fung 2018, 56-57). Despite the video game industry still being young, it “has become a large source of employment, particularly for young graduates,” with 36,660 specialists employed directly by video game companies in 2012, and “is also seen as a way to solve the problem of youth unemployment” (Fung 2018, 55-56). Anthony Fung underlines that it is the state policy that allowed the industry to fast-track its development and expand in both domestic and foreign markets (Fung 2018, 71).

The national and, even more so, the local authorities can use the framework of this study for constructing their own policy strategies in a comprehensive manner. The Japanese and Chinese policymakers will benefit the most since it is designed to reveal the strong and weak points of their cultural and urban regeneration policies and produce policy recommendations specifically for them. Consequently, they can draw conclusions from the results of this research and make appropriate adjustments to their cultural strategies in the future. As Fung (2018) noted, most of the recent studies in the area of cultural and urban regeneration policies have failed to analyse them as “a set of concrete, organisational practices” and, thus, to “generate relevant policy recommendations for concrete actions to be taken by the agents concerned” (Fung 2018, 72). In other words, there is a lack of studies that produce concrete policy recommendations that could be implemented by governments. This study, on the other hand, aims to demonstrate in which directions policy efforts are lacking and which areas should be targeted more in order to increase the efficiency of the cultural and urban regeneration policies for cluster development.

As a result, the creative agents, i.e. video game companies, related industries, and creative intermediaries, will also benefit from the improvements of cultural policies by local and national governments. There are several reasons why the success of the video game industry is largely dependent on adequate public policies, which will be discussed in detail in the literature review. One of them is that, although this industry is highly technology- and capital-intensive and requires constant innovative solutions, the majority of video game companies are small and vulnerable (Sharma 2016, unpaginated). For example, although giant companies like Sony and Nintendo hardly require the state’s support, over 70% of Japanese video game companies are SMEs and employ less than 200 employees (METI 2017, 12). In a recent interview, a major video game industry specialist Akira Baba, along with an anonymous official of a video game company, pointed out that the global competition is taking the greatest toll on these companies (Garvizu 2017, 291). Therefore, examining the policies for the game industry and its clusters will particularly merit creative SMEs in the target countries.

What is more, this study will help game companies better formulate their demands and needs when communicating with the authorities. There might already be a set of policies in place,

but they are not necessarily optimal and might incorporate stringent censorship or obstruct access to global information flows. This study is particularly relevant to the video game companies that have joined the creative clusters in either Tokyo, Fukuoka, Shanghai, or Shenzhen, or are considering doing so in the future, as they will be able to see the benefits and drawbacks associated with being part of these agglomerations.

In conclusion, the relevance of comparing the policies for the development of game clusters in Japan and China stems mainly from: 1) the contribution to the academic discourse by avoiding the pitfalls of generalisation and overemphasising urban regeneration; 2) the opportunity for the national and local policymakers to address the shortcomings of their strategies and apply the framework of this research for future evaluation of policies; 3) enabling companies with a clear view of the support measures (or lack thereof) relevant to them and a toolset for formulating their demands to the authorities.

1.4. Case studies

It would be impossible to cover all the video game clusters in Japan and China within the limits set by the scope of this paper. Therefore, this paper will mainly focus on Tokyo and Fukuoka in Japan and Shanghai and Shenzhen in China as case studies.

Tokyo and Shanghai were chosen because they host the highest number of creative businesses in their respective countries, which is why the policies in these cities have a great impact on the whole industry. Tokyo is Japan's largest gaming cluster with a history that runs back many decades (De Vaan, Boschma, and Frenken 2013, 977; Ernkvist and Ström 2018, 269). More than 60% of Japan's video game companies are located in the Greater Tokyo Area (Hanzawa 2014, 4). Shanghai, on the other hand, not only takes over 40% of the online games' market share but was also the first city in China which adopted the strategy of creative cluster development and has the largest stock of these agglomerations (Gu 2014, 123; Fung 2018, 89).

At the same time, including relatively smaller urban centres, which have incorporated a specific agenda for promoting the local video game industries, will provide a fuller picture and allow for a more comprehensive analysis. Shenzhen was chosen because it headquarters the largest video game company in the world – Tencent and its cultural policy puts more emphasis on the new media industries, while Beijing and Shanghai tend to focus on more traditional cultural industries (Fung 2018, 77). The same applies to Fukuoka, which tries to use its emerging video game creative cluster to attract talent and revitalise the region (de Winter 2012, 398).

1.5. Research outline and limitations

In this introduction, the background for the chosen topic has been roughly outlined. The research question and its relevance have been identified, and the main objectives and limitations of this study have been discussed. In order to address the research question in a structured manner, the subsequent sections shall be organised as follows.

This study aims to outline and evaluate the wide spectrum of cultural and urban regeneration policies that target video game clusters at the national and, even more importantly, local levels. In order to do that, in the following sections, the existing approaches and methodologies to creative cluster development policies will be analysed, and a structured analytical framework will be developed and applied to the target cities. The paper will evaluate which policy instruments, and to what extent, are used to promote creative cluster development and assess how comprehensive and well-suited these practices are for the needs of the local video game clusters.

The next section will provide a comprehensive overview of the main academic books, articles, and theses as well as statistical data provided by national and local governments and international organisations that will be used to address the stated research question. The literature review will outline the main concepts related to cultural and creative industries, creative clusters and policies used for their development. The main focus will be on identifying the main cultural and urban regeneration policy instruments available to policymakers and discussing their pros and cons, which are reflected in major academic works on this subject.

The literature review is followed by the analytical framework. As no comprehensive methodologies of studying creative cluster policies and performing cross-country analysis have been identified, an eclectic framework is developed based on the conclusions derived from the state of the art. The origin and function of each of the selected criteria will be discussed, and the ways to acquire empirical data will be outlined. The methodology will be designed in a way that will allow the paper to narrow in on the individual dimensions of cluster development policies and measure each criterion either quantitatively or qualitatively.

The main body of the paper will be split into two main parts: the empirical investigation and the comparative analysis. The first one will collect the available information based on the selected analytical criteria for Japan and China, as well as for each of the four target cities, in order to address the policies both at the national and local levels. The second part will “harvest” the results of the empirical investigation and perform a comparative evaluation between the two countries for each of the chosen criteria in order to address the stated research question. The quality and relevance of the

results will be discussed, and concrete policy recommendations will be produced. The paper aims to be as specific as possible in order for the results to be easy to apply in the form of concrete policies. In addition, the main contributions to the general academic discourse will be discussed and suggestions for further research directions will be provided. At the end of the paper, a conclusion will be formulated in order to succinctly summarise the findings and provide a succinct answer to the research question.

It is also important to establish the limitations of the study as there are some things that go outside its scope. For instance, the paper will not aim to analyse the clusters themselves, their structures, and unique features. Neither will it not go into more depth than necessary when outlining the state of the video game industry in the target countries. The main focus will remain on the policies aimed at promoting creative clusters and the gaming industry. In addition, the research will be limited by whatever data is available at this point, although a lack of data will also provide an insight into how prioritised a given direction is.

2. Literature Review

2.1. Overview

In order to construct the analytical carcass of the study, the main ideas surrounding the research of creative cluster development policies will have to be discussed. It is important to note that the chosen topic is surrounded by many controversies and clashing opinions. Therefore, the main goal of this literature review is to outline the main ideas and arguments existing in the academic literature on each of the listed subjects and, thus, provide a solid theoretical foundation for the rest of the thesis.

In order to properly address the stated research question, this section will be organised in the following manner. First of all, the main notions, such as the cultural and creative industries and creative clusters, will have to be defined and the main centripetal factors that promote cluster survival are addressed. The following section will analyse the debates surrounding the urban regeneration policy and discuss its pros and cons. Finally, the last part will review and categorise the academic literature that addresses the various cultural policy instruments at the disposal of policymakers and how they can be analysed. This analysis should yield the basis for the study's analytical framework that will be constructed in the next chapter of the paper.

2.2. Creative and cultural industries and clusters: notions, definitions, and debates

First of all, it is necessary to provide the main notions and definitions associated with the cultural and creative industries (CCIs) and their agglomerations. This section of the literature review will address the main directions in the study of creative clusters, see how different researchers explain this phenomenon, and look at the advantages and disadvantages of the clustering approach discussed in academia. This step is important in order to identify the needs of creative clusters and the main centripetal factors that can be targeted by policymakers to promote cluster development. The paper will look at the definitive works on creative clusters and identify the main controversies and debates surrounding them.

In recent decades, the creative and cultural industries have become an important driving force of economic development. According to the latest report of UNCTAD Creative Economy Outlook, not only have the cultural and creative industries been significantly contributing to the growth of the world economy, but they also “make a valuable contribution to the achievement of sustainable development goals”. The paper specifically underlines the input of the Asian region: it has “outstripped all other regions” and, in 2015, accounted for \$228 billion of creative goods exports, with China holding the leading position and growing at the rate of 14% per year on average between 2002 and 2015. In particular, the executive summary notes that “[g]ame development and film studios are on the rise”

in a number of regions around the world (UNCTAD 2018, 10). According to the statistics by Newzoo, the Asia-Pacific region accounts for half of the global games market, with China, again, coming on top with a market size of almost \$35 billion (Newzoo 2018, unpaginated).

In order to better understand the composition of the cultural and creative industries and narrow in on one of their constituents, it is important to look at their definition. For example, in their recent work *Creative Cluster Development: Innovation, Governance and Production*, Komorowski and Picone provide the following definition of CCIs:

Creative and cultural industries encompass those economic activities that incorporate creative processes for the creation of (mostly) cultural products and services forming a number of CCIs sectors: advertising, architecture, art, crafts, design, fashion, film, music, performing arts, publishing, R&D, software, toys and games, TV and radio, and **video games**, etc. (Komorowski and Picone 2020, 8).

Creative actors “are known for approaching topics from different angles and in fundamentally and conceptually different ways” compared to other major economic and political forces. It has been noted that CCIs, more than other industries, tend to agglomerate in urban areas, forming *creative clusters* (Snoeckx 2020, 38).

In the academic literature, there are numerous concepts and terms used to talk about creative clusters: creative cities (Landry 2000, 2006), creative regions, creative quarters, and creative/art districts (Evans 2009, Keane 2013, Chapple et al. 2010), creative hubs, media cities and media parks (Komorowski and Picone 2020), etc. Therefore, it is sometimes hard to provide a concrete definition of these formations. Komorowski and Picone formulate the definition of a creative cluster as an “agglomeration of CCI activities which are localised in proximity within a particular geographic area while benefiting from their shared location” (Komorowski and Picone 2020, 11). Komorowski (2017) provides a typology of creative clusters that all fall under this umbrella term: a creative urban region; a giant anchor bringing together large private or public institutions; a specialised area that provides benefits for the activity of specialised CCIs; an attracting enabler that offers shared facilities and resources; a real estate cluster providing office space to CCIs through private or public initiatives; a pooling (Komorowski 2017, 1347; Komorowski and Picone 2020, 10-11).

In recent decades, creative clusters have gained a spotlight in a wide range of academic fields. So much has been written on them at this point, that there are works focusing just on reviewing and analysing the existing literature, such as Caroline Chapain & Dominique Sagot-Duvaurox (2018) and Bloom et al. (2020). These show that the subject areas published research is coming from vary greatly and range from geography and urban studies to policy and environmental studies (Chapain & Dominique Sagot-Duvaurox 2018, 300; Bloom et al. 2020, 14). There appear to be four main approaches in the creative cluster research field: the clustering and agglomeration approach, the creative

governance and urban planning approach, the creative city and creative class approach, and the media city and global hub approach (Komorowski and Picone 2020, 4-6). For this study, the second approach holds particular interest.

The spatial concentration of industries has been a popular subject of research for economic geographers since the 19th century, with many authors trying to understand how and why industries cluster. The most influential works on this account were written by the British neoclassical economist Alfred Marshall, the author of *Principles of Economics*. He explained that firms co-locate seeking *location externalities* emerging “as a result of local access to specialised suppliers and buyers, a large and specialised labour pool and local knowledge spill-overs” (Marshall 1920, 230; De Vaan 2013, 967). Interconnections and interdependencies in clusters provide co-located firms with a chance to gain access to more knowledge, respond to changes in the economic, social, and political environment, and boost their innovation through exposure to different practices, thus making them more competitive (De Vaan 2013, 965).

Since then, as the study of clusters became much more interdisciplinary, more centripetal factors came into view, with more recent case studies showing “empirical evidence of the role of tacit knowledge and relational dimensions of knowledge development” (Pilon and Tremblay 2013, 2). One such example is the concept of *untraded interdependencies*, introduced by Michael Storper (1995). These are intangible benefits that economic actors derive from the region-specific conventions and informal rules that coordinate their activity and potentate economic and organisational learning, collective action and adjustment to the changes in the market (Storper 1995, 192).

Related to this concept is the notion of *tacit knowledge* (also sometimes referred to as *sticky*), which is “exchanged through direct experience, collective support systems, common languages, conventions, habits ... and regional proximity” (Belussi and Sedita 2012, 8). In his works on knowledge spill-overs and economic geography of context, Meric S. Gertler (1995, 2003) argues that “being there” is important to get access to tacit knowledge and that “spatial proximity also requires cognitive proximity, social affinity, and cultural commonalities in order to be effective” (Pilon and Tremblay 2013, 2). According to Gertler, this further “reinforces the importance of innovative clusters, districts, and regions” (Gertler 2003, 85). Furthermore, as Maskell and Malmberg (1999) note, “[i]t is the region’s distinct institutional endowment that embeds knowledge and allows for knowledge creation which - through interaction with available physical and human resources - constitutes its capabilities and enhances or abates the competitiveness of the firms in the region” (Maskell and Malmberg 1999, 181). Such processes have also been referred to as *buzz* (Storper and Venables, 2004; Komorowski 2020, 10).

Another major centripetal factor is *cross-fertilisation* between interconnected industries, for which not only geographical but also relational proximity is needed. The presence of related companies is a favourable condition not only in terms of lowering the transaction costs but also in terms of facilitating innovation through cross-sectoral interactions. What is more, according to Power (2010), “the existence of related variety can help firms pursue the types of diversification processes associated with exploring a strong position”, e.g. a new musical can open deals with advertising, film and gaming companies (Power 2010, 153).

What is more, according to Jason Potts (2011), in clusters, companies learn from each other, creating *external economies of innovation*, which is one of the main reasons for clustering. This is particularly important for small new creative businesses, for whom this exchange of knowledge and exploitation of social networks becomes their “R&D” (Potts 2011, 154).

All of these factors have particular relevance for creative industries, where innovation plays a crucial role in the survival and commercial success of firms. As Power (2010) emphasises, “the cluster promises to produce innovation and competitiveness via a series of interactive processes within systems of actors assembles in a milieu defined through some form of spatial proximity” (Power 2010, 150).

However, many authors also note that sometimes excessive geographical and institutional proximities might not only facilitate collective learning and adjustment but also generate what Storper calls “institutional sclerosis” and Maskell and Malmberg - “spatial myopia”, which is widely known as the *lock-in effect* (Storper 1995, 211; Maskell and Malmberg 2007, 607). Lock-in reflects the reluctance of firms to “take risks and seek out new approaches” and restricts their ability to innovate (Keane 2013, 2).

Dominic Power (2010) argues that continuous *product differentiation* is essential for sustainable long-term competitiveness and growth of creative clusters as it helps them avoid getting into an *innovation trap*. Failure to differentiate creative IP, on the other hand, would result in cluster stagnation and decline: “products that cannot deliver at least the vestige of difference will ultimately get involved in a race to the bottom or fade from fashion and view” (Power 2010, 146). Therefore, it is crucial that companies should cross-fertilise with related industries through their cluster and receive access to the global pipelines of knowledge and information.

Furthermore, Power adjusted *the diamond model* developed by Porter (1990), which combines four key components to a cluster’s competitive success. It essentially is constituted by four sets of factors that are thought to “foster industrial dynamism, innovation and long-time growth” (Power 2010, 150). Applied to cultural and creative industries, these include factor conditions (specialised

labour, infrastructure, access to capital, positive local image, etc.); local demand conditions (sophistication of local consumers, presence and density of niche consumers, regulatory standards, etc.); context for strategy and rivalry (fair competition, intellectual property rights regime, range of substitutes, transparency, etc.); and related and supporting industries (presence of local suppliers of speciality inputs and clusters, media exposure, etc.) (Power 2010, 151-154).

At the same time, the clustering approach has also been subject to critique by some authors. For example, Martin and Sunley (2003) insist that clustering should be used much more cautiously, especially in the context of cultural and urban regeneration policies, as “there is much about it that is problematic, and the rush to employ ‘cluster ideas’ has run ahead of many fundamental conceptual, theoretical, and empirical questions” (Martin and Sunley 2003, 2). They express concern over the fact that clustering as a concept is too “elastic” and, thus, cannot supply a universal model of regional economic growth. On the other hand, the authors claim that there is little empirical evidence that would confirm the causality between high-growth industries and spatial agglomeration (Martin and Sunley 2003, 47).

However, one must keep in mind that most of such critiques are geared towards traditional manufacturing industries, which significantly differ in the way they operate from CCIs (Komorowski and Picone 2020, 4-5). As a matter of fact, creative and cultural industries *tend to cluster* in urban areas, and it has been widely recognised in the literature that “creativity is frequently characterised by the agglomeration of firms so that creative industries are not homogeneously distributed across the territory, but they are concentrated in the space” (Lazzeretti et al. 2010, 1). In their research, Lazzeretti, Boix and Capone (2010) try to explain why this is so, based on the empirical evidence gathered from the creative clusters in Italy and Spain. They identify several centripetal factors that encourage CCIs to agglomerate historical-cultural heritage, proximity to the political power, diversity of the productive structure, availability of qualified human capital, and Florida’s 3T of creativity (technology, talent, and tolerance) (Lazzeretti et al. 2010, 28-29).

Another account of the attractiveness of clusters was provided by Potts (2011). He brings up four factors of centripetal pull. First, the great variety of job opportunities serve to attract skilled workers, which, in turn, makes it easier for firms to find and recruit them. This effect also applies to other transaction costs. Second, the concentration of many similar firms allows them to establish insourcing and supplier relationships, cross-fertilise, and increase their productivity. Third, the companies can decrease their expenses on utilities, infrastructure, and transport. Fourth, such an agglomeration gives the consumers a physical focus of the cluster output and makes it easier for them to find its products (Potts 2011, 152-155).

What is more, Mathijs De Vaan, Ron Boschma and Koen Frenken (2013) challenge the evidence that project-based clustered firms do not perform better than those outside business agglomerations in their research. According to the study conducted among 4607 firms and 1229 subsidiaries operating in the gaming sector around the world, “the net effect of clustering becomes positive after a cluster reaches a critical size” (De Vaan et al. 2013, 965). They note that, although a higher concentration of same-industry firms in one place leads to an increase in competition, such negative location externalities as congestion and high real estate prices, do not play a significant role in project-based industries. In addition, a large cluster ensures the provision of talent for a great variety of projects, which is essential for the video game industry (De Vaan et al. 2013, 970). Therefore, the authors come to the conclusion that in project-based industries, such as the video game industry, “negative localisation externalities associated with competition grow proportionally with cluster size, while positive localisation externalities increase more than proportionally with cluster size” (De Vaan et al. 2013, 965).

The same conclusion was reached by Hanzawa and Yamamoto (2017), who analyse the benefits of spatial agglomerations (i.e. creative clusters) for “hits-based” industries, such as the video game industry, narrowing in on the case study on Japan’s console video game industry. Their main finding is that redundancy, by which they understand “a diverse range of often indistinguishably similar outputs, most of which end up as commercial failures”, is vital for sustaining innovation in “industries that are characterised by fundamental demand uncertainties” (Hanzawa and Yamamoto 2017, 59). They also identify the following advantages of creative clusters as a business model for video game companies: “spatially concentrated, flexibly specialised and vertically disintegrated firms” minimise the transaction costs; “sharing of non-traded in-puts”, especially knowledge (i.e. untraded interdependencies and tacit knowledge that have been addressed above), is important for innovation, which is essential for the CCIs; the presence of place-specific institutions (Hanzawa and Yamamoto 2017, 62). Hanzawa and Yamamoto provide a real-life illustration of the beneficial effect of clustering: in-house video-game publishers within the Tokyo cluster are more than 36% more likely to rely on their revenue from video games alone than non-Tokyo-based publishers, due to the benefits of urban agglomeration that provides an “increased opportunity for business diversification” (Hanzawa and Yamamoto 2017, 71).

To summarise, the main advantages pointed out by researchers are the location externalities, untraded interdependencies, such as tacit knowledge, the opportunities for cross-fertilising and forming external economies of innovation. The main controversy surrounding creative clusters is the lock-in effect, which can be addressed through IP differentiation and increasing the cluster’s ability to

innovate. Although some authors claim that the clustering approach is problematic due to its generalisation, it has been shown that CCIs tend to cluster in urban centres due to a number of centripetal factors, such as the socio-spatial vibrancy, lower transaction costs, proximity to consumers, and the availability of technological and productive infrastructure and qualified human capital.

2.3. Urban regeneration policies for cluster development

Now that creative clusters, the main concepts related to them and factors for their successful development have been discussed, it is time to delve deeper into the main notions associated with cluster development policies and the debates surrounding them. In this sub-section, the main arguments for and against active urban development policies and the major works advocating for either “authentic” or “planned” development will be outlined. It is important to analyse this component of the policy spectrum first since it tends to draw the most attention and gives rise to most debates when it comes to cluster development strategies.

In the 1980s, local governments in the UK and the US started noticing that creativity can have a beneficial effect on both the economic performance of the city and its image. Today *creative cluster development* is increasingly used as a strategy for transforming cities and regions from “industrial capitals into new creative capitals”, thus mitigating the negative effects of deindustrialisation and helping national and local governments deal with globalisation, digitalisation, and other challenges (Komorowski and Picone 2020, 3-4). This strategy is taking the form of a wide range of urban regeneration policies, “with cities subsidising cultural flagships, special events, or artists’ housing in the hopes that arts investment will lead to arts-led revitalisation and redevelopment” (Chapple et al. 2010, 226).

First of all, it makes sense to briefly address two widely discussed and debated concepts closely intertwined with them, i.e. *the creative city* and *the creative class*. The first one was coined by Charles Landry in his highly influential book *The Creative City* (2000), where he talks about the “Creative City Movement”, in which cities, led by the so-called “creativity rash”, compete for the right to be called creative. Throsby (2010) provides the following definition of a *creative city*: “an urban complex where cultural activities of various sorts are an integral component of the city’s economic and social functioning” (Throsby 2010, 139). In order to become creative, the city does not just need to have “hard infrastructure”, like buildings and roads, but also “soft infrastructure”, such as skilled workers, creative thinkers, intellectual and educational infrastructure, etc. (Landry 2005, 2-3). Illustratively, today, cities compete for nomination in UNESCO’s Creative Cities Network, which

includes, among others, Shanghai, Shenzhen, and Chengdu in China, along with Kobe and Nagoya in Japan (UNESCO 2020, unpaginated).

Cunningham (2012), in turn, talks about the “creative cities discourse”, attaching a rather negative connotation to it and emphasising the need to balance production-oriented and consumption-oriented policies. He points out that such competition leads to “what many academics might regard as egregious and tendentious displays by civic officials as they jostle to put their city on the map” (Cunningham 2012, 113). Evans (2009) also expresses scepticism about the promotion of the creative city and calls the policy rationale “quasi-scientific” and lacking theoretical ground (Evans 2009, 1005). Despite the critiques, Landry’s thoughts, along with Florida’s, gave a start to the movement among policymakers to reinvent urban planning and development.

Richard Florida’s contribution to the creative cluster debate is as significant as it is controversial. In 2002, he published a highly influential work titled *The Rise of the Creative Class*, which shifted the focus from regions in general to cities and emphasised the importance of *the creative class*. Florida believed that cultural consumption drives creative urban renewal and growth: “when people - especially talented and creative ones - come together, ideas flow more freely, and as a result individual and aggregate talents increase exponentially: the end result adds to more than the sum of the parts... this in a nutshell is the clustering force” (Florida 2008, 66). His point was that creative people are mobile and they tend to be drawn to open creative and culturally diverse places, which meant that governments should try to promote a place’s *socio-spatial vibrancy* (Florida 2002, 2005; Florida and Tinagli 2004). Policymakers around the world have learned from Florida’s ideas about the relationship between cultural consumption taking place in creative clusters and its effect on creativity and innovation as drivers of urban development. Essentially, “Florida encourages policymakers to build the amenities and expect the creative class and the innovation economies to follow” (Gu 2014, 125). Furthermore, he suggests certain policy interventions - based on improving the 3T factors of technology, talent, and tolerance - that are supposed to uncover “hitherto hidden or neglected resources” (Keane 2013, 45).

However, this approach has been subject to critique by many authors for a number of reasons. Andy Pratt (2009), for instance, critiques Florida for moving the focus from creativity to creative workers that are assumed to, in turn, attract high-tech and high-growth industries to the city. In addition, he points out that Florida’s emphasis is on consumption rather than production, which is important for the CCIs themselves. Pratt comes to the conclusion that, therefore, “Florida’s creative cities are not about innovation (product or process), nor are they about cultural production (or creativity)” (Pratt 2009, 13). On the other hand, Xin Gu (2014), in his examination of Shanghai’s creative

clusters, noticed that “this development-led approach suited real estate interests” without much concern for the interests of the creative agents (Gu 2014, 125).

Nevertheless, since Florida suggested using creative talent flows for urban development, “the flywheel role of creativity has been recognised in many fields from urban planning to quarters regeneration, industrial policy and entrepreneurship and international economic development strategies” (Lazzeretti et al. 2010, 1). In general, clusters can either emerge organically and be intentionally created with the help of the government and its cluster-development policies. Chapple et al. (2010), for example, divide creative clusters into “formal” and “informal” ones. “Formal” clusters are created intentionally with “strong vision and leadership, often related to an anchor development” by means of cultural and urban regeneration policies. “Informal” clusters, on the other hand, form more spontaneously and naturally. However, the authors note that both models “can serve as urban revitalisation strategies boosting city economic activity”. In fact, these two strategies can “intermingle” to create a new approach (Chapple et al. 2010, 225). Although artists appear to support “informal” evolution over “planned”, Chapple et al. insist that a cluster cannot thrive without “significant public investment or protections, such as the provision of affordable space” (Chapple et al. 2010, 233). Potts (2011) also assumes a middle ground, saying that, although clusters should not necessarily be artificially created, they can be “artificially accelerated” through specific policies that would make it more viable and attractive, such as the financial support of producers, which will be addressed in the next section (Potts 2011, 153).

Not all researchers are quite so positive about both strategies, siding with either organic or planned format of creative cluster development instead. For instance, in her account of New York’s creative clusters *Loft Living*, Sharon Zukin describes a typical organic cultural cluster, using SoHo as a case study. She claims that it was the unintentionality of the process that made it “authentic”. The alternative “quirky” social places, such as bars and restaurants, emerged “in symbiosis” with the cultural production spaces. The central idea is that creative agents coming in (on their own) and making use of rundown neighbourhoods would revitalise the area and make it attractive to middle-class consumers and residents (Zukin 1982).

Another well-known researcher of cultural and urban regeneration policy is Graeme Evans (2005, 2009). His work *Creative Cities, Creative Spaces and Urban Policy* looks at the different creative industry strategies and policies used by governments around the world with creative clusters in mind. His approach is largely critical of such policies since, according to the author, governments use them to justify their plans for the redevelopment of industrial zones and city expansion (Evans 2009, 1003). Evans also criticises the cultural and urban development policies for putting too much focus on SMEs even though their contribution to the economy is not as significant as that of large

firms (Evans 2009, 1004). It should be noted here that this does not apply to the video game industry where the bulk of developing studios are SMEs (Sharma 2016, unpaginated).

However, there are authors who celebrate the urban revitalisation component of the policies for creative industries. For instance, in her book on the *Death and Life of Great American Cities* (1961), Jane Jacobs criticised the contemporary government's "rationalist" urban planning policies and proposed that "the built form of old buildings supply the stock of urban spaces for alternative business and cultural activities because of their unique character, low rent and adaptability to new uses" (Gu 2014, 124). In particular, she was talking about heritage industrial buildings: they have deeper connections with the cultural community and are particularly popular with creative SMEs (Jacobs 1961, 187).

There are few works that undertake the task of analysing urban regeneration policies in a systematic manner. One such example is the analytical framework developed by Liu and Chiu (2017) in their work *Evaluation of the Policy of the Creative Industry for Urban Development*, which, as the title suggests, mainly focuses on the urban regeneration aspect of the policy spectrum. Having analysed the different dimensions of the policies aimed to increase urban competitiveness, they proposed five dimensions for assessing urban development policies targeting cultural and creative industries: the basic dimension (infrastructure, education, and training); fiscal dimension (policy support and fiscal expenditure); cultural and creative dimension (cultural resources and creative potential); industrial dimension (industrial development and potential); social dimension (social diversity and friendliness). Each of the sub-criteria is further split into several assessment factors, which allows to narrow in on the individual aspects of urban development policies (Liu and Chiu 2017, 10-11).

All in all, the urban generation strategy is mainly related to the concepts of the creative class and the creative city and aims at improving a city's socio-spatial vibrancy in order to attract creative talent and revitalise post-industrial spaces. Although the urban regeneration aspect is the most popular aspect of cluster development policies in academia, it is also the most controversial one.

2.4. Cultural policies for cluster development

2.4.1. Overview

At the same time, cluster development support does not only come in the form of urban planning but also a wide range of cultural policies, a fact that seems to escape many scholars, which was noticed by Jacob and van Heur (2015). The authors claim that "creative economy strategies only partially overlap with and cannot be reduced to regeneration strategies" and that most studies have failed to

properly address such important aspects as subsidies and awards for creative industries, labour regulations, copyright protection, etc. (Jacob and van Heur 2015, 359). Therefore, in order to construct a comprehensive methodology for the current study, this section will try to identify the main cultural policy instruments proposed by different studies and their combinations in the relevant analytical frameworks of policy analysis.

As Fung (2018) pointed out in his work on *Cultural Policy and East Asian Rivalry*, cultural policy scholars oftentimes fail to produce concrete recommendations that can be analysed and implemented, instead opting to simply criticise policymakers for utilising the creative industries in their own interest. He insists that “the state’s intervention in the economy of cultural trade and flow, which overrides vested and other interests, can lead to a much healthier development of the cultural industry”, which is why scholars should focus on identifying relevant economic aspects of cultural policies, i.e. taxation, cultural talent creation, copyright protection, and different forms of direct public support, that can promote the development of local creative industries (Fung 2018, 72).

Indeed, there are some authors that make specific policy suggestions for national and local governments to promote the development of CCIs. Yusuf and Nabeshima, for example, while warning that “there is no reason to expect a linear relationship between policy actions and the growth of creative industries”, mention the following “ingredients”: macroeconomic stability; high-quality tertiary education; IP protection; openness to international flows of finance, trade and talent; R&D incentives; “mobility environment”, i.e. an easy-to-get-around transportation system; well-developed urban infrastructure and recreational amenities; “sound urban fiscal management”; environmental management (Yusuf and Nabeshima 2005, 118-121). All in all, the cultural policy component of the cluster development strategy can be categorised into five main blocks: formal governance, informal governance, financial support measures, policies used to prevent lock-in, and talent creation policies.

2.4.2. Formal governance

One of the main elements of formal governance is the creation of various industry-specific reports, which is given particular importance in the analytical framework created by Michael J. Enright in his work *Regional Clusters: What We Know and What We Should Know*. Along with calling for the provision of specific infrastructure and creation of talent through education and training required by certain clusters, he identifies the following elements of cluster development policies related to reporting:

- provision of business and economic data through reports, statistics and publication of information on markets, technological trends, competitive climate, etc. relevant to a particular cluster;

- provision of business services such as market research, consulting firms about business processes and business management, especially to SMEs that cannot perform such research with internal resources;
- “assessment and improvement of government policies” in order to analyse the effectiveness of existing policies, see where the government intervention hinders industry development and re-evaluate and adjust the strategy if needed (Enright 2003, 117).

It is evident from Enright’s framework that various reports and publications play a crucial role in cluster development in terms of collecting and distributing information. The former is especially relevant when it comes to applying policies to the local context and testing their efficacy. Although the idea of creative clusters was created in the West, since the beginning of the 21st century, the clustering model of urban cultural and economic development has been tested, customised, and applied across East Asia (Lee and Lim 2014, 4). A common theme around researchers of East Asian (as well as other non-Western countries’) creative clusters has been calling for careful consideration of local context and subsequent adjustment based on empirical evidence and carefully gathered statistics (O’Connor and Kong 2009, Pratt 2009, Tschang 2009, etc.). For example, Andy Pratt (2009) warns policymakers that they cannot simply “xerox” policies adopted in other countries or other sectors of the economy and should work out their CCI strategy via a rigorous systemised development, “where information is gathered about the objectives and outcomes, as well as the means of policy evaluation” (Pratt 2009, 19).

This problem is often brought up in the context of China, where cluster development policies are often lambasted for imitating the experiences of Western countries without adjusting them to the local realities. For instance, in his article *Cultural Industries and Creative Clusters in Shanghai* (2014), Xin Gu critiques the policies of the national and local authorities for too much interference with the organic development of creative clusters. Echoing Evans’s ideas, the author expresses his concern that artists become marginalised in the authorities’ race for urban revitalisation.

Another area that has been highlighted as an important formal-governance factor in the success of a given cluster is a *favourable regulatory environment* governing the video game industry. In their book on *Video Game Law*, Boyd, Pyne and Kane (2020) discuss the various areas of legislation affecting gaming companies: intellectual property protection, game industry contracts, game ratings, gambling, tax incentives, etc. (Boyd et al. 2020). Out of them, IP protection is given utmost importance, with most authors insisting that IP should be protected because it ensures that the owner of the copyright can “harness the full economic potential of their products, through the dissemination of

their products over multiple industries for mutual benefit and economic growth of all involved companies” (Rodrigues 2018, unpaginated). This, in turn, encourages the company to produce more products and prevent others from copying its work, leading to IP diversification (Ernkvist and Ström 2018, 279-280).

2.4.3. *Informal governance*

Many authors point out that direct governance instruments should be complemented by informal governance mechanisms. For example, along with emphasising the importance of data collection and distribution, Enright (2003) highlights the importance of “community development” at the local level to morally unite the community and enhance its economic performance. Furthermore, he notes that the government should try to foster business networking and collaboration between the firms of the cluster through formal and informal cluster development strategies, such as industry-specific associations, referrals, and other mechanisms (Enright 2003, 117).

Such “industry-specific associations”, along with other institutions that facilitate interaction between policymakers and creative actors, are referred to as *creative mediators* or *creative intermediaries*. Dotti and Lupova-Henry (2020) offer a new perspective of researching the governance of creative clusters by using the cognitive-evolutionary approach, which emphasises the role of creative mediators that act “on the boundaries between the creative cluster and the related policymaking community” and guide their co-evolution. The authors claim that creative mediators ensure the sustainability of creative clusters by securing the survival of the fittest creative industries and policies (Dotti and Lupova-Henry 2020, 23-24). This echoes the ideas of Jacob and van Heur (2015), who also put an emphasis on the importance of the role creative intermediaries play in guaranteeing the success of creative clusters.

Even some authors who are critical of direct interventions concede that informal governance strategies can have a beneficial effect on the local industry development. For instance, although Quentin Cucuel (2011) expresses his concern that the lack of diversity would soon exhaust a cluster’s creativity and innovation potential, he also acknowledges that they “may be applicable to video game publishers” as they promote the innovation of third-party developers through supporting independent local game development and provide manufacturing and distribution networks and, thus, reduce transaction costs (Cucuel 2011, 8). Kerr (2017) is also sceptical in her analysis of the *Global Games*’ industry. She notes that game developers are “disinclined to cluster” and, instead, points out the importance of “non-geographic forms of proximity”, also referred to as *informal clusters* (Kerr 2017, 23-24).

2.4.4. Financial support

Due to the capital-intensive nature of the video game industry, financial support remains one of the main instruments used to encourage its development at the national and local levels (Ernkvist and Ström 2018, 266). As Kerr (2017) points out, fiscal and capital incentives have been one of the most popular aspects of cultural policy for video game cluster development: “[t]ax incentives and tax credits for production in particular locations are increasingly justified in terms of protecting national champions, national cultures and cultural diversity” (Kerr 2017, 22). In their book about *Tax Incentives for the Creative Industries* (2017), Hemels and Goto also discussed, among other sub-sectors, tax relief policies for the video game industry. They show a positive example of Canadian provinces that provide incentives for labour expenses, thus making it more attractive for gaming companies to move their labour-intensive business to one of these regions (Hemels and Goto 2017, 167).

Enright’s (2003) framework also includes other measures for improving the overall business environment, along with taxation, such as the creation of favourable business conditions, reduction of service costs, etc. (Enright 2003, 117). The report on *Enumerating the Role of Incentives in CCI Production Chains* by Daubeuf et al. (2020) goes into more detail on this subject and looks at a wide range of incentives used to facilitate the development of creative industries and enhance their collaborations and what impact they have on the production circle. The format of these incentives will vary depending on the targeted industry and phase of the production chain: tax incentives, grants, labour incentives, public investment funds, cash rebate, regulatory incentives, etc. (Daubeuf et al. 2020, 7). The authors claim that these incentives “motivate the choice of a location for creation, production, dissemination and consumption of cultural and creative products”, therefore encouraging creative cluster formation (Daubeuf et al. 2020, 36).

2.4.5. Measures against lock-in

As it has been discussed in Section 2.2. of this chapter, the main drawback of having cultural and creative businesses agglomerate in the same place is *the lock-in effect* that restricts the cluster’s ability to innovate and take risks (Storper 1995, 211; Maskell and Malmberg 2007, 607; Keane 2013, 2). In order to counteract spatial myopia, the government can promote cross-fertilisation, provide access to global flows of knowledge and provide R&D incentives to encourage IP differentiation (Power 2010, 151-154).

An influential study of these instruments was done by Pilon and Tremblay (2013) in their work *The Geography of Clusters: The Case of the Video Games Clusters in Montreal and in Los Angeles*, which looks at video game clusters in Montreal and Los Angeles and analyses how they

came about to be and how they differ from one another by looking at the public policy, cross-fertilisation, and the results of a survey of professionals involved in the development of video games in these two clusters. They conclude that, in the case of Montreal, pre-existing film and animation industries that provided the necessary creative talent, “low-cost high-creativity” culture and, most importantly, the cultural policy aimed at job creation and financial support of creative industries contributed to the creation of a successful video game cluster (Pilon and Tremblay 2013, 4). Los Angeles, on the other hand, fostered its video game industry largely through cross-fertilisation with the existing Hollywood franchises and cooperation with software companies from Silicon Valley. While this has been a successful strategy so far, Pilon and Tremblay point out the potential dangers of rigidity and inter-industrial transaction costs that might become problematic for the video game cluster in the long run (Pilon and Tremblay 2013, 7-8).

With regard to cultural policy, the authors highlight the following implications. First, it should aim to encourage clusters to gain access to “global pipelines of information and knowledge”, which would prevent them from a potential lock-in, which echoes the ideas of Yusuf and Nabeshima (2005) and Keane (2013). Second, it should not try to separate clusters but rather encourage cooperation and cross-fertilisation between them, especially when it comes to multimedia and IT industries (Pilon and Tremblay 2013, 8). The importance of cross-industrial collaboration was also underlined in another renowned work by Yuko Aoyama and Hiro Izushi (2003) who examined Japan’s early video game industry. According to this study, the success of the video game industry can be attributed to the creative resources generated by the pre-existing manga and anime franchises, combined with the technological advances of the consumer electronics industry (Aoyama and Izushi 2003, 423). The work thus establishes the importance of cross-fertilisation with related industries and software companies as a key to a successful video game cluster.

In fact, interactions and collaborations with related industries have been often highlighted as a way to boost the ability of video game companies to produce differentiated IPs (Power 2010, 154). In their study, Ernkvist and Ström (2018) distinguish between the following mechanisms of cross-fertilisation of the video industry with related creative industries, such as comic, animation, and film industries:

- *Skill transfer*, i.e. when people from related creative industries (e.g. animation) move to the video game industry. Hanzawa (2004) also points out the similarities between the production pipelines of the animation and video game industries, which make skill transfer fairly easy (Hanzawa 2004, 33).
- *IP licensing*, i.e. expansion of a franchise from related industries to the game industry and the other way round (e.g. when the Harry Potter movies were turned into games).

- *Lead-market cross-fertilisation*, meaning that more games are created based on pre-existing games, e.g. arcade games.
- “*Company-orchestrated multi-product releases*”, i.e. integration of one IP into multiple products (e.g. when Pokemon spread its products across the franchise) (Ernkvist and Ström 2018, 267-268).

It is also essential to *facilitate innovation* within the video game industry, where the government’s help is needed due to the high costs of game development. The guidebook on the *Worldwide R&D Incentives*, for example, offers a wide range of incentives and subsidies, such as various tax incentives and tax breaks, specialised funds, grants and loans, patent-related incentives, support of specialised incubators and innovation labs, etc. (EY 2020, unpaginated). Keane (2013) also talks about the importance of the proximity of innovative technological parks and prestigious universities to creative clusters (Keane 2013, 54-55). This is especially relevant to video game clusters since, as illustrated by Tschang (2007, 2009), video games essentially consist of design, content and technological innovations as opposed to, for example, film, which almost exclusively consists of content innovations (Tschang 2009, 35). The state should, therefore, use their “traditional” policy levers to finance education and R&D and provide adequate infrastructure because “the absence of government support has hurt countries that do not have sufficiently developed infrastructure and institutions” (Tschang 2009, 39).

2.4.6. *Talent creation policies*

Although different talent attraction policies in the form of urban regeneration policy have been discussed in the previous section of the paper, the government can ensure a sufficient supply of creative individuals to a given cluster by not just attracting them but also by promoting talent creation. For example, Enright’s (2003) framework highlights the importance of the provision of specific infrastructure and the creation of talent through education and training required by certain clusters (Enright 2003, 117).

Although Liu and Chiu’s (2017) analytical framework, which has been mentioned above, mainly focuses on urban regeneration policy, the *Education and Training* sub-criterion also addresses human capital creation and is split into three factors: industry-government-academia integration, human resources, and talent training (Liu and Chiu 2017, 10). The authors suggest evaluating this parameter by looking at the number of tertiary educational institutions, especially the ones related to CCI; research institutes; numbers of specialists with higher education; relevant talent training programmes and scholarships sponsored by the government; etc.

In conclusion, although researchers disagree to what extent the government should interfere in creative cluster development in the form of urban development policies, most of them support the cultural policies dimension. In order to assess their extent and effectiveness, it is suggested to look at such criteria as taxation and other financial incentives; regulatory environment; promotion of education and training; industry-specific reports; utilisation of creative intermediaries and non-geographic forms of networking; etc. In addition, due to the unique nature of video games, most researchers emphasise the role of innovation and the ability to produce differentiated IPs as the key to ensuring the success of a video game cluster, which is why cross-fertilisation and openness to international flows of knowledge, finance and trade a crucial role.

In this literature review, the major works on the topic of creative clusters, in particular, video game clusters, and policies for their development have been examined. Many benefits of the clustering approach have been identified, such as the opportunities of cross-fertilisation with other industries and the exchange of tacit knowledge, which promote innovation. At the same time, the innovation trap known as the lock-in effect is said to be one of the main disadvantages.

As it had been pointed out at the beginning, the research topic is fraught with clashing arguments. It appears that one of the most debated issues is the balance between the organic and planned approaches to creative clusters. How much government intervention is too much? How much is too little? In the context of East Asia, many authors also warn policymakers about “xeroxing” policies without consideration for the local context.

According to the results of the literature review, the cultural and urban development policies used to effectively encourage cluster development can be split into six categories:

- urban regeneration policies, or *talent attraction policies* (provision of high-quality space for use by creative businesses and promotion of socio-spatial vibrancy);
- *formal governance policies* (adequate legislation environment; effective IP protection measures; gathering statistical data and issuing reports tracking the performance of the cluster and effectiveness of policies);
- *informal governance policies* (presence of industry-specific creative mediators targeting the local creative businesses; facilitation of non-spatial networking formats that facilitate collaboration);
- *financial support policies* (tax relief, job creation support, lower rent rates, etc. and public subsidies for video game developers);

- *measures against lock-in* (facilitation of cross-fertilisation with related creative (e.g. animation) and software industries; R&D support for the technological development of video game software; encouraging video game companies to gain access to the global pipelines of information and knowledge and reach global audiences);
- *talent creation policies* (support of educational institutions and programmes focused on generating creative talent in that particular area; funding of relevant scholarships, exchange programmes, etc.).

3. Analytical Framework

3.1. Overview

Urban regeneration strategies have for a long time been at the centre of the debate about creative cluster development policies. The governments' attempts to promote creative cluster development have been associated with policymakers' vested interests and disguised redevelopment of post-industrial zones (Evans 2009, 1003). Some authors lambast cluster development policies and even equate them to forceful clustering of firms in renovated industrial buildings and new office complexes without any regard for the artists themselves (Gu 2014, 129).

However, creative cluster development policies cannot be reduced to planned post-industrial revitalisation. Urban regeneration policies alone are not enough to safeguard the success of a creative cluster. As Keane (2013) points out, "without effective governance there is no guarantee that corraling people in managed spaces will encourage trust and sharing of ideas and therefore lead to innovations" (Keane 2013, 2). Although space quality plays an important role in increasing the competitiveness of a cluster and attracting new creative talent to it, simply providing cheap facilities does not mean that the participants will establish networking connections and exchange tacit knowledge.

This paper will try to address the whole spectrum of policies in a structured manner. Hardly any study similar to this one has been performed at this point, which is why the analytical framework is going to be constructed eclectically, so as to incorporate the different methodologies which have been discussed in the literature review. In particular, this framework was inspired by the ideas of Enright (2003), Power (2010), Liu and Chiu (2017), Pilon and Tremblay (2013), Jacob and van Heur (2015), Daubeuf et al. (2020), Ernkvist and Ström (2018), and Fung (2018).

The analytical structure will be split into five sections with several sub-items, each of which will encompass a different facet of cultural and urban regeneration policies for video game cluster development. **Section 1** will deal with the institutional foundation for these policies and focus on the political institutions involved in their formulation and implementation, the regulations that govern the video game industries at the national and local levels and the public reports that provide information about the video game industry and creative clusters within it and re-evaluate the existing strategies for their development. **Section 2**, on the other hand, is concerned with the more informal aspects of cultural policies, i.e. the creative intermediaries that facilitate the co-evolution between creative clusters, public institutions, and various networking events that draw together video game firms and their consumers. Next, **Section 3** will look at the different financial incentives that promote the video game industry, not only in the form of taxation stimuli but also various public subsidies (grants, awards, etc.). The measures used to combat the lock-in effect are discussed in **Section 4**,

which will focus on innovation support strategies, facilitation of cross-fertilisation with related industries and provision of access to global production chains and pipelines of knowledge to the video game industry. Finally, **Section 5** will address the policies for creating and attracting talent, with the latter incorporating the urban regeneration policies that are meant to draw the creative class to video game clusters.

3.2. Formal governance

3.2.1. Section overview

The first section will outline the main institutions and regulations that are involved in the process of creative cluster policy creation in the context of the video game industry. It is important to identify whether there are specialised institutions that exist to govern creative and cultural industries in general and the video game industry in particular because only such institutions can produce competent action plans and lead their development in the right direction. This section will also address the various reports published or commissioned by the government in order to either evaluate cluster performance, reassess the existing policies for cluster development, or provide information to video game companies that are not able to conduct research internally. These are crucial for self-reflection and adjusting cultural and urban regeneration policies to the local context without “xeroxing” them (Pratt 2009).

3.2.2. Presence of public institutions

First of all, it is important to identify which political institutions (if any) govern the creative industries at the national and local levels. Depending on the political system of a given country, one or the other plays a larger role in the creative cluster development process. For example, in some authoritarian countries, where all authority tends to be highly centralised, the central government will have more control over creative industries and how much support and guidance they receive (Fung 2018, 75). On the other hand, it has been pointed out that the role of local authorities, i.e. “the public administration of towns, cities, counties, and districts”, is greater in the case of CCIs compared to other industries due to their tendency to spread unevenly and be mainly concentrated in urban areas (Fazlagic and Szczepankiewicz 2020, 1-2).

Therefore, in this section, both central and local governing institutions will be identified and their role in the creative cluster development will be analysed. This step of the analysis is crucial since the other parameters of governance will be assessed based on the policies coming from these

institutions. Thus, all national and local public institutions governing creative industries in general and the video game industry, in particular, will be outlined. The paper will discuss how they were created, what their priorities and responsibilities are and how active they are when it comes to video game clusters.

3.2.3. Positive legislation

The importance of adequate regulations is highlighted by many authors (Enright 2003; Yusuf and Nabeshima 2005; Boyd 2019; etc.). Positive legislation is understood here as regulations that promote the development of the gaming clusters rather than obstructing it and making companies leave the cluster to seek a better business environment.

There are multiple dimensions to be considered when analysing the legislation affecting the video game industry in target countries. The most important legal matter is intellectual property (IP) and how well it is protected. Boyd et al. identify the following components that should be addressed by IP law: copyright, trade secrets, trademarks, and patents. Copyright is the central issue in the area of IP protection measures as it “protects original works of authorship fixed in a tangible medium of expression, and easily qualifies as the best tool for protecting game property because of its ease of use, power, and versatility” (Boyd et al. 2020, 20). The government has to ensure that companies fully explore the economic potential of their IP products by making sure that others do not produce products with similar characteristics. The intellectual property protection network includes specialised legal bodies (such as the European Union Intellectual Property Office in the EU), legal protection acts, specialised courts that handle IP disputes and, at times, international dialogues that try to strengthen copyright enforcement abroad (Rodrigues 2018, unpaginated).

Another important area of video game regulation is censorship which mainly comes in the form of bans and game rating systems (Byrd 2007, 407). Both local and foreign games can be subjected to ban on the grounds of being considered too violent or otherwise inappropriate. Meanwhile, some governments have banned foreign game software and hardware as a means to protect the local market and limit access to ideas that contradict the ideological policy of the government (Fung 2018, 80). Content rating systems, which exist to ensure that all games have a label that clearly states the recommended minimum age of the content consumers, have been created by both governments and game industry associations that decided to introduce a framework for self-regulation, such as the rating system of the Pan European Game Information (PEGI 2021, unpaginated).

Therefore, this paper will examine the existing IP protection laws and assess how strict and effective they are. It will also identify specialised legal institutions and courts (if such are to be found)

as well as address the governments' efforts to curb copyright breaching in other countries to protect the interests of domestic companies. Furthermore, it will look at any existing censorship policies and identify which game software and hardware are targeted. We will also discuss game rating and its efficiency along with other regulations related to the video game industry, for instance, the legal status of e-sports.

3.2.4. Industry-specific reports

Several criteria of the analytical framework suggested by Enright (2003) address various cluster-specific informative publications as elements of cluster development policies. These include:

- provision of information and data regarding various trends in the business and economic areas, “as well as information and data on markets, customers, competitors, and technological trends specific to clusters”;
- offering “business services ranging from basic research to market research, to materials testing, to business process consulting, to accounting and record keeping, to advice on business management”;
- gathering and publishing cluster-related information with the purpose of re-evaluating and improving the existing policies (Enright 2003, 118).

In this paper, all three will be looked at together as “reports”. Pratt (2009) also highlights the need for “a more systematic and rigorous evidence-based policy development”, where policies are not simply “xeroxed” from other countries but instead, necessary adjustments are made to reflect the local context and policies are regularly evaluated and adjusted based on the outcomes (Pratt 2009, 19). Such reports are important for both self-reflection and provision of market information for the companies that are not able to conduct market research internally, especially small- and medium-sized enterprises.

This sub-item will examine the reports published by governments and industry-specific associations that provide information on the video game industry and evaluate how comprehensive and up-to-date they are. It will also address the public documents that provide information about creative clusters and see how relevant they are to the video game industry. Finally, the study will try to identify whether reports that re-evaluate the existing policies for creative cluster development are present and decide if they hold relevance to the target industry.

3.3. Informal governance

3.3.1. Section overview

It has been noticed that creative cluster development can be encouraged not only through formal channels but also by facilitating networking indirectly, i.e. through creative intermediaries and networking events. Some authors, such as Kerr (2017), point out the importance of these “non-geographic forms of proximity”, which encourage collaboration between the policymaking community, video game companies, and their lead users (Kerr 2017, 24). Effective informal governance mechanisms can promote the sustainability of the creative cluster they target by improving these communication channels.

3.3.2. Creative mediators

The main function of creative intermediaries in terms of cultural policy is to facilitate the interaction between creative clusters and policymakers and coordinate their co-evolution. As Dotti and Lupova-Henry (2020) pointed out, these institutions “have the highest awareness of the tensions and contradictions which exist within and between the policymaking and creative communities and, potentially, can ease them if their knowledge has a way of feeding back to both communities” (Dotti and Lupova-Henry 2020, 23). For example, the Entertainment Software Association of Europe (ISFE) has been actively lobbying for the introduction of funding for gaming companies in France, along with tax credits at the European level, and for games to be recognised as a cultural industry (Kerr 2017, 144-145).

Furthermore, creative mediators are responsible for promoting the development of creative and cultural industries and ensuring their “heterogeneity” by preserving the strongest CCIs and thus ensuring the survival and sustainability of the cluster (Dotti and Lupova-Henry 2020, 24). Despite the role they play in creative cluster development, creative intermediaries are often overlooked and much less is known about their contribution to the creative economy (Jacob and Van Heur 2015, 357).

In the context of the video game industry, these actors include a wide variety of industry-specific associations, managing companies, educational institutions, incubators, foundations, etc. (Jacob and Van Heur 2015, 357). Jacob and van Heur (2015) also include festivals and trade shows in the category of creative mediators, but in this paper, they will be discussed in a separate section (see Section 2.2.).

At this stage, it is important to see which game industry associations, managing companies and other creative mediators exist, how many of them there are, and how they interact with the government and the creative cluster. The paper will also examine what role they play in facilitating interaction between policymakers and the video game industry, and what activities they are involved in that contribute to creative cluster development.

3.3.3. Networking events

In his analytical framework, Enright (2003) highlights the importance of “community building”. Such measures differ from economic incentives and are meant to help the cluster “develop a shared sense of purpose and work toward the common good”, which leads it to produce better economic performance (Enright 2003, 118). Some authors also emphasise that these non-geographic clusters can become an effective element of a policymaker’s toolkit when it comes to promoting local CCIs (Kerr 2017, 24).

Networked communities within the video game industry take the form of “a range of events and informal meet-ups that focus on games and play” (Kerr 2017, 140). Various forums, shows, and e-sports competitions provide an opportunity not only for cross-fertilisation and exchange of information and knowledge but also for getting feedback from the consumers. Gamers themselves thus become a part of the creative creation process by providing detailed feedback about video game products. As Power (2010) noticed in his interpretation of *the diamond model* by Porter (1990), active and sophisticated consumers, or demand, are an important condition for IP differentiation and, consequently, for the sustainability of creative clusters (Power 2010, 154).

Therefore, it is important to look at the different gaming networking events, i.e. forums, shows, e-sports events, etc. The paper will try to identify how many of them there are locally, how many people and companies participate in them and whether the government helps facilitate these events.

3.4. Financial support

3.4.1. Section overview

In the last few decades, as the technological advances in video game hardware made the graphic and programming requirements for games higher and games became more complex, game creation has become an increasingly expensive business. As a result, each project required more time, higher costs, and more advanced developers to be involved, which meant that the average cost of a video game

title went up dramatically (Ernkvist and Ström 2018, 266). Consequently, both national and municipal financial support schemes play a critical role in ensuring the survival of the video game industry.

3.4.2. Tax incentives

A proposal to review tax policy in order to improve the business climate within the cluster also features in Enright's framework (Enright 2003, 118). As it has already been discussed in the literature review, fiscal and capital incentives and credits are some of the most notable and called-for measures when it comes to creative cluster development (Kerr 2017, 22). It should also be noted that they are traditionally introduced at the national level, especially in countries with centralised authority (Daubeuf et al. 2020, 36).

The efforts of the Canadian government in this area have been brought up by many authors as a positive example of creating favourable business conditions for video game companies (Pilon and Tremblay 2013; Hemels and Goto 2017; Kerr 2017; Fung 2018). Most Canadian provinces provide refundable tax credits and experimental development tax credits to encourage interactive digital media production and promote R&D in this area (Fung 2018, 126). All programmes provide an incentive that helps cover the labour costs (from 17.5% up to 50%), with Ontario providing additional subsidies for 40% of marketing and distribution costs (Hemels and Goto 2017, 168). These policies help attract companies to places that offer more incentives and thus facilitate creative cluster development.

On the other hand, taxation policy can be used by policymakers to promote their own agenda. Both Kerr (2017, 146) and Fung (2018, 83) point out that games that satisfy specific cultural or ideological parameters have a better chance of having some of their production costs written off against tax. Therefore, it is also important to examine the preconditions for receiving tax incentives.

This section will try to answer the following questions: Do tax incentives exist at the national and local levels? If not, are they being discussed and considered? Which costs can be written off and how much value do they hold? What are the preconditions that should be satisfied to be qualified for tax breaks? The answers to these questions will help adequately analyse the taxation policy and how it affects video game clusters.

3.4.3. Public subsidies and other financial support measures

Although taxation policy is becoming an increasingly widespread CCI-support tool among policymakers, financial support measures come in many different forms, such as various public subsidies,

all of which have to be examined to see the full picture as they also play an important role in motivating companies to choose a particular location for creative production. Unlike regulatory and tax incentives, public subsidies can be operated both at the national and local levels, which will allow this study to narrow in on particular regions (Daubeuf et al. 2020, 36).

Daubeuf et al. (2020) identify a wide range of incentives in their report, some of which (tax incentives and regulatory framework) will be analysed separately. It is necessary to take into account that, in the case of the video game industry, production-phase incentives play an important role. (Daubeuf et al. 2020, 36). Therefore, this section will address such measures as grants, public investment funds, awards, etc., which mainly “consist in a non-repayable amount of money given to cultural operators after a selection process mainly based on artistic quality” (Daubeuf et al. 2020, 9).

It is important to keep in mind that, in this paper, financial support measures that do not directly address the video game industry will not be discussed. For example, the paper will not talk about incentives that promote the city as a tourist destination as it is not clear whether they have a significant economic effect on the video game industry (Daubeuf et al. 2020, 36). Instead, it will try to address the following questions: What kind of public subsidies are available to video game companies at the national and local levels? How many of these options are there? How much money is allocated to these projects? What are the conditions that have to be satisfied in order to qualify for these subsidies?

3.5. Measures against lock-in

3.5.1. Section overview

Despite the advantages of clustering discussed in the literature review, most authors pointed out one major drawback that comes with it - the lock-in effect (Storper 1995; Yusuf and Nabeshima 2005; Maskell and Malberg 2007; Power 2010; Keane 2013; etc.). This effect can be defined as a constriction to “a fated path where development is constrained within a progressively narrower range of possibilities that ultimately leads to stagnation or decline when confronted with radical technological shifts or wider market changes” (Maskell and Malberg 2007, 603-604).

The video game industry is particularly prone to locking in as experimentation is incredibly risky because of the high costs of developing games. However, being a hits-based industry, video games have to be extremely innovative and keep coming up with new IPs in order to succeed, which is why it is important to prevent spatial myopia and encourage IP differentiation (Power 2010; Hanzawa and Yamamoto 2017).

In this paper, three such strategies will be examined: R&D and innovation facilitation; support of cross-pollination with related industries; provision of access to global pipelines of knowledge and information. It should be pointed out that the criterion of innovation support intersects with the previous section, but this section will look not only at R&D subsidies but also at other policy levers used by governments to facilitate content and technological innovations within video game clusters.

3.5.2. Innovation support

In the 21st century, technological progress plays an increasingly important role in the development and progress within creative industries, especially digital content industries, such as animation, film and video games, requiring them to constantly update their mode of production (Ernkvist and Ström 2018, 266). This is particularly true for the video game industry due to its technology- and capital-intensity and the fact that it essentially consists of design, content, and technological innovations, with the technological infrastructure of game development demanding vast investments and thus increasing the business risk and sunk costs (Tschang 2009, 35; Fung 2018, 52). This makes video games an industry where “digital technology is embedded in all parts of the development process” and all opportunities for IP differentiation heavily depend on technological development (Ernkvist and Ström 2018, 266).

Therefore, in order to secure the success of a video game cluster, governments should introduce policies for supporting game R&D and enhancing its ability to innovate. Such policies come in the form of R&D tax incentives, specialised funds and grants, patent-related incentives, support of and collaboration with specialised incubators, innovation labs, and video game research centres (EY 2020, unpaginated).

This section will see which of these subsidies are relevant to video game companies and which requirements should be satisfied in order to qualify for them. Furthermore, it is important to know if the government supports any specialised incubators, labs and research centres and if any other innovation incentives are available to video game companies.

3.5.3. Facilitation of cross-fertilisation

One of the biggest upsides of creative clusters is the synergies that emerge through the interactions and collaborations between related industries in spatial proximity (Aoyama and Izushi 2003; Power 2010; Pilon and Tremblay 2013; Ernkvist and Ström 2018; Fung 2018; etc.). According to Power (2010), cross-pollination with related industries helps companies not only decrease their transaction

costs and benefit from knowledge spill-overs but also differentiate their IPs to escape the lock-in effect (Power 2010, 153).

The video game industry is linked to a wide range of creative industries, including comics, animation, film, music, etc. For example, most of its production processes mirror those of the animation industry, allowing for an easy skill transfer (Hanzawa 2004, 33). Some other important related industries unique to the video game industry are IT and the manufacturing of electronic gadgets due to the technology-intensive nature of its products (Fung 2018, 55).

There are many ways governments can encourage cross-fertilisation between the gaming cluster and the industries relevant to it. One of the most widely known and controversial methods is the provision of easily available shared office spaces (Keane 2013; Gu 2014; Fung 2018). Some other ways to enhance cross-pollination include supporting networking events that attract workers from different related industries, designing interdisciplinary modules and forums for students, supporting cultural and creative spaces and promoting related industries locally, which feature in the Creative Europe project proposed by the European Commission (EC 2021, unpaginated).

Our study will thus try to answer the following questions: Which initiatives exist to promote cross-fertilisation between the video game and related creative and IT industries, and how effective are they? Are there any shared creative and office spaces supported by the government, and how efficient are they at encouraging networking? Are there any schemes for attracting related industries to the clusters at the local level? The answers to these questions will help reach a conclusion about how effective the government's efforts to facilitate cross-fertilisation are.

3.5.4. Access to global production chains and pipelines of knowledge

The ability to learn from the global circuits of knowledge prevents creative clusters from locking in and helps them bring fresh ideas in and better differentiate their IPs (Power 2010; Keane 2013; Pilon and Tremblay 2013; etc.). In their research of Canadian video game clusters, Pilon and Tremblay (2013) also notice that “[i]nflows of knowledge from global networks with foreign partners, labour, and international acquisitions serve as feeding pipelines of new ideas, competencies, and technological assets for local firms which, in turn, stimulate internal dynamics of clusters and their performance” (Pilon and Tremblay 2013, 2) Therefore, the authors insist that policymakers should aim to increase the openness of creative clusters in order to facilitate the “inflow of foreign knowledge carried by individuals with different values, competencies, and industrial practices” (Pilon and Tremblay 2013, 8).

In order to evaluate the existing policies aimed to promote video game clusters' exposure to international knowledge flows and participation in the global production chains, it is necessary to look at the following aspects. First of all, the governments' efforts to attract foreign investors and businesses should be analysed, including the existing entry barriers and restrictions. Another important aspect is the policies for foreign talent attraction and promotion of ethnocultural diversity, which should create a comfortable living and working environment for foreign workers. Finally, it is necessary to look at the opportunities for participation in international networking events that facilitate knowledge and information exchange between video game companies at the regional and global levels.

3.6. Talent creation and talent attraction policies

3.6.1. Section overview

In order to promote creative cluster development, it is crucial to ensure that there is a constant supply of qualified creative workers. This element of cultural policy has been emphasised by Florida, who popularised the term “*creative class*”, by which he understood the highly mobile talented and creative people who are drawn to creative and culturally diverse places and trigger urban regeneration and economic growth in these places (Florida 2008, 66). According to him, the flow of talent has taken the place of investment and capital as “the key determinant of global competitiveness”. He goes as far as claiming that “[t]he winners and losers in the global creative economy will be those nations that are best able to attract, retain, and develop creative talent and harness their creative assets and capabilities” (Florida and Tinagli 2004, 41).

Although Florida's ideas have often been subject to criticism, many other authors have underlined the importance of human capital policies. For example, in his framework, Enright (2003) highlights the importance of adequate infrastructure as well as education and training that provide talent with the skills and capabilities required by a certain cluster (Enright 2003, 118). Liu and Chiu (2017) also suggest that governments should introduce specified talent training programmes for CCIs (Liu and Chiu 2017, 14). On the other hand, their framework, which focuses on urban development policies, also includes such assessment criteria as infrastructure, creative resources, industrial potential, and social value, all of which help attract talent to creative clusters (Liu and Chiu 2017, 10-11).

Therefore, two main directions can be identified. The first is the talent creation policy which aims to generate high-quality talent for the creative industries through providing relevant education and training. The second is the talent attraction policy that tries to create a positive image of the city

and improve space quality and vibrancy through urban regeneration, which would in turn attract qualified specialists and other creative people to these cities.

3.6.2. Talent creation policies

Like any other industry, CCIs need to receive a consistent supply of human capital in order to become sustainable. In the case of the video game industry, most workers require expertise in either programming and software engineering or graphic design, and, ideally, have a combination of these skills (Fung 2018, 56). This means that their training has to be highly specific, which has to be reflected in the curricula of educational institutions.

The *Education and Training* sub-criterion of Liu and Chiu's analytical framework is split into three assessment factors: industry-government-academia integration, human resources, and talent training. The authors suggest taking into account such factors as the number of CCI-related educational institutions and experts, the proportion of people with higher education, investment into specialised talent training, scholarship availability, etc. (Liu and Chiu 2017, 10).

Therefore, it is possible to examine this aspect of the cultural policy through evaluating the different instruments in the policymakers' toolset that can be used to improve the quality of education and training, such as cooperation with universities that target video game developers and artists, provision of funding to educational institutions and establishment of video game-oriented scholarships, encouragement of the establishment of specialised training organisations, etc. (Throsby 2010, 185-186; Liu and Chiu 2017; Fung 2018, 92).

3.6.3. Talent attraction policies

Another way to supply creative workers to ensure cluster sustainability are multidimensional talent attraction policies. Although these might find expression in specific programmes that provide residency permits and rent incentives to creative agents, they often take the form of urban regeneration policies and other attempts to improve the image of the city. Urban regeneration policy aims to generate new assets and optimise the efficiency of the urban capital, i.e. the city's physical (buildings, transport and other "hard" infrastructure), natural, human and cultural capital (Throsby 2010, 133). In this paper, this strategy will be divided into two categories: space quality and space vibrancy policies.

Space quality is a more objective factor that incorporates the following urban amenities: public transportation, information and communication, development space. These can be evaluated by

assessing the availability of adequate public urban transportation, internet and mobile network, the quality and price of the office space used by video game companies, and the existing projects that aim to improve these amenities (Liu and Chiu 2017, 10-11).

However, in order to attract cultural and creative industries, a city needs not only “hard infrastructure” but also a vibrant and creative atmosphere that the creative class can identify with and that facilitates creative cluster development (Gu 2014, 124). Today many urban centres around the world compete for the right to be called a “creative city” and be included in UNESCO’s Creative Cities Network (UNESCO 2020, unpaginated). Creative cities have a socio-spatial vibrancy that is created by their cultural amenities and social diversity. These are less tangible than space quality but are nonetheless essential for the sustainable development of creative clusters since, as Hanzawa (2004) pointed out, “workers in the game industry prefer living and working in, or adjacent to, a vibrant area” (Hanzawa 2004, 596). In order to assess the “soft” creative infrastructure, it is important to analyse whether the city has created its own creative city brand as well as the availability of cultural venues, such as museums and galleries, historical monuments, cultural landscape, and the opportunities for informal interaction, such as bars, restaurants, etc.

In this analytical framework, the main criteria for answering the stated research question have been laid out. All five sections with the chosen sub-criteria and assessment methods are summarised in Figure 1. In the following section, this methodology will be applied to four specific cases: Tokyo and Fukuoka in Japan, and Shanghai and Shenzhen in China.

Criteria	Assessment sub-criteria	How to assess?
<i>Formal governance</i>	Presence of public institutions	Which relevant political institutions exist at the national and local levels? How specialised are they? What are their responsibilities?
	Positive legislation	How effective are the IP protection regulations and other attempts to curb copy-right breaching? Are there specialised courts? Is the video game industry subject to censorship? How streamlined is the game rating process?
	Industry-specific reports	Are there any reports published by governments and industry-specific associations that provide information on the video game industry, creative clusters or evaluate existing policies for creative cluster development? How comprehensive, up-to-date and relevant to the video game industry are they?
<i>Informal governance</i>	Creative mediators	Are there any game industry associations, managing companies and other creative intermediaries? How do they interact with the government and the video game cluster? What role do they play in facilitating interaction between policy-makers and the video game industry? What are their main functions?
	Networking events	How many gaming networking events, i.e. forums, shows, e-sports events, etc., are there locally? How many people and companies participate in them? Does the government help facilitate these events?
<i>Financial support</i>	Tax incentives	Are there any tax incentives at the national and local levels? If not, are they being discussed and considered? Which costs can be written off and how much?

		What are the preconditions that should be satisfied to be qualified for tax breaks?
	Public subsidies and other financial support measures	What kind of public subsidies are available to video game companies at the national and local levels? How many? How much money is allocated to these projects? What are the conditions that must be satisfied in order to qualify for these subsidies?
<i>Measures against lock-in</i>	Innovation support	Which R&D subsidies, grants, etc. are there? Are they relevant to video game companies? Which requirements should be satisfied in order to qualify for them?
	Facilitation of cross-fertilisation	Which initiatives exist to promote cross-fertilisation between the video game and related creative and IT industries? Are there any shared creative and office spaces supported by the government? How efficient are they at encouraging networking? Are there any schemes for attracting related industries to the clusters at the local level?
	Access to global production chains and pipelines of knowledge	Does the government try to attract foreign investors and businesses? Are there any entry barriers or restrictions? Are there any policies to attract foreign talent in particular? Are there any opportunities for participating in international networking events relevant to video game companies?
<i>Talent creation and talent attraction policies</i>	Talent creation policies	Does the government cooperate with universities relevant to video game developers and artists? Does it provide any funding to these educational institutions? Are there any video game-oriented scholarships?
	Talent attraction policies	Which urban regeneration policies are there? Is the emphasis on the “hard” or “soft” infrastructure? Are there any efforts to improve the city’s socio-spatial vibrancy?

Table 1. Analysis of cultural and urban regeneration policies for video game clusters: criteria for comparison (compiled by the author).

4. Empirical Part

4.1. Overview

In this chapter, empirical evidence will be gathered and presented for each of the criteria of the analytical framework in order to answer the assessment questions presented in Table 1. For each of the policy dimensions, relevant data will be presented separately for Japan and China, with a focus on the different governance aspects and functions of the central authorities of the two countries as well as the local governments in the four target cities: Tokyo, Fukuoka, Shanghai, and Shenzhen. In the following chapter, the findings will be compared, analysed, and discussed to order to answer the stated research question.

In order to collect the necessary data, a variety of relevant primary and secondary sources will be examined, including laws, statistical data, interviews, newspaper publications, scholarly articles and books, etc. With a view to widen the range of sources and access the most recent policy documents, the paper utilises sources in three languages: English, Chinese, and Japanese.

Finally, it is important to note that some of the criteria overlap with one another, which means that certain policies will be relevant for assessing more than one dimension. For example, looking at tax breaks on R&D incentives will be necessary to evaluate both the tax incentives and the innovation support criteria.

4.2. Formal governance

4.2.1. *Presence of public institutions*

Japan

The term “cultural policy” made its first appearance in the lexicon of the Japanese authorities in a report published by the Agency for Cultural Affairs (ACA) in 1990. From 1993, the term was adopted by the Ministry of Education. This development was precipitated by the burst of the Japanese economic bubble in the late 1980s, which had a critical impact on the cultural and creative economy and the national cultural policy. Whereas previously Japan’s CCIs had focused on the domestic market, now they had to establish themselves internationally and prioritise new creative industries that would drive economic development (Morgner 2019, 47-48). Furthermore, its manufacturing industries lost a fair share of their competitiveness and were superseded by developing economies, the Japanese government began paying more attention to service industries and other industries that produce non-tangible products (Kawashima 2018, 22). The authorities realised that the content industry alone “was worth double Japan’s steel industry, and half its automobile industry” (the automotive industry, as of

2001, was sized at 20.8 trillion yen, the steel industry at 5.2 trillion, and the content industry at 11 trillion yen), which led to a belated intensification of the cultural policy (Johns 2010, 12-27).

In 1992, the first cultural policy plan was published officially, resulting in the establishment of the Cultural Policy Office within the framework of the ACA. At that time, in order to fund creative projects, the Japanese Arts Fund was established, providing over 3,000 grants every year. This cultural development strategy also included the facilitation of a wide range of creative activities and resulted in the introduction of new legal acts, which simplified the establishment of creative spaces, such as art galleries and small event venues. As a result, by the beginning of the 21st century, the number of these creative spaces had grown substantially (Morgner 2019, 48).

Around 2005, the Japanese government started using the slogan *Cool Japan* to talk about using the creative and cultural industries as a way to open up the country and boost its economic development. As Morgner (2019) points out, this strategy is “at its core a re-branding policy, presenting Japan not only as a manufacturing and tech-led nation but as a cultural and creative powerhouse”. Its main intention is to encourage CCIs to expand their activities abroad and, thus, support the image of Japan overseas (Morgner 2019, 48). The internationalisation policy mainly took shape of efforts to develop and improve communication channels and platforms with global partners and “clustering small and medium companies in associations and consortia to lend them more weight and visibility abroad” (Morgner 2019, 51).

The Cool Japan initiative led to the establishment of new ministerial offices. For instance, in 2013, the Council for the Promotion of Cool Japan was established by the Cabinet Secretariat (Iwabuchi 2019, 3). However, the policies published under the umbrella of Cool Japan are based on “questionable or anecdotal” empirical data, which do not take into account the specifics of the region (Morgner 2019, 52). The CCIs also expressed their scepticism regarding this strategy and how the Cool Japan Fund is used: they want the government to prioritise “the improvement of the domestic production environment to foster the creative competence needed to win against international rivals, through state subsidy of training of creators, improvement of notoriously bad labour conditions and clarification of copyright matters” rather than the efforts to promote cultural exports, attract tourists, and improve Japan’s national brand abroad (Iwabuchi 2019, 6-7).

In the aftermath of a major restructuring of the central government agencies, a new department was set up to govern the cultural and creative industries under the auspices of the Ministry of Economy, Trade, and Industry (METI). The department received the name of the Media and Content Industry Division and was placed within the framework of the Commerce and Information Policy Bureau. Following its establishment, the Division started conducting research to identify the weak points

of the cultural policy to stimulate the growth of the industry. As a result, several issues were identified, such as insufficient financial resources available for creative industries, lack of qualified talent, and inequalities between producers and distributors (Kawashima 2018, 22).

In 2010, the creative industries promotion policy was institutionalised under the Creative Industries Promotion Office that was created within the Commerce and Information Policy Bureau of METI, which signified the first time the term “creative industries” was used for official English translation (Iwabuchi 2019, 3; Morgner 2019, 48). Another term that is used by Japanese bureaucrats is “content industry”: in their official documents, Japanese government agencies use it to talk about the CCIs. In *Act on Promotion of Creation, Protection and Exploitation of Contents*, the content industry is defined as the cultural sector that produces film, music, theatre, literary arts, photographs, cartoons, animations, computer games and other products containing text, figures, colours, sounds, movements or videos, or combinations thereof (METI 2012, 4-5).

Another agency responsible for drafting and implementing the cultural policy is the Agency for Cultural Affairs. It carries out policies related to arts and culture, cultural properties, copyright, cultural exchanges, art, and history museums, etc. (ACA 2021, unpaginated). Within the framework of the ACA, there are four categories of media arts: art, animation, manga, and entertainment. Video games do not have a separate category and are incorporated into the entertainment group of arts. Therefore, it is evident that this sector does not occupy a central place in the ACA system, unlike manga and anime (Koizumi 2021, 188).

As for the Tokyo creative cluster, the cultural policy mainly emanates from the Tokyo Metropolitan Government (TMG), Tokyo Council for the Arts, Arts Council Tokyo run by the Tokyo Metropolitan Foundation for History and Culture. These three bodies work together, with the TMG in charge of policy planning and funding, Tokyo Council for the Arts providing policy proposals and evaluations, and the Arts Council Tokyo implementing the programmes in accordance with these proposals (Arts Council Tokyo 2021, unpaginated). The cultural agenda of the metropolis is determined by the *Tokyo Vision for Arts and Culture (2015-2025)* published by the TMG in 2015. Although the document touches upon the topic of creative clusters, socio-spatial vibrancy, and urban regeneration in one of the strategies aimed at “[s]trengthen[ing] Tokyo’s message as a city of arts and culture by raising the allure of its diverse cultural centres”, there are no policies tailored for the promotion of the game industry (Tokyo Metropolitan Government 2015, 14).

In Fukuoka, the Fukuoka City Government and the Fukuoka Chamber of Commerce and Industry are responsible for formulating and implementing the cultural and economic policies affecting the local game industry. The municipal Chamber of Commerce provides information, training, research and business exchange opportunities, and subsidies to the local enterprises, especially SMEs.

However, the Fukuoka City Government plays the most visible role in the development of the local video game cluster: it promotes the government-industry-academia collaboration and supports creative talent development through the Fukuoka Game Promotion Industry Agency and Creative Lab Fukuoka, which will be further discussed in the section on creative mediators (see Section 4.3.1.).

Overall, however, the national government is hesitant to institutionalise cultural policy in the traditional sense and move it into a more economic terrain. The policies for supporting the development of cultural and creative industries are interspersed across several agencies, none of which specialises in the promotion of the game industry. Cool Japan, the main cultural strategy of the last two decades, has produced few results in terms of helping creative agents by improving the local infrastructure for industrial development and fostering content production (Kawashima 2018, 32). At the local level, most of the cultural policies emanate from the city governments, and there are no specialised agencies dealing with creative industries in general and the game industry specifically. Despite this, it is evident that the Fukuoka City Government places a higher value on games and actively supports it through creative mediators.

China

Similar to other content industries in China, the video game industry is closely overseen by the government. The majority of the political and administrative measures which affect the market of video games are formulated at the ministerial level, “with multiple government ministries assuming jurisdiction over different aspects of regulating the industry”. These central government bodies are complemented by multiple tiers of corresponding local agencies which are responsible for implementing official directives within their areas of jurisdiction (Tai 2010, 48).

As video games are seen as a profitable industry that can fuel economic growth, there are a number of agencies involved in fostering their development and prosperity. With regards to the game industry governance, the three central administrative bodies are the Ministry of Culture (MOC), the Ministry of Industry and Information Technology (MIIT), and the NPPA (Pilarowski et al. 2021, unpaginated). These are, in turn, placed under the control of the Central Committee of the Chinese Communist Party (CPC) and the State Council. At the very top, there is the Central Department of Propaganda which can issue directives to all government agencies “to map out overarching goals of ideological orientation and information cleansing” (Tai 2010, 49).

The Ministry of Culture oversees “general cultural activities and is in charge of making regulations and granting licenses to all cultural activities”. The Ministry is constituted by a variety of departments and bureaus, which are responsible for different sectors of the CCIs. It exercises political

control over the market, together with the Ministry of Industry and Information Technology (Fung 2018, 75). In particular, it is involved in the supervision of game console manufacturing and internet cafés, which are widely utilised by Chinese online gamers. However, as Pilarowski et al. 2021 point out, it is not involved in the regulation of the biggest sub-sector of the Chinese game industry - online games (Pilarowski et al. 2021, unpaginated).

The primary public institution for overseeing the telecommunications industry, MIIT, was formed in 2008 through the merger of its predecessor - the Ministry of Information Industry (MII) with the Commission of Science, Technology and Industry for National Defense, the State Council Information Office, and the State Tobacco Monopoly Bureau. This state department is responsible for the supervision of China's information technology and industry. Its primary activity directions include "the regulation and promotion of Chinese telecommunications and software companies which include online gaming". In addition, MIIT is also responsible for facilitating projects which aim to boost "the number and prominence of natively produced online games" (IBP Inc. 2016, 41).

Both ministries have put forward multiple objectives for industrial development, such as industry-specific support measures for promoting the game industry, introducing a project for fostering games that develop fine motor skills, supporting the online gaming industry and related sectors. The Chinese government's aim is to increase the industrial value of games and create a "healthy online cultural environment" for children. Domestic video game companies are also encouraged to explore overseas markets, which, in turn, is expected to improve the image of the country and increase the popularity of its culture (Fung 2018, 79).

There is also a designated government bureau that specifically deals with the regulation of the video game industry and the contents of its production - the National Press and Publication Administration (NPPA). It was created in 2018, as a result of the reorganisation of the State Administration of Press, Publication, Radio, Film and Television (SAPPRFT), which was split into NPP and the National Radio and Television Administration (NRTA). NRTA is primarily responsible for reviewing and censoring media content, formulating laws and regulations for the industry, as well as supervising state-owned media enterprises. NPPA, on the other hand, handles the issuing of game licenses. Interestingly, in contrast to the prior structure, where the agency was placed under the control of the State Council, it is now subordinate to the Propaganda Department of the Central Committee under the CPC, which signifies the increase in the role of the official ideology for cultural policies (Pilarowski et al. 2021, unpaginated).

The Shanghai municipality places "cultural industries" and "creative industries" under different under the authority of two different bureaus: the Department of Press, Publication, Film and Tel-

evision and the Department of Economic Information, respectively (Liang and Wang 2020, 56). Furthermore, since Shanghai is one of the largest centres of the video game industry, the local government set up several special offices to guide and develop the Shanghai gaming cluster. In 2010, the General Office of the Shanghai Municipal People's Government established the Shanghai Cultural Creative Industries Office (SHCCIO), which is responsible for creating the principal framework of the cultural policy, formulating the interests and approaches with regards to creative enterprises, and spearheading the development of the local CCIs. Within the framework of SHCCIO, there is an agency specifically charged with leading the advancement of the local game industry - the Shanghai Municipal Administration of Culture and Tourism (SMACT), which is charged with promoting the synergies between it and other cultural and creative industries, as well as organising events and training programmes for the game industry professionals. Some of the recent policies published by this bureau include *Supportive and Incentive Measures to Shanghai Animation and Game Industries* (2017) and *Notice on Incentive Measures to Shanghai Animation and Game Industries Development* (2018). Finally, another agency whose activities concern the game industry is the Science and Technology Commission of the Shanghai Municipality (STCSM), which focuses on promoting the local high-tech industries by encouraging R&D, supporting relevant organisations, and incubating and improving the local talent pool for these industries (Huang 2021, 7-8).

In Shenzhen, on the other side, almost all cultural policy directives related to video games are issued by the Culture, Radio, Television, Tourism and Sports Bureau of Shenzhen Municipality. The agency is responsible for drafting and implementing culture, sports, and tourism policies at the local level; overseeing the development of CCIs; facilitating industry events and encouraging cross-sectoral and international exchanges, etc. (Shenzhen Government Online 2021, unpaginated). Some of the recent initiatives include the creation of a special fund for the development of the cultural and creative industries, which provides funding for cultural R&D and product development, rent subsidies for SMEs, recognition awards for creative clusters, etc. (Shenzhen Municipal Bureau of Culture, Radio, Television, Tourism and Sports Cultural Industry 2020, unpaginated). Currently, the cultural policy agenda is regulated by the *High-Quality Development Plan of Shenzhen's Cultural Industry (2021-2025)* published by the Culture, Radio, Television, Tourism and Sports Bureau in 2021. The plan underlines the importance of supporting the digital content industries, such as video games, and promoting global knowledge flows and exchanges, using business incubators and cultural technology centres as the main tools to implement this agenda (Shenzhen Municipal Bureau of Culture, Radio, Television, Tourism and Sports Cultural Industry 2021, unpaginated).

All in all, it is evident that there are multiple institutions at the national level that deal with cultural and creative industries, and they are designed to closely oversee and provide guidance for

this sector. Industry-specific institutions are present even at the local level, although there are no agencies targeting the video game industry in particular. On the other hand, most of the policies are formulated at the ministerial level, and cities have less independence in implementing their cultural agenda. Furthermore, as a result of the recent reshuffling, the influence of the central government and the propaganda department has increased, which could pose a threat to the capacity for innovation and exacerbate the lock-in effect.

4.2.2. Positive legislation

Japan

Strong regulations for protecting intellectual property (IP) rights from infringement are crucial for creating favourable conditions for the development of the video game industry because of the rents that flow from IP (Johns 2010, 16). Therefore, according to several interviews with gaming company officials, Japanese companies operating in this industry are aware that the interference of the state “is essential for the eradication of piracy and the enforcement of copyright” (Garvizu 2017, 289). Indeed, profits from sequels and creative iterations of existing franchises are one of the main sources of revenue for the Japanese video game industry (Ernkvist and Ström 2018, 264). Although the losses incurred because of piracy are hard to calculate due to its illegal nature, it is apparent that they run high. For example, Nintendo calculated in one of its reports that it lost over ¥500 billion as the result of there being more than 120 million pirated copies of its games (Garvizu 2017, 290). Furthermore, Baba (2010) estimated that Japan’s video game industry loses about ¥159 billion to piracy every year, a number that does not provide the full scale because it only accounts for the losses of Nintendo DS and Sony’s PSP (Baba 2010, 16).

In 2002, Prime Minister Junichiro Koizumi addressed the importance of IP protection for the first time, stating that “in order to enhance the international competitiveness of its industries, Japan needs to strategically protect and utilise the intellectual properties that are derived from its research and creative activities”. Shortly after, the Strategic Council on Intellectual Property was created, and the Intellectual Property Policy Outlines were drafted to institutionalise this intention. The latter proposed the Intellectual Property Strategic Headquarters (IPHQ) and the Basic Law on Intellectual Property and was approved by the Diet in the same year (Arai 2005, 5).

Consequently, the IPHQ was set up in March 2003 in close connection to METI and has been responsible for producing policies that aim to create and protect different IP rights, such as copyrights, patents, trademarks, etc. These policies range “from supporting research and development, strengthening legal structures for IP and its enforcement internationally, to encouraging industries to innovate

with new digital technologies”. Annual plans put a strong emphasis on the content industries, including the video game industry, deeming them an important asset in terms of economic development (Kawashima 2018, 22-23). Moreover, the Japanese government has launched an annual Intellectual Property Strategy Programme, through which it aims to promote Japan as an “intellectual property-based nation” and “world-class content superpower” (Johns 2010, 16).

With regards to the video game industry, in particular, the main legislation policy directions include protection against copyright infringement, technological development assistance, and prevention of negative effects of games on minors. The first legal protection measures were applied to game software, as well as other computer programmes, in 1985 under the Copyright Act, which allowed the right owners to retain their protective rights without having to file for a patent. In 1997, the copyright system incorporated public transmission rights, which “allow copyrighted works to be transmitted for the purpose of direct reception of the works by the public”. The Japanese government established the Intellectual Property High Court in 2005, which exists to review cases related to IP protection. More recently, in 2012, amendments were made to the Copyright Act, introducing criminal penalties for those who illegally download media on the Internet. These adjustments to the legal system helped the government meet the changing times to effectively protect the intellectual property of video game companies (Koizumi 2021, 192-193).

Furthermore, the Japanese government’s quest to prevent copyright infringement is not limited by the national borders. In 2002, the Content Overseas Distribution Association (CODA) was founded with the support of METI and ACA to fight piracy overseas. CODA has been taking measures to curb pirating; for example, it cooperated with the local law enforcement to conduct anti-piracy activities in China between 2005 and 2008 (Garvizu 2017, 187). Both METI and ACA actively support CODA’s activities against piracy, and this issue is “at the forefront of concern in the Japanese cultural industries” when they interact with the Association. Moreover, in 2014, METI increased its anti-piracy budget twofold, from ¥150 million to ¥300 million (Garvizu 2017, 272). However, as one former president of a video game company pointed out in his interview with Garvizu (2017), CODA is only capable of conducting limited activities because of its lack of funds and authority (Garvizu 2017, 289-290).

In order to curb the adverse effects of gaming on minors and society in general, a rating system was introduced to determine the appropriate age of the audience for individual game titles. As the government is not directly involved in this process, a voluntary organisation called the Computer Entertainment Rating Organization (CERO) was set up in 2002. It is responsible for rating nearly all video games sold in Japan based on a system of five age classifications. Since its establishment, CERO has been working on improving the rating system to keep with the changing times, which has

been an increasingly difficult task since the emergence and spread of harder-to-manage online video games (Koizumi 2021, 193).

One distinguishing feature of the legal framework for the video game industry is that censorship in Japan is virtually non-existent because of Article 21 of the Constitution, which stipulates: “Freedom of assembly and association as well as speech, press and all other forms of expression are guaranteed. No censorship shall be maintained, nor shall the secrecy of any means of communication be violated” (The Constitution of Japan 1946, art. 21). Although the intent behind this peremptory phrasing is to protect the freedom of speech, and it allows Japanese content creators to enjoy considerable freedom for creation, it also makes it difficult to address “the occasional need for certain forms of censorship”. Japan struggles with censoring pornography in its media production, with regulations arriving late and having limited coverage. For instance, child pornography was not criminalised until 2014 when an amendment was passed to *Law for Punishing Acts Related to Child Prostitution and Child Pornography*, but even then, anime, manga, and video games remained exempt from it (deWinter et al. 2018, 44).

The development of e-sports is also hindered by a number of legal complications. Unlike other sports events, in order to host a video game contest, it is necessary to obtain the consent of the IP owner of the video game titles featured in it. Furthermore, there are several laws that obstruct the organisation of e-sports competitions, i.e. the Penal Code, the Act against Unjustifiable Premiums and Misleading Representations, and the Act on Control and Improvement of Amusement and Entertainment Business. Because of these acts, it is illegal to offer large sums of money as a prize for winning in an e-sports competition, which is an established practice in other countries: for instance, *The International 2021*, which took place in October 2021 in Bucharest, Romania, offered a prize pool of \$40 million USD, while *Rage Japan Tournament*, which took place in August 2020, only offered under \$50,000 USD. Consequently, as Koizumi (2021) notes, “it is nearly impossible to hold large e-sports competitions in Japan with significant prize money, it is difficult both to develop gamers and to build a following among ordinary viewers” (Koizumi 2021, 191-192).

In conclusion, the legal framework under which the video game industry operates in Japan has a number of distinguishing features. It boasts a strong IP protection system, which includes specialised courts that review IP breach cases and even attempts to curb piracy in other countries to protect the interests of domestic game companies. Due to the peremptory approach to censorship stipulated by the Constitution, the industry enjoys vast freedom in choosing what content it produces. At the same time, it is difficult to censor objectively inappropriate content, such as child pornography. The government is also not involved in content rating, with the existing rating system being upheld by a voluntary organisation – CERO. Finally, because of the stringent legal regulations, the Japanese

game industry faces multiple barriers when it comes to hosting e-sports competitions, such as the inability to offer substantial rewards to the winners.

China

Because of the emergent nature of its cultural economy, China did not start creating a regulatory structure for the video game industry until 2004. As the need for monitoring and guidance of the gaming sector increased, several legal acts were introduced between 2007 and 2009, including *the Regulation on Digital Publication*, *the Regulation on Publishing of Digital Publication*, and *the Administration of Software Production*. Although all national legislation is passed by China's main legislative body - the National People's Congress (NPC), a major decentralisation took place in 2010 as "regulation and control were delegated to the provincial governments" (Tai 2010, 49; Fung 2016, 46).

Fung (2016) identifies two major directions in the development of a legal structure for the industry. The first one is the protection of underage players from the negative effects of gaming, mainly through the censorship of inappropriate content. The second one is the "ideological control was commonly exercised in the screening process, which can be seen as a means of curbing the importation of foreign games" (Fung 2016, 46).

Although China has a notorious reputation for allowing "rampant piracy" of intellectual property, it has been making progress in confronting copyright infringement by creating a copyright protection system resembling that in the U.S. and joining a number of international conventions on IP rights, among other measures. Similar to most Western countries and Japan, China does not have specific laws for the protection of video games' IP. Gaming products are "protected by specific intellectual property laws, anti-unfair competition laws, and criminal laws when their elements and aspects are determined as qualified subjects of legal protection under those laws" (Tang and Wang 2017, unpaginated). The principal copyright regulatory act in China is the Copyright Law of the People's Republic of China, which, together with the Implementing Regulations of the Copyright Law, came into effect in June 1991. As for the accession to international conventions, China became a party to the Berne Convention, the Universal Copyright Conventions, the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), and the World Intellectual Property Organization (WIPO) Copyright Treaty, thus "bringing China's copyright protection in line with international standards" (China IPR SME Helpdesk 2019, 3). In recent years, the enforcement of these reg-

ulations has improved, and the number of raids on counterfeiters and severity of penalties have increased. This, in turn, further imbedded the illegal nature of piracy into the public perception, which acts as a deterrent to copyright infringement (Morris 2016, unpaginated).

However, the Chinese IP rights protection system still suffers from a number of shortcomings that impede the development of original video game titles. One of such issues is the fact that a lot of the cases of copyright infringement are not “out-and-out reproductions” of original works but rather incorporations of their isolated elements (so-called “clones”) (Snyder 2018, 18). One notable example of this is the litigation between two U.S.-based video game companies, Blizzard and Valve, and a China-based company, Lilith. The former two accused the Chinese company of copying several character designs, among other IP infringements. As Morris (2016) points out, “the Lilith characters have the identical clothing, weaponry, and even skin colour; the only real difference between the two sets of characters is that Lilith’s versions are more cartoon-like, two-dimensional, and cuter than WoW’s more three-dimensional and intimidating versions” (Morris 2016, unpaginated).

Furthermore, the widespread availability of pirated PC single-player games has had a devastating effect on the sales of such games and caused numerous companies to suffer significant losses. For example, Rockstar Games suffered a potential loss of U.S. \$840 million in 2013 alone due to the dissemination of illegal copies of *Grand Theft Auto V* by Ali213.net, through which 14 million copies were downloaded. The website hosts thousands of single-player titles available for users to download (Snyder 2018, 17-18).

At the same time, it has been noted that the originality and creativity requirements that must be met to rule the copyright element sufficiently original by the Chinese IP court, are minimal, which makes it relatively easy to seek remedy (China IPR SME Helpdesk 2019, 4). It can be tricky to determine the statutory type of copyrighted work due to the complexity of game elements, but there are manuals provided by consulting agencies that help companies determine whether the infringed element belongs to written works, artworks, musical works, audio-visual works, etc. (Tang and Wang 2017, unpaginated).

Another area that evokes concern of both domestic and foreign video game companies is the stringent censorship system. The state has set certain “boundaries of creative production in game development”. The political interest of the CCP is clearly given priority in the government’s policy of creating a restrictive environment for the video gaming industry through censorship and the quota system. In 2004, the General Administration of Press and Publications introduced the National Online Game Publishing Project, which “encourages local game developers to adopt popular literature that reflects Chinese histories and traditions and use those stories as the backbone or plot for games, in particular, for players under the age of 18” (Chung and Fung 2013, 241-242).

Therefore, it is evident that the Chinese authorities encourage the production of titles for certain game genres, in particular historical and epic games, such as *wuxia* (“martial heroes”). Video game companies have thus developed a strategy of observing which game concepts get approved by the state and “play it safe” by producing similar games, which inhibits originality and creativity. It has been observed that all major companies have at least one core product that is “safe” (Chung and Fung 2013, 243).

As for the imported games, stringent examination and censorship of their content are required, according to *Interim Measures for the Administration of Online Games* released by the Ministry of Culture (MOC) in 2010. A specialised examination committee was formed, which consists of 30 to 50 experts from different fields who work on an annual rotation basis. The committee censors all content that is considered to be reactionary, violent, or pornographic (Fung 2018, 80).

Furthermore, the government retains strict control over all gaming content by resisting the introduction of a universal rating system. The classification of video games was first instigated by the “semi-official agency” called China Youth Association for Network Development in 2004. A project called *Green Games Recommendable Regulation* was launched with the aim to “encourage self-regulation of the Internet sector” (Fung 2018, 81). It proposed a draft rating system, which determined which games were suitable for underage players based on the rating system of five static indicators (e.g. violence and pornography) and seven dynamic indicators (e.g. player kill actions and social order within the game), yet the project was never approved. In 2010, the Institute for Cultural Industry of Peking University drafted another rating system based on 20 criteria, which was also never implemented (Yang 2021, unpaginated).

Instead, all games must obtain approval from the government prior to being released on the market. Prior to March 2018, such approval was issued by the State Administration of Press, Publication, Radio, Film and Television (SAPPRFT), with all foreign games having to go through a review by the MOC, and all domestic games having to register with the ministry within a month after commercialisation. In 2018, a major government reorganisation took place, as a result of which the State Administration of Press and Publication (SAPP) became the primary gaming regulator, and new rules and regulations were introduced. The reorganisation led to a suspension of all game approvals for nine months. Furthermore, not a single foreign title was licensed for a year after the resumption of approvals as the government focused on getting through the extensive backlog of domestic games (Niko Partners 2019, unpaginated).

In December 2018, an Online Game Ethics Committee was formed under the premises of the Publicity Department of the Central Committee of the Communist Party of China (CCPD). The committee consists of game experts and scholars who decide whether a game observes Chinese social

values, i.e. it must not contain anything that goes against the Chinese constitution; “threaten China’s national unity, sovereignty, or territorial integrity”; damage the national image, security or interests; violate “public ethics or China’s culture and traditions”, etc. (Niko Partners 2018, unpaginated).

All in all, it can be observed that the main features of the Chinese legal system that governs the game industry are the stringent censorship regulations and the government’s continuous battle with copyright infringement. Since the state encourages only certain kinds of games, such as historical genres, that comply with the official ideology, the capacity for innovation is restricted, with game companies choosing to “play it safe”. The innovation trap is exacerbated by the stipulations that require all foreign games to acquire a license from the government - a long and convoluted process that is further complicated by institutional reshufflings. Another persevering issue in China is piracy, although IP protection regulations have been improved in recent years, and it is relatively easy for game companies to win a copyright infringement case in court.

4.2.3. Industry-specific reports

Japan

The first attempt to compile a comprehensive Japanese video game market report was made in 2003, yet it was published not by the government but by a non-governmental research agency - NLI Research Institute. The paper “aimed to demonstrate the capacity of the cultural industries in Japan and confirmed the need to develop categories to fit the Japanese market”. In addition, it demonstrated the potential of the video game industry and clearly showed that the revenues had doubled over the preceding decade (Merger 2019, 48).

As for the government-led research, the Media and Content Industry Division of METI, in the first few years following its establishment, carried out a study aimed at identifying the main policy issues so as to facilitate the growth of the media industries. As a result, such obstacles as insufficient financing, especially for SME production companies, were identified across all content industries. The report emphasised that the Japanese video game industry suffered from the lack of investment flows from outside the industry. Furthermore, it pointed out that other factors hindering the development of video games, such as significant inequalities between small production companies and large oligopolist distributors, lack of qualified talent resources, etc. (Kawashima 2018, 22).

In 2007, Japan External Trade Organization (JETRO) also published a report that focused on the video game industry in particular. It covered the dynamics of the industry development from

1983, provided an overview of the market and a comprehensive analysis of the industry and its leading companies (JETRO 2007, unpaginated). Despite the extensive coverage of the report, it is important to note no updated versions have been published since its publication.

In addition, in 2010, ACA launched a project called *the Media Art Digital Archive Initiative*, which aimed to collect data about past works of Japanese video games, as well manga, animation and past content industry-related events, in order to make it available online. In the category of video games, “the database has information on video game titles compatible with home video game consoles sold as recently as December 2016, arcade games released from 1972 through 2016, and video game software compatible with the PC-8801 series of home computers”. After the database was completed, the agency launched another project for supporting the archive, with three out of the nineteen sub-categories of the project being related to video games, i.e. “The Game Preservation Society’s Entry of information into a database of Japanese retro computer games (10.2 thousand USD); the Komaki Highway Kikaku’s Project to restore, preserve, and archive arcade games (59.1 thousand USD); and the Ritsumeikan Trust’s Survey project toward the creation and application of video game bibliographic records (63.6 thousand USD) (as of fiscal 2017)” (Koizumi 2021, 188).

As of today, arguably the most comprehensive report concerning the video game industry is published by the Computer Entertainment Suppliers Association (CESA), an organisation responsible for promoting the computer entertainment industry, with a focus on video games. The paper will go into more detail about this association and similar creative mediators in the next section. Provision of statistical information for the industry is one of the major functions of CESA. Since 1997, this association has been publishing an annual white paper that contains official data about the gaming market and the main trends in the video game industry (Garvizu 2017, 285). The 2020 edition of this paper covers such areas as basic requirements and recommendations for video game enterprises, e.g. the business structure of the industry and expansion into the related areas; research on shipments and the scale of the domestic and overseas markets for both hardware and software products; major trends in the industry, such as leading game titles, changes in the development and operation costs for gaming hardware and software, trends among game players, etc. (CESA 2020a, V-XI).

At the same time, there seem to be no government-issued reports that focus on local video game clusters. All industry-specific research and reporting take place at the national level, and little information is available about Tokyo and Fukuoka gaming clusters. Perhaps, the closest thing to such reports is the official website of JETRO, which advertises Fukuoka as an attractive region for investors and provides a general overview of the industrial cluster (JETRO 2020, unpaginated). *The Tokyo Game Show Official Post-Event Report*, on the other hand, hardly represents the Tokyo gaming cluster due to the international scale of the event (CESA 2019, unpaginated).

In conclusion, a lack of focus on the game industry can be observed in the Japanese official documents and statistical reporting. Most of the existing reports concerning games are either outdated, focus on a narrow issue, and thus fail to provide the industry with a comprehensive analysis, or are published by independent organisations, such as the CESA. There are also hardly any industry-specific reports released locally to target gaming clusters. Therefore, the game companies have to rely on their own research, while the government lacks tools that would help it evaluate the effectiveness of existing policies for creative cluster development.

China

The Chinese government invests a significant share of its resources into the preparation and publication of plans and reports. These documents provide information to the CCIs and guide the national and local administrative bodies to promote these industries through specific programmes, which has resulted in the rapid growth of the video game industry over the past two decades (Fung 2018, 77).

Every five years, the Chinese government makes amendments to the country's development blueprint for every area. These so-called "Five-Year Plans" consist of numerous specific socio-economic development policy proposals. Their main objective is "to establish principles for the development of China by mapping strategies, setting growth targets, and launching reforms". It is important to note that, starting with *the 10th Five-Year Plan* released in 2002, cultural and creative industries have been distinguished as a crucial sector in these documents, and policies for their financial support, human resources development, and tax incentives for their promotion have been included in them (Fung 2018, 74).

Furthermore, in 2009, *the Plan on Reinvigoration of the Cultural Industry* was published, and the gaming sector was "listed as one of the major sectors of cultural creation that was enthusiastically supported by the PRC". The document introduced a number of industry-specific policies and regulations for games (Fung 2018, 78). One of the reasons behind the video game industry being singled out is the expectations of spill-over effects: it was expected "to help fuel the boom of the relevant service sector and manufacturing sector" (General Office of the State Council 2009, unpaginated).

In the past decade, the Chinese government has commissioned and released multiple reports concerning the video game industry, especially from the research institute called Gamma Data (also referred to as CNG). One of such documents is *the China Gaming Industry Report*, which is an official gaming sector report jointly released by the Game Working Committee of the China Audio-Video and Digital Publishing Association, the China Game Industry Research Institute and CNG. The report provides a summary of the main trends in the Chinese video game industry and a comprehensive

interpretation of various socio-economic dimensions within it. For example, the 2020 report focuses on such topics as the impact of the global pandemic on the industry; content innovation; game copyright awareness; access to global markets; Chinese game markets trends, etc. (GPC and CADPA 2020, 1-28).

It is important to point out that one of the chapters focuses specifically on local policy support. The report emphasises that the local policy support had been increased, with the “One County, One Industry” vision receiving a vigorous promotion from local governments. It emphasises that each region is trying to focus on regional industrial development and formulate gaming cluster development plans, taking into account their respective local characteristics to “build a new industrial pattern for online game development”. For example, the report commemorates Shanghai’s efforts to use its economic advantages to become the “e-sports capital” of China (GPC and CADPA 2020, 3).

There are also gaming reports and plans released at the local level. For example, in 2020, under the guidance of the Shanghai Press and Publication Bureau, Shanghai Publishing Association and Gamma Data jointly released the *2019-2020 Shanghai Game Publishing Industry Survey Report*. The report covers a wide range of statistics, including the sales figures; the development status of the Shanghai gaming industry and its sub-sectors; R&D innovation trends and initiatives; the number of local game publishers and their geographical distribution; local e-sports events and related projects, etc. (Shanghai Press and Publication Bureau 2020, 1-2)

As for Shenzhen, there is an annual report that covers the video game cluster statistics and trends at the provincial level - *the Guangdong Game Industry Data Report*. The most recent report was released in January 2020 during the 2020 Guangdong Game Industry Annual Conference by the Guangdong Game Industry Association. This document establishes Guangdong as the capital of the Chinese video game industry, with it accounting for 76.5% (213.21 billion yuan) of the national gaming revenue. *The Guangdong Game Industry Data Report* provides information not only about revenue statistics but also about the overseas performance of local companies; the segmentation of the market; listed video game companies; investment trends; the statistics for game title approvals, etc. (Gamelook 2021, unpaginated).

Therefore, it can be concluded that China has a well-developed system of reporting geared towards the game industry. Along with the policies for the CCIs outlined in Five-Year Plans, the government has highlighted the industry in other cultural reports. Moreover, it regularly commissions gaming sector reports from research institutes such as the China Game Industry Report by Gamma Data. Both Shanghai and Shenzhen game industries are also analysed in local reports and plans, which provide a comprehensive overview of the performance of the local gaming clusters.

4.3. Informal governance

4.3.1. Creative mediators

Japan

To compensate for the lack of direct interference in industrial development, the Japanese government gives considerable freedom to various mediating institutions, which has resulted in a network of strong gaming intermediaries that contribute to the development of creative clusters at the national and local levels. One such institution was already discussed in the previous chapter: the Computer Entertainment Rating Organisation (CERO) is a voluntary institution that singlehandedly reviews and rates all domestic video games (Koizumi 2021, 193). This organisation is aided by the Content Evaluation and Monitoring Association (EMA), another independent self-regulatory institution, which was created in 2008 to monitor online content and is used to rate game content of online video games (Fung 2018, 115).

Various video game business associations began to appear in the 1990s, and, as a CESA official pointed out in his interview with Garvizu (2017), they were mainly established to get access to governmental grants. These intermediary institutions allowed companies to establish communication channels with government officials who had jurisdiction over their commercial activities and increase their chances of being subsidised. The government, on the other hand, seized the opportunity to exert influence on video game associations and make them a tool for implementing its industrial policy (Garvizu 2017, 286).

The largest and most influential video game association in Japan is the Computer Entertainment Supplier's Association (CESA), which was established in 1996 on the initiative of the Japan Amusement Machinery Manufacturers Association (JAMMA) and the Japan Personal Computer Software Association (JPSA). Since its establishment, CESA has been in a close relationship with METI, especially the Media and Content Industry Division. They regularly exchange information, with CESA informing METI about the situation in the video game industry and METI communicating the government's policies in advance. As Garvizu (2017) pointed out, "[t]he collection of information on the video games industry by the METI is the necessary condition to ensure its relative degree of autonomy when it decides to take initiative concerning this industry, an important feature of the developmental state" (Garvizu 2017, 285).

Some of the main activities of CESA include activities related to the promotion of the Japanese video game industry; conducting industry-specific research; preparing and publishing annual white papers, which have been discussed in the previous section; hosting the Tokyo Game Show, the

largest gaming exhibition in Japan, among other events, training sessions and study seminars; awarding Japan Game Awards (originally created in 1996 as CESA Awards) (CESA 2021, unpaginated). However, CESA's effectiveness as an intermediary is limited by several factors. For example, Nintendo, the world's third-biggest video game company, is not a member of this association. Furthermore, it lacks activities related to R&D facilitation and talent development (Hasegawa et al. 2012, 21).

Educational institutions, especially specialised research centres and laboratories can also act as creative mediators. One of the main research institutes focusing on the game industry and gaming clusters is the Ritsumeikan Center for Game Studies (RCGS), which was established in Kyoto in 2011. According to its pamphlet, the institute "conducts technical and general research on a wide range of games and types of playing, from traditional toys to games using the latest technology" and aims to expand the network of gaming research centres both domestically and abroad. It claims its mission to be the mediation between governmental bodies, public institutions, video game companies and related organisations with a view to facilitate and promote the collaboration between the video game industry, academia and the government. To this end, the centre's researchers promote projects on a wide range of topics: from "Constructing an Archive of Digital Games" to "Potential Social and Educational Applications for Games" (RCGS 2018, 1).

There are also creative intermediaries dealing with specific gaming sectors, such as the Japanese Social Game Association (JSGA) and the Japanese Online Game Association (JOGA). The former was created for facilitating the self-regulation and control of the industry after an incident involving *Complete Gacha*, a game in which players were offered valuable prizes after purchasing certain items, which was deemed to be a form of gambling. The association is mainly responsible for "clarifying game rules and explanations, establishing working groups, and promoting closer ties among relevant organisations" (Fung 2018, 114). JOGA has also introduced measures for self-regulating the industry and encourages its members to follow the legal acts and tax laws that apply to online games. Furthermore, the association acts as a business-matching platform and conducts annual surveys on the gaming industry (Fung 2018, 115).

Despite Tokyo hosting the biggest video game cluster in Japan, hardly any intermediaries exist to specifically promote its development, although most of the above-mentioned institutions and organisations are located in Tokyo and work with the local gaming companies and governmental agencies. In Fukuoka, however, a number of creative mediators working towards the development of the local video game cluster exist. One such intermediary is the Game Factory's Friendship (GFF), an association of game software production companies. This voluntary organisation was launched in 2004 and currently consists of 12 companies located in Fukuoka and its surroundings, such as Level-

5 and CyberConnect2. This organisation was the first attempt at creating a local-level collaboration mechanism between the industry, academia, and the government. Its aim is to make Fukuoka a global video game cluster, “a game-industry Hollywood”, with world-class technology and talent resources (GFF 2018, unpaginated).

In 2006, the Fukuoka Game Industry Promotion Agency, an organisation playing a major role in the development of the Fukuoka gaming cluster, was jointly established by GFF, the Fukuoka City Government, Kyushu University. This organisation exists to promote the collaboration between the public and private sectors and make Fukuoka a “global gaming city” with a focus on three dimensions: talent development, e.g. attracting and raising world-class creators and producers; market development through the promotion of exchanges with tech and financial companies and provision of access to global pipelines of knowledge; creating the image of Fukuoka as a base for global game production (Fukuoka Game Industry Promotion Agency 2021a, unpaginated). According to the PR office of the local government, the Agency is actively involved in “various job training and recruiting activities, such as sponsoring job fairs for jobseekers hoping to work in the game industry, arranging internships, and holding game contests” (Sawaji 2016, unpaginated).

All in all, Japan has numerous creative mediators which help the government regulate the game industry and promote its development without direct interference. With CESA playing the leading role among the industry-specific organisations, there are intermediaries dealing with various aspects of regulation, such as CERO, which is responsible for rating all gaming products, JSGA, an organisation in charge of game rules clarification, or JOGA, which facilitates the self-regulation of the game industry and encourages companies to comply with the legal acts and tax laws that apply to them. Most of the organisations closely interact with the government and establish communication channels for government-industry interaction. At the same time, national-level associations do not allocate enough budget to R&D and talent training, and there are virtually no creative mediators that focus on the Tokyo creative cluster, despite it hosting the largest number of game companies. The creation of such local intermediaries is usually initiated by local governments, as can be seen from the example of Fukuoka, when the city administration has nurtured a number of gaming associations, such as GFF and the Fukuoka Game Industry Promotion Agency, which promote industry-academia-government collaboration and work towards making Fukuoka “a game-industry Hollywood”.

China

Creative mediators in China vary from their Japanese counterparts in both their format and the role they play in facilitating industry-government collaboration. One of the main associations in China

responsible for monitoring the performance of the video game industry at the national level is the China Audio-Video and Digital Publishing Association (CADPA), established in 1994 and dubbed “China’s video games watchdog” (Ye 2020, unpaginated). It is directly affiliated with the government through the National Press and Publication Administration (Pilarowski et al. 2021, unpaginated). The association defines itself as a non-profit social organisation with independent legal status formed by enterprises and institutions engaged in the production and operation of the content industry. Along with establishing a link between the audio-visual and digital publishing industries, including the video game industry, and the relevant government departments, CADPA is responsible for: conducting research on relevant policies for the promotion and monitoring of the industry; providing information and consulting services to its members and related governmental agencies; organising business exchanges, academic events and training events for industry professionals; developing the cooperation with international companies and organisations; etc. (CADPA 2021, unpaginated).

Another “traditional” creative intermediary operating at the national level in China is the Chinese Digital Games Research Association (Chinese DiGRA), although being a regional chapter of a larger international network, its clout is limited, and its main focus is on providing game research. Its activities focus on developing a network of researchers who study the video game industry in the context of China, releasing relevant scholarly publications, and organising annual conferences. The events organised by Chinese DiGRA mainly attract the attention of foreign researchers associated with Chinese universities or working in the Chinese Studies field (Chinese DiGRA 2020, unpaginated).

A more influential type of creative intermediaries in China is government-related managing companies and game enterprises that are used for influencing and monitoring the industry. One such example is Shenzhen Zhongqingbao Network Technology Co Ltd., a company that was founded in Shenzhen in 2003 and has, since then, been engaged in the development of online games. In 2005, the Communist Youth League of China run by the CCP made an investment in this company “with the aim of promoting values, such as making modest sacrifices for the common good and social unity through recalling the history of the Japanese invasion”. Although it is highly unlikely that such games would be marketable abroad, Zhongqingbao continually supports the genre in order to address the ideological needs of the Chinese government. Through these channels, the government can exert its influence to encourage video game companies to produce “ideologically compatible content” (Fung 2016, 49).

What makes it difficult to determine how closely a given managing company is connected to the government is the vagueness of the line between privately-owned and state-owned firms and how hard to trace managing companies are. In his research of the game industry in China, Fung (2018)

noted that after the formation of a video game hub and the settlement of companies in it, management companies tend to disappear off the map (Fung 2018, 96). As for the degree of governmental involvement, recently, the authorities have been pushing the largest players to give the government a direct role in companies' decisions by providing it with an equity stake (Snyder 2018, 12).

With the rise of e-sports, various associations sprung to promote the development of this highly profitable business. Most Chinese provinces have established local professional associations with the aim to "organise and promote the registration of professional esports athletes and coaches through certification and training" (Yang et al. 2020, 3). These organisations tend to establish close relationships with the regional and local governments, furthering the development of creative clusters. For instance, in Shenzhen, the leading professional e-sports association called Victory Five Esports Club, or V5 Club, signed a strategic partnership with the Shenzhen Media Group, a government-owned managing company, in 2019, with representatives from the Shenzhen Municipal Committee of the CCP and the Sports Industry Development Department for the Shenzhen Municipal Bureau of Culture, Radio, Film, and Television among the partnership press conference attendees (Chen 2019, unpaginated).

According to *Several Implementation Measures on Promoting the Development of Shanghai Animation and Game Industry*, the Shanghai municipal government also encourages the participation of game associations in the formulation of the national and international industry standards, industrial self-regulation, the provision of training and the promotion of "excellent leading enterprises" and "excellent growth enterprises" (Shanghai Municipal Administration of Culture, Radio, Film and TV 2018, unpaginated). Two major game associations operating in the case-study creative clusters are the Shanghai Online Game Association (OGA) and the Guangdong Games Industry Association (GEGIA). With the approval of the Shanghai Municipal Administration of Radio and Television, OGA was voluntarily established in 2016 by Shanghai online game companies for the self-regulation of the industry. It is responsible for promoting the development of the local online game industry, boosting its technological development; promoting research; safeguarding the rights and interests of the local gaming companies, and facilitating business and information exchanges within the industry and cross-fertilisation with related industries. Furthermore, the organisation promotes state-business collaboration by participating in the decision-making process of the government related to the local video game industry development, putting forward suggestions about economic and industrial policies, and participating in joint meetings between the National People's Congress and relevant government departments (OGA 2021, unpaginated).

GEGIA is an association similar to OGA, however, it operates at the provincial level and includes such gaming giants as Tencent and NetEase. Its members cover all game segments, including

online games, mobile games, web games, game consoles, and arcades. The association aims to actively promote the integration of resources in the local game industry, strengthen exchanges and interactions between enterprises and consolidate the leading position of the Guangdong game industry in the country as well as increase its global influence. Like OGA, GEGIA participates in formulating industry-specific legislation, government planning, policy development, and implementation. It works on creating a wide range of communication channels and effective mechanisms both within the industry and between enterprises and the local and national authorities (GEGIA 2021, unpaginated).

Overall, although Chinese creative mediators have some of the usual functions, such as conducting research, organising various events, and facilitating business exchanges, there are fewer “traditional” industry-specific associations in China, and they are closely affiliated with and supervised by the government. Government-related managing companies exercise even more influence over gaming clusters and are used by the state to encourage companies to produce “ideologically compatible content” (Fung 2016, 49). Furthermore, as such intermediaries are hard to trace and blur the line between privately-owned and state-owned enterprises, it is hard to determine the degree of governmental involvement in their capital and decision-making process. Local-level associations, on the other hand, seem to be closer to “traditional” mediators and have a higher level of autonomy, participating in the political decision-making and encouraging self-regulation of the clusters. Finally, one distinguishing characteristic is the prevalence of e-sports associations that have been formed at the national and local levels to promote the development of this lucrative sector.

4.3.2. Networking events

Japan

In Japan, there is a wide variety of networking events that are used for community building, including various game shows, expos, conferences, and e-sports competitions. Until the second half of the 1990s, the number of events that “could provide an important source of ‘buzz’ and learning in creative industries” was limited, but later larger events such as the Tokyo Game Show began emerging. As Ernkvist and Ström (2018) note, at that time, “[t]he intra-industry buzz and learning that took place between firms were largely through informal channels and personal networks” (Ernkvist and Ström 2018, 276). Companies started using game shows and other gaming events for collecting feedback from players and conducting “informal field studies” (Ernkvist and Ström 2018, 278).

However, it should be noted that one of the above-mentioned event categories, e-sports competitions, is severely hindered by the legal status of e-sports contests and the prizes offered during

such events, which has been discussed in the previous chapter. The scale of e-sports competitions is limited due to the fact that it is not legal to offer large sums of money to the winners, whereas overseas such prizes can reach dozens of million dollars (Koizumi 2021, 192). However, in a recent publication, the Japan Esports Union (JeSU) points out the importance of esports for the development of creative clusters and the revitalisation of the local community. It expects the national government's cooperation in adapting the regulatory system and the local governments' support in "adapting esports into local events, the corporation of local businesses and residents on esports, and utilising esports on welfare, education, and tourist attraction" (Investigative Commission on Measures for Vitalizing Esports 2020, 37). In 2019, METI commissioned *FY2019 Project for Development of Environments for Creating New Content (Project for Research on and Analysis of Market Scale and Other Elements for e-Sports)* to JeSU and created a special Study Group on Measures for Vitalising e-Sports, which shows that the government is interested in developing this sector (METI 2020, unpaginated)

Furthermore, despite the hindrances on e-sports contents in Japan, in 2018, Tokyo hosted a B2B esports event called the e-Sports North Asia Summit, which provided opportunities for business and information exchange on e-sports-related strategies and business models. The event was attended not just by game publishers and developers but by government officials, e-sports teams, and league organisers, thus facilitating a dialogue between esports leagues, game companies, and the authorities (IQPC 2018, unpaginated).

Tokyo also hosts the biggest computer entertainment event in the world - the Tokyo Game Show (TGS). It is sponsored and organised by METI, CESA, and Nikkei Business Publications, Inc., with hundreds of thousands of visitors attending the exhibition every year. For instance, in 2018, it drew almost 300,000 visitors from all over the world over its four-day duration period (Koizumi 2021, 187). In an interview with Garvizu (2019), a bureaucrat from the Media and Content Industry Division of METI mentioned that events like the Tokyo Game Show require frequent contacts between the government and video game associations such as CESA, which helps them forge institutional links through informal channels (Garvizu 2019, 212). However, despite the scope of the event and the opportunities it creates in terms of networking locally and internationally, one of the major shortcomings of TGS is that the show puts too much emphasis on the interaction between video game companies and consumers but does not sufficiently facilitate cross-fertilisation with other industries (Hasegawa et al. 2012, 21).

There are many other game events organised in Tokyo, including the Content Tokyo, which gathers around 1,100 exhibitors and 30,000 visitors. The Production/Studio Expo section of the event is specifically dedicated to video production, CG, games, and animation (Content Tokyo 2021, unpaginated). A similar event is the Digital Content Expo (DCEXPO) organised by the Digital Content

Association of Japan, which consists of seven specialised shows and provides a platform for content creators, distributors, high-tech specialists, marketers, researchers, and licensing companies can interact and network (DCEXPO 2021, unpaginated).

The Agency for Cultural Affairs does not have any events dedicated to video games specifically, but it holds an annual event called Japan Media Arts Festival, with video games represented in the entertainment division (Japan Media Arts Festival 2021, unpaginated). This shows a lack of focus on this industry, especially since animation and manga have their own separate divisions. In addition, there is a number of conferences focusing on the video game industry, such as Replaying Japan organised by the Ritsumeikan Center for Game Studies (Ritsumeikan University 2021, unpaginated).

In addition to the Computer Entertainment Developers Conference, the largest conference for Japanese game developers held annually at Makuhari Messe (located in Tokyo-Yokohama metropolitan area), CESA organises a regional event called CEDEC+ in Fukuoka, attended by major local video game companies. Both conferences provide plenty of opportunities for networking and knowledge exchange and have thousands of attendees, with CEDEC+ focusing on revitalising the game industry in rural areas, especially in Kyushu (JCS 2020, unpaginated).

In the Fukuoka gaming cluster, some of the major events are also organised and sponsored by Game Factory's Friendship and the Fukuoka Game Industry Promotion Agency. For instance, GFF sponsors debriefings which are held after the Game Developers Conference (GDC) and Computer Entertainment Developers Conference (CEDEC). These allow creators representing video game companies to "become lecturers, using materials for internal corporate reports as is in half-day study sessions". Later, they can organise roundtables to discuss the various areas participating companies operate, as well as opinion exchange meetings not less than two times a year after the GDC and CEDEC conferences. Furthermore, the companies that cannot take part in these events are still allowed to provide information that is presented and discussed during them (Wada et al. 2014, 98).

The Fukuoka Game Industry Promotion Agency is also involved in the sponsorship of gaming events, such as Game Fun in Fukuoka and the GFF Award ceremony. The former aims to increase awareness of Fukuoka's video game industry and inspire the young generation to become game creators by facilitating interaction between gaming company representatives and game players. In addition to conducting the Fukuoka Game Contest, exhibiting the nominated works, and awarding the prizes, the GFF Award ceremony also includes talk shows with industry professionals (Fukuoka Game Industry Promotion Agency 2021b, unpaginated).

In conclusion, there are many networking opportunities for gaming clusters in both Tokyo and Fukuoka, with formats ranging from developer conferences to gaming contests. However, most

of the events are organised not by the government but by private institutions and creative mediators such as CESA and DCAJ in Tokyo and GFF and the Fukuoka Game Industry Promotion Agency in Fukuoka. Events that are coordinated by the government, such as the Japan Media Arts Festival, usually fail to gather enough gaming enterprises to support creative cluster development. At the same time, METI sponsors the main gaming event – Tokyo Game Show, and its organisation provides opportunities for active collaboration between the government and video game associations, such as CESA. One of the event’s major shortcomings is that it does not provide a good platform for cross-sectoral collaborations as the main focus is on the business-customer interactions. Another issue that affects gaming clusters is the difficulties associated with holding e-sports events due to the legal restrictions on the prize sums, although the government has launched an investigation aimed at developing this sector.

China

China also offers game creators many opportunities for networking in the form of a wide variety of events. The largest and most influential gaming event in China is China Digital Entertainment Expo & Conference, also known as ChinaJoy, which is held annually in Shanghai. In 2019, the exhibition and conferences of the event attracted over 364,700 attendees (Zhu 2019, unpaginated). ChinaJoy is organised and sponsored by the China Audio-Video and Digital Publishing Association, which lists the event as one of its key priorities and “an important means that the Association serves the industry” (ChinaJoy 2020, unpaginated). The event organisers underline “the geographical advantages of Shanghai as a transport hub of the world” and its ability to “to maximally attract and welcome domestic and overseas spectators and game industry practitioners to come to participate” as the main reasons for choosing this creative cluster as its business venue. The event consists of the following components: an exhibition (ChinaJoy Expo) and two conferences (China Digital Entertainment Congress and China Game Developers Conference) (ChinaJoy 2021c, unpaginated).

China Digital Entertainment Congress focuses on the business side of the video game industry and has been held concurrently with the China International Digital Interactive Entertainment Exhibition since 2003. The congress attracts about 10,000 participants and consists of 6 conferences: China Digital Entertainment Congress (CDEC); Global e-Sports Conference; Global Game Industry Summit; Global Cloud Game Industry Conference; China Digital Entertainment Investment and Financing Conference; China Digital Entertainment and Virtual Reality Conference (ChinaJoy 2021b, unpaginated). China Game Developers Conference, on the other hand, addresses the topics related to

game development and other technical aspects: it attracts game developers and technical professionals from different sectors of the game industry, including social and mobile games (ChinaJoy 2021a, unpaginated).

From the official statement regarding the 2020 ChinaJoy Exhibition, this event is used to promote the government-industry collaboration, in order to boost the development of the national and local game industry. In this statement, CADPA promises to “invite relevant government officials and departmental heads to attend the activities” and “help the industry access to more resources and supports”, thus helping it recover from the COVID-19 pandemic. The organisers also emphasise that as an important industrial exchange platform, ChinaJoy has made a great contribution to promoting the development of the Shanghai video game cluster and making it “the global e-sports capital” (ChinaJoy 2020, unpaginated).

Indeed, e-sports competitions have been gaining traction in Shanghai. The rapid development of e-sports “has incubated a group of powerful, technologically and branded game companies”, contributing to the development of the creative cluster (GPC and CADPA 2020, 3). Many major e-sports events are organised on a regular basis, including the League of Legends World Championship in 2020 (among 22 teams) and the International in 2019 (among 18 teams). Furthermore, in 2020, Tencent opened the first e-sports exploration hall in China called V-Station (Zhu 2020, unpaginated).

The local government has introduced policies to support the sector and create an e-sports event system. For example, in *the Implementation Measures for Promoting the Healthy Development of E-sports Industry in the District*, the Huangpu District government offered a subsidy of up to 5 million yuan for the organisation of top international professional competitions and up to 2 million yuan for hosting sub-national professional competitions. Furthermore, the government will cover from 30% to 50% of the costs associated with e-sports awards ceremonies, exhibitions, forums, and other relevant events (Shanghai Huangpu District People’s Government 2019, unpaginated).

Although Shenzhen’s e-sports industry is still surpassed by Shanghai, Hangzhou, and some other clusters, it is also competing for the status of China’s e-sports capital and is set to host the 2021 League of Legends World Championship (Chen 2021, unpaginated). In 2020, the Longgang District of Shenzhen introduced measures to not only support the creation of original games but also encourage the organisation of e-sports competitions, the development of e-sports clubs, and the construction of e-sports venues. It offered subsidies of 1 million yuan for every project related to national e-sports sub-professional competitions, 1-2 million yuan to every e-sports club that moves to the Longgang clustering area, and up to 2 million yuan to support the construction of e-sports facilities (Shenzhen Municipal People’s Government 2020, unpaginated).

The city is already home to a number of other gaming events, including a large-scale gaming festival called the Shenzhen International Video Game Festival. This annual event organised during the Golden Week provides a platform for corporate exchanges and interactions with the players and the organising authorities. It also allows local companies to gain access to international knowledge and business channels as the festival is attended by representatives of top video game manufacturers from Hong Kong, Japan, South Korea, Taiwan, etc. It is important to note that among the sponsors of the event are the Propaganda Department of Shenzhen Municipal Committee of the Communist Party of China and the Shenzhen Municipal Bureau of Culture, Sports and Tourism, which points towards a close involvement of the government in the facilitation of this festival (Liu 2020, unpaginated).

Overall, both clusters offer opportunities for networking through a variety of gaming events, with Shanghai, in particular, hosting a high number of nationwide and international gaming events. It is evident that the Chinese government is actively involved in the organisation, sponsorship, and subsidisation of gaming events that facilitate networking in the Shanghai and Shenzhen creative clusters. A particular focus is put on promoting the e-sports sector, with both governments providing subsidies for the organisation of competitions and construction of e-sports venues.

4.4. Financial support

4.4.1. Tax incentives

Japan

A close examination of the tax policy and budget allocation shows that the Japanese government does not have many tax incentives for the promotion of the creative and cultural industries at the national level. In 2020, the total budget for cultural and art-related activities of the Agency for Cultural Affairs amounted to 106.72 billion yen, i.e. approximately 0.2% of the national GDP and 0.6% of the fiscal 2020 budget. The budget reached its highest value in 2018 when ACA went through restructuring following the implementation of the *Basic Law on Art and Culture* amendment in 2017. In 2020, the biggest share of the budgetary means was allocated to “the projects for inheritance and utilisation of cultural properties through proper maintenance”. In addition, ACA supports the Japan Arts Fund (Arba 2020, unpaginated).

The current measures for promoting the creative and cultural industries are defined by the *Basic Plan on the Promotion of Culture and the Arts*, which puts an emphasis on the concept of

Cultural and Artistic Creative Cities, i.e. creative clusters. These are supported through commendation awards and the construction of “domestic networks”. However, no tax incentives are outlined in this plan (ACA 2018, unpaginated).

In 2014, in an interview with Garvizu (2017), a renowned Japanese video games researcher Akira Baba noted that the gaming industry “expects tax cuts from the government in a similar way to what happens in Canada to face the rising cost of the development of video games”, yet the authorities have continually dismissed these demands. Although he mentioned that the government is “considering granting a tax cut”, no such measures have been implemented to date (Garvizu 2017, 287). Furthermore, shall such incentives be introduced in the future, it would be hard to assess their impact as they are not disclosed in the annual budget reports, which reflects a lack of fiscal transparency of the Japanese government (Hemels and Goto 2017, 50).

The Tokyo Metropolitan Tax Guide does not offer any information with regard to tax breaks for the creative and cultural industries (Tokyo Metropolitan Government 2019, unpaginated). In Fukuoka, although the numbers and requirements are not specified for the video games or even the content industry as a whole, it is evident that some efforts are being made to provide tax incentives for urban revitalisation. In order to qualify for preferential taxation on buildings, companies have to satisfy the requirements listed in Article 17 (Section 2) of the Local Revitalisation Act and the “Fukuoka City Ordinance on the Promotion of the Development of Head Office Functions in the Areas for Improving Local Vibrancy” (JETRO 2020, unpaginated). Such businesses have to provide a plan for how they are going to contribute to the local revitalisation and maintain the facilities utilised by them (Local Revitalisation Act 2005, unpaginated). Seeing as creative clusters are closely tied to the concept of urban revitalisation, creative businesses can potentially qualify for such tax breaks.

In conclusion, despite the fact Japanese game companies, especially small- and medium-sized enterprises, have expressed their expectations for the introduction of preferential taxation and the positive results of tax cuts on the development of creative clusters, no tax incentives have been introduced in Japan at either the national or the local levels. Although such incentives are being considered, according to government officials, their impact would be hard to calculate due to a lack of fiscal transparency. The only case of a tax cut policy that might be relevant to the game industry is the preferential taxation on buildings that contribute to urban revitalisation, but the eligibility requirements are not specified for gaming companies.

China

In China, the state plays a proactive role in supporting the video game industry through various tax incentives. In recent years, China has introduced preferential taxation policies for information services in order to promote the development of high-tech industries and encourage the export of its products and services (Fung 2018, 84). These tax policies also apply to video games. For example, Chinese video game companies can qualify for tax breaks as “high and new technology enterprises,” which can help them benefit from a substantially lower corporate income tax: 15% instead of the usual 25% (Snyder 2018, 14).

In *Opinions of the General Office of the State Council on Implementing Some Policies and Measures for Accelerating the Development of the Service Sector*, the authorities emphasised the importance of preferential taxation policies for service industries. The General Office of the State Council also promised to support their R&D activities and “grant preferential deduction of income tax on the expenses for research and development as actually spent by enterprises according to relevant policies”. The tax incentives are also meant to encourage businesses to create more jobs and consume fewer resources (Fung 2018, 84).

Another direction of the preferential taxation policy is to encourage video game companies to participate in the global markets. Exports tax rebates provided by the central and local governments apply to video games as a category of audio-visual products covered by the policy, which supports the companies’ “expansion into foreign markets, technological innovation, and customs clearance for the export”. These are designed to primarily benefit major companies that export cultural products and online game companies that develop and publish games “with national characteristics” (Fung 2018, 84-85).

In addition, local governments have also launched various preferential taxation policies aimed at developing a specific video game cluster. In an interview with Fung (2018), Ren Huajian, director of the Cultural Industry Research Centre of the Shanghai Academy of Social Science, noted that the Shanghai government’s incentive policies have proven to be highly effective in contributing to the growth of the video game industry (Fung 2018, 89). In 2018, it released a document that specifically targets tax incentives called *Several Implementation Measures on Promoting the Development of Shanghai Animation and Game Industry*. In order to create a fertile environment for industrial development, aside from the above-mentioned reduced income tax tariff of 15% for recognised high-tech enterprises, the document allows them to deduct the actual expenditures on the education of employees that do not exceed 8% of the total salaries from the taxable income. Furthermore, according to the act, qualified R&D expenses incurred by video game companies are subject to a 150% pre-tax

deduction policy, while technology-based SMEs enjoy a 175% pre-tax deduction (Shanghai Municipal Administration of Culture, Radio, Film and TV 2018, unpaginated).

In Shenzhen, high-tech and software gaming enterprises, as well as importers of advanced technology, also qualify for preferential taxation, including the reduced 15% income tax (Fung 2018, 91). According to the recently released *Administrative Measures for the Subtle Advantages of Technology and Technology Associations*, high-tech enterprises are exempt from value-added tax on the income of technology contracts and enjoy tax reductions or even exemption from the income tax on the revenue from technology transfers. In addition, their expenses on R&D are also not subject to taxation, and their scientific and technical employees are awarded for their achievements through subsidies (Shenzhen Municipal Science and Technology Innovation Centre 2021, unpaginated).

Contrary to the situation in Japan, Chinese game companies have access to a number of tax incentives both at the national and the local levels. Firstly, as high-tech enterprises, they qualify for a much lower corporate income tax (15% instead of the usual 25%). Secondly, the government provides tax incentives to support R&D and encourage game companies to export their products and produce games of certain genres. Furthermore, at the local level, both Shanghai and Shenzhen have introduced preferential taxation measures to foster their gaming clusters: in addition to the reduced income tax tariff, companies are eligible for preferential taxation on R&D expenses and technology transfers, as well as subsidies for highly skilled scientific and technical talent.

4.4.2. Public subsidies and other financial support measures

Japan

Although there are virtually no tax incentives existing to promote cultural and creative industries, the Japanese government has introduced some other formats of public financial support. However, this policy has several shortcomings in terms of facilitating the development of video game creative clusters. First of all, the main programme for supporting CCIs, Cool Japan, ultimately aims to improve the image of Japan abroad and “enhance the brand value of the country”, as well as promote the export of cultural goods and services and attract foreign tourists, making use of the popularity of the Japanese pop culture abroad (Kawashima 2018, 20). This strategy has gradually waned over the recent years, with the main websites not being updated regularly, festivals halting, and funding being cut down. Because it puts so much emphasis on the re-branding component, “neither the Japanese government nor any other municipal or governmental organization has developed a comprehensive policy targeting the internal composition of cultural and creative industry in Japan” within the framework of Cool Japan (Morgner 2019, 52).

On the other hand, even though the government seems to recognise the importance of the video game industry, this sector has received less attention than other content industries, such as anime. For example, the Cool Japan Fund, which is the main investment institution within the framework of the Cool Japan Strategy, has not sponsored any projects directly linked to video games. There have only been two projects that are somewhat related to the gaming industry: *Japan Content-Related Online Sales to Overseas*, with a subsidy amount of 13.6 million dollars, and *Creator Development Abroad*, with a subsidy amount of 4.1 million dollars. However, as Koizumi (2021) points out, this relationship is only marginal (Koizumi 2021, 187).

Another public support tool of the video game industry is the *Japan Localisation and Promotion (J-LOP)* project, which was conducted from 2013 to 2017. It aimed at supporting creative enterprises to export Japanese content by “subsidising the localisation and promotion of content to match the culture and customs of overseas markets” and helping gaming enterprises “cover the costs of localising video games and exhibiting at international exhibitions” (Koizumi 2021, 187). According to the survey conducted by Garvizu (2017), almost all video game companies apply for subsidies from J-LOP. However, company officials complained in an interview with the author that the application process is lengthy while “businesses need an immediate answer”. Furthermore, they pointed out the difficulty of satisfying the requirements of J-LOP subsidisation for localisation, exacerbated by the fact that games published before the launch of J-LOP are ineligible (Garvizu 2017, 283-284).

Overall, the budget of cultural governance agencies is disproportionately small, which explains the limited extent of financial support. The budget of ACA constitutes about 0.1% of the total public expenditure, with most of it being channelled into heritage preservation and maintenance of museums and art centres. For comparison, in South Korea and France, corresponding budgetary allocation figures are about 1% for the same period (2016) (Kawashima 2018, 21-22).

Similar to the national-wide policy, there are few public subsidies available to video game companies at the local level. One of the main forms of financial support are awards, such as the Japan Game Awards in Tokyo. Established in 2008, the award ceremony is held by METI and CESA as a part of the Tokyo Game Show on an annual basis. There are several categories, such as the Games of the Year Division Awards (Global Award, Best Sales Award and Special Award), Game Designers Award, Amateur Division Awards, Future Division Awards (for non-released works), and U18 Division Awards (for underage game developers). The Grand Prize in the Amateur Division Awards, for instance, amounts to 500,000 yen (CESA 2020b, unpaginated).

Unlike Tokyo, Fukuoka’s municipal government offers substantial subsidies to encourage creative cluster development. According to the official website of JETRO, “Fukuoka city provides subsidies to companies establishing businesses in the target fields in Fukuoka city to cover parts of

their investment, lease, employment, and establishment expenses according to the business field, location, office floor area, and the number of employees” (JETRO 2020, unpaginated). Video game companies qualify for these subsidies as enterprises belonging to the knowledge creation industry engaged in software and digital content development. The subsidies cover 1/4 of their annual rent for a period of 1 or 2 years depending on the office floor area. Employees are also eligible for subsidisation, with the subsidies ranging from 50,000 (part-time non-Fukuoka residents) to 1 million yen (researchers with Fukuoka residence employed on a full-time basis) (Fukuoka City Municipal Government 2016, 1).

All in all, although the Japanese government offers a number of financial support measures to help gaming companies, they are few in number and have several shortcomings. First, many of the projects subsidized by the state are run as a part of the nation rebranding strategy of Cool Japan and do not contribute to the development of the domestic game industry and its creative clusters, especially since none of the sponsored projects is directly related to games, with other culture-specific content industries such as anime taking the spotlight. Second, the application process for subsidies, such as the ones provided within the framework of J-LOP, is lengthy and complicated, and game companies find it hard to satisfy the eligibility requirements. Over, the budget for financial support of creative and cultural industries is disproportionally limited compared to other developed countries. The only substantial subsidies with clearly outlined requirements available to game companies at the local level are provided by the Fukuoka government, as they fall under the category of knowledge creation enterprises engaged in software and digital content development: these subsidies cover some of the rent and personnel expenses.

China

The Chinese government uses public subsidies as one of the main tools for supporting the game industry. In 2008, it released a document called *Opinions of the General Office of the State Council on Implementing Some Policies and Measures for Accelerating the Development of the Service Sector*, which put forward several policies for the promotion of service industries, in particular software and information industries. As a fast-growing service industry, video games were one of the main foci of this directive. Among other initiatives, it proposed the creation of special and guidance funds at both the national and local levels to encourage the development of the sector. Furthermore, various financial institutions were encouraged to develop a system of financial products, such as loan and stock issuance, and arrange subsidies and discounts that prioritise the service industry, especially SMEs and start-ups (Fung 2018, 82-83).

Although public subsidies are opulent and easily available, they are largely ideology-driven and prioritise the development of games that address certain themes, such as anti-corruption, patriotism, and anti-Japanese motives. For example, the Commission for Discipline Inspection of Haishu District invested 100,000 yuan into a game where the main character was meant to eliminate corrupt politicians, although the game was later removed from circulation (Fung 2018, 83).

Interestingly, another area targeted by the government is the support of non-public capital, which is a tendency specific to CCIs, according to Fung (2018). For instance, in *Several Opinions of the State Council on Encouraging, Supporting and Guiding the Development of Individual and Private Economy and Other Non-public Sectors of the Economy* released in 2005, the State Council listed its intention to liberalise market access for private enterprises and provide them with further tax incentives and other public support measures (Fung 2018, 85).

Gaming companies also have access to many subsidies offered by local governments. For instance, in 2010, Shanghai introduced *Supportive and Incentive Measures of Shanghai Animation and Game Industries* that were meant to guide the development of the local animation and gaming industries, promote the growth of major companies and foster innovation. This policy document promises to encourage the development of “green online games and games with themes that promote traditional Chinese culture” by providing up to 200 thousand yuan to every “outstanding company” with over 10 million yuan in annual revenue as well as other subsidies to companies of smaller size. In addition, the Shanghai government introduced subsidies aimed at promoting cross-fertilisation between the video game industry and related industries (see Section 4.5.2.) (Fung 2018, 89).

In its public support of the video game industry, Shanghai puts an emphasis on promoting the development of the local e-sports industry. In 2019, the Huangpu District government released *Implementation Measures for Promoting the Healthy Development of the E-sports Industry in the District*, which proposed a number of policies that are meant to encourage the growth of the e-sports cluster. For example, the companies belonging to the cluster are to receive subsidies for buying and renting office spaces, which cover 10% of the construction or purchase costs. In addition, e-sports start-ups are eligible for subsidies by to 5 million yuan to cover their expenses. The measures include a number of other incentives, such as operational rewards, club admission subsidies, subsidies for financing and listing, etc. (Shanghai Huangpu District People’s Government 2019, unpaginated).

At the same time, as it was shown in the surveys and interviews conducted by Huang (2021), while a video game company can qualify for a grant within the range of 200,000 and 500,000 RBM, such help is marginal considering the expenses associated with producing a game. In Shanghai, for instance, the cost of developing a mobile game is estimated to amount to at least 5 million yuan, rendering the funding “too meagre to substantially alleviate gaming entrepreneurs’ shortage of funds

in the venture creation process” (Huang 2021, 9). Furthermore, to qualify for these grants, a company must achieve a certain sales volume, which is out of reach for many small enterprises (Huang 2021, 10).

In an interview with Hong Kong Economic Times, Ma Huateng, the founder of Tencent, revealed that “he was attracted by the Shenzhen government as it has supported high-tech start-up firms to a great extent including not only the tax incentives but also different awards and supporting policies” (Yang and Chan 2020, 10). In Shenzhen, high-tech industries in industrial bases are subsidised by different sectors of the government, requiring the collaboration between the municipal government and district governments. The projects in industrial bases are eligible for a maximum subsidy of 3 million yuan. The local government provides financial support to new enterprises in these bases for a period of three years. Furthermore, the Shenzhen administration provides public support to “qualified game companies and relevant enterprises”: companies that have received the recommendation of the Shenzhen Municipal Office of Cultural Industries and the recognition by special funds for CCIs are eligible for matching grants. In addition, both organisers and attendees of national and international gaming exhibitions are subsidised in accordance with their “cultural area” (Fung 2018, 91). Similar to the situation in Shanghai, this means that the government can employ their ideological agenda to decide which enterprises are rewarded.

Overall, it can be observed that there are many subsidies available to video game companies. Both the central and local governments have released policies outlining support measures meant to stimulate the game industry and foster its growth specifically. At the same time, the government tends to use ideology-compliance as a deciding factor in awarding public support, which encourages companies to produce similar products and, thus, creates obstacles in the way of innovation. On the other hand, cultural and creative industries are one of the only sectors where the government is trying to support non-public capital by providing them with tax incentives and other financial support measures. At the local level, both Shanghai and Shenzhen offer subsidies for game companies; however, they also have to be “green”, promote traditional Chinese culture, or receive a special recommendation from the government, although the criteria appear to be more liberal for the e-sports sector. What is more, the funding is considered to be insubstantial given the costs associated with developing and publishing a video game.

4.5. Measures against lock-in

4.5.1. Innovation support

Japan

In their research of the effects of IP differentiation on video game creative cluster development, Ernkvist and Ström (2018) explained the recent stagnation of the Japanese video game industry through “changing technological and market conditions related to the Japanese cluster’s ability to produce differentiated game IPs” (Ernkvist and Ström 2018, 264). Their study shows the innovation-related challenges the industry faced in the 21st century and the importance of encouraging IP differentiation, promoting cross-fertilisation with related industries, and embracing technological change which guides the evolution of creative industries (Ernkvist and Ström 2018, 279-280).

In order to facilitate the growth of the high-tech sector, the Japanese government has introduced a number of measures at the national level. One of the most prominent frameworks that are meant to encourage innovation is the *Technology Strategy Maps* by METI, the first edition of which was formulated in 2005. The strategy aims to support R&D projects, encourage the fusion of technologies from different areas, promote the collaboration between the industry, academia, and the government, and facilitate the revitalisation of local industries, which would support new industries and strengthen their international competitiveness (Watanabe 2006, 1207-1210).

In 2012, the newly published *Technology Strategy Map* focused on the content industry, which encompasses such cultural and creative industries as games, film, anime, broadcasting, etc. However, same as with the case of the Cool Japan strategy, this document focuses on anime, traditional culture, fashion, food, and other cultural spheres carrying the Japanese aesthetic, as they are seen as valuable assets in the soft power toolbox. At the same time, the development of the ICT infrastructure and promotion of information technology industries is seen as a way to boost the growth of the national economy and help it recover from stagnation (METI 2012, 2-3).

The *Technology Strategy Map* emphasises developing the following trends: 1) improving the expressiveness of creative products through the use of interactive technology, 3DCG technology, multi-view and multi-sensory technology, etc.; 2) establishing a technical system that “scientifically captures the value creation of the content itself” and that would be used as a means of creating, distributing, and displaying content; 3) utilisation of content in real space and transformation of its products into marketable real-life items for fashion, food, education, tourism, and other industries. The document concludes that, in order to promote the innovative development of the industry, it is crucial to support content-driven projects and open content labs (METI 2012, 23-24). However, although the

Map tries to propose a development path for content industries, including the video game industry, it does not put forward any concrete measures, or promise financial support for R&D.

Despite this, the 2012 *Technology Strategy Map* managed to inspire a number of projects that are meant to contribute to the growth of the CCIs. One such project is *Innovative Technologies*, which was launched in 2012 and aims to identify original and innovative technology items that can contribute to realising the goals formulated in the document. These items are then presented at Digital Content Expo (DCEXPO), a conference for researchers and companies in the digital content sphere organised by the Digital Content Association of Japan (DCAJ) at the international level. The event helps video game companies developing cutting-edge technology get recognition and exposure to potential investors and players (DCAJ 2021, unpaginated).

Another prominent strategy for supporting innovation specifically in the video game industry is the *Game Development Technology Roadmap* by CESA. It narrows in on the different areas of game development, such as engineering, visual arts, game design, production, and sound, and proposes a development roadmap for each of them. Same as in the case of the *Technology Strategy Map*, this Roadmap is meant to be used as a set of activity guidelines for game developers, researchers, and companies operating in related industries, and does not offer any concrete support measures through official or informal channels (CEDEC 2019, unpaginated).

Similarly, although local governments claim to support research and development activities of high-tech businesses and promote the industry-academia-government collaboration, no specialised subsidies, grants, or other support measures were found in either Tokyo or Fukuoka. In conclusion, the government takes on a guiding role when it comes to supporting innovation within the video game industry, putting forward comprehensive development strategies, and providing exposure to companies that spearhead technological evolution.

China

Compared to Japan, the government's role in supporting innovation and technology development is augmented in China. According to the OECD, the Chinese government is forced to step up its involvement because of the disparities between the country's regions, a higher chance of market failure, lack of innovative capacities in state-owned enterprises, insufficient collaboration between businesses and research institutes, among other factors (OECD 2007, 16-17). In addition, the tendency to imitate other games that have enjoyed success and the conservative market present additional challenges to producing breakthrough innovations (Tschang 2009, 32-33). Therefore, both central and local authorities attach great importance to supporting innovation and producing strong policies to that end.

According to an interview with Zuhai Tou, the former Deputy Division Chief of the Culture Market Division of the Ministry of Culture, the Chinese government actively encourages the creation of unique game engines and various gaming-related technologies (Fung 2016a, 50). One of the most important tools utilised by the authorities is R&D tax incentives, which amount to 150% tax deduction for eligible activities for both SMEs and large companies and are easily obtainable. Thus, companies save 12.5% in net taxes for their R&D expenses. The eligibility criteria demand that the technological activities must creatively apply new knowledge and lead to product and process improvements. For example, if a company spends \$10 million on R&D, this innovative effort will generate \$1.25 million in tax savings (Garcia et al. 2015, unpaginated). Such incentives have proven highly effective in encouraging video game companies to invest more heavily into R&D, with Tencent and NetEase reaching the total annual R&D investment of \$2.42 billion in 2016. For comparison, the top three Korean gaming companies only invested \$200 million into R&D during the same period (Kim and Kang 2021, 145).

At the local level, governments create elaborate plans on how to promote innovation within their creative clusters. In 2016, Shanghai Municipal People's Government announced that during the *13th Five-year Plan*, it would be crucial for Shanghai to intensify its investment into R&D and boost the innovation capacity of a wide range of industries, including the video game industry. It also emphasised the need to create a favourable environment for the industry to foster innovation. During this period, the city “should make use of local and international cutting-edge technologies to transform the city into an innovation hub of online games and prioritise the research and development capacity of online game developers, as this will enhance the industry’s future development” (Rong and O’Connor 2018, 155).

As in other aspects, in Shanghai, a particular emphasis is put on the development of e-sports products. For example, in its *Announcement on Soliciting Public Opinions on "Implementation Measures for Promoting the Healthy Development of E-sports Industry in the District*, the Huangpu District Government addressed, among other support measures, the need to encourage relevant enterprises to research and develop innovative products. To this end, the government offered to subsidise 30% of all software development investments, up to 5 million yuan in each case. The document puts a focus on cultivating virtual reality industry clusters and facilitating “the application of advanced technological achievements and services such as intelligent manufacturing, artificial intelligence, and future communications to the production of e-sports content”. In addition, the district government emphasised the need to encourage relevant companies to collaborate with universities, scientific research institutions and global e-sports R&D teams in order to strengthen joint research and development efforts (Shanghai Huangpu District People’s Government 2019, unpaginated).

Shenzhen, on the other hand, is often referred to as “China’s very own Silicon Valley”, and not without reason (Chen and Ogan 2017, 55). From 2009 to 2014, the city’s R&D investments amounted to 4.2% of GDP, more than double that of the national average. Moreover, in June 2016, over half of all Chinese applied patents originated from Shenzhen. The city’s video game companies invest more into innovation than in the rest of the country, and Tencent even founded its own research institute as early as 2007 (Chen and Ogan 2017, 56-59). According to Chen and Ogan, “[a] small and purposeful local government is the first key to Shenzhen’s successful ecosystem for breeding and sustaining innovative companies” (Chen and Ogan 2017, 59).

In order to transform Shenzhen into a global innovation hub, the local government encourages the development of creative clusters by establishing “model bases for creative design, cultural software, animation and games, new media”, etc. In addition, it provides creative start-ups, the most vulnerable echelon of the industry, with rent subsidies of up to 70% (Chen and Ogan 2017, 60). The city administration also rewards companies that produce original gaming products which receive major national and international awards. Publishers of original games receive up to 1 million yuan based on the sales revenue brought by such products (Fung 2018, 91).

To conclude, due to the market failures and problems with innovative capacities and imitative trends, the Chinese government is prompted to offer active support for creative enterprises to promote innovation and R&D. Most of the policies offer measurable financial incentives: for instance, there are tax deductions for R&D expenses, which allows companies to save 12.5% in net taxes and has proven to be an effective tool to encourage them to invest more in R&D. Local governments offer additional incentives to innovative enterprises, with Shanghai putting an emphasis on the e-sports industry. Shenzhen, which is sometimes referred to as China’s “Silicon Valley”, heavily invests in fostering innovation, encourages the establishment of creative hubs and provides rent subsidies and awards to gaming start-ups and publishers of original games.

4.5.2. Facilitation of cross-fertilisation

Japan

Ernkvist and Ström (2018) identify four main modes of cross-fertilisation of the video game industry and related industries in Japan. The first one is skill transfer, especially with the anime and manga industries before the innovative development of the gaming industry created a technological barrier for the workers of this sector and, at the same time, created new opportunities for skill transfers with the equally fast-developing film industry. The second mode is IP licensing from other industries, which has a positive effect on the sales figures but “is perceived as a symptom of a lack of novel

creative expression in a more mature game market”. Another format of cross-sectoral fertilisation is lead-market IPs, although their importance has decreased over time. Finally, related industries can orchestrate multi-product releases for the same IP, a good example of which are big franchises like *Pokemon* (Ernkvist and Ström 2018, 268).

However, in recent decades, the technological progress of the hardware and software components of games has presented challenges for pursuing cross-fertilisation opportunities, due to “the lack of an organisational structure and relative comparative disadvantage in creative industries with more realistic content”. Furthermore, low employee retention rates and insufficient collaboration structures with other creative industries have hindered cross-sectoral relationships. Consequently, there is a growing need for the government to step up and create more cross-fertilisation opportunities across creative clusters to encourage innovation and IP differentiation (Ernkvist and Ström 2018, 277).

In Japan, at the national level, the government emphasises that integration of various content industries can help achieve significant synergetic benefits and boost the development of the industries involved, as was observed in a report by METI (METI 2007, 22). One of the examples of measures to promote this synergy is the Media Art Cooperation Promotion Programme by the ACA, which supports “research studies and the creation of new domains through the cooperation and collaboration of industry, academia, and government crossing fields and domains in the media arts”. Out of the eight projects promoted within the framework of this programme in 2017, two were connected to the gaming industry: *Cross-discipline Oral History Project on Innovation Generated by the Video Game Industry* run by Hitotsubashi University and *Fiscal 2017 Survey Project on Coordination Among Collections of Video Game Archives* conducted by the Ritsumeikan Center for Game Studies. The funding provided for these projects was estimated to be \$49.5 thousand and \$165 thousand, respectively (Koizumi 2021, 188). Although this programme has demonstrated that the ACA is willing to provide assistance to video games among other creative industries, these projects only supported the creation of archives and have not had a significant impact on the local industry or creative cluster development.

In the case of Tokyo, according to Matsubara (2018), most CG and animation production companies are located in the subcenter of Tokyo (Shinjuku, Shibuya, Toshima, and Bunkyo) and its suburbs (Matsubara 2018, 243). However, the districts where such agglomerations have emerged vary for animation and video game companies: while animation firms are mostly found in the western suburbs, video game firms tend to cluster in the centre of the city (Hanzawa 2004, 593; Matsubara 2018, 242). The location of most animation companies can be explained by the need to be close to the main TV and processing stations and the historical factor: most of them can trace their roots to

Toei Animation and Mushi Production, which were incidentally established in western Tokyo. The firms of the video game cluster, on the other hand, have much more diverse origins, from arcades to system development. Despite this, these two clusters have a close inter-firm relationship, with companies collaborating on the same projects and exchanging talent (Hanzawa 2004, 593-594).

Official documents outlining the Cool Japan initiative often emphasise the importance of cross-industrial collaboration. For instance, in 2018, the Content Industry Division of METI announced *About Open Recruitment of Contractors Related to Informational and Innovation Support of the Cross-Sectoral Collaboration within the Framework of Cool Japan 2018*. The purpose of the project was to “promote the growth and independence of the Cool Japan industry by holding international events that contribute to the dissemination and development of the Cool Japan industry”. However, it should be pointed out that, as is the case with most projects run within the framework of Cool Japan, the main objective of these measures is not to further the development of creative clusters across industries but to increase exposure to foreign markets and attract tourists from other countries: the document even provides an estimate of the expected number of foreign visitors the initiative was supposed to bring to Japan (METI 2018, 1).

There are also few public initiatives to promote cross-sectoral collaboration in both Tokyo and Fukuoka. The key events for video games and animation are Tokyo Game Show and Anime Japan, respectively, although there are smaller in scale networking platforms organised locally, such as Content Tokyo. The latter attracts exhibitors from various new media and software industries, including video production, CG, animation, video games, music production, production solutions, etc. (Content Tokyo 2021, unpaginated). One of the most recent efforts to support cross-fertilisation was the Anime and Game Summit, which was held in an online format in 2021 and allowed professionals from over 220 animation and video game companies to hold business negotiations (PR Times 2020, unpaginated). However, the event is organised by a private commercial company GK DMM.com and is not directly subsidised or sponsored by the local or national government.

To summarise, in Japan, traditional synergies between the game industry and other creative sectors, such as anime, have been disrupted by technological progress and other factors, which has created a growing need for the government to interfere and create more cross-fertilisation opportunities. However, most of the cultural policy projects either have little relevance in this regard or follow a different objective, which is the case with the Cool Japan initiative. Furthermore, the government does not sponsor or organise any events that create opportunities for cross-sectoral interactions.

China

In China, the government is substantially more proactive in facilitating cross-industrial link-building among cultural and creative industries. In 2014, the State Council published *About the Promotion of Cultural Creativity and Design Services and Several Opinions on the Integration and Development of Related Industries*, which addressed the promotion of CCIs, in particular new and high-end industries, through the encouragement of their integrated development across all provinces. As is the case with other policy initiatives, the document lists guiding ideology and state-led coordination among the general requirements for the implementation of this strategy. Among the suggested measures, the State Council proposed to promote cross-sectoral research and exchanges, build integrated cross-industrial groups and alliances, and encourage qualified large-scale enterprises to set up industrial design centres. One of the main directions of the strategy is to support the development of creative clusters and strengthen organic connections within them (State Council of China 2014, unpaginated). What is more, in its *Cultural Industry Development Plan during the 13th Five-Year Plan Period of the Ministry of Culture*, MOC went one step further and formulated one of the priorities for the development of the industry as “promoting the integration of video games with education, medical care, environmental protection, popular science, and other fields” (MOC 2014, 26).

The state pursued this policy by creating numerous technological parks and cultural industrial parks, many of which can be found at the heart of gaming clusters. Fung (2018) estimates that “[i]n 2015, there were 2,530 incubators related to technology, and they represented a creative space for 4,875 various cultural industries, which was the largest establishment of this kind in the world”. In these incubators, different creative industries, including games, animation, and film, are housed together with software and IT colleagues. In fact, creative clusters that are made up of just one industry are a rarity in China, while heterogeneous agglomerations that involve companies from related industries are more common (Fung 2018, 94).

In theory, these firms should act as “units in the production chain” and fully capitalise on the competitive edge of co-location. However, more often than not, companies only choose to cluster in these technological parks due to the tax reductions, low rental rates, and other incentives provided by the government, and “neither interact with nor participate in a value chain, which is counter to the concept” (Fung 2018, 97).

In Shanghai, the gaming industry plays a crucial role in the content agglomeration and multi-industry development. The integrated development of creative industries has resulted in the formation of “a big and inclusive cultural content production system that covers film, television, online music, mobile entertainment, cartoon, and online literature” (Rong and O’Connor 2018, 156-157). The local government actively encourages cross-industrial synergies to enhance the spill-over effects for games

and related industries, especially animation. For instance, *Supportive and Incentive Measures of Shanghai Animation and Game Industries*, released in 2010, encourage gaming firms to engage in the production of films, toys, and other products along the games-related value chain. To that end, the Shanghai government promised to provide subsidies of up to 300 thousand yuan to all eligible companies. To qualify for this aid, they must create at least 5 million yuan in revenue annually from derived products (Shanghai Municipal Administration of Culture, Radio, Film, and TV 2012, unpaginated).

Unlike Shanghai, where state-owned companies play a significant role, Shenzhen's economic foundation is formed by private enterprises, according to Hu (2021). The value chain formed by video game companies and related industries is thus more organic and complete, which "has put Shenzhen in an advantageous position in the national and global innovation races" (Hu 2021, 88-90). Indeed, in contrast to Shanghai's regularly published plans for developing cross-sectoral synergies, the Shenzhen administration does not seem to have any policies that address this issue, although the importance of encouraging cross-fertilisation still figures in large-scale umbrella documents, such as *The Revitalization and Development Plan of Shenzhen's Cultural and Creative Industries (2011-2015)* (Shenzhen Municipal People's Government 2011, unpaginated).

All in all, the Chinese government is actively involved in facilitating cross-sectoral interactions, which takes the form of encouraging cross-industrial link-building through subsidies, the creation of integrated groups and alliances, and the establishment of technological parts and other heterogeneous hubs. However, it should be noted that simply placing companies in a park does not create value chains between them and thus cannot help them capitalise on the competitive advantages of co-location, therefore building artificial clusters does not necessarily lead to cross-fertilisation synergies.

4.5.3. Access to global production chains and pipelines of knowledge

Japan

The Japanese market is often described as insulated and dominated by domestic companies, protected from international competition by the existing formal and informal barriers (Ernkvist and Ström 2018, 264). In their study of entry barriers encountered by software SMEs in Japan, Ojala and Past found that foreign firms face a wide range of obstacles when entering the Japanese market, including complex bureaucratic processes and requirements; the government's restrictions for FDI; high tariffs; language barrier and localisation requirements; the difficulty of finding the right liaisons; the conservatism of the market, etc. (Ojala and Pasi 2007, 702). All of these create obstructions for accessing global production chains and pipelines of knowledge and further insulate the market.

Launched around 2005, the Cool Japan initiative is posed as a policy that aims to open Japan up to the world and “help foreign audiences to understand the cultural significance and attractiveness of products from Japan, linking sales and resources to local markets, and making Japan more attractive to foreign visitors and investment” (Morgner 2019, 51). However, it has been criticised for being a rebranding strategy that “is based on questionable data and anecdotal evidence” and seeks to support the whole economy rather than promote certain cultural and creative industries (Morgner 2019, 48). Furthermore, Iwabuchi (2019) notes that “there is a huge discrepancy between the rapid development of the Cool Japan policy and the strong unwillingness to accept migrants and foster cultural diversity within Japan”. On the contrary, he emphasises that this strategy contradicts the concept of diversity because nation branding plays up the importance of a single nation and “disengages with cultural diversity” (Iwabuchi 2019, 7-8).

Another dimension of Japan’s opening-up policy, which is more grounded and directly engages with the CCIs, is the endeavour to establish multilateral formats of collaboration, especially with other Asian countries. It should be noted that the expansion pattern of Japanese video game companies has one important characteristic: for the most part, they look for opportunities to collaborate with neighbouring Asian countries, such as China, South Korea, and Southeast Asian nations (Hasegawa et al. 2012, 30). Therefore, the government also puts an emphasis on promoting intraregional cooperation. Some of the existing exchange formats relevant to the gaming industry include the Trilateral Cultural Content Industry Forum and the Asia Content Business Summit. The Trilateral Cultural Content Industry Forum has been held between Japan, China, and South Korea since 2002 and aims to facilitate information exchange on cultural policy and market trends, as well as create business opportunities for cultural and creative enterprises in these countries (METI 2017, 1). The Asia Content Business Summit is a more “Pan-Asian” platform that seeks to bring together government officials and industry professionals and promote content industry exchanges among Indonesia, Japan, China, Hong Kong (China), India, Korea, Singapore, Malaysia, the Philippines, and Thailand, with METI taking on the responsibility of acting as the secretariat for the summit (ACBS 2021, unpaginated).

One more organisation responsible for increasing the exposure of Japanese companies to international markets and attracting foreign investors to the Japanese market is the Japan External Trade Organization (JETRO). For example, its Regional Industry Tie-up (RIT) programme launched by JETRO in 2007 is meant to help Japanese regions establish industry partnerships with foreign counterparts through industrial collaboration and exchange. It aims to help “foreign regions interested in partnering with Japan but lacking the resources or network to make such connections”, addressing the issue of finding contact persons, mentioned in Ojala and Pasi’s study. Individual companies are

barred from applying for the programme, which is only available to local business and industrial organisations “that represent the industry in the region”, local governments, study groups conferences, and other consortium formats, which could potentially lead to forming relationships between domestic and foreign clusters (JETRO 2008, 1).

The Digital Content Association of Japan (DCAJ) also works together with governmental agencies responsible for the content industry to promote business collaborations and knowledge exchanges with other countries. For instance, the organisation participates in the SIGGRAPH Conference on Computer Graphics and Interactive Techniques, where it facilitates exchanges between Japanese companies and their U.S. counterparts. It also focuses on building up the collaboration with ASEAN countries, organises seminars on the present situation of the digital content industry in Japan for experts in Asian government agencies and organisations, and holds “business matching” activities between them and their Japanese counterparts. In particular, DCAJ monitors the situation in China and South Korea and regularly conducts research on these countries’ content industries (DCAJ 2021, unpaginated).

As for the local initiatives, in Tokyo, which already has the highest concentration of foreign enterprises, the local government offers few additional incentives to promote international exchanges. However, in anticipation of the 2020 Olympic Games, the Tokyo Metropolitan Government released a plan which, among other initiatives, aimed at making Tokyo a “Diverse City” by cultivating an inclusive intercultural society through providing support for foreign companies wishing to expand to Tokyo, cooperating with private institutions to facilitate global exchanges, and creating a comfortable environment for expats and their families. At the same time, the document is missing concrete measures that would help achieve these goals (Tokyo Metropolitan Government 2018, 26).

At the same time, Fukuoka, in its attempt to build the image of “Japan’s gateway to East Asia”, has launched a number of ongoing initiatives that are meant to attract foreign businesses and help them integrate into the Japanese market. The local government has set up the Global Startup Center, which offers support to foreign entrepreneurs that wish to either start a business in Fukuoka or expand their operations to this city, and the Global Finance Centre, “a one-stop support desk” working with international finance companies. Foreign enterprises can receive free help with launching a business, applying for a start-up visa, business matching, etc. The local government also collaborates with different support facilities for start-ups in order to collect relevant information abroad, support Japanese companies to explore foreign markets and match them with overseas counterparts (JETRO 2020, unpaginated). Furthermore, foreign video game companies qualify for a number of subsidies: the local government can refund 25% of their rent expenses for a period of up to 2 years

and provide employment subsidies of up to 100,000 yen for non-residents. Companies that are entering Japan for the first time are also eligible for the coverage of 50% of their marketing research, translation, recruitment, travelling and other costs, with the maximum aid standing at 3 million yen (Fukuoka City Municipal Government 2016, 1). Other efforts of the city government to increase diversity include attracting higher numbers of international students by offering more degree programmes taught in English, translating all street signs into Chinese and Korean, and even making broadcasts in shopping centres in these languages (Lim 2008, unpaginated).

Finally, it should be pointed out that most official websites of the Japanese governmental bodies, industry-specific organisations and events relevant for video game clusters reviewed in this paper provide at least some of the information in English, and many official documents and summaries have also been translated. Despite the existing language barrier, it shows that these institutions are trying to reach out to foreign partners and engage them in various existing programmes and events.

In conclusion, Japan's cultural policies for increasing the exposure of the domestic content industries to the outside world are more intensive compared to other aspects. The Japanese government actively participates in multilateral collaboration formats, especially within the Asian region. JETRO, in particular, plays an important role in the collaboration of Japanese regions with foreign counterparts through industrial exchanges by helping local business and industrial organisations, local governments, and other consortium entities find contact people and build networking relationships. At the same time, many national-level initiatives stem from Cool Japan and, therefore, focus more on expanding cultural exports and attracting foreign tourists rather than developing the domestic CCIs. Finally, it can be seen that, at the local level, the Fukuoka city government takes a more active stance in its attempt to become "Japan's gateway to East Asia" by actively supporting foreign enterprises wishing to move their operations to Fukuoka, along with other efforts to increase diversity.

China

In China, access to global knowledge exchanges and business collaborations is restricted due to stringent market regulations and censorship. In 2010, the Internet Culture Operation License policy was issued by the MOC. It means that, from a legal perspective, the only option for a foreign gaming company that wants to penetrate the Chinese market is to license their games to local operators and distributors in return for a certain share of the revenues, which would sometimes amount to more than a half of all profits (Snyder 2018, 3; Yang and Chan 2020, 10). Although this creates additional hurdles for foreign game developers, some experts point out that the requirement to franchise all products to Chinese companies has had a beneficial effect on the development of the local video game

industry. According to Kim and Kang (2021), foreign enterprises provided their Chinese partners with a multitude of learning opportunities. Firstly, Chinese companies gain the opportunity to learn how the billing system for game services works and how to “develop experience in various aspects of online game operations, such as stable management of the large-scale network”. Secondly, they were able to “accumulate basic data to analyse the game characteristics, such as preferences, demands and requirements of the local game users, which are indispensable in securing programming, design, and content capabilities” (Kim and Kang 2021, 141-142).

However, besides being forced into cooperation with Chinese companies, foreign game makers are also faced with strict censorship regulations. Before going on sale, every game must obtain approval from the Chinese government, allowing it to closely monitor each product. These games would often be banned by the content censorship procedures meant to protect the market from dissident ideologies. Chung and Fung (2013) even claim that “[t]he Chinese authorities only give an import green light to one or two foreign games as a token of free and fair trade” (Chung and Fung 2013, 248). For instance, in 2004, the MOC banned a game produced by the Swedish company Paradox Interactive for “distorting history and damaging China’s sovereignty and territorial integrity” because the game portrayed Tibet as an independent country. Its new game *Stellaris*, even after the company had secured a partnership with Tencent, has still not been approved five years after it was submitted for review, despite being a sci-fi game that has is set in a distant future. The situation is further complicated by the vagueness of the guidelines set forth by the National Press and Publication Administration, which is responsible for censorship, which gives the authorities the ultimate power to decide which games are appropriate (Holmes 2021, unpaginated).

Nevertheless, the most successful games in China are imported from other countries, such as Japan, South Korea, and the U.S. In his interview with Ho and Fung (2016), Liu Yusu, Vice Dean of the Animation and Game Research Centre of the Institute for Cultural Industries at Peking University, estimated that 40% of the Chinese video games market is taken up by imported games, while domestically produced games only have a 60% market share. Therefore, the restrictive measures of the Chinese government can be explained by its intent to protect domestic publishers and developers (Hu and Fung 2016, 109).

Another area where the Chinese government is restricting access to the market is the sale of consoles. Until 2015, gaming consoles were banned completely, and even today there are still stringent censorship restrictions on imported console games. Some experts view this as a sign that “local studios do not have the necessary skills and experience to produce console games”, which compels the government to protect this sector (Roche 2018, 14).

On the other hand, the state recognises the importance of supporting the collaboration of Chinese gaming companies with foreign counterparts. *The 46th Statistical Report on Internet Development in China* released in 2020 by the China Internet Network Information Centre emphasises that “[t]he cooperation between domestic and international online games enterprises is conducive to the further improvement of the quality of China’s online games, which will help to promote the development of high-quality games and bring [a] better experience to Chinese online games users”. It also celebrates the collaboration agreements between Tencent Games and Pokémon Company and congratulates NetEase and Activision Blizzard on the successful registration of their new game *Diablo Immortal* (CNNIC 2020, 45).

In addition, *The Cultural Industry Development Plan During the 13th Five-Year Plan Period of the Ministry of Culture* published by the MOC in 2017 highlights that, in order to enhance the competitiveness of the Chinese creative and cultural industries, it is crucial to facilitate open development and deep integration into the international division of labour. In this plan, the government promised to formulate measures that would create favourable conditions for domestic export-oriented cultural enterprises to encourage them to integrate into the global value chain, participate in international labour and knowledge flows, and build investment and marketing networks overseas. It also focused on attracting foreign investment through establishing multilateral trade dialogues and other inter-governmental cooperation mechanisms and expanding cultural trade exchanges with other countries, although it was highlighted that such investment must comply with the country’s laws and regulations (MOC 2017, 26).

The Ministry of Culture also has a special department responsible for managing cultural collaboration and communication with other countries - the Bureau for External Cultural Relations (BECR). It oversees foreign exchanges and cooperation in the cultural sphere; outlines policies and regulations and signs cultural collaboration agreements with other countries; works together with cultural departments of Chinese embassies overseas, etc. (China Culture 2008, unpaginated). Although mainland game publishers are allowed to cooperate with companies and organisations from Hong Kong, Macau, Taiwan, and foreign countries, any collaborative formats with them are closely monitored by the BECR as well as the State Council publication departments. According to the *Regulations on the Administration of Audio and Video Recordings*, without the explicit permission of the national or local government, no entity or individual is allowed to manufacture audio and video products, which applies to video games as well (Chinalawinfo 2001, unpaginated; Fung 2018, 86).

In particular, the Chinese government focuses on facilitating cultural exchanges with Hong Kong, Macao, and Taiwan, which is especially relevant for the Shenzhen video game cluster, which neighbours with Hong Kong and is actively involved in the Greater Bay Area cooperation. The city

became China's first Special Economic Zone (SEZ) in 1980, and this status has allowed it greater access to the global knowledge flows and value chains. The intention of the government was "to take advantage of Hong Kong's developed economic status in order to benefit the Chinese mainland's economy by using the local conditions (cheap land and labour) and superior policies (low taxes) to attract foreign capital and developing its export production capacity" (O'Connor and Liu 2014, 132). As a result, while Shanghai has the largest migrant population in the country, Shenzhen has the highest ratio of migrants, which stands at almost 70% of the total population of the city (Lin 2017, unpaginated). On the other hand, some studies, such as Yang and Chan (2020), show that the overseas expansion of Shenzhen gaming companies has largely been limited to Southeast Asian countries and is not truly involved in the global value chain. This can be explained by China's cultural closeness to this region: game developers find it difficult to appeal to Western audiences while making a product that is popular both in China and Southeast Asia is easily achievable (Yang and Chan 2020, 13-14).

Similar to Shenzhen, Shanghai also enjoys a privileged status provided by its Free-Trade Zone, officially known as the China (Shanghai) Pilot Free-Trade Zone, which was launched in 2013. It has created a gateway for foreign gaming enterprises to enter the Chinese market and launch collaborative projects with their Chinese counterparts. For example, Shanghai became home to joint ventures by Microsoft and BesTV, as well as Sony and Shanghai Oriental Pearl (Group) (Rong and O'Connor 2018, 160). During the joint session between the government and private sector of the 10th Trilateral Cultural Content Industry Forum, Chinese representatives emphasised the role of Shanghai Free-Trade Zone in increasing exposure to global production chains and knowledge exchanges as the "tenants in [the] entertainment industry including games can enjoy the same treatment as Chinese domestic companies" (METI 2017, 1). However, preference is given to companies from China's special administrative regions, such as Hong Kong: "[a]s opposed to foreign capital, the central government and the Shanghai government have a more welcoming attitude toward Hong Kong capital", and video game enterprises from Hong Kong can invest directly as long as no less than 51% of the venture is controlled by mainland firms (Fung 2018, 90).

Lastly, the language barrier creates obstacles for foreign companies and organisations wishing to expand to China or collaborate with the local companies. Unlike Japan, where, as it was mentioned earlier, key information is easily accessible in English on all government websites, finding information in any language but Chinese proves to be an arduous task. Most websites of the Chinese national and local governments and their publications are not available in English, which bars Chinese creative clusters from gaining access to global value chains and knowledge flows.

All in all, while Chinese policy documents encourage the CCIs to integrate into the international labour and knowledge flows, the focus is on developing cooperative formats with Hong Kong,

Macao, and Taiwan, which limits the exposure of local game companies to fresh ideas and processes from the rest of the world. Furthermore, the government's restrictive policies towards foreign enterprises are meant to protect Chinese game enterprises from the competition, yet they also limit their access to global value chains and pipelines of knowledge. Although the government ostensibly recognises the importance of collaboration with foreign companies, there are no measures to attract them to China. On the contrary, every foreign game maker must franchise all its products to a Chinese partner and obtain approval from the government for each game before it is released.

4.6. Talent creation and talent attraction policies

4.6.1. Talent creation policies

Japan

Japan is facing several issues when with regards to nurturing creative talents. Compared to other developed countries, its share of creative workers is increasing at a slower rate despite the overall growth of the cultural and creative industries (Ursic and Imai 2020, 32). Furthermore, according to Akira Baba's interview with Garvizu (2017), Japanese video game companies experience another problem related to the training of their employees: although they possess the necessary practical skills, "they lack the ability to learn new ones, for example in new technologies". Furthermore, as it was pointed out in the previous section, the language barrier is still a significant obstacle in the way of creative cluster development. Therefore, it is important to strengthen the industry-academia links and encourage the creation of games departments to prepare the future generation of high-skilled developers (Garvizu 2017, 287-288).

To target these issues, in 2010, Strategic Headquarters for the Promotion of an Advanced Information and Telecommunications Network Society of the Cabinet of Japan released a roadmap titled *the New Strategy in Information and Communications Technology (IT)*, which defined the measures that should be taken by each Ministry to promote the IT industry. One of the sections of this document addressed the development of talent for the advanced IT field, which includes video games. Among other measures, it instructed METI to outline a hands-on plan "for developing and recruiting human resources for the advanced IT field", create an "IT-aided educational and learning environment at universities and Specialised Training Colleges" and enhance the industry-academia collaboration in this field, with the goal of reflecting relevant enterprises' professional development models in students' curricula. MEXT, on the other hand, should work out and implement "curricula

for digital content production and programming and the like” among primary and middle school students, as well as equip students from different majors with IT knowledge at the university level (Cabinet of Japan 2010, 89-91).

In the same year, METI released a report of the study group on growth strategies of the content industry, the first section of which addresses the development of human resources for creative clusters, especially for animation and games. With regards to the gaming industry, the report highlights the role of the industry research fair, which has been held by METI since 2009 as a side event of CEDEC, in securing high-quality human resources in the game industry. In this document, METI lays out its plans to set up new contests and awards for young talented specialists in the area of innovative game development. It also focuses on the importance of fostering video game producers for the industry, for whom a specially compiled curriculum was created. It should be noted, however, that, as with most components of the Cool Japan strategy, the focus of this report is on producing “internationally accepted content” and fostering specialists who would expand the Japanese content industries abroad and attract overseas tourists and investment (METI 2010, 11-14).

Masuda and Kohda (2018) relate the formation of the Tokyo video game cluster to the high concentration of higher education institutions and game-related research and education opportunities in the capital (Masuda and Kohda 2018, 5). It appears that the local government is barely involved in the process of human resource development for the creative and cultural industries: there are hardly any industry-academia-government collaboration formats in the context of the video game industry at the local level, nor any government-funded internships or scholarships were found. This can be explained by the fact that the cluster already attracts a steady flow of qualified specialists, and the government sees no reason to interfere and takes a passive stance.

Unlike Tokyo, Fukuoka has suffered from a brain drain in the last few decades. Economic stagnation in Kyushu has resulted in additional efforts to cultivate a strong service industry through talent creation and talent attraction policies (Lim 2020, unpaginated). One of the examples of the industry-academia-government collaboration in Fukuoka is the Fukuoka Game Industry Promotion Agency, which was launched in 2006, which initiates various recruiting and training activities. For instance, it sponsors job fairs for professionals seeking to find a job in the game industry, arranges internships, and organises gaming contests (Sawaji 2016, unpaginated). The Fukuoka Game Internship Programme instigated by the Agency in 2006, solicits applications from a wide range of participants, from students to amateurs, finds a matching host company and organises training with them for approximately one month, with partial subsidies for accommodation expenses for non-residential participants (Fukuoka Game Industry Promotion Agency 2021d, unpaginated).

The Fukuoka city government has also supported the establishment of game-related educational courses, and, currently, there are about thirty educational institutions that have departments specialising in IT and Design, as well as many Digital Content courses (Fukuoka Game Industry Promotion Agency 2021c, unpaginated). Moreover, *The Cool Japan Human Resources Development Study Group Final Summary* outlines some talent development measures undertaken within the framework of the Cool Japan strategy. For instance, the local government collaborated with the universities and business circles in the prefecture to establish the Fukuoka Prefecture International Student Support Centre Management Council. They also support individual job-hunting activities by international students who aim to work at local companies through employment introductions, seminars, individual consultations, etc. (Cabinet of Japan 2018, 30).

In conclusion, Japan is facing a lack of creative talent as the share of creative workers does not reflect the growth of the CCIs. Some of the measures introduced by the central government, which affect game industry creative clusters, include a talent development plan for the IT industry and the development of specially compiled curricula for game industry professionals, namely producers. However, as with most initiatives within the Cool Japan framework, the focus is on nurturing specialists who would promote Japanese content abroad and improve the country image, and there are hardly any government-academia cooperation formats at the national level that aim to improve the quality of education for creative professionals and development of educational degrees, scholarships, or internships tailored for them. The same can be said about the Tokyo cluster, although the Fukuoka government has taken the initiative and launched a number of measures aimed at stopping the brain drain from the region. It actively promotes the industry-academia-government collaboration through the Fukuoka Game Industry Promotion Agency and supports the establishment of educational courses for future game industry professionals.

China

In recent years, the creative and cultural industries, including the game industry, have become a major source of employment in China, especially among young professionals. According to the *Special Analysis of Talent Supply and Demand in China's Game Industry 2021*, the industry currently employs around 700,000 people, and Shanghai and Shenzhen clusters constitute 20.91% and 12.57% of the country's recruitment needs, respectively (Analysis 2021, 12). The report concludes that, in the future, China's game industry talent creation efforts will have to be focused on the three major areas: technology, art and engineering (Analysis 2021, 15).

There are two main obstacles for the talent creation policy to address: the negative image of the industry among the population and the lack of educational opportunities aimed at producing video game industry professionals. As Fung (2018) notes, “[d]espite the attractive remuneration packages they offer, game companies in China, in general, face a lack of human capital” because of the public perceiving games as addictive and having a negative effect on the youth. Therefore, specialists involved in game development do not enjoy the same status as their colleagues from other industries. On the other hand, universities only started offering educational programmes relevant to the game industry recently, and the quality of these courses still does not “match the industry’s expectations”, which requires video game firms to offer in-house training to new graduates (Fung 2018, 63-64).

Therefore, the government takes on an active role in developing human resources for the industry. In *About the Promotion of Cultural Creativity and Design Services and Several Opinions on the Integration and Development of Related Industries*, the State Council emphasised the importance of strengthening personnel training and increasing support through tax subsidies. The suggested measures included the facilitation of talent creation programmes; optimisation of the professional setting; encouraging educational institutions to enhance professional degree establishment and research; promotion of industry-academia cooperation and the establishment of talent training bases; introducing a reward system to subsidise talent creation activities and exchanges, etc. What is more, to support in-house training activities by companies, it was suggested to deduct educational expenditures for personnel incurred by cultural and creative enterprises that do not exceed 8% of the total remuneration to employees. (State Council of China 2014, unpaginated).

In Shanghai, there are few educational programmes relevant to the game industry, with most industry professionals coming from IT and computer science backgrounds and receiving in-house training. Reportedly, “[t]here is a... shortage of talent to fill the roles of ‘Game Designer’, ‘Game Programmer’ and ‘Game Planner’” (Roche 2018, 15). However, the government appears to focus more on attracting talent rather than developing it locally. For example, the *Implementation Measures on Promoting the Development of Shanghai Animation and Game Industry* released in 2018 refer to “30 Articles”, a set of policies for talent attraction from other Chinese provinces and abroad recently launched by the Shanghai government. The document expresses the local government’s commitment to implementing these measures to create an open and competitive talent environment for the game industry. To this end, it was proposed to provide more access to the Shanghai job market for non-Shanghai graduates with majors relevant to this industry and allocate more residence permit bonus points to them. At the same time, the policy also included some talent creation measures, such as supporting industry associations and professional institutions in carrying out training activities for

local companies, encouraging gaming enterprises to actively participate in various domestic and foreign training programmes, and reviewing the inclusion of game-related vocational skills training projects in the Shanghai Vocational Skills Training Subsidy Catalogue (Huangpu District Cultural Bureau 2018, unpaginated).

Compared to Shanghai, the Shenzhen administration puts more emphasis on supporting talent creation. The policies introduced by the local government encourage video game firms to set up their own training organisations to foster industry professionals. As early as 2006, *Several Opinions on Supporting the Development of the Animation and Game Industry* were released to outline the main measures for promoting these two industries. Among other policies, the document underlines the importance of enhancing the training of talents for the game industry. In particular, it emphasises the role played by the Shenzhen University and Shenzhen Polytechnic in cultivating high-quality industry professionals, providing a platform for research and technical exchanges, and facilitating industry-university-research cooperation. It also proposes to support the Shenzhen Institute of Information Technology and the Shenzhen Institute of Advanced Integration Technology in fostering senior talents for the industry, encourage qualified companies to establish training institutions, and expand the city's talent base. Every year, the government provides funding to organise exchange programmes for eligible students. Furthermore, it provides privileges in obtaining permanent residence to game talents with bachelor's degrees and offers preferential housing, insurance, and education opportunities to those professionals who hold a master's degree and higher (Shenzhen Municipal People's Government 2006, unpaginated). By 2025, the Shenzhen administration is planning to expand the number of higher educational institutions to 20 by 2025 and increase the number of enrolled students to 250,000, which shows that the government is determined to cultivate local talent to sustain its economy (Chen and Ogan 2017, 61).

All things considered, the Chinese government largely fails to focus on the main issues of game talent creation: the negative image of the game industry and lack of educational programmes tailored for game developers and other industry professionals. Most of the cultural policies in this area aim to support in-house personnel training: for instance, the government subsidises educational expenditures by cultural and creative enterprises. In Shanghai, the local administration puts an emphasis on attracting talent from other regions rather than developing educational programmes at the local universities. Shenzhen is a notable exception and has released a plan that outlines the policies of talent development for the game industry, with a special focus on cooperating with the Shenzhen Institute of Information Technology and the Shenzhen Institute of Advanced Integration Technology.

4.6.2. Talent attraction policies

Japan

The Tokyo metropolitan area is the largest city-region in the world, which houses most of the advanced functions in Japan, such as international finance and information services (Matsubara 2018, 236). The “creative ecosystem” of Tokyo evolved along with the urban infrastructure of the city, which connects its vast districts composed of autonomous neighbourhoods through a complex network of highways, subways, and walking streets. Aside from its efficient transportation system, the city enjoys a reputation of being one of the largest and wealthiest urban economies, which excels at IP protection and a high level of services and products (Ursic and Imai 2020, 34). According to Mori Memorial Foundation’s *Global Power City Index (GPCI) 2020 Report*, Tokyo has the third highest GPCI in the world, due to its consistently excellent scores in all categories (Mori Memorial Foundation 2020, 5).

However, due to “[t]he global socioeconomic structural changes in the early twenty-first century, with increased mobility and technological advances enabling intense flows of ideas, information, and people”, the city has lost some of its appeal and competitive advantages, which exposed the socio-spatial vulnerabilities of its creative clusters (Ursic and Imai 2020, 32). Tokyo suffers from a variety of problems: exorbitant land and commodity prices, congestion, and inconvenient infrastructure. As noted by Matsubara (2018), creative cluster development is obstructed by the fact that the Tokyo metropolitan area is “too large and disorderly”, making it difficult to nurture close inter-firm connections and to keep track of the emerging business opportunities. Therefore, in order to bolster the competitiveness and innovation of the video game industry and other creative and cultural industries, “it is important to convert the internal structure of Tokyo’s urban areas, to accelerate multi-polarisation, and to construct comfortable space in the metropolitan area” (Matsubara 2018, 244).

From a political standpoint, Tokyo Metropolitan Government’s urban policies evolved based on “the globally popular and trendy” concept of *creative city*, which led to the development of “a customised urban development model” (Ursic and Imai 2020, viii). The urban regeneration policies led by the national and local authorities in Tokyo are highly eclectic and “have undergone many changes, supplements, and adaptations over the last two decades”. There are many components that repeat each other in some places and contradict one another in others. For example, METI has put forward the *Cool Japan Strategy* and *Creative Tokyo Proposal*, while the TMG published a range of other strategies related to urban revitalisation, including *Promoting Urban Regeneration toward a Higher International Competitiveness of Tokyo*; *Creating the Future: The Long-Term Vision for Tokyo*; *Tokyo Vision for Arts and Culture*; *New Tokyo. New Tomorrow. The Action Plan for 2020*; *Creating a Sustainable City: Tokyo’s Environmental Policy* (Ursic and Imai 2020, 36).

In addition, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) is also involved in urban planning policy creation: its responsibilities range “from urban renewal regulations and railway networks to disaster prevention and low carbon policies” (Pham 2015, 13-14). Some of the strategies employed by the MLIT include the provision of “Regional Renovation Infrastructures Reinforcement Subsidies”, which aim to support regional infrastructure development; the introduction of the Regional Economy and Society Analysing System, which is designed to prepare public officials who would be responsible for drafting and implementing the urban revitalisation policy; general measures to intensify the development of transport facilities, etc. (MLIT 2018, 157-162).

It is, therefore, clear that urban regeneration policies are spread out across different agencies. The TMG itself includes a number of bureaus responsible for formulating and implementing urban revitalisation policies, such as the Bureau of Urban Development, Bureau of Construction, Public Enterprise Bureaus of Transportation, Waterworks and Sewerage, etc. In particular, the Bureau of Urban Development formulates urban regeneration and housing policies and is in charge of the construction of urban infrastructure components, such as roads and railways (Pham 2015, 13-14).

However, the goals and purposes of the urban redevelopment plans have stayed largely consistent throughout the years. The changes implemented by the national and local governments have taken the form of “incremental spatial interventions and projects that would not affect the existing socioeconomic and political power relations around spatial planning”. In Japan, the state tends to stay away from the more novel and radical ideas within the creative city discourse, which has kept the application of the paradigm limited in Tokyo. Rather than attempting to reshape the existing socio-spatial conditions, urban regeneration policy aims to maintain the status quo and limit the intervention to minor adjustments (Ursic and Imai 2020, 37-38). Therefore, decisions related to urban redevelopment do not follow a single holistic narrative, which results in a plethora of incremental, nonintegrated changes in the socio-spatial structure, which often do not account for the local specificities (Ursic and Imai 2020, 41). Another “blind spot” in the policymaking process in Tokyo is that, despite the established channels of government-industry communication, there is a distinct asynchronisation between the needs of the CCIs and the reactions of the state, which disrupts the sociospatial coevolution (Kawashima 2018, 21). Finally, these policies are not intended to address the needs of individual industries, such as the video game industry, and tend to generalise the measures across all creative and cultural industries (Matsubara 2018, 244).

Another distinguishing characteristic of urban regeneration policies in Japan is that they predominantly aim to improve the “hard” infrastructure of cities and tend to oversee the “soft” infrastructure. Although video game companies tend to cluster in central Tokyo because they value its

socio-spatial vibrancy, the local government has paid little attention to building up cultural and entertainment amenities (Hanzawa 2004, 597; Basurto 2018, 53). Furthermore, Ursic and Imai (2020) accuse the Tokyo government of using the urban regeneration discourse as a blanket tool “to obscure the profound urban transformations of the working and living environment for numerous Tokyoites” and gather support for large construction projects (Ursic and Imai 2020, ix).

Unlike Tokyo, which has an established image as a global economic powerhouse, Fukuoka had to build up its reputation to reverse the brain drain tendencies as creative talent was leaving it to pursue career opportunities in Tokyo and Osaka. The decline of the manufacturing industries resulted in an increasing role of the service sector, especially finance, information, and cultural industries (Lim 2008, unpaginated). The Fukuoka city government chose the video game sector as its primary focus in cultivating the image of a “creative city”. The game industry in Fukuoka is not nascent but rather mature, so the policies aim to revitalise the already existing creative cluster (de Winter 2012, 398). The city was able to draw gaming companies in with its inexpensive office rental rates, low cost of living and advantageous location with easy access to other Asian countries compared to Tokyo: it has even been called “Japan’s Gateway to Eastern Asia” (Mustovic 2011, 852; Ernkvist 2014, 27). Moreover, it has been ranked as one of the most attractive cities in the world for foreign residents and the number one “good place to live” for entrepreneurs in Japan (JETRO 2020, unpaginated).

A concentration of “soft” infrastructure facilities can be found in the Daimyo district, which became “the trendiest area of the city by reflecting a subculture of nonconformity while embracing the traditional culture and local identity” (Mustovic 2011, 854). As a result, an agglomeration of not just video game companies but also fashion, design, publishing, animation, and other creative agents was formed. However, this led to an increase in rent prices in Daimyo, which has pushed small creative enterprises to leave the cluster (Lim 2008, unpaginated).

In order to support the existing creative agents and to attract new ones, The Fukuoka local government launched its creative city strategy in 2006, when it proposed *Creative Fukuoka 10-Year Plan*. Although the plan was largely abandoned, the core ideas of the *Art and Culture Promotion Vision* incorporated many elements of the concept and is meant to encourage citizens’ engagement in creative and cultural activities; open the door for knowledge exchange with other Asian countries; create and ensure the effective use of art and cultural facilities, etc. (Mustovic 2011, 852). The *Fukuoka City Master Plan* released in 2012 also targets the development of “soft” infrastructure and vibrancy for attracting creative talent as it focuses on making Fukuoka “a major Asian city that is brimming with vibrancy and character to attract people, investment, goods, information, and dreams from throughout the world” (Fukuoka City Municipal Government 2012, 3). This 10-year plan seems to prioritise “soft” infrastructure over “hard” infrastructure, stating that the city does not aim to become

“the largest city in population or economic scale” and strives for achieving a balance between high quality of life and economic growth. Some of the objectives put forward by this urban development strategy include supporting the socio-spatial vibrancy; using cultural and historical facilities to attract human resources; creating new jobs; supporting sustainability, etc. (Fukuoka City Municipal Government 2012, 5-6).

Many of the measures launched by the Fukuoka city government, however, still focus on developing a robust “hard” infrastructure. Massive residential intelligent buildings have been constructed near the city centre to house young professionals, especially in the Momochi district, the importance of which was also underlined in the *Fukuoka City Master Plan* (Fukuoka City Municipal Government 2012, 12). Furthermore, in 2002, the city and prefectural governments made the decision to relocate the airport to an artificial island, which is close to the southeast of Fukuoka and is even connected to the city centre by the underground system, making it possible to reach the city centre within ten minutes (Lim 2008, unpaginated).

In conclusion, inspired by the urban regeneration discourse in Western countries, Japan picked up the trendy notion of *creative city* and has developed a number of policies based on its ideas. However, there is a distinct lack of a single narrative when it comes to the planning and implementation of these measures. For instance, in Tokyo, there are too many agencies responsible for urban regeneration, which has resulted in a system that cannot carry out large-scale projects to reshape the socio-spatial conditions and effectively respond to the needs of local creative enterprises. Although the Fukuoka city government has launched some efforts to improve its “soft” infrastructure, the overall focus in Japan remains on developing its “hard” infrastructure. As a result, the government has been criticised that creative clusters are often used as a cover-up to obscure large-scale urban reconstruction projects from the public.

China

In China, the development of creative and cultural industries is closely tied to the urban development agenda. The CCIs were officially included in the formal urban regeneration guidance by the State Council and will play a visible role in the 14th Five-Year Plan (Liang and Wang 2020, 54). The concentration of creativity in cities is seen as a way to increase their economic competitiveness, attract investment, and generate more tax revenues, which has prompted the national and local governments to adopt an intensive urban regeneration policy (Gu 2014, 123). The notion of a creative cluster is

oftentimes taken too literally, with the local governments setting up artificial hubs and trying to develop cultural districts from scratch through elaborate real estate strategies instead of creating favourable conditions for the local CCIs to thrive (Keane 2013, 2).

According to Liang and Wang (2020), five types of cultural agglomerations can be found in China: original clusters, industrial heritage areas, new industrial parks, historic conservation parks, and commercial development zones (Liang and Wang 2020, 54). Their main characteristics include stringent top-down guidance, close involvement of the creative and cultural industries with the science and technology parks, and underdeveloped connections with the local communities (Liang and Wang 2020, 54). Unlike Western organic clusters, many of the Chinese CCI cluster formations have been developed and are directly controlled by the state. They have distinct spatial boundaries, often have managing companies that play a guiding role for the whole cluster and are built with specific creative industries in mind (Gu 2014, 123).

Some of the ways the government attracts video game companies and other creative enterprises to these tech parks and other artificial hubs include *hukou* privileges, the physical appearance of the buildings hosting these clusters, and business incentives, such as low rent rates and tax cuts. *Hukou* privileges mean that the government grants permanent residence to the professionals employed by the firms that decide to settle there and provides them with easy access to education and health care (Bontje 2016, 168). In light of the unpredictability of career paths in the gaming industry, *hukou* is seen as a major benefit since it “provides the professional with a lifelong sanctuary” (Fung 2018, 96). On the other hand, Gu (2014) notes that creative companies are able to identify with the locations of the clusters, “most of which are listed heritage sites and have undergone significant transformation” and have been chosen by the government specifically to meet the needs of creative professionals (Gu 2014, 124). Furthermore, such hubs are usually placed in the vicinity of prestigious universities, research centres, and development areas (Keane 2013, 55-56). Video game companies, in particular, enjoy the advantages associated with being co-located with both high-tech and cultural companies, two major components of games, which, in theory, should provide gaming companies with knowledge flows and enhance spill-over effects (Liang and Wang 2020, 57).

At the same time, artificially created clusters are often disorganised, “loose” and fail to create synergies between the creative agents they host. They are also isolated and lack communication channels with local communities, which results in the exacerbation of the lock-in effect (Liang and Wang 2020, 57; Fung 2018, 96). Another critique is that many Chinese creative clusters grow dependent on the government; as a result, 80% of them are not self-sustaining and rely on government subsidies to cover their expenses (Gu 2014, 123-124).

Shanghai was one of the first Chinese cities to adopt the notion of “creative city” and “creative cluster” and currently has the highest number of cultural agglomerations (Gu 2014, 123). Based on these concepts, the local government has formulated the idea of *chuangyi chanye jiju qu* (i.e. “creative industry clusters”), which originated as “derelict urban quarters accommodating poor artists and cultural businesses outside of the state’s main interest by spontaneous bottom-up participation” (Zheng 2010, 145). However, as of today, Shanghai creative clusters tend to be located close to the city centre, with 50 out of 75 clusters being gathered within the Inner Ring Road (Liang and Wang 2020, 57). Most companies that focus on game development and production can be found in the Pudong New Area, Huangpu District and Xuhui, as they are drawn to the tech parks located in these areas. These districts offer vibrant socio-spatial conditions and rich resources for cultural innovation: for instance, the Zhangjiang National Demonstration Zone for Culture and Technology Integration, where two of the top ten gaming enterprises can be found, incorporates 22 smaller parks that house numerous game industry professionals and high-tech specialists (Rong and O’Connor 2018, 154).

The Shanghai administration has geared its cluster development policies with a number of incubation programmes that “play a key role in stimulating and maintaining a sustainable growth of gaming entrepreneurship” (Huang 2021, 6). For example, in *Implementation Measures on Promoting the Development of Shanghai Animation and Game Industry*, the district government set forth the goal to promote the development of key game industry clusters and create “a healthy and harmonious industrial landscape”. To this end, the document proposed such measures as supporting the construction of new clusters and encouraging the incubation of small and micro-sized enterprises (Huangpu District Cultural Bureau 2018, unpaginated).

Another good example of a video game cluster in Shanghai is the Shanghai Game Incubator in Jiading District (Shanghai Game Industry Incubator), which also houses two of the top ten game firms. The district government covers (whether partially or in full) the expenses associated with office rent; provides financial and administrative services; organises training programmes; and provides tax incentives to higher managers of gaming enterprises by issuing personal income tax refunds to attract more firms to creative clusters (Gong and Hassink 2019, 1015).

Shenzhen has also embarked on the idea of rebranding itself as a creative city. However, unlike Shanghai, with its long cultural history, Shenzhen was practically built from scratch in a matter of three decades. Until 1979, when it became one of China’s first Special Economic Zones (SEZs), Shenzhen was but a group of fishing villages with a population of around 20,000 people. The intention behind the creation of the SEZ was to capitalise on the city’s proximity to the economically developed Hong Kong and combine it with the competitive advantages of the mainland’s economy, such as

leach labour and low taxation rates. Consequently, Shenzhen became “a ‘test-site’ for political, cultural, educational, technological and economic reforms”, which attracted a steady flow of young professionals, including creative talent, and grew into the city with the largest migrant population in China (O’Connor and Liu 2014, 131-132). By 2009, the city had nurtured and attracted over 6,000 design companies that collectively employed 100,000 creative professionals (UNESCO 2019, unpaginated).

In 2004, the local government began to highlight the role of creative and cultural industries in restructuring and modernising the economy and improving the space quality (O’Connor and Liu 2014, 133). The creation of the Cultural Industries Development Office helped the city win the status of UNESCO’s designated “City of Design” in 2009 as a part of the “Creative City Network” initiative run by the organization (UNESCO 2019, unpaginated). Winning this status encouraged the Shenzhen government to start actively engaging in the creation and promotion of artificial creative clusters.

The decision of the general secretary of the Guangdong Province to launch the urban regeneration policy titled *Three Old Conversions* had a strong impact on the region’s economic performance as it promoted modernisation through creativity. As a result, many of Shenzhen’s old industrial bases were converted into creative spaces (O’Connor and Liu 2014, 133). As early as the early 2000s, it established the Shenzhen Software Park (2001) and Shenzhen National Cartoon and Animation Industry Base (2006), which offered privileges and incentives to creative, cultural, and software enterprises, with the aim of attracting them to these clusters.

In 2011, the *Shenzhen Cultural and Creative Industries Revitalisation and Development Plan* for the period of 2011-2015 was published. It outlined the principal steps for promoting the local cultural and creative industries, with a focus on the cluster creation based on “Culture + Technology”, “Culture + Finance”, and “Culture + Tourism” models implemented in high-tech creative parks. The document states that under the promotion and guidance of the Shenzhen government, the local CCIs have adopted the strategy of special agglomeration and formed such clusters as Shenzhen (Tianmian) “City of Design” Creative Design Industrial Estate, OCT (Overseas Chinese Town) LOFT Creative Industry Park, Shenzhen National Cartoon & Animation Industry Base, as well as over 40 other major cultural industrial parks (Shenzhen Municipal People's Government 2011, unpaginated).

However, as Bontje (2016) remarks, the urban regeneration policies undertaken by the Shenzhen administration focus too much on enterprises and their locations and, at the same time, oversee the “people”, i.e. the creative professionals working at these companies. The government rarely targets the cultural and infrastructural amenities which are required for attracting and keeping creative talent (Bontje 2016, 167). Although the municipal authorities incentivise district governments and

real estate developers to build affordable housing for creative workers by providing land price discounts and various subsidies, such accommodation is rarely available to them because of the limited quantity and the restrictive criteria that must be satisfied (Bontje 2016, 169-170).

To summarize, like Japan, the Chinese authorities have also adopted the concept of *creative cities* and reworked it into the idea of *chuangyi chanye jiju qu* (“creative industry clusters”). The main focus of this urban regeneration policy is on the “hard” infrastructure in the sense that the government takes the concept of creative clusters literally and is actively establishing artificial hubs and incubators to house creative enterprises. These clusters vary significantly from their western counterparts: they are controlled by the state, have distinct borders and managing companies, and target specific creative industries. Although the local governments have introduced incentives to draw creative enterprises to these hubs, there is too much focus on the locations and enough emphasis on creating favourable conditions for creative professionals and improving the cities’ socio-spatial vibrancy.

5. Analytical Part

5.1. Overview

All five criteria have been investigated in as much detail as the available data and format of the paper allow for. In this part, the results of the empirical analysis of different dimensions of cultural and urban regeneration policies relevant to game industry clusters in Japan and China will be examined, analysed, and compared to answer the stated research question:

To what extent do different cultural and urban regeneration policy instruments constitute the creative cluster governance system at the national and local levels in Japan and China, and how are they utilised to encourage creative cluster development within the video game industry?

After the findings are compared for Japan and China, they will be summarised in accordance with the chosen analytical framework to estimate the formal and informal governance strategies, financial support measures, policies against lock-in as well as talent creation and attraction policies. Next, the relevance and quality of the research results will be discussed to place them within the academic discourse. Finally, policy recommendations will be produced in order to help governments improve their practices and create successful creative cluster development policies.

5.2. Formal governance

5.2.1. Presence of public institutions

Both the Japanese and Chinese institutional infrastructures for conducting cultural policies relevant to the game industry are recent creations, as the governments only began to notice the economic significance of the CCIs in the late 20th - early 21st century. However, a comparison of the existing governmental systems at the local and national levels shows that the two countries have crucial differences between their formal governance frameworks.

Despite their recent establishment, it can be noted that the cultural institutions in China are often reformed and restructured, which, on the one hand, is done to optimise their functions, and, on the other hand, has resulted in their placement under the direct supervision of higher authorities, such as the State Council, and the agencies responsible for propaganda and compliance with the communist ideology. This means that game companies have to ensure that their products are in line with the official doctrine, which creates obstacles for innovation and exacerbates the lock-in effect.

While the Chinese governmental system is devised to closely oversee and control every aspect of creative industry regulation, Japanese government bodies, on the contrary, enjoy a high level of independence. The institutional structure has largely remained the same since its creation and is designed to perform selective “surgical” interventions, rarely interfering in industrial development.

While this might be a benefit in the eyes of large gaming corporations like Sony and Nintendo which hardly require the government's assistance, it means that there are few initiatives to support small- and medium-sized companies, which make up 75 % of the games market in Japan (METI 2017, 12).

The Cool Japan strategy is the central agenda for many of the agencies comprising Japan's institutional framework, such as the Council for the Promotion of Cool Japan and the Cool Japan fund. However, this policy has been criticised as ineffective in promoting the CCIs as it focuses on nation rebranding and fails to target the needs of individual cultural and creative industries (Iwabuchi 2019; Morgner 2019; etc.). Consequently, no specialised government institutions that focus on the development of the game industry can be found at either the national or local levels. Although there are hardly any public agencies that specifically target games in China and government institutions are created in a universal manner to formulate and implement a wide range of cultural policies and measures, they tend to have a more hands-on approach and formulate comprehensive industry-specific policies, which also applies to the game industry.

At the same time, both countries' cultural agencies at the national level have eclectic features. This means that, in both cases, there are multiple ministries and bureaus that create policies for video games and other CCIs, and they do not always operate within the same institutional framework. Therefore, it presents difficulties in terms of policy coordination and makes it hard to produce a single coherent narrative. Furthermore, it can cause confusion for game companies as to which agency they should be dealing with to resolve a particular issue. For instance, as a consequence of the 2018 ministerial reorganisation, the issuing of game licenses was suspended across China as the jurisdiction was transferred from the SAPPRFT to the NPPA.

At the local level, it is evident that Japan lacks a definitive framework for drafting and implementing cultural policies, with most of the proposals emanating from the municipal administrations – the Tokyo Metropolitan Government and the Fukuoka City Government. Both Shanghai and Shenzhen, on the other hand, have industry-specific departments dealing with the promotion of the CCIs. In the case of Shanghai, the Department of Economic Information provides an institutional framework for the creative industries in particular.

5.2.2. Positive legislation

In this section of the empirical part, the IP protection regulations and other legal means of curbing copyright breaching were examined at the national level as, in both countries, such legislation is developed by central authorities. The content censorship systems were examined, with a focus on video games. In addition, as a part of the censorship policy analysis, it was important to see how streamlined and straightforward the content rating systems are.

The regulatory system for IP protection in Japan can be characterised as strong. There are specialised courts hearing copyright breaching cases, and the government is even trying to extend its copyright protection policy abroad through the Content Overseas Distribution Association (CODA), which cooperated with China to conduct anti-piracy activities. China is catching up: it has become a party to several international conventions on IP protection and increased the penalties for copyright infringement. At the same time, there are still a lot of issues with piracy and other copyright infringement such as copying isolated elements of popular games. Although the requirements for seeking remedy are usually minimal in the Chinese IP protection courts, it is hard to track all cases.

At the same time, the main focus of the Chinese legal system for video games has been on censoring the content of games to curb inappropriate and ideologically unsuitable content, as well as protect the domestic market from the competition of imported games. Game companies also must face legal complications related to mandatory licensing, which affects foreign enterprises in particular. All games must go through a lengthy and complicated review process, which was made more difficult by the recent institutional reshuffling, which led to a nine-month suspension of license issuing. Furthermore, the stringent censorship regulations prompt many companies to “play it safe” and produce games that resemble the ones that have already been approved by the government. Coupled with the encouragement of certain game genres, especially historical and epic titles, the existing regulations exacerbate the lock-in effect and inhibit the capacity of the game industry to innovate and produce original IP products.

The opposite situation can be observed in Japan, where the ability of the government to censor and curb any inappropriate content is hampered by the Constitution, which bans any form of censorship. Although this provides game companies with unlimited freedom to choose what content to produce, the occasional cases requiring selective censorship measures cannot be effectively addressed. For instance, the government struggles with censoring child pornography, with games still being exempt from the Law for Punishing Acts Related to Child Prostitution and Child Pornography.

Another regulatory issue that affects Japanese game clusters is the barriers to holding e-sports events. It is virtually impossible to organise large competitions because it is illegal to offer large prizes to the winners, with the average reward being hundreds of times lower than those offered during large international e-sports competitions. This issue does not affect the Chinese game industry, and the Shanghai government has even prioritised the development of e-sports to spur the growth of the sector (see Section 4.2.3.).

On the other hand, Japanese game companies enjoy the benefits of a streamlined rating system run by a voluntary organisation, which has been active for two decades and manages to review and rate almost 100% of all published games based on a system of five age classifications. Meanwhile, the Chinese government has resisted all attempts to establish a traditional rating system to maintain

full control over the game industry, which allows it to review all games one by one and “weed out” all content it considers inappropriate.

5.2.3. Industry-specific reports

The analysis of the existing reports at the national and local levels shows that Japanese industry-specific reports are more outdated and less comprehensive than the corresponding documents published by the Chinese government. Furthermore, they are usually initiated and prepared by independent organisations, while Chinese reports are either directly published by the government or commissioned by it to research institutes, such as Gamma Data and the China Game Industry Research Institute.

On the one hand, the result is that the Japanese authorities have fewer tools to analyse the effectiveness of their policies and improve them based on the statistical results. On the other hand, it means that the reports available to the Japanese game industry allow for less political bias, as organisations like CESA, which publishes the most comprehensive annual report concerning the Japanese game industry, tend to be more impartial.

The gap is more visible at the local level, where, unlike their Japanese counterparts, Chinese cities have a comprehensive system of analysing the performance of their gaming clusters, including the sales figures of the local companies, R&D and investment trends, the segmentation of the market, existing gaming events, the statistics of game title approvals, etc. Therefore, it can be concluded that the Chinese authorities have a more developed reporting framework for gathering gaming industry and cluster-related information and data, which helps them provide the clusters with relevant research as well as re-evaluate and improve the existing cultural and urban regeneration policies for game industry cluster development.

5.3. Informal governance

5.3.1. Creative mediators

Both case-study countries have multiple creative mediators that exist to promote the development of the game industry and facilitate the industry-government collaboration; however, a number of important differences can be observed. Japan has a higher variety of industry-specific associations, with CESA playing the leading role: for example, CERO is responsible for sustaining the rating system, while JSGA and JOGA exist to facilitate self-regulation of the industry. In China, however, there are few “traditional” mediators, with organisations like the Chinese Digital Games Research Association exerting little influence. One exception is the omnipresent e-sports associations established by many provinces to support this highly profitable sector.

These mediators are also designed differently in terms of the degree of governmental involvement. Japan's creative intermediaries enjoy a higher autonomy and oftentimes interact with the authorities through informal meetings and information exchanges. For instance, CESA maintains a close relationship with METI, keeping it updated on the situation in the game industry in exchange for advance notices about the government's political decisions.

Chinese gaming associations, on the other hand, are closely affiliated with the government: for instance, the game industry "watchdog" CADPA is connected to the state through NPPA. Furthermore, government-related managing companies are created to push creative clusters to produce ideologically favourable content. As it is hard to track the degree of state involvement in their capital and decision-making, such managing companies are a useful tool used by the government to exert influence on the industry.

At the local level, however, Chinese intermediaries seem to enjoy a higher level of independence and actively participate in the policy creation process and encourage self-regulation of creative clusters. At the same time, local gaming associations in Fukuoka demonstrate the opposite tendency by having a closer collaboration pattern with the city government that initiated their creation and has nurtured them to promote the industry-academia-government synergies and make Fukuoka "a game-industry Hollywood".

5.3.2. Networking events

Both countries under examination have a variety of networking events, with large-scale international and subnational events in all four clusters. Because of their size, the Tokyo and Shanghai gaming clusters boast a greater number of industry-specific events, which range from developer conferences and digital content expos to gaming contests and e-sports competitions. Some of the events are accompanied by award ceremonies meant to reward outstanding participants, which are normally sponsored by the government or game industry associations.

At the same time, it can be observed that, in Japan, the government is less involved in the organisation and sponsorship of gaming events. Most of them are coordinated by private institutions and gaming associations, such as CESA and the Digital Content Association in Tokyo and Game Factory's Friendship and the Fukuoka Game Industry Promotion Agency in Fukuoka. One exception is the Tokyo Game Show, the biggest computer entertainment event in the world, which is sponsored by METI and requires frequent consultations between the government and the video game associations involved in the organisation of the event. However, despite its scale and the opportunities for networking it creates, the event is criticised for putting too much emphasis on the business-customer interactions and not facilitating enough cross-sectoral synergies.

In China, on the other hand, the government actively participates in the organisation, sponsorship, and subsidisation of events relevant to the game industry. For example, the Shenzhen International Video Game Festival is sponsored by the Propaganda Department of the Shenzhen Municipal Committee of the Communist Party of China and the Shenzhen Municipal Bureau of Culture, Sports and Tourism, which signifies a close involvement of the local authorities, including agencies responsible for official ideology. ChinaJoy, the largest and most authoritative gaming event in China, which takes place in Shanghai is also organised by an association directly affiliated with the National Press and Publication Administration.

The situation in the e-sports sector also makes Japan and China vastly different in terms of networking opportunities for gaming enterprises. Because of the legal complications discussed previously (see Sections 4.2.2 and 5.2.2.), it is virtually impossible to offer large prizes to the winners of e-sports competitions in Japan, which significantly limits their scale and hinders the development of the industry. To address this issue, METI recently commissioned a project for analysing the sector and created a special Study Group on Measures for Vitalising e-Sports, which shows that the government is eager to develop e-sports and is looking into adjusting the regulatory system, although no progress can be observed to date.

In view of a more lenient regulatory system surrounding e-sports, the sector has seen rapid development in the past years, with world-class competitions, such as the League of Legends World Championship, being hosted by both Shanghai and Shenzhen. The local governments provide subsidies to encourage the organisation of international and sub-national e-sports competitions and the construction of e-sports venues at the district level, which demonstrates the authorities' commitment to developing this lucrative sector and profit from the agglomeration effects it brings to the local gaming clusters.

5.4. Financial support

5.4.1. Tax incentives

A close examination and comparison of tax incentives at the national and local levels in Japan and China has shown that the state of affairs is vastly different in these countries. While the Chinese government offers a range of tax breaks to gaming companies, no such incentives were to be found in Japan, despite some officials claiming that they were under discussion.

Although Japanese game companies expect preferential taxation benefits from the government due to the increasingly expensive process of game development and publication, the authorities have dismissed such demands. According to Akira Baba, a well-known researcher of the local industry, the government is “considering granting a tax cut”, yet no such policies have been introduced to

date (Garvizu 2017, 287). At the local level, there also seem to be no tax incentives available for gaming enterprises: they do not appear in the Tokyo Metropolitan Tax Guide, and although creative businesses could potentially qualify for tax breaks for companies that contribute to urban regeneration, the numbers and requirements are not specified for game firms.

In contrast, Chinese gaming enterprises qualify for a number of industry-specific tax incentives, which were introduced to promote the game industry and foster creative clusters. Game companies fall under the category of high and new technology enterprises and, therefore, benefit from a reduced income tax rate – 15% compared to the normal 25%. In addition, they qualify for a tax break on the expenses associated with R&D activities, which is meant to support technological innovation and encourage companies to create new jobs. Another type of tax incentives available to gaming companies are tax rebates on exported audio-visual products, yet it should be noted that these primarily benefit large exporters and companies that produce ideologically compatible content.

Localities are also encouraged to introduce preferential taxation benefits for game enterprises; thus, they can be found in both Shanghai and Shenzhen. For instance, the Shanghai administration allows high-tech enterprises to deduct any expenditures on training not exceeding 8% of the total salaries from the taxable income, while Shenzhen subsidizes scientific and technical employees of high-tech game companies for their achievements. Both cities also provide additional incentives for research: Shanghai has introduced a pre-tax deduction policy for qualified R&D expenses, and Shenzhen has exempted its high-tech enterprises from the taxes on R&D expenses and the income generated from technology contracts and technology transfers.

5.4.2. Public subsidies and other financial support measures

Aside from tax incentives, the paper also looked at the different kinds of public subsidies and other financial support measures for promoting the game industry at the national and local levels. It is evident that there are many contrasting features between the policies of the Japanese and the Chinese governments in this regard.

Firstly, although there are some financial support measures that Japanese game companies qualify for, there are few of them and they cannot sufficiently help creative businesses meet the costs of developing and publishing gaming products. There are significantly more subsidies available to Chinese gaming enterprises that are outlined in national and local policy documents specifically geared towards developing the game industry.

That being said, not many of the available subsidies are substantial enough to alleviate the shortage of funds gaming companies, especially small enterprises, suffer from, which is true for both China and Japan. Despite the critique, while Chinese grants usually range from 200,000 to 500,000 yuan (around 30-80 thousand dollars), most of the higher-end Japanese grants and awards are within

the range of 500,000 to 1 million yen (around 4-9 thousand dollars). Furthermore, while, in China, there is a plethora of financial support programmes a company can apply for, Japan's budget for the creative and cultural industries is disproportionately meagre compared to other developed countries, so there is hardly any meaningful support a game company can qualify for. A notable exception are the subsidies provided by the Fukuoka city government to support knowledge creation enterprises involved in software and digital content development: they not only help game firms cover the rent but also provide subsidies to their employees.

At the same time, in China, companies face the issue of meeting the eligibility criteria: a company must achieve a certain sales volume to be considered “outstanding” and produce content that is compliant with the state ideology and/or represents the traditional Chinese culture, which aggravates the lock-in effect as companies are incentivised to only produce a certain kind of content. Japanese game enterprises are faced with a different issue – most of the available subsidies are not relevant for them as the majority of the programmes were launched a part of the Cool Japan strategy. Cool Japan is an initiative that is largely geared towards nation-rebranding; it prioritises other creative industries, such as anime, and focuses on encouraging cultural exports instead of developing local industrial clusters. For instance, J-LOP only supports localisation and promotion of content to foreign audiences, and, while most game companies apply for these subsidies, the application process is lengthy and is accompanied by eligibility criteria that are hard to meet.

5.5. Measures against lock-in

5.5.1. Innovation support

Innovation plays a crucial role for the creative sector, especially gaming clusters. In order to gauge the extent and relevance of the innovation support policies in Japan and China, the paper looked at the existing roadmaps and measures that are concerned with fostering innovation and R&D activities. The empirical analysis has shown that the roles taken on by the government and the approaches utilised by it vary greatly.

In Japan, the government takes on a more guiding role by providing the industry with an “action plan”. Its roadmaps put forth comprehensive development strategies and activity guidelines that are supposed to lead the industry along an innovative development path for cultural and creative industries, including gaming enterprises. However, it fails to propose any tangible measures and does not provide any financial support for research and development.

The Chinese government, on the other hand, has chosen a proactive approach to fostering innovation and technology development, which can be explained by the necessity to address market failures, regional disparities, the lack of innovative capacities in state-capital companies, the tendency

of Chinese gaming firms to imitate existing successful games, among other factors. This translates into concrete measures and opulent financial incentives, such as tax breaks on R&D investments. The eligibility criteria require companies to perform research activities that must apply knowledge in a new creative way and result in the improvement of products and processes.

Contrary to the situation in Japan, where local-level innovation support measures were found in neither Tokyo nor Fukuoka, both the Shanghai and Shenzhen administrations have created elaborate strategies meant to encourage companies to invest in R&D and produce original IP products and, thus, transform the cities into innovation hubs. As in other policy dimensions, Shanghai prioritizes its prominent e-sports sector: it provides R&D subsidies to relevant enterprises and facilitates industry-university collaboration in order to promote joint research activities. Shenzhen, which is frequently referred to as China's Silicon Valley, invests a hefty share of its budget into R&D – more than 4.2% of the city's GDP, which is over two times that of the national average. The city government encourages the formation of creative clusters, provides rent subsidies for creative start-ups, which are the most vulnerable echelon of the game industry, and rewards the producers of original games, all of which contributed to a “successful ecosystem for breeding and sustaining innovative companies” (Chen and Ogan 2017, 59).

5.5.2. Facilitation of cross-fertilisation

The analysis of the initiatives to promote cross-fertilisation between the game industry and related sectors has not only produced vastly different results for Japan and China but also showed that approaches can vary within one country. Based on this evaluation, it can be concluded that even though the creation of opportunities for cross-sectoral interactions can result in beneficial synergies for the local game industries and contribute to their growth, simply forcing companies into shared office spaces does not create the necessary value chains and collaboration structures.

In Japan, where cross-industrial links have developed naturally over time, especially between games and anime, technological progress, increasingly low employee retention rates, and insufficient institutionalised collaboration structures have created obstacles for cross-sectoral relationships. Despite the growing need for the state to assume a more active role in facilitating cross-fertilisation opportunities, most of the cultural policies have done little to contribute to this objective. Although the government recognises the importance of integrating various content industries, projects like the Media Art Cooperation Promotion Programme have little significance for the creation of synergies between the game industry and other creative sectors. Furthermore, no events that create opportunities for cross-sectoral interactions were found to be directly sponsored or organised by the local or national authorities. This can be explained by most cultural policies following a different agenda as they are produced within the framework of Cool Japan: the main objective of these measures is to increase

exposure to foreign markets and attract foreign tourists with a view to boost the growth of the entire economy and improve the country's image.

In contrast, China takes an active stance in promoting cross-fertilisation by providing subsidies, facilitating business and knowledge exchanges between different industries, establishing integrated cross-industrial groups and alliances, and, last but not least, creating technological parks, incubators, and other hubs within creative clusters. While subsidies, such as the ones provided by the Shanghai government to game companies for engaging in the production chain of game-related products, could potentially enhance the spill-over effects of cross-fertilisation, the same cannot be said about artificially created tech parks and hubs. The government uses tax reductions, lower rent rates, along with other incentives to attract companies to these shared office spaces, but co-location alone is not enough to encourage companies to interact and form cross-sectoral value chains.

At the same time, the example of Tokyo shows that it is not necessary for companies from different creative industries to co-locate: most animation companies are historically placed in the western suburbs of the city, while game firms tend to cluster in the city centre, which has not prevented the two hubs from forming close inter-firm relationships. The benefits of organic value chain building between the game industry and related sectors can also be seen in Shenzhen, where private enterprises play a bigger role, and the local government takes a less invasive approach to encouraging cross-fertilisation.

5.5.3. Access to global production chains and pipelines of knowledge

The empirical part looked at the different strategies governments use to attract foreign businesses and talent, the existing barriers and restrictions that bar foreign capital from entering the market, as well as whether gaming companies have opportunities to network with their foreign counterparts. Although both acknowledge the importance of international collaboration, due to the objectives of their policies, China and Japan take different approaches to providing access to global production chains and pipelines of knowledge to their CCIs.

Contrary to its usual approach of minimal interference, the Japanese government has assumed an active role in increasing the exposure of its creative enterprises to the global markets. It is involved in a number of intergovernmental multilateral forums focusing on the content industry and even takes the responsibility of acting as the secretariat for the Asia Content Business Summit, although the focus is on promoting intraregional cooperation with other Asian countries, such as China, South Korea, and Southeast Asia. The focus of the Chinese authorities is even narrower: they mainly encourage companies to establish “international” collaborative relationships within Greater China, i.e.

with Hong Kong, Macao, and Taiwan. While capital originating from this region also has easier access to the mainland market, companies from other countries must overcome numerous barriers and obstacles.

In its attempt to protect the domestic producers from the international competition, China has introduced several restrictive policies for foreign game companies, such as the requirement to franchise all gaming products to Chinese partners and obtain a license from the government for each released game, or a ban on imported consoles, which was not lifted until 2015. While the franchising requirement has provided Chinese companies with useful learning opportunities, it has also created additional hurdles for foreign game developers. Stringent and vague censorship regulations also mean that only a small number of imported games can obtain approval from the government, which further insulates the market and exacerbates the lock-in effect in creative clusters as companies are not sufficiently exposed to fresh ideas and are not involved in the global value chains.

The Japanese authorities, on the other hand, are actively trying to attract foreign capital. This policy is mainly implemented through the Japan External Trade Organization (JETRO), which was created specifically for that purpose. Among other measures, the agency has launched a programme that helps Japanese regions form partnerships with foreign counterparts through local governments, business and industrial organisations, study group conferences, and other consortium formats, which can facilitate global inter-cluster interactions. At the same time, most other initiatives launched by the central government tie into the Cool Japan strategy and are, thus, focusing on nation rebranding and import expansion more than developing domestic creative clusters.

At the local level, the Fukuoka city government has assumed a more proactive role compared to the TMG in its quest to become “Japan’s gateway to East Asia”. It provides support and guidance to foreign enterprises that want to expand their operations in Fukuoka. Foreign game enterprises also qualify for several subsidies, such as employment subsidies and partial coverage of their rent expenses, as well as marketing research, translation, and some other costs.

Both Shanghai and Shenzhen enjoy a privileged status of a free-trade zone and a special economic zone, respectively, which has provided them with greater access to the global production chains and knowledge exchanges. However, in both cases, preference is given to capital from Greater China, especially Hong Kong, and the mainland companies are not truly involved in the global value chains as their expansion is limited by neighbouring Asian countries because they find it hard to appeal to Western audiences.

Finally, it is worth mentioning that the language barrier creates obstacles in both countries. However, as it became evident during the collection of empirical data for this research, the official websites of the Japanese government and industry-specific organisations and events always provide key information in English, and a lot of the relevant policy documents and reports are also available

in both Japanese and English. Corresponding Chinese webpages, on the other hand, are rarely translated into English, which makes it difficult for foreign enterprises to access legal, statistical, and other kinds of information relevant to them.

5.6. Talent creation and talent attraction policies

5.6.1. Talent creation policies

Gaming industries in both Japan and China are struggling from a lack of qualified creative talent, meaning that there is a rising need for talent creation policies. The governments should cooperate with universities and other educational institutions to establish educational programmes and scholarships that would help prepare future industry professionals. However, both sets of examined policies have substantial shortcomings.

In Japan, the game industry is experiencing a lack of educated creative employees due to the share of creative workers increasing at a slower rate than the growth of the cultural and creative industries and the inability of professionals to acquire new skills, which calls for a review of the educational system. The measures introduced by the central authorities include a talent development plan for the IT industry across all ministries, proposals to establish awards and contests for young game developers, and a specially compiled curriculum for future video game producers. However, there is hardly any university-government collaboration that targets the game industry specifically at the national level, and the focus on video game producers is explained by the goal of producing “internationally accepted content”, which ties into the plan to promote Japan’s cultural exports within the framework of Cool Japan.

In its talent creation policies, the Chinese government also fails to address the main issues faced by game companies. First of all, its policies do not focus on improving the negative image of the industry, which makes it difficult for companies to attract talent in spite of the high salaries: the government’s regulations aimed at curbing the addictive effects of games on the youth only serve to exacerbate the situation. Secondly, most of the measures aim to help game companies foster talent through in-house training rather than encourage the creation of more educational programmes relevant to the industry.

The empirical analysis has also shown that approaches to talent creation differ across clusters in both countries. For example, as the capital of Japan already enjoys a steady inflow of creative professionals, the Tokyo Metropolitan Government is hardly involved in human resource development for the cultural and creative industries and does not support any relevant internships or scholarships. Fukuoka, on the other hand, has suffered from a brain drain, which has prompted the government to step up and launch additional measures to cultivate a strong industry through talent creation

and attraction policies. It supports the establishment of game development courses and leverages industry-academia-government collaboration through the Fukuoka Game Industry Promotion Agency, which facilitates recruiting and training activities, such as job fairs and internships for game industry professionals.

A similar situation can be observed in China. Despite the lack of educational opportunities for game developers, the Shanghai government does not have a strong policy for developing creative talent locally and puts more emphasis on attracting professionals from other regions by providing them with extra *hukou* registration points. Shenzhen seems to make talent creation a higher priority: in addition to registration privileges and encouragement in-house training, it supports its higher education institutions in preparing game industry professionals and sponsors exchange programmes for eligible students.

5.6.2. Talent attraction policies

The corresponding section of the empirical part focused on the urban regeneration policies in China and Japan and tried to gauge their main priorities in terms of improving the cities' "hard" and "soft" infrastructure in pursuance of creative cluster development and attracting creative enterprises and creative professionals to these clusters. As it became clear from the analysis, both countries under examination focus on developing the "hard" infrastructure and do not put enough emphasis on improving the socio-spatial vibrancy of cities; however, there are also vast differences in their approaches.

Both countries' urban regeneration strategies were inspired by the Western ideas of "creative cities" and "creative clusters", but they reworked and adapted them to the local conditions in different ways. Japan has developed a customised model that has undergone a lot of changes and is highly eclectic as it involves many government agencies and consists of numerous strategic components that overlap in some places and contradict each other in others, which is especially the case in Tokyo. As a result, there is no single holistic narrative in urban planning, which is why it is nearly unfeasible to make any radical changes, and the government settles for incremental, non-integrated spatial interventions and maintaining the status quo. Furthermore, the bulky system does not account for the needs of specific cultural and creative industries, tends to generalise across the spectrum, and fails to react to arising promptly.

In contrast, China, in its attempt to adopt the concepts of "creative cities" and "creative clusters", has reworked these ideas into a radicalised version of *chuangyi chanye jiju qu* ("creative industry clusters"). The local governments have taken the notion of creative clusters literally and have adopted a strategy of setting up artificial hubs and building cultural districts from scratch using elaborate real estate schemes rather than creating favourable conditions that would naturally draw the

CCIs to these places. These clusters are distinctly different from their Western counterparts as they are created and controlled by the government, have clear special boundaries and managing companies that guide the whole cluster, and are built for specific industries.

The local governments in both Shanghai and Shenzhen have introduced privileges and incentives to attract creative companies to these artificial hubs, especially *hukou* registration privileges. The clusters also provide certain spatial advantages, as they are usually placed in locations that creative companies can identify with and that are in the vicinity of both high-tech and other cultural enterprises, which are two major components of games. At the same time, the focus is predominantly on the locations and the enterprises, and, as a result, there is not enough emphasis on creating a favourable environment for creative workers and improving the socio-spatial vibrancy of the cities.

Similarly, in Japan, the overall focus is on developing the “hard” infrastructure, with hardly any projects aimed at making the cities more vibrant and “creativity-inducing”. Although Fukuoka has introduced a number of measures to improve its “soft” infrastructure and is trying to achieve a balance between economic growth and high quality of life for its citizens, many of the projects are still aimed at developing a robust “hard” infrastructure and the forbidding prices in the “trendy” districts are driving creative enterprises out. What is more, the Tokyo government has been criticised for using creative cluster development as an excuse to obscure large-scale urban redevelopment projects from the public.

5.7. Discussion of the findings

5.7.1. Overview

In this chapter, the chosen analytical framework has been applied to assess policies relevant for creative cluster development in the example of the game industry in Japan and China. The findings for each of the criteria have been summarised in Table 2, with a focus on highlighting the strong and weak points in the target countries’ strategies.

In this section, these findings and their relevance will be critically discussed and interpreted. In accordance with the goals stated at the beginning, the paper will try to formulate concrete policy recommendations for central and local authorities in the target countries. However, these recommendations and the framework they are based on also have relevance not only for scholars working in the fields of cultural policy, creative clusters, and game industry research but also for the governments of other countries, as the methodology is designed to be flexible and can be adapted to different economic and cultural contexts.

Criteria	Assessment sub-criteria	Japan	China
Formal governance	Presence of public institutions	<ul style="list-style-type: none"> Cultural policy institutions were created recently. Eclectic system with many agencies responsible for creating policies for game industry development. The system is designed to perform selective “surgical” interventions, letting the market forces take the lead. Institutions are not specialised to develop specific CCIs and largely focus on Cool Japan – a nation re-branding and cultural export promotion campaign. Lack of a definitive institutional framework for cultural policies at the local level. 	<ul style="list-style-type: none"> Cultural policy institutions were created recently. Eclectic system with many agencies responsible for creating policies for game industry development. Institutional structure is often reorganized and has been placed under the direct supervision of the central authorities and propaganda agencies. Institutions are more specialised and formulate industry-specific policies that often focus on creative cluster development. Local governments have departments that deal with the promotion of the CCIs.
	Positive legislation	<ul style="list-style-type: none"> Strong IP protection regulatory system with specialised courts. The government conducts anti-piracy activities abroad through CODA. The constitutional ban on censorship gives unlimited freedom to creators but does not allow the government to censor inappropriate content. Legal regulations create obstacles for holding e-sports competitions. Streamlined rating system overseen by a voluntary organisation. 	<ul style="list-style-type: none"> Copyright infringement is still a big problem, but the government has been catching up with the international IP protection standards. The requirements for seeking remedy in IP protection courts are minimal. The lock-in effect is exacerbated by the stringent censorship regulations, allowing the government to curb ideologically incompatible content and promote certain genres of games. Lack of a traditional rating system, which allows the government to have full control over every released game.
	Industry-specific reports	<ul style="list-style-type: none"> Industry-specific reports are more outdated and less comprehensive. Reports are usually initiated and prepared by independent organisations, which means that there is less bias but also fewer tools for the state to review their policies. No local reports that analyse creative cluster dynamics. 	<ul style="list-style-type: none"> Industry-specific reports are released regularly and are more comprehensive. Reports are usually either published directly by the state or are commissioned by it to research institutes. Local reports provide a comprehensive system for analysing the performance of gaming clusters.
Informal governance	Creative mediators	<ul style="list-style-type: none"> High variety of industry-specific creative mediators that facilitate self-regulation of the industry. Creative mediators have a higher autonomy and often interact with the government through informal information exchanges. Regional disparities: hardly any local mediators in Tokyo, while gaming associations in Fukuoka actively collaborate with the city government. 	<ul style="list-style-type: none"> Few “traditional” mediators that wield little authority, except for the less-regulated e-sports sector. Creative mediators are closely affiliated with the government. Managing companies, which guide creative clusters, are used by the state to influence the industry and push creators to produce ideologically favourable content. Local mediators enjoy a higher level of autonomy.
	Networking events	<ul style="list-style-type: none"> High variety of large-scale international and sub-national events with more networking opportunities in bigger clusters. The government is less involved in the organisation and sponsorship of industry-specific events. Legal obstacles for holding e-sports competitions have resulted in their limited number and scale. 	<ul style="list-style-type: none"> High variety of large-scale international and sub-national events with more networking opportunities in bigger clusters. The government is actively involved in the organisation and sponsorship of industry-specific events. The e-sports sector is rapidly developing, with the government subsidising e-sports competitions.
Financial support	Tax incentives	<ul style="list-style-type: none"> No tax incentives available to game companies at either the national or local levels. Despite claims that the government is considering granting tax breaks, no plans to introduce such incentives have been released. 	<ul style="list-style-type: none"> A range of tax incentives are available to game companies at both the national and local levels. They qualify for a reduced income tax, tax rebates on R&D expenses and exported audio-visual products. Tax breaks can be used to incentivise companies to produce ideologically compatible products.
	Public subsidies and other financial support measures	<ul style="list-style-type: none"> Few financial support measures are available to game companies. The existing subsidies are either not relevant to game enterprises or do not provide substantial support that could help companies cover their expenses. Most of the incentives prioritise the expansion of cultural exports. 	<ul style="list-style-type: none"> Game companies qualify for a range of different subsidies. Significantly more funds are allocated to financial support. It is hard to meet the eligibility criteria as companies must achieve a certain sales volume and produce a certain kind of content.

<i>Measures against lock-in</i>	Innovation support	<ul style="list-style-type: none"> The government plays a guiding role by providing the industry with development strategies and activity guidelines. Its roadmaps do not provide any concrete measures nor offer financial support for R&D. 	<ul style="list-style-type: none"> There are many R&D incentives and other concrete measures to encourage innovation. To qualify for these, game companies have to perform R&D activities, apply knowledge in new creative ways, and produce original products. The government encourages the creation of incubators and creative clusters in the vicinity of tech parks to facilitate knowledge flows and provides rewards for producers of original games.
	Facilitation of cross-fertilisation	<ul style="list-style-type: none"> Although the government recognises the importance of cross-sectoral synergies, there are no concrete measures to facilitate them. The government does not sponsor any events that provide cross-fertilisation opportunities. Most projects have little relevance to the gaming clusters as Cool Japan pursues a different agenda. 	<ul style="list-style-type: none"> The government provides subsidies, facilitates business and knowledge exchanges between different CCIs, and sets up integrated cross-sectoral groups and alliances. The creation of artificial heterogeneous hubs and shared spaces does not always lead to the formation of value chains, while organic synergies have proven to be more effective in encouraging spill-overs.
	Access to global production chains and pipelines of knowledge	<ul style="list-style-type: none"> The government is involved in several intergovernmental multilateral forums focusing on the content industry, with an emphasis on promoting intra-regional cooperation and exchanges. The focus is on attracting investment and expanding cultural exports to other countries within the framework of Cool Japan. The government helps Japanese regions form partnerships with foreign counterparts. Most official websites and relevant policy documents are available in English. 	<ul style="list-style-type: none"> The focus is on promoting collaborative relationships within Greater China. Restrictive policies for foreign game companies exist to protect the domestic market from competition and curb products that are not ideologically compatible, insulating the domestic game industry from the global value chains. Foreign game developers are required to franchise their products to Chinese partners, which provides the latter with many learning opportunities but creates additional hurdles for accessing the market. Official websites and relevant policy documents are rarely available in English.
<i>Talent creation and talent attraction policies</i>	Talent creation policies	<ul style="list-style-type: none"> There are hardly any university-government collaboration formats that target talent creation for the game industry. The government has developed specialised curricula for video game producers to produce internationally accepted content. Regional disparities: compared to Tokyo, the Fukuoka government has a more active human resource development strategy and supports the establishment of games-related educational courses, scholarships, and internships. 	<ul style="list-style-type: none"> The government fails to address the main talent creation issues faced by the game industry: the negative public image and the lack of educational opportunities. The focus is on helping companies develop talent in-house and attracting creative professionals from other regions. Regional disparities: Shanghai prioritises talent attraction over talent creation, while Shenzhen collaborates with educational institutions and sponsors exchange programmes.
	Talent attraction policies	<ul style="list-style-type: none"> The urban regeneration strategy was inspired by the Western notion of “creative city”. The focus is on developing the “hard” infrastructure, with not enough emphasis on improving the socio-spatial vibrancy and creating favourable conditions for creative professionals. The model is highly eclectic, involves many agencies and strategic components, and does not account for the needs of specific CCIs. The government can only make incremental, non-integrated interventions that do not radically affect the spatial conditions. 	<ul style="list-style-type: none"> The urban regeneration strategy was inspired by the Western notion of “creative city”. The focus is on developing the “hard” infrastructure, with not enough emphasis on improving the socio-spatial vibrancy and creating favourable conditions for creative professionals. The notion of “creative clusters” is interpreted literally and taken to the extreme: the government sets up artificial hubs and builds cultural districts from scratch. Elaborate real estate plans, registration privileges and other incentives are used to attract creative companies to these hubs.

Table 2. Comparative analysis of cultural and urban regeneration policies for video game clusters in Japan and China (compiled by the author).

5.7.2. Relevance of the research results

The value of the findings mainly stems from their narrow focus and applicability to the real world. Most studies about creative cluster policies tend to generalise across the entire spectrum of creative

and cultural industries, even though they range from animation to ballet and require completely different sets of policies. Therefore, they largely fail to assess how different policies are used to encourage the development of a particular cluster and whether the chosen approach corresponds to the needs of its creative agents. One of the main advantages of this research is that it was able to zoom in on a single industry, which allowed it to outline the exact toolset of cultural and urban revitalisation policies which affect gaming clusters in Japan and China. In addition, the exhaustiveness of the analytical framework allowed the paper to narrow in on the specific dimensions of cultural and urban regeneration policies across five areas that are crucial for promoting creative cluster development: formal and informal governance, financial support, measures against lock-in, and talent creation and attraction policies.

Above all else, this research aims to hold practical value to policymakers and creative enterprises themselves. The findings of this study allowed the author to draw conclusions and produce concrete policy recommendations, which is something that is lacking from most similar studies. Therefore, this paper holds the most relevance for the policymakers at the national and local levels in Japan and China as the recommendations contain concrete measures that are customised for the specific context of these countries. Furthermore, these governments as well as policymakers in other countries can use the analytical framework in order to create their own action plans and evaluate their policies in the future.

This study will also be useful to creative agents, especially video game companies, for several reasons. First, as a consequence of policymakers adopting the suggested policy recommendations, creative companies would gain access to more support measures relevant to them and enjoy more favourable conditions. Second, the findings illustrate the different subsidies, awards, and other incentives that the game companies in each cluster are eligible for but might not know about. Finally, this research will help game companies and other creative enterprises formulate and communicate their demands and needs to the government as they will be aware of the different policy options.

At the same time, this research aims to not only contribute to the academic discourse and help policymakers and creative agents but also provide future researchers with a framework that can be applied to other countries and industries. While the paper avoids generalisation, the analytical framework was designed to be as flexible and universal as possible. This means that it can be adapted to other contexts and sectors as most of its criteria can be used to evaluate policies for any creative cluster. The methodology can be adjusted to suit the needs of a given research project: for instance, such measures as innovation can also be relevant to the animation and film industries but can be left out when looking at such CCIs as traditional arts. Alternatively, in future research, it can be expanded to include more policy dimensions or break down the existing criteria into more specific subcriteria,

which will allow for a more comprehensive analysis and, therefore, more concrete policy recommendations.

5.7.3. Policy recommendations

As it has been stated earlier, the findings will be particularly relevant to policymakers since the comparative analysis has yielded information about the benefits and shortcomings of different policies in terms of game cluster development. Overall, it can be observed that Japan takes a less active stance in its cultural policy, assuming a guiding role and performing “surgical” interventions. The upside of the non-interference approach is that the game industry and creative mediators enjoy a great degree of freedom and independence, but, at the same time, they do not receive any substantial support from the government as the focus is on expanding cultural exports rather than developing the local creative industry bases. The Chinese government, on the other hand, has introduced a number of strong policies that are meant to stimulate and guide the development of creative clusters with a range of regulatory tools, financial incentives, etc. The problem is that this strategy has resulted in a strictly regulated industry that suffers from the lock-in effect due to the stringent censorship, forceful clustering, and restrictive policies for foreign companies.

Therefore, based on the research results of this paper, the following recommendations have been formulated for the national and local governments of Japan and China:

- Based on the analysis of the public institutions, both of the target countries could benefit from streamlining their national-level institutions responsible for cultural and urban regeneration policies and clarifying their areas of responsibility. It is advised to establish government agencies responsible for cultural policies at the local level in order to oversee the development of individual creative clusters. Ideally, public institutions should be structured to account for the needs of specific industries, or at least separate policies for cultural and creative industries, as it has been done in Shanghai.
- Creative clusters in both countries suffer from insulation, which is why it is recommended to expand the collaboration formats beyond the Asian region to grant the local companies access to knowledge flows from the West and other regions. For China, in particular, it is advised to consider translating their official websites and relevant policy documents into English (and, potentially, other languages) in order to make this information more accessible to foreign creative agents.
- There are significant shortcomings in the talent attraction policies of both target countries. It is, therefore, advised to intensify the industry-academia-government collaboration at the local

level in order to create more educational opportunities for the future game industry professionals by, for instance, establishing relevant educational programmes, providing scholarships, and facilitating internships within the clusters.

- Both China and Japan focus too much on developing the “hard” infrastructure in their urban regeneration policies and are even accused of using creative clusters as a cover-up to obscure their large-scale urban redevelopment construction projects. Therefore, it is advised to pay more attention to “soft” infrastructure, improving the socio-spatial vibrancy, and creating favourable conditions for creative workers.
- It is advised that, in order to support its creative and cultural industries, Japan should completely revise its Cool Japan strategy because it puts too much focus on promoting cultural exports and attracting foreign investments with a view to boost the growth of the whole economy and improve the national image abroad. However, it has not only failed to contribute to the development of the local creative clusters but also did not reach its stated goals related to nation branding and export expansion, which is why it should be re-examined and reworked.
- In addition, in Japan, cultural policy is seen predominantly as a way to correct market failure, which means that the support for commercial creative enterprises is limited. This strategy might work for large gaming companies but does not account for the needs of SMEs, which comprise 70% of the games market in Japan. As of today, there are no tax incentives or financial support measures that target this vulnerable echelon, which is why it is recommended to introduce more measures that would encourage the production of original IPs by game companies, especially by SMEs, which would have a positive effect on the creative clusters.
- Certain regional disparities can be observed between Tokyo and Fukuoka: while the Fukuoka municipal government takes a more active stance in its cultural policies for developing the local game industry, the TMG is largely inactive in this regard, with hardly any local initiatives. As Tokyo has the largest gaming cluster in Japan, and it is in need of the government’s help on a number of issues, such as the facilitation of cross-fertilisation with other industries and the lack of local creative mediators, it is recommended to consider researching the needs of the local game industry and introducing a comprehensive strategy to support it to prevent further stagnation.
- It is recommended for the Japanese government to consider updating their reports and policy documents concerning the game industry at the national level to account for the current realities. In addition, it would be beneficial to introduce a comprehensive system for analysing creative cluster dynamics and performance at the local level.

- China, on the other hand, should continue working on developing its IP protection policies to fight copyright infringement, with a particular focus on curbing the copyright breach of isolated elements of games, such as character designs.
- Even more importantly, with a view to create a positive legal governance system for the game industry and provide more access to the global knowledge flows and value chains, it is advised that the Chinese government should consider gradually removing its stringent censorship regulations and restrictive policies for foreign game companies. In addition, the introduction of a traditional rating system would significantly streamline the process of game publishment and help alleviate the lock-in effects as companies would be less encouraged to produce “safe” content. Furthermore, it is advised that the Chinese government should clarify its requirements for the content of cultural and creative products as much as possible.
- The research has shown that setting up artificial hubs and incubators does not always lead to the formation of value chains and knowledge spill-overs as companies are not encouraged to collaborate and simply settle in these shared spaces to enjoy the privileges and incentives provided by the government. Therefore, it is recommended that the Chinese government should focus more on the cultural policy aspect of creative cluster development in order to create conditions for *organic* cluster emergence.

6. Conclusion

This paper has employed abundant quantitative and qualitative data, which has helped the author perform a comparison of the policies for creative cluster development in Japan and China and analyse the findings using the criteria of the analytical framework. In the introduction, the research question was stated and justified, and the main objectives and limitations of this research were outlined. In order to identify and evaluate the wide spectrum of cultural and urban regeneration policies at the national and local levels, the previous approaches and methodologies related to the studying of creative cluster development policies were analysed and discussed. Based on the conclusions derived from the state of the art, an eclectic analytical framework was developed. It was composed of five main dimensions, each of which was subdivided into narrower criteria: formal and informal governance, financial support, measures against lock-in, and talent creation and talent attraction policies. The available data on each of the subcriteria was collected and presented in the empirical part for Japan and China and, within them, for each of the four case-study cities: Tokyo, Fukuoka, Shanghai, and Shenzhen. This information was then analysed to perform a comparative evaluation between the two countries for each of the parameters. The findings were succinctly presented in a table and their relevance was discussed. Finally, concrete policy recommendations were produced for both target countries and their local governments.

Now that the data has been collected, presented, and analysed, it is time to address the research question of this paper:

To what extent do different cultural and urban regeneration policy instruments constitute the creative cluster governance system at the national and local levels in Japan and China, and how are they utilised to encourage creative cluster development within the video game industry?

The evaluation of the existing policies for creative cluster development has shown that the two countries under examination have different approaches, both of which have prominent shortcomings. For example, it was observed that both countries have a weak talent creation policy component, fail to provide sufficient access to global value chains and pipelines of knowledge, and tend to focus on the “hard” infrastructure in their urban regeneration policies.

In addition, Japan puts too much emphasis on encouraging cultural exports and attracting foreign investment and tourists with a view to improve its national image and stimulate the whole economy rather than promote the development of its creative cluster. In its cultural and urban regeneration policies, it avoids radical reforms and, instead, assumes a guiding role and settles for

incremental, non-integrated “surgical” interventions only to correct market failure. The advantage of this approach is that it gives significant independence and freedom to both game companies and creative mediators, such as gaming associations, which the state entrusts with ensuring the self-regulation of the industry. However, it also means that the industry does not receive any substantial support from the state: it does not offer any tax incentives or other financial support measures, and it is hardly involved in the organisation of relevant events, publication of industry-specific reports, or the facilitation of cross-fertilisation and industry-academia collaboration.

In contrast, the Chinese government has employed a strong set of cultural and urban regeneration policies that follow the goal of stimulating and guiding the development of creative clusters. It uses a wide range of formal and informal tools, including various regulations, financial incentives, participation in the capital of managing companies, and the establishment of artificial hubs. The state puts a particular emphasis on developing the lucrative sector of e-sports, which is not obstructed by legal complications, unlike it is in Japan. Despite the active support of the game industry and its creative clusters, the strict control and invasive measures of the government have resulted in a tightly regulated industry that is encouraged to only produce a certain kind of content and, thus, suffers from the lock-in effect, exacerbated by the stringent censorship regulations, forced clustering, and restricting access to the market for foreign enterprises.

In both cases, certain regional disparities could be observed. For example, the local government in Fukuoka has adopted a more proactive cultural policy in almost every dimension that was examined in this paper. Therefore, expanding the number of case-study clusters could be a potential area of improvement in future research projects. The fact that the paper examined the policies at both the national and local levels across more than one city in each country benefitted the completeness of the findings. However, as results often varied across different clusters, expanding the number of cities under examination would make the comparative analysis more comprehensive and, hopefully, explain the regional disparities better.

The reliability of this research was also influenced by the use of official government sources in order to outline and evaluate the existing policies, which were not always up-to-date and could be partial. Therefore, for future studies, it is recommended to gain access to more statistical reports by private organisations and research institutions. In addition, holding interviews with the representatives of creative companies, industry-specific associations, and public institutions would help gauge information about informal activities and communication channels and understand which measures are being discussed and considered.

Despite these limitations, the paper produced valuable findings, which will benefit not only researchers but also governments and creative agents, especially in Japan and China. The policy

recommendations laid out in the previous section hold practical value and are designed to be applicable to the realities of these countries. What is more, with proper adjustments, the methodology and results of this study can be transferrable to other industries, contributing to the evolution of the creative cluster development policies across the wide spectrum of cultural and creative industries.

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Appendix

Abstract (English)

With the increasingly important role the creative and cultural industries are playing in the global economy, the cultural and urban regeneration policies for creative cluster development are gaining a spotlight among academia and policymakers. This master thesis aims to assess and compare the different tools used by the national and local governments in Japan and China to promote creative cluster development within the video game industry. The research aims to evaluate how these tools are utilised in the cultural and urban regeneration policies of these countries with a view to produce applicable context-specific results and policy recommendations. To this end, the study uses an eclectic analytical methodology that narrows in on the individual dimensions of cluster development policies, i.e. formal and informal governance, financial support, measures against the lock-in effect, and talent creation and attraction policies. The findings show that both countries have weak policy components, such as talent creation and attraction as well as integration in the global value chains and knowledge flows, but there are fundamental differences in their approaches. Japan's policies are designed to perform non-integrated "surgical" interventions and focus on export promotion and nation branding rather than creative cluster development, providing little support for creative enterprises. The Chinese government, on the other hand, plays an active role in stimulating and guiding the development of creative industries, yet its tight rein has resulted in a strictly regulated sector, which suffers from the lock-in effect.

Abstract (Deutsch)

Mit der kontinuierlich wachsenden Wichtigkeit der Rolle welche die kreativen und kulturellen Industrien in der globalen Ökonomie spielen wächst in der Lehre und der Politik ebenso das Bewusstsein für kulturelle und urbane regenerative Politik in Bezug auf Kreativ-Cluster Entwicklungen. Diese Masterarbeit strebt einen Vergleich zwischen den verschiedenen Mitteln an welche von den nationalen und regionalen Regierungen und Behörden in Japan und China zur Förderung von Kreative-Cluster Entwicklungen innerhalb der Video-Spiel Industrie genutzt werden. Die Forschung zielt darauf ab zu evaluieren wie diese Mittel innerhalb der kulturell und urbanen regenerative Politik dieser Länder genutzt werden um kontextspezifische Resultate und Gesetzesempfehlungen zu entwickeln. Um dies zu Erreichen wird eine eklektisch analytische Methodik gewählt welche gezielt auf die individuellen Dimensionen von cluster entwicklungs Politik eingeht wie z.B. auf formelle und informelle Führung, finanzielle Unterstützung, Verhinderung des Sperreffekts, sowie die Erzeugung und Anlockung von Talenten. Die Resultate zeigen, dass beide Länder schwache politische Komponenten im Rahmen der Erzeugung und Anziehung von Talenten sowie bei der Integration in die globale Wertschöpfungskette und in den Wissensfluss aufweisen. Sie weisen dabei in ihren Ansätzen jedoch fundamentale Unterschiede aus. Japans Politik ist ausgelegt um nicht integrierte "chirurgische" Eingriffe durchzuführen und fokussiert sich auf die Förderung von Export und auf "Nation Branding" statt auf Kreativ-Cluster Entwicklung und bietet somit wenig Unterstützung für kreative Unternehmungen. Die Chinesische Regierung spielt stattdessen in der Anregung und Leitung der kreativen Industrien eine aktive Rolle, wobei ihre enge Führung in einem streng regulierten Sektor ausgeartet ist welcher unter dem Sperreffekt leidet.