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Creation and promotion of creative industries clusters in developing countries- the case of Colombia

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Résumé

Traditionnellement, les agglomérations économiques ont été étudiées par des théories comme celle des grappes industrielles et celle de la géographie économique. Ces théories identifient les facteurs nécessaires pour la création et le développement des grappes. Cependant, la plupart de la littérature concerne surtout les industries traditionnelles dans les pays développés et très peu a été écrit sur les pays moins développés, en particulier sur le secteur créatif et culturel. Par conséquent, cette thèse contribuera à l'expansion de ces connaissances en étudiant les conditions pour la création et l'évolution d'une grappe culturelle et créative dans les économies en développement. Ceci sera fait en combinant les cadres existants, tels que ceux déjà mentionnés, avec les théories institutionnelles et en les adaptant au secteur créatif des pays qui ont une économie moins puissante. Le modèle résultant de cette recherche met en relief l'importance d'établir une synergie parmi les entreprises, les autorités locales et nationales, le secteur éducatif et les agents internationaux, sous prétexte de promouvoir la croissance du secteur. De plus, en utilisant le cas de la Colombie en tant que référence, le modèle initial est testé afin de prouver que les conditions prédites sont valables. Ces résultats permettent d'apprécier une importance considérable au sein des différents acteurs, à savoir, les gouvernements des pays en développement, cherchant à encourager ce secteur, ainsi que les hommes d'affaires et les entrepreneurs sur le terrain créatif. Les établissements d'enseignement supérieur et les organisations internationales travaillant avec des économies en développement pourront aussi profiter des résultats afin d'envisager des stratégies faisant progresser le secteur de la créativité et de la culture.

Mots clés : grappes, agglomération, industries créatives et culturelles, pays en développement

Abstract

Traditionally, economic agglomerations have been studied by theories such as industrial clusters and economic geography perspectives. These notions identify the necessary factors for the birth and evolution of clusters. However, most of this literature is about traditional industries in developed economies and very little has been written on less developed countries, especially about the creative and cultural sector. Therefore, this thesis will contribute to the expansion of this knowledge by answering which are the conditions for the creation and development of a cultural and creative cluster in developing economies. This will be achieved by combining existing frameworks, such as those already mentioned, with institutional theories- and adapting them to the creative sector in less economically developed countries. The resulting model of this thesis highlights the importance of establishing a synergy among businesses, local and national authorities, educational entities, and international agents for promoting the growth of the industry. In addition, by using the case of Colombia as a reference, the initial model is tested to prove that the anticipated conditions uphold. These findings are relevant for different actors, such as governments in developing countries seeking to encourage this sector and for businessmen and entrepreneurs in the creative field. Higher education entities and international organizations working with developing economies will also take advantage of the findings in order to create strategies to attain progress of the creative and cultural sector.

Keywords: Cluster, agglomeration, creative and cultural industries, developing countries

Resumen

Tradicionalmente, las aglomeraciones económicas han sido estudiadas por teorías de clústeres industriales y de geografía económica. En dichas teorías se identifican los factores necesarios para la creación y el desarrollo de clústeres. Sin embargo, la mayor parte de la literatura hace referencia a las industrias tradicionales en los países desarrollados, y se ha escrito muy poco acerca de los países menos desarrollados, especialmente en lo concerniente al sector creativo y cultural. Por lo tanto, esta tesis ayudará a la expansión del conocimiento en este campo, al estudiar cuáles son las condiciones para la creación y evolución de un clúster cultural y creativo en los países en vía de desarrollo. Lo anterior se logrará combinando los marcos teóricos existentes, como los ya mencionados, con las teorías institucionales y adaptándolos al sector creativo de países con menor poder económico. El modelo resultante de esta investigación resalta la importancia de establecer una sinergia entre las empresas, las autoridades locales y nacionales, las instituciones educativas y los agentes internacionales, para potenciar el crecimiento del sector. Además, utilizando el caso de Colombia como referencia, se evalúa el modelo inicial para probar que las condiciones previstas son válidas. Estos hallazgos resultan importantes para diferentes actores, entre los cuales se destacan los gobiernos de los países en desarrollo que buscan potenciar este sector y los empresarios del sector creativo. Asimismo, las entidades de educación superior y las organizaciones internacionales que trabajan con economías en desarrollo, podrán beneficiarse de este trabajo para generar estrategias eficaces que promuevan el sector de la creatividad y la cultura.

Palabras clave: clúster, aglomeración, industrias creativas y culturales, países en desarrollo

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List of Abbreviations

CCI	Creative and Cultural Industries
CNEN	Colombian National Council of Orange Economy
DANE	Colombian National Administrative Department of Statistics
DCMS	United Kingdom's Department of Culture, Media and Sports
DNDA	Colombian National Direction of Property Rights
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDP	Gross Domestic Product
ICT	Information and Communication Technologies
IDB	Inter-American Development Bank
IPP	Intellectual Property Protection
LEDCs	Less Economically Developed Countries
LQ	Location Quotient
MEN	Colombian Ministry of National Education
MICE	Meetings, Incentives, Congress and Exhibitions
MICSUR	Cultural Industries' Market for Latin American Countries
MINCIT	Colombian Ministry of Commerce, Industry and Tourism
MINTIC	Colombian Ministry of Information and Communication Technologies
OECD	Organization for Economic Cooperation and Development
OAS	Organization of American States
SENA	Colombian National Learning Service
SICSUR	Cultural Information System for Latin American Countries
SMEs	Small and Medium Enterprises
SNPI	Intellectual Property System
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational Scientific and Cultural Organization
VIF	Variance Inflation Factor
WIPO	World Intellectual Property Organization

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Introduction

The topic on industrial agglomerations is not new. The first one to cover this matter was Alfred Marshall- in his book Principles of Economics (Porter, 1998, 2000; Thisse, 2000; Newlands, 2003; Giacomin, 2017). But research on the field did not stop there; many individuals from a variety of backgrounds became interested in the topic and developed various theories around it (Gordon & McCann, 2005).

However, most of the literature that has been written on clusters covers traditional industries, while the literature on Cultural and Creative Industries is neither as deep nor as numerous as existing studies on the former type of industries. Furthermore, the different concepts, theories and frameworks that have emerged in the creative and cultural sector, are the result of analyzing -mainly- developed countries. Thus, the existing studies focus on industrialized economies with pretty similar characteristics – such as solid institutions and political stability (Giaconmin, 2017)- that prevail in the so-called global north. Nevertheless, these types of features do not always hold in less developed countries because they face different challenges and constraints. This is why it is important to adapt existing literature to the special cases such as (1) cultural and creative industries and (2) the so-called global south.

Therefore, the present study will contribute by filling existing gaps concerning these subjects and trying to explain which are the conditions for the creation and development of a cultural and creative cluster in developing countries- by blending existing frameworks such as industrial cluster literature, economic geography perspectives and institutional theories, and adjusting them so that they are suitable for the creative sector in less economically developed countries (LEDCs).

In this way, a new model will be developed and afterward tested by establishing a case study on Colombia, a Latin American country that is encouraging what they call 'Orange Economy'- referring to the creative sector.

This thesis is structured in the following way. After the current introduction, section 2 reviews in a very deep way the existing literature on clusters, economic geography, institutional approaches, cultural and creative industries, and developing countries. Afterwards, section 3 establishes the theoretical framework that will guide the research by introducing the recommended model- resulting fro, the literature review. Section 4 discusses the steps and methodology of the study. Following with Section 5 that analyzes the resulting model through the case study of Colombia. Continuing with Section 6 that discusses the results, evaluates the model, highlights limitations, and gives possible direction for future research. And finally, Section 7 presents the general conclusions of the work.

2. Literature Review

There exists a wide variety of literature concerning economic agglomerations, industrial districts, and clusters. Alfred Marshall made the first contributions to this topic when he wrote the book 'Principles of Economics'' and talked about specialized industrial locations (Porter, 1998, 2000; Thisse, 2000; Newlands, 2003; Giacomin, 2017). From that point on, researchers from different backgrounds such as management, international business and economics have developed frameworks and analytical tools to study this subject (Gordon & McCann, 2005).

These investigations have lead to know that clusters or agglomeration economies may occur under different circumstances, in different industries- both traditional and the so-called creative ones- as well as in developed and less developed economies. Hence, this literature review will summarize existing theories and frameworks such as industrial clusters, economic geography perspectives, and institutional models. Then it will have a special focus on existing research in cultural

and creative industries. And finally, it will present the general panorama of developing countries by highlighting some of the circumstances they face and the different characteristics that they have to deal with- features that may differ from those of developed countries.

2.1 Industrial Clusters

Even if the first one to talk about specialized locations for particular industries was Alfred Marshall- as mentioned before- the cluster theory is attributed to Michael Porter (Giacomin, 2017; Porter, 1998; 2000)- who presented a starting definition and a preliminary background. After him many other researchers have studied clusters in an attempt to identify their components, understand their importance, and the reasons for their emergence. As a result of these studies, it has been found that these agglomerations produce positive and negative externalities- defined as misalignments between private costs and social costs (Doyle, 2016)-, that impact their surroundings and make this topic a very interesting one to address.

2.1.1 Definition of clusters

Notwithstanding the concept of cluster is mostly understood by authors in the field, it is important to comprehend the concept fully. The most popular definition of a cluster states that it is a group of enterprises geographically concentrated in a country, state, region or city (Porter, 1998; 2000), -linked to each other and whose interactions reinforce patterns of competition and cooperation (Newlands, 2003; Porter, 2000; Korolev et al., 2018). These companies are interconnected due to their roles of suppliers, service providers, associated institutions, universities, trade associations, etc. (Porter, 1998; 2000).

It is important to mention that clusters can emerge in both developed and developing countries, but according to Porter (2000) they are usually more advanced in the former ones. Similarly, domestic as well as foreign firms can be part of a cluster (Porter, 1998; 2000) and the instituted linkages between members can

be either vertical (buyer-supplier relationships) or horizontal (partnerships and joint action) (Korolev et al., 2018; Bathelt et al., 2004; Turkina et al., 2016; 2018; Geldes et al., 2015; Giuliani et al., 2005). Both types of linkages are always present in the cluster; however the vertical type is more profitable for labour intensive clusters, while the horizontal type offers more benefits for knowledge intensive ones (Turkina & Van Assche, 2018).

Due to these inner linkages, traditional investigations have considered clusters as self-contained entities and studied them in certain isolation (Giacomin, 2017). In other words, traditional studies focus on intra-cluster connections and do not pay sufficient attention to external ties (Giuliani et al., 2005). Nonetheless, more recent studies actually show that clusters are part of wider networks that go beyond the location (Sturgeon, Biesebroeck & Gereffi, 2008).

Furthermore, when speaking about industrial cluster it is natural to think about a particular industry but the reality is that the networks are also developed between sectors. Actually, clusters are cross-sectorial by nature (Izsak & zu Köcker, 2015), meaning that the enterprises and organizations that are part of the cluster may not belong to a particular industry but to a pool of related industries. This also means that clusters, as industries, are not static (Izsak & zu Köcher, 2015). As competition is dynamic and depends on innovation (Porter, 1998; 2000), clusters are exposed to a life cycle process including emergence, growth, decline and renewal (Ibid). The reason behind this is that clusters- by being an aggregate of firms, respond to the external environment and also generate changes by themselves (Izsak & zu Köcker, 2015). Consequently, the boundaries of clusters are continually shifting and evolving (Porter, 2000), which in the end may also transform their focus and core activities.

Finally, due to the peculiarity of the concept and the unclear boundaries, scholars have developed particular ways to identify if there exists an industrial cluster in a particular region. Some of these measurements include concentration

indexes, network analysis, spatial econometrics, and also path dependency features, among others (UNDP, 2013). As a result, different types of clusters have been identified, starting from the most basic type- pure agglomeration- based on geographical proximity, passing through industrial complexes based on linkages, and the latter one denominated as social-network and which analyses the degree of embeddedness and social integration between firms (Gordon & McCann, 2000 in Boix et al., 2015).

2.1.2 Reasons for clustering

As previously mentioned, many studies talk about firms' geographical concentration and some of them have focused on understanding the reasons behind that collocation. Economic geography was one of the most important lines of this type of research in the 20th century, as will be further discussed in this same section, and it focused on cost minimization, factor endowment and economies of scale as the main explanatory variables (Porter, 1998; Krugman, 1991). In other words, the main suggestion of this area of knowledge was that firms got together in a particular location in an attempt to decrease transaction costs, be closer to natural resources, and in general to save resources.

Nonetheless, what more up-to-date research has found is that those traditional reasons are no longer valid nor enough for understanding co-location (Porter, 2000; Bathelt et al., 2004). This because globalization and technology have 'decreased' distance, allowing countries to access foreign markets and expand their supply. With these new conditions firms are able to outsource different activities of the value chain (Porter, 1998) and thus, access locations where they can profit of less expensive labour costs, particular resources, among other benefits.

So, if traditional reasons were the only argument for co-location, clusters would no longer exist. However, what the evidence illustrates is that clusters continue to be alive and growing in importance (Porter, 2000) due to the new world

dynamics. The closeness to other firms is no longer attributed to cost reasons but to achieve improvement and innovation (Ibid)- factors that are key in economic development (Korolev et al., 2018).

This implies that firms can obtain advantages from being embedded in a cluster due to many reasons. For instance, the existing trade-off between competition and cooperation incentivizes knowledge creation (Newlands, 2003), the access that the companies have to localised capabilities improve their daily operations (Giacomin, 2017), and the inter-firm communication leads to a particular atmosphere –or buzz - improving product development (Ibid; Bathelt et al., 2004). These arguments are resumed– by traditional theories- in the idea that the creation, appropriation and exchange of tacit and codified knowledge is better done locally (Bathelt et al., 2004; Sturgeon et al., 2008); even when the latter type of knowledge is less space sensitive (Bathelt et al., 2004) and consequently, easier to transfer at bigger scales –national and international (Sturgeon et al., 2008).

In the end, the dynamics encounter in clusters turns them into platforms for innovation, industrial change (Izsak & zu Köcker, 2015), and for attracting foreign direct investment (FDI) and knowledge (Giacomin, 2017). These benefits translate into better technology; more skilled, talented and specialized workers; a wider pool of suppliers; and more information contributing to local prosperity (Porter, 2000; Giuliani et al., 2005). In sum, clusters favour economic transactions and exchange of ideas and knowledge (Djik & Sverrison, 2003), advancing not only the firms in that particular industry, but the location in general (Porter, 1998).

2.1.3 Importance of clusters- beyond proximity

As previously cited, proximity generates opportunities of spontaneous situations where local firms interact and build relationships (Bathelt et al., 2004), creating advantages for the participants. However, the role of clusters go beyond

proximity in the sense that geographical colocation does not necessarily mean knowledge creation, collaboration, or spillovers (Bathelt et al., 2004; Turkina et al., 2016; Sturgeon et al., 2008; Djik & Sverrison, 2003). That is to say that proximity is a necessary condition, though not sufficient.

In this sense it is important to remember that local agglomerations cannot be studied in isolation because their competencies also depend on interactions with outsiders (Bathelt & Turi, 2011). One of these competencies is innovation, which is "nurtured through [**novel**] combinations of ideas, technologies, assets and supply chains" (Izsak & zu Köcker, 2015, pg.12). Consequently, cross-border linkages and partnerships -or what Bathelt et al., (2004) denoted as global pipelines- are very important sources to promote local growth (Bathelt et al., 2004), facilitate technology and knowledge exchanges (Izsak & zu Köcher, 2015; Lall & Narula, 2004), and increase innovation performance (Turkina & Van Assche, 2018). Actually Giacomin (2017) affirms that in LEDCs the factors acquired from abroad are even more important sources of clusters' growth than location-specific factors. Additionally, these global linkages, as well as the local ones, can be vertical or horizontal (Bathelt et al., 2004; Turkina et al., 2016; 2018).

Thus, the importance of clusters, their growth, and the degree in which they contribute to their environments, are the result of local and global interactions, which are mutually reinforcing and reduce the risk of stagnation (Bathelt et al., 2004; Lall & Narula, 2004) by feeding home clusters with international ideas (Ibid; Sturgeon et al., 2008). In other words, the dynamism of a cluster is the result of direct and indirect linkages that its firms develop both inside and outside the geographical boundaries of the cluster (Turkina et al., 2016).

2.1.4 Conditions for the emergence and development of clusters

Now that the characteristics of clusters have been presented it is important to understand the conditions that allow their emergence. It would be natural to start

the analysis by considering the industry, as it is no secret that some industries are more competitive than others and face different challenges. However, existing research states that the dynamism and growth of clusters vary according to local conditions and factors, regardless of the industry (Gong & Hassink, 2018; Porter, 1998; 2000).

Subsequently, cluster emergence, productivity, and success, depend not only on how the firms compete in their respective industries but are also influenced by the quality of the business environment (Ibid), the absorptive capacity of the firms (Bathelt et al., 2004; Lall & Narula, 2004)- defined as the assimilation of external valuable knowledge (Cohen & Levinthal, 1990)-, and the trade-off between competition and cooperation driven by governmental policies (Newlands, 2003). In sum, it is the aggregate of social, organizational, institutional and cognitive factors (Turkina et al., 2016; Geldes et al., 2015; Timur, 2012) that provide an appropriate or not appropriate environment for agglomeration economies.

Regarding business environment, Porter (1998; 2000) links it with the road system, existing infrastructure, corporate taxes, education, and regulations, among other variables. In order to identify the sources of locational competitive advantages -that in the end influence the business environment- the author uses a diamond to show the interrelations between four principal factors. These factors include demand conditions, the presence of related industries, input conditions – in terms of quantity, quality and costs- and finally the firms' strategy and rivalry- resulting from regulations and incentives of operation. This latter condition is a consequence of both formal and informal mechanisms that determine the direction and functioning of clusters (Porter, 2000).

Following Porter's view, it can be said that in order to achieve the necessary conditions for the emergence and development of industrial districts, the focus needs to go beyond firms, and include other actors such local and regional authorities (Porter, 1998; 2000; Djik & Sverrison, 2003). The reason behind this

statement is that even if clusters are believed to emerge spontaneously (Djik & Sverrison, 2003), evidence shows that they can be a result of either public or private initiatives indistinctively (Korolev et al., 2018). In other words, while economic forces – or firms' initiatives- are related to spontaneity and represent the bottom-up approach, the government policies support the emergence of the cluster from another angle and are associated with the top-down vision (Parrilli, 2004; Cohendet, Grandadam & Simon, 2010). These approaches are not excludable, actually they are mutually reinforcing and enhanced by an inside social force from the whole community that depends on non-economic motivations such as trust and self-realization (Ibid). Consequently, the interactions, synergy and linkages between businesses, government, and science –education institutions- are said to drive the performance and innovation within a cluster (Geldes et al., 2015; Korolev et al., 2018) and constitute the Triple Helix (Korolev et al., 2018; Dameri et al., 2016).

According to Korolev et al (2018), in this triple helix businesses are at the core. However the role of the accompanying actors: government and science, is also determining. First, governments are crucial in removing obstacles to generate growth (Porter, 2000), in creating opportunities for local actors to absorb and internalize spillovers, and in stimulating inter-linkages (Lall & Narula, 2004). Moreover, it is through policies that governments foster essential factors such as corporate investment and the protection of intellectual property (Porter, 1998); and understand the stage of development within a cluster to encourage the right combination of cooperation and competition between firms (Newlands, 2003). Still the role of the government goes beyond the above; as the number of global pipelines that a firm can establish is limited, the authorities become important channels to redirect those connections and turn into providers of the required institutional and physical infrastructure to sustain these linkages (Bathelt et al., 2004).

It is important to note that even if foreign firms and international connections usually generate positive outcomes for the local environment, such as knowledge transfer and job creation (Lall & Narula, 2004), they can harm the

national companies if the latter are not ready to compete at a global scale. Thus, authorities play another important role in preventing this potential threat. In fact, many countries have incorporated particular clauses on intellectual property in free trade agreements (FTAs) and international investment agreements to protect certain products and provide a previously non-existing legal basis for vulnerable sectors- such as the cultural one (UNDP, 2013). The reason for this is because it was found that FTAs are beneficial for a country, if the corresponding country has acquired its own competitive advantage before enforcing the treaty (Turkina & Couillard, 2015).

Therefore, the implementation of certain restrictions should take into consideration the stages of development of the country and the industry of interest, because there are no 'one-size fits all' strategies or policies; and this might create negative externalities when regulations are not the appropriate. For example in developed economies, where clusters are mostly mature, policies are not aimed at creating new clusters but at mobilizing existing resources to continue growth promotion (Korolev et al., 2018). On the other hand -as it will be shown later in the thesis, in developing economies clusters represent platforms for global integration and are sponsors of local institutions' improvement (Giacomin, 2017).

The previously mentioned 'triple helix' also talks about education and science institutions. They too are crucial for attaining growth in an industry because universities are the incubators of intellectual capital (Dameri et al., 2016) and impart the necessary skills to benefit from possible knowledge that might become available through local and international interactions. As Bathelt et al., (2004; 2011) recognized in his research, the buzz could be blocked by the impossibility of assimilating external valuable knowledge – or lack of absorptive capacity. This means that technology and knowledge assimilation is easier when countries have 'learned to learn' (Lall & Narula, 2004). Otherwise, even if firms are able to establish contact with foreign counterparts, the information acquired may not be understood

in the correct way- either because it was not what they needed or because the lack of a common ground may produce misunderstandings (Bathelt et al., 2004).

In sum, apart from firms and governments, education entities are also vital for cluster development. They help to upgrade the local level of comprehension -through trainings that improve local skills and competencies- so that the distance between local and foreign actors is reduced and the cross-border interactions are profitable. In the end, too much or too little proximity (not only geographical but cognitive, social, and institutional) may be detrimental to knowledge exchange (Geldes et al., 2015; Timur, 2012; Earley & Mosakowski, 2000).

2.2 Economic Geography literature

Comparably to international business researchers, economists have also studied co-location advantages for firms (Gordon & McCann, 2005) and have come up with diverse perspectives. According to Thisse (2010) the theory of location can be disaggregated into three subfields: (1) spatial competition theory, (2) urban economics, and (3) economic geography. The author argues that while the first one could be related to the industrial cluster theory- analysed in the preceding section- the difference between the second and third theories relies on how firms allocate production according to the spatial dimension considered. In other words, urban economics deals with cities and the interactions between individuals and already established firms (Thisse, 2010) – a topic that will be partly covered in this work in the cultural and creative clusters' section-. And economic geography considers individuals and firms as mobile factors with interregional and international exchanges- highlighting the role of exports and imports (Ibid)-, and which in the end may influence agglomeration patterns.

2.2.1 Economic Geography background

Alike industrial cluster theory, the economic geography approach has its origins in Alfred Marshalls' ideas (Krugman, 1991; Geldes et al., 2015; Boshma & Frenken, 2011). Nonetheless, the main objective of the economic geography theory is to "study the location of factors of production in space" (Krugman, 1991,p. 483) and consequently, aspects such space, places and scales become crucial (Gong & Hassink, 2018). The most basic model of this theory seeks to understand how two firms decide where they should locate their production by choosing between two regions and considering two factors of production (Thisse, 2010). The origin of this modelling responds to the fact that there exists uneven distribution of economic activity in space and the need to understand why (Boschma & Frenken, 2011).

However, different streams of this theory have emerged. While the purpose of the different perspectives is the same- understand firms' decisions of location- the discrepancies between approaches have to do with numerous aspects. The variations from the mainstream current include: the factor of production –capital or labour- to include in order to explain firm decisions (Thisse, 2010), the dimension of proximity taken into account – cognitive, geographical, institutional, organizational or social- (Boschma & Frenken, 2011), and whether the study is static or dynamic- such as the evolutionary economic geography that has a historical and path dependence standpoint (Ibid).

2.2.2 How does Economic Geography Perspectives explain agglomeration?

As described earlier, this economic theory can be analysed from different angles given the development of the various sub-theories. However, the original and basic assumption of almost all location theories from the 1990s was that economies of scale were important to enforce geographic concentration and thus, producers chose locations that offered both good access to markets and suppliers (Krugman,

1998). This behaviour was a consequence of the optimizing process followed by firms and workers (Boschma & Frenken, 2011), indicating that concentrations are more likely to happen when there exist certain initial conditions such as an already established large market (Krugman, 1991).

Consequently, Thisse (2010) analysed these patterns and concluded that industrial agglomerations are the result of conditions such as population size, regional production structures, cost of living, job distribution, among others, which are –in turn- influenced by the interactions of markets, public policies and the degree of mobility of the factors needed (Thisse, 2010). This meant that if the conditions were not suitable for the firms to establish locally, they would simply export from one region to the other, which goes in line with the centripetal and centrifugal forces exposed by Krugman (1991).

The first category -centripetal- includes economic and non-economic characteristics that attract firms to the specific location, such as market size, labour markets with specialized skills, and the opportunity of having knowledge spillovers (Krugman, 1998; Perrons, 2001). On the contrary, the second category- centrifugal- refers to undesirable features that drive away investments, such as the immobility of certain factors as land and natural resources, high land rents and negative externalities such as congestion due to concentration (Ibid). In sum, a place will be highly concentrated if the pulling forces are stronger than those forces pushing companies away, because these forces directly influence economies of scale and transportation costs (Krugman, 1991; Jones, Lorenzen & Sapsed, 2015).

However, this approach was not convincing for all of the researchers interested in economic geography (Perrons, 2001) and perspectives such as the New Economic Geography II (Ibid) and the Evolutionary Economic Geography (Boschma & Frenken, 2011) appeared.

The New Economic Geography II gives more importance to aspects concerning relational, social and contextual backgrounds (Perrons, 2001) and highlights conditions such as the legislative framework and both cultural and social norms; unlike Krugman (1991) that gives more importance to economic aspects (Perrons, 2001). Gong & Hassink (2018) went far beyond and stated that it is not only economic and local factors that matter, and proposed a nested model in which social, cultural, institutional and economic features are modified according to other geographical scales – including regional, interregional, national, transnational and global. In simpler terms, both economic and non-economic factors driving agglomerations may come from different geographical levels and they can be either gradual (spinoff mechanisms, path dependence) or abrupt (crises, disruptions) (Gong & Hassink, 2018).

As for the second approach- the Evolutionary Economic Geography-, it gives more importance to the firm per se and the routines that it has developed throughout the years (Boschma & Frenken, 2011). In this sense the collocation of firms is the result of market competition and consequently, path dependent on earlier decisions of the firms (Ibid). In other words, the past entries and exits (deaths) of firms shape the current environment -following a Darwinian perspective (Ibid). This perspective highlights the role of the first enterprises established in the area – that would come from related industries and evolve according to factors such as knowledge creation, institutions, networks, and migration patterns (Boschma & Frenken, 2011). In sum, the reasoning would be that a "cluster emerges once a single firm or a few successful firms start to create many successful spinoffs […] in the region(s) where the initial successful parents happen to have located in the past" (Ibid, pg. 297).

2.2.3 Economic Geography vis-à-vis Industrial Cluster Theory

As it has been shown so far, the initial methodologies of the Industrial Cluster theory and the Economic Geography one differed. On the one hand Economic Geography had a focus on firm maximization models (Krugman, 1991; 1998) with a deductive approach from mathematical modelling (Timur, 2012), and on the other hand the Industrial Cluster theory had a more inductive approach (Timur, 2012) with a strong focus in the diamond of Porter (1998; 2000). However, both agglomeration theories received critiques from different academics and subsequently research in the field evolved according to the recommendations and to the variety of scholars' backgrounds. For example, Geldes et al (2015) affirms that both economics and international business literature on agglomeration focus too much on spatial and psychic distances to explain internationalization and trade aspects. While management and industrialists' literature give more importance to the role of proximity in the development of innovation and competitiveness. However, and contrary to this view, Gordon & McCann (2005) affirm that internationalists and geographers also focus on innovation and on the relation between that innovation and agglomeration patterns.

Consequently, one may argue that it all depends on which sub-theory is been analysed. Even if the original theories of industrial clusters and economic geography diverged – as it has been shown through the literature review- they have ended up converging in many aspects through the advancements made. For instance, the narrow focus on the firm (Perrons, 2001) and the prevalence of economic factors over non-economic ones in the original economic geography theory (Thisse, 2010) have incentivized researchers to go even further. The inclusion of factors such as institutions (Korolev et al., 2018; Boschma & Frenken, 2011), path-dependence (Gong & Hassink, 2018; Boschma & Frenken, 2011) and other dimensions of proximity (Geldes et al., 2015; Boschma & Frenken, 2011) to explain industrial concentration in both currents- cluster theory and economic geography- has helped to avoid what Giacomin (2017) defines as a tunnelled-vision. Therefore,

Institutional Theory will be covered later in this review as it has given a broader perspective to the study of economics and international business.

Lastly, the two theories have studied positive and negative outcomes of firms' concentration and the influence of related industries on these clusters. The original work of Marshall- that inspired both of them- was the first to address positive consequences in terms of thick labour markets, specialized suppliers and local knowledge spillovers, in what has been denominated MAR (Marshall- Arrow-Romer) externalities (Gong & Hassink, 2018; Geldes et al. 2015; Giacomin, 2017). At the same time, Industrial Cluster theory and the Evolutionary Economic Geography approaches have emphasized the importance of the presence of related industries in a location, due to the knowledge transfer and recombination of technologies between sectors (Gong & Hassink, 2018; Izsak & zu Köcker, 2015; Porter, 1998; 2000; Boschma & Frenken, 2011).

2.3 Institutional Theory

As shown in the two preceding sections, in order to study industrial clusters it is important to have a wide-ranging approach. The important factors for the development of economic agglomerations are not only those related to the industry and firm factors, but also to institutions. In fact, Timur (2012) says that a cluster model is impossible if the institutional dimension is not taken into account; without institutions clusters would not be feasible because they are aggregations of very dissimilar agents working within unclear borders (Timur, 2012). Furthermore, Peng et al (2009) was one of the first researchers in international business to introduce the institution-based view in the study of business strategies, in what he denominated the third-leg for a strategic tripod, arguing that institutions are more than background features.

When the new institutionalism movement- pioneered by the economists North (1991) and Williamson (2005)- arose, it had a great influence on the study of

social sciences and business (Peng et al., 2009). North (1991) focused on understanding the role that institutions- formal and informal- had in economic performance. He defined institutions as the restraints that structure interactions in the political, social and economic spheres (North, 1991) by defining what is legitimate and what is not (Peng et al., 2009; Kostova & Zaheer, 1999). These restrictions were necessary due to what Williamson (2005) denoted as transaction costs, such as information asymmetry, which generated uncertainty. In fact, poorly regulated environments usually hinder the possibility of accomplishing economic growth (Peng et al., 2009).

As mentioned before, these constraints can be both formal and informal (North, 1991; Peng et al., 2009; Kostova & Roth, 2002; DiMaggio & Powell, 1983; Kostova et Zaheer, 1999). The formal ones refer to legal boundaries such as laws and regulations and the informal ones to cultures, norms and values (Ibid). Even if today it seems that these rules have always existed, Tullock (2000) explains that governments actually appeared in an attempt to reduce the complexity of decision-making between all the individuals in a society, including firms, because they do not only affect themselves with the decisions they make but also their environments through positive and negative externalities (Tullock, 2000).

Explicitly, positive externalities of clusters may include the buzz that is created in the environment and all of the already discussed benefits. However, externalities –as previously seen- can also be negative, which means that there are social costs generated from private production that the private actors are not covering (Doyle, 2016). This happens because the participating firms -even when making part of the same cluster- have their own interests (Olson, 1971). In the end, allowing too much freedom could generate undesirable outcomes -including failure of collaboration and insufficient active knowledge sharing (Gratton, Voigt & Erickson, 2011)- and hence, justifies regulation and authorities' intervention.

As well as the formal and informal dimensions, institutions could be enforced through legal and non-legal mechanisms including the regulative, normative and cognitive regulations (DiMaggio & Powell, 1983; Xu & Shenkar, 2002; Kostova & Roth, 2002; Peng et al., 2009). The regulative aspect, as it name implies, has to do with laws and rules in the local and national environment (Ibid), the cognitive component has to do with social knowledge or social obligation, and the normative one relates to values, beliefs and norms (Ibid). Even if the three mechanisms are influential, the latter one is sometimes overlooked, as it is mostly informal- and somewhat intangible. But evidence shows that cultural differences, for example collectivism and social orientation, can explain the existence or non-existence of cooperation (Geldes et al., 2015)- these values added to other factors, such as partnership and trust, could result decisive for cluster development (Timur, 2012).

With this in mind, it is important to recall that local aspects are not the sole conditions that business people have to consider. As stated earlier foreign linkages also matter and are crucial for cluster development. In this sense the combination of local, national and transnational institutions provide settings that will influence the development of a successful or not successful cluster (Timur, 2012). To put it differently, the institutional framework should not be limited to the local level but adjusted to the bigger picture. As a matter of fact, Erez & Gati (2004) created a Multilevel Model, which is a very interesting and useful framework to understand the different levels of culture- individual, group, organizational, national and global- that are part of a nested structure reinforced by top-down and bottom-up dynamics. This approach, even if only addresses the informal institution of culture, shows the interconnection that individuals- and consequently firms- have with the rest of the world.

In sum, this section of the literature review validates the inclusion of the institutional component in the cluster analysis, as it can be argued that clusters are influenced by the city and country where they are located, by the industry in which

they are embedded, and even by their local and global partners- in both formal and informal ways.

So far, this thesis has covered the general aspects of economic agglomeration and institutional literature in order to generate a theoretical background to the study of clusters. Nevertheless, as the purpose of the research is to study the cultural and creative industries in developing countries, the next two sections of the review will highlight the main developments in the creative sector literature and provide a general panorama of less developed economies, in an attempt to understand the particularities of these scenarios.

2.4 Cultural and Creative Industries

Even if the creative and cultural activities are not novel, more importance has been given to them in research and in government agendas lately (Boix et al., 2015; Florida, 2002). With the world shifting to a knowledge based-economy (Kim & Kim, 2014; PRG, 2013; Florida, 2002), the importance given to intangible factors over the tangible -such as capital, labour and natural resources- has increased (Ibid). Among these intangible factors is creativity, which has been linked to growth, innovation and job creation (PRG, 2013; UNDP, 2013). Hence, the creative sector has emerged and is now considered as an independent industry composed by many sub-sectors (Kim & Kim, 2014), as well as being one of the most rapidly growing sectors in the world (UNDP, 2013).

2.4.1 Definition of the Cultural and Creative Industries

There are many terms used to refer to these types of activities, being the terms: cultural industries, creative industries and creative economy, the most commonly – and interchangeably- used (UNDP, 2013; Doyle, 2016; PRG, 2013). However, there still exists a lack of consensus between the definitions and the sectors that are included among the creative and cultural industries (Doyle, 2016);

which also differ depending on the context (UNDP, 2013).

Even if there is not an absolute definition for the term, the majority of authors agree that John Howkins was the first one to refer to a creative economy by identifying fifteen sectors that relied on creativity (Doyle, 2016; UNDP, 2013; Jones, Lorenzen & Sapsed, 2015; PRG 2013). Later, Florida (2002) referred to it in terms of occupations and built a theory around the creative class. Nonetheless, his approach has been extremely criticized because he focused on the characteristics of the people that constitute the creative class, and not on what they really do (Cohendet, Grandadam & Simon, 2010) or the industries where they work (UNDP, 2013). Finally, the United Kingdom's Department of Culture, Media and Sports (DCMS) defined creative industries as those that not only have their origins in creativity, skills and talent, but also use intellectual property to create wealth and jobs (Potts & Cunningham, 2010; Boix et al., 2015; Jones, Lorenzen & Sapsed, 2015; PRG, 2013). This definition is the most cited nowadays (Moore, 2014).

Even if the terminologies are interchangeably used, some distinctions between the notions of cultural industries, creative industries and creative economy have been made and questioned (Doyle, 2016; UNDP, 2013; PRG, 2013). The cultural industries approach is the oldest one of the three, and takes into consideration cultural activities that were previously defined by governments (PRG, 2013) and that have at their core elements of expression or symbolism (UNDP, 2013). The creative industries concept focuses on products and services that include artistic and creative components in their production, and also consider new digital creations (Ibid; PRG, 2013). Lastly, the creative economy concept- as originally introduced by Howkins- is very broad because it includes core cultural activities and processes, and other creative fields that are not generally related to culture, such as R&D (UNDP, 2013).

Comparatively, some scholars argue that the terms 'creative industries' and 'creative economy' are too restrictive (Ibid) and differ in the emphasis given to

cultural content and expressions (Throsby, 2008). This could be attributed to the fact that, at the beginning of the theory conception, culture was believed to be merely recreational and utilitarian (UNDP, 2013).

However, as both terms –creativity and culture- are very wide and include many goods and services (UNDP, 2013) from sectors as diverse as arts, science and technology (Doyle, 2016; UNDP, 2013), the term Creative and Cultural Industries (CCI) has become popular. This concept gives a broader and more accurate definition of the industry (Moore, 2014) and allows elements such as arts, culture, business and technology to be combined under the essential component of intellectual property (Moore, 2014). Still the sub-sectors comprised within the framework are a function of local characteristics, and consequently each region or location needs to work with the definition and model that best suits its own needs (PRG, 2013).

2.4.2 Cultural and Creative industries' Models overview

By taking a look at the characterization of the cultural and creative industries terminology, one can state that the CCI theory is still under construction. Many different models have been developed to classify and understand this industry -which is in certain ways dissimilar from traditional ones. However, it has been a hard task because -as previously stated- each particular sub-theory delimits the components used and the interpretation can change according to the context (PRG, 2013). In other words, there does not exist a general creative economy framework that fits all (UNDP, 2013). Actually, Duque & Buitrago (2013) affirm that building a universal framework that is suitable for all creative economies is pointless because the boundaries of the CCI are blurry and depend on local policy and business goals (Duque & Buitrago, 2013).

Nonetheless, even if there exists a multiplicity of definitions and models- each developed for a very particular context- it is important to understand that all of these models are interconnected (UNDP, 2013) and that there exists a common area between all of them (Duque & Buitrago, 2013).

According to the Policy Research Group from Canada in their report of creative industries (PRG, 2013) the existing models can be classified into two categories: sectorial approaches and more transversal ones. The first type, as its name suggests, takes into consideration the different activities or sectors included within the industry and classifies them according to the level of commercialization intent (Ibid). The second type- the transversal or integrated one- is concerned with the consumption side rather than the supply side by giving more importance to consumers and their demand for experiences (Ibid). However, the boundaries between these two categories are still not well defined.

According to this division, the Concentric Circles model created by Throsby (2008) could be related to the sectorial category. This model places core creative activities at the center (literature, music, visual arts and performing arts), and states that the ideas originate in these industries and diffuse outwards to the other layers stimulating innovation in these other sectors. The second circle contains 'other core cultural industries', the third one comprises the 'wider cultural industries' and the outer one encompasses 'related industries' (Ibid). The main distinction between the layers is that each one becomes less cultural and more commercial as one gets further from the core (Moore, 2014; PRG, 2013). Similar to this perspective, the United Nations Conference on Trade And Development (UNCTAD) model makes a distinction between downstream activities (closer to market) and upstream activities (more traditional cultural) (UNCTAD, 2004)- indicating that the cultural industries are a subset of the creative ones (PRG, 2013).

Also classifying by industry but in a different sense, the World Intellectual Property Organization (WIPO) model takes into account the direct and indirect

conception, manufacturing, production, broadcasting and diffusion of copyrighted output (WIPO, 2003; Moore, 2014). In this classification the most important aspect is intellectual property protection and thus, producers and distributors are divided according to the level of intellectual property content added to the goods and services (PRG, 2013). In consequence, the industries are categorized into core copyright industries, partial copyright industries, interdependent copyright industries or non-dedicated support industries (PRG, 2013; WIPO, 2003; Moore, 2014).

As presented earlier, other authors such as Florida (2002; 2005) focused on occupations rather than sectors or industries per se. This researcher highlighted the role of a group of individuals that added economic value to the society with their creativity: the creative class (Ibid). In consequence, he outlined certain characteristics that this subdivision of the population should have- which included individuality, meritocracy, diversity and openness- stressing that the society needed to work towards these values in order to attract this type of talent (Ibid). Even though many authors found that his theory was not supported empirically (UNDP, 2013), it turned out to be the background for further research in the area (Cohendet, Grandadam & Simon, 2010).

For example, rather than focusing on industries only -as traditional approaches, the creative trident framework focuses on creative occupations and highlights their importance by categorizing workers into: (1) employed in creative occupations within the creative industries, (2) employed in creative occupations within other industries, and (3) employed in other occupations within the creative industries (Florida, 2005; UNDP, 2013; PRG, 2013; Jones, Lorenzen & Sapsed, 2015). Moreover, Cohendet et al (2010) used Florida's approach as a baseline to build an anatomy of the creative city, because they thought that having a model of a creative class was not enough for explaining agglomerations of creativity. This model will be covered later in this literature review.

Finally, the Cunningham model gives another perspective to the analysis of the creative sector. More than classifying industries or activities into categories, this model aims to understand the relationship between the CCI and the rest of the economy (Potts & Cunningham, 2010) by proposing four possible explanations. The first one is the welfare model, which states that creative industries have a negative impact on the economy by consuming more than what they produce; meaning that it is an unprofitable industry that requires government support in the form of subsidies (Moore, 2014; Potts & Cunningham, 2010). The second model is the competition one, it asserts that creative industries' contribution to economic growth is not more nor less than what other industries provide. As a result, policies addressing the creative sector should be the same as for other industries (Ibid). The third model is the growth model, emphasizing the role that CCI have in growth by supporting other industries and the necessity of investing in them; otherwise the economy would suffer (Ibid). The final model is the innovation one; it sees the creative and cultural industries as an element of innovation and not as an industry per se. The attributed function of the industry is similar to the role of education, science and technology and therefore, is crucial for the development of the economy (Ibid)- as it creates structural and not only operational change (Potts & Cunningham, 2010).

2.4.3 Importance of Creative and Cultural Industries

Notwithstanding the Cunningham model proposes four different outcomes and relationships between the creative and cultural industries and the overall economy, what has been found in several studies is that these industries actually drive and enable economic growth, evolution and development (Potts & Cunningham, 2010; PRG, 2013; UNDP, 2013).

It is not only a matter of generating economic value through the production and expansion of the supply of goods and services and generating employment

(Potts & Cunningham, 2010; Cohendet, Grandadam & Simon, 2010; UNDP, 2013), but also having a dynamic impact over the whole society (Potts & Cunningham, 2010; UNDP, 2013) through technology and social benefits (UNDP, 2013).

Thus, these industries are drivers of development because they foster a combination of production, employment, and social life, that leads to learning and innovation (O'Connor, 2004; UNDP, 2013), and subsequently, facilitates the origination, adoption and retention of new ideas (UNDP, 2013; Potts & Cunningham, 2010). Furthermore, these industries are enablers of long-run development and institutional evolution (Ibid) because the artistic and cultural activities have been found to help individuals understand how the society where they live functions (PRG, 2013; UNDP, 2013), shape behaviours, norms, and routines (UNDP, 2013), and generate appreciation and empathy towards other members of the society; by building identity and sense of belonging (Ibid).

Additionally, some scholars have even gone further by addressing that the CCI should not be considered as one more pillar for sustainable development –as the economic, social and environmental components- but that it should be the central one (UNDP, 2013). This because it generates a symbiosis with the surroundings (O'Connor, 2004) -by acting as both input and output of cultural and creative content- and produces multidirectional benefits (Ibid).

2.4.4 Characteristics of Creative and Cultural Industries

This industry, unlike others, has specific features that differ from the traditional industrial sector (Izsak & zu Köcker, 2015). Even firms belonging to the same creative industry have very heterogeneous structures, markets, and distribution channels and in the end, very different business models (Ibid). Actually there is no single value chain that fits all of them (Ibid).

In terms of size, the most common and relevant type of firms within the CCI are micro-enterprises (Ibid; UNDP, 2013) but other types could be found such as small independent firms, quasi-independent subsidiaries working for larger firms and very large ones –mostly Multinationals- as is the case of film-making and publishing companies (UNDP, 2013).

According to Cohendet, Grandadam & Simon (2010) creative firms do not have large R&D departments but rather find their inspiration in their own cities with local connections. This makes the creative firms highly local and mostly present in metropolitan settings (PRG, 2013; O'Connor, 2004; Jones, Lorenzen & Sapsed, 2015; Boix et al., 2015). Thus cities are sources of talent attraction, monopolies prevention, development of Information and Communication Technologies (ICT) and infrastructure, and promotion of education (Duque & Buitrago, 2013). As a consequence, the CCI are pretty sensible to traditions and norms, community driven, and customer and service-oriented; mainly serving national markets (UNDP, 2013; Florida, 2002; Izsak & zu Köcker, 2015).

However, geographical and political borders do not delimit creative industries (UNDP, 2013; Boix et al., 2015). They have very complex networks and dense flows of people, information, and resources - as well as complicated divisions of labour (UNDP, 2013; O'Connor, 2004). And as other traditional agglomerations, they include a large number of small and medium enterprises (SMEs) (Gordon & McCann, 2005), making necessary to build alliances and incentivize collaboration in order to foster innovation. Therefore -and contrary to what is expected due to their local focus, access to international markets is an essential feature (UNDP, 2013; O'Connor, 2004) because internationalization is core for this type of industries (Kim & Kim, 2014; UNDP, 2013). This latter argument will be covered later.

In terms of market risk, they face a lot of uncertainty because demand is very difficult to predict due to the newness of the products (Doyle, 2016; O'Connor, 2004

UNDP, 2013). Moreover, it is an industry with huge economies of scale, which in the end poses a very important barrier to entry, and risk of monopoly (UNDP, 2013).

In terms of operation, it is highly dependent on human input. This means that it is both labour intensive (Doyle, 2016; O'Connor, 2004; PRG, 2013) and also knowledge intensive- making specific skills and qualifications necessary (PRG, 2013). As a result relatively unskilled and highly skilled workers make part of the industry (UNDP, 2013). Furthermore, the CCI make part of both demand and supply sides (UNDP, 2013) -as already mentioned- and comprise public, private and informal sectors, giving a special importance to not-for-profit activities (Ibid).

Moving on to their outputs, they produce symbolic knowledge -unlike other industries that produce analytical (scientific) and synthetic (industrial) knowledge (Boix et al., 2015; Cohendet, Grandadam & Simon, 2010)- which is related to the understanding of habits and norms of the location, and thus highly context-specific and mostly tacit (Ibid; O'Connor, 2004). To put it differently, the industry is highly sensitive to cultural features and associated to 'learning by doing' or non transferable skills (O'Connor, 2004). Therefore, creative firms are highly clustered (Boix et al., 2015) but not isolated from other industries. They actually co-locate into other hubs (Ibid), which allow them to have more efficient communication, promote an atmosphere of trust, and access larger labour markets (Jones, Lorenzen & Sapsed, 2015; Boix et al., 2015). In other words, they have very dynamic linkages with a wide variety of sectors (Izsak & zu Köcker, 2015).

2.4.5 Clusters of Creative and Cultural Industries

As previously stated, creative firms tend to collocate. However, empirical studies addressing spatial characteristics of creative clusters are still scarce (He & Gebhardt, 2014). Consequently, it is necessary to understand if the conditions highlighted by the industrial clusters and economic geography theories- generally

attributed to clusters in traditional industries- are also useful to explain clustering in CCI. The main features of these frameworks can be summarized through the following elements: geographical concentration, specialization, dynamic linkages between actors, competition and cooperation, life cycle properties, and sustained innovation (Kind & Meier, 2012). This section will evaluate each of these factors in the light of the creative clusters.

Regarding the first component – geographical concentration- it has been shown that creative industries are more linked to the local environment than other industries because proximity not only leads to stronger networking and easier knowledge transfers (He & Gebhardt, 2014) but also helps to develop an identity and a lifestyle while preserving the cultural heritage of the place (Evans, 2009) - in other words it creates a localized symbolic value (Evans 2009; He & Gebhardt, 2014). Furthermore, it has been determined that the creative industries have a very strong predisposition to collocate because, as already mentioned, they are mostly constituted by micro and SMEs, which usually suffer from structural and financial weaknesses (Wu, 2015; Zheng, 2011). These limitations cause creative firms to seek inter-firm assistance (Zheng, 2011) and make them highly dependent on external funding (Wu, 2015). Hence, as the investing companies tend to request a certain degree of managerial control, the latter ones prefer to give funds to companies that are located nearby (Wu, 2005).

In terms of specialization, Flew (2010) argued that creative industries clusters couldn't be explained by the specialization factor because they are strongly influenced by the diversity of the places where they develop. As it was shown in the preceding section, the creative industries may not be catalogued as a unified industry (Kind & Meier, 2012) because they are an aggregate of other sub-industries. It is a cross-sectorial industry (Kind & Meier, 2012) where cultural content merges with technological elements (He & Gebhardt, 2014) and thus, is strongly related to the ICT sector (Wu, 2005; Evans 2009) and also linked to the tourism industry (Evans, 2009).

As a consequence, the elements related to interactions and linkages between actors and the presence of competition and cooperation, go beyond the blurry boundaries of the industry. Thus, cooperation between the industry and other sectors is crucial (Evans 2009). However, as the creative industries have more flexible structures, this does not necessarily allow cooperation between enterprises- as in other sectors- but promote connections that are highly informal and established between individuals (Kind & Meier, 2012). This goes in line with the belief that industry participants tend to foster spatial proximity to improve information flows and networks by taking advantage of the buzz or ambience in an informal way (Bathelt et al., 2004; 2011), especially in industries that are complex and uncertain such as the creative ones (Flew, 2010).

It is important to mention that ideas and knowledge creation follow bottom-up and top-down processes (Cohendet, Grandadam & Simon, 2010). Actually Cohendet, Grandadam & Simon (2010) talk about different levels of the society: the upperground -referring to firms and institutions with financial capacity, the underground -referring to creative, artistic, cultural and scientific activities outside the formal organizations, and the middleground -making reference to the intermediary ground where the upperground and underground interact (Ibid). The same authors argue that the latter component is the most important one in the creative sector because it is where interactions are possible. This component refers to events- including festivals, conferences, and fairs- where both local and global enterprises, agents and organizations participate so that processes of exploration and exploitation of ideas are accomplished (Ibid).

Following with the life cycle properties, it can be stated that they are pretty similar to other sectors (Kind & Meier, 2012). Nevertheless, Evans (2009) adjusted the process of CCI clusters through the following four stages of development. The first one named 'Dependent' is where creative enterprises, mostly micro and SMEs, start to develop with the help of public intervention. The second one 'Aspirational' is

where some independent firms come to live but still face limitations in size and range, and need public and institutional support. The third stage is the 'Emergent' one in which the creative firms are numerous but infrastructure investment comes from public entities. And finally the 'Mature' stage is when firms are larger, more links between enterprises have materialized and there is Business-to-Business (B2B) consumption.

In terms of sustained innovation, creativity is seen as its foundation through the emergence of new processes and products (Wu, 2015; Flew, 2010). Therefore, CCI tend to be highly dependent on the generation of original knowledge (Wu, 2015). However, the measurement of this innovation is more difficult for this industry, and standardized measures, such as patents, are not suitable (Kind & Meier, 2012). This because even if CCI are often related to intellectual property, the copyright and patenting processes are not that common within the participating actors (Ibid).

Therefore, it can be affirmed that the creative and cultural clusters share certain characteristics of other types of clusters with slight nuances. Still it is important to know if there are some conditions that need to be fulfilled for the development and promotion of this type of clusters, as in other traditional industries', and this will be covered in the next section.

2.4.6 Conditions for promoting Creative and Cultural Industries' Clusters

The existing literature on clusters specify that they may emerge at all geographical levels including transnational, national, regional, city and local (Evans, 2009). However, the creative sector has been mostly related to agglomerations at the city and regional levels (Evans, 2009), especially emphasizing large cities (Wu, 2005). As a result most of the research on creative clusters have to do with urban studies (He & Gebhardt, 2014). Nevertheless, most recent investigations have

observed the development of creative clusters outside the metropolitan areas (Escalona et al, 2016) but this type of rural creative clusters is still uncommon (He & Gebhardt, 2014). Unfortunately, existing urban studies have been unable to solve a dichotomy. It has been very hard to determine if creative enterprises gather together in the cities because metropolitan areas are the center of commercial activities or if cities become highly dynamic due to creative and cultural agents within their frontiers (Flew, 2010).

Therefore, other currents of knowledge –different from urban perspectives- have tried to explain the origins of cultural and creative clusters. In general the emergence and growth of CCI in a specific location are attributed to a path dependence approach or to social demand for cultural products (PRG, 2013). The path dependence perspective explains that it is hard to generate a new cluster where nothing existed before (Wu, 2015). Thus this vision suggests two potential reasons for creative agglomerations. The first one stating that as traditional industries needed to adapt fast to the changing trends of the market, the cultural and creative sector emerged as an intermediary attached to local characteristics (Evans, 2009). And the second one claims that underutilized industrial districts and facilities became attractive to CCI entrepreneurs due to the affordable prices and they turned them into their working spaces (He & Gebhardt, 2014). In sum, the necessity of sharing facilities and learning by inter-firm exchanges of knowledge make part of the path dependence explanation (PRG, 2013).

On the other hand, the demand approach has to do with the supply-demand matching for both products and labor (PRG, 2013). It is believed that production and consumption of cultural goods and services have to be done in the same location and in some circumstances at the same time (He & Gebhardt, 2014). Hence, the appearance of a cluster of this type may be the response to that demand.

These two approaches support the general belief that creative and cultural clusters are organically built. Actually, literature presumes that clusters develop

independent from public intervention (Wu, 2015) and that there exists a contradiction between the public and private sectors (Flew, 2010). However there is evidence that confirms that state policy- and not necessarily market forces- may explain the occurrence of some creative clusters (Wu, 2015) and that the joint action of private and public sectors is crucial for innovation processes in creative industries (Flew, 2010). For instance, in China this type of agglomerations have been build from scratch by the government (Jones, Lorenzen & Sapsed, 2015), and other organizations such as the United Nations Educational, Science and Cultural Organization (UNESCO) and the UNCTAD have been involved in the planning of this type of places in an attempt to promote local culture (Evans, 2009).

Consequently, the motivations behind the promotion of CCI clusters are numerous. According to Zheng (2011) it could be a cultural strategy to improve the image and reputation of a region. However, Flew (2010) argues that it goes beyond marketing or branding tactics and it also responds to the desire of constructing modern cultural facilities, promoting cultural diversity, and repairing industrial settings. Moreover, some creative clusters do not even have economic characteristics but only respond to cultural needs that focus on heritage preservation where not-for-profit organizations constitute the main actors (Evans, 2009). Whichever the origin and motivations, it is important to remember that creative clusters are more sensible to local characteristics than other sectors and they are highly embedded in their local settings (He & Gebhardt, 2014).

Nonetheless, even if local features have a high influence on the industry, the national environment –including agents, policies and institutions- also conditions the processes (Wu, 2015). Thus, neither demand nor path dependence approaches are enough to explain agglomerations because a specific location on its own may not have the required capacities to develop the industry fully. This explains the role of regional and national governments and public policies in the development of local clusters by offering tools to ensure high quality programs at all levels of education and training (UNDP, 2013; Wu, 2015; O'Connor, 2004), solving the deficit of creative

skills in professionals from the sector (UNDP, 2013), filling the existing gap in funding (Wu, 2015), and promoting the construction of appropriate infrastructure (UNDP, 2013; O'Connor, 2004).

Current literature on clusters affirms that in order to develop a solid industry, the networks between members and a very strong sense of buzz, trust and collectivity need to be promoted (Boix et al., 2015). As previously stated, the interconnections must go beyond creative firms and they should also involve ICT and tourism sectors. Similarly, it has been found that the connections with schools, universities, and research organizations are fundamental (UNDP, 2013) – as in other type of clusters. In fact, the role played by education and research entities (Wu, 2015; Evans, 2009; He & Gebhardt, 2014) is always emphasized in numerous sectors and the creative sector is no exception. However within this industry, firms willing to generate skilled labor and pertinent knowledge are perfect substitutes of the formal educational entities (Wu, 2015). The general conclusion here is that creative centers have a very high concentration of professional and educated artists –independent of where they were formed- and it is not an aggregate of bohemian artists (Wu, 2015; Evans, 2009) -as commonly thought.

It was earlier mentioned, that Florida (2002) refers to this group of people as the creative class and he also states that there are three conditions -that are necessary but on its own insufficient- to attract creative people and promote the industry. These features are the combination of: technology, talent and tolerance; meaning that in order to encourage the creative sector it is necessary that the location becomes creative too (O'Connor, 2004) by being authentic, building its own identity and guaranteeing a good quality of life (Florida, 2002).

However, even if Florida's three conditions were effective in gathering together the 'right' type of individuals, concentrating talent does not necessarily imply success. Consequently, and as previously validated, institutions become crucial elements to promote collaboration and facilitate interactions. Some of these

institutions may be created before the creative activities take place and others might be the result of a trial and error process; developing simultaneously (Wu, 2015).

However, the focus should not be only local or national, as internationalization is a core element for CCI (Kim & Kim, 2014; UNDP, 2013). These industries are both labor and knowledge intensive – as seen before- meaning that they need access to both local and global knowledge (Boix et al., 2015; O'Connor, 2004). As a consequence, certain strategies to promote global exchanges need to be put in place. The strategies include improving trade policies (UNDP, 2013)- for instance export promotion (Kim & Kim, 2014)-, encouraging investments on international marketing and brand development (UNDP, 2013), and fostering openness to outsiders –often migrants- to attract creative talent (O'Connor, 2004; Florida, 2002) and to bring more social and cultural dynamism (UNDP, 2013).

Nevertheless, if not addressed correctly, international connections may pose a threat to local CCI. This would be the case of transferring foreign characteristics without considering local needs (UNDP, 2013)- as has been evidenced in some developing countries that are replicating the strategies of CCI clusters from the global north, where they were traditionally predominant (Evans, 2009). Therefore, and to avoid misconceiving methods, it is necessary to map the existing and potential assets in a particular location that may help to potentiate the development of the industry (UNDP, 2013). These characteristics could include people, practices and traditions that are mainly local (Ibid).

2.4.7 Challenges faced by the Creative and Cultural Industries

Even if literature proves that the CCI sector is highly determined by local features, there are certain challenges that this type of industries face –independent of their location. This section will analyse some of the characteristics presented earlier and explain why they are considered to be defies.

For instance, technology and digitalization developments –at the global scale- have altered the way in which CCI operate by blurring sectorial and geographical boundaries and also by changing consumption patterns (Doyle, 2016).

Also, by having a high concentration of SMEs, this industry needs more help from the government concerning finance and specialized information (Kim & Kim, 2014). Commonly, small firms are the ones with more absence of specialized skills, more troubles to access technology, markets, information, inputs and external services (Giuliani et al., 2005). Furthermore, it is very hard for this type of enterprises to access foreign markets and internationalize – on their own- due to the lack of experience in fostering interactions and lack of basic capabilities (Izsak & zu Köcker, 2015). This is why public mediation is highly needed but unfortunately it is the industry with the least attention from policy-makers and one of the most constrained by weak governance (UNDP, 2013; Jones, Lorenzen & Sapsed, 2015).

As a result, international organizations -such as the Organization for Economic Cooperation and Development (OECD), the Inter-American Development Bank (IDB), the European Union and the United Nations- become fundamental allies (PRG, 2013). These entities serve as intermediaries and help different creative agents to participate in international trade shows where they can form diverse networks (Ibid). Especially when the CCI are considered a strategic sector comprising activities that are hard to imitate and, due to the already covered supply-demand link, virtually impossible to outsource to lower costs markets (UNDP, 2013).

Nevertheless, the most important reason for the existence of policies and intervention from local, national and global authorities is that market failures are the main feature of the industry (Ibid). First, the creative sector has very high levels of informal systems, processes and institutions, which is noteworthy in developing countries but also present in developed ones (Ibid). Second, they have public good characteristics (Doyle, 2016; UNDP, 2013), meaning that by being non-excludable

and non-rival, they provide collective benefit but no common interest in paying the cost to provide the good (Olson, 1971). Hence, causing the free rider and the tragedy of commons effects (Duque & Buitrago, 2013).

Consequently, when consumers or other agents fail to realize the benefits that some goods bring to the society, authorities need to find alternative methods to produce them. These alternatives include direct public funding, public investment in human capital (UNDP, 2013), and sometimes allocating fiscal credits in order to attract foreign creative producers (Cohendet, Grandadam & Simon, 2010). Otherwise, artists would not be appropriately compensated for what they do because their careers are not considered to be legitimate (Duque & Buitrago, 2013) and very few firms would be incentivized to stay in the industry making monopolies likely to appear (UNDP, 2013); which would mean higher prices and/or very low quality products (Ibid).

The third market failure has to do with the fact that even if the initial production of a creative good or service is costly, the replication of it is not –leading to economies of scale. This feature is believed to be favourable for certain industries, however for CCI it could potentiate the propensity of piracy and illegal distribution. Subsequently, there would be less production than what is socially desirable (Doyle, 2016; UNDP, 2013) as illegal copying disincentives creative firms to produce original content. Moreover, as regulatory and legal norms addressing intellectual property are not as strict as desired (UNDP, 2013; Kim & Kim, 2014; Doyle, 2016) there is a lack of recognition of true ownership, real added value and trade for cultural goods and services is somewhat hindered (Ibid).

Finally, even if the networks –local and global- are seen as a positive and necessary component for industry growth, the infinite needs that the creative market disclosure turn into higher transaction costs and inefficiencies (Ibid). So even if authorities make investments in education, networking and infrastructure, there needs to be a special consideration concerning the places where people can

meet (Cohendet, Grandadam & simon, 2010). These spaces will reduce those inefficiencies and costs, which in the end turn into diseconomies of scale and congestion (Wu, 2015).

This section showed the particularities of the CCI and what researchers have done so far. However, it is relevant to know if there exist nuances between developed and developing regions of the world for this industry, because normally the less economically developed economies face harder constraints in all of the dimensions such as political, social, economical, cultural, and technological. Thus, the following section will present a general description of developing countries by including information on the business environment, cluster development, and cultural and creative industries; with a special focus Latin America – the region of reference of this thesis.

2.5 Business environment in Developing Countries

There exists a general division between the global north and the global south. It is important to outline the differences between these two regions because as it has been shown so far, the external environment affects the operations of a company (Vokoun & Daza-Aramayo, 2017). Those factors are the combination of economic, social, geographical, political, and technological features that can have either positive or negative impacts on the overall environment (Ibid) and are different between both regions.

However, even if developing countries -or the countries belonging to the global south- present many and varied environments (Dijk & Sverrisson, 2003), certain characteristics prevail among all of them. For example, political instability is very common in developing countries (UNDP, 2013) and it is not a secret that corruption also prevails. Additionally, authorities have a very constricted capacity to invest in infrastructure (Djik & Sverrison, 2003), and access to some services -such as legal advice or accounting- is viewed as a luxury item (Ibid).

Similarly business operations in LEDCs face certain constraints too, such as higher interest rates (Vokoun & Daza-Aramayo, 2017), and hence foreign investment is necessary and complementary to local enterprises (Lall & Narula, 2004). But this foreign help is insufficient on its own making it complementary to aspects such as local capabilities and policies (Ibid). However, attaining those conditions in LEDCs is really hard because some institutions and legal frameworks are still under construction- as is the case of the copyright licenses (UNDP, 2013)- and some others, even if already theoretically in place, do not work adequately due to the absence of suitable administrative resources (UNDP, 2013).

2.5.1 An overview of cluster development in developing countries

Notwithstanding clusters can emerge in both developed and developing economies, in the latter ones they are not well established due to poor infrastructure and poor institutions (Porter, 1998; Giacomin, 2017). Nonetheless, and as it was previously highlighted, clusters are essential for regional and economic growth due to spillovers, especially in developing countries (Djik & Sverrison, 2003). This is why is important to support their formation and progress in the global south.

Furthermore, this review has already shown how clusters are platforms to attract FDI and knowledge into emerging economies. However, their impact is even deeper in this type of countries, as clusters are crucial for global integration and help institutional improvement (Giacomin, 2017).

Unfortunately, due to emerging countries' unfavourable circumstances, the creation of clusters needs absolute complementarity between economic, social and governmental factors (Parrilli, 2004) -beyond the local sphere. In other words, a joint effort between private enterprises, local governments, and communities, is not

enough if there is not international cooperation and NGOs intervention (Giacomin, 2017). This shows that as CCI in general, developing countries need extra support and constitute special cases.

2.5.2 Developing countries and Cultural and Creative Industries

Throughout the literature review, it has been evidenced that CCI face numerous challenges that other traditional industries do not. This section of the review will also help to understand the intensity of those challenges in LEDCs.

As recently cited, intellectual property protection is not well enforced. This situation, as well as insufficient investment, lack of disposable income and not enough state support -which are common in emerging economies- pose a threat to the creative industries growth (UNDP, 2013). Besides this, there are other important obstacles for international expansion because local firms lack enough information on regulations, consumer tastes, and market structures of other countries, as well as proper organizational and management skills (Kim & Kim, 2014; UNDP, 2013). That is why creative firms have started to partner with countries in the north to work together (UNDP, 2013), not only to access trade shows that will enable them to expand their businesses, but also to reinforce intellectual property rights (Kim & Kim, 2014).

However, the literature revised showed that international collaboration is only useful when certain initial conditions are attained; which means that there is still a lot of work to be done. For example, the capacity for government subsidies – that following the welfare model of Cunningham result crucial for the industry- is limited in developing economies (UNDP, 2013). Furthermore, assets such as capital and entrepreneurial skills represent important obstacles to the creative sector (Ibid). As a result, there is a different degree of trans-regional collaboration and linkages within the different regions of the world. According to Izsak & zu Köcker

(2015), these relations are very weak in Asia and Central Eastern Europe, almost inexistent in African and South America, and very strong in Western Europe.

Nevertheless, not every country has had the same behaviour and outcomes. Some developing countries have very dynamic and growing creative sectors (UNDP, 2013), which is the result of already acknowledged local capacities and particular needs. Thus analyzing the global South as a whole is very ambitious because their features and characteristics are a result of past and contemporary practices (UNDP, 2013). To address this issue, the UNESCO has divided developing countries into regions that have a similar history and traditions- Africa, Arab States, Asia-Pacific, and Latin America & the Caribbean (UNDP, 2013). That is why the following part of the literature review will cover the geo-cultural region of Latin America, as it is the central topic of this thesis.

2.5.3 Latin American panorama

Latin America is characterized by its richness in natural resources and no so much in human and technical ones (Giuliani et al., 2005; Vokoun & Daza-Aramayo, 2017). As a consequence many of these countries still rely heavily on agriculture, mining, tourism and manufacturing (Vokoun & Daza-Aramayo, 2017)- generating an underdevelopment of other sectors. Even if the countries' circumstances differ according to their local assets and institutions, the general conditions in the South American region include high country level risks, poor institutional frameworks, low purchasing power, and violence (Vokoun & Daza-Aramayo, 2017; Geldes et al., 2015).

In terms of business and entrepreneurship, R&D investments are very low for both domestic and foreign companies (Vokoun & Daza-Aramayo, 2017; Giulinai et al., 2005), and the linkages that were previously exposed as necessary for industry growth -such as university and firm interactions- appear to be really weak in comparison to other regions (Giuliani et al., 2005). However, Latin America is

considered to be the home of a young workforce with strong entrepreneurial spirit (Vokoun & Daza-Aramayo, 2017) that may help to leverage these limitations in the near future.

Regarding Latin American CCI, they are highly labour intensive and dependent on tradition and heritage (UNDP, 2013). This means that in this region the labour component prevails over the knowledge one. Moreover, the main challenges for the industry in the region are: absence of suitable infrastructure (Duque and Buitrago, 2013), lack of an appropriate environment to produce intellectual capital and give proper education to build the necessary skills and competencies (Duque & Buitrago, 2013; UNDP, 2013), and a very weak supporting legal framework (UNDP, 2013). The latter weakness results from irregular political commitment and very high levels of informality (Duque & Buitrago, 2013), which makes it very hard to have accurate information and hence create the appropriate norms to support CCI progress. These issues are still present even when some political and economic changes took place during the 80's – such as the creation of Ministries of Culture- to boost the regional CCI (Velez, 2013).

Overall, the reason for the sector's weaknesses despite the support received may be that creative talent is still extremely undervalued by the south American society, which translates into very low local payments and the willingness of artists to go abroad (Duque & Buitrago, 2013). Therefore, it is very hard to attract and retain talent in Latin America (Ibid); a reality that is also reinforced by the low commercial integration within the region that creates strong barriers to trade, low joint production of cultural goods and services (AP, 2016), and a deficit in the balance of payments regarding cultural products (UNDP, 2013; Duque & Buitrago, 2013) for most of the Latin American countries.

As a general conclusion of the literature review of the current thesis it can be said that it sets the baseline to identify- in a deeper way- the conditions that need to be fulfilled for the existence of a cluster. Furthermore, it identified special

characteristics and challenges faced by non-traditional clusters -such as the ones belonging to the cultural and creative sector, and in less favourable conditions – for instance within the Latin American region. The following section will present a summary of the most important components of this revision, in order to build the theoretical framework that will guide the subsequent segments of the thesis.

3. Theoretical framework development

3.1 Model building

As a starting point, industrial cluster theory and economic geography theories stress the importance of the quality of the business environment in similar ways. The diamond, in the cluster theory, states that demand conditions, related industries, input conditions and the firms' strategy and rivalry, determine the attractiveness of the location (Porter, 1998; 2000). These conditions could be related to the centripetal and centrifugal forces from economic geography that also talk about market size, labour markets with specialized skills, rents of the land and characteristics of the factors of production or inputs (Krugman, 1991).

In this sense, the first condition for cluster emergence in a location is that there exists demand for the product. In fact, creative clusters have always been associated with metropolitan areas- as stated previously- due to market potential, and are considered to be highly sensitive to the local atmosphere.

The second condition stated by both cluster theory and economic geography literature is the availability of inputs –the most important in this case being specialized labour. The workers need specialized skills to work in this particular industry and it was proposed in the literature that the development of the necessary abilities could result from evolution of relating industries or specialized education. Here it is important to remember that even if the creative sector could be related to infinite industries, the ones that share a stronger linkage with it are digital services,

tourism and education (Izsak & zu Köcker, 2015) – having a stronger connection and deriving bigger benefits from ICT (Duque & Buitrago, 2013).

That is why it could be argued that locations where CCI clusters are meant to be established need to promote –in a parallel way- technological progress, implement policies to attract tourism, and potentiate universities with educational programs concerning creative industries. As a matter of fact, these three components could be related with Florida's (2002; 2005) 3T's: technology, tolerance –as tourism may be a source of openness to diversity- and talent, which may be reinforced by specialized skills learned in education entities. These 3T's become even more important in LEDCs, where human and technological resources are not that strong (UNDP, 2013).

In terms of the firms' strategy and rivalry, the high degree of economies of scale in the industry promotes geographic concentration. But the same scale economies generate barriers to entry and risk of monopoly (Porter, 1980). As a result, this is an industry were rivalry can be somewhat high -hindering cooperation. Additionally the size of the enterprises and the nature of their structure potentiate cooperation between individuals and not necessarily companies. These are very important issues to consider and to resolve, because it was argued that geographically concentrated creative firms must have vertical and horizontal linkages in place to generate innovation. Moreover, this is particularly problematic in Latin America, where interactions between firms and universities are still very weak. Therefore, public policies and different measures to encourage collaboration and reduce the levels of rivalry are necessary.

As for the type of linkages that should be promoted, it was exposed that it is a function of the degree of knowledge or labour-intensity of the industry. Although the literature revision made visible that vertical linkages were better for labour intensive clusters and horizontal linkages were more profitable for knowledge intensive ones (Turkina & Van Assche, 2018), both types of linkages have to be

promoted in this particular case. The reason for this is because even if generally the creative sector is highly knowledge driven, in Latin America the industry is actually more labour intensive. Therefore, both types of linkages should be equally promoted in cultural and creative industries in Latin America.

The literature also showed that the number of linkages, principally global, that a firm can handle on its own is limited and that the government's intervention in this matter is crucial. However, the government's support goes far beyond the establishment of global pipelines, it is also necessary to promote formal and informal institutions –as previously identified in the institutional theory- in order to sustain the development of a cluster.

Beginning with the formal ones, the literature showed that it is vital to create rules that enforce intellectual property protection- especially in the CCI. It also exposed that local and national authorities have several responsibilities including: the creation of relevant policies that promote inter-industry alliances and collaboration; the accessibility to funding and the availability of financial services for enterprises; the investment in infrastructure and human capital; and the internationalization strategies of creative firms- such as export promotion, international marketing and brand development. Similarly, informal institutions that were found relevant for this type of cluster were collectivism, social orientation, trust and partnership. The absence of these characteristics could obstruct collaboration.

Unfortunately, as shown, developing countries suffer from political instability, corruption, lack of intellectual property protection, very weak legal frameworks, insufficient administrative resources, and a limited budget for infrastructure and subsidies, among other inconveniences. Consequently, transnational and global authorities become as important as local and national authorities.

As a result, intervention of other countries and international organizations is central in these countries and in this industry. Their tasks include not only to support the government in its duties -that due to instability are hard to accomplish- but also to help with the construction of spaces – events, festivals, fairs-, linkages, and strategies. Therefore, I propose to include a fourth component to the initial triple helix of clusters- presented in the literature review (Dameri, 2016; Korolev et al., 2018) in which the ideal model for the constitution of a CCI cluster in LEDCs would be the result of the interactions between four players.

3.2 Graphical representation of the model

Taking into consideration the previous contextualization, the proposed model for the creation and development of cultural and creative clusters in Latin America of this paper is resumed in the following way: A dynamic and reinforcing synergy between four agents: (1) businesses, (2) local and national institutions, (3) science & education, and (4) international entities. Figure 1, constitutes the graphical representation of the cluster and the interactions in CCI.

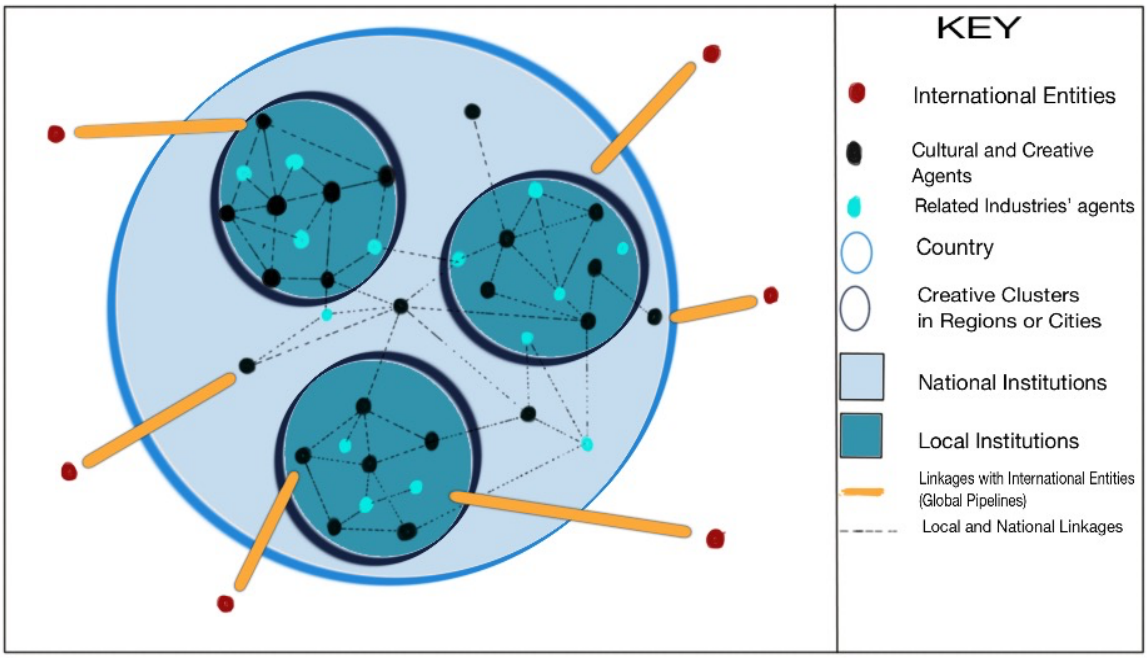

Figure 1- Graphical model for creative and cultural clusters in Latin America
Author's own construction based on Sturgeon et al., (2008) & Bathelt et al., (2004)

However, figure 2 shows a simplified version. In this graphic the synergy is clearer and the local demand for cultural and creative products is included because the literature showed that these industries are highly sensible to local characteristics- and if at this level there are no consumers to satisfy the cluster dies.

The first component - businesses- includes independent artists as well as domestic and foreign firms -locally established, belonging to the cultural and creative sector and developing co-working strategies. It also includes related industries' units, meaning digital services (or ICT), tourism and education establishments, that share vertical and horizontal linkages with the creative sector.

The second component- local and national institutions- is the aggregate of the formal and informal rules that shape the environment. The formal category- meaning governments and regulations- need to guarantee the progress of the industry through laws and policies promoting intellectual property protection (IPP), investing in infrastructure and human capital, and building funding programs. They are also crucial for building external linkages for the benefit of the cluster. On the other hand, the informal institutions that need to be present are trust, social orientation and collectivism, which would be both input and output of the whole system in a mutually reinforcing process.

The third component- science & education- refers to higher education establishments that will fill the gap in creative education and training through the proposal of specialized and innovative academic programs. This component needs support from local and national authorities, and also from international entities – including international universities. Lastly, the education entities also need to build strong relationships and interactions with businesses in the field to understand the current dynamics and the flaws that need to be resolved.

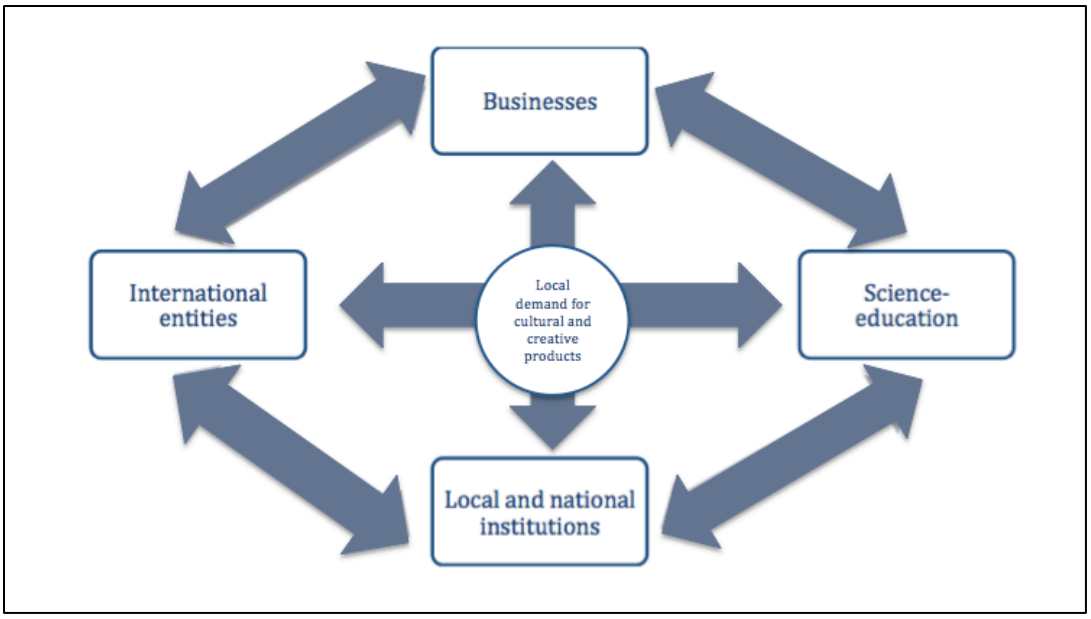

Figure 2- Simplified representation of the model for creative and cultural clusters in Latin America
Author's own construction

Finally, the fourth component- international entities- needs to be tightly connected to all of the other components because it provides the lacking conditions that the other three cannot build on their own due to the fact that they belong to the creative sector in a developing economy. This component includes other countries, international organizations, universities abroad, among others. However, these agents need to pay very close attention to the local environment's particular needs to avoid harming it.

In sum, figure 3 shows in a summarized way the actors and activities belonging to each one of the four components – apart from demand- that were found necessary to the development of creative clusters.

Now that the theoretical framework of the current research has been presented, it is necessary to explain the methodology that will guide the research. This topic will be covered in the next section.

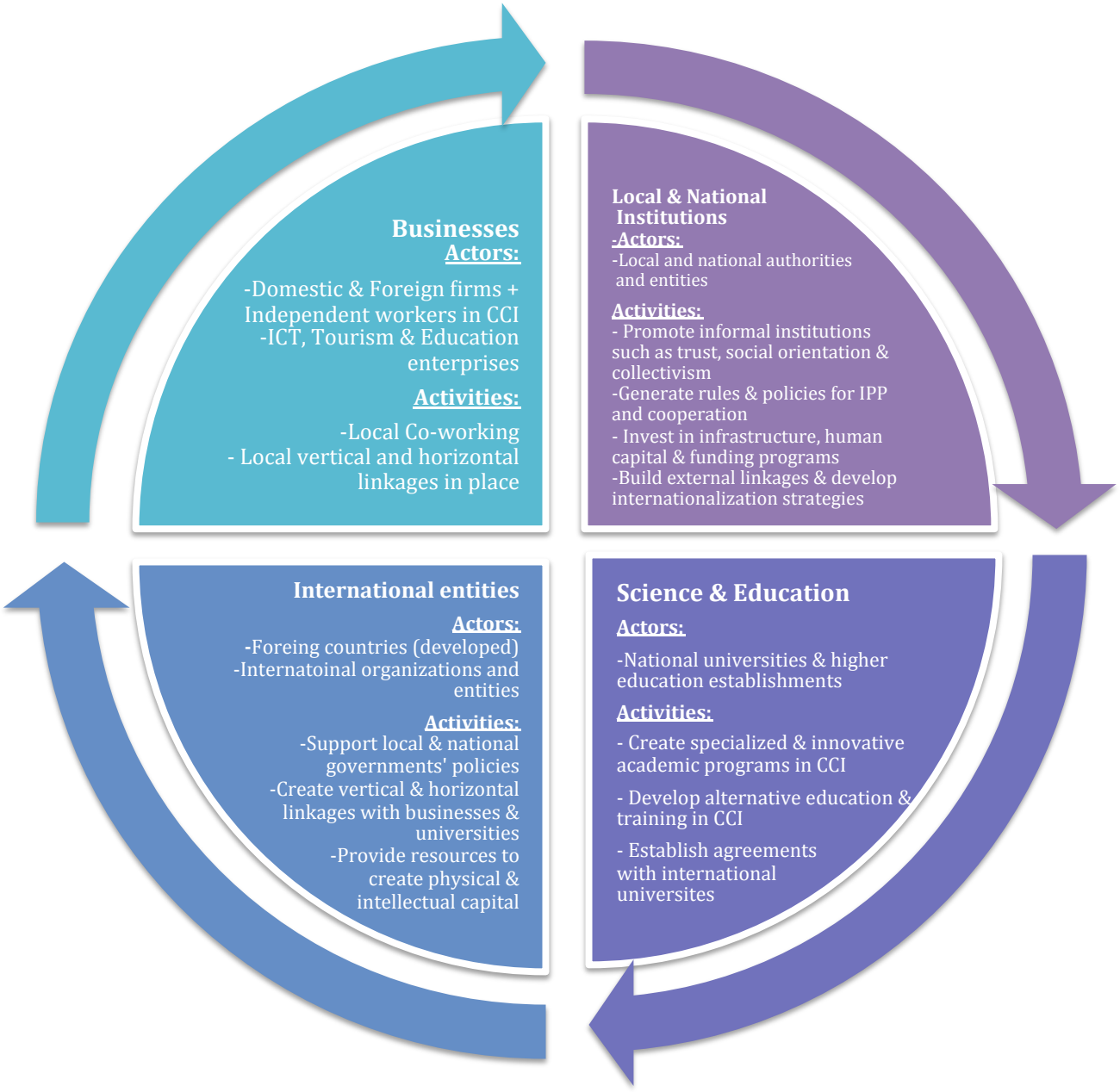

Figure 3- Components of each sub-group of the model for CCI in Latin America
Author's own construction

4. Methodology

4.1 Research Design

The first stage of the study included an exhaustive literature review in order to create the adjusted theoretical framework that would explain the necessary conditions for the emergence and development of a cultural and creative cluster in Latin America. This first stage responds to the methodology proposed by Sharan Merriam and Robert Yin; two foundational methodologists in case study research (as cited in Yazan, 2015; Ceballos-Herrera, 2009). These two authors state that it is important to conduct a literature review as part of the process in order to build a relevant theoretical framework and as a guideline before the data collection process (Yazan, 2015).

The second stage of the research will include a case study in Colombia, a Latin American country, in order to test the model with empirical data. In this sense the case study will be what Muñiz (2010) denominates as an instrumental case, in the sense that it will put the created theory to the test. This stage will include qualitative and quantitative approaches –or what is called a methodological triangularization (Muñiz, 2010; Mangan, Lalwani & Gardner, 2004)- by dividing the analysis into the national level and local level contexts.

First, the qualitative approach, which will have a focus on the national level, will help to understand the complete situation by taking a phenomenological perspective (Mangan et al., 2004). In other words, it will help to understand the conditions that creative industries face in the country as a whole including institutional framework such as laws and regulations, demand conditions, the related industries' performance, international cooperation, etc. Second, the quantitative perspective, done at the regional level, will be guided by a positivistic approach in which a series of hypotheses will be formulated and tested following statistical methods (Mangan et al., 2004). This perspective will help to determine the existence of clusters at the level of regional states or departments (as generally

called in Colombia) and the factors that may contribute to their emergence and growth. Finally, the aggregate of the results obtained through the double-approach method will not only contribute to the testing of the model, but also to its adjustment if necessary.

4.2 Data

The case study will use secondary data published by different governmental agents in Colombia. For the national evaluation, the information collected comes from a document review of official sources - including different publications made by governmental entities, international organizations, other countries' embassies, and official reports.

On the other hand, the information used for the quantitative approach comes from an own constructed dataset, which is the aggregate of a variety of databases of public domain and published by different governmental agencies that collected cultural and creative industries' information. Therefore, the 33 geographical departments of Colombia were used as the merging reference. The sources of the information include: the National Report for the Orange Economy for the year 2019 (DANE, 2019), the Management Report of the Colombian Ministry of Culture for the year 2017 (MinCultura et al., 2017), information from the National Administrative Department of Statistics (DANE) (DANE, n.d.-b), the National Satellite Account of Culture and Orange Economy (CSCEN, 2019), and the Colombian Bank of the Republic (BanRep, 2019).

As a result, the database only includes variables or proxies that will help to understand the existence of clusters according to the model constructed in section 3. The justification of each one of the following parameters will be covered later, however it is important to mention the sources of each one of them.

First, the location quotient data for the year 2017 is obtained from BanRep (2019) database and the DANE website (DANE, n.d.-a). The information on related industries was obtained according to the following considerations: The number of higher education establishments was taken from a publication of the Colombian Ministry of Education (MEN, 2016), the number of Internet subscriptions was taken from the Quarterly ICT Newsletter of 2018- published by the Colombian Ministry of Information and Communication Technologies (MINTIC, 2018, p. 49), and the percentage of hotel occupancy was found in the website of the Colombian Ministry of Commerce, Industry and Tourism (MINCIT) (MinCIT, n.d.).

Similarly, the number of music schools and movie theaters was taken from the National Satellite Account of Culture and Orange Economy (CSCEN, 2019). Additionally, the number of active museums was taken from the webpage of the Information System of Colombian Museums (SIMCO, n.d.) and the number of cultural programs funded by the government was obtained from a publication of the Ministry of Culture of Colombia (MinCultura et al., 2017, p. 15).

Finally, the quantity of graduated students in cultural and creative programs for the year 2017 was taken from the National Information System of Higher Education of the Colombian Ministry of Education (MEN, n.d), and the number of foreign visitors for that same year was found in the website of the Colombian MINCIT (MinCIT, n.d.). All of the variables include observations for the 33 regional divisions of Colombia; 32 departments and the capital city Bogota that is counted as another independent region.

4.3 Measurement and hypotheses building

As previously mentioned in order to analyze the existing environment in Colombia, the first part of the case study will present a deep descriptive analysis; at the national level. Consequently, the aspects that were identified as crucial for the

existence of the industry -including demand, institutions and international collaboration- will be considered and summarized.

Likewise, the second part of the case will focus on the sub-regions in an attempt to identify cultural and creative clusters within the country and the local conditions that may have allowed the presence of these agglomerations in particular areas.

In this sense, the independent variable of the second part of the study is the existence of an agglomeration of CCI. To measure it, I will use the Location Quotient (LQ), as it is a tool that measures if a particular industry is spatially concentrated by accounting to the employment of that industry in that specific location (Fracasso & Vittucci-Marzetti, 2018). The formula for calculating the LQ is the following:

$$LQ = \frac{\frac{Industry\ employment\ in\ the\ region}{Total\ employment\ in\ the\ region}}{\frac{Industry\ employment\ in\ the\ country}{Total\ employment\ in\ the\ country}}$$

Unfortunately, the data for calculating the location quotient is not complete for Colombia. Some of the information in CCI has been collected exclusively at the country level and this is the case for the employment of the industry, which was aggregated at the national level making information unavailable for each one of the departments independently. However, the national government has published information on the Gross Domestic Product (GDP) that each sector of the economy produces at both local and national levels, meaning that the LQ in this research will be adjusted and calculated using the following formula:

$$Adjusted\ LQ = \frac{\frac{Industry\ GDP\ in\ the\ region}{Region's\ GDP}}{\frac{Industry\ GDP\ in\ the\ country}{National\ GDP}}$$

The Industry GDP in the region shows the total value of the goods and services produced by the cultural and creative sector in a particular region; the Region's GDP is the total value of all goods and services produced by all economic sectors in the region; the Industry GDP in the country is equivalent to the total value of the cultural and creative goods and services produced in the whole country; and the National GDP is the total value of the goods and services from all economic activities in the country.

In order to have a more robust analysis, I will be using two independent variables to test the model. The first one will be the result obtained by using the adjusted LQ formula, and the second one is a binary variable -named Agglomeration- derivative from the LQ in the following way. If the resulting value of the LQ is equal or greater than 1, the Agglomeration variable will take a value of 1. If the LQ value is less than 1, then the Agglomeration variable will take a value of 0. This because the ratio of 1 or more would mean that the participation of the creative sector in the GDP for that region is more important than the participation of the industry in the national GDP. Subsequently, it could be assumed that the sector is important for that location and therefore it is highly probable that a cultural and creative agglomeration is located in that region.

With respect to the enabling conditions of the environment – or the explanatory variables- the model states that the presence of related industries is important for the development of a creative and cultural cluster. The top three industries are digital services, tourism and education. Their development in each region will be measured in the following way. First by using the number of Internet subscriptions, which is the tool that the Colombian government uses as a proxy for ITC- (CRC, 2017). Second, by using the percentage of hotel occupancy because this rate measures success in the industry (Jeffrey et al, 2002; Jeffrey & Barden, 2000a), the internal success of a firm in the sector (Abdullah & Haan, 2012)- and in general the performance of the industry (Jeffrey & Barden, 2000b). Finally the number of higher education establishments in the region will be a proxy to the growth of the

education industry because the existence of higher education is vital to the development of a country (OECD, 2018) and in Colombia they are focusing in increasing its level of coverage (Ibid). One of the indicators they are using to measure the progress and foster regional growth is the quantity of higher education establishments in an area (MEN, 2015). This variable is also used by Melo-Becerra et al, (2017) as a proxy to measure coverage in Colombian education. In this sense the proposal is the following:

H1: The higher the development of the three related industries, the more likely it is that there exists a cultural and creative cluster in the region.

In terms of institutions, it was found that both local and national -formal and informal- are necessary. The national institutions will be covered in the first section of the study by addressing particular laws and regulations in place, as well as government policies to support the industry such as enforcing IPP and trust promotion. As for the local ones, the model shows that governments need to promote adequate infrastructure and funding in human capital.

In order to measure infrastructure, the European Commission (2017) uses the quantity of museums, cinema seats, and cultural buildings to measure cultural venues and facilities. In the case of Colombia the infrastructure at the local level will be the aggregate of the museums, movie theaters and music schools in the respective regions. On the other hand, the funding in human capital will be represented by the number of creative projects supported by the government in each region. These projects are a way of obtaining funding for artistic training programs and cultural entrepreneurial workshops, which in the end translate into human capital and foster trust in the society- potentiating sustainability (MinCultura et al., 2017).

As a consequence, the hypotheses raised are:

H2a: The better the infrastructure in the region – in other words more music schools, more chairs in movie theaters and more museums-, the more likely is that this region has a cultural and creative cluster

H2b: The stronger the institutional presence -measured by the involvement of the government in local projects-, the more likely is that this region has a cultural and creative cluster

The third component proposed by the model has to do with science and education in cultural and creative skills. The European Commission (2017) uses the number of graduates in arts and humanities' programs to evaluate the presence of education entities. In the case of Colombia, the number of graduates per region in what the government denotes as 'fine arts' programs will be the variable used. This category includes the graduated students from programs such as design, music, visual arts, performing arts, and plastic arts, among others. In this sense the proposed hypothesis states:

H3: The higher the number of graduated students in 'fine arts' programs in the region, the higher the probability that the region has a cultural and creative cluster

Finally, a lot of importance was given to international linkages with other countries, organizations, etc., for the development of the creative cluster. The European Commission (2017) proposes that the number of international passenger flights can be a proxy to international linkages of the creative cities. However, not all of the regions in Colombia have international airports, which does not mean that they do not receive international visitors through other means of transportation. As a result, for this particular case, the international linkages will be measured by the quantity of foreign visitors to each one of the regions. The hypothesis raised for this component is the following:

H4: The higher the international linkages in a particular region, represented by the number of international visitors, the more likely is that this region has a cultural and creative cluster

In order to test these hypotheses, I will run both a multiple linear regression and a logistic regression. The first one will have the estimated location quotient as the dependent variable- as it is continues numerical-, while the logistic regression will have the Agglomeration variable as the dependent variable – because as explained earlier it is binary.

Now that the methodology and hypotheses have been presented, section 5 will present the qualitative and quantitative evaluations of the creative sector in Colombia according to the model.

5. Case Study

5.1 Colombia's National Perspective – Qualitative assessment

5.1.1 Overview of Colombia

Colombia is a Latin American country with approximately 49 million citizens and a GDP of US 330,000 billion according to the World Bank[1]. Most of the Colombian population – the 76%- lives in the urban areas (OECD, 2016) and there is a very high level of wealth concentration in some specific territories (Ibid). According to the OECD, Colombia is one of the oldest and most stable democracies in Latin America and the 32 departments –as well as the capital city Bogota- have administrative and financial autonomy (Ibid).

This country is rich in natural resources- as other South American countries- and has a very varied topography. The three mountain ranges that cross the country from South to North and the extensive plain in the eastern side of the country, has made it suitable for agriculture -due to the highly diversified climates- and cattle raising[2]. However, the landscape has also proved to be a source of inconveniences

[1] Retrieved from https://data.worldbank.org/country/colombia
[2]Retrieved from https://www.worldbank.org/en/news/feature/2018/03/16/el-enfoque-de-la-agricultura-climaticamente-inteligente-la-ultima-frontera-agropecuaria-de-colombia

because it hinders connections between different locations within the territory and as a consequence some areas have become extremely isolated.

This disconnection makes controlling and monitoring the area to be somewhat hard (Radinger et a., 2018) and that is why this South American country has faced many years of violence and war within its borders. This intern conflict of almost 50 years had a negative impact towards the social and economic development of the country (OECD, 2016). It increased inequality, generated forced movements of people, and consumed many economic resources. But the country has managed to survive and in 2016 the government signed a Peace Treaty[3] with one of the biggest armed groups of the country, giving the Colombian citizens some hope towards the future.

In terms of the business environment, the Global Entrepreneurship Monitor has collected information from businessmen in Colombia (See Appendix A). The results for 2018 show that while the respondents believe that this country has sufficient physical infrastructure and entrepreneurial education at post school stage, items such as cultural and social norms, commercial and legal infrastructure, and government entrepreneurship programs appear to have an average level. Unfortunately, other aspects such as entrepreneurial finance, entry regulations, internal market dynamics, R&D transfers, entrepreneurial education at school stage, and governmental policies -in terms of support, relevance, taxes and bureaucracy- are perceived as insufficient by the entrepreneurs surveyed.

As per the creative sector, the industry was facing the same challenges of the Latin American region. It was getting little attention (Duque & Buitrago, 2013) and it was considered to be a challenging sector due to incertitude, difficulty in planning, complex production processes, and very long periods to recover initial investments (MinCultura, n.d.). With the election of Ivan Duque Márquez as president of the

[3] https://www.nytimes.com/2019/05/17/world/americas/colombia-farc-peace-deal.html

Republic of Colombia in August 2018, the 'Orange Economy' was included as part of the governing agenda- referring to cultural and creative goods and services. He and the current Colombian Counsellor for Economic and Strategic Affairs- Felipe Buitrago- developed a study around this topic when they were both working for the IDB in 2013 (Duque & Buitrago, 2013).

Even if these types of industries have always made part of Colombian activities, it is the first time that the government is actively involved in promoting them (GC, 2019). The president wants to support the national talent and facilitate exchanges with other Latin American countries (Martinez, 2017) in order to help Colombia transition into the knowledge based economy (GC, 2019). His strategy focuses on three pillars: knowledge, opportunities and promotion -by the implementation of certain tools denominated as 7is: information, institutions, infrastructure, industry, integration, inclusion and inspiration (Ibid). In the end, the Orange Economy seeks to develop cultural policies that promote sustainable development, poverty reduction, and incentivize South-South cooperation (MinCultura et al., 2017).

5.1.2 Defining the Orange Economy in the Colombian context

According to Duque & Buitrago (2013) the Orange Economy "encompasses talent, intellectual property, interconnectedness and cultural heritage of Latin America and the Caribbean region" (p. 8). It is divided between creative goods and creative services and is constituted by three subcategories: arts and heritage; conventional cultural industries; and functional creations, new media and software (Duque & Buitrago, 2013).

Following this framework, the Colombian government defined the Orange Economy as the set of chained activities that transform ideas into cultural and creative goods and services, and whose value is determined by the content of intellectual property (GC, 2019; DANE, 2019). They adopted the subdivision of 'Arts

and Patrimony', 'Conventional Cultural Industries', and 'Functional Creations, New Media and Software' from the IDB. They categorized 32 activities in a full way and 69 in a partial way as part of the Orange Economy- by considering the International Standard Industrial Classification system (CIIU- for its name in Spanish) (DANE, 2019) (See Appendix B).

The first category –Arts and Patrimony- refers to the creative production, promotion and participation of live performance, events and expositions (DANE, 2019; Duque & Buitrago, 2013). The second one – Conventional Cultural Industries- includes activities that provide goods and services of symbolic content, both artistic and creative, that can be reproduced, massively diffused, and have had a traditional relation with culture (Ibid). Finally, the Functional Creations category makes reference to those activities that are not commonly related to culture but have symbolic value and are generally protected by property rights (DANE, 2019) (Appendix C).

It is also important to mention that Colombia also makes a distinction between creative industries and cultural industries, as the first ones are mainly viewed as a social and monetary recognition of artists, while the second ones have a double nature (MinCultural, n.d)- first they allow ideas, symbolic content and values to be transmitted, and second they follow economic conditions of commerce and production (Ibid).

As previously mentioned, the Orange Strategy aims at both incorporating Colombia into the forth-industrial revolution (GC, 2019), and promoting the industry. In the past the Colombian creative sector faced (1) weak demand at the local and national levels, (2) constraining economic conditions, and (3) little awareness of products with small commercial content (MinCultura et al., 2017). The Orange Economy seeks to commercialize the Colombian creative products under only one label 'Crea Colombia', in order to highlight national identity and its distinctive value (MinCultura 2019a).

Sections 5.1.1 and 5.1.2 have given the necessary context to build the case study around this country. The following sections will present the necessary information to evaluate the components of the model at the national level.

5.1.3 Outline of the Orange Economy's related industries

As previously explained, the three industries that are most related to the creative and cultural ones are: digital industries, tourism and education. Therefore it is important to make an evaluation of the current state of these other industries in Colombia to establish if their development has had an impact on the creative sector's development.

In terms of ICT Colombia has modernized its systems to keep ahead with the global trends (CRC, 2017). The country has tried to amplify its connectivity regarding Internet connections and by the year 2017, 62,3% of the inhabitants had Internet access (Ibid). However, as other sectors of the country, ICT suffer from profound disparities and the rural areas are still behind in terms of connectivity (CRC, 2017). But the government is investing time and resources to foster growth and innovation in this important sector.

According to the Organization of American States (OAS) during the previous administration, the budget intended for science, technology and innovation increased significantly, and as a result Colombia was ranked as the fifth most innovative country in Latin America in the year 2017[4]. In fact, the entrepreneurial and educational sectors have benefit the most from the now accessible technology;

[4] http://www.oas.org/en/sedi/desd/stm/2017/about-co.asp

enterprises use digital technologies everyday to perform their daily tasks and higher education establishments are increasing the access for their students (Ibid).

Nevertheless, the efforts towards improving the national education go beyond the access to the latest technologies. Beginning in the 2000's Colombia started to focus on increasing the number of students matriculated in all of the academic levels (OECD, 2016). This because even if education is a right for all Colombian citizens -as stated in the General Law of Education of 1994 and the 1991 Political Constitution (Ibid)-, in reality not everyone can exercise this right. There are many reasons that explain this situation, starting with the topography that hinders communication between regions (Radinger et al., 2018), continuing with Colombia's small public sector that is not enough to provide the adequate quantity of public services (OECD, 2016), and finalizing with the unfortunate and still current problem of corruption (Ibid) -that diverts the funds initially intended for education.

But the government and the Ministry of National Education (MEN – for its name in Spanish) know what type of weaknesses and challenges they have to address. They benefit from a very large quantity of actors that are currently involved in the education sector (OECD, 2016) and who will be crucial for the following goals. Achieve quality education (MEN, 2013), close the existing gap between the different territories (Ibid) and between the public and private entities (OECD, 2016), and finally attain the objective of being Latin America's best-educated country by 2025 (OECD, 2016).

As a consequence, political agents have already started to implement different strategies in order to accomplish these targets. For instance, 'Ser Pilo Paga' was a program from the previous presidential agenda, in which the government financed higher education for academically outstanding students that could not afford to pay the tuitions due to unfavourable economic conditions (Radinger et al., 2018). Moreover, the authorities envision a transformation in the whole education system that will be in place until the year 2034, and includes coverage expansions

(MEN, 2013; Radinger et al., 2018), strategies to help students transition from high school to higher education (Radinger et al., 2018), and new agendas working towards having more flexible and integrated graduate education programs that generate knowledge, technology and innovation (MEN, 2013).

Finally, the last of the top 3 sectors –tourism- has stood out by being one of the most dynamic sectors in the country between the years 2010 and 2018 (MinCIT, 2018b), and there has been a very large increase in the number of foreign visitors to the country (Ibid). It is no secret that Colombia's intern conflict created a negative country-image during the 80's and 90's, however with the government's 'democratic security' plan between 2002 and 2010, tourism increased. With this strategy the national highways began to be protected by militaries and a massive marketing campaign was put in place in order to make Colombia attractive again (MinCIT, 2018b). The New York Times even published an article mentioning Colombia as one of the principal destinations to visit in 2018 (Ibid).

But it does not stop there, Colombia also wants to position itself in the sector of Meetings, Incentives, Congress and Exhibitions (MICE) tourism (MinCIT, 2018a). It wants to compete with other Latin American countries and be the leader for this type of tourism by 2027. In order to make this possible, different entities have invested in infrastructure, increased the connectivity and technology, and promoted top of mind campaigns (Ibid), which have amplified the number of events held in the country from 38 in 2008 to 160 in 2016 (Ibid).

5.1.4 Institutional Perspective

Apart from the development of related industries, the model proposes institutions as another factor to explain the performance of CCI; component that will be presented in this section.

Notwithstanding the current political agenda in Colombia has made a strong emphasis in developing the cultural and creative sector through different policies, the basis for the development and promotion of the industry was established a few decades back.

Legislative Framework

The first time that culture was included in Colombian official documents was in the 1991 political constitution (Min Cultura et al., 2017). This document was not only the initial trigger for subsequent cultural policies, but was key to the recognition of the multiculturalism and pluralism of the territory and its inhabitants, and it categorized culture as both the foundation and engine of economic and social development (MinCultura et al., 2017). Furthermore, by including this component in the legislation it allowed cities, departments and the country as a whole to integrate culture into the different development plans and agendas (UNESCO, n.d. –a).

After this first step, many other laws were built around CCI. For example, in 1997 the General Law of culture came into place (MinCultura, n.d). With this law, culture was recognized as universal right for Colombian citizens -and the government explicitly committed itself for the funding (Ibid). Additionally, the Ministry of Culture was created (Martinez, 2017), and the goods and values that were symbol of Colombian nationality began to be openly recognized as cultural patrimony (DANE, 2019).

Moreover, the generation of a National Cultural plan during the period 2001 to 2010 was a crucial tool for the creative and cultural sector, because public entities became involved in executing productivity and competitiveness policies to foster the industry (MinCultura, n.d.). However, Colombian representatives knew that other strategies needed to emerge, and their initiatives to potentiate the culture were accompanied by the creation of other important laws addressing micro, small and medium enterprises (Law 590 of 2000) (Ibid); as well as the promotion of

entrepreneurship training and formal education systems (Law 1014 of 2006) (Ibid). Lastly and as stated by the constitution, the government knew that access to creative products needed to be democratized, so the Ministry of Culture focused on their plan 'Culture for all' during the period 2007 to 2010 (Ibid).

Nevertheless, heterogeneity in the sector started to be evident, as not all of the sub-industries had been equally supported (MinCultura et al., 2017). In fact, the cinematographic industry received considerable attention from the legislative body and elements such as entrepreneurship policies were not the same for other industries such as music, performing arts, visual arts, etc. (Ibid). In order to support the national cinematographic sector, the Cinema Law (Law 814 of 2003) was approved (Garces & Hurtado, 2017; MinCultura et al 2017) and the Colombian territory was advertised as scenario for foreign films by giving monetary incentives to entrepreneurs (Garces & Hurtado, 2017; MinCultura et al., 2017). The international film companies that recorded movies in the Colombian territory were compensated with 40% of the value of their expenses in activities of preproduction, production and postproduction, and 20% in logistic services- when they met certain conditions (Ibid).

Even so, efforts towards other industries' advancements have increased. With Law 1493 of 2011, public spectacles of performing arts were formalized and strengthened (MinCultura et al., 2017). The main goal was to give tax incentives and make administrative transactions simpler, through the generation of a unique platform in 2016 in which the government managed to register producers and creators of public spectacles (Garces & Hurtado 2017; MinCultura et al., 2017). The new available information has contributed to increase transparency, intensify tax collection, and enable the reinvestment of collected resources in the construction and improvement of cultural spaces (Garces & Hurtado, 2017). Unfortunately, this latter outcome has not been as successful as the others. For the year 2017, only 55% of the money raised was actually executed for cultural infrastructure purposes (Garces & Hurtado, 2017)- showing that there is still a lot of work to be done.

By considering in place legislation, it can be stated that Colombia had been establishing the foundations for what was about to happen. This country has always been aware of its cultural richness and has –consequently- invested resources to protect it. However, they are aware that culture also includes their ethnic roots, so they have incentivized diversity and participation of minorities in various media such as radio, TV and digital platforms (Law 1507 of 2012) (MinCultura et al., 2017).

All of these policies and regulations acted as background for the implementation of the 'Orange Law' or Law 1834 in the year 2017 (GC & MinCultura, n.d.; DANE, 2019; GC, 2019). This law has become the central approach of the current government by encouraging activities around intellectual property rights such as brands and patents- previously associated with culture and creativity (DANE, 2019). With this law the economic measurements of culture expanded, policies for the sector were formulated and updated, new financial sources for the sector were found (GC & MinCultura, n.d.), and the National Council of Orange Economy established (CNEN for its name in Spanish) (DANE, 2019).

National Entities- working towards the same objective

Although recently the presidency has been the main agent in the development of the CCI, it has been the participation of other public and private agents that has triggered domestic supply and demand, as well as the export of cultural goods and services (MinCultura, n.d.). Analogously, this same collaboration has allowed the sector to access new forms of financing, find new ways towards cultural entrepreneurship, and improve education and training (Ibid).

For instance, the public entities that have been actively involved are: the Ministry of Culture that received technical assistance and funding from UNESCO, and has been able to design cultural policies (Martinez, 2017) and create scholarships to promote cultural entrepreneurship (GC & MinCultura, n.d.). The Ministry of Information and Communication Technologies (MinTIC- for its name in

Spanish), which has created digitalization programs (Ibid) and integrated culture and technology in different projects such as 'Crea Digital', 'Quioscos Vive digital' and 'Cine para todos' (MinCultura et al., 2017)- projects that will be covered later in the case.

Correspondingly, the MINCIT has been in charged of potentiating mechanisms for funding through partnerships with Bancoldex, which is the Colombian Foreign Trade Bank that promotes firms' productivity and competitiveness, the National Guarantee Fund (Fondo Nacional de Garantías) that is a governmental entity seeking to improve access to funding for SMEs, and iNNpulsa -the Business Growth Management Unit of the National Government created to promote entrepreneurship, innovation and productivity (GC & MinCultura, n.d.; Martinez, 2017). The Ministry of Labour, the MEN and the National Learning Service (SENA) have worked with departmental and municipal governments, as well as with universities and the private sector, to develop creative clusters in different regions (GC & MinCultura, n.d.).

Summing up, it has been the contribution of many actors- the ones already mentioned and others such as the Ministry of Foreign Relations; the MINCIT; the Ministry of Interior; the Treasury; the National Authority of TV and public media; the National Direction of Property Rights (DNDA); the Intellectual Property System (SNPI); the DANE; the National Planning Department (DNP); ProColombia; universities, NGOs, among others- that has nurtured the industry (Mincultura 2019c; Mincultura et al., 2017; DANE, 2019; UNESCO, n.d. –a; Garces & Hurtado, 2017). These actors have been crucial to collect information, share culture and traditions throughout the territory, give education and training on property rights, create appropriate tools for the registration of those rights, and find sponsorships for different cultural projects (MinCultura et al., 2017; Garces & Hurtado, 2017).

5.1.5 Infrastructure

The proposed model of this thesis suggests that while laws and institutions are essential to support any strategy or initiative in the creative and cultural sector, the physical and virtual spaces are equally important to create a link among communities; thus this section covers the existing infrastructure in Colombia.

Since 2017 the Colombian Ministry of Culture has engaged in several projects not only towards constructing and improving existing scenarios, but also towards the protection of real state assets of cultural interest and public spaces in general (Garces & Hurtado, 2017).

Even if this is a centralized process, each territory has the opportunity to participate in an annual contest where they share various proposals to improve different places, create events and strengthen their own cultural infrastructure (Ibid). This process gives a certain degree of autonomy to each region. In these contests the central government is responsible for choosing the winning projects and to make them possible. Therefore it gives technical advice to execute them and also grants tax benefits to those who invest in the construction of zones for the arts (Ibid).

However, the main idea of creating these places for the development and promotion of the arts is to be inclusive and reach several individuals. As a result, physical and digital platforms have been developed to expand the distribution of national and international goods and services belonging to the creative sector (MinCultura et al., 2017). As previously mentioned, Internet and communications for everyone – including indigenous and minorities- make part of the plan. The most representative projects are (1) 'Quioscos Vive Digital', which promotes digital content on artistic expressions and look to preserve the culture, tradition and language (Ibid). (2)'Cine para todos' or Cinema for all, which takes special format movies to twelve cities of the country with no movie theaters, and make the content

suitable for population with visual, hearing and cognitive disabilities (Ibid); they even give workshops and monetary incentives to this population in order for them to create cinematographic projects. And finally (3) 'Crea Digital' is a tool generated to support micro and SMES in the creation of digital content covering topics with cultural and educational emphasis (Ibid).

Furthermore, this thesis has also mentioned that fairs, expositions and other type of events are major contributors to the growth of the sector. These cultural exhibitions have received a lot of support from different actors and include: The International Art Fair (ARTBO) (AP, 2016); the International Book Fair in Bogota (FILBO); the Music and Audio-visual markets (BOMM and BAM) (MinCultura et al., 2017); Art exhibitions in eight cities including photography workshops (Garces & Hurtado, 2017); the Creation in 2009 of the Technical Committee of Competitiveness for creative industries -where public and private actors of the sector can meet and debate (MinCultura, n.d.); and many other events that take place all around the country where music, dance and culture have the main role.

Nevertheless, all of this support would not have been possible without the appropriate information at both local and national level. To put it differently, it is not enough to have physical infrastructure without digital one. As a matter of fact Colombia is leader in having cultural statistics (UNESCO, n.d. –a), which have been collected since 1999 (DANE, 2019). During this year, many sectorial and national investigations took place in order to make an initial judgement on the panorama of the CCI concerning economic and social development (Ibid).

Later on, starting in 2002 the economic cultural activities were measured and the National Satellite Account of Culture was designed (DANE, 2019; MinCultura et al., 2017). The first approach of this account was towards activities that had to do with creation, transmission, diffusion, consumption and appropriation of symbolic content associated with art and patrimony (Ibid). But overtime and with the Orange Law, it expanded to incorporate Orange Economy activities and was renamed

'Satellite Account of Culture and Orange Economy'. This account and the Cultural Consumption Survey have been key for the development of the information system in Orange Economy that has guided the public policies for the sector (Ibid).

According to the information collected in 2017, the 1.8% of national firms was part of the Orange Economy. From those, the 10.9% corresponded to manufacturing enterprises, while the remaining 89.1% were services enterprises. All of them belonged to the micro, small and medium firms category, mostly having independent workers and operating primarily at a local level (DANE, 2019).

5.1.6 Training and Education

Recapitulating the four components suggested by the model, the following factor to evaluate should be science and education.

In Colombia, the training and education in CCI is the sum of both informal and professional programs and tools (Velez, 2013). Some academic programs in cultural management have emerged in various parts of the country (MinCultura et al., 2017); however they are highly concentrated in five cities: Bogota, Medellin, Cali, Manizales and Cartagena (Velez, 2013). The main contributors towards the creation of these courses, master programs and training sessions to support the Orange Economy are Universities.

For instance, Andes University offered a course in Orange Economy during the second semester of 2018 with the objective of incorporating economic analysis and administrative management in creative and entertainment industries (Uniandes, 2018); El Bosque University created a Master's Degree in Design for Creative and Cultural Industries (Universidad El Bosque, 2017); and the Sabana University included the Orange Economy in their annual FIAfest- an event that promotes students audio-visual works and gives tools for them to develop

multimedia communication (UniSabana, 2019). Furthermore, El Rosario University has created programs in cultural management and EAN University has both undergraduate and graduate programs in Culture (Velez, 2013). Other institutions worth to be mentioned are: the National University in Manizales, the Antioquia University in Medellin and the Bolivar Technical University in Cartagena; all of them with academic programs emphasized in cultural entrepreneurship (Ibid).

Nonetheless, these programs are only accessible to people that can pay for them. So the government itself has developed different public trainings to teach abilities in cultural entrepreneurship, generation and management of new funding sources, and research and development (Garces & Hurtado, 2017; MinCultura et al., 2017). These programs constitute the informal component of training and education in Colombia.

For instance, music education has been expanded throughout the territory with the establishment of music schools, the provision of musical instruments and the training of teachers with the help of BATUTA -an organization that brings musical education to Colombian children and teenagers in less favourable economic conditions (Garces & Hurtado, 2017). The government has also given technical assistance and accompaniment to several organizations to incubate and accelerate business ideas, and to have access to credit and initial capital (Ibid). But as their core motto is to be inclusive, they have created special programs for indigenous, minorities and less privileged population; this is the case of craft women who are receiving training in cultural entrepreneurship, weaving techniques, and product design (MinCultura et al., 2017).

Up to now, information on three of the four components of the model has been shown. The subsequent section will focus on international cooperation and linkages established by Colombia.

5.1.7 International partnerships and support

Even if the Colombian government has played the major role in developing the industry by giving tax incentives, providing infrastructure and training, and generating a legislative framework that supports the cultural and creative sector, the state has also received a very important contribution from a wide range of international entities and governments that have put their experience and resources at the disposal of the country. These international agents come from different parts of the world and from scenarios that include developed and less developed regions.

South-South Cooperation

For Colombia, it is a priority to establish alliances and promote cooperation with other countries in the South American region and that is why it has actively participated in several mechanisms of regional integration around culture (MinCultura et al., 2017).

One of these integration mechanisms is the 'Alianza del Pacífico' (Pacific Alliance) in which apart from Colombia, countries such as Chile, Mexico and Peru participate. This alliance was constituted in 2012 to promote growth, development and competitiveness of the participating members through the flow of goods, services, capital and people between these four countries (AP, 2016). However, they noticed that cultural and creative industries were not always considered in multilateral FTAs (Ibid) and as a consequence, the 'Alianza del Pacifico' established a technical group around culture with the aim of protecting, preserving and diffusing the cultural patrimony of its four members (MinCultura et al., 2017).

Additionally, Colombia makes part of the 'Comunidad Andina' (Andean Community), as well as Bolivia, Ecuador and Peru. Within this international cooperation group, an Andean normative was established in order to fight illegal traffic of cultural goods, protect each country's patrimony, and promote the creative

sector (AP, 2016). The participating agents are the Ministers of Culture of each of the countries, and their aim is to foster the orange economy in Latin America through joint artistic programs, scholarships, a common fund, and the celebration of the Andean Cultural Week as part of the partnership (Ibid).

Similarly, Colombia established a permanent exchange network with Peru and Uruguay to incentivize the flow of cultural goods and services, knowledge sharing, and contact with experts from the other countries (MinCultura et al., 2017). They created special trainings and are promoting collaborative works in music (Ibid).

Yet the country's alliances within the Latin American region go beyond cooperation groups. In an attempt to have a common statistical ground on culture measurements, in 2006 Argentina coordinated the building of the Cultural Information System for Latin American Countries (SICSUR -for its name in Spanish) and Colombia has been present and actively collaborative since the beginning; by sharing its experience (MinCultura et al., 2017).

As mentioned before, Latin America is not highly integrated, which makes cultural and creative content distribution difficult throughout the area. Thus, in 2016, Colombia became the leader of 'Retina Latina'- a cinematographic platform intended to ease the distribution of movies and promote coproduction (Ibid) in Latin America. This tool gives free access to the citizens from Colombia, Bolivia, Ecuador, Mexico and Peru to watch regionally produced movies.

On the other hand, there exists a coproduction network for feature films among the countries of SICSUR. Colombia's coproduction network during the period 2006-2016 is shown in Figure 4. This diagram is the evidence of the numerous alliances that the country made. The green dots represent co-productions involving SICSUR countries only, and the blue dots represent co-productions where third countries outside the region participated too.

Continuing with the efforts to ease commercialization, the countries of the region created the Cultural Industries' Market for Latin American Countries (MICSUR) (MinCultura et al., 2017; AP, 2016). In this market they distribute assorted cultural content including performing arts, audio-visuals, design, editorial, music, animation and videogames (Mincultura et al., 2017). The first edition of this market took place in 2014 in Mar del Plata, Argentina, and the second edition took place in 2016 in Bogota, Colombia (Ibid).

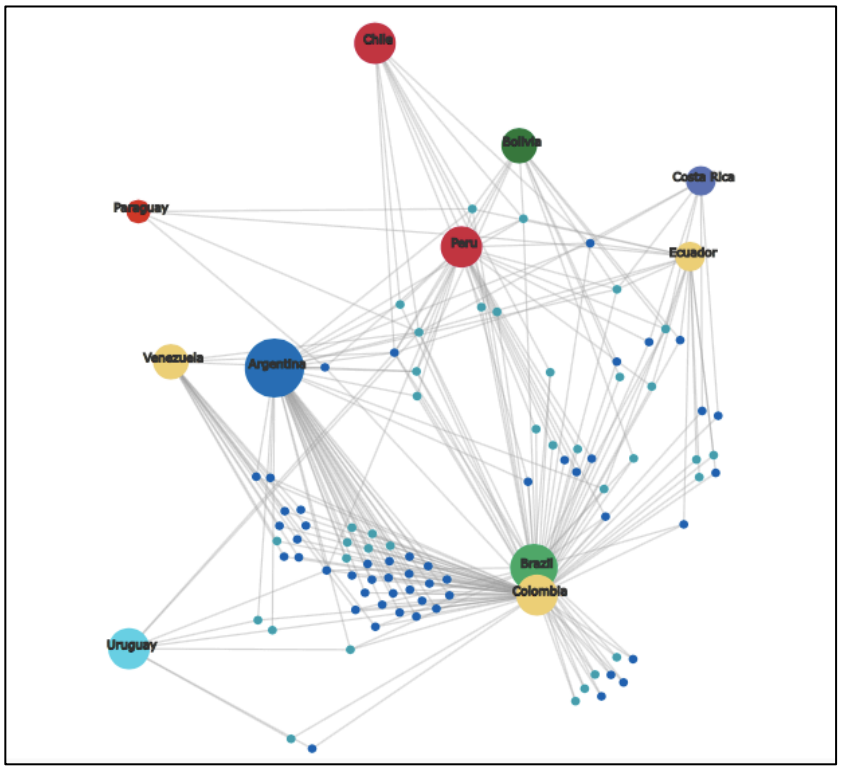

Figure 4- Colombia's co-production network of feature films
Retrieved from SICSUR (n.d)

Developed countries' role in Colombia's development

The literature review stated the importance of international linkages with developed countries. Therefore, it is important to know if Colombia has received assistance from other countries and entities beyond Latin America to achieve their goals.

As a matter of fact, in the year 2013 Colombia joined the 2005 Convention from UNESCO regarding protection and promotion of cultural expressions' diversity (MinCultura et al., 2017). The convention's goal is to assure that cultural actors and the population in general can produce, enjoy and have access to cultural goods and services- through international cooperation[5]- by helping less developed economies in their efforts to create and reinforce their cultural processes (Ibid).

Apart from this, UNESCO created the Cultural Indicators for Development between the years 2009 and 2013, which Colombia implemented during the period of 2011 to 2014 (UNESCO, n.d. –a). This participation was very important for the country because it gave direction in the creation of the appropriate measurement tools to analyze the industry and quantify its economic contribution (Ibid). Besides, Colombia received help from UNESCO's International Fund for Cultural Diversity (IFCD) (Garces & Hurtado, 2017); a fund aimed at reducing poverty and helping sustainable development in developing countries by supporting the formation of a dynamic cultural sector (UNESCO, n.d. – b).

Similarly, other entities have been very supportive towards the Colombian creative sector. For instance, the European Union funded the Colombian radio project for peace (MinCultura et al., 2017), the Bill & Melinda Gates organization helped with the development of public libraries and technological endowment (Ibid), and Japan has given material resources since 1982 to support education and cultural projects through infrastructure and equipment (EJC, 2016). The cooperation has also been evident in the bilateral FTAs that Colombia has with both United States and Europe in which clauses to protect the national cultural content, tradition and ethnic minorities were included (MinCultura et al., 2017).

[5] https://en.unesco.org/creativity/convention

However, cooperation is not unidirectional. Bilateral collaboration with France during the Colombia-France year in 2017 included a cultural agenda with various co-creation projects and the participation of France in different Colombian events such as the International Book Fair in Bogota, the Biennial Photographic Fair in Bogota, the Image Festival in Manizales, and the International Film Festival in Cartagena (FEB, 2017).

Similarly, there exists an Ibero-American cinematographic agreement, envisioned as a development and integration instrument to guarantee equitable participation of member countries in regional film activities (MinCultura et al., 2017; APCI, 2016). Two comparable agreements are in place between Colombia and other nations. The first one involves France's collaboration in the cinematographic productions. And the second one has to do with an audio-visual coproduction arrangement with Canada in which the two countries have agreed to share resources – monetary, technical, creative and artistic- in the generation of films and TV content (Ibid).

Similarly, the Ministry of Culture has had a vital role in supporting the internationalization strategies of different Colombian groups by promoting their participation in worldwide events such as the World Music Expo Womex in 2017 held in Poland, the MaMA Festival and Convention from 2017 in Paris, and the Arts Festival of Valparaiso in Chile 2018 (Garces & Hurtado, 2017).

But Colombia is still finding new partners and ways to potentiate its creative sector abroad. This year (2019) it held different meetings with the Binational Chambers of Commerce from Germany, China, Brazil, UK, France, Italy, Japan, Turkey, among others (MinCultura, 2019c)-, to establish strategic partnerships for the cultural sector. In one of these meetings the Korean-Colombian Chamber of Commerce committed itself to contribute actively with technological and economic resources to potentiate Colombia's plans towards the Orange Economy (Ibid).

Finally, during February of 2019 the Canadian Mission led by the Ministry of Canadian Heritage and constituted by the representatives of the federal government and the provinces of Yukon and Quebec, as well as cultural and creative agencies and enterprises, visited Colombia (MinCultura, 2019b). The aim of these meetings was to find areas of collaboration, present Colombia's agenda for the Orange Economy and learn about the Canadian Export Strategy for the creative industries (MinCultura, 2019b). Furthermore, interactions between Colombian and Canadian creative individuals and firms took place, in order to foster potential partnerships in sectors such as music, film, TV, visual effects, animations, museums, performing arts, among others (Ibid).

5.1.8 Quantifying national production and demand for cultural and creative products

As previously mentioned, the last component of the model that conditions the existence of CCI has to do with local demand for the cultural and creative goods and services. This section will present both the supply and demand sides in order to understand this factor.

To evaluate this part, it is important to remember that Colombia divided the Orange Economy according to the three subcategories delimited by the IDB study in 2013, because the collection of the information has been done according to these parameters. Figure 5 shows the total production (supply) of each of the subgroups – Arts & Patrimony, Conventional Cultural Industries, and Functional Creations.

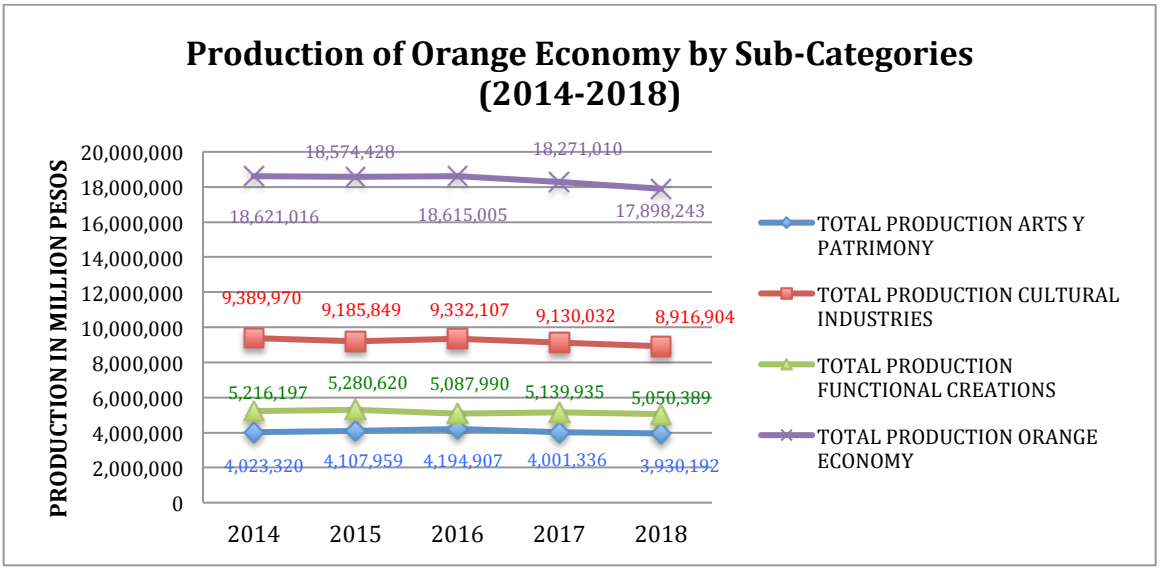

Figure 5- Colombian National Production of cultural and creative products by subcategories for the period 2014-2018
Author's own creation using CSCEN (2019) data

It can be observed that in general, the production of the three groups has been very stable during the period 2014-2018 with slight variations. However the total production of cultural industries (in red) has suffered the highest decrease if compared to the other two groups. The overall behaviour shows that the total production of the Orange Economy decreased from the year 2014 to the year 2018, but as shown in figure 6 it does not mean that the industry is less important. On the contrary, the contribution towards the national GDP has gone from 2.33% to 2.438% during the same period.

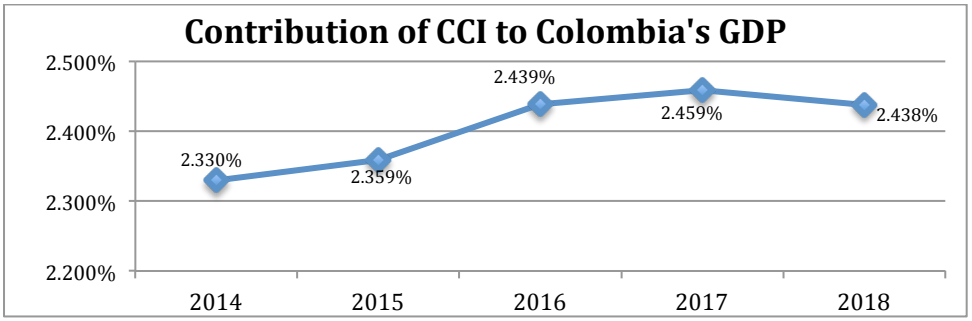

Figure 6- Contribution of Cultural and Creative Industries to Colombia's GDP for the period 2014-2018
Author's own creation using Banrep (2019) data

Following with the demand side, Figures 7, 8 and 9 show the consumption of the products of the Orange Economy in Colombia between the years 2010 and 2017. First, Figure 7 displays information regarding Presentations and Live Spectacles. When considering the yearly percentages for each subgroup measured within this category, it is evident that there has been a general decrease of the consumption of Presentations and Spectacles between the years 2010 and 2012, and a slow recovery from 2012 to 2017. The group of activities with the highest demand within this segment for the year 2017 are assistance to music presentations, followed by artisanal fairs and expositions; while the lowest demand is for books and audio-visual festivals.

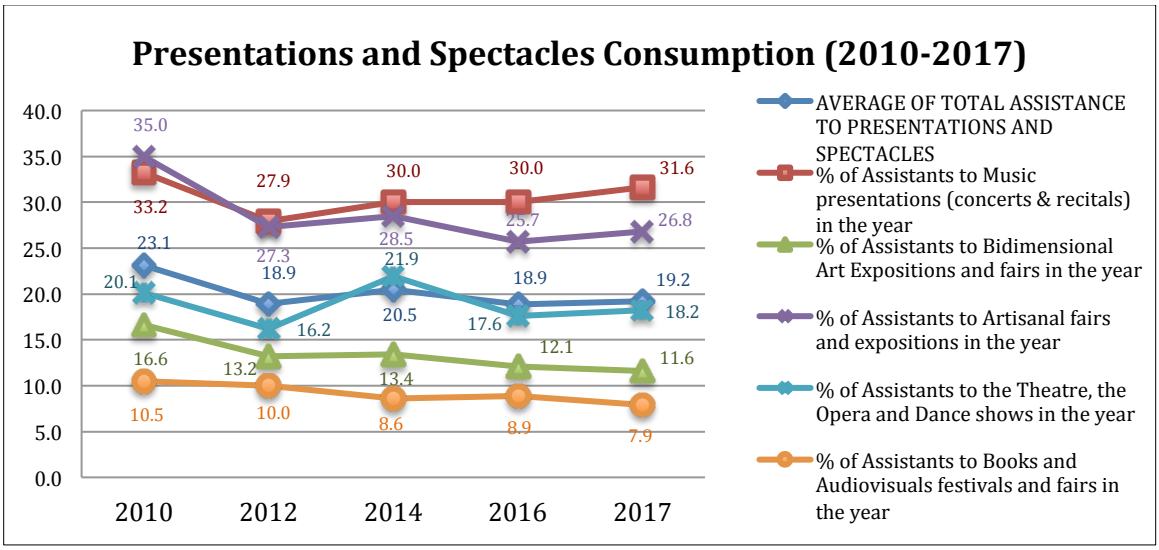

Figure 7-Presentations and Spectacles consumption for the period 2010-2017
Author's own creation using DANE (n.d.-b)

On the other hand, Figures 8 and 9 present information concerning Audio-visual and Cultural Spaces Consumption for the same period of time. The item with the highest consumption within the Audio-visual category is TV, followed by radio, recorded music and cinema; and the least demanded is videogames. As per the category of Cultural Spaces libraries are the areas with the highest quantity of assistants, followed by museums, and lastly galleries and exposition halls. The trends show that TV, recorded music and videogames consumption has been mostly

stable throughout the years, while radio consumption and assistance to libraries, galleries and expositions, and museums have decreased. In sum the only item that has shown a noteworthy increase in demand- by comparing the percentages from the years 2010 and 2017 - is the cinematographic one measured by the assistance to the cinema.

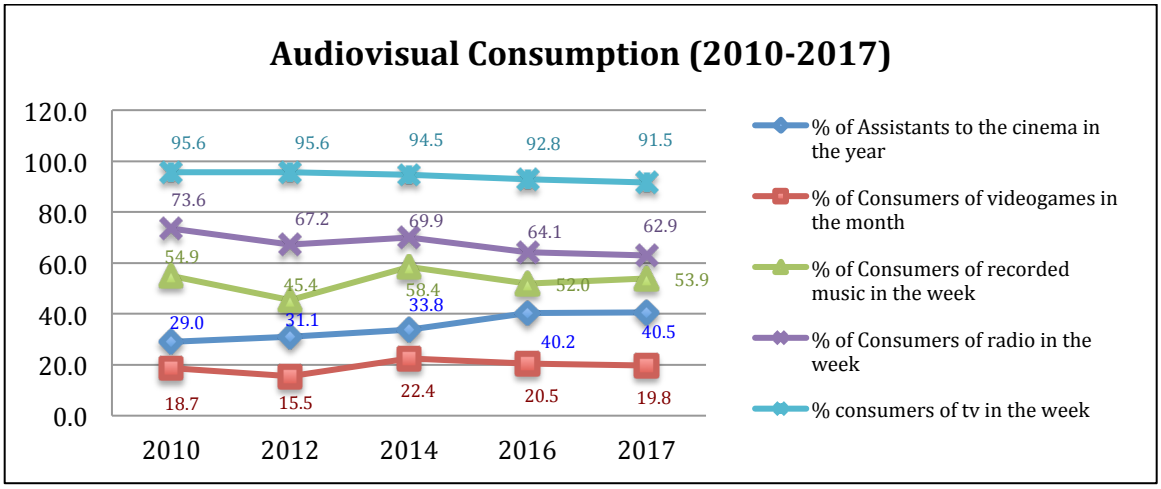

Figure 8- Audio-visual consumption for the period 2010-2017
Author's own creation using DANE (n.d.-b)

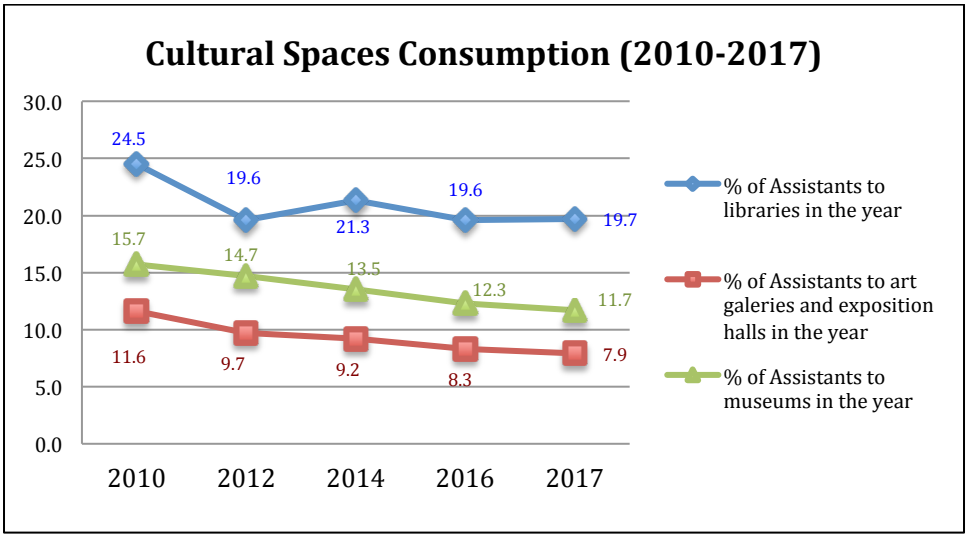

Figure 9- Cultural Spaces consumption for the period 2010-2017
Author's own creation using DANE (n.d.-b)

By analyzing the graphics presented in this section, it can be said that the consumption of the majority of the CCI products has decreased during the period

2010 and 2017, which might explain the interest of the new government to promote the industry by making it a key part of the governing agenda for the following four years (2018-2022); the period of time that a presidency lasts in Colombia.

5.1.9 Summarizing the government's action plan through the 7is of the Orange Economy

The previous descriptive analysis was the result of the incorporation of the components of the model presented in Section 3 to the creative and cultural information found for Colombia. However it is important to summarize the national plan through the seven items (7is) that are guiding Colombia's agenda for the development of the CCI.

Through the collection of relevant (1) information, they plan to measure the economic contribution of the sector. The data should include national as well as local statistics (GC, 2019) and the process of collection and mapping has to be done by political and education entities jointly (Duque & Buitrago, 2013). Similarly (2) institutions and regulations are a fundamental part of the plan, emphasizing the creation of the CNEN as the advisory and consultative body in terms of public policies, and the naming of a vice Minister of Creativity and Orange Economy (GC, 2019).

In order to have an appropriate physical and digital (3) infrastructure, the government plans to establish a youth network to develop skills, modernize the information and communication technologies, promote entrepreneurial centers for start-ups, build partnerships with the SENA for training programs, and build spaces to develop a trident constituted by (a) cultural and creative clusters, (b)the strengthening of the community, and (c) the improvement of local businesses (Ibid).

Regarding the (4) industry, they are willing to change the mentality and risk aversion patterns (GC, 2019) within the Colombian society. They have found that

one of the reasons for the existence of these patterns is the lack of financial and management trainings for artists that become source of distrust towards intermediaries (Duque & Buitrago, 2013)- as well as the lack of financial resources in the sector. As part of the plan, they want to give incentives such as zero business income tax for orange enterprises during the first seven years of operation, and discounts in the value added tax for orange economy contributors. They also want to encourage the national network of labour formalization to protect labour rights and guarantee employability for the young people in the sector (Ibid). As already stated, they will ease the creation of partnerships with iNNpulsa and Bancoldex for financing; with the DNDA and SNPI for intellectual property protection; and with SENA for technical assistance and initial capital (Ibid).

Equally important is to consider (5) integration, which makes reference to fostering world connections and be part of the global knowledge economy (GC, 2019). It is a matter of battling the fear of international competition and promoting joint creation, nurturing, production, and distribution, among others (Duque & Buitrago, 2013). Towards this end, the government proposes infrastructure projects to promote cluster creation in the areas of audio-visuals, cultural tourism and -in general- orange economy activities (GC, 2019). The process will be supported by: (i) 'Colombia Crea'- the positioning brand in both national and international environments; (ii) the cultural tourism- which will be incentivized through diversified policies; (iii) an orange network platform that will be key to match supply and demand of creative contents; and (iv) the embassies of the 65 countries that are present in Colombia and signify a source of cooperation, trade, etc. (Ibid).

Finally, (6) inclusion and (7) inspiration are items that will be used to reduce inequality (GC, 2019). The first one in terms of human capital, digital technologies, scholarships, property rights courses, and the addition of cultural and creative contents in all levels of public education (Ibid). The second one by executing strategies oriented to change mentalities and beliefs so that the citizens feel proud

of the national creative and cultural productions, and the artists feel confident enough to structure a life plan around culture, art and creativity (Ibid).

These seven components will be aggregated to nurture the three already mentioned strategic pillars of the plan: (a) Knowledge –to improve sources of intelligence, research and data to develop the best public policies. (b) Opportunities –through ordered clustering, quality infrastructure, high level education, attractive jobs, and a friendly environment for entrepreneurship. And (c) Promotion meaning the positioning of a different country-image through the exposition of national talent in the local and foreign spheres, the advertising of cultural tourism, and the digital transformation of the Colombian society (GC, 2019).

5.2 Colombia's regional perspective- Quantitative approach

As stated in the methodology section of this thesis, the current investigation had a double approach: a qualitative one including descriptive information on the national level -and which was done in section 5.1- and a quantitative one addressing the local level that will be covered in this section.

5.2.1 Descriptive Statistics and factor creation

Table 1-Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
LQ	33	.7049	.3846919	.1445414	1.685528
Agglomerat~n	33	.3030303	.4666937	0	1
HigherE~2015	33	10.51515	21.75017	0	115
Internet_S~s	33	8.082727	5.486368	.14	22.34
Hotel_Occu~y	33	30.3197	26.19835	0	80.25
Projectssu~t	33	59.75455	30.27242	9	122
MusicSchools	33	45.33333	38.73844	0	163
Museums	33	11.09091	15.11283	0	66
Movie_Thea~s	33	5878.242	10634.14	0	55128
Foreign_Vi~s	33	74695.52	217852.5	12	1165977
Graduat~2017	33	396.4242	1141.56	0	6358

Table 1 shows the descriptive statistics of the two independent variables (LQ and Agglomeration) and the explanatory variables presented in the methodology section: Higher Education establishments, Number of Internet Subscriptions, Percentage of Hotel Occupancy, Projects supervised by the government, Number of Music Schools, Number of Museums, Number of Movie Theaters, the Quantity of Foreign Visitors and the Number of Graduated Students from 'fine arts' programs. Each of them has a total of 33 observations, because as stated before, Colombia has 32 departments and the capital city –Bogota- is counted as another regional division.

However, in order to adapt the data to the model, the factors measuring Related Industries and Infrastructure will be an aggregate of other variables. Hence, it is important to standardize all of the variables, as it is shown in Table 2 where all of the variables were normalized except for Agglomeration as I decided to keep it as the original binary variable and not normalize it.

Table 2- Normalized Variables- Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
zLQ	33	1.81e-09	1	-1.456642	2.549125
Agglomerat~n	33	.3030303	.4666937	0	1
zHigher_Educ	33	-2.26e-09	1	-.4834514	4.803863
zInternet_~c	33	1.41e-09	1	-1.44772	2.598672
zHotel_Occu	33	2.26e-08	1	-1.157313	1.905857
zProj_Supgvt	33	9.37e-09	1	-1.676594	2.056177
zMusicScho~s	33	-5.42e-09	1	-1.170242	3.037465
zMuseums	33	-3.61e-09	1	-.7338736	3.633276
zSeats_Movie	33	4.10e-09	1	-.5527709	4.631288
zForeign_v~s	33	2.03e-09	1	-.3428169	5.009269
zGrad_CCI	33	-1.11e-08	1	-.3472654	5.222306

Before creating the factors that will measure related industries and infrastructure, it is important to evaluate their internal consistency by calculating the Cronbach's alpha coefficient. The results presented in tables 3 and 4 show that

there is internal consistency in the two factors, which means that the variables used to create the scales are correlated with one another.

For first factor (related industries) that includes Higher education, Internet Subscriptions and Hotel Occupancy, the scale reliability coefficient has value of 0.8134 (See table 3). For the second factor (infrastructure) that includes Music Schools, Museums and Seats in Movie Theaters, the scale reliability coefficient has value of 0.8604 (See table 4). Both values are greater than 0.6, which means that there is a high degree of internal consistency of the variables included in these factors.

Table 3- Scale reliability coefficient for Related Industries Factor

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem covariance	alpha
zHigher_Educ	**33**	**+**	**0.8191**	**0.5985**	**.6801278**	**0.8096**
zInternet_~c	**33**	**+**	**0.9280**	**0.8218**	**.4014131**	**0.5729**
zHotel_Occu	**33**	**+**	**0.8131**	**0.5873**	**.6956694**	**0.8205**
Test scale					**.5924034**	**0.8134**

Table 4- Scale reliability coefficient for Infrastructure Factor

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem covariance	alpha
zMusicScho~s	**33**	**+**	**0.8193**	**0.6107**	**.8449032**	**0.9159**
zMuseums	**33**	**+**	**0.9817**	**0.9538**	**.4140514**	**0.5856**
zSeats_Movie	**33**	**+**	**0.8516**	**0.6712**	**.759088**	**0.8630**
Test scale					**.6726809**	**0.8604**

Therefore, table 5 shows the new explanatory variables – normalized- in which the items related industries and infrastructure are the aggregated constructs according to the previous evaluation; the variable Institutions is the name given to the projects supervised by the government; International linkages is the name given to the foreign visitors variable and Education is equivalent to the number of graduates of cultural and creative programs- all of them with 33 observations.

Table 5- Explanatory variables descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Related_In~s	33	7.34e-09	1	-1.206364	3.312479
Infrastruc~e	33	1.97e-09	1	-.9262313	3.157907
Institutions	33	9.37e-09	1	-1.676594	2.056177
Internatio~s	33	2.03e-09	1	-.3428169	5.009269
Education	33	-1.11e-08	1	-.3472654	5.222306

5.2.2 Correlation Indexes

As a first step before proceeding to perform regressions, it is important to make a correlation analysis that provides preliminary support in order to run the regressions (See Table 6). The results show that, as expected Agglomeration and LQ variables have a very strong and statistically significant correlation. Moreover, all of the explanatory variables show a positive and significant relation with the LQ variable, but only Related Industries, Infrastructure and Education appear to have a significant positive relation with Agglomeration. The remaining variables appear to have a positive relation, however not statistically significant, with Agglomeration.

Table 6- Correlation Coefficients

	(Correlation Coefficients)
zLQ	
zLQ	1
Agglomeration	0.817***
Related_Industries	0.569***
Infrastructure	0.490**
Institutions	0.498**
International_Linkages	0.453**
Education	0.539**
Agglomeration	
Agglomeration	1
Related_Industries	0.481**
Infrastructure	0.391*
Institutions	0.344
International_Linkages	0.274
Education	0.365*
Related_Industries	
Related_Industries	1
Infrastructure	0.828***

Institutions	0.596***
International_Linkages	0.728***
Education	0.764***
Infrastructure	
Infrastructure	1
Institutions	0.722***
International_Linkages	0.682***
Education	0.750***
Institutions	
Institutions	1
International_Linkages	0.304
Education	0.338
International_Linkages	
International_Linkages	1
Education	0.943***
Education	
Education	1
N	33

$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Taking into consideration the benchmark for correlation coefficient in International Business, it is important to note that some of the explanatory variables have very strong and significant correlation indexes between them- more than 70%, which implies high tendency of linear correlation. Therefore, it is important to evaluate if there exists the possibility of having a multicolinearity problem. For this purpose, I did a multicolinearity test by calculating the variance inflation factor (VIF) (See Appendix D). The results of the test show a VIF mean of 6.85 and a VIF value of 12.23 for Education and of 9.33 for International Linkages. Although the first (mean) and the third values (International Linkages) are smaller than 10, the second one (Education) is above that limit, indicating a potential colinearity effect that may pose certain inconveniences. So, the regressions done for this study will include the two explanatory variables with high VIF at different times, to reduce the risk of having statistical misinterpretations.

5.2.3 Results

Table 7 shows the results of the regressions. Model 1 represents a multiple linear regression with the standardized LQ as independent variable and including all of the other variables as explanatory ones- except Education and International Linkages that were the ones presenting high VIF. Models (2) and (3) are again multiple linear regressions with the same independent variable, but including one of the problematic variables at a time. Regression (4) uses a logistic estimation with Agglomeration variable as independent variable and including all of the variables – except Education and International Linkages, and finally regressions (5) and (6) are both logistic regressions with all explanatory variables and alternating International Linkages and Education.

Table 7- Regression results

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	zLQ	zLQ	zLQ	Agglomeration	Agglomeration	Agglomeration
Related_Industries	0.522*	0.397	0.271	1.456*	1.683*	1.292
	(0.263)	(0.291)	(0.275)	(0.828)	(0.930)	(0.909)
Infrastructure	-0.161	-0.292	-0.537	-0.515	-0.364	-0.732
	(0.305)	(0.332)	(0.338)	(0.910)	(0.955)	(1.080)
Institutions	0.304	0.399*	0.537**	0.512	0.419	0.569
	(0.213)	(0.233)	(0.229)	(0.747)	(0.770)	(0.763)
International Linkages		0.242			-0.418	
		(0.241)			(0.695)	
Education			0.553**			0.597
			(0.260)			(1.783)
Constant	-1.11e-08	-1.13e-08	-4.59e-09	-1.101**	-1.163**	-1.012*
	(0.145)	(0.145)	(0.137)	(0.488)	(0.511)	(0.554)
Observations	33	33	33	33	33	33
R-squared	0.369	0.391	0.457			
Pseudo R2				0.2150	0.2235	0.2192
Prob Chi 2	0.0035	0.0062	0.0014	0.0335	0.0599	0.0643

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The table of regressions show that all of the estimated models have a total of 33 observations and Chi Probabilities smaller than 0.1, which makes all of them globally significant at 10% level -some even at the 5% level (Models 1, 2, 3 and 4).

The R square values for models 1, 2 and 3 are 0.360, 0.391 and 0.457, respectively, which shows how much of the variability of the dependent variable is explained by the independent ones. On the other hand the Pseudo R square for Models 4, 5 and 6 are 0.2150, 0.2235 and 0.2192, correspondingly.

The variable Related Industries has positive sign in all of the models and presents a statistically significant correlation- at the 10% level- with the LQ in Model 1 and with the Agglomeration variable in Models 4 and 5. The Institutions variable also has positive signs consistently throughout all of the models and presents a statistically significant correlation with the LQ in Models 2 and 3. In the first one this correlation is significant at the 10% level and in the latter one at the 5% level. Finally, Education has a positive sign in both of the models in which it was included, but is only significantly correlated at the 5% level with the LQ variable in Model 3.

Concerning, the remaining two variables -Infrastructure and International Linkages- nothing can be concluded as they are not statistically significant in any of the models; even when the initial correlation coefficient estimations showed a positive and significant relation between all of the explanatory variables and the LQ variable, and a positive and significant correlation between Related Industries, Infrastructure and Education with the Agglomeration variable (See Table 6).

In terms of hypotheses testing, it can be stated that H1, H2b and H3 are partially proven. In other words the higher the degree of development of the related industries (digital, tourism and education) in a region, the higher the probability that there exists a concentration of cultural and creative agents in that region. The same applies to the existence of institutions: the stronger the institutional effect in a particular location, the more likely it is for a cultural and creative cluster to occur. Finally, the larger the number of individuals obtaining a diploma in creative and cultural academic programs in a particular location, it is more probable that a cultural and creative cluster emerges.

5.2.4 Mapping the clusters

The information collected for the previous quantitative analysis has also been useful to determine the location of the creative clusters present within the Colombian borders. By looking at the calculated LQ values (See Appendix E), it is shown that there are 9 –out of the 33- regions where cultural and creative clusters have emerged. This argument is supported by the estimations of LQ values bigger than 1.

Figure 10 shows the geographical location of those clusters within the country. The red symbols indicate the region where the creative and cultural clusters are located. These are Atlántico, Sucre, Norte de Santander, Risaralda, Caldas, Quindío, Bogotá, Huila and Nariño. Additionally, the blue symbol is for Antioquia, which even though did not have a LQ value of 1 or higher, it was pretty close with a value of 0.97; hence worth mentioning it.

These results are pretty consistent with the records of cluster initiatives that 'Red Cluster Colombia' (Cluster Network Colombia) is collecting[6]. According to this entity, the Bogota region counts with three clusters that fit into the creative category: fashion cluster, music cluster and creative industries and content. The Eje Cafetero- constituted by the departments of Risaralda, Caldas and Quindío- has a creative industries cluster. The other regions – Antioquia, Tolima, and Norte de Santander- have fashion clusters within their territories. Even Valle del Cauca – not represented by a symbol- has a fashion cluster, which is very consistent with its location quotient value of 0.92 (See Appendix E).

[6] https://redclustercolombia.com/clusters-en-colombia/lista-de-iniciativas/filtro

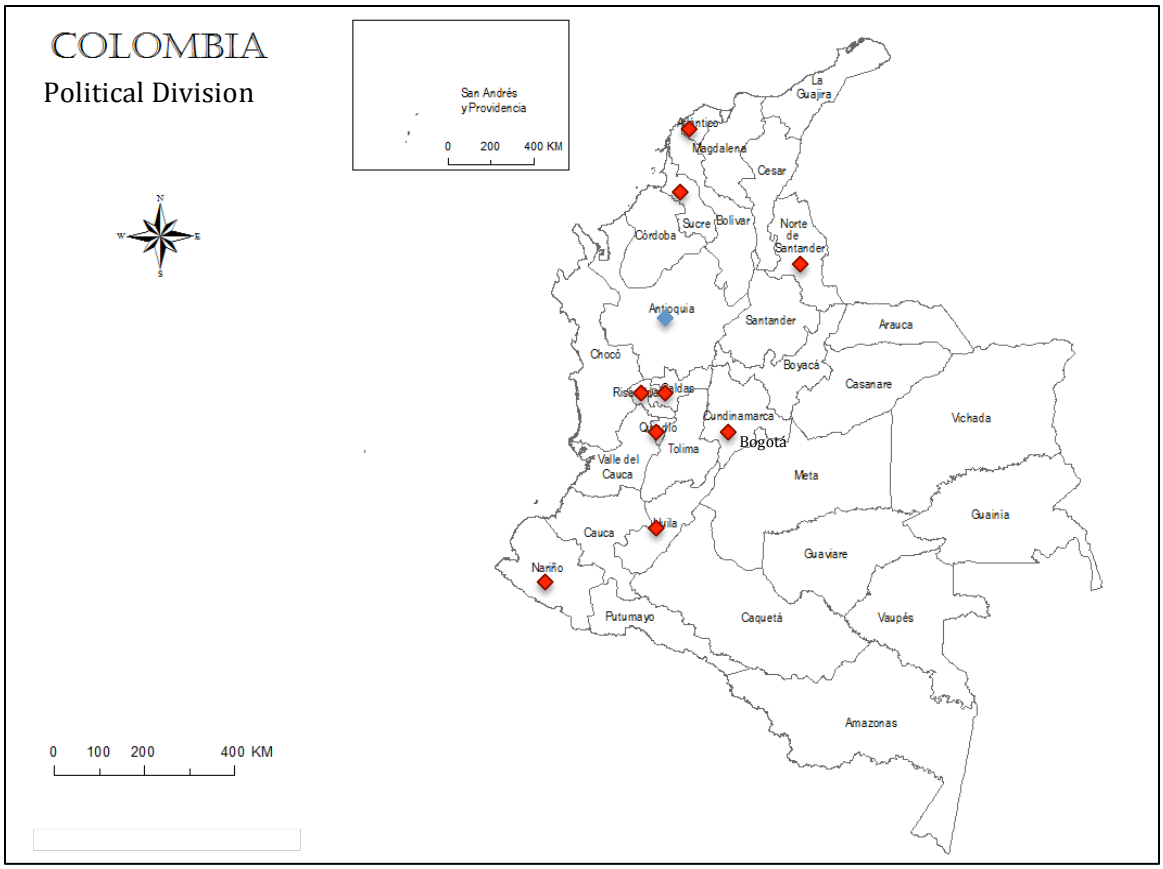

Figure 10- Creative and Cultural clusters in Colombia
Author's construction using Appendix E
Map retrieved from Mapas de Colombia (n.d)

On the other hand, regions such as Atlántico, Sucre, Huila and Nariño that are also represented by red symbols in the map, have not registered their cluster initiatives in this website, but they are places where cultural traditions and important national festivals take place. For example, the 'Carnaval de Barranquilla' in Atlántico, is a very huge event where folkloric traditional music and dances are performed[7]. Huila – as well as Tolima- are also known for the Folkloric Festival of San Pedro, where other type of folkloric traditional music and dances –different from the ones in Atlántico- are exhibit (SINIC, n.d.). Nariño is the house of the 'Blacks and White' Carnival -other cultural sample- (Ibid), and finally Sucre has a

[7]http://www.sinic.gov.co/SINIC/ColombiaCultural/ColCulturalBusca.aspx?AREID=3&SECID=8&IdDep=08&COLTEM=215

variety of music events such as the National Performance of Bands, the Accordion Festival, and the National Gaita Festival (Ibid).

6. Discussion and Model adjustment

The current study aimed at analysing which are the conditions for the creation and development of cultural and creative clusters in developing countries- mainly in Latin America- by creating a model derived from the existing literature on economic geography perspectives, industrial cluster's research, and institutional theories and adjusting it to this particular industry and to a particular region of the world.

Furthermore, the suggested model was tested in Colombia – a Latin American country that is currently implementing a focal strategy to develop the creative sector- in a two-way approach. The qualitative approach was done for the whole country, in attempt to understand general conditions that may lead to the appearance and progress of the creative sector at a national scale. This because the literature showed that not only local characteristics mattered but the broader context was determinant too. On the other hand, the quantitative approach had two main objectives: the first one was to identify the existence of creative and cultural clusters within the geographical borders of the country by using the estimated LQ, and the second one was to evaluate if the factors proposed by the model explained the presence and development of these regional agglomerations at the local level.

6.1 Findings

The empirical analysis of the current study showed that in order to encourage the cultural and creative sector in a developing country from the southern region of America – as it is the case of Colombia- it is important to develop a holistic strategy addressing a variety of subjects in a simultaneous way.

With respect to related industries such as ICT, Tourism, and Education the qualitative analysis showed that these are sectors that are having a special attention

and have been included in government agendas as an important support to the creative sector. The coordination of diverse tactics that modernize the communication system, improve the coverage and quality of education at all levels, and promote tourism (vacation, cultural and MICE), are strategies that will foster the growth of the CCI. The case also showed that these industries have been promoted with independent plans but also through co-working projects with the creative industries such as 'Crea digital', 'Cinema for all' and 'Quioscos Vive Digital'. Nonetheless, Colombia has shown that the efforts and commitments need to be done for a long period of time in order to generate the desired effects and improve the aggregate of economic and social conditions of the whole country.

Furthermore, the quantitative approach also confirmed the positive influence that the development of these three industries has over the existence of creative clusters, meaning that the regions with better performance of the ICT, tourism and education sectors could be potential candidates to cultivate cultural and creative agglomerations.

In terms of institutions, the national evaluation presented evidence to support the role of laws and regulations in the promotion of the sector. These laws need to be adjusted to the CCI of each country by appealing to its own characteristics and level of development- such as the establishment of the necessary Ministry-, and they also need to include other supporting mechanisms such as policies and incentives addressed to the micro and SMEs because they are highly prevalent in the creative sector.

Moreover, it is important to incorporate regulations that deal with IPP rights and the establishment of appropriate supervisory bodies. But the institutions' role does not stop there, it is important to involve a wide variety of agents in order to collect accurate data that will be fundamental for statistical measurements. These indicators are very important because they provide information for the creation of relevant policies aimed at protecting the industry through legal mechanisms.

Comparatively, the quantitative section helped to measure the influence of institutions in another way by evaluating the degree of involvement that the authorities have in the building of human capital. The general conclusion of this part was that even when autonomy is given to each of the regions in the creation of cultural projects, the economic and non-economic resources come from the national government; and that the promotion of human capital has a positive influence towards the appearance of a creative cluster in a particular location.

But it is important to remember that the activities of local and national institutions also involve the creation and construction of appropriate infrastructure. On the one hand, the descriptive analysis stated that many infrastructure projects including the building and improvement of cultural spaces have been put into place throughout the years. It also showed that the government is implementing different strategies focused on the protection of cultural assets and supporting different cultural constructions thought different monetary incentives. However, as shown by same analysis, there is still a gap between the funds collected to reinvest in cultural infrastructure and the actual resources that are destined to it (Garces & Hurtado, 2017) and as shown by Evans (2009) in the earlier stages of development of clusters the infrastructure is almost totally provided by the authorities. The possible explanation to the lack of relevance of this variable in the quantitative analysis is that it only incorporated facilities such as museums, music schools and cinema theaters, which mostly cover the demand side. However, cultural and creative producers require other type of spaces to develop their goods and services and this information is still not available in the databases of Colombia's orange economy.

Regarding education, it was exposed that even if formal academic programs covering creative skills are important for the industry, there also needs to be a special focus in entrepreneurial, financial and managerial cultural programs. The qualitative assessment also confirmed what was presented in the literature review regarding the interchangeable role between formal education entities and informal

training programs given by other agents in this industry. To put it differently, even if higher education entities were proved to be fundamental in the creation of academic programs for the undergraduate and graduate levels, other mechanisms such as workshops and training sessions given in a more informal way are also necessary to cultivate the necessary abilities needed to generate growth.

As a consequence, formal education entities should try to create alliances and partnerships with different agents such as industry experts, government officials, and other local educational entities to develop these informal tools and diffuse them among the people that need this information – usually artisans, artists and informal creative workers. Nevertheless, the inclusion of cultural education should not be limited to post-secondary education and -as the government of Colombia did- authorities should also include creative and cultural content in all of the levels of public education, so that it is accessible to individuals at a very early age.

Conversely, the quantitative case study only contemplated the formal education dimension. However, it served to prove that the number of graduated students from cultural and creative programs have a very high influence towards the importance given in a specific location to the sector, and may potentiate the emergence of a cluster. This could relate to the 'creative class' presented by Florida (2002; 2005) in the literature review, as it is this segment of the population that helps to potentiate the creative sector.

Moving to the international linkages component the qualitative approach showed that the Colombian authorities are working to potentiate international linkages that reinforce their agenda for the Orange Economy, unlike the quantitative perspective in which the results were unable to support this argument.

The national evaluation showed how authorities serve as intermediaries between the local artists and the outside world, through tasks such as promoting their brands, supporting their attendance to international events, and looking for

foreign funding. Thus, international linkages appeared to be crucial in the direction and funding of many cultural projects for this Latin American country. It was evidenced that international organizations, such as UNESCO, played a crucial role in the elaboration of guiding agendas and in helping the government address and solve their own problems concerning the cultural industry. Additionally, foreign authorities represented by embassies, governments, and commissions provided numerous resources such as investment, experience, ideas, and co-working strategies. Besides, the case also showed that this cooperation is not limited to developed economies, as Colombia established partnerships with other countries within the Latin American region in an attempt to foster the growth of the sector beyond its own borders.

Nevertheless, the quantitative analysis did not support the role of international linkages. The possible explanation is related to Bathelt et al., (2004) in which he states that the number of global pipelines that a firm can have is limited and that is why government intervention is needed. In this particular case, the Colombian departments could be compared to the firms because they cannot handle international relations due to their other responsibilities within their territories, thus the central/national government plays the role of intermediary by building the foreign connections and alliances that will later have a positive impact on the whole country.

Finally, even if the national demand for cultural products evidenced a decrease in the last years – except for the cinematographic sector- and the positive effect with agglomerations could not be proved at the regional scale, the government is tackling this issue through a two-way strategy by addressing supply and demand at the same time. The government is willing to change the risk aversion patterns within artists by creating trust environments around them. This has been done through trainings in which they acquire abilities that they currently lack, and building self-confidence so that artists empower themselves to believe in their work and talent. On the demand side, the authorities are appealing to the marketing

strategy, by building brands and changing society's beliefs so that citizens start to value cultural and creative products and its creators, through the recognition of this sector and the strong positive impact that it has on social, economic, cultural, and even technological development.

6.2 Model Adjustment

The previous section presented a summary of the main findings. With the information and results obtained from the Colombian context it is possible to evaluate the accurateness of the initial model from section 3 and adjusted it accordingly.

Originally this model suggested that in order to create and enhance the cultural and creative industries, it was necessary to establish a synergy between different agents resumed in four categories: businesses, local and national institutions, science and education, and international entities- all of them jointly reinforced and also affected by the existing local demand. Furthermore, each one of these categories was analysed at a deeper level by determining their components – meaning actors and activities.

The 'businesses' category initially referred to independent artists, domestic and foreign firms belonging to the creative sector, and firms that made part of related industries such as digital services, tourism and education- all of them with vertical and horizontal linkages in place. The case showed that the authorities are implementing strategies that improve and generate growth in the four industries by fostering inter-industry cooperation. However, the information obtained was not enough to determine the existence of vertical and horizontal linkages between all of the actors involved and it also emphasized the role of the government in the establishment of those co-working projects. A possible explanation to this may be the stage of development of the industry according to the life cycle framework proposed by Kind & Meier (2012), as the authors affirm that only when the cluster

has reached the 'mature' stage there are B2B relations. Thus, the questions that prevail are whether agents -on its own- are capable of building those cooperation linkages without intermediaries and if the linkages are in fact vertical and horizontal.

Taking into consideration the local and national institutions, the initial model proposed that it was the aggregate of formal and informal rules shaping the environment. These institutions were constituted by both regulations and entities, whose purpose was to enforce IP, promote values such as trust, social orientation and collectivism, work towards the building of an appropriate infrastructure and human capital, and finance different cultural projects. The general conclusions of the Colombian case exposed that the authorities are establishing rules to promote the sector by not only modifying the legal framework and including laws that make reference to culture, creativity and intellectual property right protection; but they are also committed to give trainings and educate people in these matters. Additionally, in order to promote trust among artists, they proposed to put in place managerial and entrepreneurial workshops. However, the other informal institutions – social orientation and collectivism- were not explicitly covered in the case of Colombia, which does not allow making general conclusions of those components in the model.

Furthermore, the authorities proved to be crucial in the development of infrastructure by giving monetary incentives to contributors, generate strategies to promote human capital and find potential investors, which were the initial activities proposed by the model. However, their actions went far beyond these activities, as authorities also demonstrated to be fundamental in the collection of data, measurements and statistics to determine the economic contribution of the sector. It was also exposed that there is a very high degree of centrality in the proposals and decisions taken for the sector, however the regional divisions in the territory still have certain degree of autonomy to create their own projects according to their own specific needs. Finally, -as initially stated- authorities are key to establish

international relations, develop marketing strategies, and help the local artists participate in global exhibitions and events.

Following with Science and Education, it was exposed that not only national universities are in charge of sharing the available knowledge and potentiate the creation of new one, but also informal trainings through partners such as experts, government agents, and other individuals –not necessarily academics- should be given to respond to the needs of the local characteristics. This means that instead of the initial alliances with foreign universities that the model included, the local education entities should focus in establishing partnerships that can fill the gaps of quality and coverage of creative education, cultural management, and cultural entrepreneurship in scenarios beyond formal education.

Finally, international entities originally comprised foreign organizations, entities and other countries' governments –mainly developed ones- to support the local industry with different monetary and non-monetary resources. Even if these actors and activities proved to be fundamental in the Colombian case, it was also found that generating cooperation and establishing alliances with other countries within the region is as important as building relationships with developed economies. However, even if the two types of cooperation are necessary, they are the result of different interests. On the one hand, developed economies and international organizations are a source of what developing economies lack. For example, experience, knowledge, and funding. On the other hand, developing economies in the same region share language, roots, and culture, which could increase the potential market for local creative and cultural products and foster co-production activities.

Moreover, as previously seen, the creative sector is pretty sensible to local characteristics – such as traditions and norms- and thus focuses primarily in the national markets (UNDP, 2013; Florida, 2002; Izsak & zu Köcker, 2015). Therefore, opening the door to new markets with similar characteristics and beyond national

boundaries is a very interesting opportunity. As a result, engaging in projects to help the region develop at the same pace -by helping to collect information, generate integration, promote joint collaboration and build strong trade agreements that involve the creative sector- could potentially solve problems such as retaining talent- if not in the country at least within the region.

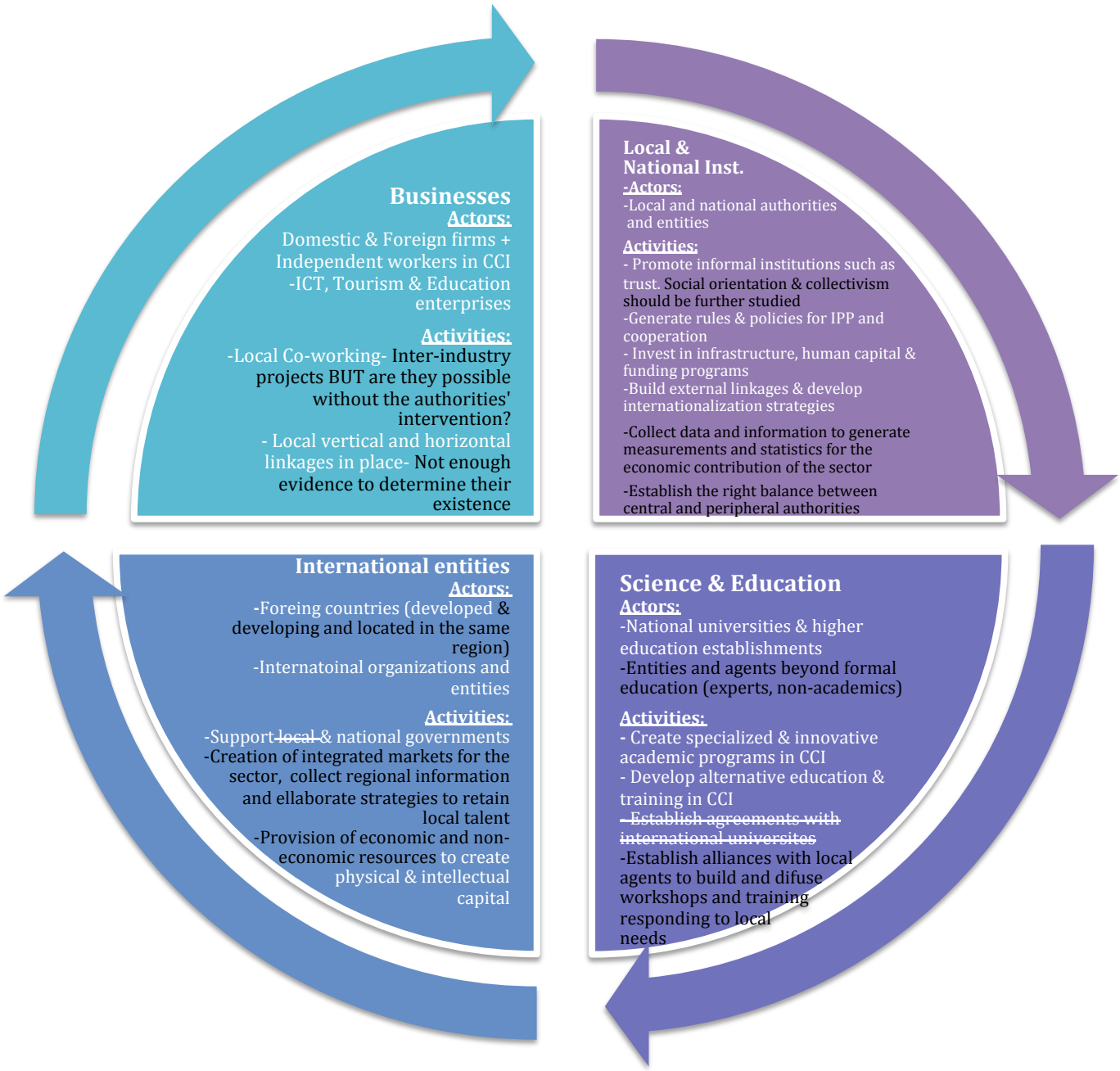

Figure 11- Revised model by components for CCI in Latin America
Author's own construction

The previous evaluation of the model implies that the initial proposal needs some adjustments and therefore, figure 11 shows the changes (in black) that were made to the initial version after the assessment of each one of the components

6.3 Implications

By recapitulating the information presented in the literature review, one can say that the majority of the literature on clusters focuses on traditional industries and the creative sector has not received as much attention. The situation proved to be even more critical for studies concerning creative cluster in developing economies, as most of the studies have been done for the developed ones. Therefore, the current study has contributed to fill the existing gaps in the literature on cultural and creative clusters for developing countries.

Furthermore, this research makes a theoretical contribution by blending different theories together -such as cluster theory, economic geography, and institutional perspectives- and building a model to explain agglomerations in the cultural and creative sector within LEDCs in the South American continent. This analysis extends previous research as it helps to understand the difficulties faced by the CCI and how these obstacles become even bigger for economies making part of the global South.

The suggested model is an initial approximation to the factors that may contribute to the development of the sector and sets the base for future research in the topic. And the empirical testing done in Colombia becomes an example for other countries willing to potentiate this industry -and for the analysed country too- by showing strengths and weaknesses of the government strategies in the light of the theoretical framework developed in this research.

Similarly, this study functions as a guidance for the different actors that are involved in the synergy, so that they understand their role in fostering the growth of the creative industries in order to achieve the individual and aggregate goals. It

enlightens the way and helps policy makers, artists, businesses, and educators, among others, to make their own contributions but without forgetting that they are part of a larger system in which interdependence is absolutely necessary; they are not isolated agents working for their own benefit but a fundamental part of a bigger puzzle.

For instance, policy makers would know that is crucial to be aware of the context that they are facing by collecting data, information, and creating measurements and indicators that clarify the current importance given to the sector in that particular country and thus, the actions to be taken. It also shows how the concept of creative industries and the activities considered within it vary according to the national circumstances and therefore prioritizing certain activities – such as the cinematographic sector in Colombia- may be useful; but without forgetting about the other sectors.

Correspondingly, other actors will also understand their positions within the gearing. Artists will know that they are the main source and fuel for a bigger engine; the governments will generate the necessary support and work towards creating an appropriate environment with a legislative framework that is suitable for the sector; the bigger firms will come with new ideas to foster knowledge sharing and generate alliances to strengthen creations and productions; education entities will know that their role can go beyond creating innovative formal programs for a reduced number of students; and for the society in general, it will show the value of the industry.

However, the implications and utility of the study go beyond geographical frontiers. It shows that it is important for neighbour countries to be informed of the agendas of the others and take advantage of the experience of similar economies to generate cooperation mechanisms that will represent a win-win scenario. It is also clarifying for international organizations and developed economies that want to collaborate and support the efforts of an emerging economy in their quest to potentiate the cultural sector. This research provides a general idea of the potential

flaws faced by Latin American countries in CCI and the direction of the help that foreigners can give, so that strategies are not replicated from their own experiences but adapted to the country's own characteristics.

6.4 Limitations and further directions of research

It is important to mention that the analysis, results, and development of the current study was done under certain conditions and facing a number of limitations, and thus the interpretations must be done in accordance with these constraints.

Since this is a relatively new topic, research on it has been rather scarce and there is still a lack of general consensus on the concepts, models, and ways to address the topic of CCI. Moreover, the degree of information and data concerning this type of industries is hard to find because as previously mentioned many artists, creative, economists, and politicians discourage the idea of analysing culture with an economics focus (Duque & Buitrago, 2013). This lack of information has further implications in developing economies where there exist even higher levels of informality in the sector (Ibid) and where there is not enough or sustained political commitment towards the process of statistical collection (Ibid) so the information is still incomplete. Even if Colombia is working towards attaining a higher level of information, there are still gaps to fill- mostly at the local level.

In other words, even if the literature review made possible to build a preliminary model that became the guiding tool towards the empirical analysis, in developing countries- such as the country of reference- the information available is commonly existent at the national level, sometimes at the regional level and very scarce at municipal and cluster level (Giuliani et al., 2005). This scenario makes the task of validation of results -in a quantitative way- more difficult.

Therefore, since the industry has only started to receive attention in the developing world, the model could only be tested at the departmental level in Colombia with the information that was available at the time of the study. As a result

the number of observations constraint the amount of variables that could be included in the study, and some of the variables needed were inexistent at the department level –such as the demand for cultural products.

Hopefully, when the collection of information attains the desired level in the region and in other developing regions of the world, it could be very interesting to test the model at the city or metropolitan level- where most of the creative and cultural clusters are located (PRG, 2013; O'Connor, 2004; Jones, Lorenzen & Sapsed, 2015; Boix et al., 2015). Furthermore, the literature was stated that clusters benefit their surrounding environment (Porter, 1998) by creating a particular atmosphere or buzz (Bathelt et al., 2004) that leads to an easier exchange of ideas and knowledge (Djik & Sverrison, 2003); and that the creative and cultural industries have a positive impact over the society in general (Potts & Cunningham, 2010; UNDP, 2013) by potentiating technological improvements and social benefits (UNDP, 2013). Therefore, analysing the real impact that CCI clusters have on LEDCs would also be a very fascinating direction of research- including the future evaluation of the current efforts that Colombia is implementing in the sector.

Similarly, it would be very useful to analyse the degree of impact that each one of the related industries –ICT, tourism and education- has on the creative sector on its own, in order to create public policies prioritizing and emphasizing the highest contributor and fostering joint development accordingly.

Lastly, this study was limited to the Latin American region and the analysis of one of the countries belonging to that region. However it would be very instructive to apply a similar approach to countries located in other developing regions of the world. Regions where CCI are also beginning to emerge and be relevant in an attempt to contribute to the growth of the sector at a global scale. Nevertheless, it is important to remember – as reiteratively mentioned- that each place needs to come up with an appropriate delimitation of the industry and a proper definition that is suitable to the context.

7. Conclusions

Even if the topic of Industrial Clusters has been studied for many years, the approach on Cultural and Creative Industries and the development of clusters in this sector has acquired a recent importance. Therefore, there are still many interesting facts to investigate – especially in less economically developed economies. The aim of this investigation was to understand the factors behind the birth and further expansion of CCI clusters in Latin America by generating a preliminary model and testing it empirically through a meticulous analysis on a country of reference. Hence, this thesis contributes to the literature on geographic agglomerations and international business, by blending existing frameworks of the literature and using them to explain the characteristics of industries that are different from the traditional ones, and showing the new trends that the world is facing towards the knowledge based economy.

Furthermore, it was exhibited that the creation and progress of CCI clusters are influenced by a variety of factors and that those factors need to be tightly interconnected to accomplish successful outcomes. It also showed how the CCI industries –today more than ever before- are linked to other key industries and that their progress reflects in the entire economy.

However, this positive influence is only beginning to be evident to LEDCs and the industry in these regions responds to what Potts and Cunningham (2010) have denominated as the Welfare Model. That is to say that it is an industry where government support in the form of subsidies is crucial, because in the meantime it is undervalued by the society. As this industry currently consumes more than what it produces it faces issues such as the free rider effect and the tragedy of the commons. Therefore, structural and operational changes need to take place (Potts & Cunningham, 2010) in order to influence the consumers' behaviour, modify the society's mentality towards CCI, and expand the knowledge that the government already has on CCI as source of innovation.

The case of reference, helped to understand that a clear agenda needs to be put into place and that the emergence of CCI clusters in LEDCs – contrary to being organically built as exposed by Jones, Lorenzen & Sapsed (2015)- has a very high degree of influence of the government and can be planned. Moreover, the factors that drive these types of agglomerations –following Gong & Hassink's (2018) propositions- appear to be more gradual and less abrupt; resulting of the cumulative effect of a series of actions taken over a long period of time.

Similarly, it exhibits the particularities of CCI in general and how sensitive these industries result to local characteristics. However, being able to identify the resemblances and disparities between regions can also be a tool to study the degree of generalization and particularization of models, definitions and frameworks used to analyse the industry – even for countries belonging to the same region of the world that share common cultural roots, languages and traditions.

Finally, it emphasizes the role of foreign contributors to the development of the industry by showing the monetary constraints faced by LEDCs' authorities and their limits in intervention and funding for CCI. Hence, establishing alliances to obtain different kinds of resources, as well as prioritizing tasks and potentiating subsectors of CCI in a staggered way results fundamental to have a sustainable development – as was the case of Colombia when they decided to begin by focusing on the cinematographic segment and later on other types of creative sub-industries.

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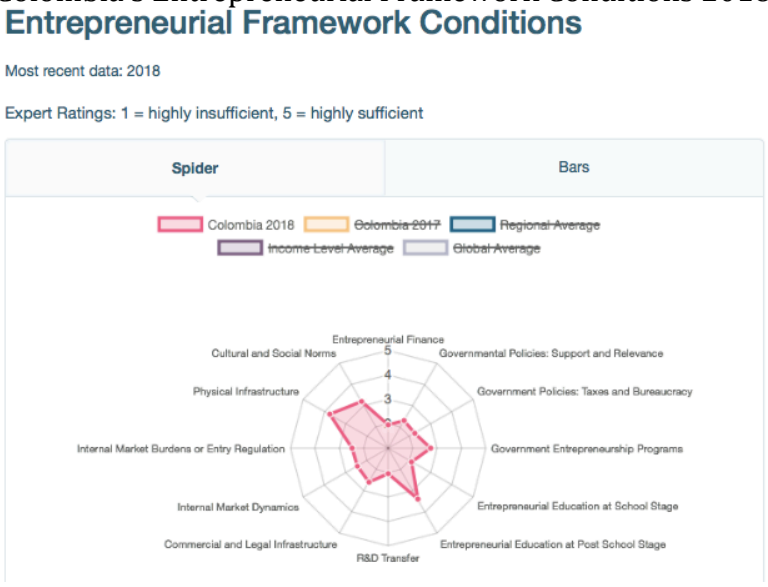
Appendices

Appendix A- Colombia's Entrepreneurial Framework Conditions 2018



Retrieved from https://www.gemconsortium.org/economy-profiles/colombia

Appendix B – List of Total and Partial Activities in the Orange Economy

Total Inclusion Activities in the Orange Economy		
	Description	**CIIU 4 A.C**
1	Jewellery, costume jewellery and related articles manufacture	3210
2	Musical instruments manufacture	3220
3	Games, toys and puzzles manufacture	3240
4	Book Editing	5811
5	Newspaper, magazines and periodic publications editing	5813
6	Other editing activities	5819
7	Computer programs edition (software)	5820
8	Film, video, shows, announcements and TV commercials production activities	5911
9	Postproduction activities of cinematographic contents	5912
10	Film, video, shows, announcements and TV commercials distribution activities	5913
11	Film and video exhibition activities	5914
12	Sound recording and music editing activities	5920
13	Programming and transmission activities in sound broadcasting service	6010
14	TV Programming and transmission activities	6020
15	News agencies activities	6391

16	Other information service activities	6399
17	Advertising	7310
18	Specialized activities in design	7410
19	Photography activities	7420
20	Cultural teaching	8553
21	Literary creation	9001
22	Music creation	9002
23	Theater creation	9003
24	Audio-visual creation	9004
25	Plastic and visual arts	9005
26	Theatrical activities	9006
27	Live music shows activities	9007
28	Other live shows activities	9008
29	Libraries and archives activities	9101
30	Activities for museum operation and historic buildings and places conservation	9102
31	Activities for botanical gardens, zoos and natural reserves	9103
32	Amusement and thematic parks activities	9321

Author's translation of DANE (2019, p. 54)

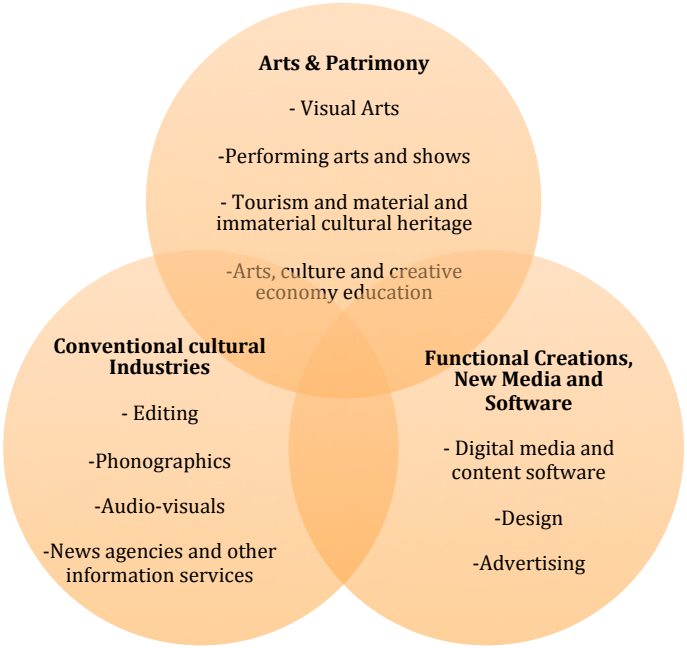
Partial Inclusion Activities in the Orange Economy		
	Description	**CIIU 4 A.C**
1	Weaving of textile products	1312
2	Finishing of textile products	1313
3	Knitted and crocheted fabrics manufacture	1391
4	Manufacture of articles made of textile materials, except apparel	1392
5	Floor mats and carpets manufacture	1393
6	Other textile articles manufacture	1399
7	Garment manufacture, except fur garment	1410
8	Manufacture of leather articles	1420
9	Manufacture of knitted and crochet articles	1430
10	Manufacture of travel articles, handbags and similar articles made of leather, and manufacture of saddlery articles	1512
11	Manufacture of leather and fur footwear, with any type of shoe sole	1521
12	Manufacture of other types of footwear, except leather and fur footwear	1522
13	Manufacture of wood containers	1640
14	Manufacture of other wood products; manufacture of cork, basketry and plaiting articles	1690
15	Printing activities	1811
16	Service activities related to printing	1812

17	Copy production from original recordings	2820
18	Glass and glass articles production	2310
19	Manufacture of other types of ceramic and porcelain	2393
20	Cutting, shaping and finishing of stone	2396
21	Forging, pressing, stamping and metal rolling; powder metallurgy	2591
22	Manufacture of other processed metal products	2599
23	Furniture manufacturing	3110
24	Other manufacturing industries	3290
25	Retail trade of books, newspapers, materials, and desk articles in specialized establishments	4761
26	Retail trade of other cultural and entertainment articles in specialized establishments	4767
27	Retail trade of computers, peripheral equipment, computer programs and telecommunications equipment in specialized establishments	4741
28	Retail trade of clothing and accessories (including fur articles) in specialized establishments	4771
29	Retail trade of all types of shoe wear and leather articles in specialized establishments	4772
30	Rail passenger transport	4911
31	Passenger transportation	4921
32	River transport of passengers	5021
33	Hotel accommodation	5511
34	Accommodation in apart hotels	5512
35	Accommodation in vacation centers	5513
36	Rural accommodation	5514
37	Other types of accommodation for visitors	5519
38	Activities of camping areas and parks for recreational vehicles	5520
39	Prepared meals served to the table establishments	5611
40	Prepared meals self-service establishments	5612
41	Prepared meals served in cafeterias	5613
42	Other types of prepared meals establishments	5619
43	Alcoholic beverages for in-establishment consumption establishments	5630
44	Wireless telecommunication activities	6110
45	Satellite telecommunication activities	6130
46	Information system development activities (planning, analysis, design, programming and tests)	6201
47	Computer consulting activities and computer facilities administration activities	6202
48	Activities of architecture and engineering and other activities related to technical consulting	7110
49	Research and experimental development in the field of natural science and engineering	7210
50	Research and experimental development in the field of social sciences and	7220

	humanities	
51	Other professional, scientific, and technical activities	7490
52	Travel agencies activities	7911
53	Other reservation services and related activities	7990
54	Executive activities of public administration	8412
55	Regulation activities for entities related to health, education, cultural and other social services, except social security services	8413
56	Early childhood education	8511
57	Pre-school education	8512
58	Primary education	8513
59	Secondary education	8521
60	Academic middle-school education	8522
61	Technical middle-school education and job training	8523
62	Establishments that offer different education levels	8530
63	Professional technical education	8541
64	Technological education	8542
65	Education in university institutions of technological schools	8543
66	Education in universities	8544
67	Non-formal academic training	8551
68	Activities of professional associations	9412
69	Other associative activities	9499

Author's translation of DANE (2019, p. 55-56)

Appendix C – Activities included in the sub-categories of the Orange Economy



Author's translation of DANE (2019, p. 7)

Appendix D – VIF Results

Variable	VIF	1/VIF
Education	12.23	0.081798
Internatio~s	9.33	0.107176
Infrastruc~e	6.02	0.166041
Related_In~s	3.95	0.253413
Institutions	2.72	0.368236
Mean VIF	6.85	

Author's estimations

Appendix E – Location Quotient estimations

Region	GDP CCI 2017 (billion pesos)	Total GDP region 2017 (billion pesos)	Colombian GDP CCI 2017 (billion pesos)	Colombian GDP 2017 (billion pesos)	Estimated Location Quotient *	Agglomeration *
Amazonas	7	630	20,475.0	832,590.0	0.441095396	0
Antioquia	2,903	121,242	20,475.0	832,590.0	0.973533789	0
Arauca	21	4,158	20,475.0	832,590.0	0.206627589	0
Atlántico	909	36,667	20,475.0	832,590.0	1.007541039	1
Bogotá	8,901	214,749	20,475.0	832,590.0	1.685527941	1
Bolivar	431	30,223	20,475.0	832,590.0	0.579334898	0
Boyacá	248	22,525	20,475.0	832,590.0	0.447225218	0
Caldas	343	13,005	20,475.0	832,590.0	1.073441674	1
Caquetá	63	3,439	20,475.0	832,590.0	0.744930324	0
Casanare	46	12,925	20,475.0	832,590.0	0.144541438	0
Cauca	212	14,897	20,475.0	832,590.0	0.578659989	0
Cesar	144	16,145	20,475.0	832,590.0	0.362584784	0
Chocó	34	3,440	20,475.0	832,590.0	0.403677045	0
Córdoba	266	13,777	20,475.0	832,590.0	0.783836727	0
Cundinamarca	511	50,488	20,475.0	832,590.0	0.411483094	0
Guainía	3	301	20,475.0	832,590.0	0.3385816	0
Guaviare	7	693	20,475.0	832,590.0	0.432922713	0
Huila	325	13,112	20,475.0	832,590.0	1.007582302	1
La Guajira	143	8,998	20,475.0	832,590.0	0.64829901	0
Magdalena	246	10,956	20,475.0	832,590.0	0.913029083	0
Meta	184	29,072	20,475.0	832,590.0	0.256673969	0
Nariño	328	12,487	20,475.0	832,590.0	1.06859243	1
Norte de Santander	462	12,952	20,475.0	832,590.0	1.449127081	1
Putumayo	50	3,362	20,475.0	832,590.0	0.603807241	0
Quindío	167	6,701	20,475.0	832,590.0	1.015852915	1
Risaralda	420	13,199	20,475.0	832,590.0	1.295230211	1
San Andres y Providencia	8	1,340	20,475.0	832,590.0	0.228028713	0
Santander	684	53,970	20,475.0	832,590.0	0.515128948	0
Sucre	200	6,985	20,475.0	832,590.0	1.164655426	1
Tolima	358	17,918	20,475.0	832,590.0	0.812633157	0
Valle del Cauca	1,846	81,429	20,475.0	832,590.0	0.92169723	0
Vaupés	2	239	20,475.0	832,590.0	0.373232235	0
Vichada	5	533	20,475.0	832,590.0	0.372584808	0

Author's construction using Banrep (2019) and DANE (n.d.-a)
*Author's estimations