THE CULTURAL ADVANTAGE OF CITIES: EXPLORING THE CULTURAL INDUSTRY AGGLOMERATIONS AS A SOURCE FOR ECONOMIC GROWTH

A DISSERTATION

By

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Abstract

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AS A SOURCES FOR ECONOMIC GROWTH

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Interest in the cultural industries as a source for economic growth has risen to prominence in recent decades. The purpose of this research is to explore the role and contribution of the cultural industries for economic growth. The analytical framework is based on the agglomeration model, which links economic growth to the spatial organization of economic activity. The cultural industries exhibit a tendency to cluster in geographical space due to competitive pressures, which causes some degree of agglomeration economies to arise (Scott, 2004). The literature exploring the economic impacts of the cultural industries has focused on their agglomeration tendencies at the regional or national levels. Yet; we don't know much more about their implications at the local level or at smaller spatial scales. The research is conducted by analyzing cultural employment and socioeconomic data from the US Census from 2004 to 2014 using regression and other quantitative techniques. A zip-code level analysis is performed to determine whether variations of cultural employment explain the differences in local employment growth. The findings suggest that the cultural industries' contribution to local economic growth is modest, nonetheless; agglomeration economies play an important role in explaining employment growth. The study also reveals that agglomeration

economies can operate at a sub-city level and are not necessarily industry-specific. The research contributes to knowledge and practice as relates to the potential role of culture in local planning and policy. The scope and implementation strategy of cultural industry agglomerations as a source of economic development may still be in its early stages, however; much further research and reflection are needed before we can draw conclusions about its full potential. Despite its limitations, the analytical framework and the findings of the study present a step forward toward understanding this role.

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Introduction

Background and Overview

Interest in the cultural industries as a source for economic growth has risen to prominence in recent decades. The increasing disparities in incomes and growth across time and space accompanied by a continued decline in manufacturing sector employment underscore the structural shifts that are occurring within the advanced capitalist economies during the past decades. In contrast, the cultural industries are increasingly seen as an important element of urban and regional economies, which are manifested by an increasing demand for symbolic and aesthetic content as forms of self-expression (Scott, 1997). The cultural sector comprises an eclectic collection of industries producing goods and services that fulfill consumer demands for amusement, self-affirmation and social display (Scott, 1999). The most obvious examples of cultural industries are music, television, motion pictures, museums and the performing arts. Place marketing programs through cultural flagship projects or tourist attractions constitute a first wave of economic development strategies involving cultural forms of production (Evans, 2003; Garcia, 2004; Scott, 1997). A new generation of policy approaches stimulates the formation of localized clusters of production with the intent to boost local income and employment growth (Scott, 2004). The literature exploring the cultural economy generally follows two major strands: the industrial approach and the occupational approach. The industrial approach focuses on grouping the industries that produce cultural outputs (Pratt, 1997; Scott 1997). The occupational approach targets the occupations rather than industries by focusing on labor skills, training and implications for regional development (Markusen, Wassall, DeNatale & Cohen, 2008; Markusen & Schrock, 2006).

The purpose of this research is to explore the role and contribution of cultural industries for city growth. The framework of analysis is based on the agglomeration model, which links economic growth to the spatial organization of economic activity. The cultural industries exhibit a tendency to cluster in geographical space due to competitive pressures, which causes some degree of agglomeration economies to arise (Scott, 2004). Literature exploring the cultural industries has focused on its economic contributions at the regional or national levels, but we don't know much more about their effects at much smaller geographical scales. It is suggested that the growth effects of the cultural industries are directly related to the logic and dynamics of local economic activity. The research is conducted using regression and other quantitative techniques to analyze cultural employment and socioeconomic data. A zip-code level regression analysis is performed to determine whether variations of cultural employment explain the differences in employment growth from 2004 to 2014. The findings suggest that agglomeration economies play an important role in explaining employment growth, however; the cultural employment effects are modest, nonetheless; The study reveals that agglomeration economies can operate at a sub-city level, but are not necessarily industry-specific.

The research contributes to knowledge and practice as relates to the potential role of culture in local planning and policy. The scope and implementation strategy of cultural industry agglomerations as a source of economic development may still be in its early stages, however; much further research and reflection are needed before we can draw conclusions about its full potential or limitations. The analytical framework and the findings of the study, despite their limitations, may offer a step forward in helping us better understand these roles.

The Research Problem

A longstanding view of urban growth is the outcome of industrialization and production processes. The physical capital and natural resources are thought to be major forces for the creation of economic growth (Scott & Storper, 2009). Mass production in manufacturing seemed to be a major feature of the advanced capitalist economies prior to the 1970s. Scott et al. (2001) contend that firms in various sectors are shifting toward more flexible technologies and organizational patterns during the past few decades for many complex reasons. In addition, new digital technologies allow for flexibility in production processes. Furthermore, the rise of disposable incomes and market niches are stimulating consumer demands for a wide variety of products (Scott, Agnew, Soja, & Storper, 2001). As a result, flexible specialization increasingly represent a large share of output and employment in the advanced capitalist economies. The economic restructuring of the advanced capitalist economies during the past decade underscores a declining employment in the manufacturing sector, expanding employment in the service sectors and concentrating of incomes and growth within certain places more than others. Simultaneously, the effect of globalization and its associated economic transformation tend to intensify the interregional differences in income and growth (Scott & Storper, 2003).

An ongoing debate in the literature concerns the underlying causes of economic growth and the polemic question of whether people follow jobs or jobs follow people. One of the major arguments is provided by the proponents of human capital theory. In their view, creativity and skills of workers play important roles in the creation of economic growth. The underlying assumption is that firms will follow the individuals who possess a high level of skills and knowledge. Thus, the spatial concentration of skilled workers or the “human capital” allows for the rapid transmission of knowledge to create economic

value. Contemporary economic growth theories that share the same logic of the human capital theory include: the creative class theory (Florida, 2003) and a Neoclassical version conceived by Berry and Glaeser (2005). The creative class theory is based on the assumption that creativity and talent are two important characteristics for driving economic growth. Furthermore, the geographic patterns of creative people are shaped by preferences for lifestyles and amenities and subsequently cities with higher concentrations of creative people will grow at a faster rate than those with lower concentrations (Florida, 2003). A neoclassical model of the human capital theory was developed by Berry and Glaeser in which they argue that cities should target individuals with high levels of human capital (Berry and Glaeser, 2005). They present evidence that is that the clustering of skilled people in metropolitan areas motivates skilled workers to innovate, which leads to increases in labor demand for more skilled workers and wages. An occupational approach of the human capital theory offers an alternative view, which emphasizes investments in skills and training (Markusen, 2004). The strategy of the occupational approach is to identify and target key occupations that serve the local markets as agents for economic development by enhancing the skills and capabilities of the workers via education and training. Markusen (2004) argues that planners should target the locational preferences of these key occupations by seeking to enhance the qualities of living and working environments that will attract the members of these key occupations. A major weakness of the three approaches is the failure to recognize the underlying sources of urban growth which inherently reside within the processes of productive activity arising from locational agglomerations of firms and workers. Clusters of economic activities arise and thrive over time because of the net external economies, which in turn stimulates growth in a cyclical and cumulative fashion (Scott & Storper, 2009). The tendency of economic activities, whether manufacturing sector or service

sectors, to spatially cluster in dense locational agglomerations appears to be gaining strength as of late.

The cultural industries are becoming a prominent component of the economic structure for large metropolitan cities and various kinds of geographical contexts. The rise of cultural capitals to global prominence has stimulated the interest into exploring the culture-generating capabilities of cities (Scott, 1997). The rapid growth of the cultural industries sector in terms of output and employment in the last few decades is manifested by the rising demands for self-expression and symbolic values in design and aesthetics in response to the growth in disposable incomes within the capitalist economies (Scott, 2004). The first wave of cultural-led economic development policies involves place marketing strategies such as city branding or flagship cultural projects. Various kinds of agencies are formed by municipalities to promote their brands. Entrepreneurial municipal governments build flagship cultural projects to attract businesses and tourists locally and nationally (Grodach, 2013). Similar kinds of policies and programs aim to take advantage the local resources of cultural and symbolic value in pursuit of revitalization and redevelopment of the stagnant parts of the city (Scott, 2002). More recently, a new wave of economic development strategies involves the formation of localized clusters of economic activities with the intent to boost the level of employment and income. The cultural industries appear to be locked in a system of productive agglomerations (Storper & Scott, 1995; Scott, 1997). These agglomerative characteristics of have caught the attention of scholars in recent years. For instance, in a recent study, Grodach et al. (2014) explored that the concentrations of artistic activities at a neighborhood and metropolitan level. Their results revealed the impact of artistic clusters are place-specific. They also revealed that artistic activity cluster in innovation districts, which suggests they could play an important role in economic development. In a study of the arts employment

in Canada, Polese (2012) explored their locational patterns and the evidence of collocation with knowledge-rich industries. The results revealed insignificant relationships. Other studies have focused on the implications of artists' populations for economic growth (Ryberg, Salling & Soltis, 2013; Silver & Miller, 2013). Other studies have explored the linkages of artistic and cultural clusters to neighborhood revitalization (Stern & Seifert, 2010; Noonan, 2013; Grodach, Foster, & Murdoch, 2014). The findings of these studies so far suggest the existence of various levels of agglomeration economies at different geographical scales.

This research builds on the existing literature on the relationships between the cultural industries and economic growth with special attention to the agglomeration economies of the cultural industries. Our framework of analysis draws the attention to the synergies and dynamic interdependencies arising from the territorial agglomeration of the cultural and artistic industries.

The Purpose Statement

The cultural industries are an important component of the US economy according to current data from the Bureau of Labor Statistics; and they comprise a high level of skilled and creative workers. The purpose of the study is to explore the role of cultural industries as a source for local economic growth and to determine whether the variations of cultural employment explain the differences in economic growth levels. Industries usually cluster to take advantage of proximity access to cheap and skilled labor, reduce transportation costs and facilitate knowledge transfer which contributes to the creation of external economies, which in turn contributes to the creation of new employment opportunities and enhance the competitive advantage of firms. This research focuses on the cultural industry agglomerations as they tend to be highly localized and rely heavily on the local market for inputs and outputs. These characteristics make the cultural

industries very attractive to policy-makers seeking local economic development and redevelopment. To model this relationship, we will examine two sources of agglomeration economies, and more specifically, the urbanization and localization economies. The theoretical foundation is to model economic growth as a consequence of the spatial organization of economic activities and the economic benefits arising from the interactions among firms or individuals within their own industry and with other industries. Territorial proximity enables the easy transmission of knowledge among the participants throughout the industry or among the participants from other industries. Territorial proximity, industry interdependencies and specialization of labor are important ingredients to creating agglomeration economies. Due to the territorial proximity factor, economies tend to be large in a city. The spatial clusters of firms and their resources foster synergy and efficiency and create positive externalities, which spill over throughout the industry. As such, firms greatly enhance their competitive advantage from the collocation within a dense agglomeration of activities as they make business transactions among each other and benefit from the local labor pool. In the same way, these industry agglomerations promote economic growth and productivity within the various sectors, including the cultural industries. Therefore, we can infer that industry specialization and diversity are two major sources that generate agglomeration economies, which are conducive for economic growth.

The Research Questions

Empirical literature seeking evidence that supports the causal relationships of the cultural industries to economic growth have focused on questions such as the role of the cultural industries for neighborhood revitalization (Stern & Seifert, 2010; Grodach, Foster, & Murdoch, 2014). Gentrification, social inequalities and economic growth associated with the presence of creative or artistic milieus also have received a great

deal of attention. The knowledge-based creative industries are also being linked to higher productivity or innovation. Other studies have focused on the locational patterns of artistic and creative employment and their collocation with knowledge-intensive industries (Polese, 2012; Silver & Miller, 2013). An important question has not yet received enough attention in the literature: how and to what extent do the cultural industries contribute to local economic growth. We need to better understand the structure and agglomeration dynamics in relation to local economic growth. The recent debate concerns the structure of economic activity and how agglomeration economies produce and reinforce economic growth in a cyclical fashion. There are two sources of agglomeration economies that are known to promote in the process of knowledge creation and dissemination. The first one is the localization economies, which mainly arise within a specific industry. The second one is the urbanization economies, which arise across industries and sectors. Our aim is to test whether the two major sources of agglomerations: localization economies and urbanization economies, are conducive to promoting economic growth. Specifically, the research seeks to address the following objectives:

1. Explore the employment trends in the cultural industries of the past decade.
2. Explore whether cultural employment variations explain variations in local employment growth.
3. Explore whether the levels of localization and urbanization economies explain variations in local employment growth.
4. Explore the relationship between the cultural industries and economic growth in consideration of the economic recession.

Overview of Methodology

A variety of methodological approaches are used in the literature to organize the cultural and creative industries for measuring their economic impacts. Two major characteristics can be identified from the cultural industries. First, the cultural industries are not a homogeneous sector and their activities may operate under various domains (Mikić, 2012). Second, the cultural industries may involve various segments of society including public and private sectors and non-profit organizations. Therefore, measuring the economic impacts of the cultural industries requires a conceptual framework that recognizes the diversity of its sub-sectors. This research seeks to explore the agglomeration effects of the cultural industries on employment growth. Using the explanatory power of regression analysis techniques, we will test three agglomeration economies that are known to promote economic growth, which are the localization economies and the urbanization economies.

The industrial specialization model was first introduced over a century ago by Alfred Marshal, which argues the spatial concentration of an industry enables knowledge spillovers between firms, which in turn fosters economic growth in that industry (Marshal, 1920). The underlying assumption is that knowledge transmission would only benefit firms within the same industry. It is also assumed that the agglomeration economies across industries are non-existent or insignificant. However, a major source of agglomeration economies which arise across industries may be ignored. The diversity thesis was conceptualized by Jane Jacobs, where she argued that the most important sources of agglomeration economies occur across diverse industries in which the firm operates (Jacobs, 1969). Therefore, the diversity thesis suggests that the diversity of economic activities within a geographic region promotes knowledge creation and diffusion and consequently promotes economic growth and productivity.

A quantitative statistical approach is selected as the appropriate means to examine the cultural industries agglomerations as a source for economic growth. Using employment growth is commonly used in research as a proxy for measuring economic growth because the data on total employment are often readily available. Other measures of economic growth include the number of new startups, real wages, number of plants and property values. A number studies have shown evidence of agglomeration economies when using employment growth as the dependent variable (Glaeser, Kallal, Scheinkman, & Shleifer,1992; Stern & Seifert, 2010; Polese, 2012). The nature of agglomeration economies hence depends on the product lifecycle, which imply that employment growth would benefit from the diversity of activities while productivity would increase with specialization. The following are the steps associated with developing our methodology framework:

1. Establish a working definition for the cultural industries based on the literature and theoretical considerations.
2. Explore the various methods of measuring the cultural industries in the literature.
3. Develop a conceptual model for testing relationship between the independent variables (agglomeration economies) and the dependent variable (employment growth).
4. Define measures of agglomeration economies from the literature.
5. Perform regression analysis and other quantitative techniques to test the economic model.

Rationale and Assumptions

A great deal of urban and regional growth theories are premised on the classical urban economics theory of agglomeration economies, which result from the territorial

proximity of firms and individuals. Cities have always been viewed as the sites of economic growth and prosperity due to the agglomeration economies generated from the divisions of economic activities and labor.

1. One of the main pillars of agglomeration economies is the ability of producers and suppliers to reduce transportation and communication costs through spatial clustering. Inputs and outputs can move freely, which increases transaction costs and increasing returns to scale.
2. Second, territorial agglomerations raise the possibility for labor pooling by allowing specialization and flexibility. Eventually, firms and workers benefit by reducing the risk from job turnover and job search and rehire.
3. Thirdly and more importantly, knowledge and information transfer through face to face interactions presents another advantage where innovation and creativity fuel more growth and productivity in a cyclical fashion (Audretsch & Feldman, 1999). These three advantages underlying the clustering of firms and workers generate agglomeration economies that form the basis to economic growth and productivity.

Cities exist because they allow for a complex system of agglomerations of firms and workers to occur, which in turn provides the conditions for economic growth and development. The patterns of agglomerations that are formed may vary from one location to another depending on local circumstances and the local composition of industries. Those industries that achieve economies of scale at low rates of outputs such as the cultural industries, electronic industries and business services have numerous opportunities of achieving locational agglomeration economies. These sectors can engage in various forms of product differentiation from one place to another (Scott &

Storper, 2003). Once the industry agglomeration occurs, agglomeration economies start to form.

Scott (2004) suggests that agglomeration economies in the cultural industries arising from proximity frequently encourage groups of producers to cluster together to form specialized industrial districts. The purpose of this research is to explore the linkages of the cultural industry clusters to local economic growth. More specifically, we will consider the agglomeration economies effects for stimulating employment growth. To achieve this goal, we will test the following hypotheses:

1. Geographically-agglomerated specialized activities are conducive to economic growth.
2. Industrial diversity (or urbanization economies) is conducive for economic growth.
3. Local competition is conducive for economic growth.

Definitions

The cultural industries, sometimes referred to in the literature as the cultural economy, is a relatively recent term that encompasses the fields of culture and art with the intent to recognize the distinctive features of cultural products and to capture the ways in which such assets contribute to the creation of further cultural products and services. Different conceptualizations of the cultural industries and its sub-sectors will lead to a wide range of definitions of the term. Horkheimer and Adorno (2001) first used the term “cultural industry” in their critical analysis of the commercial production of mass culture. Adorno’s definition of the culture industry includes all forms of commercial cultural production (Adorno, 1991). In Hesmondhalgh’s view, the cultural industries are directly involving the production of social meaning in the form of texts and symbols (Hesmondhalgh, 2002). From his perspective, the cultural industries inculde television,

radio, the cinema, news-papers, magazine and book publishing, music recording and publishing industries, advertising, and the performing arts. Throsby (2008) identified some common characteristics the cultural industries share. First, cultural products and activities may involve some degree of human creativity in their production. Additionally, cultural products may carry symbolic representations for those who consume them. Furthermore, they may contain some intellectual property that belong to the producer of such product or service. Throsby's definition of the cultural industries includes activities and services such as artworks, music performances, literature and film and television (Throsby, 2008). The cultural industries are blurred by the symbolic and utilitarian functions of the products they produce. Throsby (2004) recognized two forms of cultural products: tangible and intangible. Tangible cultural products occur in the form of artworks and artifacts such as paintings and sculptures, and heritage buildings. Intangible cultural products comprise artworks which exist in their pure form as public goods such as music and literature. The cultural products and service may be directly consumed yielding a flow of capital services over time, or may enter as an input to produce other cultural goods and services. For example, the creative work of designers, artists, or writers can directly enter the consumption line or can be combined and reproduced in other forms of cultural production such as the media or the preforming arts. Moreover, the services of artworks as capital items may be combined with labor and other inputs to yield consumption experiences for visitors at art museums. Cultural products and artifacts can be commodified, reproduced or consumed to become sources of revenue and employment. An artwork in a museum may stimulate creative artists to produce further works, thus leading to further asset formation. The cultural industries encompass the production and consumption of various cultural products and services deliberately inscribed with cultural meanings, lifestyle associations, emotional values or symbolic content (Scott, 1997).

Therefore, the cultural industries are increasingly becoming one of the most important growth and employment sectors in advanced postindustrial economies. For this research, we adopt a broader concept of the cultural industries established by Allen Scott, which identified three important common features (Scott, 2004). They are primarily involved in the creation of aesthetic and semiotic content. Additionally, the demand and consumption of these products expand with the rise of disposable income (Beyers 2002). Furthermore, they have the tendency to agglomerate together in dense specialized clusters or industrial districts. According to this view, the cultural industries constitute an incoherent collection of industries bound together by three common features (Scott, 2004). First, they are concerned with the creation of aesthetic and semiotic content. Secondly, the consumption of their outputs rises as disposable income expands. Finally, they are subject to competitive pressures that encourage individual firms to cluster together.

Chapter 2

Literature review

Introduction

A longstanding debate in the economic literature is concerned with the underlying causes of urban growth. Two major schools of thought have offered two contrasting views about the issue. The first comes from the neoclassical economic theory, which predicts that regional convergence in development and incomes will occur over time. This view holds that the spatial integration of economic activities tends to gradually eliminate the interregional differences in living standards through the convergence of economies. On the other hand, the divergence thesis holds that uneven spatial development will persist and the economies of scale and agglomeration will lead to the concentration of capital and labor in certain places more than others. The increasing disparity in income levels between the rich and the poor manifest the tendency toward the divergence thesis. Endogenous growth theory offers an alternative view of local and regional growth in response to the shortcomings of the neoclassical convergence theory. Empirical studies have given emphasis to the role of human capital and agglomeration by integrating them into the production function. Scott and Storper (2003) argue that there are significant endogenous determinants – local and national – of how agglomerations function and contribute to economic development in their contexts. On the other hand, investment in human capital generates spillover effects which induce growth and increase productivity. In the next section, the human capital and agglomeration economies will be discussed in more details.

Endogenous Growth: Agglomeration vs Human Capital

An old tradition in economic literature view industrialization and processes of economic development as major drivers of economic growth. In recent years, an

emerging branch of economic literature sees urban growth not so much because of productive activity, but as an effect of population dynamics. The endogenous growth theory holds the view that economic growth is primarily the result of endogenous and not external forces. One major factor of explanation focusses on the role of knowledge and investment in human capital (Lucas, 1988). The human capital theory introduces the skills of the educated class as an endogenous factor into the growth model. They also draw the attention to the forces that shape the spatial preferences of skilled labor. One of the longstanding debates in the literature concerns whether people follow jobs or jobs follow people. The human capital theory assumes the spatial distributions of highly educated and skilled labor force greatly influence the patterns of regional and economic growth. Assuming there is a high level of population mobility within an open economy, the locational patterns of human capital will be influenced by the migration of highly skilled labor. In addition, human capital is locally shaped by means of education, training and the processes of socialization. The human capital formation is uneven across the space economy and locally and regionally differentiated, which can greatly shape localized systems of production (Martin & Sunley, 1998). The local skill base and the socio-cultural attributes enable and contribute to the human capital formation and the urban regions' attractive power. City growth, competitive advantage and quality of life can greatly be enhanced by aspects of the urban environment through the creation of vibrant spaces and places and the promotion of cultural and social activities. The next section provides a brief review of a few human capital-based models. Then, it will be followed by a literature review of the theoretical foundations of agglomeration economies.

The Creative City

The creative city is a concept pioneered and advocated by the work of Richard Florida. The fundamental argument of the theory suggests that creativity is the main

driving force for economic growth. An examination by Florida (2003) found that cities with a higher concentration of the creative class have exhibited particularly successful economic development in high-tech and high growth firms. Consequently, Florida argues that members of the creative class are attracted to cities based on certain factors, particularly emphasizing socio-cultural attraction factors such as tolerance, openness and cultural diversity. A major distinction between the creative class theory and the traditional strategies of economic development is that the presence of the creative class becomes the focus for attracting firms and industries seeking highly skilled labor instead rather than the debated strategy of offering direct incentives to attract the firms or industries. The arguments of the creative class theory have captured the attention of researchers, particularly interested to test the theoretical rigor within different contexts. A few empirical tests of the Creative Class thesis have yielded mixed results. A study by Florida and his associates found that the creative class is linked to regional development (Florida, Mellander, & Stolarick, 2008). Other research findings revealed the creative class has no effect on economic growth (Hoyman & Faricy, 2009). There is also a great deal of empirical testing of the Creative Class thesis within the European context (Andersen, Hansen, Isaksen, & Raunio, 2010; Marlet & Woekens, 2007; Martin-Brelot, Grossetti, Eckert, Gritsai, & Kovacs, 2010). The findings were also mixed. For instance, Andersen et. al. (2010) found weak support for the creative class in the smaller regions; meanwhile Hansen (2009) concluded that the creative class people move for jobs rather than place.

A neoclassical model of the human capital was developed by Berry and Glaeser, where skills of the working class become an influential factor for urban growth (Berry & Glaeser, 2005). The assumption is that high skilled people follow the jobs and the firms that will hire them. In their model, Berry and Glaeser (2005) tested whether the clustering of skilled people in metropolitan areas motivates skilled workers to innovate and leads to

an increase in labor demand for more skilled workers. They also tested whether the wages for skilled workers in skilled cities increase relative to the wages of unskilled workers in the same cities. They found strong correlation between the initial shares of metropolitan area adults with college degrees and change in that variable. Places with higher levels of human capital were found more attractive to highly skilled individuals.

An amenity-based explanation of the human capital theory was provided by Terry Clark and his colleagues. Their main argument is that the geography of urban growth is linked to a tradeoff of consumer preferences for amenities. Further, they suggested that places endowed with cultural, aesthetic or consumer amenities attract individuals with high levels of human capital more than others (Clark, Lloyd, Wong, & Jain, 2002). One problem with this explanation is that consumer amenities do not vary a lot between different places. Meanwhile the consumer amenities may explain the preferences of individuals choosing to live in urban areas rather than rural areas; it may not better explain a decision to live in one city over another.

Agglomeration Economies

In contrast to the human capital approach, which focusses on the skills and talent of the working population, the agglomeration theory underscores the importance of spatial organization of economic activities as a determinant of economic growth (Fujita, Krugman & Venables, 2001). The agglomeration thesis asserts the spatial concentration of economic activity as an endogenous outcome of the growth model (Storper, 2010). The agglomeration economies resulting from the spatial clustering of activities depend on the local capacity to foster social networks, interdependencies and cooperation to promote innovation and economic growth (Storper, 1995). The concept of agglomeration economies is typically exemplified by locally-originating industrial districts and innovation clusters, in which economic externalities and knowledge spillovers are flowing

collaboratively throughout the economic cluster (Marshall, 1920). The tendencies of economic activities to spatially concentrate have stirred interest among scholars a long time ago to explore the underlying causes of this phenomenon. An old debate in the empirical literature on agglomeration economies concerns whether agglomeration economies are related to the concentration of an industry or to the size of a city itself. In other words, the debate focusses on the relative importance of localization and urbanization economies as major sources of economic growth and innovation. The first type is localization economies, which occur when a specific industry geographically cluster to take advantage of the proximity to other competitors and intermediate suppliers. Territorial proximity facilitates the transmission and exchange of knowledge, reduces transport cost, and supports an efficient labor market. Knowledge developed within a particular firm or industry can easily spill over throughout the industry cluster and may be further developed to different uses and applications. The underlying assumption here is that knowledge and economic externalities are limited only among firms and establishments within the same industry, cluster or region.

The second type is urbanization economies, which stem from the externalities that operate across sectors and industries. The industrial diversity of the regional economy gives rise to urbanization economies. In this view, urbanization economies rather than localization economies are viewed as the driving force for economic growth and productivity. Cities are viewed as sites for economic growth and innovation because of their sheer size, and the division of labor and activities that exist in cities.

Specialization vs Diversity

Another important debate involving the industrial scope concerns the role of specialization and diversity of economic activities. The specialization thesis assumes that the spatial clustering of a specific industry within a city enables knowledge spillovers

between firms and, therefore, the growth of that industry and of that city. Alfred Marshall a century ago was first to recognize the arguments for agglomeration economies. Marshall (1920) argued that industries spatially agglomerate because proximity enables an easy transmission of knowledge, reduces transport costs of inputs and outputs, and enables firms to take advantage of a more efficient labor market. The basic concepts of agglomeration economies have been developed and differentiated over time. The first-factor is scale economies, which explains why cities exist in the first place. Without scale economies in production, economic activities would spread evenly across space to reduce transportation costs. The second factor is shared inputs in production and consumption, which involves the economic benefits that arise within a specialized industry. Krugman (1993) suggests the presence of workers specialized in accounting, law, advertising and other technical fields in a metropolitan area can reduce costs for businesses. The third factor is the savings in transactions costs. The availability of a large pool of workers and the possibility of job matching between worker skills and job requirements reduce the search costs of workers with various skills and employers with various demands for labor (Helsley & Strange, 1990). Other cost savings may arise from the fluctuation and stabilization that occur to the larger economy (Mills and Hamilton 1984).

Theories of industrial diversity date back the work of Chinitz (1961) and Jacobs (1969). Growth models focusing on the importance of diversity in large cities emphasize urbanization economies and interdependencies among industries. In contrast to the specialization thesis suggested by Marshall, Jacobs (1969) emphasized the importance of diversity for urban growth. Her argument is that diversity enables cross-fertilization of ideas. The diversity thesis suggests that the most sources of productivity and economic growth lie outside the industry in which the firm operates. The greater variety of industry

sectors and division of labor the greater the economy's capacity to produce and innovate. Agglomerative economies in this interpretation promotes the creation and transmission of knowledge, which in stimulates productivity and economic growth. The diversity of economic activities sustains the easy transmission of knowledge. Knowledge spills from one industry to another, which fosters new ideas in other branches of the economy. A good example for the diversity thesis comes from Hollywood, where innovation and creativity have fostered to sustain other industries such as the fashion, design and advertising industries (Molotch, 1996).

How diversity of economic activity improves economic performance and productivity? The empirical models examining the agglomeration advantages of industrial diversity in inputs and outputs revealed compelling findings. Some of the early studies estimated production functions for specific industries using the metropolitan statistical area as the units of observation. Shefer (1973) examined of a group of twenty industries across metropolitan statistical areas found that doubling city size would increase productivity by fourteen (14%) to twenty seven percent (27%). Applying more sophisticated methods, Sveikauskas (1975) found that the doubling of city size would increase output by six to seven percent. Segal (1976) aggregated across industries and found that productivity within cities of about two million or more in population was about 8 percent higher than in smaller cities. Soroka's study of Canadian municipalities (1994) found some weaker results. During the 1990s, more sophisticated empirical analyses have been developed to explore the relationships between city size, the concentration of certain economic activities, the diversity of a city's industrial composition and the level of economic performance. A number of studies examined the link between the urban human capital and productivity. Rauch's empirical analysis (1991) was pioneering because he was able to link the labor market to theories of human capital. Using 1990 data on

individual workers living in over 200 U.S. metropolitan areas, Rauch found strong evidence to support the hypothesis that the economic advantage of a metropolitan area with an average educational level one-year higher increases about three percent (3%). The role of universities is well known and documented in disseminating knowledge. Much recent empirical work linking growth and productivity to the urban economy can be found in the influential empirical study by Glaeser and his colleagues. (1992). By gathering a comparable body of data on city-industries in 1956 and 1987, Glaeser et al. (1992) explored various theories of knowledge spillovers and growth using a data set on geographic concentration and competition of industries in 170 of the largest U.S. cities. The findings of the study provide evidence to the importance of industrial diversity on economic growth. The results were consistent with the arguments of Jane Jacobs (1969) about the stimulation of ideas within diverse environments. Several empirical studies have followed the same premise and elaborated on it. Henderson et al. (1995) used data for eight manufacturing industries in 1970 and 1987 to test for and characterize dynamic production externalities in cities. Their findings revealed evidence of specialization externalities, which are associated with past own industry employment concentration, and Jacobs externalities, which are associated with past diversity of local total employment. Their findings were consistent with notions of urban specialization and product cycles. Moreover, they found the established industries had a high degree of persistence in individual employment patterns across cities associated with the specialization externalities and persistence in regional comparative advantage. Bostic et al. (1997) found that industrial diversity in 1880 had a substantial effect on output in 1890, using Census of Manufacturers data for 79 American cities. Other recent research focused on states rather than cities, including a study by Garcia-Mila and McGuire (1993) who used annual employment data for the states and the United States from 1969 to 1985. They

(1993) calculated measures of growth and variability for each state. Their results showed evidence that the industrial mix of an economy explain differences in net growth rates and variabilities across the states. In the next section, we will explore the cultural economy through the lens of agglomeration economies, and the geographic scales of various cultural clustering models.

Typology of Cultural Clusters

Literature exploring the economic geography of the cultural industries is rapidly growing (Mommaas, 2004; Cooke & Lazzeretti, 2008; Markusen & Schrock, 2006; Stern & Seifert 2010; Grodach, Currid-Halkett, Foster, & Murdoch III, 2014). The cultural industries sector is a unique and growing in regional and national economies and its landscape cut across manufacturing and service industries. Mommaas (2004) argued that cultural activities and functions, from production to presentation to consumption, can be grouped into a variety of spatial forms. He suggested that cultural clustering strategies can be restricted to artistic and cultural activities, but may also include entertainment and leisure activities. Based on the sectoral scope and geographical focus, we explore three models of the cultural economy: the traditional cultural model, the cultural products model, the cultural occupations model.

The Traditional Cultural Model

The guiding principle in this strategy is to promote the city as a cultural destination by fostering the local cultural resources and activities with the intent of attracting tourists and out-of-town residents (Evans, 2003). Establishing arts and cultural districts is the most common approach to carry out this strategy. There is a large body of literature examining the role of cultural projects in economic development and urban revitalization efforts. Traditional approaches to cultural development include flagship cultural projects (Grodach, 2008). Although flagships projects have become a popular

strategy to stimulate economic development within a targeted district of the city; however, it was unclear whether the extent of their impacts can be positively sustained in the long run (Evans, 2003). A number of issues have been raised in questioning of these strategies. From gentrification to the role and extent of public expenditures to the design of the public realm, and how cultural forms are constructed in the planning process are all important questions that need to be addressed (Porter & Barber, 2007; Mommas, 2004; Scott, 1997). The cultural district or cluster is the most common form for cities to stimulate local economic development. The development of a cultural district or cluster involves several stakeholders, including the public and private sectors and non-profit organizations. They may take several forms and most major cities have adopted or developed some variation of the concept. Two prominent forms of the traditional clustering strategy are the regional cultural districts and the neighborhood cultural cluster.

Regional Cultural Districts

Regional or metropolitan cultural district is a spatial clustering of establishments and buildings that may accommodate performing arts, museums, and organizations, which are typically clustered at the core of the metro area or the region (Santagata, 2002). This type of clusters serves and draws its customer base from a large geographical area such as a region or a metro area. In this form of cultural clustering, the arts and cultural district are developed as destinations to attract the local residents as well as tourists, to revitalize the central core of the region, and to brand the region as a global cultural destination. This is the most common form of cultural clusters in major American cities. Noonan (2013) has examined the economic impacts of cultural districts within the major US cities. Grodach et al. (2014) explored the impact of arts clusters on the inner-city neighborhoods. From a European perspective, empirical studies have

examined the impacts of cultural and creative strategies for economic development and revitalization (Le Blanc, 2010; Mommaas, 2004; Porter & Barber, 2007).

Local Arts and Cultural Districts

This form of clustering is based on the local arts or cultural district, usually connected through community networks (Grodach, 2010). These districts can take the form of a neighborhood cluster of a cultural arts center, an ethnic museum, or any other form of local or seasonal cultural events or activity such as music festivals. Their density in itself creates systemic effects which attract visitors and tourists. This development and success of this cultural cluster depends on the presence of a localized culture embedded in the community, and an organization that will be responsible for maintaining and sustaining such local assets such as non-profit organizations or municipal authorities (Grodach, 2010). Marksuen (2006) argues that the presence of a particular cultural facility or an influx of cultural workers or consumers can be modeled and tested for impacts on surrounding property values, retail businesses, building vacancy rates, jobs, and income. A few recent studies have examined these forms of cultural assets and their potential implications on urban revitalization. Stern and Seifert (2010) found evidence that neighborhoods with more arts organizations and participation were more likely to experience revitalization.

The Cultural Industries Approach

This approach focuses on the cultural industries or products as sectors offering services and products for entertainment and information such as motion pictures, recorded music and print media, or on industries that are specialized in manufactured products that reproduce distinctive forms of cultural meaning and representation (Scott, 1997). Thus, the cultural products model involves an incoherent collection of products and sectors. Cultural industries are often characterized by flexible, specialized, and

creative forms of production (Pilati & Tremblay, 2007). There is a large body of research that examined the importance of cultural industries and products for job creation and urban regeneration (Bassett, 1993; Bryan, Hill, Munday, & Roberts, 2000; Scott, 2005, Currid, 2007). While the majority of these studies use location quotients to illustrate the concentrations of these industries in their respective cities and regions, they do not show that these industries account for an estimated share of job growth or property values. Markusen and Schrock (2006) used location quotients and artist migration rates as present evidence that cultural specialization among large U.S. metros does not explain aggregate performance. The cultural industries model tends to overestimate employment figures within these industries, because they include all workers who are involved directly or indirectly in producing cultural content (Markusen, Wassall, DeNatale & Cohen, 2008). The Hollywood movie industry is a good example of the cultural industry cluster (Scott, 2002). The industry cluster is based on the agglomeration economies created by the spatial concentration of small firms (Storper & Harrison, 1991). Scott (2004) defines the industrial cultural cluster as an industrial district that is specialized in cultural production. These clusters take advantage of proximity, to attract firms and businesses in cultural-products industries to establish specialized industrial districts (Scott, 2004).

The Occupational Approach

A cultural occupational approach focuses on the characteristics and needs of artists such as musicians, writers, performing and visual artists, and to a lesser extent those of workers in design and media-related fields. An occupational approach may involve analyzing artistic and cultural occupations at both metropolitan and smaller geographical scales. A cultural occupational approach would focus more closely on what cultural workers do rather than what they make (Markusen, Wassall, DeNatale & Cohen,

2008). A few studies show how the analysis of occupation can provide insights into training and career development of artists (Markusen, 2004; Markusen & Schrock, 2006).

Chapter 3

Methodology

Introduction

Any methodology that attempts to analyze the cultural industries must recognize two important characteristics. First, the cultural industries sector is not homogeneous and the cultural activities operate under various domains. The second is that the cultural sector cuts through various segments of society, including public and private sectors, profit and non-profit organizations. A variety of methodological approaches have been used in the literature to analyze the economic contribution of the cultural industries. In this section, we will review some of the most common methods for measuring the cultural industries.

The industrial organization approach is most basic form of economic analysis, which includes analytical measurements used by statistical agencies for measuring economic performance of any other industry such as gross value added (GVA), fixed capital formation, employment levels of different categories of labor, business concentration. These statistical methods usually provide a good measure for modeling the commercial production of cultural industries and services. Throsby (2008) argues that measuring of the economic contribution of the cultural industries demonstrates the scope and extent of the cultural sector in relation to the macro-economy, however; it doesn't support the argument for a special role for the cultural sector. Many other industries arguably contribute similar levels of output and employment in the economy. For example, Markusen (2004) compared the growth rates of performing arts jobs by occupation for selected cities in the 1990 and 2000 censuses with the overall job growth; and compared location quotients for eight regionally representative, medium-sized

metropolitan areas with New York and San Francisco. The study concluded that there was no simple relationship between arts occupations and overall size of the labor force.

Another commonly used measure is the input-output analysis, which is a quantitative technique for assessing the economic impact associated with production activities that increase the final demand of an economy. This model can be used for various activities, including industries and services, and for various levels of analysis from the local to the national. This method also provides a framework for examining the interdependence of various industries making up the economy and how the output from one industrial sector may become an input for another sector. A report by the Americans for the Arts (2006) has used the input–output model to assess the non-profit arts and the cultural sector in Minnesota. The final report demonstrated that that the arts were a driving force for the Minneapolis economy.

Other methods and techniques used to analyze the cultural industries include contract theory and property rights (Santagata, 2002). Complex cultural and creative industries such as film and television production depend on the existence of contractual arrangements at all stages in the value chain. Property rights and contract models are used in international trade in cultural products to protect royalty and license payments for products such as music, film, television programs and other audiovisual material. Moreover, Throsby (2008) argues that the cultural industries present a challenge in international trade because cultural goods transmit some form of cultural content from one country to another. Bilateral and multilateral trade negotiations have frequently included exceptions for cultural products to allow countries the ability to protect their cultural industries from foreign competition.

Locational Analysis is increasingly becoming an important decision making technique, which relates the spatial dimension to the delineation of the cultural industries,

determining the locational characteristics of firms, particularly their tendency to form clusters in urban and regional settings. Recent studies explored the geography of cultural and artistic activity using rigorous explanatory techniques (Stern & Seifert, 2010; Silver & Miller, 2012; Grodach, Foster, & Murdoch III, 2014). For instance, Grodach et al. (2014) conducted a regression analysis to explore the attributes that are associated with arts clusters at the neighborhood and metropolitan levels. Another study examining the geography of artists within Cuyahoga County, Ohio in 2013 found a relatively high degree of clustering within the County's artist community (Ryberg, Salling, & Soltis, 2013). Throsby (2008) argues that the causal factors determining the clustering of cultural goods and services arise on both demand and supply sides of the market. As an example, Silver and Miller (2012) measured the cultural "scenes" for Canadian neighborhoods to test whether the surrounding scene strengthens or weakens the relationship between artist clusters and local economic growth between 1996 and 2006.

Macro-level studies analyze regional and metropolitan levels' economic impacts associated with higher level concentrations of cultural industries. Madden (2001) argues that it is not enough to demonstrate the increasing growth of the cultural industry within the impact region, but the effects should rather create new jobs and wealth to the region as well as benefit the other sectors. Unfortunately, the association between the cultural industries and local economic growth is not sufficiently tested in the literature. There is a need for more studies that can shed some light on these relationships. Using the explanatory power of regression analysis techniques will allow us the possibility to explore the evidence for causal relationships. This research explores the advantage of using regression techniques to estimate the relationship between the cultural industry agglomerations and employment growth.

Measuring the economic impacts of the cultural industries requires a conceptual framework that recognizes the heterogeneity of its industries and the composition of its sub-sectors. Hence, this research seeks to explore the sources of local agglomeration economies based on the cultural industries. The research will consider the spatial organization of the cultural industries by exploring the levels of specialization, diversity and competition that are conducive to local employment growth. A first step in this effort is to explore the boundaries of the cultural industries.

The Cultural Industries

In recent years, a few major strands of research on the cultural economy have emerged, one focusing on cultural industries (Scott, 1997; Scott, 2003), and one on cultural occupations (Markusen, 2004). The cultural industries and cultural occupations are most often associated with measuring employment of the cultural economy at the regional level. The cultural industries consist of those nonprofit and for-profit establishments that produce cultural goods and services. Hesmondhalgh (2007) defines the cultural industries as those involved in the production of social meaning in the form of texts and symbols. According to his view, the cultural industries include television, radio, the cinema, newspapers, magazine and book publishing, music recording and publishing industries, advertising and the performing arts.

The boundaries of the cultural industries continue to be a subject of debate as it relates to what should be included or excluded from the cultural sector. Markusen et al. (2008) argued that there are some borderline arenas that share some similarities with the cultural industries, including religious establishments, educational and information sectors, and the supplier and distributers sectors. For instance, religious establishments provide spaces and experiences where people engage in cultural expression and exchange, they produce and perform cultural events, and they share the nonprofit

organizational form with many of the performing arts. Including any of these sectors in the definition will have a significant impact on the outcome of the analysis.

A variety of approaches for grouping the cultural industries and interpreting the structure of the cultural production economy exist, which are derived from the various conceptualizations of the cultural sector, reflecting different political views and different emphases on the characteristics of cultural production system. An example to cultural clustering is found on a survey by the Americans for the Arts on 90 urban cultural districts, which produced a case record through identification of businesses involved in the production and distribution of the arts (Americans for the Arts, 2005). Following a designation principle, the survey has produced six types of districts: arts districts, arts and entertainment districts, arts and science districts, cultural districts, museums districts and theater districts. By following a typology principle, five categories were identified: cultural compounds, major arts institution focus, arts and entertainment focus, downtown focus, and cultural production focus (Americans for the Arts, 2005). Another study conducted for the UNESCO Institute for Statistics has identified five core cultural domains: cultural and natural heritage; performance and celebration; visual arts, crafts and design; books and press; and audiovisual and digital media (Mikić, 2012). The study also included related activities such as tourism, sport and leisure. In some cases, researchers distinguish between the production and consumption sides of culture; although they may be both present in a cluster or district. Frost-Kumpf (1998) identified a set of activities including education (arts training courses), production and rehearsal of arts performances, retail sale of artworks, and street trade of art products; exhibitions; festivals and fairs; film showings; readings; performing arts and public art. Mommaas (2004) distinguishes a horizontal portfolio for cultural activities clusters, which include culture, leisure time and tourism, from a vertical portfolio of culture related operations

starting from design and closing with consumption activities. From the literature reviewed, we can conclude that the composition and typology of the activities promoted within cultural clusters include a wide scope of cultural and artistic activities, ranging from performing arts, museums and libraries and including other cultural industries such as the media, film, and music. It may also include other related sectors such as leisure and entertainment.

Different conceptualizations of the cultural industries and its sub-sectors may require different models of analysis. Throsby (2008) suggests that cultural products and services such as artworks, music performances, literature, film and television programs share some common characteristics. First, they require some degree of human creativity in their production. They also carry symbolic representations to those who consume them. Finally, they may contain some intellectual property that is attributable to the individual or group producing the good or service.

Various forms of spatial and organizational structures exist for cultural industry clusters, and the heterogeneity of these formations are attributable to different developmental paths. Frost-Kumpf (1998), Hitters and Richards (2002) and Wynne (1992) defined a cultural cluster, district or quarter as city area or district where a high concentration of cultural activities stimulates the presence of concurrent services and activities. The heterogeneity of functions and activities of a cultural cluster ranges from the production to the consumption activities, from theatre and the visual arts to pop music and the new media, which can be grouped together in a great deal of spatial forms. Mommaas (2004) contends that cultural clusters may be structured top-down around consumption or production oriented activities or from predominantly art-centered to entertainment-centered activities. Moreover, they can be organized around a specific purpose or goal, which may include things like place marketing, revitalization of city

neighborhood, preservation of architectural heritage, and promotion of local culture and diversity.

The industrial vs the Occupational Approach

There are two major methodological approaches in the literature for conceptualizing and conducting economic analysis: the industrial approach and the occupational approach. The industrial approach based on the sectoral definition has been used for a long time as the most common method for analyzing the regional or national economy. Markusen (2004) argues that the industrial approach emphasizes the physical capital over human capital and the establishment over occupation. An alternative occupational approach focusing the role of the worker rather than the production of the worker has started to emerge (Markusen, 2004). In the industry approach, the industry employment is calculated by aggregating the total employment in all the establishments in the industry. An industry approach counts all workers in each industry.

In an occupational approach, employment is divided into occupational groups based on their skills sets and work specialization. A good application to the occupational approach is associated with the creative class theory (Florida, 2003; Florida, Mellander & Stolarick, 2008, Mellander, 2009). The theory envisions the creative people as agents for regional growth based on the locational concentrations of creative occupations (Florida, 2003).

Table 1: List of selected cultural industries (6-digit NAICS Code)

	NAICS Code	Cultural Industry
1	511110	Newspaper publishers
2	511120	Periodical publishers
3	511130	Book publishers
4	512110	Motion picture and video production
5	512120	Motion picture and video distribution
6	512131	Motion picture theaters (except drive-ins)
7	512132	Drive in motion picture theaters
8	512191	Teleproduction and other postproduction services
9	512199	Other motion picture and video industries
10	512210	Record production
11	512220	Integrated record production/distribution
12	512230	Music publishers
13	512240	Sound recording studios
14	512290	Other sound recording industries
15	515111	Radio networks
16	515112	Radio stations
17	515120	Television broadcasting
18	519110	News syndicates
19	519120	Libraries and archives
20	541310	Architectural services
21	541320	Landscape architectural services
22	541810	Advertising agencies
23	541820	Public relations agencies
24	541830	Media buying agencies
25	541840	Media representatives
26	711110	Theater companies and dinner theaters
27	711120	Dance companies
28	711130	Musical groups and artists
29	711190	Other performing arts companies
30	711211	Sports teams and clubs
31	711212	Racetracks
32	711219	Other spectator sports
33	711310	Promoters of performing arts, sports, and similar events with facilities
34	711320	Promoters of performing arts, sports, and similar events without facilities
35	711410	Agents and managers for artists, athletes, entertainers, and other public figures
36	711510	Independent artists, writers, and performers
37	712110	Museums
38	712120	Historical sites
39	712130	Zoos and botanical gardens
40	712190	Nature parks and other similar institutions
41	713110	Amusement and theme parks
42	713120	Amusement arcades
43	713210	Casinos (except casino hotels)

44	713290	Other gambling industries
45	713910	Golf courses and country clubs
46	713920	Skiing facilities
47	713930	Marinas
48	713940	Fitness and recreational sports centers
49	713950	Bowling centers
50	713990	All other amusement and recreation industries

Chapter 4

Research Design

Conceptual Model

The spatial clusters of cultural industries afford benefits to cultural establishments because of agglomeration economies generated in all types of cultural production from the proximity to other establishments and individuals in the same industry (Throsby, 2008). However, the concept of clusters as a way to study agglomeration economies has raised concerns regarding how to operationalize the cluster for the purpose of analysis. Martin and Sunley (2001) argue the cluster concept is so elastic that it doesn't establish a deterministic model for the causality of agglomeration and growth. Another argument against the cluster strategy is that the associations between various forms of spatial clustering and economic growth do not necessarily imply that concentration is the main cause (Martin & Sunley, 2001). Further, there is in no general agreement on what degree of spatial concentration of an industry constitutes a cluster.

Assuming agglomeration economies is the driving force for economic growth, it would be imperative to explore the sources of growth by looking at the growth of the same sectors in different places and checking in which places these sectors grow faster. Although the industrial compositions of cities and regions are usually comprised of a mix of specialized activities, they are also interconnected with many other economic activities outside the major industries. Some of these activities are complementary to each other and some others are entirely unrelated to each other. Cities grow and develop because of the positive externalities from the high local demand for products and because of lower transportation costs. Therefore, local demand for goods and services stimulates city growth and development. The positive externalities that arise from the savings across various industries and sectors are called urbanization economies. Henderson (1986)

presented empirical evidence suggesting that urbanization externalities are not important for productivity. The growth of an industry or a sector of the local economy raises the wages, and consequently generates a local demand for goods and services, which in turn stimulates the growth of other possibly unrelated industries, generating higher demand and so forth. This means the growth of different sectors of the economy is interrelated. Hence, our model assumes that the growth in the cultural industries is interconnected with the growth in the other sectors. Employment growth in the cultural industries stimulates growth in the local employment of other industries, especially in industries complementary to the cultural sector. Furthermore, the growth of one industry in the city leads to the growth in real incomes, which increases rents in the city, which in turn increases the costs for other industries to grow. Therefore, urbanization economies cause negative externalities or diseconomies such as traffic congestion, high rents and pollution.

Hypothesis and Variables

The study explores the agglomeration effects of cultural industries in stimulating economic growth. Cultural industry employment and other sectoral employment data are used to construct measures for various types of agglomeration economies. We test three theories of agglomeration economies: specialization, diversity, and competition. In the first theory, we explore the effects of specialization based on the cultural industries, also known as the Marshall-Arrow-Romer or MAR, referring to the works of Alfred Marshall, Kenneth Arrow and Paul Romer. The prediction of Marshall-Arrow-Romer and Porter (1990) is that high specialization of an industry within a particular location stimulates growth within that location. We hypothesize that geographically-agglomerated specialized cultural industries are conducive to local economic growth. In other words, a higher level of specialization of an industry stimulates growth in the industry (Marshall, 1920; Arrow,

1962; Romer, 1994). The null hypothesis is to prove that specialization in the cultural industries is not significant in stimulating economic growth.

In the second model, we explore the diversity theory as conceptualized by Jane Jacob. Jacob's argument is that urban diversity fosters cross-fertilization of ideas (Jacobs 1969). We hypothesize that the presence of industrial diversity promotes economic growth. The null hypothesis in this model is to prove that the presence of urban diversity is not a significant in stimulating economic growth. We will use sectoral employment data to measure the level of employment diversity within each particular geographic location within the study area of analysis. To estimate the level of employment diversity within an area, we will use the employment share of the most dominant sectors as a proxy for sectoral diversity. To measure the level of diversity for an area, we aggregate the employment levels of the most dominant sectors during the study period. A higher level of employment in the most dominant sectors within an area indicates a higher level of diversity within that area.

In the third hypothesis, we test the importance of local competition for promoting economic growth. A measure of local competition provided by Glaeser et al. (1992), which is defined as the number of establishments available to a worker within an industry within a location relative to the number of establishments per worker in the country. Our predication is that a higher level of competition is conducive to economic growth. The null hypothesis is to prove that competition is not significant to stimulating economic growth.

The Independent Variables

According to our growth model suggests, economic growth is as a function of three theories of agglomeration economies. The growth model suggests that employment growth in an industry in a location depends on the specialization, diversity and competition within that location. Previous studies have used the location quotient of the

economic base to calculate the relative spatial concentration of an industry as a measure for the level of specialization (Glaeser, Kallal, Scheinkman & Shleifer, 1992). Location quotient (LQ) is an analytical statistic that calculates an area's industry specialization in relation to a larger area. However, this measure does not reflect the relative size of firms within the area in terms of their overall number of workers. Another indicator of the level of specialization is the industry employment. It is normally calculated based on the absolute size of the industry. Some suggest that own industry employment is a better measure for localization economies than the location quotient because localization economies arise from the absolute and not the relative size of the industry. Our measure of specialization of the cultural industries is the absolute size of employment in the cultural industries. We estimate our indicator by calculating the variations that occur in the level of cultural employment from the starting year to the ending year for each geographic location.

In contrast to the MAR's model of urban specialization, Jacobs (1969) emphasizes the importance of urban diversity. The Hirschman-Herfindahl index is commonly used to measure of diversity in the literature. It is calculated as the sum of the squared shares of employment for sectors within a location relative to the total employment for all the sectors. Other industry employment is another common of diversity, which measures the size of the urbanization. In this case, a larger size of employment base in all other industrial sectors implies a higher level of diversity. Total employment or total population may be used as an indicator of regional diversity. To account for Jacobs's theory, we measure the size of the urbanization, which are represented by the most dominant industries. Descriptive statistics of various industries during the study period from 2007 to 2014 show that health care, retail trade, manufacturing and accommodation and food service are the four largest sectors in the

country. To account for local competition in the cultural industries, we apply a measure of local competition used by Glaeser et al (1992), which is calculated as the number of firms per worker in the cultural industries for a geographic location.

The Dependent Variable

Employment growth is the common measure of economic growth in the literature. Other economic measures as proxies for economic growth include wage growth, property values and business startups. The study uses employment growth as a proxy for economic growth. The dependent variable is estimated by the difference in employment for all sectors (minus the cultural employment) between the starting year and the ending year. On the other hand, using wage growth as our dependent variable is not perfect for a few reasons. First, productivity may lead to uneven wage growth trajectories within various regions. Second, wage data availability at the local level is another problem that we have no way of estimating wages without precisely reported employment numbers.

As for the control variables, we include socioeconomic variables that are known to influence economic performance such as population growth, real wages, per capita income and level of education. We also include other variables such property values, median age and people in poverty. The Hispanic population was included as the largest minority group in the country.

To explore the relationship between the independent variables and the dependent variable, the study uses the following the econometric model:

$$\mathbf{Log}\, \mathcal{Y} = \boldsymbol{a} + \mathbf{Log\ Spec} + \mathbf{Log\ Div} + \mathbf{Log\ Comp} + \boldsymbol{e}$$

Where $\mathcal{Y}$ = Total employment for all sectors (dependent variable)

$\mathbf{Spec}$ = Cultural employment (measure of specialization)

$\mathbf{Div}$ = Sectoral diversity (Measure of diversity)

$\mathbf{Comp}$ = Measure of local competition (Establishment per employee)

$\mathbf{a}$ = Constant

$\boldsymbol{e}$ = Error

In the equation above, the dependent variable y in the regression model above stands for economic growth expressed in terms of growth in total employment. The independent variables representing the agglomeration economies measure the levels of specialization, diversity and local competition of the cultural industries within each geographic unit of analysis.

We include control variables to the regression equation to control for economic growth factors such as the median income, the level of education and the average home value. Some studies have argued for including a dummy variable representing locations that have a warmer winter. However, we include a variable to account for the differences in regional growth. If agglomeration economies influence economic growth, our model should yield results that reflect strong associations for our independent variables as discussed in the above section.

Data Sources and Analysis

As stated in the introduction chapter, the analysis will be conducted at the local level. The zip codes are selected as the observational unit of analysis. The dataset consists of approximately 15,000 zip codes. The zip codes are the smallest geographic unit at which business activities are reported. The Zip Codes Business Patterns and American Community Survey of the Census Bureau are the primary data sources for the study. Although, employment data are not published at the zip-code level by the Census Bureau due to the confidentiality disclosure rules, however, the census employment data are reported by the number of establishments in each industry within a range for the size of the establishment. Therefore, we estimated the employment size for each establishment in the industry at the midpoint of the range provided by the Zip Codes

Business Patterns. For example, if it reported the employment in a zip code-industry to be between 1 and 5, we used 3; if the number was between 5,000 and 10,000, we used 7,500. Then, we computed the employment for the zip code-industry, which was calculated by multiplying the establishment size by the number of establishments and aggregating the total employment from all the industry establishments. Since the Business Patterns data reports only economic data for businesses and establishments, we rely on the American Community Survey for the social, economic and housing characteristics of the study area, which are reported by the Zip Codes Tabulation Areas (ZCTA).

Chapter 5

Findings

Descriptive Data Analysis

The cultural industries sector has become one of the most important growth and employment sectors in the last few decades. A simple descriptive analysis of the data is provided to have a broader sense of the composition and geography of the cultural industries in the United States. The data we use to illustrate the rapid growth in the cultural industries comes from the U.S. Census's County Business Patterns. As mentioned previously, there is no agreement in the literature on a single definition for what constitutes the cultural economy. Table 2 includes a list of the major cultural industries that were included in the analysis. The list consists of a wide variety of professional and service activities. Employment data for 2004 and 2014 are presented for each sub-sector. The total employment in these industries in the United States was a little over 5.3 million in 2014, an increase of 10 percent over the preceding decade.

The cultural industries sub-sectors that are included in Table 2 seems to be representative to the cultural economy in general, accounting for approximately 5 percent of the total US employment in 2014. Most of the cultural industry subsectors have experienced a net employment growth as well as an overall increase in the number of establishments from 2004 to 2014. A few exceptions are the publishing, broadcasting and gambling industries. The employment decline in the publishing industry may be associated with an increasing shift to electronic media and information. The performing arts employment has also experienced a slight decline. Additionally, the total number of cultural industries establishments has increased in the same period by almost 10 percent. However, the publishing and advertising industries have experienced decreases in the number of establishments.

Table 2: List of cultural industries by employment and establishments (2004-2014)

NAICS Industry	2004 Employment (Nationwide)	2014 Employment (Nation-wide)	Change	2004 Establishments (Nationwide)	2014 Establishments (Nationwide)	Change
Publishing Industries	704,892	431,427	-39%	22,443	17,901	-20%
Motion picture and Video Industries	282,712	377,987	34%	19,348	21,777	13%
Sound Recording Industries	25,101	27,477	9%	3,405	3,640	7%
Radio and Television Broadcasting	247,663	213,724	-14%	9,466	8,858	-6%
Other information services	52,235	248,637	376%	3,893	11,897	206%
Architectural and Landscape Architectural Services	1,264,845	1,415,410	12%	109,035	108,987	0%
Advertising and Public Relations	390,318	467,994	20%	38,520	37,482	-3%
Performing Arts	125,884	121,781	-3%	9,284	8,690	-6%
Spectator Sports	112,508	127,820	14%	4,350	4,237	-3%
Promoters of Performing Arts, Sports, And Similar	98,692	158,422	61%	5,542	7,329	32%
Agents and Managers for Artists, Athletes, Entertainers	16,365	20,089	23%	3,410	3,883	14%
Independent Artists, Writers, And Performers	44,618	46,144	3%	17,878	24,134	35%
Museums & Historical Sites	118,853	143,298	21%	6,934	7,498	8%
Amusement Parks and Arcades	138,849	182,296	31%	2,964	3,194	8%
Gambling Industries	179,038	153,419	-14%	2,305	2,866	24%
Other Amusement and Recreation Industries	1,054,237	1,216,852	15%	66,160	68,008	3%
Total	704,892	431,427	-39%	22,443	17,901	-20%

Table 3: Cultural employment relative to the other sectors (2004 – 2014)

NAICS Industry	Employment in 2004	Employment in 2014	Absolute Change	Percent Change
Agriculture, forestry, fishing and hunting	182121	156363	-25758	-14%
Mining, quarrying, and oil and gas extraction	470280	758971	288691	61%
Utilities	634734	637840	3106	0%
Construction	6647641	5705146	-942495	-14%
Manufacturing	13821976	11424251	-2397725	-17%
Wholesale trade	5907051	5966747	59696	1%
Retail trade	15351431	15372632	21201	0%
Transportation and warehousing	4098870	4406767	307897	8%
Information	3472427	3364530	-107897	-3%
Finance and insurance	6481304	6078713	-402591	-6%
Real estate and rental and leasing	2086085	2021372	-64713	-3%
Professional, scientific, and technical services	7569981	8619574	1049593	14%
Management of companies and enterprises	2824787	3235958	411171	15%
Administrative and support and waste management and remediation services	8708052	10579324	1871272	21%
Educational services	2893346	3562364	669018	23%
Health care and social assistance	15814812	18861973	3047161	19%
Arts, entertainment, and recreation	1889044	2170121	281077	15%
Accommodation and food services	10749811	12791928	2042117	19%
Total for all sectors	109603753	115714574	6110821	6%
Cultural Industries	4,856,810	5,352,777	495,967	10%

Table 3 presents aggregate employment for all of the major industry sectors in the country in 2004 in comparison with the cultural industry employment as defined by the study, including the percentage change in employment for each industry from 2004 to 2014. During this decade, the total employment for all sectors has grown by 6 percent adding over 6-million jobs. On the other hand, the cultural industries employment has grown by 10-percent, which is higher than the average employment growth rate for all the other sectors combined. These trends seem to be consistent and supportive of our general assumptions. It is worth to mention that there appears to be employment decline within certain sectors including the manufacturing, real estate and agriculture sectors. These declines may be related to the most recent economic recession that began in 2007 and ended in 2009. The employment depression also reinforces the manufacturing and agriculture employment trends for the last few decades associated with the economic restructuring of the US economy. The largest employment growth occurred in the healthcare sector, which could be associated with the rising demand for healthcare with an aging population and the passage of the Affordable Healthcare Act.

The top 100 U.S. cities with the highest concentrations of cultural employment in 2007 are presented in Table 4, which include the largest cities in the country in terms of population. New York City has the largest concentration of cultural employment nearing a quarter of a million, followed by the Cities of Los Angeles, Chicago, San Francisco and Washington, DC making up the top five. At the same time, Hoboken, New Jersey, Culver City, California and Eagan, Minnesota had the highest quotients of cultural employment in 2007. The cultural establishment had a national average of approximately 25 employees in 2007. New York and Los Angeles had the largest increases of cultural establishments between 2002 and 2007.

Table 4: Top cities with the largest concentrations of cultural employment in 2007

	City Name	Cultural Employment	Total Employment	Cultural Share	Location Quotient	Cultural Establishments	Total Establishments
1	New York City, New York	242681	2502805	10%	2.19	11962	177399
2	Los Angeles, California	125725	1192366	11%	2.38	11978	88585
3	Chicago, Illinois	55830	863879	6%	1.46	2463	47610
4	San Francisco, California	38848	390724	10%	2.24	1644	25209
5	Washington, District of Columbia	32997	361921	9%	2.06	1327	18020
6	Burbank , California	31002	222045	14%	3.15	733	3658
7	Boston, Massachusetts	29722	366387	8%	1.83	843	14277
8	Atlanta, Georgia	28245	266531	11%	2.39	941	13649
9	San Diego, California	28160	547855	5%	1.16	1256	31029
10	Philadelphia , Pennsylvania	27017	419513	6%	1.45	794	21818
11	Houston, Texas	26119	1042262	3%	0.57	1332	49390
12	Orlando, Florida	25508	186091	14%	3.09	336	8491
13	Dallas, Texas	24677	562497	4%	0.99	1161	26982
14	Culver, California	23591	49923	47%	10.66	304	2093
15	Seattle, Washington	22475	321452	7%	1.58	1312	20611
16	Phoenix, Arizona	21143	559204	4%	0.85	1018	27451
17	Anaheim, California	20778	145814	14%	3.22	97	6258
18	Nashville-Davidson, Tennessee	18686	270951	7%	1.56	1154	13865
19	Denver, Colorado	18418	316642	6%	1.31	854	17256
20	Minneapolis, Minnesota	18273	197108	9%	2.09	662	9748
21	Eagan, Minnesota	18225	39687	46%	10.36	19	1478
22	Hoboken, New Jersey	18092	21193	85%	19.26	32	1048
23	San Antonio, Texas	17033	444175	4%	0.87	637	22144
24	Charlotte, North Carolina	16940	305026	6%	1.25	698	16547
25	Indianapolis, Indiana	15353	349907	4%	0.99	634	17362
26	Portland, Oregon	15103	263259	6%	1.29	826	17316
27	Austin, Texas	14630	347235	4%	0.95	868	19040

28	Tampa, Florida	13730	250018	5%	1.24	379	10759
29	Detroit, Michigan	13448	162087	8%	1.87	144	7817
30	Lake Buena Vista, Florida	12560	45034	28%	6.29	19	192
31	Columbus, Ohio	12323	298291	4%	0.93	446	14027
32	Santa Monica, California	12305	72103	17%	3.85	1364	5987
33	Baltimore, Maryland	12229	220590	6%	1.25	360	10202
34	Milwaukee, Wisconsin	12016	194677	6%	1.39	253	9028
35	Pittsburgh, Pennsylvania	11864	187867	6%	1.43	379	8189
36	St. Louis, Missouri	11830	162042	7%	1.65	254	6985
37	Kansas City, Missouri	11734	198663	6%	1.33	382	9322
38	Balance of San Diego County, California	10795	36052	30%	6.76	63	2397
39	San Jose, California	9904	284514	3%	0.79	329	15658
40	Cleveland, Ohio	9747	188195	5%	1.17	288	8059
41	Jacksonville, Florida	9707	290876	3%	0.75	490	16759
42	Balance of Orange County, Florida	9515	180010	5%	1.19	188	8285
43	Fort Worth, Texas	9189	254849	4%	0.81	251	10331
44	Memphis, Tennessee	8933	254692	4%	0.79	283	12052
45	Cincinnati, Ohio	8662	162619	5%	1.20	287	6643
46	Raleigh, North Carolina	8659	164973	5%	1.18	398	10206
47	Miami, Florida	8648	236586	4%	0.82	583	14198
48	Louisville/Jefferson County metro government , Kentucky	8312	219628	4%	0.85	394	11379
49	Sacramento, California	8296	152504	5%	1.23	377	8830
50	Beverly Hills, California	8067	41707	19%	4.36	1156	5083
51	Oklahoma City, Oklahoma	7969	234914	3%	0.77	336	13115
52	Honolulu CDP, Hawaii	7610	191588	4%	0.90	459	12348
53	Albuquerque, New Mexico	7592	201599	4%	0.85	331	11441
54	Omaha, Nebraska	7564	199818	4%	0.85	301	9656

55	Paradise CDP, Nevada	7524	257211	3%	0.66	292	7525
56	Irvine, California	7469	167967	4%	1.00	308	7785
57	Tysons Corner CDP, Virginia	7449	90019	8%	1.87	66	2096
58	Las Vegas, Nevada	7420	179987	4%	0.93	388	10979
59	St. Paul, Minnesota	7372	113769	6%	1.46	216	5596
60	Salt Lake City, Utah	7279	146580	5%	1.12	283	6857
61	Scottsdale, Arizona	7090	150967	5%	1.06	398	9199
62	New Orleans, Louisiana	6817	102448	7%	1.50	270	6456
63	Glendale, California	6724	72362	9%	2.10	275	4622
64	Tulsa, Oklahoma	6624	194417	3%	0.77	361	10959
65	Balance of Palm Beach County, Florida	6599	208015	3%	0.72	263	8049
66	West Palm Beach, Florida	6567	59265	11%	2.50	178	3829
67	Virginia Beach, Virginia	6063	122139	5%	1.12	273	8402
68	Balance of Warren County, Ohio	5850	17018	34%	7.76	17	912
69	Balance of Gwinnett County, Georgia	5687	150862	4%	0.85	206	8850
70	Rochester, New York	5502	105515	5%	1.18	132	4392
71	Hempstead town, New York	5292	109656	5%	1.09	350	10561
72	Balance of Los Angeles County, California	5258	61291	9%	1.94	257	3598
73	Oakland, California	5128	109086	5%	1.06	246	7627
74	Balance of Maricopa County, Arizona	5085	34057	15%	3.37	41	2184
75	Balance of San Bernardino County, California	4855	23920	20%	4.58	28	1588
76	Wichita, Kansas	4822	157269	3%	0.69	190	7740
77	Colorado Springs, Colorado	4775	153737	3%	0.70	277	9984
78	Tucson, Arizona	4673	180889	3%	0.58	352	11069
79	North Hempstead town (balance), New York	4627	72949	6%	1.43	171	5514

80	Toledo, Ohio	4590	98370	5%	1.05	116	4938
81	Balance of Collier County, Florida	4569	46259	10%	2.23	126	4024
82	Buena Park, California	4535	24991	18%	4.10	11	1255
83	Little Rock, Arkansas	4481	119877	4%	0.84	169	5964
84	Balance of Harris County, Texas	4461	164576	3%	0.61	213	11434
85	St. Petersburg, Florida	4438	161668	3%	0.62	128	5459
86	Park City, Utah	4389	13856	32%	7.15	44	905
87	Balance of Cobb County, Georgia	4386	154224	3%	0.64	222	8006
88	Des Moines, Iowa	4324	81062	5%	1.20	106	3854
89	Huntington town (balance), New York	4324	79391	5%	1.23	253	6056
90	Balance of Osceola County, Florida	4297	30914	14%	3.14	30	1680
91	Brea, California	4180	35999	12%	2.62	25	1736
92	Lexington-Fayette urban county, Kentucky	4160	128516	3%	0.73	246	6474
93	Madison, Wisconsin	4134	119953	3%	0.78	231	5591
94	Balance of Shelby County, Alabama	4100	15469	27%	5.98	21	1035
95	Arlington CDP, Virginia	4089	106159	4%	0.87	174	5019
96	Boca Raton, Florida	4070	97025	4%	0.95	230	5794
97	Greensboro, North Carolina	4044	131972	3%	0.69	181	6596
98	Long Beach, California	4021	113323	4%	0.80	165	6475
99	Fresno, California	4019	134057	3%	0.68	187	8296
100	Knoxville, Tennessee	3991	125458	3%	0.72	178	6157

Table 5: Metro Areas with the highest cultural employment quotients in 2007

	Metro Area	Cultural Employment	Employment - All Sectors	Cultural Share	Location Quotient
1	Orlando-Kissimmee, FL Metro Area	64325	883016	7%	1.64
2	Naples-Marco Island, FL Metro Area	6643	96558	7%	1.55
3	Carson City, NV Metro Area	1480	23889	6%	1.40
4	Los Angeles-Long Beach-Santa Ana, CA Metro Area	324969	5350535	6%	1.37
5	Myrtle Beach-Conway-North Myrtle Beach, SC Metro Area	5425	95486	6%	1.28
6	Weirton-Steubenville, WV-OH Metro Area	2160	39585	5%	1.23
7	New York-Northern New Jersey-Long Island, NY-NJ-PA Metro Area	393189	7422774	5%	1.20
8	Sebastian-Vero Beach, FL Metro Area	1843	38624	5%	1.08
9	Salinas, CA Metro Area	4678	104443	4%	1.01
10	Salt Lake City, UT Metro Area	23150	518419	4%	1.01
11	Dubuque, IA Metro Area	2110	47352	4%	1.01
12	San Diego-Carlsbad-San Marcos, CA Metro Area	50086	1126285	4%	1.00
13	Barnstable Town, MA Metro Area	3229	72899	4%	1.00
14	San Francisco-Oakland-Fremont, CA Metro Area	80203	1837542	4%	0.98
15	Bridgeport-Stamford-Norwalk, CT Metro Area	18104	417563	4%	0.98
16	Santa Barbara-Santa Maria-Goleta, CA Metro Area	5840	134779	4%	0.98
17	Olympia, WA Metro Area	2574	59838	4%	0.97
18	Deltona-Daytona Beach-Ormond Beach, FL Metro Area	5576	130208	4%	0.97
19	Minneapolis-St. Paul-Bloomington, MN-WI Metro Area	65661	1570673	4%	0.94
20	Nashville-Davidson--Murfreesboro--Franklin, TN Metro Area	26575	638982	4%	0.94
21	Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area	91162	2200472	4%	0.93
22	Bremerton-Silverdale, WA Metro Area	2226	54013	4%	0.93
23	Port St. Lucie, FL Metro Area	4397	106699	4%	0.93
24	Honolulu, HI Metro Area	13601	334483	4%	0.92
25	Sacramento--Arden-Arcade--Roseville, CA Metro Area	26588	655590	4%	0.92
26	Bend, OR Metro Area	2307	56988	4%	0.91
27	Albany-Schenectady-Troy, NY Metro Area	12135	303725	4%	0.90
28	Hot Springs, AR Metro Area	1272	32073	4%	0.89
29	Seattle-Tacoma-Bellevue, WA Metro Area	56577	1427739	4%	0.89
30	Vallejo-Fairfield, CA Metro Area	3865	98208	4%	0.89
31	Charlottesville, VA Metro Area	2705	69413	4%	0.88
32	St. Louis, MO-IL Metro Area	43003	1112175	4%	0.87
33	Ocean City, NJ Metro Area	976	25490	4%	0.86

34	Cape Coral-Fort Myers, FL Metro Area	6593	173131	4%	0.86
35	Sandusky, OH Metro Area	1209	31874	4%	0.86
36	Denver-Aurora, CO Metro Area	39845	1067008	4%	0.84
37	Coeur d'Alene, ID Metro Area	1641	44104	4%	0.84
38	Glens Falls, NY Metro Area	1593	43071	4%	0.83
39	Milwaukee-Waukesha-West Allis, WI Metro Area	27442	745320	4%	0.83
40	Spokane, WA Metro Area	6371	173467	4%	0.83
41	Las Vegas-Paradise, NV Metro Area	28797	784981	4%	0.83
42	Gulfport-Biloxi, MS Metro Area	2860	78181	4%	0.83
43	Trenton-Ewing, NJ Metro Area	6489	178646	4%	0.82
44	Des Moines-West Des Moines, IA Metro Area	10051	277391	4%	0.82
45	Virginia Beach-Norfolk-Newport News, VA-NC Metro Area	21176	587523	4%	0.81
46	Rochester, NY Metro Area	14008	390875	4%	0.81
47	Boston-Cambridge-Quincy, MA-NH Metro Area	77120	2151970	4%	0.81
48	Boulder, CO Metro Area	4703	131268	4%	0.81
49	Austin-Round Rock, TX Metro Area	21669	606917	4%	0.81
50	Raleigh-Cary, NC Metro Area	13737	388991	4%	0.80
51	Tucson, AZ Metro Area	10395	297863	3%	0.79
52	New Orleans-Metairie-Kenner, LA Metro Area	14435	413755	3%	0.79
53	Asheville, NC Metro Area	4915	141653	3%	0.78
54	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metro Area	80867	2348349	3%	0.78
55	Charlotte-Gastonia-Concord, NC-SC Metro Area	26357	765988	3%	0.78
56	Binghamton, NY Metro Area	2930	85206	3%	0.78
57	Chicago-Naperville-Joliet, IL-IN-WI Metro Area	135733	3973906	3%	0.77
58	Miami-Fort Lauderdale-Pompano Beach, FL Metro Area	76860	2258695	3%	0.77
59	Dover, DE Metro Area	1560	46068	3%	0.76
60	Riverside-San Bernardino-Ontario, CA Metro Area	34767	1031502	3%	0.76
61	Green Bay, WI Metro Area	4938	147031	3%	0.76
62	Baltimore-Towson, MD Metro Area	34779	1036120	3%	0.76
63	Flagstaff, AZ Metro Area	1473	43898	3%	0.76
64	Phoenix-Mesa-Scottsdale, AZ Metro Area	52183	1559357	3%	0.76
65	Springfield, MA Metro Area	7309	219253	3%	0.75
66	Santa Rosa-Petaluma, CA Metro Area	5244	161419	3%	0.73
67	Wilmington, NC Metro Area	3695	114956	3%	0.73
68	Oxnard-Thousand Oaks-Ventura, CA Metro Area	8413	262761	3%	0.72
69	Birmingham-Hoover, AL Metro Area	13954	436398	3%	0.72
70	Tallahassee, FL Metro Area	3322	104070	3%	0.72
71	Pittsburgh, PA Metro Area	29421	927563	3%	0.72

72	Oklahoma City, OK Metro Area	13834	437224	3%	0.71
73	Santa Fe, NM Metro Area	1430	45782	3%	0.70
74	Lincoln, NE Metro Area	3960	127147	3%	0.70
75	Cincinnati-Middletown, OH-KY-IN Metro Area	27780	899523	3%	0.70
76	Omaha-Council Bluffs, NE-IA Metro Area	11739	380462	3%	0.70
77	Tulsa, OK Metro Area	11135	361617	3%	0.69
78	Atlanta-Sandy Springs-Marietta, GA Metro Area	65362	2134335	3%	0.69
79	Palm Coast, FL Metro Area	419	13703	3%	0.69
80	Little Rock-North Little Rock-Conway, AR Metro Area	8250	270892	3%	0.69
81	Albuquerque, NM Metro Area	8607	284996	3%	0.68
82	Detroit-Warren-Livonia, MI Metro Area	49792	1660670	3%	0.68
83	Portland-Vancouver-Beaverton, OR-WA Metro Area	25284	849291	3%	0.67
84	Santa Cruz-Watsonville, CA Metro Area	2237	75422	3%	0.67
85	Colorado Springs, CO Metro Area	6161	207977	3%	0.67
86	Sarasota-Bradenton-Venice, FL Metro Area	8604	290683	3%	0.67
87	Indianapolis-Carmel, IN Metro Area	21895	739942	3%	0.67
88	Springfield, IL Metro Area	2309	78065	3%	0.67
89	San Antonio, TX Metro Area	19827	671200	3%	0.67
90	Worcester, MA Metro Area	8155	277652	3%	0.66
91	Springfield, MO Metro Area	4790	164010	3%	0.66
92	Valdosta, GA Metro Area	1229	42308	3%	0.66
93	Providence-New Bedford-Fall River, RI-MA Metro Area	17787	613342	3%	0.65
94	Reno-Sparks, NV Metro Area	6192	213940	3%	0.65
95	Montgomery, AL Metro Area	3770	130276	3%	0.65
96	Kansas City, MO-KS Metro Area	25214	877669	3%	0.65
97	Harrisburg-Carlisle, PA Metro Area	7206	251160	3%	0.65
98	Richmond, VA Metro Area	13741	479993	3%	0.65
99	San Luis Obispo-Paso Robles, CA Metro Area	2299	80319	3%	0.65
100	Erie, PA Metro Area	3126	109263	3%	0.65
101	Champaign-Urbana, IL Metro Area	2128	75213	3%	0.64
102	Fort Collins-Loveland, CO Metro Area	2943	104456	3%	0.64
103	Columbus, OH Metro Area	21318	757218	3%	0.64
104	Fresno, CA Metro Area	6546	232747	3%	0.63
105	Shreveport-Bossier City, LA Metro Area	3892	140057	3%	0.63
106	Madison, WI Metro Area	7475	269481	3%	0.63
107	Gainesville, FL Metro Area	2405	87161	3%	0.62
108	Charleston-North Charleston, SC Metro Area	6475	235627	3%	0.62
109	Davenport-Moline-Rock Island, IA-IL Metro Area	4184	152843	3%	0.62
110	Billings, MT Metro Area	1919	70559	3%	0.61
111	Missoula, MT Metro Area	1246	45841	3%	0.61

112	New Haven-Milford, CT Metro Area	8264	305036	3%	0.61
113	Tampa-St. Petersburg-Clearwater, FL Metro Area	33129	1225648	3%	0.61
114	Ann Arbor, MI Metro Area	3793	140755	3%	0.61
115	Lancaster, PA Metro Area	5341	199351	3%	0.60
116	Burlington-South Burlington, VT Metro Area	2401	89993	3%	0.60
117	Boise City-Nampa, ID Metro Area	6025	226211	3%	0.60
118	Sheboygan, WI Metro Area	1366	51589	3%	0.60
119	Chattanooga, TN-GA Metro Area	5205	197933	3%	0.59
120	Allentown-Bethlehem-Easton, PA-NJ Metro Area	7514	286697	3%	0.59
121	Lexington-Fayette, KY Metro Area	5305	203139	3%	0.59
122	Cleveland-Elyria-Mentor, OH Metro Area	23337	894785	3%	0.59
123	Chico, CA Metro Area	1537	59348	3%	0.58
124	Dallas-Fort Worth-Arlington, TX Metro Area	65021	2531464	3%	0.58
125	Poughkeepsie-Newburgh-Middletown, NY Metro Area	4851	189224	3%	0.58

Evidence on Agglomeration Economies

Empirical examinations of the links of cultural clusters to economic growth have generally been scant. Most point in the direction of a modest or weak relationship compared with other predictors (Stern & Seifert, 2010, Silver & Miller, 2012, Grodach, Currid-Halkett, Foster, & Murdoch III, 2014). Stern and Seifert (2010) found a weak impact of cultural assets agglomeration on Philadelphia neighborhoods economic well-being. Grodach et al. (2014) explored the effects of the arts on neighborhood change and they didn't find evidence that fine arts activities are associated with gentrification and rapid growth areas.

Are Cultural Clusters Associated with Employment Growth?

To explore the empirical evidence for the cultural clusters-growth hypothesis, we perform two models of analyses, before and after the 2007-2009 economic recession and then compare the results. Therefore, we examine the relationship from 2007 to 2014 and from 2009 to 2014. We use data from the Zip Codes Business Patterns, which provides annual statistics for businesses with paid employees at a detailed industry level. We estimated a hundred millions of workers within the geographic coverage of these zip codes. We estimate the dependent variable by using the natural logarithm to calculate the change in total employment from 2007 to 2014. We estimate cultural employment by aggregating employment within all the selected cultural industries within an individual zip code. We select the zip codes as units of observation in order to gauge the impact of cultural employment at the neighborhood level. Zip codes are a system of postal codes used by the United States Postal Service to deliver the mail efficiently and quickly. Tables 6 and 7 show correlations results of cultural employment and employment growth before and after the economic recession. The cultural employment is subtracted from the total employment variable to eliminate endogeneity problems. We observe the relationship

with employment growth is significant and positive before and the coefficient of correlation for cultural employment increases from 0.177 before the economic recession to 0.187 after the recession.

Is Local Competition Linked to Employment Growth?

The concept of competition in the economic literature typically measured in terms of market shares and sale volumes. The greater the degree of local competition among firms, the greater potential for specialization and exchange of ideas among firms and individuals. Our main focus here is the number of firms relative to the number of workers for local competition rather than the size or share of the firms in the local market. Therefore, we use a measure from the literature to measure the extent of local competition, which is defined as the number of firms per worker in the industry (Glaeser, Kallal, Scheinkman, & Shleifer, 1992; Feldman & Audretsch 1999). A greater number of firms per worker in the industry of an area mean a higher level of local competition than other areas. We calculate the difference in local competition from 2007 to 2014 and from 2009 to 2014. The correlation results in Tables 6 and 7 reveal a strong, but negative correlation with employment growth. By contrast, we observe wages growth is not significantly correlated with employment from 2007 to 2014. However, there is a significant, but negative correlation with employment growth after the economic recession: from 2009 to 2014.

Table 6: Correlation Results: Employment Growth and Predictors (2007-2014)

Correlations

		Employment Log (All Sectors)	Cultural Employment Log	Dominant Sectors' Employment Log	Local Competition Log	Wages Log
Employment Log (All Sectors)	Pearson Correlation	1	.177**	.536**	-.534**	-.014
	Sig. (2-tailed)		.000	.000	.000	.084
	N	15704	15704	15655	15704	15704
Cultural Employment Log	Pearson Correlation	.177**	1	.054**	-.059**	-.053**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	15704	15704	15655	15704	15704
Sectoral Employment Diversity Log	Pearson Correlation	.536**	.054**	1	-.237**	-.172**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	15655	15655	15655	15655	15655
Local Competition Log	Pearson Correlation	-.534**	-.059**	-.237**	1	.119**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	15704	15704	15655	15704	15704
Wages Log	Pearson Correlation	-.014	-.053**	-.172**	.119**	1
	Sig. (2-tailed)	.084	.000	.000	.000	
	N	15704	15704	15655	15704	15704

**. Correlation is significant at the 0.01 level (2-tailed)

Descriptive Statistics

	Mean	Std. Deviation	N
Employment Log (All Sectors)	-.02481526130	.258201536000	15704
Cultural Employment Log	-.08157016480	.759376133000	15704
Sectoral Employment Diversity Log	.04139376500	.358111336000	15655
Local Competition Log	-.00140727924	.045456786500	15704
Wages Log	.15441043800	.164738987000	15704

Table 7: Correlation Results: Employment Growth and Predictors (2009-2014)

Correlations

		Employment Log (All Sectors)	Cultural Employment Log	Sectoral Employment Diversity Log	Local Competition Log	Wages Log
Employment Log (All Sectors)	Pearson Correlation	1	.187**	.501**	-.552**	-.096**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	15385	15385	15385	15385	14884
Cultural Employment Log	Pearson Correlation	.187**	1	.071**	-.067**	-.073**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	15385	15385	15385	15385	14884
Sectoral Employment Diversity Log	Pearson Correlation	.501**	.071**	1	-.239**	-.160**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	15385	15385	15385	15385	14884
Local Competition Log	Pearson Correlation	-.552**	-.067**	-.239**	1	.207**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	15385	15385	15385	15385	14884
Wages Log	Pearson Correlation	-.096**	-.073**	-.160**	.207**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	14884	14884	14884	14884	14884

**. Correlation is significant at the 0.01 level (2-tailed)

Descriptive Statistics

	Mean	Std. Deviation	N
Employment Log (All Sectors)	.04467599670	.234104265000	15385
Cultural Employment Log	-.02620872440	.663441836000	15385
Sectoral Employment Diversity Log	.06520269100	.293049758000	15385
Local Competition Log	-.00407044741	.053543682700	15385
Wages Log	.13317073300	.152281808000	14884

Regression Results

To test the link of the cultural industries and agglomeration economies to employment growth, we specify two linear regression models: before and after the most recent economic recession. We first estimate the first model from 2007 to 2014. The results are reported in Table 8. The regression results for the second model, which covers the period from 2009 to 2014 are reported in Table 9. The results show that estimated coefficients for all the variables of agglomeration economies as well as the control variables are significant at the 5% level, except the coefficients of the percentage of college graduates and the Hispanic/Latino population, which are not significant. The effects of agglomeration economies are decomposed into three variables: cultural industries employment, complementary industries employment and local competition. The regression results show the cultural industries has a modest, positive association with employment growth, meanwhile, the complementary industries has a stronger positive association with employment growth. Conversely, the local competition has a very strong, negative association with employment growth. These findings support the claims of the role of the cultural industries to promote employment growth, but also clarify their limitations to foster a strong economic growth.

The effects of the cultural industries industrial appear to be small from the regression results, and loses some of its explanatory power as the standardized (Beta) coefficient decreases from 0.128 in the first model (Table 8) to 0.108 in the second model (Table 9). These results mean that with every increase of one standard deviation in the cultural industries, the employment level rises by 0.12 standard deviation, assuming the other variables are held constant. Moreover, we observe the Marshal agglomeration economies reflected by the cultural industries specialization is less strong than the effects

of the Jacob's diversity externality reflected by the complementary industries. The standardized (Beta) coefficient for the complementary industries decreases from 0.43 in the first model to 0.35 in the second model. The local competition exhibits by far the strongest association with employment growth, which is defined as the number of firms available for each worker. The coefficient for the local competition increases from -0.43 in the first model to -0.56 in the second model. The interpretation of this coefficient is that with every increase of one standard deviation in the competition, the employment level decreases by 0.43 standard deviation in the first model and decreases by 0.56 standard deviation in the second model, assuming the other variables are held constant. The interpretation of this finding is that larger firms grow faster than smaller firms, the smaller firms have a higher probability of death than larger firms.

Looking at the control variables, we observe that employment growth is associated with population growth, wages, personal incomes and median property values. Further, the college educated, Hispanic and Latino populations, and poverty variables remain insignificant predictors of employment growth for both models.

Our predication model explains 50% of the variations in the dependent variable in the first model and 59% in the second model. The results in Table 8 and Table 9 generally provide support that it is agglomeration economies are conducive to employment growth. It is worth to note that industrial diversity appears to have larger effect on employment growth than the cultural industries. In addition, the evidence suggests that monopoly and market power not competition tend to drive economic growth.

Table 8: The Determinants of Employment Growth (2007 – 2014)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.064	.003		-24.953	.000
	Total Population Log	.278	.022	.079	12.470	.000
	Hispanic Pop. Log	-.004	.003	-.008	-1.309	.190
	Pop. in Poverty Log	-.006	.005	-.007	-1.152	.250
	Median Age Log	.061	.030	.013	2.037	.042
	College Graduates Log	-.008	.011	-.005	-.732	.464
	Median Prop. Value Log	.141	.013	.067	10.768	.000
	Per Capita Income Log	.049	.020	.017	2.459	.014
	Wages Log	.168	.010	.107	17.453	.000
	Cultural Employment Log	.043	.002	.128	21.444	.000
	Sectoral Employment Diversity Log	.313	.004	.434	69.477	.000
	Local Competition Log	-2.447	.035	-.431	-70.207	.000

a. Dependent Variable: Employment Log (All Sectors 2007- 2014)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710[a]	.504	.503	.181956150000

Table 9: The Determinants of Employment Growth (2009 – 2014)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.006	.002		-3.424	.001
	Total Population Log	.228	.016	.082	14.385	.000
	Hispanic Pop. Log	-.003	.002	-.008	-1.423	.155
	Pop. in Poverty Log	.000	.004	.000	.050	.960
	Median Age Log	.089	.022	.024	4.124	.000
	College Graduates Log	.006	.008	.004	.765	.445
	Median Prop. Value Log	.048	.009	.028	5.085	.000
	Per Capita Income Log	.030	.015	.013	2.057	.040
	Wages Log	.111	.008	.079	14.493	.000
	Cultural Employment Log	.035	.002	.108	20.170	.000
	Sectoral Employment Diversity Log	.267	.004	.346	60.687	.000
	Local Competition Log	-3.544	.036	-.559	-98.436	.000

a. Dependent Variable: Employment Log (All Sectors 2009 – 2014)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.767[a]	.588	.588	.135732514000

Chapter 6

Analysis, Synthesis and Conclusions

introduction

The final chapter of this dissertation synthesizes and discusses the significance of research findings in light of the study's research questions, literature review, and conceptual framework, and presents conclusions based on the analysis of the data. This chapter also describes the contribution made by this study to the body of knowledge in cultural policy and planning. The most significant contributions are produced by the results of the econometric model testing. In the first section, a summary of the findings and discussion of the theoretical framework are presented. In the following section, the hypotheses tests and the regression results are discussed. In light of the study findings, a discussion of the public policy and planning implications are presented. Based on the interpretation of the research and its findings, an assessment of the limitations of this empirical study is provided. The last section of this chapter is dedicated to final recommendations and concluding remarks regarding future research possibilities.

Summary of the Findings

This study developed an endogenous growth model to explore the linkages of the cultural industries to local economic growth and tested the empirical relationships based on economies of agglomeration. It was proposed that the cultural industries were increasingly becoming a popular strategy to promote local economic growth in the postindustrial economy. Second, it was also suggested that the spatial clustering of cultural industries are conducive to economic growth. Finally, it was suggested that agglomeration economies are likely to influence employment growth. The research objectives of this study were to: (1) create an economic growth model to test whether the levels of cultural industry employment explain the variations in local employment growth;

(2) determine whether the levels of specialization, diversity and competition explain the variations in local employment growth; (3) assess the effects of the economic recession on employment growth variations. The employment data used in the study was collected from a variety of sources, including the Zip Codes Business Patterns and the American Community Survey. The zip codes was selected as a unit of observation, and the data consisted of 15,704 observations. Employment growth was measured using the employment elasticity, which measures the percentage change in employment associated with a 1 percentage point change in economic growth. Agglomeration economies were measured from three different perspectives: specialization, diversity and local competition (Glaeser, Kallal, Scheinkman, & Shleifer,1992). The specialization externality refers to knowledge spillover a firm accrues from the colocation among firms of the same or similar industry, and thus supporting regional concentrations of the same or similar industries. Workers consequently have greater access to sharing and matching and lesser uncertainty if located in a region with a large local base in their own industry. Industrial diversity refers to knowledge spillovers are external to the industry in which the firm operates. Three major hypotheses were tested using correlations and regression analyses. In the next, a discussion of the methods used to measure agglomeration economies is presented, followed by a discussion of the hypotheses tests results.

Discussion

It was quite evident that measurement of the cultural industries based on the relative level of cultural outputs was not possible due to the limitation of available data. It is also quite obvious the cultural industries have no obvious unit of measurement. Therefore, the definition of the cultural industries and the unit of measurement will vary according to the viewpoint of the observer. A realistic approach to measuring the cultural industries was to rely on a proxy used in the cultural production. We assume that the

amount of labor used in the cultural production process provides a good measure to the level of cultural input. This was achievable by using employment data by industry to calculate the share of the cultural employment relative to total employment at any geographic level such as metro area, city, district or neighborhood.

Another important task was to adopt a form of classification for the cultural industries based on a working definition of the cultural industries. One of the main problems is associated with the constraints embedded in the North America Industrial Classification System or NAICS. The cultural and creative activities are distributed across various segments of the economy.

This study identified three major categories of cultural industries. The first category includes purely creative activities, which include industries such as performing arts, film, music, architecture, etc. The second category includes supportive cultural activities which include industries like advertising, publishing, broadcasting, libraries, etc. The third category includes amusement and recreational industries. The cultural industries as defined in this study was found to account for around 5 percent of the workforce.

Discussion of the Hypotheses

The study sought to explore the causal effects of cultural industry agglomerations on employment growth. It was hypothesized that a higher level of specialization in a specific industry is more conducive to growth in that particular industry. We created a model to test whether variations of cultural employment was significant in explaining the variations in employment growth. Correlations analyses were performed on the cultural employment variations and the results revealed significant association with employment growth. Similarly, the regression models results have also revealed that cultural employment was a good predictor of employment growth. Although the association wad statistically

significant, however, the overall effects were qualitatively small. These results appear to be consistent with the findings by Stern and Seifert (2010) and Grodach et. al (2014). We can infer from these results that there is broadly a supportive role for the cultural industries in economic growth.

Another argument of this study is that diversity fosters cross-fertilization of ideas and consequently promotes growth. It was hypothesized that a higher level of industrial diversity will be conducive to employment growth. We used sectoral diversity as a proxy represented by the agglomeration of complementary industries employment. The correlation analyses results revealed significant association with employment growth, and diversity was a good predictor of employment growth. These results appear to be consistent with the literature (Glaeser, Kallal, Scheinkman, & Shleifer,1992). These findings are favorable to the Jacob's diversity thesis.

The third argument concerns the role of competition for promoting local growth and the transmission of knowledge in geographically concentrated industries (Porter 1990). we hypothesized that a higher level of competition, which we defined as the number of establishments available to a worker within a particular industry, will be conducive to employment growth. Local competition was found to have a very strong negative association with employment growth. These results appear to be consistent with the literature on local competition effects (Glaeser, Kallal, Scheinkman, & Shleifer, 1992; Van Soest, Gerking, & Van Oort, 2002). These findings reveal that strong competition retards employment growth.

Implications

Attempts have been made in the past to explore the quantitative importance of the cultural industries, notwithstanding the challenges associated with the definition problems, fragmented industrial codes and the disagreement on whether to include

certain industries such as sports, gambling, religion, and education. We found that the cultural industries constitute an important segment of employment, accounting for approximately 5 percent of the total number of workers in the United States in 2014.

The evidence presented in this study suggest that the cultural industries contribution to local economic growth are modest, nonetheless; external economies play an important role in explaining in the variations in employment growth. Furthermore, we found that agglomeration economies can operate at a local level such as small areas within the city. Agglomeration economies promote local growth and knowledge spillover is not necessarily industry-specific. To the contrary, it appears there is evidence for strong inter-industry synergy and cooperation. The results have shown diversity, and not specialization, is more conducive to growth. These findings raise important questions such as what can we learn from cultural agglomerations, what role does the cultural economy play and how urban and regional policy makers take advantage of the growing industry for the purpose of promoting local economic development?

A guiding principle for any course of action involving formulating a local economic development policy based on the cultural industries shall recognize and assess the existing cultural resources and conditions and to develop future expectations based on the existing opportunities. For cities that are endowed with existing assets and opportunities, the first step to build an agglomeration is to map out the industrial composition of the local economy, including sources of external effects and interdependencies. The second step is to explore the opportunities and constraints associated with alternative policy interventions. It is important to conduct a careful evaluation of the various possibilities and potential capabilities for a meaningful and effective policy intervention so that potential pitfalls can be avoided. The policy goal is to

stimulate the formation of positive agglomeration effects that can boost the local economy.

In the absence of any preexisting base of cultural industries, policy interventions may include new development strategies based on cultural industries either through the reuse of old industrial areas or developing a new cultural economy. This suggests an entrepreneurial approach may be needed to explore alternative financial resources. Although many local economic development authorities seek to revitalize inner-city areas sometimes through partnerships with the private sector, however, negative aspects of gentrification and social equity raise neighborhood opposition that may derail these efforts. The tension between achieving growth and equity always remains a sticking problem, although the balance appears to tilt toward increasing inequalities.

Considering the significant positive externalities associated with cultural industry agglomerations, local economic strategies involving the cultural industries could pay huge dividends in terms of employment and reinvestment in the local economy. At the same time, they contribute to the quality of life in the places where they cluster and enhance the image and prestige of the local area. Given the evidence of the individual and collective advantages of the cultural industries, the absence of these assets in some parts of a city may depreciate the economic value and quality of life of these neighborhoods. By the same token, expanding arts and cultural opportunities would require long-term commitment and cooperation among the public, private and nonprofit sectors . Some type of interventions might be necessary for some neighborhoods that lack the cultural resources necessary to foster a vibrant creative economy. These interventions are sometimes small such as public art or a local museum within of a renovated industrial site, or could be grand projects involving flagship and iconic buildings. Other neighborhoods may have some existing cultural assets, but lack the

resources to become cultural clusters. There can be no standardized approach for local economic development. Each place is unique and requires different treatment depending on the unique historical and geographical circumstances of that particular place.

Limitations of the Study

This study furthers the body of knowledge on the role of culture for local economic development. However, the study is no without limitations. There are several caveats to this study that are mentioned and discussed. The first limitation concerns the measurement of the contribution of the cultural industries. Since there is no available data that directly measures the cultural economy in terms of the market share, we had to use cultural employment as a proxy for cultural output. The second limitation is that there is no agreeable definition for the boundaries of the cultural industries. Previous attempts to define the boundaries of the cultural industries may have required the subjective evaluation of the researcher regarding whether to include certain activities. Whether to broaden or narrow the boundaries of the cultural activity could lead to biased results. The third limitation concerns our economic growth model. They are many other factors that have been known in the literature as determinants of economic growth, therefore, the model may not be comprehensive. The relatively small number of variables was due to the fact that many economic indicators are not measured at the local level. Fourth, the measurement of the cultural employment was performed for a short period of time, from 2007 to 2014 due to the lack or incompatibility of data for many economic variables at the zip-code level. Future research may be able to overcome this issue as more data becomes available for analysis. Fifth, the substantial variations among zip codes in terms of the level of cultural industries employment is due the increasing presence of the cultural industries within the largest metropolitan areas in the country. For example, the presence of an extremely high number of cultural establishments in cities like New York

and Los Angeles may result in significantly sharp increases of their cultural base. Therefore, these outliers may end up skewing the employment data. A sensitivity analysis might help to increase the confidence in the model results. Sixth, our empirical model is predicated on structural variables, which are based on factors associated with growth across various places. However, the model doesn't treat shocks and events such as the latest economic recession as an endogenous factor. Although the model explains a little bit over 50 percent of the variation in employment growth, however, a large percentage of the variation remains unexplained. In summary, the results of this study expand the current knowledge on the importance of the cultural industries as a source for economic growth.

Conclusions

The final chapter of this dissertation presented the conclusions of this empirical research and discussed them in light of the major findings, the significance and the limitations of the research. The results of this study shed some light on the importance of the cultural industries, explored evidence for the causal associations with economic growth and sketched directions for public policy concerning the role of cultural sector for the economy. This study established a conceptual framework for the cultural industries as a local economic development strategy and examined the synergy, complementarity and the agglomeration economies that are generated from the spatial concentration of cultural activities.

In this dissertation we used the cultural employment clusters as a representation for the cultural industry agglomerations, defined to include not only the arts and creative industries , but also the entertainment and recreation industries. The investigation was conducted in a framework to test for the influence of agglomeration economies on local

economic growth. The analytical framework and the findings of this study offer important implications for guiding policy regarding the role of culture in economic development.

The scope and implementation strategy of cultural industry agglomerations as a source of economic development may still be in its early stages, however; much further research and reflection are needed before we can draw conclusions about its full potential. Despite its limitations, the analytical framework and the findings of the study present a step forward toward understanding this role.

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