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Manufacturing Culture: A Comparative Spatial Analysis of the Film Industry in Three Rust Belt Cities

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MANUFACTURING CULTURE:

A COMPARATIVE SPATIAL ANALYSIS OF THE FILM INDUSTRY

IN THREE RUST BELT CITIES

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Title: Manufacturing Culture: A Comparative Spatial Analysis of the Film Industry in Three Rust Belt Cities

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The purpose of this mixed methods dissertation was to comparatively explore the impact of the film industry in three Rust Belt cities. In doing so, this study creates a regional composite of the film industry as an engine of economic development in the Rust Belt. Additionally, it assesses the effect of state sponsored film production incentives on regional economies.

Qualitative analysis of interviews with regional film commissioners was synthesized with Geographic Information Systems analysis of the regional film industry to evaluate the need for, and effectiveness of, film production incentives. The qualitative data consisted of five interview transcripts that resulted from interviews conducted using the phenomenological method. The primary quantitative data was drawn from public databases made available by the United States Census Bureau and the Bureau of Labor and Statistics. Secondary sources included governmental and non-governmental economic impact studies of the film industry and film production incentives.

Three primary themes emerged from this study: Film production has an impact on economic development, in the context of employment and infrastructure; regions hoping to incorporate media production as part of an economic development strategy need to cultivate a positive experience for media producers who have myriad location options; and production incentives play a critical role in fostering film-friendly environments in

nascent media producing communities. Finally, this dissertation allowed the researcher to analyze three media producing communities at various stages of maturity, which resulted in the creation of a media production matrix that outlines a framework for non-traditional media locales to develop stable cultures of media production.

ACKNOWLEDGMENTS

In many ways this dissertation began when I moved to Erie, Pennsylvania in 2004. While driving along one of Erie's former industrial corridors, I observed the many vacant factories that once symbolized the strength of the city and the region. Real estate signs offered these once flourishing industrial sites for ten to twelve dollars per square foot, a fraction of their former value. I imagined that the thousands of square feet which stood empty would make excellent sound stages and, ultimately, mixed use studios.

I proposed this idea to my cousin, Jim Huie, who is an accomplished film and video producer. His reaction surprised me. "You have no crew," he said. This was the first time that I thought about what it meant to *create* a media production industry in a community that, more or less, had none. The idea that it wasn't enough to simply create an ideal space for people to work, and for a product to be made, seemed foreign. Implicit in Jim's reaction, and what I have come to discover through my own research, is that the success of a media industry in any location is much more about the culture of production that exists in that location than it is about the availability of equipment and infrastructure. The greatest commodity in media production is an experienced and knowledgeable crew. For Jim's conversation and providing the spark of an idea that ultimately became this dissertation, I am grateful. I hope the end result is worthy of the conversation that set this project in motion.

I'd like to thank the members of my committee for allowing me to explore this path and for embracing the ideas presented in this document at every stage of its production. The support, encouragement, and counsel of Dr. Mary Beth Leidman as well as the careful reading and constructive commentary of Dr. Nurhaya Muchtar and Dr. Jeff

Ritchey strengthened this project. The collective enthusiasm of the committee provided a constant source of motivation.

The greatest debt of gratitude is owed to my family. Thank you to my mom and John, who offered encouragement and support throughout this process. Perhaps no one sacrificed more during this phase of my life and career than my wife, Kim, and our beautiful daughters, Eleanor and Madeleine. Your love and commitment allowed me to pursue these goals, all of which have more meaning because you are here to celebrate with and to share in the accomplishment.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION TO THE STUDY

Since the mid-1990s, much attention has been paid to the revitalization of the Rust Belt. The Rust Belt is a region of the midwestern United States that suffered from economic stagnation and decline that resulted from the exodus en masse of American manufacturing in the 1970s and 1980s, and the end of the Cold War, which precipitated the industrial romance with globalization. Economic restructuring thrust workers from the relative stability of shift work that provided a living wage toward the relative instability of underemployment and cyclical unemployment common throughout the service industry, which replaced industrial manufacturing in the metropolitan Midwest (Sugrue, 1996). Cities like Cleveland, Detroit, and Pittsburgh entered, what Thomas Sugrue (1996) defined an urban crisis.

The decline of American industrial production in the Rust Belt caused regional governments to explore viable alternatives to traditional industry. In some cases, such as Pittsburgh and Cleveland, medical and high tech industries navigated principal cities through the post-industrial malaise that affected a vast segment of the U.S. population. In other cases, the transition from traditional industry to something new came less easily. Cities mired in the decades old politics of race, resistance to reconciliation and change, and the ghettoization of peoples not capable of fleeing to suburban enclaves outside the city limits, nurtured a blinding naiveté toward the demands of a post industrial economy.

Since the mid-1990s Hollywood has played an increasingly important role in conversations about redevelopment and economic alternatives to traditional industry in nearly every region of the United States. The potential for Hollywood to transform

locales through the making of film and television programs outside of California has become a central theme in an ongoing narrative about economic revitalization. The promise of employment opportunities and investment in infrastructure, as well as the possibility of rebranding cities as tourist destinations based on their presence in nationwide and international media productions, has led to the creation of a cottage industry designed to attract and maintain major media producers throughout the United States. This study seeks to investigate by comparative analysis the economic impact of film and media production on three Rust Belt cities – 1. Cleveland, Ohio 2. Detroit, Michigan and 3. Pittsburgh, Pennsylvania - which are among the top domestic destinations for media production outside of Hollywood and New York City.

Statement of the Problem

Regional leaders imagined Rust Belt revitalization in many forms. Suburban landscapes sprawled and business parks formed the periphery of new urban vistas. The depletion of smoke and steam from the midwestern skyline signaled the opening of a new urban frontier - or perhaps more accurately a series of urban frontiers - across the industrial midwest (Wilson & Wouters, 2003). The most successful post-industrial urban economies have been built around high-tech and medical industries, supported by the gentrification of urban neighborhoods, the establishments of retail zones, and vigorous promotion of cultural districts (Wilson & Wouters, 2003), in an effort to appease and contain "the creative class" (Florida, 2004).

Through the creation of regional film offices, and in conjunction with economic development efforts to harness the "creative class," (Florida, 2004) Rust Belt cities have embraced media production as an economic engine of regional recovery. In the media

production industry, outsourcing media production away from traditional production centers, such as Hollywood, is known as runaway production. Most of the literature on runaway production is U.S.-centric. It tends to focus heavily on the impact of runaway production to labor organizations and individuals who rely on the production industry for economic security (Yale, 2010). However, the literature tends to overlook the importance of other factors that contribute to production outsourcing, including accessible production supply chains that result from emergent technologies, and an ever-growing population of skilled labor in remote regions of the U.S. and the world which allow productions to leave their traditional centers without having to transport production crews and equipment. Indeed, a study of media production in developing nations by the World Bank (Locksley, 2009) concluded, "The media are a significant driver of growth in many economies. The business of producing content generates substantial income flows and jobs that contribute directly to the economy" (in Locksley, 2009, p. 2). This study will evaluate the potential of media production as an engine of economic development in the Rust Belt, a region of the United States that faces economic problems similar to those outlined in reference to developing nations by the World Bank.

Production crews in the Rust Belt are primarily permanent residents, regularly employed albeit on a contract or freelance basis - a phenomenon referred to as *permalancing* (Lipson, 2011) among media professionals. Thus, this study seeks to build upon the vast interdisciplinary literature on the nexus between urban renewal, political economy, and media production, with particular focus on three Rust Belt cities-Cleveland, Detroit, and Pittsburgh-which have gambled considerable public funding and other resources in an attempt to revitalize the local economy with varying levels of success.

Furthermore, this study will use federal economic census data for each respective metropolitan statistical area to create a regional picture of the film and media production industry within the Rust Belt and assess its potential for long term economic impact throughout the region.

Significance of the Problem

As a result of the skilled labor base and other efforts to attract runaway production (Hudson & Tung, 2010), there is a paradigm shift occurring in the media production industry. Increasingly, production is moving away from Hollywood to regions where content can be produced at less cost for greater profit. At the fulcrum of this tipping point reside technical media producers, referred to in the industry as *below-the-line talent,* who make such production possible. Most studies of production labor tend to focus on *above-the-line talent*, such as major actors, directors, and occasionally a cinematographer, because they are an in-demand and easily trackable component of the production ecology. This poses a significant problem because employment trends of below-the-line production labor, upon whom runaway productions rely, are often overlooked and integrated into the larger narrative of production expenditures in a given project.

Statement of Purpose and Research Questions

The purpose of this mixed methods study is to better understand the research problem by converging quantitative and qualitative data. In the study, Geographic Information Systems (GIS) techniques, and industry level quantitative data will be used to measure the relationship between employment in film and media production and economic development in the Rust Belt. Film production in the Rust Belt will also be

explored using qualitative interviews with film commissioners in Cleveland, Detroit, and Pittsburgh.

To shed light on the problem, the following research questions are addressed:

1. What is the impact of the film and media industry on employment in the Rust Belt?
2. To what extent does the film and media industry utilize existing industrial space?
3. Is there a correlation between the introduction of production tax incentives and job growth?
4. Does clustering of film industry entities occur within Cleveland, Detroit, and Pittsburgh?
5. Is there a correlation between population change in each Metropolitan Statistical Area (MSA) and employment change in the media production industries?
6. Do the evaluations of regional film commissions concur or conflict with the data reported by the U.S. Census Bureau and the GIS analysis of that data?

Hypotheses

The global Moran's I statistic is used to explain the level of clustering, dispersion or random nature of the data. Global Moran's I tests the null hypothesis that there is no spatial clustering within a defined geographic area (Rogerson, 2010). Using the global Moran's I statistical test for spatial autocorrelation to determine if clustering of the film

and media industry occurs in Cleveland, Detroit, and Pittsburgh, the following hypotheses will be addressed in relation to RQ4 and RQ5, respectively:

H1: If the film industry is spatially clustered, then the industry can be said to be participating in the economic development of the MSA.

H2: Employment change in the media production industries will not correlate with population change in each MSA.

Theoretical Framework

Frederick Jackson Turner's (1920) frontier thesis will serve as the primary theoretical framework of this study. Although somewhat antiquated when read in its original form and context, the frontier thesis remains a vital construct and a significant point of debate within the liberal arts, particularly in the fields of history and anthropology (English-Lueck, 1994). In spite of its philosophical origins, the frontier thesis is not a foreign concept in media and communication studies. Carey (1988) notes that Harold Innis, the father of studies in media ecology and McLuhan's mentor, remained committed to interdisciplinary studies rooted in "the historical" (p. 149), and provided for future scholars "a model of scholarly investigation that was historical, empirical, interpretive, and critical" (p. 150). Of course, Innis was not content to accept Turner's thesis outright. Innis argued that with every frontier, an inevitable "back tier" also emerged, complementary to the frontier rather than in competition to it (Carey, 1988, pp. 149-156).

In this case, the midwestern United States is cast as Hollywood's new frontier. Such classification is significant for several reasons. First, this may mark the first time that a hegemonic force has looked East for frontier. Indeed, since the dawn of human

civilization, cultural movement has always followed a westward pattern: Asia to the Middle-East, Middle-East to central Europe, central Europe to western Europe, western Europe to the east coast of the Americas, and the Americas from east coast to west coast. Hollywood, itself born in the east and resettled in the west, continues to seek new frontiers as it adapts to a production economy that evolves as part of a broader move to decentralize and redistribute labor within the realm of film and media production, both economically and geographically (Pope, 2008). To its west, Hollywood found competition in Hong Kong and Mumbai. But to its east lay a region eager to redefine itself in the wake of decades of economic devastation.

Furthermore, production economies have flourished greatly in cities and regions that have recast themselves in the image of Hollywood. Vancouver, British Columbia, Canada has been most successful in its attempt to replicate the resources, spaces, and amenities available in Hollywood. A study of film production in Massachusetts by Foster, et al. (2010) concluded that a detailed study of the steps taken by Vancouver to ingratiate itself to the Hollywood media production industry would serve well communities hoping to recast themselves as satellite production centers.

Unlike the historical American frontier of the nineteenth century where "intercultural contacts were made under conditions of ambiguity and flux" (English-Lueck, 1994, p. 108), states and provinces across North America attempt to establish autonomy and exert authority through a patchwork of legislation and tax incentives even as Hollywood wields its own sets of precarious demands. In this way, the frontier remains as Turner described it a century ago - a place of individualism, innovation, and

egalitarianism - despite the potential for these characteristics to dissuade Hollywood from establishing manufacturing centers for America's most lucrative export, culture.

Definition of Terms

Above-the-Line Labor is the designation given to named "talent." It could apply to the actors and actresses who bring star power to a film. Or it could apply to a film's director or producer, if the talent had achieved a modicum of prestige in a given role. *Above-The-Line Labor* typically receive a personal rate, negotiated between the talent agent and producers, or a share of the "back-end" profits, or some combination of the two (Caldwell, 2008).

Below-the-Line-Labor is the designation given to all technical employees and support staff on a production. These range from camera operators to people that supply the coffee. *Below-the-Line-Labor* receive an hourly wage or a negotiated day rate that may or may not fluctuate from project to project. *Below-the-Line Labor* often rely upon systems of trust based on knowledge sharing and coalition building to negotiate future projects (Caldwell, 2008).

Certified Tax Credit is a credit that has been approved by the state for transfer or sale to investors (Showbiz Incentives, 2011).

Film Commissions are organizations typically responsible for attracting film production to a region. Film commissions are often funded and affiliated with government bureaucracy (Hudson & Tung, 2010).

Geographic Information Systems (GIS) combine mapping and information technology in an effort to transfer control of the mapping process from the cartographer

to the user (Maantay & Ziegler, 2006). In this way, researchers are able to aggregate and analyze data based on specific criteria within a region.

Metropolitan Statistical Area (MSA) is a geographic entity defined by the Office of Management and Budget. Each MSA consists of an urban core with a population of 50,000 or more people. The MSA includes the county in which the urban core sits as well as adjacent counties which are socially and economically integrated (U.S. Department of Commerce, 2010).

The *New International Division of Cultural Labor (NICL)* is an economic theory which allows for the existence of "flexible cultural labor" in the global cultural economy (Yale, 2010). It governs globalization, film and television, and commodification (Miller, et al, 2003; Miller, 2004; Miller & Leger, 2001).

North American Industry Classification System (NAICS) is a coding system used by federal agencies to classify businesses in the United States, Canada, and Mexico. It allows quantitative data to be collected, analyzed, and disseminated by federal agencies in addition to the public at-large (U.S. Department of Commerce, 2010).

Production Tax Incentive is a type of incentive that includes rebates, refundable tax credits and transferable tax credits which are awarded after a production has completed procedures and qualifying spend as required by the state (Showbiz Incentives, 2011).

Runaway Production is a concept that denotes film and media production which takes place outside of Hollywood. Traditionally, *runaway production* meant that a production went on-location outside of the United States. However, with the destruction of the studio system and the establishment of production houses and firms, the term now

fits well within the framework of domestic film and media production beyond the borders of Los Angeles (Yale, 2010; Pope, 2008).

The *Rust Belt*, broadly cast, refers to the geographic region encompassing the industrial northeastern United States, the midwestern United States along the Great Lakes basin to the west coast of Lake Michigan and the southern borders of Indiana, Ohio, and Pennsylvania. Many geographers also include southern Ontario, Canada, which participated in the industrial periphery that supported American automotive and steel industries (Guerreau, 1981; Feyrer, et al, 2007; High, 1997).

Assumptions

Three primary assumptions were made in this study. First, the skills used throughout each of the various phases of the production process require a specialized knowledge base most commonly acquired by practical experience on the set of other productions. This assumption is based upon the premise that developing the necessary technical abilities and specialized vocabulary that makes one an asset to the film production industry remains part of a larger system of mentoring and on-the-job training that evolved from the production culture of the studio system. Second, film production primarily remains a nomadic enterprise for both above-the-line and below-the-line workers. "On any given set," notes Caldwell (2008), the employment origins of the current collection of workers can be 'archaeologically' traced back to a diverse set of tributaries that flow, overlap, and intersect before their confluence into a production team involving scores or even hundreds of workers on the current project" (p. 113). Third, most production work originates from Hollywood and follows a path to the hinterland that is financially motivated, rather than driven by creative interests. This assumption is

premised on the notion that while many regions of the country, including parts of the Rust Belt, are experiencing notable success as participants in the production process, no city or metropolitan area currently poses a significant threat to Hollywood, as Hollywood once posed to studio centers in the East.

Limitations of the Study

Cultural production has been a part of the American lexicon for more than a century. During great waves of immigration, movies and music unites diverse peoples with no common culture or language (Sklar, 1994). However, the present study could not have been cast in an historical context because its principal questions are contemporary in nature. This study quantitatively examines a twelve-year period, 2000-2012, because such a window includes the establishment of an employment baseline in the principal MSAs prior to the legislation of tax incentives for media production, as well as the years immediately following. Geographically, the principal MSAs in the study represent the communities ravished by the exodus of industrial labor, particularly in the automotive and steel industries, and regions which have struggled at various levels to redefine themselves in a post-industrial economy.

Employment data for these regions has been limited to only those jobs directly related to the media production industries. As economic impact studies have shown, a multitude of business sectors are impacted by media production. The extent to which non-media businesses grow as a result of media production is a difficult variable to measure. Only industries indexed or cross referenced with motion picture and video production by the United States Census Bureau are included in the study. Incorporating

this narrow employment field creates an emergent picture of non-transient below-the-line production.

Rationale and Significance

The rationale for this study relates to the ongoing conversation concerning media production as an economic engine in developing economies, both nationally and globally, between media producers, policy makers, and regional stakeholders. Central to this discussion, but often overlooked, is the impact of regional film and media production on the employment of individuals with critical knowledge bases and skill sets related to this industry. This study advances the existing literature on this difficult to characterize and often transient group of skilled laborers. This study is significant because it describes employment trends of below-the-line production labor upon whom runaway productions rely as the industry attempts to produce culture within a framework of domestic outsourcing.

Research Approach and Organization of the Study

Following the study proposal and topic approval (January 4, 2013) as well as approval of the Indiana University of Pennsylvania Institutional Review Board (approved December 13, 2012), the researcher collected County Business Pattern (CBP) data obtained from the U.S. Census Bureau website. Using North American Industry Classification System (NAICS) codes to identify relevant data, the researcher compiled employment data for the MSAs, which include the urban cores of Cleveland, Detroit, and Pittsburgh. The relevance of these MSAs, as well as the significance of the film and media industry operating within each MSA, is evaluated as part of the critical analysis of relevant literature in Chapter Two.

In-depth interviews with regional film commissioners provide the primary qualitative data source. The interviews were analyzed concurrently with the review of quantitative data from the U.S. Census Bureau. Chapter Three details both the data collection procedures and the GIS analysis techniques applied to the raw quantitative data. Chapter Four presents research findings. Chapter Five provides an interpretation and synthesis of the findings presented in the previous chapter.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The purpose of this review is to provide a critical analysis of the relevant literature associated with the geographic boundaries that concern the present study, specifically the metropolitan statistical areas, which include Cleveland, Detroit, and Pittsburgh, and the economic variables aligned with film production and urban revitalization germane to this investigation.

Overview and Organization of Literature Review

There are two major sections of this review. Section I evaluates the geographic components of this study and includes four subdivisions which detail efforts to cultivate a vibrant cultural center, particularly through film and media production, as an engine of economic development. The subdivisions will examine (1) the notion of Frontier and the Rust Belt's place as an area of economic and industrial exploration for Hollywood, the cultural center, (2) the nexus between place and the economy in the restoration and development of regional capital, (3) the effect of economic clusters and the role of clusters in facilitating successful industrial efforts, (4) the Rust Belt as a conceptual and geographic framework for this study.

Section II provides an analysis of efforts by the Hollywood production core to seek locations for film and media production in particular peripheries across North America generally, and within the Rust Belt in particular. Three subdivisions within this section examine (1) the phenomenon of domestic runaway production, (2) the place of the New International Division of Cultural Labor within the discussion of domestic

runaway production as it relates to the significance of below-the-line production labor in location productions, and (3) the ongoing debate over the long-term value, as well as the political and economic validity of state-level tax credits designed to attract Hollywood productions to non-traditional sectors of cultural production across the United States.

Geography

The Frontier

The *frontier* is an important concept in the construction of an American ideology of progress and exceptionalism. Turner's (1920) frontier was a place of "perennial rebirth" (p. 2), wherein new economic and social opportunities are born and the "American character" rejuvenated. It was a worldview uniquely endemic to nineteenth-century America - a fact which drew the criticism of the nation's most prominent historians throughout the twentieth century - yet it remains a powerful notion that serves to rejuvenate the "American character" in the wake of national financial crises, such as the long-term degradation of the U.S. manufacturing sector.

While most of Turner's observations are, indeed, antiquated, he forged for more than a century's worth of scholars the foundational variables which frame interdisciplinary inquiry of economic, political, and social typologies. He described the American frontier as a place of highly migratory populations, which were both geographically and economically mobile (English-Lueck, 1994). Moreover, he suggested that the boundaries of frontier were both permeable and fluid allowing for individual settlement to set in motion the inevitable machinations of progress: trade and industry (Turner, 1920; English-Lueck, 1994). For all of the pre-industrial paternalistic, nativist, and romanticized (English-Lueck, 1994) notions of frontier that Turner set forth, his idea

of frontier, rooted in values of optimism, individualism, innovation, risk-taking, and pragmatism (English-Lueck, 1994), echoes in the ongoing conversation about post-industrial economic revitalization that evolved in the United States during the past thirty years.

Analyses of the frontier offer complicated views of the world, due in part to the fact that often such analyses cannot be reduced to simple interactions of state and non-state actors. Interactions between core and periphery, or between hegemonic agents and the frontier generally, can be both spatial and temporal (Hall, 2009). This particular point is made more significant by the treatment of the Rust Belt as a frontier market for the culture industry and Hollywood, in particular. Frontier markets tend to be smaller, underdeveloped markets with fewer institutional controls. Therefore, social relations and human behavior play greater roles in the establishment of market based relationships with economic impact for the frontier community (Evans, Moten, Szabo, & Macdonald, 2012).

As it was in the pursuit of nineteenth century frontiers, the state has assigned itself a paramount role in courting and sustaining relationships (Hogan, 1985) with major media producers for whom Hollywood serves as a base of operations. At this time, 40 states in the Union have incentivized media production to bolster economic development (Independent Fiscal Office, 2013), either as a replacement for previously strong industrial activity or as a boon to local and regional tourism (Hudson & Tung, 2010). The efficacy of film and media tax credits have become a subject of great debate throughout the United States and will be discussed at length later in this chapter. However, at this point it is instructive to note that tax incentives are an integral part of the power dialectic between state and non-state actors as Hollywood seeks to increase per-project profits

through a reduction of expenditures, without sacrificing realism (Hudson & Tung, 2010), which begins with selecting production-friendly locations that require limited transport and storage of equipment and below-the-line labor.

The decentralization of film production away from the Hollywood core during the 1980s and 1990s led to increased competition among regions vying for the attention - and production budgets - of producers. Hopeful production centers offer Hollywood low-cost production labor, limited investment, and a host of production incentives that lower gross production costs (Hudson & Tung, 2010; Christopherson, 2002). Regional state actors remain motivated by the potential to improve public perception of locales in an effort to attract corporate interests as well as tourism, job creation, and increasing the range of facilities available in the community; thus making it more attractive for future production (Hudson & Tung, 2010).

Despite the ongoing and evolving relationship between state and non-state actors to forge mutually beneficial economic alliances, building a sustainable economy around media production across Hollywood's new frontier remains a questionable promise. Media production as an economic engine is growing nationwide. However, industrial employment remains concentrated in California (Christopherson & Rightor, 2009).

Moreover, peripheral industries including specialized lawyers, accountants, equipment rental companies, casting companies, and agents, often have no significant presence in cities or regions with nascent production economies (Christopherson & Rightor, 2009). Nevertheless, if Hollywood follows an historical pattern of decentralization, the peripheral industries that serve the production infrastructure will emerge as a result of producers' ongoing commitment to a locale. Historically, industrial

centers have served as incubators for new firms that subsequently move to the "backward regions" (Walker & Lewis, 2001, p. 5), regardless of the geographic proximity to the core. Walker and Lewis (2001) argue that "industries mature in a systematic way, and they are well behaved in their locational choices" (p. 6).

In basing the present study in the production of media rather than its consumption, there also exists an attempt to bridge the postmodernist cultural criticism of consumption popularized by Jean Baudrillard, among others, with the production focused tradition of British cultural studies established, most notably, by E.P. Thompson and Raymond Williams. Whereas Thompson and Williams emerged from a Marxist tradition which viewed culture as an inexorable byproduct of production labor, the postmodernists emphasized the culture of false consciousness cultivated by consumption (Babe, 2009). Both perspectives are worthy of consideration in regard to the present study. However, neither the Marxist nor the postmodernist traditions provide a lens suitable for analysis of modern political economy. Thus, Garnham (1995) argued that both production and consumption need to be integrated in any analysis of culture (Babe, 2009). Garnham's notion works quite well because media production and all that it represents gives the film industry merit, and thus the temerity to demand conditions of its own making for entrance into new markets, both economically and geographically. On the other hand, the consumption of goods and services ascribes media production its value to the communities it enters with short-term economic goals.

Place and Economy

Revitalization of the Rust Belt is perhaps best considered by evaluating the nexus between place and economy. The central theme of place and economy studies regards

geographical form as a dependent variable in policy decisions regarding economic development (Puentes & McFerrin, 2012; Weissbourd & Muro, 2011; Pendall, Puentes, & Martin, 2006). Underlying the relationship between place and economy is the assumption that money empowers the dissolution of local economies in favor of global forces (Gombay, 2012). Indeed, such sentiment applies to the Rust Belt at large as globalizing trends and transnational political forces precipitated the collapse of American manufacturing.

Historian Thomas Sugrue (1996) detailed one of the strongest expositions of industrial decline in his study of postwar Detroit. While specific distinctions of industry, place, and the economy can be drawn between Detroit, Cleveland and Pittsburgh, Sugrue's account of labor politics in the Ford Motor Company River Rouge plant on the outskirts of Detroit's city limits provides us with an important illustration of corporate and labor activity throughout the region. As early as 1949, Ford attempted to speed up production through nascent automation and demanding quotas for the parts and plastics facilities at River Rouge. By the summer of 1950, the United Auto Workers (UAW) Committee on Decentralization estimated that 30,000 Rouge workers would be affected by decentralization, which Sugrue calls "the crucible of economic change" (p. 158). Compounded by tepid race relations and suburban sprawl propelled by the construction of the Interstate Highway System, the UAW estimates turned out to be strikingly accurate (Sugrue, 1996). Moreover, the racial, labor, and economic situation in Detroit in the 1950s and 1960s foreshadowed similar job loss and economic conditions across the eastern and midwestern United States in the decades that followed. In an ironic turn, the Rust Belt, which was decimated by industrial decentralization and runaway production in

the automotive and steel industries, is now poised to benefit from similar, albeit more mild, forms of industrial evolution in the film and media production industries.

In the wake of decades of regional economic depression and the more recent nationwide Great Recession of 2008-2009, economic and political leaders have been forced to reevaluate revitalization efforts. According to Weissbourd and Muro (2011), local and regional economic development efforts have been faddish, historically. These efforts have focused on infrastructure oriented headquarter chasing and firm relocation rather than research based approaches which tend to be more "flexible, entrepreneurial, and attuned to the locally varied, highly dynamic market conditions and specific needs and opportunities of individual metropolitan areas" (p. 6). Economist Joseph Shumpeter referred to this phenomenon as "creative destruction," which occurs when new economic opportunities arise out of the destruction of a previous economic order (Goodman, 2013). Such phenomena, when associated with cultural production, are likely to lead to heightened forms of local economic development (Scott, 1997).

The Metropolitan Policy Program at the Brookings Institution introduced the concept of metropolitan business plans (MBP) in 2011. Weissbourd and Muro (2011) argue that metropolitan business planning attempts to leverage regional assets in dynamic ways that are unique to a particular metropolitan region. It is a process designed to facilitate collaboration between regional governments and various agents of economic stability, such as employers and economic development corporations. Moreover, it is an attempt to reverse the top-down macroeconomic policies of local and regional governments that perpetuate the aforementioned faddish economic development efforts

which emphasized infrastructure based investments. The MBP concept is based on five propositions about place and the economy:

- Economic prosperity is the result of market activity that generates jobs, income, and a gross regional product.
- Market systems are place-based. In other words, the infrastructure and geographic characteristics of a region determine the productivity limits of a regional market.
- Regional economies are complex and dynamic, which means that different regions require different economic interventions to engender sustainability.
- Developing comprehensive strategies for business planning is critical to regional success because it fosters a framework for the interactions of agents of regional transformation.
- Place-based regional economic policy, created from the "bottom-up," is a necessary complement to "top-down" governmental macroeconomic policy.

Essentially, MBP emerges as a device which views metropolitan areas, such as MSAs, as the market force in economic development by facilitating regional control of locally varied government investment in flexible, entrepreneurial private industry.

Clusters

Industrial clusters play an essential role in place-based economic policy. Some scholars have argued that globalization has eliminated geographic boundaries as applied to business and commerce (Friedman, 2005). However, borderless markets (Martin & Sunley, 2003) are more common amid high-tech industries such as aerospace engineering and chemical production (Delgado & Porter, 2009). In network-centric industries, such

as business services, information technology, and entertainment, clustering remains an integral part of an industry's ability to grow, prosper, and provide economic returns to the communities in which they reside through job creation and investment in infrastructure (Delgado & Porter, 2009). According to Porter (1998), "the enduring competitive advantages in a global economy are often heavily localised, arising from concentrations of highly specialised skills and knowledge, institutions, rivalry, related businesses, and sophisticated customers" (p. 90).

The concept of industrial clustering is hardly new. Alfred Marshall introduced the idea in his *Principles of Economics*, published in 1890 (Martin & Sunley, 2003). Indeed, throughout the twentieth century industrial clusters can be located in every major industry including meat packing, textiles, automobiles and steel, and of course entertainment; each serving as illustration of Marshall's theory. Marshall believed that concentrations of skilled labor, specialization, and "local industrial atmosphere," would elevate industrial competitiveness and foster the creation of new ideas and business practices (Martin & Sunley, 2003). A century later, Porter argued that the most successful globally competitive industries are geographically clustered within a single nation (Martin & Sunley, 2003).

The Rust Belt

The Rust Belt is a diverse region of the United States that once made a significant national and international contribution from "America's heartland," the collection of mid-western states that comprised a substantial segment of the country's agricultural and industrial economies. Journalist Joel Gerreau (1981) situates the Rust Belt within the region he calls "The Foundry," a geographic area that begins in New York City and

extends across the northeastern United States into Canada before crossing through the Great Lakes basin, moving into the upper U.S. South, and resting in Washington, D.C. Gerreau discarded the traditional political boundaries of North America and instead used the regional distinctions, such as language, dialect, and cultural geography.

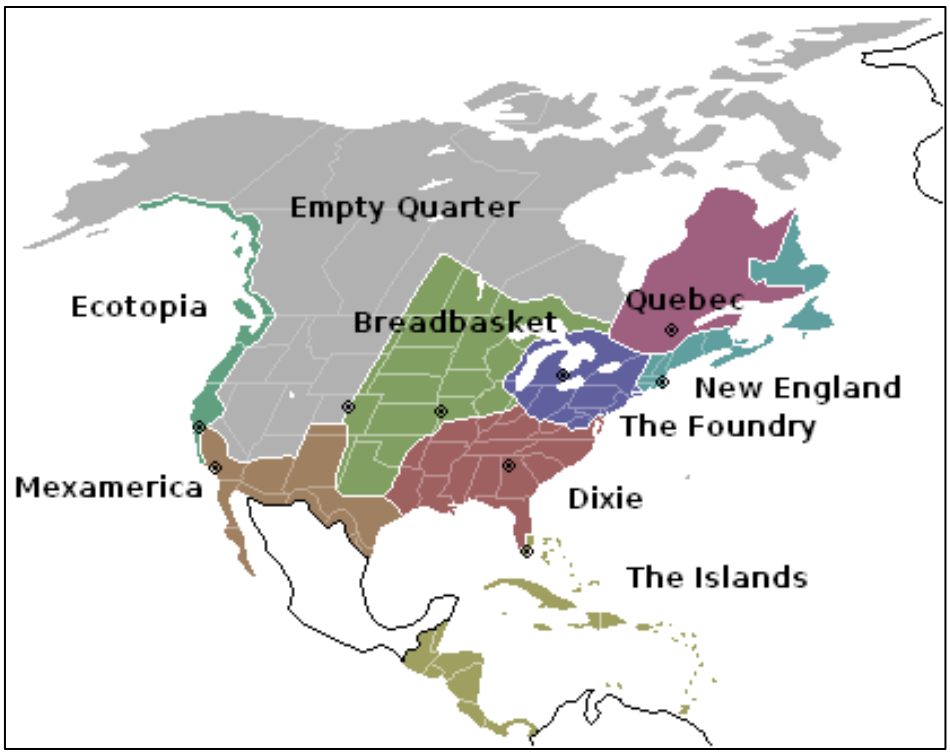


Figure 1: Nine Nations of North America. Adapted from Garreau, J. (1981). *The nine nations of North America*. Boston, MA: Houghton Mifflin.

A study by Feyrer, Sacerdote, and Stern (2007) define the region by a concentrated core of counties located in Pennsylvania, Ohio, Michigan, Indiana, and Illinois, but concede that there are tertiary areas outside of the core that include parts of upstate New York and communities near Birmingham, Alabama,which conform to the cultural matrix put forth by Gerreau (1981). Outside of The Foundry, Feyrer, et al. (2007) also found that counties in Connecticut, Florida, Georgia, and Tennessee, as well

as states as far west as California, were affected by the economic shock of America's midwestern industrial decline.

High (2000) argues for a more narrow geographic view of the region. For High, the Rust Belt is part of a cultural conceptual framework used by individuals to understand and explain a regional mindset that was inherently negative and subjective. High refers to the Rust Belt in direct reference to the American side of the Great Lakes basin, an area fundamentally affected by the transformation of the industrial heartland. In this same way, North Americans do not typically include Canada in their construction of the Rust Belt even though Canadian industry across the Great Lakes was also affected by industrial decline. Instead, the Rust Belt remains a regional label confined to the American Great Lakes basin (High, 2000).

The region, regardless of geographic distinctions, evolved as the result of the economic shock caused by the loss of industrial labor - primarily steel and auto industry jobs - during the late 1970s and throughout the 1980s (Feyrer, Sacerdote, & Stern, 2007). In that time, the country lost approximately 500,000 jobs in the auto industry and 350,000 jobs in the steel industry. The majority of these job losses were concentrated in 140 counties across the Great Lakes region and the northeastern United States (Feyrer, et al, 2007). The Rust Belt statistically recovered from its period of most rampant job loss (1977-1982) much faster than the nation recovered from the recession that occurred in that period (1980-1982). However, the fact that the region appeared to stem unemployment more resiliently than other parts of the nation has been attributed to an out-migration of the regional population more than a restoration of employment opportunities (Feyrer, et al, 2007).

As a result of regional out-migration, and a subsequent failure to repopulate, the Rust Belt suffers from a dearth of city- or regional-level amenities which stifles progress throughout the region. A 2007 Brookings Institute Study of cities and counties that lost steel and auto jobs in the 1980s found "that as Rust Belt cities shrank (in relative and absolute terms), the relative attractiveness of their restaurants, culture, and overall appearance declined as well" (Feyrer, et al., p. 43). While the region registered a five percent loss of bars and restaurants between 1977-1987, it lost 28 percent of bars and restaurants in the subsequent decade. According to Feyrer, et al. (2007), the loss of such amenities over time is a greater detriment to the local quality of life than either crime or unemployment, which are often used to mark the quality of life in a city or region.

The loss of amenities (Freyer, et al., 2007) and the suburbanization of poverty (Puentes & McFerrin, 2012) contributed significantly to population declines throughout the Rust Belt since the mid-twentieth century. Indeed, the top twenty cities experiencing population decline between 1960-2000 are Rust Belt cities. Cleveland (45.4%), Pittsburgh (44.6%), and Detroit (43.0%) are ranked third, fifth, and sixth, respectively (Schilling & Logan, 2008). The effect of this exodus was two-fold. First, it drove down real-estate values to make them accessible to lower-income populations. Second, it contributed to a decrease in the working-age population, which shrunk tax bases and caused severe fiscal stress throughout much of the industrial midwest and northeast United States (Puentes & McFerrin, 2012). A survey of over 1,800 cities, townships, and counties across the U.S. by Pendall, et al. (2006) found that metropolitan areas in the midwest and northeast use regulation to exclude most types of growth rather than regulate growth and development through sound public policy.

Puentes and McFerrin (2012), Pendall, et al (2006), Weissbourd and Muro (2011), and Katz and Bradley (2013) argue that the extent to which former industrial metropolitan areas were able to salvage tax revenue during the Great Recession and the decades of economic malaise that preceded it is largely attributed to the conversion of former industrial space to consumer space. Throughout the Rust Belt, in particular, city planners welcomed most any development on long vacant property. However, there are broad economic implications which mark a production-to-consumption shift in the local economy. Most significantly, former industrial space that has been rezoned for retail and residential space often forces out small manufacturers and artists as retailers and residents begin to lobby for quality of life measures. Puentes and McFerrin (2012) conclude, "it is unlikely that areas that have undergone an industrial-to-residential conversion will ever again regain their potential to host manufacturing or tradable services production" (p. 7).

McCarthy, Ondaatje, and Novak (2007) categorized Cleveland, Detroit, and Pittsburgh as "older manufacturing centers that have faced major economic restructuring" (p. xiv). These cities, by contrast, compete with more mature regional centers with diversified economies, including Chicago and Denver, and emergent centers, such as Charlotte and Phoenix, for grant funding, venture capital, and publicity as they attempt to rebuild and diversify their local and regional economies. In their study of metropolitan support for the arts - an indicator of metropolitan sustainability and quality of life - McCarthy, et al (2007) rated Pittsburgh a stronger arts community than either Cleveland or Detroit, and Cleveland as more supportive of the arts than Detroit. Detroit was given the most basic rating in all five categories of analysis: grants, technical assistance, presentation, promotion, and economic development.

Film and Media Production

Runaway Production

Runaway film production is a term originally adopted by U.S. film producers to reference the outsourcing of film production to less expensive foreign locales (Johnson-Yale, 2008). It describes the phenomenon in which Hollywood remains the intellectual center of production where financing, strategic planning, and distribution take place, but production activities take place in more cost effective locations (Pope, 2008). Thus, as a result of technological advances in media production, the term has come to represent the decentralization of film production away from the Hollywood core, domestically or abroad. Furthermore, two types of decentralization have emerged with this trend: creative runaway productions, intended to impact the realism of a production aesthetic; and economic runaway productions, intended to reduce the production overhead by hiring low-cost production labor, limiting studio investment, and providing producers with tax incentives based on the amount of money spent in a given state (Hudson & Tung, 2010).

Christopherson and Clark (2007) have argued that runaway production is a labor reaction to other distinct economic factors, specifically the fragmentation of specialized production practices and the rise of interregional competition between workforces that occurs because of the labor practices of transnational media corporations. Yale (2010) relies heavily upon the work of economic geographers (Christopherson, 2005, 2009; Christopherson & Clark, 2007; Christopherson & Rightor, 2010; Scott, 2005; Scott & Pope, 2007) in large part because she attempts to draw narrow lines between runaway production and globalization. Nevertheless, by placing such great emphasis on the impact of globalization on media production, Yale subverts the underlying fact that

runaway production existed, in a form similar to its current incarnation, long before globalization played a significant role in competition for media production. As such, contemporary discussions of runaway production are often cast in terms of media and cultural policy. The dominant notion is that of a broad, but powerful, alliance between Hollywood studio moguls and Washington policymakers to enhance America's role in global trade and cultural currency (Miller, 2003; Miller & Leger, 2001; Elmer & Gasher, 2005).

Despite the emphasis on runaway production as an international phenomenon and a function of a global economy - financial and cultural - attention has shifted toward the use of domestic location and off lot production (Litvak & Litvak, 2007). Domestic runaway production represents a paradigm shift in cultural production. This shift emerged as a result of a major restructuring of the Hollywood film industry in the 1990s away from an independent studio model toward an aggregation of small and medium sized firms operating as publicly owned conglomerates (Litvak & Litvak, 2007). To American communities in search of an economic boost and hoping to attract new industry, the structural transformation of Hollywood was a welcome opportunity for regional revitalization.

Indeed, the relationship between the Hollywood core and regional agents is one of mutual benefit. Increased competition among regions vying for Hollywood's attention has allowed Hollywood producers to pit locales against one another to receive the most lucrative economic package for each production. Since the early 1990s, regional and statewide film commissions have lobbied for producers to see an economic benefit to taking productions outside of Hollywood in return for memorable characterizations of

their cities and regions, which enables the regions to market themselves for future tourism and capital investment (Hudson & Tung, 2010).

New International Division of Cultural Labor & Below-the-Line Labor

The New International Division of Cultural Labor (NICL) is an economic theory which allows for the existence of "flexible cultural labor" in the global cultural economy (Yale, 2010). Miller, et al. (2003) argue that the global cultural economy is centered in the United States and subsequently supported in Western Europe, Japan, and China. It governs globalization, film and television, and commodification (Miller, et al, 2003; Miller, 2004; Miller & Leger, 2001).

Perhaps most important in the context of the NICL is the role of the globalized labor force. The NICL covers a variety of workers within the culture industries from janitors to screenwriters (Miller, 2004). However, it is imperative that the researcher distinguish between above-the-line labor (top-billed actors, directors, etc.) who remain aligned with the cultural center, and below-the-line labor (grips, production, assistants, craft services) who are bound to the production location (Yale, 2010; Caldwell, 2008).

Below-the-line laborers typically survive by learning how to exploit nomadic labor systems characteristic of media production (Caldwell, 2008). Each new production acts as a new start-up corporation. When a production wraps, many laborers experience periods of unemployment or engage in a highly competitive and social-capital reliant scramble to find more work. If a particular group has performed productively and cohesively on one shoot, it is not uncommon for art directors, set designers, or directors of photography to invite their "team" to move to the next production. Even this small modicum of security is tenuous. According to Caldwell (2008), "in the nomadic

system...membership on a technical team is seldom fixed or unchanging. In fact, as nomadic teams travel from incorporation/shoot to incorporation/shoot some faces will be the same but some will always change. In this sense labor nomadism is an amorphous enterprise" (p. 113).

The nomadic nature of below-the-line labor creates a "crew depth" problem for locales that hope to attract major productions as part of an economic development plan (Christopherson & Rightor, 2009). In Massachusetts the average length of production is between six weeks and three months. At the conclusion of one production, the nomadic crew moves, regionally or nationally, to the next job. Crew depth has become problematic for Massachusetts and its media constituencies that would like to see a steadier flow of production as part of the local economy (Foster, Terkla, & Laubacher, 2010). Thus, below the line labor that is static rather than nomadic emerges as an important variable in the decision making process of location scouts and producers looking for less-expensive, non-studio domestic locations to establish ongoing relationships for the future of media production.

Below-the-line labor plays a critical role in the present study because it plays a critical role in the life-cycle of incentives created by state legislatures to lure media producers to their respective states. Most qualified expenditures relate to salaries for below-the-line labor and the services it provides. However, some incentives do explicitly address the role of above-the-line labor, particularly in regard to tax credits for salaries paid to resident and nonresident talent. That said, film incentives were largely created to facilitate job creation and reduce the transience of production labor by creating a steadier production stream in a given locale. This study seeks to address the veracity of such

intent by analyzing employment trends and the clustering of production related businesses in three of the most active locations for media production in the Rust Belt.

Tax Credits

Amid the many debates that surfaced as a result of the ongoing decentralization of the film industry from Hollywood to locations outside of California, both foreign and domestic, no topic has elicited greater debate than the role of incentives in luring Hollywood producers to new and recurrent locations. Within that debate, no incentive has attracted greater scrutiny than tax credits used to offset the costs of production outside of Hollywood. Many scholarly discussions of incentives for film and media producers are related to the relationship between Hollywood and Canada, where film subsidies created in the 1980s lead locations there to be used as the backdrop for numerous American films and television series without the promotion of Canadian talent or culture (Chidley, 2000; Mintz, 2004; Coles, 2010). However, there is a dearth of scholarly literature related to domestic American film credits. Much of the discussion about state legislated film tax credits in the United States has been driven by policy makers and the popular press.

In most cases, tax credits - typically in the form of tax rebates for budget expenditures on everything from food, lodging, and transportation, to resident and non-resident salaries - are used to attract producers from Hollywood to other domestic locations. It is important to note that tax credits are open to local producers as well as out of state producers. However, the catalyst for tax incentives is the hope of politicians and tourism agents, who believe their city's or region's presence in a Hollywood blockbuster film will yield long term returns by way of tourists seeking an immersive experience in

an iconic location. From the perspective of state legislatures, which modify state tax codes to establish film credits, any return to the state in the form of job creation or spending by productions within state limits is viewed as a positive return, even if such returns do not offset the credits paid out to producers in the wake of the production.

In an era of nationwide budget deficits at the state level, subsidies such as the film tax credits are viewed by critics as another form of corporate welfare. In 2008, 31 states faced budget deficits, yet 40 states offered some form of film tax credit. The most film friendly states, at that time, offered credits matching between 30% and 42% of a film's production costs. The Chief Economist for the state of Louisiana estimated that only 15 cents to 20 cents of revenue would be recovered for every dollar of tax revenue "lost" to film tax credits (Nothdurft, 2008). In 2010, the liberal Center on Budget and Policy Priorities found that for every dollar Massachusetts spent on film tax credits it raised only 16 cents of revenue (Welfare for Hollywood, 2012). The Federal Reserve Bank of Boston charged that even the most successful film tax credit programs yielded returns that it classified as "rather modest" (Nothdurft, 2008). The Heartland Institute, a Chicago-based non-profit think tank that studies social and economic problems, concluded in 2008 that states had begun to engage in "an increasingly inefficient film subsidy 'arms race'" to attract jobs (Nothdurft, 2008, p.1). By 2010, 44 states had some form of film tax credit (Welfare for Hollywood, 2012). Currently, 40 states offer some form of "substantial tax credit" according to a report by the Pennsylvania Independent Fiscal Office (2013).

An informal survey of tax credit criticism in the popular press suggests that, perhaps expectedly, there is a correlation between the volume of tax credits in a particular

location and the level of scrutiny such tax credits attract from wonks and pundits. For example, according to the Motion Picture Association of America (MPAA, 2013) California (n = 1117) and New York (n = 470) were the two largest media producing states providing tax credits in 2010 and 2011, continuing an historical trend in U.S. media production. While New York's tax credit appears to be an effort to grow it's well established cultural production industry, mostly based in New York City, California's tax credit was enacted in 2009 in an attempt to curb the incipient threat of domestic runaway production charged by the flood of tax credits enacted by state legislatures across the United States.

California Governor Jerry Brown argued in 2012 for a $200 million increase to the state's $500 million film subsidy, which began in 2009 under the Republican administration of actor-turned-politician Arnold Schwarzenegger (Itzkoff, 2009b; Welfare for Hollywood, 2012). The California Legislative Analysts Office concluded that the benefits of the film tax credit are overstated and, in fact, "arbitrarily favor some productions over others, and will mostly fund productions that would have filmed in California in any case" (Welfare for Hollywood, 2012, p. A12). Brown said the increase was necessary to stem the tide of domestic runaway production. According to Film L.A., Inc., the non-profit film commission in Los Angeles which coordinates film permits, the city has seen a moderate decline in feature film production since states across the U.S. began to enact legislation incentivising film and media production (Sanders, 2009). According to Jack Kyser, the chief economist at the Los Angeles County Economic Development Corporation, "people in Sacramento tend to view the industry as being specifically a Los Angeles thing, but it's scattered across the state, and the industry

touches a lot of people statewide (Sanders, p. B2). In 2008 when the California film industry recorded its lowest number of feature film production days since 1993, when that data was first tracked (Sanders, 2009), the impact of runaway production on the state's economy became a principal economic and political concern.

In New York State, the second largest media production center in the United States, the relative benefits of tax credits for media production have undergone similar scrutiny. The New York film tax credit began in 2004 with a four year, $100 million incentive to companies shooting seventy-five percent of their production in New York State. Additionally, the legislation allowed New York City to contribute an additional $12.5 million per year for productions primarily shot in the city. According to a 2004 *New York Times* article, filmmaking in New York City alone brought in $5.1 billion, including 100,000 jobs and 5,000 production businesses (Collins, 2004).

In the wake of the 2008 nationwide financial crisis New York Governor David Patterson attempted to partially close the state's $7 billion budget deficit in 2009 by closing the state's thirty-five percent tax credit for films shot in New York City. Actor Alec Baldwin rebuked Patterson by declaring that the New York film and television industry would collapse and all of the production currently located in New York would relocate to California (Tax me if you can, 2009). After the 2007-2008 Writer's Guild of America strike halted production nationwide and significantly disrupted New York's production industry, Baldwin's threat resonated writ large. In April 2009, Patterson signed a $132 billion budget that included $350 million for film tax credits (Itzkoff, 2009a). Through 2014, New York offers an uncapped 30 percent refundable tax credit on

qualified expenditures with an additional five percent tax credit on investments in existing qualified film production facilities (MPAA, 2013).

Within the context of the present study, each of the home states to the subject MSAs are ranked in the top 20 media producing states nationwide. Michigan, Pennsylvania, and Ohio are ranked 4th, 14th, and 19th, respectively. Rankings were compiled by the researcher based on the total number of film and television productions as reported by the MPAA (2013). In 2010-2011, four percent of the film and television production in the United States was made in Michigan, Pennsylvania, and Ohio.

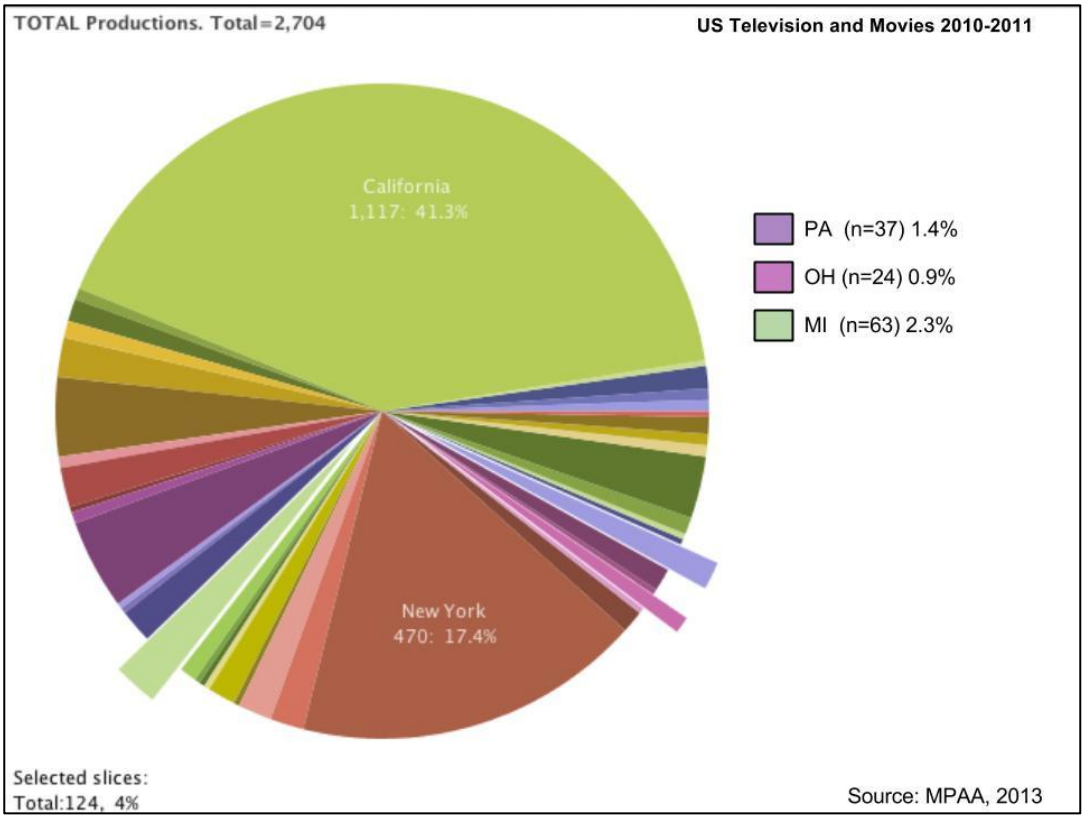


Figure 2: Production Totals, US Television and Movies 2010-2011

Michigan had offered the largest tax credit in the nation, giving production companies up to 42 percent in return for budget expenditures incurred while creating media artifacts in the state. Since 2011, the Michigan Film and Digital Media Incentives

offer variable tax credits based on the type of qualifying expenditure. Pennsylvania and Ohio, while not as generous as Michigan, both offer competitive incentives for media production. Pennsylvania offers up to 25 percent in return for a minimum of 60 percent of the production budget being spent in the state. Ohio offers a 20 percent tax credit with minimum in state expenditures of $300,000. Thus, state rankings appear relative to the scope of the incentive offered in each location.

Like the top three states producing media, Michigan - and to a lesser extent Pennsylvania and Ohio - has also weathered its fair share of criticism for its sizable tax credit. Under the direction of former governor Jennifer Granholm, Michigan established its film tax credit program and used the state employee pension fund as collateral for a bond to complete the construction of a film studio in a former General Motors facility in Pontiac, Michigan (Sanders, 2009; Story, 2012). Film director Mike Binder and Hollywood talent agent Ari Emanuel were among the site's financial investors. Investors promised 3,600 new jobs in connection with the film studio. According to company officials 200 new jobs had been created by the summer of 2011. However, when temporary construction workers were excluded from the calculation, financial records show that the studio employed only two people in 2010 and 12 people in 2012 (Story, 2012).

The Pittsburgh film office credits the Pennsylvania film tax credit for its success (Smit, 2010). In 2007, the region brought in $18 million dollars. But by 2009 revenues from film production grew to $104 million (Smit, 2010). According to the McQuillin Group, an accounting firm that works on film production expenditures, production companies had difficulty meeting the sixty percent requisite in-state expenditures to

receive the tax credit when the program began in 2004 because there were not enough businesses that supported the film industry. As entrepreneurs established new film-related firms, productions made greater commitments to the state, and Pittsburgh in particular (Hipwell, 2012).

The confluence of local industrial support and film production in Pittsburgh has stabilized the regional pool of below-the-line labor and led to the creation of state-of-the-art production facilities. The International Alliance of Theatrical and Stage Employees (IATSE) saw membership triple between 2008-2010. Furthermore, IATSE members were employed consistently for 22 months during that time (Smit, 2010). In 2011, investment banker Chris Breakwell founded 31st Street Studios, a 300,000 square foot facility located in a former steel mill in Pittsburgh's Strip District. It is the largest production facility outside of Los Angeles and New York. In 2012, 31st Street Studios announced a partnership with Paramount On Location and Knight Vision, the company which owns the motion-capture technology seen in the blockbuster film *Avatar*, making the studio the regional base for these major film industry producers (Hipwell, 2012).

Ohio has had more modest success with its film tax credit program. In 2010 expenditures from film production were more than $30 million (Prevish, 2010). However, after the success of the feature film *The Avengers*, which filmed in Ohio in 2011, the Ohio House voted unanimously and the Ohio Senate voted 29-2 to double the state's film tax credit from $20 million to $40 million over a two year period (Van Horn & Drenkard, 2012). The legislature drew criticism from the nonpartisan tax research group, the Tax Foundation, for increasing the film tax credit, but it follows a common trend among states hoping to increase revenues and elevate their profile among media producers.

Promises of job creation and the development of new and existing infrastructure in conjunction with media production are common elements in the debate over tax incentives for production companies and independent producers. The non-profit Tax Foundation, an anti-film tax incentive Washington, DC tax research group, concluded that states often justified the establishment of film tax credits by using "fanciful estimates of economic activity" (Story, 2012). The MPAA and state legislatures attempt to win over public opinion with such promises, while communities that have experienced decades of economic decline remain anxious to allow any form of industrial activity to revive local economies. As state sponsored economic impact studies conclude for all three study sites, the employment and investment activity initiated by the appropriation of tax credits is welcomed by the states over no employment and investment activity despite the meager returns on the distribution of tax revenue (Clouse, 2012; Ernst & Young, 2011; Pennsylvania Department of Community and Economic Development, 2011).

Chapter Summary

This chapter provided a summary and review of relevant literature related to domestic runaway production and, at once, Hollywood's role in nurturing and lamenting the economic and political structures which make runaway production possible across the United States. Furthermore, it articulated the geographic boundaries of the present study as related to the more general discussion of the conceptualization of the Rust Belt in the collective American imagination. Perhaps most importantly, it established the link between media production and job creation as an element of economic development.

Through the implementation of tax credits and related economic incentives, states are attempting to lure national and international productions, emanating from the

Hollywood culture industry. The primary rationale for such incentives is the creation of jobs and investment opportunities. This study evaluates the validity of that proposition in three prominent MSAs within the Rust Belt. Cleveland, Detroit, and Pittsburgh are arguably the dominant centers of media production in their respective states. Therefore, this study comparatively assesses the scale of employment of film and media production professionals from 2005-2010 and its relative impact on the production culture in each locale. Furthermore, statistical analysis of zip-code level economic census data was conducted to determine if industrial clustering of film and media production related business has occurred in any or all of the aforementioned locations. Chapter Three provides a detailed explanation of the research design and methods used to reach the findings and subsequent conclusions reported in Chapter Four and Chapter Five, respectively.

CHAPTER THREE

RESEARCH DESIGN

Introduction & Overview

This chapter introduces the research design, including methods of data collection and analysis, issues of trustworthiness, and study limitations. The chapter begins with a rationale for using a concurrent mixed methods design, which is employed to provide an analysis of the economic impact of media production in the Rust Belt as it relates to employment, in particular. The unit of analysis, the regional MSA, is also defined and described as related to the present study. Furthermore, methods of data collection and analysis are reviewed before introducing issues of trustworthiness and study limitations.

Rationale for Research Approach

Rationale for a Mixed Methods Research Design

The purpose of this concurrent mixed methods study is to better understand a research problem by converging both quantitative and qualitative data (Creswell, 2003). In the study, the global Moran's I will be used to evaluate census data and measure spatial clustering of media producers associated with Hollywood media production in the Rust Belt. The global Moran's I evaluates if the pattern expressed is "clustered, dispersed, or random" (ESRI, 2012). At the same time, media production in the Rust Belt will be explored using qualitative interviews with the organizational leaders of regional film offices, which act as liaisons between producers from media centers and their respective region.

The concurrent triangulation strategy in the study allows the researcher to triangulate research methods and collected data in order to bolster trustworthiness and strengthen knowledge claims (Creswell, 2003) within the study. A comparative spatial

analysis of the film production industry in Pittsburgh, Cleveland, and Detroit will be conducted by collecting US Census County Business Patterns (CBP) data, which provide annual detailed geographical and industry snapshots by breaking down census data through the use of North American Industry Classification System (NAICS) codes. The codes will allow the researcher to identify different sectors of the media production industry in these cities and immediate surrounding counties.

The global Moran's I statistical test will be used to determine if clustering of media production industry assets occurs within geographically defined areas, as demonstrated by Williams and Currid-Halkett (2011) in their comparative study of the fashion industry in New York and Los Angeles. The quantitative method will be supplemented by semi-structured interviews with the leadership of regional film offices using a phenomenological method (Merleau-Ponty, 1974), emphasizing loose structure and open-ended questions. The mixed methods approach described here allows the researcher to develop a more holistic view of the film industry in the U.S. Rust Belt.

Unit of Analysis

Metropolitan statistical areas (MSA) serve as the unit of analysis for the proposed study. Each MSA is composed of one or more principal cities and surrounding areas. The MSAs included in the present study are identified by the United States Census Bureau as Detroit-Warren-Dearborn, a five county region of southeastern Michigan; Cleveland-Elyria-Mentor, comprised of four counties in northeastern Ohio; and Pittsburgh, which includes seven counties in southwestern Pennsylvania.

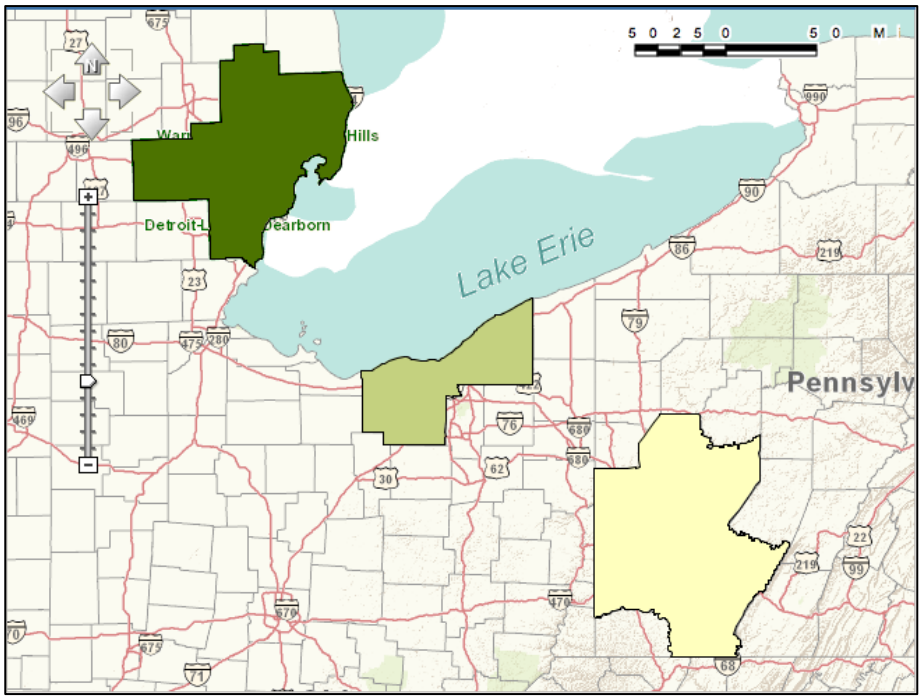


Figure 3: Metropolitan Statistical Areas. (From Left to Right: Detroit-Warren-Livonia, Cleveland-Elyria-Mentor, Pittsburgh.)

Analysis of CBP data at this level will allow for the inclusion of labor that is not located directly in the regional center, but nevertheless is affected by the production of culture as it occurs in the region (Williams & Currid-Halkett, 2011). Moreover, the range of analysis provided by MSA level data is in concert with the regional emphasis of studies by The Brookings Institution regarding place and the economy (Puentes & McFerrin, 2012; Weissbourd & Muro, 2011; Pendall, Puentes, & Martin, 2006).

MSAs are indexed by the U.S. Census Bureau using Census Bureau Statistical Area (CBSA) codes, which allow for MSAs to be categorized numerically, similar to the NAICS system. Each MSA has one or more urban cores by which the region is classified. For example, the Pittsburgh, PA MSA (CBSA 38300) has only one principal city: Pittsburgh, PA. However, the Census Bureau includes two principal cities, Cleveland,

Elyria, and Mentor in its classification of the Cleveland-Elyria-Mentor, OH MSA (CBSA 17460); and ten principal cities in the Detroit-Warren-Livonia MSA (CBSA 19820), which has a population more than twice the size of either Pittsburgh or Cleveland-Elyria.

Table 1: *Annual Estimates of the Population of Metropolitan Statistical Areas, 2005-2010*

CBSA Code	Geographic area: Metropolitan statistical areas. (Titles of metropolitan divisions are indented.)						
		July 1, 2010	July 1, 2009	July 1, 2008	July 1, 2007	July 1, 2006	July 1, 2005
17460	Cleveland-Elyria-Mentor, OH	2076016	2091286	2094051	2099185	2106336	2118249
19820	Detroit-Warren-Livonia, MI	4291828	4403437	4423781	4456582	4484542	4494398
38300	Pittsburgh, PA	2356827	2354957	2355391	2357141	2361482	2372328

Overview of Research Method

The collection of qualitative and quantitative data will be sequential. The CBP/NAICS data will be mined using archival research methods and electronic government databases (Yale, 2008). The semi-structured interviews will be collected using open-ended questions concerning the role and impact of the media production industry within the MSA. The quantitative and qualitative data analysis will take place concurrently, allowing for the results to be compared during the interpretation phase (Creswell, 2003).

Data Collection Phase I: Quantitative Data

U.S. economic census data comprise the quantitative data set for the present investigation. Economic census data is organized by NAICS codes which group businesses into industrial clusters at various units of analysis. NAICS code 512110 is the primary industrial data set in this study. It includes most industries related to motion picture and video production.

Table 2: *NAICS Codes Related to Motion Picture and Video Production*

NAICS CODE	CLASSIFICATION
512110	Motion Picture and Video Production Animated cartoon production Animated cartoon production and distribution Commercials, television, production Film studios producing films Films, motion picture production Films, motion picture production and distribution Instructional video production Motion picture and video production Motion picture and video production and distribution Motion picture production Motion picture production and distribution Motion picture studios, producing motion pictures Movie production and distribution Music video production Music video production and distribution Program producing, television Television commercial production Television show production Video production Video production and distribution
512120*	Motion Picture and Video Distribution
711510*	Independent Artists, Writers, and Performers
512199*	Other Motion Picture and Video Industries
334612*	Prerecorded Compact Disc (except Software), Tape, and Record Reproducing

* U.S. Census Bureau NAICS Codes Cross Referenced with NAICS Code 512110

The study also includes most industries cross referenced with NAICS code 512110 by the U.S. Census Bureau. Those industries include Motion picture and video distribution (NAICS 512120), which acquires distribution rights and distributes motion pictures and videos; Independent artists, writers, and performers (NAICS 711510), who produce motion pictures and videos on contract as independent producers; Teleproduction and other post-production services (NAICS 512191), which are companies that provide general post-production services such as film and video digitization; Other motion picture and video industries (NAICS 512199), which provide laboratory services for film

development, production dailies, coloration, and related services; and Compact disc, tape, and record reproducing (NAICS 334612), which provide mass duplication and packaging of video tapes. This study excludes one cross referenced industry, Photographic services (NAICS 54192), because it includes businesses that video tape weddings, special events, and other boutique services unrelated to the national and international cultural production industry.

CBP data for related NAICS were retrieved from the Census Bureau website. CBP provide subnational economic data by industry, including the number of establishments, first-quarter employment, first quarter payroll data, and annual payroll data. According to the Census Bureau, the data is ideal for economic analysis of small areas and analysis of economic change over time (U.S. Department of Commerce, 2013). CBP data is available in comma-separated value (csv) format for the years 1986-2010. 2010 data sets were made available in June 2012.

CPB data was downloaded from the County Business Patterns page of the U.S. Census Bureau website for reporting years 1986-2010. The researcher extracted data for the scope of the present study, 2005-2010. For each year, data sets were broken down first by NAICS Code, then by MSA. Finally, each MSA was separated into zip code level data in order to calculate the global Moran's I statistic for spatial autocorrelation.

Data Collection Phase II: Qualitative Data

The quantitative method is supplemented with semi-structured interviews with regional film commissions using the phenomenological method (Merleau-Ponty, 1974), emphasizing loose structure and open-ended questions. Participants received no monetary compensation. Participants will receive copies of the dissertation as

a form of non-monetary compensation. Interviews were approximately 60 minutes in length. The protocol for semi-structured interviews allows for some freedom to introduce unscripted questions in response to answers provided by research participants. However, a standard set of interview questions served as an outline for each interview. Those questions are attached as an appendix.

Interview subjects are adult executives in charge of the day-to-day operations of regional film offices located in Pittsburgh, Pennsylvania, Cleveland, Ohio, and Detroit, Michigan. They were selected because they are tasked with recruiting productions to the region and assisting producers who meet specific requirements with filing appropriate documentation related to tax incentives and other forms of production support. Five interviews were conducted in the qualitative portion of the research design. These include the executive director and the associate director, or other designee such as the production coordinator, who has a significant role in recruiting and supporting local productions. Because of the specialized roles of the subjects to be interviewed, the researcher excluded subjects not directly affiliated with the respective regional film offices and limited participation to those film office personnel who deal with recruitment and production support on a daily basis.

The researcher will interview subjects from the staff listing provided on the websites of the Pittsburgh Film Office, the Greater Cleveland Film Commission, and Film Detroit, a division of the Detroit Metro Convention & Visitors Bureau. Requests for interviews were made via email to the Pittsburgh Film Office to interview Film Office Director Dawn M. Keezer and Communications Specialist Steve Bittle; to the Greater Cleveland Film Commission to interview Commission President Ivan Schwarz and

Production Coordinator Jason Drake; and to Karla Murray, National Manager of Film Detroit. Once the interview subjects agreed to participate in the study, the subjects were provided with a consent form, which included the information outlined in the Essentials of Informed Consent and the Informed Consent Form provided by the Indiana University of Pennsylvania (IUP) Institutional Research Board (IRB) (IRB Approved, December 13, 2013). The researcher conducted and recorded three interviews face-to-face, and two interviews via telephone from a personal office.

Interviews were recorded and transcribed. All recordings and transcriptions will be retained for at least three years in compliance with federal regulations. Since neither the interview participants nor the subject matter of the interviews deal with marginalized groups or individuals, biographical anonymity and confidentiality was not sought. The current research study does not fall under any of the specific research categories designated by federal regulation to maintain confidentiality protections of its subjects.

The researcher chose to withhold preliminary results of the quantitative data during the interview process in an effort to illicit more trustworthy responses from study participants, as opposed to responses provided that concur with or reject the findings of the spatial autocorrelation. In this way, discrepant information will be presented in the research findings as part of the validation strategy. According to Creswell (2003), "discussing contrary information adds to the credibility of an account for the reader" (p. 196).

Post-study debriefing occurred through member checking (Creswell, 2003) of specific sections or descriptions that emerge through the data analysis and interpretation phases of the research design. The researcher provided the participants with specific

excerpts of the research related to their participation. The researcher included the member checks as part of the data analysis and interpretation.

Methods and Procedures for Data Analysis and Synthesis

Overview

The following section details the methods used to analyze the qualitative and quantitative data collected during this investigation. The quantitative data analysis includes descriptive and inferential statistics, including the global Moran's I, which is a common method for determining spatial autocorrelation in geographical analysis (Rogerson, 2010). Qualitative data analysis will follow the three step semiotic phenomenological method (Lanigan, 1987). Coding methods used during qualitative data analysis for the interpretation and reduction phases followed an eclectic coding method (Saldaña, 2013), making use of analytic software to aid in the coding and theming processes.

The passages that follow are an outline for the analysis of data in the present investigation, which inform the findings and conclusions reported in Chapters 4 and 5. The following section provides a roadmap for the process of data analysis and synthesis, which emerged as part of the inquiry and subsequent analysis of collected data (Cresswell, 2003; Bloomberg & Volpe, 2012; Saldaña, 2013).

Analytic Approach: Quantitative Data

The quantitative data collected from the U.S. Census Bureau was analyzed in several ways. Descriptive statistics complement the spatial autocorrelation and other inferential statistical methods. For example, a t-test for comparison of means was used to establish the significance of population change in each region and industry during the

period of investigation. The global Moran's I is a statistical analysis used to evaluate spatial autocorrelation between a given set of features and an associated attribute (ESRI, 2012), which in this case are the NAICS codes in each region related to film and media production. The global Moran's I also calculates a Z score that indicates whether or not one can reject the null hypothesis, "there is no spatial clustering" (ESRI, 2012; Williams & Currid-Halkett, 2011; Rogerson, 2010). The global Moran's I was calculated using GeoDa, a free software download developed at Arizona State University. The resulting calculations produce numeric data that can be represented graphically in order to better illustrate the impact of the film and media production industry on the region.

Analytic Approach: Qualitative Data

Interview analysis was conducted using the semiotic phenomenological method popularized by Lanigan (1987). Lanigan's semiotic phenomenology is based on Merleau-Ponty's (1974) phenomenological method, which included three phases of analysis: interpretation, reduction, and description. Within each phase of Merleau-Ponty's method, the researcher undertakes three independent steps beginning with description, followed by reduction, and concluding with the interpretation of the data. According to Merleau-Ponty all phenomenology must be conducted through the phenomenological method. However, Lanigan (1987) noted that despite phenomenology's emphasis on the description of a phenomenon, Merleau-Ponty's method concluded with an interpretation of the description. Therefore, he proposed the semiotic phenomenological model, which inverts the steps prescribed by Merleau-Ponty for each stage of phenomenological reduction.

The semiotic model of phenomenology includes the same three phases of analysis that are found in Merleau-Ponty's method: interpretation, followed by reduction, followed by description. However, the inversion of the analysis guides the researcher through a process of interpretation, reduction, and description within each phase of phenomenological reduction. In this way, rather than concluding with the interpretation of the description of the phenomenon, the phenomenologist concludes the study with a description of the interpretation of the phenomenon. It is a subtle, yet important distinction in the process of phenomenological analysis.

In order to achieve an appropriate level of interpretation and reduction as prescribed by Lanigan (1987), the researcher will employ an eclectic coding method (Saldaña, 2013). Eclectic coding utilizes two or more purposeful First Cycle coding methods with the understanding that analytic memos and Second Cycle coding will reconcile the use of multiple methods through synthesis of multiple codes and thematization of the data (Saldaña, 2013).

The researcher also used *Many Eyes*™, an analytic web based program licensed by IBM research, to assist in First Cycle coding. Interview transcripts were uploaded to the *Many Eyes*™ project database as individual transcripts and as a combined comprehensive transcript document. *Many Eyes*™ is capable of analyzing documents of up to one million words. Once uploaded, the transcripts were processed into text analysis visualizations.

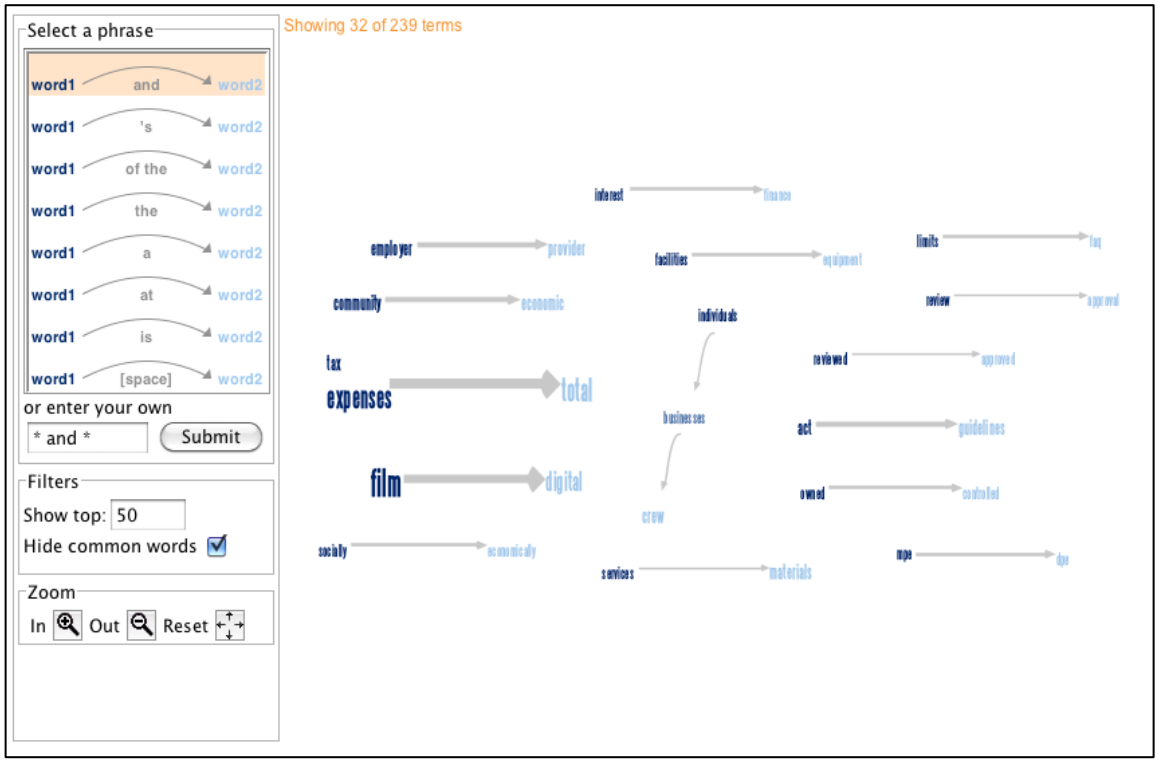
Visualizations include word clouds, word trees, and phrase nets. The word cloud inserted below is based on a dataset comprised of the film tax credit guidelines in Michigan, Pennsylvania, and Ohio. The word cloud includes the most common words

found in those three documents and ranks the frequency of word use by comparatively adjusting the size of the word relative to its frequency in the document. From this image, one might deduce particular codes around which additional analysis will focus. However, the word cloud lacks higher order data, including frequency counts and words or phrases that may be correlated with one another.

Figure 4: *Production Tax Credit Word Cloud*

Phrase nets provide useful analytics by diagramming the association of different words in a given text. It analyzes a text by looking for words that fit a designated pattern. For example, if a researcher is looking for related concepts in a text, s/he would select the pattern "and," which commonly connects related terms or concepts in text. The image inserted below is a screenshot of a phrase net created with the same data set used to generate the film tax credit word cloud.

Figure 5: *Production Tax Credit Phrase Net*

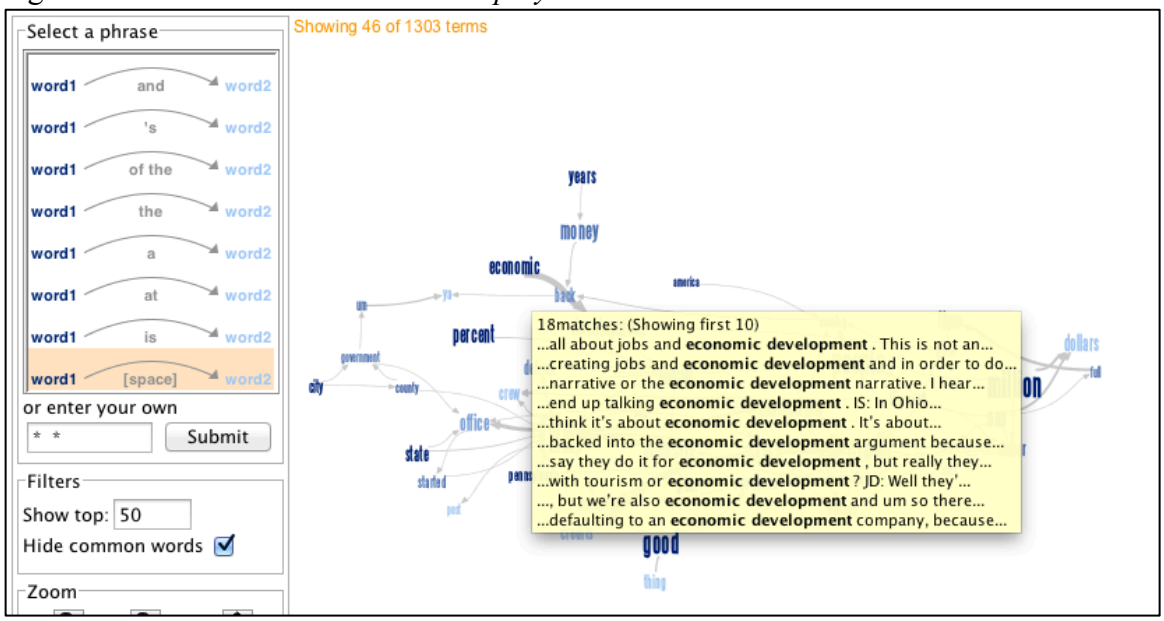


The results are quite different. Where the word cloud only shows text based on the frequency of its occurrence, the phrase net can be used to make associations between major concepts. On the left side of the image a string of related words are displayed: employer/provider, community/economic, tax/expense/total, film/digital, socially/economically. In this way, the words begin to form relational frames by which the document itself, as well as other data, might be analyzed. Furthermore, the phrase net is interactive. If one were to roll the computer cursor over the word "film" s/he would see that there were ten occurrences of the word in the document. Like the word cloud, the phrase net also displays text in a size relative to its frequency in the data set. Because the word "film" is larger than the word "digital," one can accurately assume that "film" is used more frequently than "digital" in the document. Rolling the computer cursor over

the word “digital” confirms the assumption by revealing that “digital” appears only five times in the data set.

Like the size of the text in the phrase net, the size of the arrow connecting two terms is also indicative of the frequency with which the terms are matched. The larger the arrow, the more times the terms are matched in the document with the designated pattern. In the case of the words “film” and “digital,” the two terms were matched on five occasions. Hovering over the arrow with the computer cursor displays snippet views of the matched phrases, which allow the researcher to search the document for the matched occurrences to validate and describe the pattern in more detail.

Figure 6: *Phrase Net with Alt-Text Display*



During the computer assisted portion of the First Cycle coding phase, analytic memos were used to reflect on and write about code choices and how they relate to the study’s research questions, operational definitions, and emergent patterns, categories, themes and concepts, among others, throughout this process (Saldaña, 2013). According to Saldaña (2013), “analytic memo writing serves as an additional code- and category-

generating method" (p. 51). In this way, the analytic memos produced in the data analysis phase of the investigation become an additional form of data to be considered when rendering findings and conclusions (Saldaña, 2013).

Second Cycle coding involved combining similar codes and themes that emerged during First Cycle coding and classifying, prioritizing, integrating, synthesizing, abstracting and conceptualizing the data in different ways (Saldaña, 2013). Second Cycle coding methods are not always required, but the process provided an advanced organizer for reporting findings and conclusions drawn from the investigation.

Synthesis

Synthesis refers to the act of reconstructing data that was deconstructed through the data analysis process (Bloomberg & Volpe, 2012). In this way, the researcher related the data analysis to the research questions stated in Chapter 1, connect the qualitative findings to the quantitative data, relate the findings to the literature, and describe how the findings relate to the researcher's initial assumptions about the study. The process culminates with the researcher attaching meaning to the findings and interpretations that emerged from the data analysis phase of the inquiry (Bloomberg & Volpe, 2012).

Synthesis occurred by extracting the second cycle codes and reconnecting them to specific quotations that illustrate the broader theme or interpretation that emerged from the coding cycles. Quantitative results were also connected to the second cycle coding results in an effort to explicate those findings into final narrative construction. This process proved most difficult in connecting the qualitative data to the GIS analysis because so little of the interview content dealt with hard numbers for industry establishments in a geographic locale. Film commissioners discussed studios and

affiliated facilities generally from a need based perspective, but those comments, while providing context for the GIS analysis, did not challenge or overtly support those findings.

Issues of Trustworthiness

Credibility/Validity

In an effort to establish trustworthiness of the study, the researcher utilized three strategies for data validation (Creswell, 2003). First, the researcher employed methodological triangulation, which required that the researcher use multiple forms of data within the study architecture. In this particular study, semi-structured interviews were triangulated with quantitative spatial analysis of the film and digital media production industry within and around the cities under investigation. Validation strategies (Creswell, 2003) include triangulation "to build a coherent justification of themes" (p. 196), member checking, which includes sharing specific descriptions of the final report with study participants to determine whether the participants feel the information was accurately presented, and detailed description. Additionally, because of the polarizing nature of the debate around incentivization of the media production industry across the U.S., there exists the potential for discrepancy between the results of the quantitative data and the findings and interpretation of the qualitative data. According to Creswell (1993), such discrepancy should be reported as a form of data validation.

Dependability/Reliability

Dependability in qualitative research parallels reliability in quantitative investigation. To the extent possible the researcher created an audit trail (Bloomberg & Volpe, 2012) explaining how the data were collected and analyzed. Finally, thick

description and detailed information lends itself to reader transferability, whereby the audience should be able to determine whether or not the study might be applicable to other contexts for future inquiry (Bloomberg & Volpe, 2012).

Limitations of the Study

The study contains certain limiting conditions inherent in the present research design. First, the selection of NAICS codes for inclusion in this study limit the potential findings of economic impact relevant to media production in each respective MSA. There is a great difficulty in determining which tertiary sectors of the economy are impacted by media production on a regular basis. As noted in Chapter 2, southern California remains the core location for media production because it is home to numerous professionals who work in niche sectors of various industries. For example, lawyers, accountants, and even caterers that specialize in providing craft services to production studios, comprise an important component of the media ecology. However, outside of Hollywood it is difficult to gauge the impact, both immediate and long term, of media production on these industries. Do local coffee houses employ more people because of movie productions? Are livery fleets expanding service areas to meet the needs of above-the-line talent? Questions such as these are beyond the scope of the present investigation. However, inquiring about the annually reported local production-related workforce in each MSA serves as a baseline from which answers to tangential questions may be inferred.

The study participants hold highly subjective views about the role of media production in their communities. Film commissions are, by definition, in the business of promoting and supporting film production in their communities. Film commissions are

equally enthusiastic about the use and expansion of film tax credit programs. Such enthusiasm, and the perception of success which film commissioners put forth, may be difficult to reconcile with census data in the absence of overwhelming evidence of that the impact of media production on the local workforce is substantial and sustained. Furthermore, the researcher's personal biases concerning media production in the Rust Belt, while bracketed, remain central in this investigation.

Chapter Summary

This chapter provided a detailed account of the research design and methods of inquiry and analysis. The mixed methods research design was employed to converge the quantitative census data and qualitative interview data in order to provide a comprehensive analysis of problems related to the question of media production as a source of economic impact (Creswell, 2003). The units of analysis are MSAs located in the U.S. Rust Belt. The participant sample are the industries classified by the U.S. Census Bureau under the NAICS codes for motion picture and video production intended for a national or international audience. Methods of data collection include downloading and indexing economic census data, interviews with professionals working to cultivate production in the region, and archival research methods. The data collected will be analyzed against a conceptual framework developed through the review of literature relevant to the topic. Credibility and dependability are accounted for through methodological triangulation, member checking, and thick description (Creswell, 2003; Bloomberg & Volpe, 2012).

CHAPTER FOUR

RESULTS & DISCUSSION

Introduction

This chapter provides a description of the study's participants and the function of each regional film office in relation to the film industry in each locale. Additionally, this chapter outlines dominant themes that emerged from interview analysis and the industry data that comprise this study. These findings address the study's principal research questions. The qualitative findings incorporate geospatial analysis, which addresses the quantitative hypotheses. However, results of the spatial autocorrelation are addressed independently. Discussion of the findings has been synthesized throughout the text in an effort to better integrate, where appropriate, the qualitative and quantitative findings.

Background of Research Participants

Three organizations participated in this study. These organizations were selected because each organization acts as a liaison in its region between local and state government agencies, non-governmental stakeholders, and film and media entities from U.S. media centers as well as the global media community. Participating organizations include the Greater Cleveland Film Commission (GCFC), which advocates for film and media production in northeast Ohio; Film Detroit, which is division of the Detroit Metro Convention and Visitors Bureau; and the Pittsburgh Film Office (PFO), which represents a ten county region of southeastern Pennsylvania. All three agencies are not-for-profit organizations. However, each organization defines its role differently in local film and media production based on the evolving and emergent needs of the film and media industry in each region.

The Greater Cleveland Film Commission

The GCFC is a not-for-profit organization intent on harnessing a relatively nascent, but rapidly growing, media production industry in northeast Ohio. It is a five-person office, composed of its president, vice president of finance and operations, production coordinator, assistant production coordinator, and an office manager/executive assistant. At the GCFC, like many not-for-profit organizations, each member of the staff may be asked to take on myriad professional responsibilities outside of those that fall under the description of any specific job title. The GCFC is located in Cleveland's downtown business district, which includes the city's major athletic and entertainment venues, bordered on the north by Lake Erie and the city's commercial waterfront, and Interstate-90, just beyond Cleveland State University and Progressive Field, to its south.

The GCLC has an annual operating budget of approximately $650,000. Two-thirds of its budget comes from the City of Cleveland and Cuyahoga County, for which Cleveland is the county seat. To supplement its public funding, the GCLC is supported by grants, private funding, and annual fundraising events. According to GCLC president, Ivan Schwarz, the partnership between the commission and local government has been positive because the region is experiencing a return on its investment.

Two interviews were conducted at the GCFC. An interview with Jason Drake, the production coordinator for the GCFC, was followed by an interview with Ivan Schwarz, the president of the GCFC. Each interview lasted for approximately one hour and was conducted in the conference room at the GCFC offices in Cleveland, Ohio.

Jason Drake came to the Cleveland area from New York City, where he received a PhD in English from New York University and worked in film production. He describes his role at the GCFC as helping to facilitate a "one-stop shop for productions coming in...We try to be a concierge service, both providing locations, providing access to locations, and then maintaining and keeping our locations..." (personal communication, June 6, 2013).

Like Drake, Ivan Schwarz is also an Ohio transplant. Schwarz is a California native who came of age in the film industry. He began as a production assistant (PA) and worked his way into the role of location manager for HBO series *Entourage* and *Band of Brothers*, and the FOX/NBC sitcom *My Name is Earl*. He was recruited to come to Cleveland to head up the GCFC in 2006. Despite the fact that he spent his adult life based in Los Angeles, his enthusiasm for Cleveland is as palpable as his enthusiasm for the film industry. In his capacity as the president of the GCFC, Schwarz was also the principal architect of the Ohio Film Tax Credit, which supports a diverse range of media projects.

Although the GCFC is a not-for-profit, Schwarz treats the organization more like a small business enterprise. When asked about the organization's structure and function prior to his arrival in 2006, he candidly dismissed the past and redirected the conversation toward the current structure of the GCFC:

> Pretty close to the first thing we did was to get a strategic plan together and build a structure. We've been building a structure for like the last four years and literally creating infrastructure [to facilitate film production]. And the truth is that its a not-for-profit. However, we should be structured more like a small business

> and that's how we've structured this....I look at us as a concierge for whatever they need. The answer is never 'no.' We're going to work our asses off to get what you need because we're a business and they're our customers (personal communication, June 6, 2013).

The idea that the GCFC act as a concierge service to the film industry and create the most positive experience possible for incoming productions was a dominant theme that emerged during my interviews with Drake and Schwarz. The organizational emphasis on service to the industry, as well as service to local crew and vendors, appears to be a core mission of the GCFC brand. For Schwarz, in particular, the idea that the GCFC provides great service to its customers also anchors its economic development agenda. "These guys will build our workforce and get us jobs and build our economic development because they're going to hire" (Personal Communication, June 6, 2013). On the day that I visited the GCFC, Schwarz felt vindicated by reports that the Cleveland Teamsters local was experiencing 100 percent employment because Marvel's *Captain America* and the Kevin Costner film *Draft Day* were both shooting in Cleveland at that time.

Film Detroit

Film Detroit is the local agency providing film support to Wayne, Oakland, and Macomb Counties in southeastern Michigan. Its structure is different from that of the Michigan Film Office, which oversees statewide recruitment of film and media projects as well as the reporting of the Michigan Film and Digital Media Incentive Program. It also differs in many ways from the structure and function of the Greater Cleveland Film Commission and the Pittsburgh Film Office because those offices are multi-person

organizations dedicated to the promotion of film and media production in each respective region. However, Film Detroit was included in this study because publicly it is the point of contact for film and media production in the Detroit metropolitan area and in this way it is most closely comparable to the other regional entities included in the study.

Film Detroit is a division of the Detroit Metropolitan Convention and Visitors Bureau. It is located in downtown Detroit, a few blocks from the Detroit River which also served as the international border with Windsor, Ontario, Canada. The office is run by Karla Murray, the national manager of Film Detroit, who also oversees corporate accounts unrelated to the film industry. Murray is a native of Detroit who spent 25 years working in the film industry in Los Angeles before returning to Detroit in 2011 to work for the Convention and Visitors Bureau and serve as the primary liaison to the film industry in metropolitan Detroit. During her career she worked with such major figures in the film industry as Sam Raimi and Jerry Bruckheimer, both of whom are Detroit natives. Murray was interviewed via telephone about her role as the National Manager at Film Detroit and the role that the film industry plays in the redevelopment efforts of metropolitan Detroit. The interview duration was just over one hour.

Because she works under the umbrella of the Detroit Metropolitan Convention and Visitor's Bureau, Murray is not directly involved with lobbying efforts for, or the administration of, the Michigan Film and Digital Media Incentive Program, which had been the focus of extensive scrutiny since it was first established in 2008 under the Democratic administration of former Governor Jennifer Granholm. The program was temporarily suspended under the Republican leadership of Granholm's successor, Rick Snyder. It was reintroduced in 2011 with new qualifying in-state expenditures.

Although her primary role remains within the Convention and Visitor's Bureau, she associates her position with Film Detroit as part of the region's ongoing economic development efforts. Echoing the sentiments of film office officials in Cleveland and Pittsburgh, much of the economic effort in Detroit is motivated by employment; not only film industry employment, but also employment in the service economy and support industries. Murray discussed the regional alliance that fortifies these efforts:

> [The Detroit Metropolitan Convention and Visitors Bureau has] a partnership base. And we have the hotels. And really that's why film is a different animal for a convention and visitors' bureau even though it does fall under what you want to do, which is ultimately put heads in beds, bringing people in, bringing money into the city, making sure everybody's got a job whether its the maid or the housekeeper or the cook, sales, the manager of the hotel, whatever (personal communication, June 20, 2013).

Pittsburgh Film Office

Steve Bittle, the communications specialist for the PFO, concurs with Murray. According to production receipts in the Pittsburgh area, the film industry purchased more than 30,000 hotel room nights in 2012. While industry and state auditors track those first dollars, the residual effects of those accounts remain anecdotal. Bittle reports that Pittsburgh hoteliers have said that typically annual layoffs were unnecessary in recent years because of the influx of clientele, which he attributes to increased media production in the region. That said, Pittsburgh is a popular tourist destination and an active sector for medical and high-tech industries. Therefore critics of the Pennsylvania Film Tax

Credit argue that it is difficult to attribute to the film industry the success of any one support industry. Bittle takes umbrage with such accounting:

> A lot of the critics are saying we lose $60 million in revenues [to the state], and you say 'yeah, but okay, how much of that comes back in taxes?' And they say $40 million comes back. So we're losing $20 million. And that's at first dollar. Nobody is even considering any of the other stuff. And then you're talking about growth and you're talking about businesses growing. You're talking about how we talked to a hotel and they're talking about two or three housekeepers they didn't have to lay off last year because they had people coming in. There's a security company that said it had to hire ten more guys last year because of [film]. None of that stuff is tracked, so that is stuff that doesn't come back. And when you tell critics this, they're like, 'yeah whatever'. No, not 'yeah whatever'. You have to include that in your plans because when you say you lose $20 million or whatever in tax revenue every year, that's picked up through growth (personal communication, June 5, 2013).

Bittle came to the PFO with film industry experience. He is a native of Pittsburgh who spent most of his career working in the film industry in Los Angeles and Pittsburgh. While Keezer remains the primary contact with the film industry and for the interests of regional film production from Los Angeles, Bittle and Assistant Director Jessica Conner coordinate the Pittsburgh Film Office. Bittle was interviewed at the PFO in early June 2013, at the end of the state's fiscal year and a time when the Pennsylvania Film Tax Credit had been exhausted. The office was waiting for the state legislature to pass its 2014 budget, which included funding for the Film Tax Credit program. A bill had

recently been introduced to uncap the film tax credit, but funding allocation remained unknown until the budget was passed and signed in July 2013.

After Pennsylvania passed its state budget without uncapping the Pennsylvania Film Tax Credit, Dawn M. Keezer, Director of the Pittsburgh Film Office, was interviewed by telephone from Los Angeles. Keezer had been outspoken in the media about the limits of the production incentive and the potential threat financial caps pose to the flourishing state film industry. Keezer was one of the original architects of the incentive program in Pennsylvania and a past chair of the Producer's Guild of America's Film USA Committee, which consisted of all domestic film commissions in the United States. When Keezer served on the committee, it's emphasis was the creation of a national film incentive, which would supplement state production incentives and deter international runaway production, particularly for those productions going to Canada where there were both national and provincial incentives. According to Keezer, that initiative was sidetracked after the terrorist attacks of September 11, 2001, which dramatically changed the political culture and funding priorities of the federal government (personal communication, July 19, 2013). Keezer is a native of California and has a degree in Communication from the University of California, Berkely. Before joining the PFO in 1994, she was the Director of Public Affairs and the head of the county film office for Santa Cruz County, California. She relocated to Los Angeles in 2006, but returns to the Pittsburgh office each month.

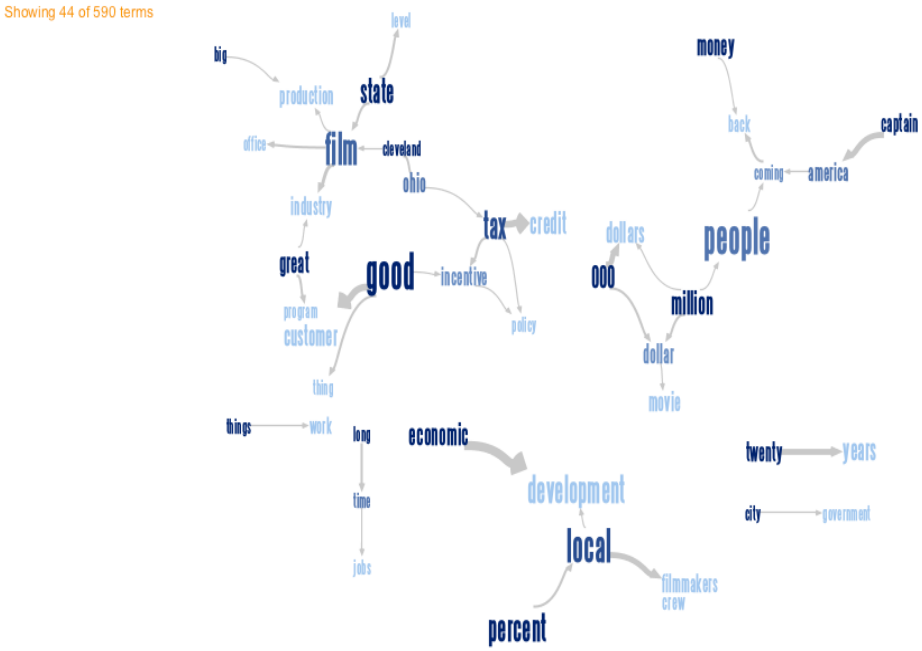
The PFO is essentially a three person office supplemented by college interns. The PFO consists of Keezer, assistant director Jessica Conner, who oversees the major fundraising efforts, and Steve Bittle, the communications specialist. The PFO is a not-

for-profit organization, which receives no money from city or county government. In the 1990s the office was funded primarily by the Allegheny County hotel room tax. However, the PFO lost its public funding in 2000 as regional governments began to identify major regional assets, like the construction of PNC Park and Heinz Field, home to the Pittsburgh Pirates and Pittsburgh Steelers, respectively, for support. Since that time, the organization has relied on private grants and fundraisers to meet its approximately $500,000 annual operating budget.

Themes

Three major themes emerged from transcript analysis. These themes emerged using an eclectic coding methodology (Saldana, 2013), which began by transcribing the interview, separating individual responses, and thematizing each response (Lanigan, 1987). The emergent themes were compared to and combined with the results of data visualizations of the interview transcripts created in *Many Eyes*®, an open source data visualization program developed and maintained by IBM.

Figure 7: *Phrase Net: GCFC Interviews*



In this phrase net, composed by combining the transcripts from the interviews conducted at the GCFC with Schwarz and Drake, the significance of themes are made evident by the size of the font of individual terms and the size of the arrows that connect associated terms. Large font and arrow size indicate a greater frequency in the use of individual terms and the frequency of association among terms. The same process was performed using the interview transcripts from the Murray and the Keezer and Bittle interviews, displayed below.

Figure 8: *Phrase Net: Film Detroit Interview*

Showing 36 of 403 terms

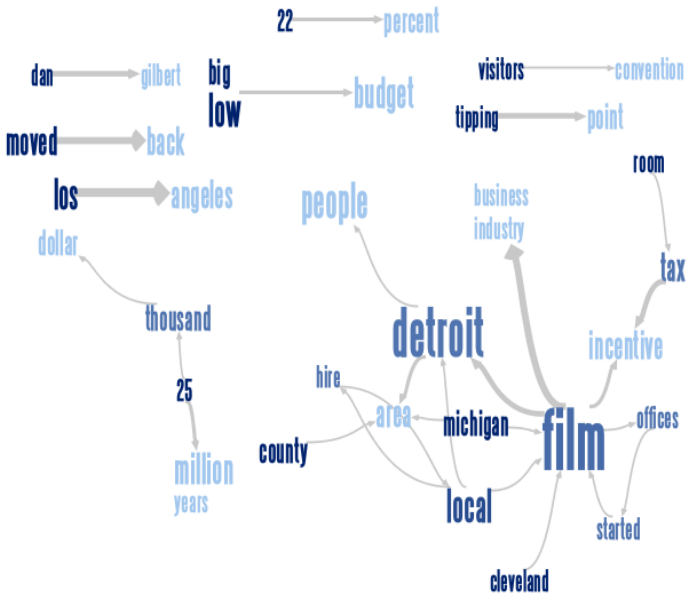
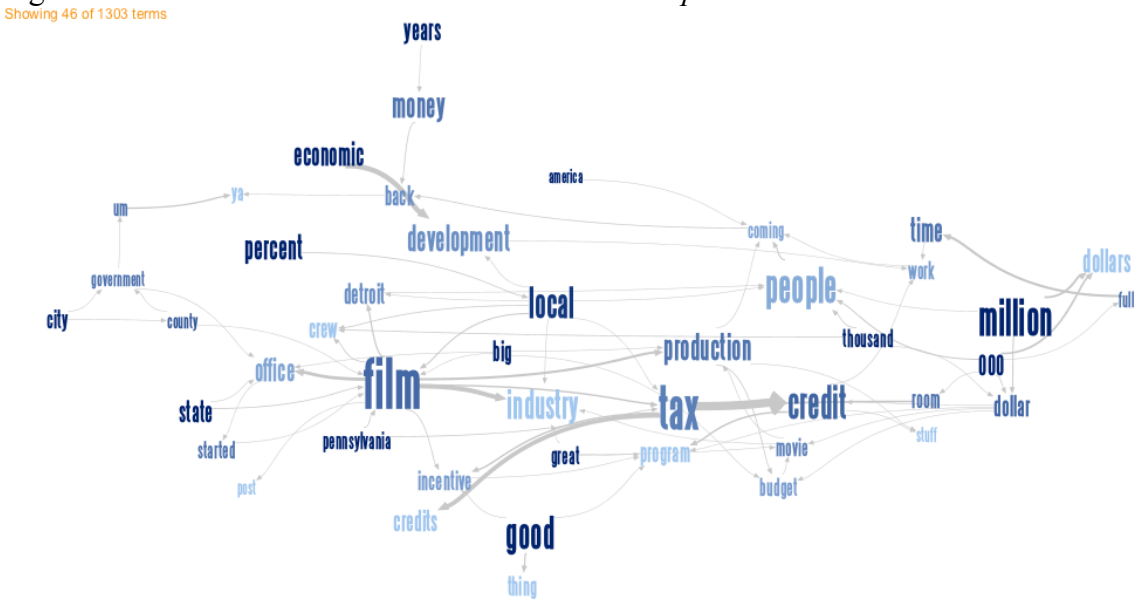


Figure 9: *Phrase Net: PFO Interviews*

Showing 46 of 723 terms

Upon completion of analysis of the individual transcripts, all four of the transcripts were combined and uploaded to *Many Eyes*®. The results of the combined transcript displayed a visual affirmation that many of the dominant themes that emerged from the individual transcripts were echoed by the ensemble of participants.

Figure 10: *Phrase Net: Combined Interview Transcripts*



The individual terms and associations were abstracted (Lanigan, 1987) into larger frames of analysis. Interview transcripts were reviewed multiple times in the context of these analytical frames and explicated (Lanigan, 1987) into three primary themes: economic development, the importance of cultivating a positive experience for film producers, and the ascribed value of film production incentives at the state level to the regional film commissions.

Theme 1: Economic Development

The first theme is that regional film production imparts a significant emphasis on economic development with particular focus on sustainable employment and infrastructure development. In this way, the economic development theme corresponds with the following research questions and hypotheses:

- RQ_1: What is the impact of the film and media industry on employment in the Rust Belt?
- RQ_2: To what extent does the film and media industry utilize existing industrial space?
- RQ_5: Is there a correlation between population change in each Metropolitan Statistical Area (MSA) and employment change in the media production industries?
- H_2: Employment change in the media production industries will not correlate with population change in each MSA.

Each film office official related the success of the film industry to the level of crew depth in their region. Crew depth determines how many productions can be staffed with local labor at any given time. For example, local labor that is five crews deep refers to the fact that five productions could be staffed at one time. Crew depth varies from site to site based on the scale of production occurring there and the maturity of the industry in a given location. Detroit and Pittsburgh have comparable crew depth, while Cleveland has the youngest industry and, as a result, it currently has the fewest number of below-the-line laborers. As the industry matures and training programs are developed and nurtured, it too will likely reach a level comparable to its regional counterparts. Crew

depth is significant because when a region does not have the local crew to support one or more productions the financial incentive to producers is diminished by virtue of having to import below-the-line talent to the production location (Christopherson & Rightor, 2009). Furthermore, sustainable job creation is the seed of infrastructure development, the apex of economic development (Feyrer, et al, 2007).

Employment. Schwarz celebrates the success of the film industry in Louisiana and hopes to have comparable success in Ohio. Louisiana was one of the first states in the nation to develop a film incentive, which Schwarz views as an example of the commitment on the part of state government to grow the film industry there. He added:

> Louisiana made the decision and the last time I looked they created over 60,000 full time jobs in that sector. They have infrastructure there now. They're full. They have people moving there. It's not just the movies. They're growing the population and people are moving to Louisiana (personal communication, June 6, 2013).

Indeed, growing the population and recovering from the decades long exodus of youth and talent from the Rust Belt has become a key objective of regions in decline (Florida, 2004). Diminishing populations in Cleveland, Detroit, and Pittsburgh have slowed since the rapid depopulation of these regions during the 1980s and 1990s. While somewhat more population stable, these regions continue to struggle with harnessing the creative class that has been deemed most relevant to successful post-industrial economies.

Table 3: *Annual Population Estimates by MSA, 2005-2010*

MSA Code	Metropolitan statistical areas.	July 1, 2010	July 1, 2009	July 1, 2008	July 1, 2007	July 1, 2006	July 1, 2005
17460	Cleveland-Elyria-Mentor, OH	2076016	2091286	2094051	2099185	2106336	2118249
19820	Detroit-Warren-Livonia, MI	4291828	4403437	4423781	4456582	4484542	4494398
38300	Pittsburgh, PA	2356827	2354957	2355391	2357141	2361482	2372328

Adapted from United States Census Bureau, Industry and Occupation Data. http://www.census.gov/people/io/

To assess the relationship between population and the number of film industry-related establishments for each metropolitan statistical area in this study, a Pearson's correlation coefficient was computed. In the Cleveland-Elyria-Mentor, Ohio metropolitan statistical area there was a positive correlation between the two variables, r=.921, n=6, p=.01. However, there was not a statistically significant correlation between the two variables in either the Detroit-Warren-Livonia (r=.541, n=6, p=.268) or Pittsburgh (r=-.499, n=6, p=.313) metropolitan statistical areas. Therefore, H_2: Employment change in the media production industries will not correlate with population change in each MSA is rejected in reference to Cleveland-Elyria-Mentor, but supported in reference to Detroit-Warren-Livonia and Pittsburgh. These results don't necessarily indicate the scope of the industry in each respective region. However, in the case of northeast Ohio, future changes in the population might also be representative of growth within media production sectors of the economy.

High tech and creative industries, like those associated with film and media production, are generally viewed as magnets for regions hoping to maintain young, college or vocation-educated citizens. However, tracking film industry employment in the Rust Belt, and nationwide, is a difficult task for several reasons. Many below-the-line laborers in the film industry designate themselves as self-employed for tax-filing purposes and neither the Internal Revenue Service nor the Census Bureau identify self-

employed individuals beyond that designation. Only individuals that have registered with the state as some form of corporate entity (ie. Limited Liability Corporation, etc.) using a film industry-related NAICS code are officially included in economic census by industry. As a result, the majority of registered production related establishments, in the Rust Belt and nationwide, consist of less than five employees.

Table 4: *Production Industry*[1] *Establishments by MSA, Year, and Employees*

Column1	2005	2006	2007	2008	2009	2010	AVERAGE	STDEV	MIN	MAX
CLE Production EST (MSA 17460)	131	126	126	116	114	112	120.8333333	7.808115436	112	131
n= 1-4 Emp	111	104	106	99	92	93	100.8333333	7.521081483	92	111
n= 5-9 Emp	11	15	13	8	11	10	11.33333333	2.422120283	8	15
n= >10 Emp	9	7	7	9	11	9	8.666666667	1.505545305	7	11
DET Production EST (MSA 19820)	284	275	281	276	269	274	276.5	5.319774431	269	284
n= 1-4 Emp	225	212	225	222	222	230	222.6666667	5.988878582	212	230
n= 5-9 Emp	33	28	32	31	25	23	28.66666667	4.03319559	23	33
n= >10 Emp	26	35	24	23	22	21	25.16666667	5.115336418	21	35
PIT Production EST (MSA 38300)	110	114	125	114	115	114	115.3333333	5.046450898	110	125
n= 1-4 Emp	89	91	97	83	90	88	89.66666667	4.546060566	83	97
n= 5-9 Emp	8	8	17	19	14	15	13.5	4.593473631	8	19
n= >10 Emp	13	15	11	12	11	11	12.16666667	1.602081979	11	15

[1] NAICS Codes 512110, 711510, 512191, 512199, 512120, 334612.
Adapted from United States Census Bureau, Industry and Occupation Data.
http://www.census.gov/people/io/

Whether or not someone is registered as a corporation or self-employed further complicates the ambiguity of what types of labor or business are counted as part of the film industry as it grows and becomes economically viable in a given locale. Actors and production technicians are the core of production personnel, but there are also vendors, such as caterers and security, who work each day on set and are viewed as critical members of the production community. Bittle explains:

> If you're U.S. Steel and you have a factory, that's how many people work there. But in the film industry, the guys who show up to the set everyday are a certain number of people, but don't forget they have to hire all these vendors and the hire all these companies to come in. There's a guy who started a coffee company and he's got two or three assistants. There are three or four people who work for that

> company. They're not considered film crew. The security company that was able to bring in more security guards. They're not considered film crew. They don't count, so it's not just a thousand people. You could probably extrapolate that and say it's tens of thousands that benefit from that (personal communication, June 5, 2013).

However, Bittle warns that extrapolating beyond the first dollars spent by productions creates easy fodder for critics of the film tax credit (personal communication, June 5, 2013). Economic impact studies of the film industry frequently include multipliers on dollars spent by the production company to examine how those dollars spread throughout the community. However, such extrapolation can be difficult to defend without hard evidence to support the claims of film commissioners. According to Keezer this is one of the more difficult obstacles to overcome when defending tax incentives. "That's my biggest pet peeve with my fellow film commissioners. [They say] they spent $100 million. How did that happen on a $5 million budget?" (personal communication, July 19, 2013).

Indeed, critics of film tax incentives nationwide argue that the rhetoric of job creation is fallacious. These critics, including the non-profit Washington, D.C. based Tax Foundation as well as members of both political parties in state legislatures across the United States, argue that the jobs created by the film industry are primarily part-time jobs which lead to cyclical unemployment throughout the year as productions begin and leave the location (Henchman, 2012; Mayer & Goldman, 2010). However, the nature of employment in the film industry is more akin to contract employment rather than being employed by a single company for twelve months each year. Bittle argues:

> There are at least a thousand people in southwestern Pennsylvania making a full-time living, and when I say full-time I mean making a year's wage working on things...that's another point of contention. People talk about...partial years. They're like, 'well no, this is part-time work.' Well, this isn't part-time work. They may work on one big film a year, but they make $40,000 to $50,000, which is their job. It's what they do. They don't go to a coffee shop or something. They work on films (personal communication, June 5, 2013).

Keezer added:

> I think what it comes down to is that people don't look at the film industry as a business. It's fun. It's glitzy. It's glamorous. They don't see the jobs behind it. They don't see the small businesses that make most or all of their living off of it when it's in town. If you look at my website, phgfilm.org, when you look at the filmography and you go back seven years you see the increase in business. And you can look back over the last four years that we can point to direct spending of $100 million in the region; that 25 percent of my union crew have been able to buy houses in the past four years. It didn't happen before and it didn't happen because we didn't have the tax credit.
>
> A lot of times people don't realize that the seven major studios are all publicly traded companies and they have stockholders to answer to. If this was a car manufacturer, Pennsylvania would be rolling out the red carpet, giving them tax credits, giving them everything to get those jobs and this is the same thing. It's just that you can't hold the final product...so I think that's where we run into some problems and challenges (personal communication, July 19, 2013).

In addition to the debate over what constitutes full versus part-time work in the film industry, critics also decry state sponsored production incentives because many of the key personnel - key grip, key make-up, key lighting, etc. - who comprise the core labor force of production units are brought in from Los Angeles or New York to staff the productions rather than filling these positions with local labor (Murray, personal communication, June 20, 2013). In many locations this is due to the fact that there simply aren't enough experienced people in the region to fill these roles. Over time, as regional production industries mature and local crew have an opportunity to work larger productions and gain experience in these highly specialized positions, out of town producers, many of whom have worked in the region on past productions, will begin seeking local talent to fill these assignments (Schwarz, personal communication, June 6, 2013; Murray, personal communication, June 20, 2013). Moreover, key crew members from out of town often hire local talent to assist them. In this way, people with years of industry experience are providing paid, on-the-job training for less experienced local labor (Schwarz, personal communication, June 6, 2013; Caldwell, 2008). In this way, the film industry offers an illustration of what the Brookings Institution terms a "metropolitan revolution" wherein metropolitan centered post-industrial economies essentially return to industrial-style vocational and apprentice-type educational opportunities for sustainable employment in emergent industrial sectors (Katz & Bradley, 2013).

At the root of the film tax credit criticism is the argument that states are not seeing bold economic returns on their investment. The Tax Foundation review of the Ohio Film Tax Credit concluded that the state only received 21 cents on the dollar for its

investment (Henchman, 2012). Similar arguments abound in Pennsylvania and Michigan, but film commissioners acknowledge the disparity between the credits awarded and the return to the state. They posit that states benefit in other ways and that the diminished financial returns on paper are 1) compensated for with other taxes paid on wages and services and 2) should be viewed as part of the state's investment in creating a stable film industry that once grounded in the state will continue to produce content without the long-term expectation of financial incentives. Schwarz argues:

> If you look at the state of Ohio as a business and you are trying to enrich the coffers of the state of Ohio, then [the Ohio Film Tax Credit] isn't a great program. [Critics] say what is the benefit to the state? You know, the state's job is to create jobs and economic wealth for its citizens and to take care of the people of the state of Ohio or Louisiana or wherever, and this does that.
>
> There are people making a really good wage. I just got off the phone with the teamsters here. Every single teamster that's on the roster is working. Now is the state of Ohio going to benefit directly from that? Probably not as much as the guys who are working, the guys who have those jobs. Now they're paying taxes that they never would have had and so you have to look at it as, I personally think, a philosophical discussion...If you want to make a realistic statement, then the state of Ohio isn't whole on this. However, are the citizens and the people and the people you're supposed to be serving made whole? Ten times over (personal communication, June 6, 2013).

Infrastructure. The development of infrastructure is the second tier of creating a sustainable regional film industry. Unlike traditional brick and mortar manufacturing

where a company would construct a facility and fill it first with machinery and later with an appropriate accompaniment of laborers, the film industry develops infrastructure once it has a diversely skilled, well trained workforce in place and an ongoing stream of production to keep the business solvent. This is in part because any place can be a location, or site of production. A physical studio is not required. Only after a region has attracted the attention of producers, for any number of reasons, cultivated a local workforce to compliment the key personnel that might come from a production center, and maintained a consistent book of work, will the need for brick and mortar infrastructure arise (Schwarz, personal communication, June 6, 2013). Once studios, equipment houses, and eventually post production facilities are constructed, regional film industries can more easily attract larger films and television shows, which tend to have longer production cycles that require greater community investment through the rental and purchase of housing, transportation, and day to day personal needs of the office personnel, cast and crew.

Because each of the study sites are former industrial havens, none of the sites struggles to find physical space for film and media production. In each location, empty warehouses allow producers to create makeshift studio facilities on demand. However, creating studio space in this way for one-time use can be both time consuming and cost prohibitive, particularly when one considers the abundance of finished studio space in North American production centers. Jason Drake, the production coordinator at the Greater Cleveland Film Commission, described what it is like to find spaces in Cleveland, which is the only one of the three regions under examination in this study that does not have formal studio space:

> We've got warehouses...and we've worked really hard at starting to network with commercial and industrial real estate folks so that we can call them at any point and say, 'Hey, I need 30,000 square feet or I need 120,000 square feet. They'll respond quickly [and] that helped tremendously [in] getting a grasp on [infrastructure] without soundstages (personal communication, June 6, 2013).

Until recently, both Pittsburgh and Detroit were in a similar position as Cleveland when it came to dressing warehouses to act as production facilities. But since 2008, two sound stages were constructed in Pittsburgh and three have operated in the Detroit metropolitan area (Bittle, personal communication, June 5, 2013; Murray, personal communication, June 20, 2013). As Bittle explained, the creation of studio space opened the Pittsburgh film industry to additional growth and partnerships with outside investors:

> We've got two studios [in Pittsburgh] now that weren't here five years ago...They grew because there was a need and that's a brick and mortar type business. Then we've had a lot of existing companies, the equipment companies and all, that have had to grow to keep up with demand. They might have started with some simple video equipment, but they've had to bring in a lot of state of the art grip and lighting equipment. Paramount is actually working with 31st Street Studios and brought in an inventory or grip and lighting equipment that's part of the Paramount company, but they've partnered with 31st Street Studios and so it's growing 31st Street's business (personal communication, June 5, 2013).

Partnerships between existing local businesses and industry stalwarts like Paramount are critical to creating a workforce and an economy for film and media production. In Pittsburgh, Bittle sees the establishment of post production facilities as the

next logical step in the evolution of this enterprise. Once post production facilities are in place, it will be easier for productions to meet the mandatory sixty percent in-state expenditures to qualify for the PA Film Tax Credit because post production often accounts for 30 percent or more of a production budget (Bittle, personal communication, June 5, 2013).

In the Detroit region, which has a mature media production industry as a result of the advertising and industrial film and video economies related to Detroit automakers (LeDuff, 2013), in addition to its initially aggressive film incentive program introduced in 2008, post production facilities and studio space are well established. There the region only needs to maintain a production cycle that supports existing infrastructure. In this way, the success of these industrial sites appears to be inextricably linked to the Michigan Film and Digital Media Incentives. When the Michigan incentive was briefly suspended in 2011, productions fled to other locations, including Cleveland and Pittsburgh, and investors in the Motown Motion Picture Studio in Pontiac, Michigan defaulted on their publicly financed loan. This episode temporarily crippled the Michigan film industry and briefly emboldened a cavalcade of criticism directed toward the Michigan Film and Digital Media Incentive and the political maneuvering behind the public subsidies that aided the rapid expansion of the state's creative economy.

Because infrastructure and employment appear to be associated with continued state support for production incentives, the question of maintaining production industries should state-funded incentives ever be dissolved looms large over the regional film commissions. In most cases, and in the case of Cleveland, Detroit, and Michigan in particular, the industries are still too new to sustain the loss of production incentives.

Schwarz, Murray, and Bittle agree that if the incentives dissolved now, it is unlikely that the film industry in these states would continue in any significant way. However, Schwarz believes that if there is a diverse and substantial labor and industry related to transmedia production - a collection of media ranging from film to animation to video games to design, etc. - that cultural production would remain viable long term:

> We're working on [infrastructure]. We're very close to getting that, but not just sound stages. It's going to be part of a media technology campus where it will be an innovation center where ideas and animation, gaming - to capture a lot of the gaming students who go to the coasts. Come out here and give them an opportunity to start their own companies and maybe somebody hits it big and they're here in Cleveland, Ohio. You don't have to do that in L.A. So focusing on that which will be linked to a film school, which is linked to those boxes that everybody talks about, that infrastructure soundstage. So I think it's important because I'm not looking to be good for today...we're looking for sustainability. I mean everybody is looking for survival now, but I'm looking for sustainability. And what happens if the tax credit goes away? If you start building a little bit of what Georgia's doing and attracting other companies and ancillary businesses to the state that support the industry then you have a vibrant core industry, so that's what we're working on. I always think that if the tax credit goes away then we need an industry that can survive (personal communication, June 6, 2013).

Murray agrees that given an appropriate gestation period, a sustainable film economy is possible. "If you can hang in there for ten years, you have an industry" (personal

communication, June 20, 2013). But in order for that evolution to take place a diverse magnitude of production is required:

> I think that is the primary function of film commissions is you want to grow the small [productions], grow local talent, bring in medium stuff, and if you've got a studio, my gosh, you've got to have a good healthy medium sized one that wants studio space, and a large one. So it's like diversifying a fund. You're money and funds, stocks, bonds, real estate, cash. That's how I look at it. You definitely have to promote the people who are starting out in the business...That's really important. But it's important also to - if you want to be in the film business - be in the film business, and see how trained crews are at that level, with that kind of pressure, and that kind of time limit, and that kind of scheduling and structure (Murray, personal communication, June 20, 2013).

Theme 2: Cultivating Positive Experience

The second major theme that emerged from the qualitative analysis is that media productions must have a positive experience when on location. Positive experience can manifest itself in a number of way: experienced and competent local crews lend credibility to a region's viability as a runaway location for film and media production; access to essential resources, which might range from craft services vendors, to grip and lighting equipment, to a stable of local actors to work as extras or daily hires, makes a location desirable for larger films that face a greater number of variables during the course of production (Caldwell, 2008). The more professional and competent local support provided for production services, from pre-production through post-production,

the greater the likelihood that a production will have a positive experience and return for future endeavors.

To this end regional film commissions provide a service akin to a concierge service. Developing an organization that is knowledgeable about the cultural, economic, and geographic landscape is one characteristic that sets regional film commissions apart from their statewide counterparts (Bittle, personal communication, June 5, 2013). Moreover, regional commissioners have the ability to more easily establish and maintain relationships with local and regional government officials, real estate agents, and office personnel who often act as gatekeepers to decision makers enabling the regional film office to more quickly meet the evolving needs of media productions (Drake, personal communication, June 6, 2013).

Table 5: *Distance in Miles from State Capital to Regional Metro Center*

State	State Capital	Regional Metro Center	Distance (miles)
Michigan	Lansing	Detroit	90
Ohio	Columbus	Cleveland	143
Pennsylvania	Harrisburg	Pittsburgh	205

Adapted from Google Maps.

Every commissioner in the present study used terms like concierge and liaison to describe the relationships between their organization and incoming productions. Schwarz insists:

> The answer is never no. We're going to provide. We're going to work our asses off to get you what you need because we're a business and they're our customers and when they leave we need them to have good word of mouth. We don't have a budget to advertise, so I need to be good. We need to be true word of mouth (personal communication, June 6, 2013).

Bittle concurred:

> We're here as basically, we're liaisons, if you want to put it that way...we'll facilitate the meetings. We'll sit down with them, if need be. We'll go to the permits office, if need be. Batman, being a fantastic example, went through six months of planning. This office was integral in coordinating that. Ultimately, Batman could have done that on their own, but we have the relationships. We've worked with [the city] for decades and so we know how the process works. So when they wanted to close down five or six city blocks, we can go with the production company and work with the port authority, work with the police, work with the fire department and be there to answer questions. Be there as sort of a point of contact for the city and for multiple films.
>
> It's just making sure that everybody feels comfortable, that we're here as an advocate for both sides. We're not just here to represent the film industry, or force the city to do whatever...it works both ways. They know they can call us and get a fair shake (personal communication, June 5, 2013).

Working in such a way that both productions and regional entities feel satisfied with the experience is no easy task, but it remains integral to establishing and sustaining a legitimate regional film industry. Schwarz explains:

> This is a business, not a giveaway, and you've got to treat it like a business. People want to make money and that's how people survive. People should be paid a reasonable wage. Vendors should be...ya know, listen...I tell the community, 'Don't overcharge otherwise you're going to mess this up for everybody.' And I tell the productions, 'Listen, don't come here and think we're some podunk town where you're going to get everything for free.' Everybody

> deserves to be treated fair. It's great to leave L.A. and not to be paying $30,000 a day for a house. But be reasonable with that person. You know that house is worth $30,000 a day in L.A. What's it worth to you here? It's not worth $1,000 a day? Be reasonable and be polite and it always works out (personal communication, June 6, 2013).

Understanding that conducting business sometimes necessitates those conversations bolsters the fact that each research participant has some form of industry experience. In this way, they are able to bridge cultural divides that may exist between midwestern and West coast sensibilities. These might range from conversations like the one described by Schwarz - although he insists that the need for such interventions are extremely rare - to discussions of production roles and crew needs that non-industry savvy commissioners might have a difficult time conducting in a meaningful way. Murray concludes:

> But people will come back and shoot if they have a positive experience and you save them money by expeditiously handling issues. See, this is what makes it invaluable for someone like me being here. I worked in the business. I know the vernacular of Hollywood. I worked for some of the biggest names in the business. So, I'm just trying to implement little by little to a mentality that doesn't know that business, just to say, 'this will help if people have a great experience.' Michael Bay is back with *Transformers 4* in Detroit. There's a reason for that (personal communication, June 20, 2013).

Theme 3: Production Incentives

The third emergent theme is the importance of the state-sponsored film/media tax credit program to empowering media production and courting producers who are generally ambivalent about the production location. In relatively few cases, the production budget is large enough to negate what would amount to insignificant savings over the life of a production because of incentive caps on the film tax credit. For example, when *Batman: The Dark Knight Rises* filmed in Pittsburgh in 2011 it did not qualify for the Pennsylvania Film Tax Credit because it could not spend 60 percent of its budget in the state (Bittle, personal communication, June 5, 2013; Keezer, personal communication, July 19, 2013). According to the Internet Movie Database (IMDB), the $250 million production shot in 27 locations worldwide making it highly improbable that producers would have been able to spend the required 60 percent of its budget in Pennsylvania without several of those locations being in Pennsylvania in addition to significant preproduction and postproduction also occurring in the state. For most productions, savings of several hundreds of thousands of dollars, up to several million dollars, is a significant factor in choosing a location in the volatile post-studio economy of media production (Hudson & Tung, 2010). In this way, the question of production incentives addresses RQ3 concerning the correlation between the introduction of production tax incentives and job growth.

Prior to the introduction of state film tax credit programs, film and media production in the United States was primarily location driven. If a producer could take a city like Cleveland, Detroit, or Pittsburgh and make it look like San Francisco, New York City, or London, the production would come to town because of the reduced cost of

operation, as well as the ease with which a city street or bridge or building might be closed to the public for any number of days because that was often a difficult proposition, if even a possibility, in larger metropolitan areas. A significant point of consideration when choosing a location was the cost of union production labor in that region. Prior to 1996, IATSE locals representing employees of the entertainment industries negotiated and established local rates for production. Locations such as Pittsburgh benefited from the wage and benefit structures negotiated by IATSE Local 3, which made its wages and benefits more competitive than those in larger metropolitan areas. By the mid 1990s, IATSE locals in New York City, in particular, had overpriced their services and productions looked for more "film-friendly" locations. Pittsburgh became a satellite production center absorbing much of the work previously conducted in New York City (Keezer, personal communication, July 19, 2013; Bittle, personal communication, June 5, 2013; Schwarz, personal communication, June 6, 2013). Between 1996-1999, IATSE International negotiated a nationwide contract for its below-the-line labor, returning much of the work that had left for American locations to more traditional production centers. According to IATSE president Thomas Short, the union was "entering into broad-based contracts which provide long term stability and prevent competition among our locals" (IATSE Signs Area Standards Agreements with Majors, 1999). Once wages and benefits were standardized in the film industry, states that had burgeoning media industries needed to create new incentives to remain competitive nationally and internationally. To this end, state legislatures across the United States began to establish film production incentives (Keezer, personal communication, July 19, 2013; Bittle, personal communication, June 5, 2013; Schwarz, personal communication, June 6, 2013).

From its inception, production incentives were a difficult concept to explain to legislators and taxpayers. In part, the dissonance about incentive programs resulted from the fact that every state established its own incentive to meet the state's individual needs and no one program proved to be an adequate model for other states. Of the three states represented in this study, Pennsylvania was the first to establish its production incentive in 2004, Michigan followed in 2007, and Ohio began its incentive program in 2009. In each state, incentive programs are subject to budget approval by the state legislature, and the amount of funding for tax credits is subject to change from year to year. Each state has a formal application and audit process.

Table 6: *Film Production Tax Incentives by State*

State	Incentive	Production Tax Incentive %	Wage Credits	Annual Cap
Michigan	Credit	27%	25-32%	50 mil
Ohio	Credit	25-35%		20 mil**
Pennsylvania	Credit	25-30%		60 mil

*Adapted from Commonwealth of Pennsylvania, Independent Fiscal Office (2013, May 31), Special Report 2013-5: Uncapping the Film Production Tax Credit: A Fiscal and Economic Analysis.
** Adapted from http://clevelandfilm.com/blog2/?cat=5.

In each state the incentives vary in availability and ease of use. For example, Michigan and Ohio have refundable tax credits on qualified expenditures with a minimum spend of $100,000 in Michigan and $300,000 in Ohio. Pennsylvania has a transferable tax credit, which allows production companies to broker their tax credits to qualified Pennsylvania corporations, and it requires productions to spend 60 percent of the production budget in Pennsylvania to qualify for the tax credit. For film commissioners, these incentives are the critical elements in courting new business and maintaining that book of business over time. In some cases, what a state lacks in resources can be compensated for by administering a competitive production incentive program. Schwarz explains:

> I know that if I tell you you can't bring in crew, that they don't count, then you're not going to come. I know that if we don't allow above the line as well, you're not going to come. We need to prove to you that we're in this. We're capable of doing this. And in order to do that, I have to give a little more away. Eventually we'll be able to draw a little of that back because we'll have all the things we need here. But we don't have equipment. We don't have production vehicles. We simply don't have the stuff, so until that stuff comes and until our crew base...we're about two crews deep...then we need to keep this in place (personal communication, June 6, 2013).

Regionally - and to some extent nationally - Michigan has been the moving target when it comes to criticism of establishing and renewing film tax credits across the country. In Murray's words, "we had this incredible momentum and we had to put on the brakes and slow it down and figure out which way it was going to turn" (personal communication, June 20, 2013). When its program began in 2007, Michigan had the nation's most aggressive tax credit offering production companies a 42 percent refundable credit on qualified expenditures, and the program was uncapped. For reasons including a lack of infrastructure and labor, the financial giveaway in the fiscally strapped state elicited internal and external criticism and gave anti-incentive legislators across the country a reason to challenge incentives. The Michigan incentive was briefly suspended in 2010, but reinstated in 2011 with a less aggressive credit and a program cap of $50 million. Murray describes the scenario she encountered after joining Film Detroit in 2011:

> We got a new governor, so everything changed. [Productions] were closing as you're training [crew]. So we had a little downtime in there as the film incentive was being justified and calibrated for lack of a better word. And once the numbers came back up...it helped pass an extra $25 million and it put us back in the ballgame. Not to the extent that we were, but we're dealing with a $50 million dollar pot instead of a $25 million dollars that was first suggested. We'd like $150 million, but... (personal communication, June 20, 2013).

The Pennsylvania Film Tax Credit program has the highest cap in the region at $60 million. The program allows for production companies to apply for credits before the start of the fiscal year, up to 30 percent of the annual incentive. In other words, at the start of the fiscal year approximately $42 million remain in the fund. Each production files individual applications and can be awarded up to 25 percent in tax credits on qualified expenditures (Keezer, personal communication, July 19, 2013).

In June 2013, one day after the Independent Fiscal Office (IFO) released its report concluding that uncapping the film tax credit would have a positive impact on the state economy, Pennsylvania Senate Majority Leader Dominic Pileggi (R-9) introduced legislation to uncap the incentive. Despite bipartisan support, the legislation did not pass and the incentive remained capped at $60 million for 2013-2014, as it was the previous year. Keezer points to several fiscal challenges facing the state, such as funding for transportation infrastructure, state pensions, and the rising cost education, as reason for the legislature's failure to uncap the film tax credit during this budget cycle. Keezer also suggested that there exist some dissonance about the difference between taxes and the tax credits that incentivize media production. She explained:

> Taxes are designed to put money in the pocket of government. Tax credits are designed to put money in the pocket of the economy. You're cutting taxes to people putting money in their businesses so people will spend money locally, hiring people, doing all those things because they are not having to pay those taxes.
>
> This program has created over 18,000 jobs in Pennsylvania. And given the economy and given what we've been able to do, this program brings money in....and the other unique thing with the film tax credit program is that we use that money for 18-24 months before the credits are ever awarded because in the case of the tax credit in Pennsylvania you have to finish, you have to have everything done before you can turn in your paperwork, and you have to turn in an audit. We know where you spent your money, who you hired, we know everything. It takes about a year to make a movie and we've had all that revenue, the use of their money, in the commonwealth for free basically (personal communication, July 19, 2013).

The logic behind Keezer's argument motivates her support of uncapping the incentive as well. As she sees it, a greater incentive will lead to more production, which will lead to greater spending on qualified expenditures, which will lead to more jobs for Pennsylvania residents, which will in turn add to the state's tax rolls. On the other hand, critics of an uncapped film tax credit in Pennsylvania argue that if the state uncapped its incentive, there would be a production run in the state that would exhaust the state's film industry labor and financial resources.

The uncapped 42 percent rebate program in Michigan, before the state had enough crew or infrastructure to support the production demand, is frequently cited as a reason to limit incentives and cultivate a manageable industry. All of the film commissioners I spoke with challenge such assertions by contending that location film production is self regulating when the production companies are incentive driven rather than location driven. Because responsible regional film production begins by establishing a crew base on which infrastructure can be built and future productions booked, specifically major studio productions and television series, producers are not inclined to take their productions to locations that do not in some way benefit their bottom line (Keezer, personal communication, July 19, 2013; Schwarz, personal communication, June 6, 2013; Murray, personal communication, June 20, 2013).

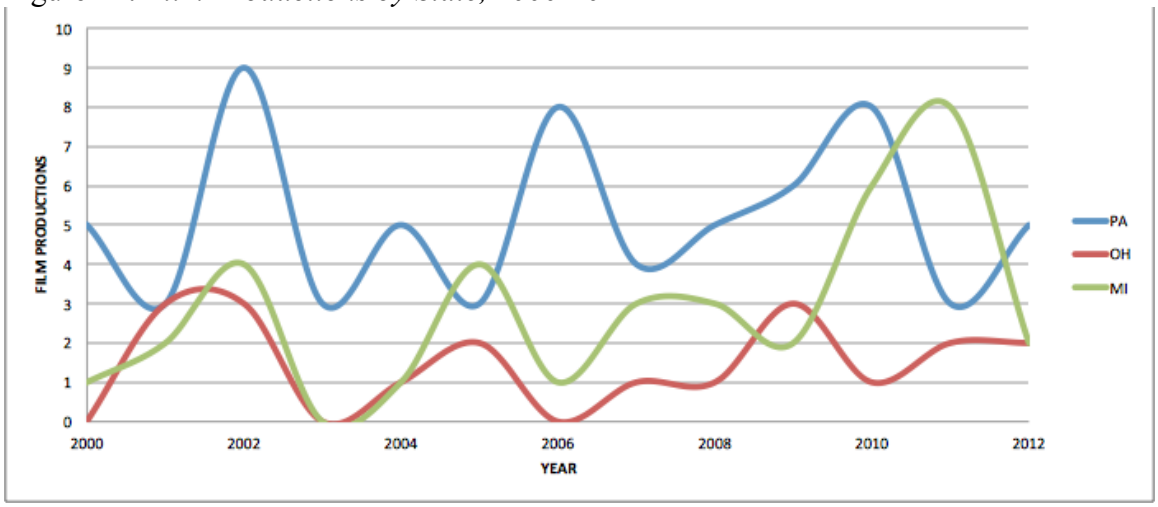
Currently, Pittsburgh reports being four to five crews deep (Keezer, personal communication, July 19, 2013; Bittle, personal communication, June 5, 2013), Cleveland is two to three crews deep (Schwarz, personal communication, June 6, 2013; Drake, personal communication, June 6, 2013), and Detroit is three to four crews deep (Murray, personal communication, June 20, 2013). If any one of these states was to uncap its incentive program and more productions came in than there were below the line talent to crew, the production companies would have to import production labor from other states, including California, which greatly diminishes the amount of tax credit a production may be eligible to receive (Keezer, personal communication, July 19, 2013). In this way the paradigmatic shift from location driven media production to incentive driven media production marks a watershed in the industry and should be something that regional film commissioners and state legislatures not overlook.

Incentives and Job Growth. To quantify the correlation between production tax incentives and job growth, measured in this case by the number of major studio productions in each state, a data set was created from a series of IMDB advanced search queries that limited search results to films that were produced in Pennsylvania, Ohio, and Michigan by one of the seven major studios between 2000-2012. IMDB is a public database that allows any user to create a film listing and alter its contents, which creates a new set of problems in the context of research because guidelines must be created to determine which films will be included in the dataset. This data provided a baseline from which productions could be counted over time and compared between states. The data was collected in this way because discrepancies exist between state and regional reporting. For example, in Pennsylvania only those productions that applied for, or received, the production incentive are recorded at the state level. Regionally, the Pittsburgh Film Office adds to its filmography every film to which it provides assistance (Keezer, personal communication, July 19, 2013). In both the case of the state film office and the regional film office, films that have not applied for incentives nor worked with the local film office are not counted on any list. The results of the IMDB advanced searches allowed for quantification of the productions by state and year of production. It also allowed for the correlation of relationships between studios and states, which helps to illuminate some of the issues that arise from questions about economic development and the creation of infrastructure.

It is important to note that these results should not be viewed in a competitive context although certainly some sense of competition does exist between regional film offices. Each location had a different culture of production (Caldwell, 2008) leading up

to the introduction of incentives. That culture allowed for the states to prepare in different ways. For example, during the mid-1990s Pittsburgh benefitted from the labor problems in New York City because it could replicate many locations and IATSE Local 3 had negotiated a competitive wage and benefits package for its members. Although this work eventually returned to New York City, it left behind a nascent community of experienced production talent that was eager to see that level of production return to their community (D. Keezer, personal communication, July 19, 2013). Cultural indicators such as these are not fully considered in this study, but the history and development of the industry in each location is paramount in the minds of film commissioners.

Figure 11: *Film Productions by State, 2000-2012*



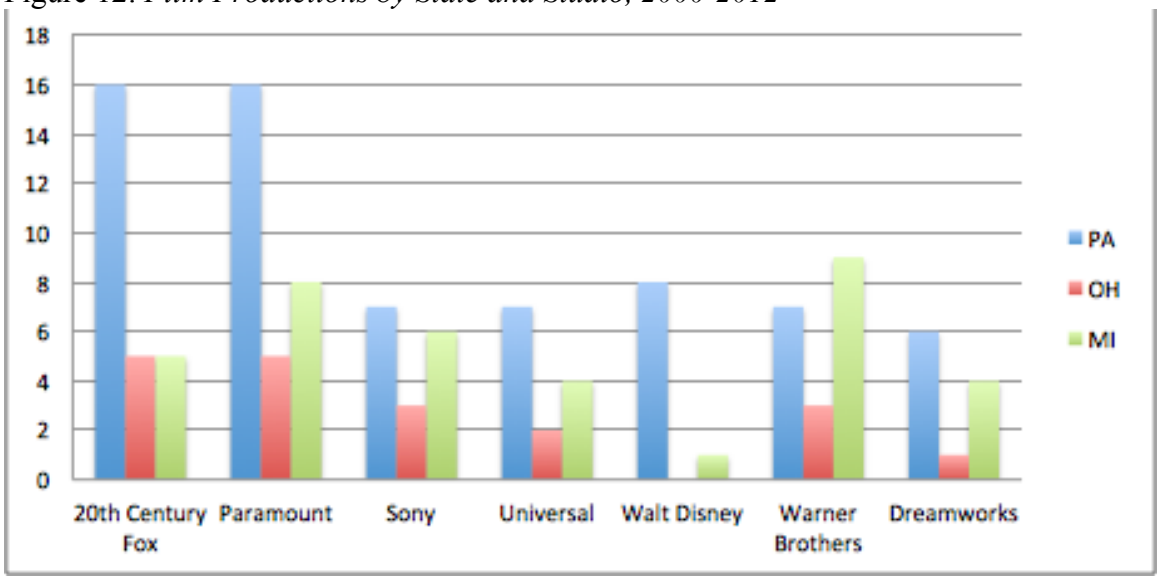
Adapted from Internet Movie Database, advanced title search, filtered for studio, state, and year. http://www.imdb.com/search/title

The results of the IMDB advanced title search indicate that the incentive programs do have a positive effect on the number of major productions that come to each location. In each case there is a spike in production after the introduction of an incentive program followed by leveling period, which is likely representative of the self-regulation of production companies described by the film commissioners. We can assume that the ability of a location to service any number of films is somewhat oversold in its initial

phase, given the concierge or liaison mindset of the regional commissions, causing a groundswell of production for which there may or may not be adequate crew. The leveling effect that follows the first post-incentive round of productions begins a period of training for less experienced crew people by experienced below the line talent, who may receive key production positions. The less experienced crewmembers may have worked in commercial or industrial film and video production rather than the motion picture industry.

These results also suggest production trends in each state are likely tied to national economic and political cycles over time. All three states experience a spike in studio production after the economic recession of 2001 as well as following the Great Recession of 2007-2009. After the eight-month recession in 2001, Pennsylvania tripled its studio production and Michigan doubled its studio production in in 2002. Ohio productions did not increase, but it had three studio productions in 2001 and 2002, which may have been location driven production decisions. During recessions, even spikes in production attributed to the introduction of incentives are normalized. After the introduction of incentives in Pennsylvania and Michigan, studio productions remained below average from 2007-2009. Ohio introduced its film incentive at the end of the Great Recession in 2009, although the number of productions remains relatively stable perhaps as a result of the size of its incentive and local crew depth.

Figure 12: *Film Productions by State and Studio, 2000-2012*



Adapted from Internet Movie Database, advanced title search, filtered for studio, state, and year. http://www.imdb.com/search/title

The results of IMDB advanced title search also suggest that there are professional relationships between particular studios and locations that might provide insight into the development of infrastructure as well as the marshaling of resources as films are courted in a particular region. For example, Paramount made 16 films in the Pittsburgh area between 2000-2012. That is twice as many films as they made in Detroit and more than three times the number of films that studio produced in Cleveland. Perhaps the relationships cultivated with Paramount executives during this time laid the foundation for its deal with Pittsburgh's 31st Street Studio, which Paramount Studio Group president Randy Baumgartner called "the perfect gateway to many of our major partners across the East Coast," in an interview with the *Pittsburgh Business Times* (Schooley, 2012). According to Steve Bittle of the PFO, strategic partnerships like this, in concert with the training and technological development occurring at local universities and research parks, are integral to growing regional film industries:

> Paramount is actually working with 31st Street Studios and brought in an inventory or grip and lighting equipment that's part of the Paramount company, but they've partnered with 31st Street Studios and so it's growing 31st Street's business....Carnegie Mellon had been doing their own thing in terms of animation and all that, but we've seen these companies, sort of off shoots of all the initiative that Carnegie Mellon has been taking to take advantage of the film industry locally, so we're getting more animation companies. We're getting a few more post houses. On many different levels different companies are either growing or starting new business (personal communication, June 5, 2013).

Spatial Analysis

This section reports the results of the spatial analysis for media industry establishments in each MSA based on the most recent available data (2010) from the United States Census Bureau. It relates to RQ4 and H_2 regarding spatial autocorrelation, or clusters, among film industry establishments in each region. Industrial clusters are an important indicator for growth and profitability because clustered establishments allow for the creation of an industrial ecosystem in which capital resources, such as technological innovation, social capital, and increased productivity, can be initiated and shared (Vedantam, 2013). Hollywood itself has long served as a model of productivity and profitability that has benefited from the geographic clustering of its industry. Now, as regions across the U.S. attempt to replicate, even on a small scale, the success of the industrial core in California, geographic clustering of businesses related to film and media production may well signal the pace with which industry may struggle or succeed.

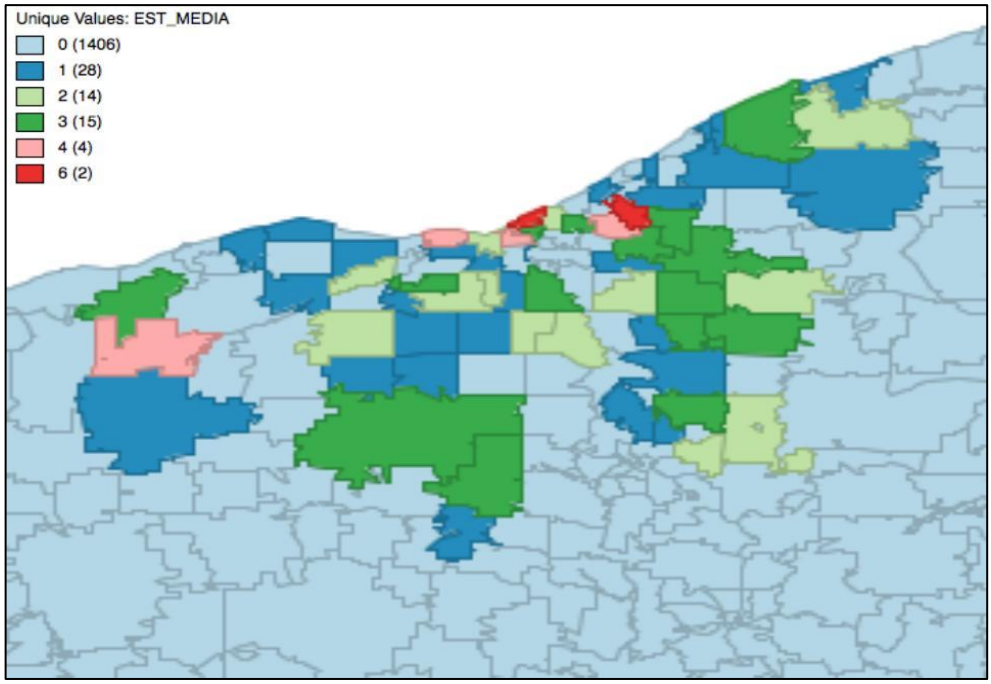
A Global Moran's I statistic was calculated using GeoDa, an open source spatial analysis tool (GeoDa Center, 2013). The Global Moran's I statistic measures spatial autocorrelation based on feature locations and feature values (ArcGIS Resources, 2013), in this case zip codes within each MSA and the number of media establishments. Given this data, the statistic evaluates whether the pattern of the variable is clustered, dispersed, or random. Like the Pearson's correlation coefficient, the Global Moran's I index value is reported on a range of -1 to 1, or completely dispersed to completely clustered, respectively (Kalkahn, 2011). If the calculation produces a statistically significant p-value with a positive index value, the spatial autocorrelation pattern expressed is clustered. If the calculation produces a statistically significant p-value with a negative index value, the spatial autocorrelation pattern expressed is dispersed. If the calculation produces a p-value that is not statistically significant, the spatial autocorrelation pattern expressed is random. Each index value is interpreted in the context of the following null hypothesis, which states that the attributes of the study are randomly distributed across the feature locations (ArcGIS Resources, 2013). In this case:

H_0= Media establishments are randomly distributed across the MSA by zip code.

Cleveland-Elyria-Mentor, Ohio.

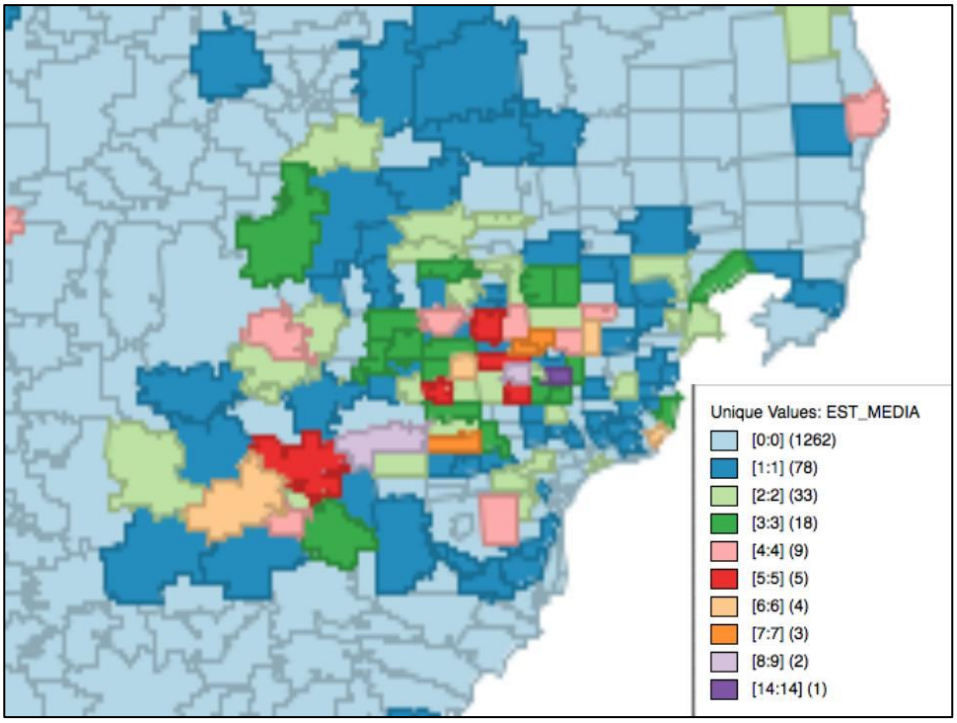
The spatial autocorrelation analysis produced mixed results across the areas of investigation. In the Cleveland-Elyria-Mentor, Ohio region the results of the Moran's I were not statistically significant, I = 0.441264, R^2 = .38, p = .256, indicating that the media establishments were randomly dispersed across the region. Thus the null hypothesis that media establishments are randomly distributed throughout this northeast Ohio MSA is supported in this case.

Figure 13: *Media Establishments in Cleveland-Elyria-Mentor MSA*



As mentioned in interviews with both Drake and Schwarz, warehouse space is abundant in the Cleveland, Ohio region. These warehouses, while requiring some retrofitting to support production equipment, are frequently used as soundstages, but not counted in the data drawn from the Census Bureau. Therefore, while not statistically significant, spatial autocorrelation may be greater if vacant brown space is included.

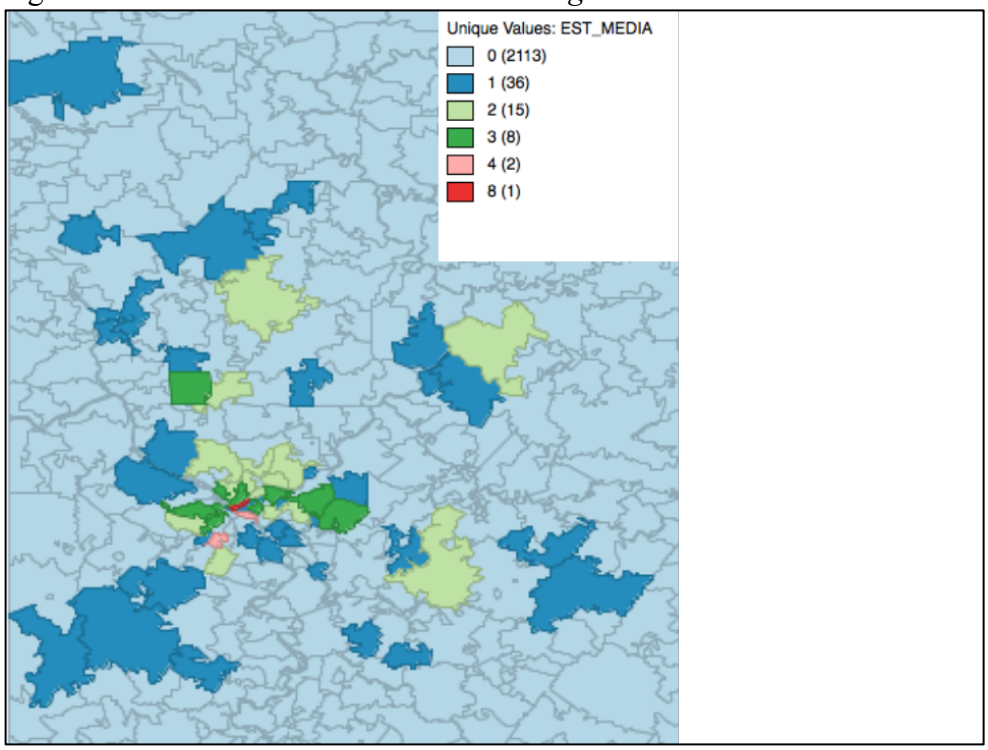
Figure 14: *Media Establishments in Detroit-Warren-Livonia MSA*



Detroit-Warren-Livonia, Michigan.

However, the data for the Detroit-Warren-Livonia, Michigan, and the Pittsburgh, Pennsylvania MSAs produced statistically significant results with varying levels of clustering in each MSA near the metropolitan center. The data reported for Detroit-Warren-Livonia produced a statistically significant positive index value indicating that clustering does occur in the region, $I = 0.395331$, $R^2 = .259$, $p = .0267$. In this case the null hypothesis is rejected because the index value and level of significance indicate that some spatial autocorrelation exists among media establishments in the MSA.

Figure 15: *Media Establishments in Pittsburgh MSA*



Pittsburgh, Pennsylvania.

The Moran's I calculation produced a statistically significant result with a positive index value indicating industrial clustering in the Pittsburgh, Pennsylvania MSA, I = 0.241676, R^2 = .113, p = .000566. Eight media establishments are concentrated in one zip code tabulation area (ZCTA), with two, three, or four establishments in each of the directly neighboring ZCTA. Although the index value does not suggest a high degree of spatial autocorrelation, the null hypothesis is rejected.

Table 7: *MSA Comparison by ZCTA, Media Establishment, and 2010 Population*

Column1	CLE	DET	PIT
ZCTA w Media EST	63	152	62
Total Media Establishments	129	335	106
2010 Population Estimates	2,076,016	4,291,828	2,356,827

Adapted from United States Census Bureau, Industry and Occupation Data. http://www.census.gov/people/io/

Comparative Analysis.

The number of media establishments and ZCTA with media establishments appear relative to population size in each MSA. The lack of statistical significance in the Cleveland-Elyria-Mentor, Ohio MSA is best explained by its recent entry into the production incentive marketplace and its ongoing efforts to establish greater crew depth and infrastructure. Conversely, the statistical significance of spatial autocorrelation in Detroit-Warren-Livonia, Michigan and Pittsburgh, Pennsylvania MSAs is likely explained by the relative maturity of media production in those regions.

The difference in statistical significance in those areas is potentially explained by the geography of each region. Pittsburgh's industrial and urban core is concentrated along the city's aquatic triple divide where the Ohio, Allegheny, and Monongahela Rivers meet. The greatest confluence of media establishments occurs in the Pittsburgh's Strip District, the city's vibrant industrial and wholesale commercial zone. As a result of the mountainous terrain, which surrounds the city limits, industry in the Pittsburgh region has always been forced inward toward its downtown. The fact that former steel mills, iron works, and packaging plants are being replaced by technology centered industries

requiring vast, but variable, amounts of workspace makes the clustering of media production industries in Pittsburgh an expected outcome.

In contrast to the Pittsburgh MSA, Detroit is forced to move westward away from its waterfront along the Detroit River, which also serves as the border between the United States and Canada. Media industry establishments are not naturally inclined to remain in the city of Detroit or cluster in any one area of the MSA, but rather to move toward the more affluent business parks in the outer regions of the MSA. Therefore, where clustering in the Pittsburgh MSA decreases in concentric circles from the Strip District to its outer regions, Detroit-Warren-Livonia is clustered in more fragmented collections of industry throughout the region.

Revisiting Assumptions From Chapter One

At this point in the investigation it is helpful to revisit the three assumptions presented in Chapter 1 (Bloomberg & Volpe, 2012). These assumptions are identified in Chapter 1 and discussed in light of the analysis of the findings in the preceding pages. The first assumption stated that film and media production required a specialized technical skill set and vocabulary that is best acquired by peer-mentoring while working on set during film production. The findings related to economic development and sustainable job creation support this assumption. Schwarz explained the process in the following statement:

> The only way you can learn a job is to have the movies here. If we didn't have them here there would be no place for anybody to learn. And so if that means you're starting as a PA (production assistant), or you can hold an actor's hand, or be on the set watching how things work and deciding what you want to do, that

> opportunity wouldn't be here [without having the movies here]. Long term, do you stay like that forever? No. The goal is not to be like that forever. But we are in this business to make the investment (personal communication, June 6, 2013).

The second assumption stated that film production primarily remains a nomadic enterprise for below-the-line talent. There is evidence to support this assumption, but such support is dependent upon the level of production taking place in any given locale. According to Keezer and Bittle, Pittsburgh crews have worked on a twelve-month cycle for the past five years. Local unions report that approximately 25 percent of their membership purchased houses during that time because of the consistent production schedule. 2013 was the first year that production slowed because the state's tax credit incentive was awarded early in the year. When production slowed, many below-the-line talent used their peer networks to find jobs outside of southwestern Pennsylvania. Some of them went to Cleveland where Marvel's *Captain America* was filming during the spring and summer 2013, and others went to Georgia where a number of Detroit's production crew also went when Michigan's production incentive was suspended in 2011(Bittle, personal communication, June 5, 2013; Murray, personal communication, June 20, 2013). But commissioners understand the complexity of the situation for local crew looking to remain employed for as much of the calendar year as possible. "We don't mind if they go somewhere else to work when they have to," Bittle said. "We just want to make sure they have a reason to come back" (personal communication, June 5, 2013).

The third assumption stated that most productions originate in Hollywood and choose locations motivated by financial, rather than artistic, considerations. Based upon

the commissioners' descriptions of pre-incentive media production in each region there is evidence to support this assumption. Pre-incentive, most decisions were location driven. However, there were financial considerations associated with those decisions as well. For example, Keezer retold the story of the nationalization of the IATSE contract for film and entertainment workers to illustrate why Pittsburgh received so much work that would have been produced in the New York City area during the late 1980s and early 1990s. The fact that the labor was less expensive and Pittsburgh could double, in part, for most American cities made it an attractive alternative to higher cost production centers. Once wages were equalized nationwide, the producers no longer had the same financial incentive to move productions away from cities and regions with industry clusters that efficiently supported their enterprise (Keezer, personal communication, July 19, 2013).

Summary Interpretation of Findings

This chapter addressed the complexities of regional film production through the lens of regional film commissions, labor and industry data, and geospatial analysis. The emergent picture of the film and media production industry in these MSAs, which include the largest and most film friendly locations in the Rust Belt, indicates that film and media offer significant potential to impact revitalization efforts in each MSA, as well as throughout the region at large. This claim is supported by evidence that this industry has an impact on economic and infrastructure related variables that extend far beyond the film industry. Moreover, geospatial analysis of the industry in each MSA indicates that it is poised for growth, albeit in different capacities, based on industry scale, government incentives, and community support.

The challenge throughout the process of concurrent data analysis (Creswell, 2003) was balancing large tracts of census and industry data with the primarily anecdotal accounts of film commissioners in each MSA. While there was a great deal of cohesion among statements collected during the interview processes (Saldaña, 2013), it was difficult in some cases to reconcile those statements with relatively inconsistent quantitative data sets. Therefore, several adjustments were made during the data collection process, particularly in regard to collecting comparable data on completed productions across the region, in an effort to bolster the validity and trustworthiness of these findings (Bloomberg & Volpe, 2012).

Nevertheless, in regard to RQ6, it seems that the evaluations of regional film commissions, while providing primarily positive accounts of the regional film industry, remains extremely realistic in terms of evaluating the impact of the industry and its potential for future success. In each case, film commissioners illicit an understanding of the necessity for practical growth strategies that take into account the current state of the industry in their respective jurisdiction as well as the political and social factors at the state and federal level that impact the decision making process of external stakeholders. To paraphrase the sentiments of the film commissioners, producers have many choices and if locations are not properly prepared to receive the business, no one is going to come.

In Chapter 5, each research question and hypothesis is directly addressed and relevant conclusions drawn from these findings and results are outlined. Furthermore, the next chapter offers recommendations for the region's film industry based on syntheses of various parts of the individual experiences of the locations examined here. The final chapter attempts to create a theoretical and pragmatic framework by which other regions

hoping to bolster economic development initiatives after several decades of industrial withdrawal might incorporate film and media production into a roadmap for future sustainable success.

CHAPTER 5

CONCLUSIONS & RECOMMENDATIONS

Introduction and Purpose of the Study

The purpose of this study was to examine the impact of film and media production incentives on cultural production industries and regional economic development efforts in three Rust Belt cities. Using a mixed methods research design, this study analyzed and compared the qualitative statements of regional film commissioners from three prominent metropolitan statistical areas (MSA) in the Rust Belt - Cleveland-Elyria-Mentor, Ohio; Detroit-Warren-Livonia, Michigan; and Pittsburgh, Pennsylvania - with quantitative data from the United States Census Bureau, the Bureau of Labor and Statistics, and industry level reports regarding the frequency and scale of cultural production in these MSAs in an effort to create a recent snapshot of extant and potential media production throughout the Rust Belt. Finally, statistical analysis for spatial autocorrelation was conducted to evaluate the extent to which industrial clustering exists in each MSA. These results are significant because clustering of industrial worksites and support networks have long been viewed as a symbol of productivity and potential growth for business or industry. The results of this analysis were reported in the previous chapter.

This chapter provides a summary of findings and directly addresses the research questions and hypotheses that guided this inquiry. Conclusions and recommendations follow, which will link these findings with implications for theory and praxis of cultural production introduced in Chapters 1-3. This chapter concludes with an outline of study limitations, and suggestions for future research.

Summary Findings

This study contributes to an ongoing discussion, both practical and philosophical, about the role of media production and, in particular, film production throughout the United States. Currently 40 states (IFO, 2013) offer some form of financial incentive to entice film and media producers to move their productions out of traditional media centers, principally Hollywood and New York City, and into America's heartland. Legislators hope that the promise of cultural production will provide the financial boost so desperately needed in many American regions, cities, and towns (Katz & Bradley, 2013; Weissbourd & Murro, 2011). Jobs in the media production industry are attractive to young talent who have been the object of attention from many economic development consultants and urban planners (Florida, 2004). Moreover, jobs in the media industry tend to pay a living wage, which ultimately finds its way back into the community through costs of living, entertainment, and other tertiary expenses.

Despite its potential, film and media production has been the target of many critics. Tax monitors in non-governmental organizations as well as some governmental agencies argue that the direct return on investment is insignificant and that incentive programs should not be funded by state legislatures (Van Horn & Drenkard, 2012; Nothdurft, 2008). Academic researchers and analysts are somewhat more measured in their criticisms, but urge caution to locales considering an economic alliance with media producers (Christopherson & Rightor, 2009). While many of the criticisms are justified, industry wide proclamations and nationwide attacks on incentives are not. Because each state administers incentive programs unique to its desire and ability to support production, blanket criticisms are unjustified.

The current study investigated media production in three metropolitan statistical areas in one midwestern region of the United States. Each MSA is at a different stage of its industrial development related to media production and each MSA presents a unique set of challenges to researchers attempting to compare and contrast across political and geographic boundaries. Nevertheless, evaluating each MSA individually and searching for common themes that shed light on media incentives and the media production industry leaves us with a comparative overview that addresses the questions driving this inquiry as well as motivating future research on this topic.

There were three principal themes that emerged during data analysis:

- Theme 1: film and media production industries are having an impact on regional economies through job creation and infrastructure development;
- Theme 2: positive consumer experience is a critical element to creating a sustainable production industry;
- Theme 3: production incentives like the state-funded film and media tax credits are a critical component for establishing and nurturing a successful and competitive environment for media production long term.

Researchers with the Brookings Institute have concluded that as the United States begins to fully adjust to and regulate for a post-industrial economy, the economic success of the nation will rely more heavily on the apprenticeship model of education prevalent in our industrial past than it will adhere to recent emphases on secondary and postsecondary education to train a niche workforce with highly specialized skills (Katz & Bradley, 2013). Katz and Bradley (2013) believe this will be especially true in metropolitan economies where specialized industries, such as film and media production, are finding

that higher education sometimes falls short in preparing its workforce for the realities of new industrial work in what many refer to as a post-industrial society. Film and media production offers a community of practice (Wenger, 2003) wherein practitioners can share specialized knowledge, acquire the necessary vocabulary for the industry, and cultivate a career path at the feet of key role models within that industry. In a production culture that values expertise over education, peer networks over job boards, and consistency in the performance of its members, communities of practice such as this provide the necessary foundation for a thriving industry.

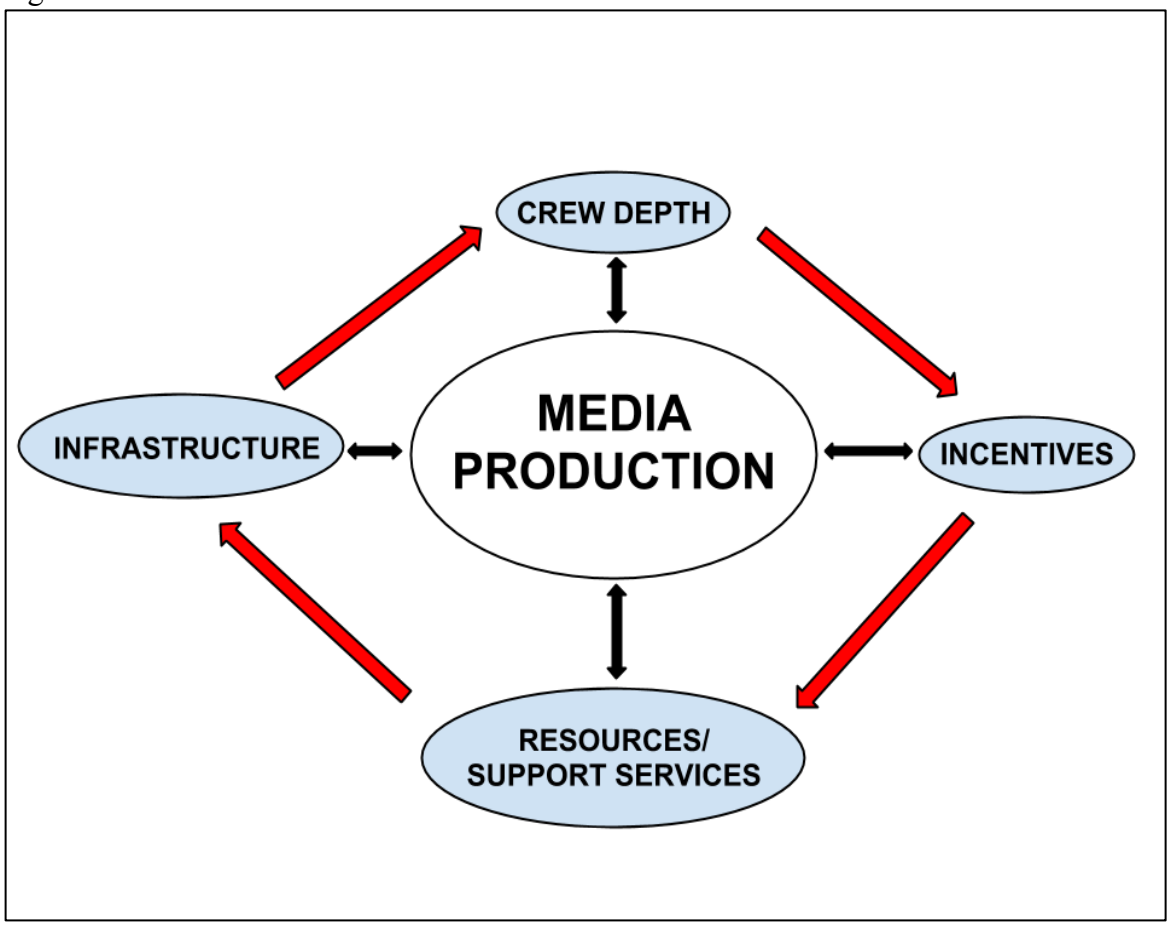
Once a stable and credible workforce has been established, a location's book of work will begin to grow. Because media production is today, more than ever, incentive driven rather than location driven, it is to the benefit of locations to have, at a minimum, moderate crew depth (Foster, et al., 2010). In the three locations included in this study, crew depth ranges from two to five crews based on the number and scale of productions in any one location at any given time. If crew depth is a problem, the production incentive is diminished because the production company will be required to recruit below-the-line talent from outside of the location, which increases costs and affects the portion of the state sponsored incentive related to local labor. Also, providing adequate crew and support resources appear to be essential to cultivating the type of experience that will ultimately forge relationships, bring production companies back to a location for multiple projects, and economically bolster the region.

Infrastructure, such as soundstages and postproduction facilities, is the final element in creating a long-term industrial engine. The Rust Belt, because of the preponderance of brown space throughout the region, is particularly well situated to meet

this demand if its cities can harness the crew base to support the infrastructure and the state legislatures continue to approve incentives that attract major production. Brick and mortar establishments will ultimately allow locations and states to move beyond an incentive based economy because the incentive to the production company will be the ease of use, the "one-stop-shop," which should in and of itself reduce costs and facilitate the knowledge and resource sharing that is the promise of industrial clustering. Locations will be more likely to attract a diverse range of productions. Rather than having only feature films, which often don't require local soundstages or postproduction facilities, locations can begin to move toward specialized production for animation, gaming, and motion capture, as well as episodic production like television series, which require specialized equipment and significant real estate for the construction of sets.

Until maximum crew depth has been realized, production remains steady, and infrastructure has been established, state sponsored incentive packages will be the reason that production companies choose particular locations, particularly first-time locations where personal relationships and peer networks play a less significant role. The challenge of incentive programs is to create incentives that match the ability of the state to meet the demand created by the incentive, while continuing to grow and keep pace with industrial scale as crew bases and infrastructure expand to meet the increased demand, thus creating more production friendly environments. What emerges from these findings is a complex matrix in which each component of the process is dependent upon another component in order to engender a thriving industrial sector and an enlightened production culture.

Figure 16: *Media Production Matrix*



Research Questions and Hypotheses

This study hoped to answer the following research questions and hypotheses:

1. What is the impact of the film and media industry on employment in the Rust Belt?

2. To what extent does the film and media industry utilize existing industrial space?

3. Is there a correlation between the introduction of production tax incentives and job growth?

4. Does clustering of film industry entities occur within Cleveland, Detroit, and Pittsburgh?

    H1: If the film industry is spatially clustered, then the industry can be said to be participating in the economic development of the MSA.

5. Is there a correlation between population change in each Metropolitan Statistical Area (MSA) and employment change in the media production industries?

    H2: Employment change in the media production industries will not correlate with population change in each MSA.

6. Do the evaluations of regional film commissions concur or conflict with the data reported by the U.S. Census Bureau and the GIS analysis of that data?

The following passages address each research question and, where appropriate, related hypotheses based upon the results of the data analysis and subsequent reflection upon the process of synthesis in reporting the findings of this study.

RQ1: The impact of film and media production in these Rust Belt cities is significant. However, as a percentage of the labor force statewide, or as a percentage of the film industry nationwide, the statistics appear somewhat less than significant. The significance of employment in relation to film and media production lay in the ability of below-the-line talent to abandon the transience that has long marked work in the film industry and allow them to establish community roots, which enable them to contribute to the cultural and economic vitality of their community (Florida, 2004).

RQ2: In each metropolitan area, the ability to utilize existing infrastructure is a strategic advantage for the region that lowers the cost of production, increases the financial return on community investments, and aids in regional economic development by utilizing existing space that otherwise would sit dormant in various stages of decay (Katz & Bradley, 2013). In Pittsburgh and Detroit, former steel mills and automotive plants, respectively, have been transformed into soundstages. In Cleveland, where the level of production has not yet reached the

tipping point toward new infrastructure, industrial warehouses are used as makeshift soundstages when productions require such amenities. In short, one of the principal strengths of nurturing this industry in these regions is the ability to incorporate existing resources into strategic planning initiatives.

RQ3: There is a potential correlation between production incentives and job growth. It would be more appropriate at this juncture to say that there is a correlation between production incentives and job stability. Industry employment grows based on the frequency of production in a given location. But a diversity of production, in terms of scale, allows for below-the-line talent to apprentice in new roles, experience upward professional mobility by taking on key roles in smaller productions, and bank social capital within their peer networks (Caldwell, 2008). Furthermore, based on the data table constructed from the IMDB advanced title search, it also appears that there are external factors that impact both production and employment at rates which may be more significant than production incentives alone.

RQ4: Industrial clustering does occur in the Pittsburgh and Detroit MSAs, but not in northeast Ohio. The primary factor based on the media production matrix presented previously in this chapter is that the Cleveland film industry is not yet at a developmental stage to warrant the infrastructure and support services that would eventually lead to a clustered network of industry establishments. It also seems appropriate to note in this regard that while Pittsburgh followed an organic pattern of development, Detroit did not. Detroit created its incentive and its infrastructure before it was prepared to fully support the business that was

attracted to its aggressive incentive and impressive studios. As a result, Detroit experienced a stagnation of incoming production, which ultimately led to new business moving elsewhere in the region allowing places like Cleveland to open its doors to major studio production, put young crews to work, and promote its production incentive with relatively little external marketing.

H_1: The first hypothesis, which connects spatial clustering to economic development, is partially supported. It would be disingenuous to say that film in Cleveland is not having an economic impact on the region. The Cleveland State Economic Impact Study of the film industry in northeast Ohio reports a 1.2 return on investment in the region (Clouse, 2012). Anecdotally, the economic impact appears to be even more significant. Furthermore, film production is making use of existing infrastructure even if those structures have not been renovated or designated as dedicated production space. Whereas researchers can point to infrastructure and expanded industry presence in Pittsburgh and Detroit, Cleveland also appears to be making headway toward industrial stability. Much of its continued success will be dependent upon the state legislatures continued support of production incentives.

RQ5: There is no statistically significant correlation between population change and employment change in media production industries in either Pittsburgh or Detroit MSAs. However, there was a statistically significant correlation between these variables in the Cleveland-Elyria-Mentor MSA. These results do not necessarily indicate growth or contraction within the industry, although each region has experienced consistent annual population decline during the past three

decades. Population decline may explain the correlation in this particular MSA, in part because its regional counterparts have experienced a greater frequency of film production with greater variation in number of films and the scale of productions that come to these locations.

H_2: This hypothesis was supported in the case of southwestern Pennsylvania and eastern Michigan. However, it was not supported in regard to northeast Ohio, where some correlation does exist. The ways in which the selected variables correlate in this region will require additional inquiry, but deserve continued attention as the industry develops in northeast Ohio because indicators of success and stagnation will be important to other locales establishing production economies.

RQ6: The evaluations of the regional film commissioners, while presented in a context of overwhelming positivity and success, were pragmatic and supportable based on industry level data. Where preponderant evidence of success did not exist for certain claims, the film commissioners discussed those issues in terms of the challenges of growth and sustainability in business generally. For example, Murray referenced the loss of crew to Louisiana and Georgia upon the suspension of the Michigan Film and Digital Media Incentive, Bittle and Keezer discussed the difficulty of keeping crews employed once the tax credit had been exhausted, and Drake and Schwarz outlined the challenges of establishing a new industry in a community that has struggled with the effects of industrial decline. Given the relatively candid interpretations of each official in relation to Census Data and the GIS analysis, these evaluations do concur with the data collected in this study.

Limitations

The primary limitation of the current study is the fact that film production in the Rust Belt is subject to ongoing political and economic change. Even as this study progressed, state legislatures in Ohio and Pennsylvania voted to extend media production incentives, albeit with less funding than local stakeholders would have liked. From the vantage point of qualitative data analysis, the ambiguity of the industry's future in any given location as stakeholders waited for government referenda may have affected the ways in which interview subjects responded to particular questions related to funding and the future of the industry.

Interviews were conducted in person and by telephone. The difference in context between the face-to-face interview and those conducted by phone also pose a limitation to the study because of variations in the interaction between the researcher and the research participants. Bittle, Drake, and Schwarz were interviewed in person. However, because of Keezer's residence in California and scheduling conflicts with Murray, face-to-face interviews were not possible.

This study also illustrates the difficulty of synthesizing quantitative and qualitative data sources, particularly when there exists a lag in the availability of hard quantitative data behind the qualitative statements of stakeholders who are addressing the most current concerns about the industry. In this case, quantitative data was drawn from a variety of sources in order to create as valid a data set from available collections. Ultimately, the researcher had to rely on data reported by governmental and non-governmental organizations, rather than extracting raw data from comprehensive data collections, in order to secure data that was most current. This data was synthesized with

the qualitative data from interviews with regional film commissioners, who are zealous advocates for the industry and their respective regions. Balancing the enthusiasm of the commissioners with the indifference of hard data was both challenging and productive in developing analytical frames.

Conclusions and Recommendations

The findings of the present study leave a complex picture of regional film production and the necessary components of a profitable and sustainable regional economic engine. Because no part of this industry - crew, incentives, support services, infrastructure - exists independent of the other elements or free of the effects of changes to one component, it is necessary to evaluate each component in terms of its own potential for growth and sustainability as well as its relationship within the context of media production generally. Where no production exists, there is no crew on which to build a production industry. Where no incentives exists, there is no production on which crew will be supported. Where no support services are established, the potential of production will go unrealized. And where the potential of production goes unrealized, no infrastructure will be developed. Without infrastructure, incentives will always be necessary, employment will remain cyclical, and the viability of media production as an engine of economic development will continue to be called into question.

Christopherson and Rightor (2009) contend that state legislatures should be cautious about implementing incentive programs for the expressed purpose of luring media producers. However, luring media producers is the only way that a region or state will begin to participate in this potentially lucrative enterprise. In a production system that is no longer location driven, in which below-the-line wages are relatively equal

nationwide, reducing costs to employers is the primary means of attracting new business, just as it is in most industries across the country. The difference between media production and other industries is that media production is capable of growing responsibly by only establishing support services and infrastructure as consistency of work deems it necessary. States, counties, and municipalities are not asked to inject resources into infrastructure in order to create jobs as they do when a big-box store or manufacturing plant seeks to relocate. In the case of media production, ongoing employment dictates the need for infrastructure. Only when a state attempts to usurp this process - as Michigan did when it established its aggressive production incentive and studio system - does it find itself unable to support the industry it hoped to cultivate and it loses the faith of its investors, the media production companies.

The remainder of Chapter 5 includes two sets of recommendations. The first set of recommendations applies to locales seeking to establish a culture of production as a component of economic development. These recommendations evaluate the component parts of regional media production and the importance of scaffolding into this precarious industrial economy. The second set of recommendations applies to future research. There is a great deal that the various publics involved in this conversation have yet to understand about developing regional economies based on media production. The reluctance to accept new models of industry is perhaps indicative of a larger cultural shift, although it may just be part of a general wave of misunderstanding. Most people, across the United States and worldwide, it is safe to say, have little understanding of the system that dominated film and media production, the evolution to its current form, and the cultural and economic forces that will continue to drive industrial change in the years

ahead. Future research needs to explore these issues in ways that will make a studio in Pittsburgh, Pennsylvania as interesting and important as the steel mills it has replaced because there is nothing glamorous about the exterior walls of soundstage. The magic only happens inside.

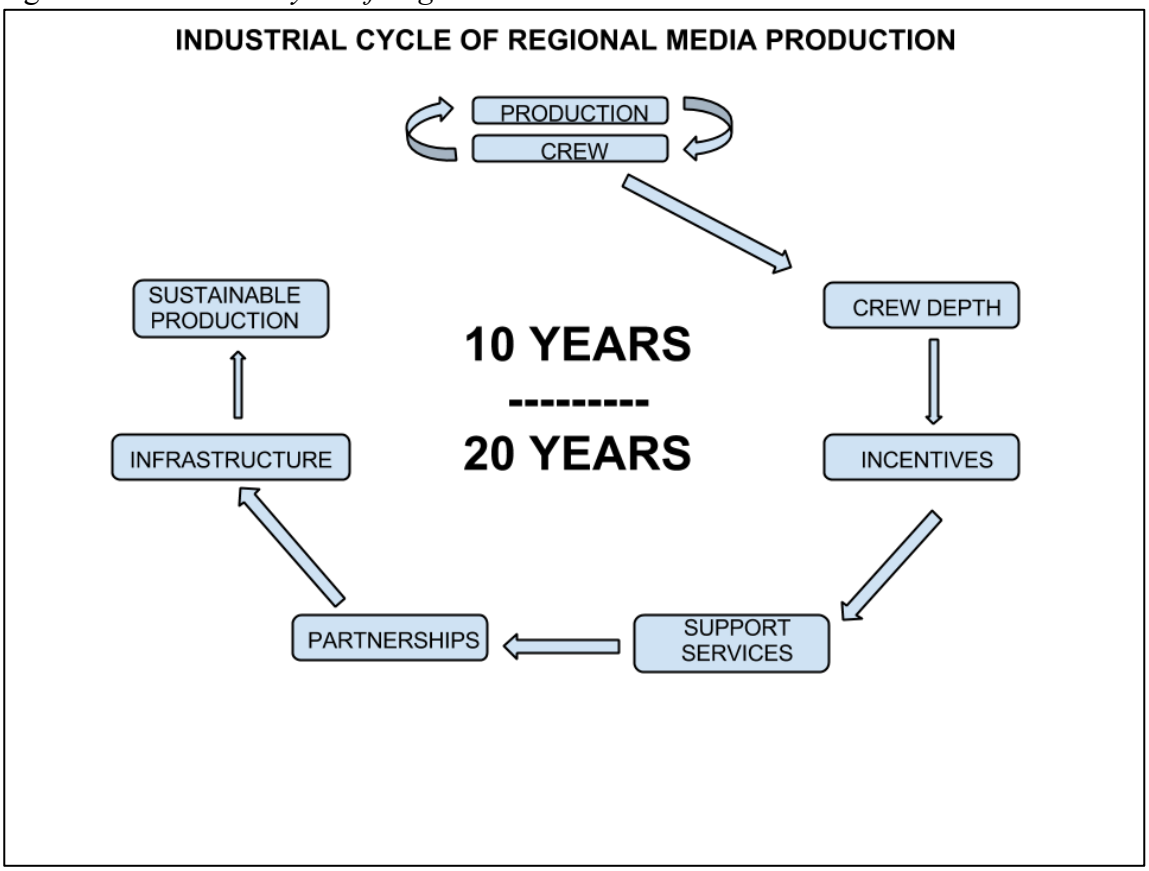
Recommendations for Regional Film Production

"If you build it, they will come," is ironically one of the more memorable clichés to emerge from 20th century film. The whispers from the *Field of Dreams* are ironic in this case because unlike the brick and mortar industries of late 19th century and 20th century America, the post-studio film industry does not require anything to be built before it can begin work. The industry is fickle. It is also malleable in the sense that it can take whatever form is necessary in order for it to be most efficient, productive, and powerful. The following recommendations relate to the elements required to create a sustainable media production industry in regions without a traditional media culture and organization.

A locale hoping to bolster economic development or tourism revenue, or some combination thereof, with commercial media production should court producers or wait for Hollywood to come to it. The residue of productions past is the seed of sustainability in years to come. When a production comes to town, members of the community who took part in the process will be mentored, educated, and inspired to continue to engage in production labor. These people form a crew base that will ultimately multiply until a region has seen enough production and attracted and trained enough talent to handle multiple productions at any given time. In this highly competitive market space, it no longer serves production companies, small or large, to transport crew when so many

locations celebrate significant crew depth. Only in rare occasions, where Hollywood blockbusters dictate a crew scale or location-dependence, does crew transport remain a reality. Therefore, a symbiosis between productions and crew is a critical first stage in developing sustainable economic production.

Figure 17: *Industrial Cycle of Regional Media Production*



Once the locale has experienced media production and both producers and the community agree that production should return and continue, the locale needs to grow its crew depth so that it can support more than one production at any given time. Crew depth is often a quotient of the scale and timeline of ongoing production versus the needs of incoming production. Regional film commissions begin to play an integral role in the process at this stage because they will work with incoming productions and coordinate crew lists and community resources. Without a regional film commission to broker

resources, it is likely that multiple productions begin to overlap space and services creating competition for resources, diminishing the production experience, and decreasing the likelihood that producers will choose to return for future projects.

Crew depth is a challenging obstacle for regional film production because there needs to be enough work to sustain members of the production community and enough available labor to attract new production (Christopherson & Rightor, 2009). It is, perhaps, the "Catch 22" that poses the most significant threat to creating profound economic change through media production. The issue of crew depth becomes even more complicated when unemployed below-the-line talent have the option to migrate to neighboring states with competitive production incentives as productions open and close.

Only after a locale has achieved moderate crew depth should it begin to incentivize media production. The incentive will lure producers and provide local labor with enough work to inhibit transience among the workforce. The incentive should also be measured and capped based on regional crew depth and support services. Michigan began its incentive program by returning 42 cents on every dollar spent in the state to producers and constructed infrastructure backed by state pension funds without taking into consideration the fact that it did not have, at that time, the resources to support the cavalcade of productions that lined up to take advantage of the incentive. As a result, Michigan became the poster child for critics of media production incentives despite its recent efforts to scale back the incentive to a more manageable and fiscally responsibly level. Pennsylvania, on the other hand, struggles to expand its incentive to meet the demand of producers interested in coming to the state for its crew and infrastructure. For the 2012-2013 fiscal year, production stagnated in the second half of the year because the

state exhausted its incentive forcing crews back into a period of transience and uncertainty for the remainder of the year.

The consistent production cycle occurring as the result of crew depth and financial incentives will lead to the creation of new businesses that support production. These businesses range from service providers of meals and beverages to distributors of high end lighting, camera, and production equipment, in addition to lawyers, accountants, and business agents who offer services specific to the media industry. These businesses are perhaps the greatest point of contention in the debate over the validity of production incentives. In this case, Christopherson & Rightor (2009) are correct to say "the indirect impact of expenditures made in conjunction with subsidized film and television productions cannot be gauged accurately without public access to information on the budgets, actual expenditures, and the labor force (wages and place of residence) of subsidized productions over a period of years" (p. 5). Nevertheless, there exists a preponderance of anecdotal evidence that suggests the establishment of businesses that primarily support media production signals a tipping point toward an economically viable industry, long term, that calls for industrial expansion by way of new partnerships and infrastructure.

The cultivation of non-governmental partnerships and private infrastructure are the final building blocks in the ongoing efforts to create a sustainable industry. Meeting the burdens detailed in the previous phases of this cycle demonstrate that a locale can fully support major media production. At this point, soundstages, postproduction facilities, animation studios, and technology incubators will partner with capital investors, research institutions, and community stakeholders to transform the locale into a "one-stop

shop" for media production. Once producers have this option, the state-sponsored incentive will become less necessary because long-term vendor agreements and continuity in the production calendar will reduce the cost of production and make the locale a first choice among producers.

Theoretical Implications

In Chapter One, Turner's 120-year-old frontier thesis was presented as a theoretical framework for this project, yet until now the interceding pages made little reference to the ideas put forth by Turner or his acolytes, including in many ways Harold Innis (Carey, 1988). The comparative analysis of media production in the three MSAs considered makes it difficult to connect such divergent ideas. However, the conclusions drawn from the comparative analysis leave one considering the potential of new frontiers and the establishment of capital centers.

No state rivals California or New York for media production. But the fact that producers are willing to vacate their financial centers and explore new frontiers, whatever the motivation, signifies the possibility for new markets based on the existing model. The closer a location can get to developing a model based on the industrial core - Hollywood - the more successful it will be.

Suggestions for Future Research

The potential financial gain for states that establish sustainable production industries is significant. Film and television production remains one of the most lucrative industries in the United States. It also remains one of the nation's greatest exports. As an industry, cultural production generally and media production in particular remain vastly

misunderstood. From regional film and media production, there are several important areas of inquiry for researchers to follow.

More details need to be understood concerning the decentralization process that allowed states to become competitors against national and international centers of media production. Previous research (Yale, 2010) cites the nationalization of film production incentives in Canada and the matching provincial incentives as the gateway to state sponsored incentives in the United States. Others point to the complex relationship between producers and organized labor in the United States in concert with decentralization of the Hollywood studio system. However, the situation is more nuanced and requires a more intricate explanation. Part of piecing together this complicated puzzle will include telling the story of the nationalization of labor contracts for the union membership that comprise so much below-the-line talent in the film industry, as well as legislative histories that articulate the political negotiations which led to the establishment of production incentives in nearly every state.

The qualitative impact of regional repatriation of jobs in film and media production to states outside of New York and California is another important story. This emerged as a secondary theme in the interviews with regional film commissions. So many of the local labor pool on which they have come to rely for consistent, quality, production are people who left the region to pursue production careers but now have the opportunity to return to their home states, become contributing members of their native communities, and reconnect with familial and peer support (Gombay, 2012). This quality of life indicator is little explored in the context of relocating media production throughout

the United States, but could prove to be an important variable in the geographic stability of the creative class.

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Informed Consent Form

You are invited to participate in this research study. The following information is provided in order to help you to make an informed decision whether or not to participate. If you have any questions please do not hesitate to ask. You are eligible to participate because you are an administrator or designee of a regional film office involved in the recruitment and support for regional film production.

The purpose of this study is to create a regional picture of the film industry within the Rust Belt and to evaluate the potential for long-term economic impact throughout the region. Participation in this study will require approximately 60 minutes of your time. First you will be interviewed about the film industry in your Metropolitan Statistical Area (MSA) as defined by the U.S. Census Bureau. Furthermore, the interview will include questions about recruitment and support efforts undertaken by the regional film office. Finally, you will be given the opportunity to offer any additional information about your role, or the role of the film office, in regional film production. You may also be asked to participate in follow-up interviews after the initial data analysis phase of the research study.

The interviews will be transcribed and analyzed by the Project Director. There are no known risks or discomforts associated with this research. The information gained from this study may help us to better understand the impact of film production on the regional economy and urban renewal efforts throughout the Rust Belt.

Your participation in this study is voluntary. You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigator. Your decision will not result in any loss of benefits to which you are otherwise entitled. If you choose to participate, you may withdraw at any time by notifying the Project Director. Upon your request to withdraw, all information pertaining to you will be destroyed. Biographical anonymity and confidentiality are not sought as part of the current study. If you choose to participate and wish to remain anonymous in the report findings, you will need to notify the Project Director of your choice before participating in the interview. The information obtained in the study may be published in scientific journals or presented at scientific meetings.

If you are willing to participate in this study, please sign the statement below and return it to the Project Director. If you choose not to participate, discard the unsigned copies.

Project Director:	Project Advisor:
Mr. R. James Wertz Doctoral Candidate 952 West 8th Street Erie, PA 16502 Phone: 814-449-0096	Dr. Mary Beth Leidman Professor Department of Communications Media Stouffer Hall, Room 121 1175 Maple Street Indiana, PA 15705 Phone: 724-357-5763

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724/357-7730).

Occupation: Arts, Design, Entertainment, Sports, and Media Occupations (SOC code 270000) Period: May 2012		
Area name	**Employment(1)**	**Annual mean wage(2)**
Anniston-Oxford, AL	390	36850
Auburn-Opelika AL	540	53570
Birmingham-Hoover AL	6290	36380
Columbus GA-AL	860	40350
Decatur AL	250	33070
Dothan AL	570	27770
Florence-Muscle Shoals AL	350	32180
Gadsden AL	190	26400
Huntsville AL	2340	41890
Mobile AL	1560	36040
Montgomery AL	1980	38310
Tuscaloosa AL	900	42210
Northwest Alabama nonmetropolitan area	280	26410
Northeast Alabama nonmetropolitan area	730	35370
Southwest Alabama nonmetropolitan area	730	29940
Southeast Alabama nonmetropolitan area	910	36680
Anchorage AK	2140	46460
Fairbanks AK	310	42800
Southeast Alaska nonmetropolitan area	350	44210
Railbelt / Southwest Alaska nonmetropolitan area	490	47220
Flagstaff AZ	540	40850
Lake Havasu City - Kingman AZ	340	37220
Phoenix-Mesa-Glendale AZ	21220	46650
Prescott AZ	530	38610
Tucson AZ	5040	40850
Yuma AZ	380	40120
North Arizona nonmetropolitan area	470	37120
Southeast Arizona nonmetropolitan area	600	38680
Fayetteville-Springdale-Rogers AR-MO	1670	42810
Fort Smith AR-OK	640	34740
Hot Springs AR	210	36600
Jonesboro AR	280	37110
Little Rock-North Little Rock-Conway AR	3310	43970
Memphis TN-MS-AR	4390	42760
Pine Bluff AR	170	39810
Texarkana-Texarkana TX-AR	320	39310
Central Arkansas nonmetropolitan area	510	32120
East Arkansas nonmetropolitan area	550	34940
South Arkansas nonmetropolitan area	700	34380
West Arkansas nonmetropolitan area	450	37250

Bakersfield-Delano CA	2320	49250
Chico CA	660	38980
El Centro CA	240	46930
Fresno CA	2840	46870
Hanford-Corcoran CA	170	39730
Los Angeles-Long Beach-Glendale CA Metropolitan Division	143960	87920
Los Angeles-Long Beach-Santa Ana CA	163870	83790
Madera-Chowchilla CA	180	43150
Merced CA	440	40960
Modesto CA	1250	46060
Napa CA	420	50580
Oakland-Fremont-Hayward CA Metropolitan Division	13830	58890
Oxnard-Thousand Oaks-Ventura CA	3030	58800
Redding CA	370	38470
Riverside-San Bernardino-Ontario CA	9910	48820
Sacramento--Arden-Arcade--Roseville CA	9530	52120
Salinas CA	2220	49180
San Diego-Carlsbad-San Marcos CA	16750	54360
San Francisco-Oakland-Fremont CA	39930	65980
San Francisco-San Mateo-Redwood City CA Metropolitan Division	26100	69740
San Jose-Sunnyvale-Santa Clara CA	13200	65370
San Luis Obispo-Paso Robles CA	1080	45910
Santa Ana-Anaheim-Irvine CA Metropolitan Division	19910	53910
Santa Barbara-Santa Maria-Goleta CA	3110	61130
Santa Cruz-Watsonville CA	1110	55400
Santa Rosa-Petaluma CA	2230	50920
Stockton CA	1340	44460
Vallejo-Fairfield CA	1050	52170
Visalia-Porterville CA	460	43370
Yuba City CA	190	50200
Mother Lode Region of California nonmetropolitan area	270	42980
Eastern Sierra Region of California nonmetropolitan area	200	42140
North Coast Region of California nonmetropolitan area	870	45040
North Valley Region of California nonmetropolitan area	80	42010
Northern Mountains Region of California nonmetropolitan area	590	41360
Boulder CO	3130	50830
Colorado Springs CO	4220	49340
Denver-Aurora-Broomfield CO	20310	52040
Fort Collins-Loveland CO	1770	48760
Grand Junction CO	880	35380
Greeley CO	610	37630

Pueblo CO	310	35190
East and South Colorado nonmetropolitan area	350	37080
West Colorado nonmetropolitan area	1420	37280
Northcentral Colorado nonmetropolitan area	2030	38270
Central Colorado nonmetropolitan area	230	32170
Bridgeport-Stamford-Norwalk CT	7580	59570
Danbury CT	600	37160
Hartford-West Hartford-East Hartford CT	8790	54670
New Haven CT	3030	49510
Norwich-New London CT-RI	1580	51270
Springfield MA-CT	2930	47400
Waterbury CT	440	41040
Worcester MA-CT	2950	48440
Northwestern Connecticut nonmetropolitan area	460	48020
Eastern Connecticut nonmetropolitan area	200	46490
Dover DE	450	43510
Wilmington DE-MD-NJ Metropolitan Division	2700	49080
Sussex County Delaware nonmetropolitan area	430	41310
Washington-Arlington-Alexandria DC-VA-MD-WV Metropolitan Division	55490	72790
Washington-Arlington-Alexandria DC-VA-MD-WV	64970	70890
Cape Coral-Fort Myers FL	2160	44090
Crestview-Fort Walton Beach-Destin FL	580	45750
Deltona-Daytona Beach-Ormond Beach FL	1480	46170
Fort Lauderdale-Pompano Beach-Deerfield Beach FL Metropolitan Division	8510	49540
Gainesville FL	1580	41920
Jacksonville FL	5180	45720
Lakeland-Winter Haven FL	1470	39740
Miami-Fort Lauderdale-Pompano Beach FL	29190	50000
Miami-Miami Beach-Kendall FL Metropolitan Division	14410	51370
Naples-Marco Island FL	1160	45450
North Port-Bradenton-Sarasota FL	4080	37900
Ocala FL	580	41950
Orlando-Kissimmee-Sanford FL	17350	42910
Palm Bay-Melbourne-Titusville FL	1460	44900
Palm Coast FL	90	38310
Panama City-Lynn Haven-Panama City Beach FL	430	46040
Pensacola-Ferry Pass-Brent FL	1160	36570
Port St. Lucie FL	1080	43040
Punta Gorda FL	330	39020
Sebastian-Vero Beach FL	390	47180
Tallahassee FL	2740	45220

Tampa-St. Petersburg-Clearwater FL	10850	46010
West Palm Beach-Boca Raton-Boynton Beach FL Metropolitan Division	6260	47490
Northwest Florida nonmetropolitan area	300	35020
Northeast Florida nonmetropolitan area	590	41610
South Florida nonmetropolitan area	510	43880
Albany GA	440	38390
Athens-Clarke County GA	600	50820
Atlanta-Sandy Springs-Marietta GA	29700	49950
Augusta-Richmond County GA-SC	1430	45010
Brunswick GA	540	37090
Chattanooga TN-GA	2060	36280
Dalton GA	210	44210
Gainesville GA	560	64320
Hinesville-Fort Stewart GA	70	52880
Macon GA	610	36400
Rome GA	310	40860
Savannah GA	1380	45640
Valdosta GA	280	35760
Warner Robins GA	340	52180
North Georgia nonmetropolitan area	880	38230
Middle Georgia nonmetropolitan area	730	35780
East Georgia nonmetropolitan area	480	38740
South Georgia nonmetropolitan area	680	39460
Honolulu HI	6840	47090
Hawaii / Maui / Kauai nonmetropolitan area	1880	47640
Boise City-Nampa ID	3350	40160
Coeur d'Alene ID	560	34420
Idaho Falls ID	620	31420
Lewiston ID-WA	180	31540
Logan UT-ID	510	43550
Pocatello ID	340	35160
North Idaho nonmetropolitan area	640	35490
Southwest Idaho nonmetropolitan area	110	28580
Southcentral Idaho nonmetropolitan area	790	40090
East Idaho nonmetropolitan area	460	36080
Bloomington-Normal IL	1620	53600
Cape Girardeau-Jackson MO-IL	490	34720
Champaign-Urbana IL	1060	49680
Chicago-Joliet-Naperville IL Metropolitan Division	50510	53140
Chicago-Joliet-Naperville IL-IN-WI	56590	52000
Danville IL	170	36220
Davenport-Moline-Rock Island IA-IL	2040	35620

Decatur IL	300	47250
Kankakee-Bradley IL	220	41120
Lake County-Kenosha County IL-WI Metropolitan Division	3790	47460
Peoria IL	1700	44190
Rockford IL	1230	37600
St. Louis MO-IL	17900	44730
Springfield IL	860	46360
Northwest Illinois nonmetropolitan area	1450	28950
West Central Illinois nonmetropolitan area	1290	33510
East Central Illinois nonmetropolitan area	950	33930
South Illinois nonmetropolitan area	1100	37200
Anderson IN	410	38600
Bloomington IN	1200	48610
Cincinnati-Middletown OH-KY-IN	11520	44170
Columbus IN	250	40070
Elkhart-Goshen IN	700	39550
Evansville IN-KY	1480	37890
Fort Wayne IN	2280	35090
Gary IN Metropolitan Division	2280	34530
Indianapolis-Carmel IN	11520	44250
Kokomo IN	340	39330
Lafayette IN	1020	38500
Louisville-Jefferson County KY-IN	6140	39990
Michigan City-La Porte IN	300	35470
Muncie IN	1050	34830
South Bend-Mishawaka IN-MI	1760	36050
Terre Haute IN	790	36700
Northern Indiana nonmetropolitan area	1650	32240
Central Indiana nonmetropolitan area	1290	36620
Southern Indiana nonmetropolitan area	980	37980
Ames IA	630	43220
Cedar Rapids IA	1690	40020
Des Moines-West Des Moines IA	6030	43860
Dubuque IA	690	36650
Iowa City IA	1030	44870
Omaha-Council Bluffs NE-IA	5830	41590
Sioux City IA-NE-SD	740	31130
Waterloo-Cedar Falls IA	890	35500
Northeast Iowa nonmetropolitan area	1140	31490
Northwest Iowa nonmetropolitan area	1480	30640
Southwest Iowa nonmetropolitan area	540	31180
Southeast Iowa nonmetropolitan area	2430	30980
Kansas City MO-KS	13150	46260

Lawrence KS	1140	33010
Manhattan KS	870	30260
St. Joseph MO-KS	350	35540
Topeka KS	1390	41090
Wichita KS	3360	41190
Kansas nonmetropolitan area	4540	29680
Bowling Green KY	690	33940
Clarksville TN-KY	470	38800
Elizabethtown KY	380	41670
Huntington-Ashland WV-KY-OH	670	38100
Lexington-Fayette KY	3000	39510
Owensboro KY	260	31960
West Kentucky nonmetropolitan area	1020	34120
South Central Kentucky nonmetropolitan area	840	31590
West Central Kentucky nonmetropolitan area	1120	39090
East Kentucky nonmetropolitan area	540	28930
Alexandria LA	290	34710
Baton Rouge LA	3550	45000
Houma-Bayou Cane-Thibodaux LA	450	63030
Lafayette LA	910	37430
Lake Charles LA	470	37860
Monroe LA	490	36400
New Orleans-Metairie-Kenner LA	8140	46240
Shreveport-Bossier City LA	1330	43800
Hammond nonmetropolitan area	180	33530
Natchitoches nonmetropolitan area	510	38690
Winnsboro nonmetropolitan area	500	43790
New Iberia nonmetropolitan area	360	33540
Bangor ME	680	33260
Lewiston-Auburn ME	360	30400
Portland-South Portland-Biddeford ME	3120	41630
Portsmouth NH-ME	460	56530
Rochester-Dover NH-ME	510	43490
Northeast Maine nonmetropolitan area	750	30070
Southwest Maine nonmetropolitan area	1970	32570
Baltimore-Towson MD	15500	55230
Bethesda-Rockville-Frederick MD Metropolitan Division	9480	59720
Cumberland MD-WV	270	35380
Hagerstown-Martinsburg MD-WV	930	42150
Salisbury MD	340	39120
Upper Eastern Shore nonmetropolitan area	490	42670
Garrett County Maryland nonmetropolitan area	40	35890
St. Mary's County Maryland nonmetropolitan area	400	60930

Barnstable Town MA	910	47710
Boston-Cambridge-Quincy MA-NH	41490	59990
Boston-Cambridge-Quincy MA NECTA Division	33640	61820
Brockton-Bridgewater-Easton MA NECTA Division	720	50540
Framingham MA NECTA Division	2070	63070
Haverhill-North Andover-Amesbury MA-NH NECTA Division	790	45470
Lawrence-Methuen-Salem MA-NH NECTA Division	460	48730
Leominster-Fitchburg-Gardner MA	390	41350
Lowell-Billerica-Chelmsford MA-NH NECTA Division	1240	47160
Nashua NH-MA NECTA Division	1290	48250
New Bedford MA	520	44460
Peabody MA NECTA Division	870	53040
Pittsfield MA	270	51160
Providence-Fall River-Warwick RI-MA	6410	49280
Taunton-Norton-Raynham MA NECTA Division	400	41730
Nantucket Island and Martha's Vineyard nonmetropolitan area	240	48280
Southwest Massachusetts nonmetropolitan area	130	40770
Northwest Massachusetts nonmetropolitan area	330	46780
North Central Massachusetts nonmetropolitan area	440	57150
Ann Arbor MI	3200	49150
Battle Creek MI	410	41080
Bay City MI	290	33980
Detroit-Livonia-Dearborn MI Metropolitan Division	7610	49350
Detroit-Warren-Livonia MI	20160	50760
Flint MI	1450	36240
Grand Rapids-Wyoming MI	4690	42700
Holland-Grand Haven MI	1040	40820
Jackson MI	290	36770
Kalamazoo-Portage MI	1410	40220
Lansing-East Lansing MI	2420	44190
Monroe MI	200	42210
Muskegon-Norton Shores MI	420	40380
Niles-Benton Harbor MI	990	42390
Saginaw-Saginaw Township North MI	660	38970
Warren-Troy-Farmington Hills MI Metropolitan Division	12550	51610
Upper Peninsula of Michigan nonmetropolitan area	750	34740
Northeast Lower Peninsula of Michigan nonmetropolitan area	440	36970
Northwest Lower Peninsula of Michigan nonmetropolitan area	1180	40640
Balance of Lower Peninsula of Michigan nonmetropolitan area	2410	35450

Duluth MN-WI	1240	38370
Fargo ND-MN	1710	36060
Grand Forks ND-MN	500	36110
La Crosse WI-MN	850	36540
Mankato-North Mankato MN	510	41680
Minneapolis-St. Paul-Bloomington MN-WI	29930	50580
Rochester MN	1370	39850
St. Cloud MN	760	40560
Northwest Minnesota nonmetropolitan area	1540	36710
Northeast Minnesota nonmetropolitan area	440	31920
Southwest Minnesota nonmetropolitan area	900	33850
Southeast Minnesota nonmetropolitan area	1630	38620
Gulfport-Biloxi MS	750	41180
Hattiesburg MS	350	39390
Jackson MS	2670	39880
Pascagoula MS	220	44820
Northeast Mississippi nonmetropolitan area	1660	39180
Northwest Mississippi nonmetropolitan area	620	35370
Southeast Mississippi nonmetropolitan area	720	30600
Southwest Mississippi nonmetropolitan area	560	33590
Columbia MO	1430	37080
Jefferson City MO	880	42730
Joplin MO	670	35290
Springfield MO	2310	35680
Central Missouri nonmetropolitan area	1470	32250
North Missouri nonmetropolitan area	1050	31220
Southeast Missouri nonmetropolitan area	970	33210
Southwest Missouri nonmetropolitan area	1090	37610
Billings MT	1350	34120
Great Falls MT	430	35310
Missoula MT	960	36850
Eastern Montana nonmetropolitan area	320	25710
Central Montana nonmetropolitan area	440	27740
Southwestern Montana nonmetropolitan area	1860	37660
Western Montana nonmetropolitan area	810	32460
Lincoln NE	2710	43300
Western Nebraska nonmetropolitan area	760	33670
Central Nebraska nonmetropolitan area	960	27910
Northeastern Nebraska nonmetropolitan area	800	29400
Southeastern Nebraska nonmetropolitan area	420	30160
Carson City NV	200	47570
Las Vegas-Paradise NV	12230	59870
Reno-Sparks NV	2090	51230

Western Central Nevada nonmetropolitan area	260	38260
Other Nevada nonmetropolitan area	280	38700
Manchester NH	1150	47680
Northern New Hampshire nonmetropolitan area	290	35560
Other New Hampshire nonmetropolitan area	1080	45790
Western New Hampshire nonmetropolitan area	660	47700
Southwestern New Hampshire nonmetropolitan area	530	45860
Allentown-Bethlehem-Easton PA-NJ	3270	45970
Atlantic City-Hammonton NJ	2170	63870
Camden NJ Metropolitan Division	4150	50120
Edison-New Brunswick NJ Metropolitan Division	9410	52630
Newark-Union NJ-PA Metropolitan Division	12330	57020
New York-White Plains-Wayne NY-NJ Metropolitan Division	148200	75920
Ocean City NJ	290	43380
Trenton-Ewing NJ	2500	58620
Vineland-Millville-Bridgeton NJ	190	41730
Albuquerque NM	3970	45550
Farmington NM	250	27040
Las Cruces NM	550	38170
Santa Fe NM	800	48630
North and West Central New Mexico nonmetropolitan area	350	34530
Eastern New Mexico nonmetropolitan area	700	31530
Southwestern New Mexico nonmetropolitan area	90	34430
Los Alamos County New Mexico nonmetropolitan area	180	56830
Albany-Schenectady-Troy NY	5370	50790
Binghamton NY	1080	45350
Buffalo-Niagara Falls NY	5350	44210
Elmira NY	260	41120
Glens Falls NY	700	39490
Ithaca NY	610	48580
Kingston NY	480	44210
Nassau-Suffolk NY Metropolitan Division	14750	58960
New York-Northern New Jersey-Long Island NY-NJ-PA	184690	72120
Poughkeepsie-Newburgh-Middletown NY	2430	46480
Rochester NY	6910	49860
Syracuse NY	3270	45960
Utica-Rome NY	940	38520
Capital/Northern New York nonmetropolitan area	1510	42020
East Central New York nonmetropolitan area	220	40770
Central New York nonmetropolitan area	1120	45870
Southwest New York nonmetropolitan area	1500	35710
Asheville NC	1750	36580
Burlington NC	370	33290

Charlotte-Gastonia-Rock Hill NC-SC	9540	51310
Durham-Chapel Hill NC	3710	55070
Fayetteville NC	1460	(8)-
Goldsboro NC	330	29310
Greensboro-High Point NC	3870	44790
Greenville NC	560	37660
Hickory-Lenoir-Morganton NC	750	36190
Jacksonville NC	210	36170
Raleigh-Cary NC	7470	51700
Rocky Mount NC	210	39450
Virginia Beach-Norfolk-Newport News VA-NC	8530	50150
Wilmington NC	1300	42750
Winston-Salem NC	2430	45990
Northeastern North Carolina nonmetropolitan area	1190	34680
Other North Carolina nonmetropolitan area	1730	36630
Western Central North Carolina nonmetropolitan area	1990	38710
Western North Carolina nonmetropolitan area	1350	35330
Bismarck ND	1000	34720
Far Western North Dakota nonmetropolitan area	330	27980
West Central North Dakota nonmetropolitan area	460	30190
East Central North Dakota nonmetropolitan area	340	30380
Far Eastern North Dakota nonmetropolitan area	140	29700
Akron OH	3100	42850
Canton-Massillon OH	1590	36770
Cleveland-Elyria-Mentor OH	11600	46110
Columbus OH	13080	54100
Dayton OH	4050	45110
Lima OH	380	35230
Mansfield OH	470	32320
Parkersburg-Marietta-Vienna WV-OH	470	42480
Sandusky OH	560	34840
Springfield OH	270	45420
Steubenville-Weirton OH-WV	430	36490
Toledo OH	3050	41000
Wheeling WV-OH	390	37440
Youngstown-Warren-Boardman OH-PA	1470	32890
West Northwestern Ohio nonmetropolitan area	2020	33330
Other Ohio nonmetropolitan area	1790	32190
Eastern Ohio nonmetropolitan area	730	29870
Southern Ohio nonmetropolitan area	1260	38480
Lawton OK	330	35720
Oklahoma City OK	5530	41250
Tulsa OK	3330	41160

Northeastern Oklahoma nonmetropolitan area	880	33640
Northwestern Oklahoma nonmetropolitan area	910	32510
Southwestern Oklahoma nonmetropolitan area	370	31500
Southeastern Oklahoma nonmetropolitan area	950	32180
Bend OR	770	39790
Corvallis OR	580	51760
Eugene-Springfield OR	2000	46590
Medford OR	1270	43510
Portland-Vancouver-Hillsboro OR-WA	16630	51100
Salem OR	1420	44190
Coastal Oregon nonmetropolitan area	590	35660
Southern Oregon and Linn County nonmetropolitan area	880	38930
North Central Oregon nonmetropolitan area	560	32790
Eastern Oregon nonmetropolitan area	480	35780
Altoona PA	360	36380
Erie PA	1670	39450
Harrisburg-Carlisle PA	3770	46210
Johnstown PA	390	39560
Lancaster PA	3250	37160
Lebanon PA	280	41590
Philadelphia PA Metropolitan Division	26040	55830
Philadelphia-Camden-Wilmington PA-NJ-DE-MD	32890	54550
Pittsburgh PA	12900	47170
Reading PA	1540	39450
Scranton--Wilkes-Barre PA	2420	38820
State College PA	1070	43500
Williamsport PA	330	41130
York-Hanover PA	1530	36510
Far Western Pennsylvania nonmetropolitan area	1290	33810
West Central Pennsylvania nonmetropolitan area	930	29960
Northeastern Pennsylvania nonmetropolitan area	1150	37920
East Central Pennsylvania nonmetropolitan area	2300	45670
Aguadilla-Isabela-San Sebastian PR	110	23410
Fajardo PR	40	20230
Mayaguez PR	170	22700
Ponce PR	310	20840
San German-Cabo Rojo PR	50	26090
San Juan-Caguas-Guaynabo PR	5520	33720
Yauco PR	50	17460
Puerto Rico nonmetropolitan area 2	40	18160
Anderson SC	350	41010
Charleston-North Charleston-Summerville SC	3030	44750
Columbia SC	3250	39820

Florence SC	460	37010
Greenville-Mauldin-Easley SC	3260	45990
Myrtle Beach-Conway-North Myrtle Beach SC	1420	35950
Spartanburg SC	790	44640
Sumter SC	140	40800
Low Country South Carolina nonmetropolitan area	750	36730
Upper Savannah South Carolina nonmetropolitan area	650	37180
Pee Dee South Carolina nonmetropolitan area	200	34070
Lower Savannah South Carolina nonmetropolitan area	340	42350
Rapid City SD	800	31530
Sioux Falls SD	2340	35400
Central South Dakota nonmetropolitan area	360	32960
Eastern South Dakota nonmetropolitan area	1400	33190
Western South Dakota nonmetropolitan area	420	34070
Cleveland TN	260	31840
Jackson TN	330	33260
Johnson City TN	650	38110
Kingsport-Bristol-Bristol TN-VA	1100	31010
Knoxville TN	3010	43860
Morristown TN	300	36890
Nashville-Davidson--Murfreesboro--Franklin TN	12090	58010
Western Tennessee nonmetropolitan area	650	32290
South Central Tennessee nonmetropolitan area	690	32580
North Central Tennessee nonmetropolitan area	650	35020
Eastern Tennessee nonmetropolitan area	1160	37880
Abilene TX	830	35010
Amarillo TX	1170	42060
Austin-Round Rock-San Marcos TX	12950	52530
Beaumont-Port Arthur TX	1080	43140
Brownsville-Harlingen TX	740	35170
College Station-Bryan TX	900	49360
Corpus Christi TX	1280	39690
Dallas-Fort Worth-Arlington TX	33520	48960
Dallas-Plano-Irving TX Metropolitan Division	24740	51500
El Paso TX	2090	41770
Fort Worth-Arlington TX Metropolitan Division	8780	41810
Houston-Sugar Land-Baytown TX	24730	44730
Killeen-Temple-Fort Hood TX	940	40360
Laredo TX	620	42740
Longview TX	690	36040
Lubbock TX	1150	40160
McAllen-Edinburg-Mission TX	1530	38210
Midland TX	510	39120

Odessa TX	520	35660
San Angelo TX	300	34180
San Antonio-New Braunfels TX	8580	43900
Sherman-Denison TX	210	44680
Tyler TX	920	39430
Victoria TX	320	36180
Waco TX	1190	44830
Wichita Falls TX	440	33140
Northwestern Texas nonmetropolitan area	1220	33360
North Central Texas nonmetropolitan area	510	41440
Eastern Texas nonmetropolitan area	1540	34240
Central Texas nonmetropolitan area	930	40170
Southern Texas nonmetropolitan area	500	48570
Gulf Coast Texas nonmetropolitan area	670	46740
Ogden-Clearfield UT	1980	41270
Provo-Orem UT	2720	40570
St. George UT	490	34980
Salt Lake City UT	9940	47390
Northern Utah nonmetropolitan area	110	(8)-
West Central Utah nonmetropolitan area	110	32600
South Western Utah nonmetropolitan area	200	34420
Eastern Utah nonmetropolitan area	320	38470
Burlington-South Burlington VT	2110	45630
Southern Vermont nonmetropolitan area	2030	37940
Northern Vermont nonmetropolitan area	990	43920
Blacksburg-Christiansburg-Radford VA	730	41400
Charlottesville VA	1950	48260
Danville VA	220	33330
Harrisonburg VA	920	44010
Lynchburg VA	770	38470
Richmond VA	6900	50460
Roanoke VA	1520	42480
Winchester VA-WV	490	40350
Southwestern Virginia nonmetropolitan area	710	32240
Southside Virginia nonmetropolitan area	530	30060
Northeastern Virginia nonmetropolitan area	300	47150
Northwestern Virginia nonmetropolitan area	1020	37470
Bellingham WA	910	44080
Bremerton-Silverdale WA	810	45560
Kennewick-Pasco-Richland WA	950	45370
Longview WA	260	41120
Mount Vernon-Anacortes WA	330	44690
Olympia WA	1260	41990

Seattle-Bellevue-Everett WA Metropolitan Division	27910	58550
Seattle-Tacoma-Bellevue WA	30050	57650
Spokane WA	2780	44280
Tacoma WA Metropolitan Division	2130	45920
Wenatchee-East Wenatchee WA	470	36970
Yakima WA	600	37040
Northwestern Washington nonmetropolitan area	540	37850
Southwestern Washington nonmetropolitan area	540	41610
Central Washington nonmetropolitan area	660	38810
Eastern Washington nonmetropolitan area	730	42680
Charleston WV	1320	43900
Morgantown WV	480	53030
Southern West Virginia nonmetropolitan area	860	29270
North Central West Virginia nonmetropolitan area	800	35270
Appleton WI	1170	38000
Eau Claire WI	800	34770
Fond du Lac WI	520	44150
Green Bay WI	2210	43510
Janesville WI	460	39100
Madison WI	5690	49840
Milwaukee-Waukesha-West Allis WI	11260	49070
Oshkosh-Neenah WI	1040	38160
Racine WI	800	38240
Sheboygan WI	550	40740
Wausau WI	690	37150
Eastern Wisconsin nonmetropolitan area	1710	40430
West Central Wisconsin nonmetropolitan area	1510	38020
South Central Wisconsin nonmetropolitan area	1030	36450
Southwestern Wisconsin nonmetropolitan area	530	31720
Northern Wisconsin nonmetropolitan area	780	31390
Casper WY	410	36560
Cheyenne WY	410	41300
Northwestern Wyoming nonmetropolitan area	470	32430
Southwestern Wyoming nonmetropolitan area	660	40690
Northeastern Wyoming nonmetropolitan area	360	34670
Southeastern Wyoming nonmetropolitan area	490	38380

Footnotes:
(1) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.
(2) Annual wages have been calculated by multiplying the hourly mean wage by 2080 hours; where an hourly mean wage is not published the annual wage has been directly calculated from the reported survey data.
(8) Estimate not released.

Occupation: Arts, Design, Entertainment, Sports, and Media Occupations (SOC code 270000)

Period: May 2012

Area name	Employment(1)	Employment percent relative standard error(3)	Hourly mean wage	Annual mean wage(2)	Wage percent relative standard error(3)
Detroit-Warren-Livonia MI	20160	3.4	24.4	50760	2.4
Cleveland-Elyria-Mentor OH	11600	7.3	22.17	46110	2.2
Pittsburgh PA	12900	5.8	22.68	47170	3.5

Footnotes:

(1) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(2) Annual wages have been calculated by multiplying the hourly mean wage by 2080 hours; where an hourly mean wage is not published the annual wage has been directly calculated from the reported survey data.

(3) The relative standard error (RSE) is a measure of the reliability of a survey statistic. The smaller the relative standard error the more precise the estimate.

SOC code: Standard Occupational Classification code -- see http://www.bls.gov/soc/home.htm

FILM PRODUCTION TAX INCENTIVES BY STATE

State	Incentive	Production Tax Incentive %	Wage Credits	Annual Cap	Cap per Project	Sales Tax Exemption	Refundable	Transferable	Video Game Incentive	Post-Production
Alabama	Rebate	25%	35%	15 mil	5 mil	Yes	Yes	No	Yes	Included
Alaska[1]	Credit	30-38%	20%	200 mil[2]	No	No Tax	Yes	Yes	No	Included
Arizona										
Arkansas	Rebate	15%	10%	No	No	No	No	No	Yes	Separate[3]
California	Credit	20-25%		100 mil	15 mil	Yes	No	Yes[4]	No	Included
Colorado	Rebate	20%		4 mil	No	No	No	No	Yes	Included
Connecticut	Credit	10-30%		No	No	Yes	No	Yes	Yes	Included
Delaware										
Florida	Credit	20-30%		296 mil[5]	8 mil	Yes	No	Yes	Yes	Included
Georgia	Credit	20-30%		No	No	Yes	No	Yes	Yes	Included
Hawaii	Credit	15-20%		No	8 mil	No	Yes	No	Yes	Included
Idaho										
Illinois	Credit	30%	15%	No	No	No	No	Yes	No	Included
Indiana	Credit	15%		2.5 mil	No	No	Yes	No	Yes	Included
Iowa										
Kansas	Credit	30%		2 mil	No	No	No	No	No	Included
Kentucky	Credit	20%		No	No	No	Yes	No	Yes	Included
Louisiana	Credit	30%	5%	No	No	No	Yes	Yes	Yes	Included
Maine	Rebate	5%	10-12%	No	No	Yes	No	No	Yes	Included
Maryland	Rebate	25%			No	Yes	No	No	No	Included
Massachusetts	Credit	25%	25%	No	No	Yes	Yes	Yes	No	Included
Michigan	Credit	27%	25-32%	50 mil	No	No	Yes	Yes	Yes	Included
Minnesota	Rebate	15-20%		No	No	Partial	No	No	No	Included
Mississippi	Rebate	25%	25-30%	20 mil	8 mil	Partial	No	No	No	Included
Missouri	Credit	35%		4.5 mil	No	No	No	Yes	No	Included
Montana	Credit	9%	14%	No	No	No Tax	Yes	No	No	Included
Nebraska										
Nevada										
New Hampshire						No Tax				
New Jersey[6]	Credit	20%		10 mil	No	Yes	No	Yes	Yes	Included

Source: Pennsylvania Independent Fiscal Office (2013), Special Report 2013-5, "Uncapping the Film Production Tax Credit: A Fiscal and Economic Analysis.

State	Incentive	Production Tax Incentive %	Wage Credits	Annual Cap	Cap per Project	Sales Tax Exemption	Refundable	Transferable	Video Game Incentive	Post-Production
New Mexico	Credit	25%		50 mil	No	Yes	Yes	No	Yes	Separate
New York	Credit	30%		420 mil	No	Yes	Yes	No	No	Separate
North Carolina	Credit	25%		No	20 mil	No	Yes	No	Yes	Included
North Dakota										
Ohio	Credit	25-35%		40 mil	5 mil	No	Yes	No	Yes	Included
Oklahoma	Rebate	37%		5 mil	No	Yes	No	No	No	Included
Oregon	Rebate	20%	16%	7.5 mil	No	No Tax	No	No	No	Included
Pennsylvania	Credit	25%		60 mil	15 mil	No	No	Yes	No	Included
Rhode Island	Credit	25%		15 mil	5 mil	No	No	Yes	Yes	Included
South Carolina	Rebate	15%	15%	15 mil	0	Yes	No	No	No	Included
South Dakota										
Tennessee[7]	Credit and Grant	25%		N/A	No	Yes	Yes	No	No	Included
Texas	Grant	5-17.5%	8-29.5%	15 mil	No	Yes	No	No	Yes	Separate
Utah	Credit and Rebate	15-25%		6.8 mil	500 k	Yes	No	Yes	Yes	Included
Vermont										
Virginia	Credit	15-20%	10%	5 mil[8]	0	Yes	Yes	No	Yes	Included
Washington	Credit	15-35%		3.5 mil	0	Yes	No	No	No	Included
West Virginia	Credit	27%	4%	10 mil	No	Yes	No	Yes	No	Included
Wisconsin	Credit	25%		500k	100k	Yes	Yes	No	Yes	Included
Wyoming	Rebate	12-15%		1 mil	0	No	No	No	No	Included

Notes: If not otherwise stated, post-production is assumed to be included. Annual caps may have limits for qualified salaries. Some states listed as "no" in the Annual Cap column allocate only a specific level of annual funding, but do not make it explicit.

[1] Reflects 2013 policy change.
[2] $200 million over ten years.
[3] Separate incentive for post-production.
[4] For independent films only.
[5] $296 million over six years.
[6] Program suspended in FY 2011.
[7] Program is being restructured.
[8] $5 million over two years.

Sources: State film offices, departments of revenue, departments of economic development and legislative statutes. Most recent data is presented.

APPENDIX E: FILM PRODUCTION BY STATE AND STUDIO, 2000-2012

Film Production by State and Studio (2000-2012)

Column1	20th Century Fox	Paramount	Sony	Universal	Walt Disney	Warner Brothers	Dreamworks	Total
PA	16	16	7	7	8	7	6	67
OH	5	5	3	2	0	3	1	19
MI	5	8	6	4	1	9	4	37
Total By Studio	26	29	16	13	9	19	11	123

Source: Internet Movie Database

Film Production by State and Year

YEAR	PA	OH	MI	Annual Total
2000	5	0	1	6
2001	3	3	2	8
2002	9	3	4	16
2003	3	0	0	3
2004	5	1	1	7
2005	3	2	4	9
2006	8	0	1	9
2007	4	1	3	8
2008	5	1	3	9
2009	6	3	2	11
2010	8	1	6	15
2011	3	2	8	13
2012	5	2	2	9
Total by State	67	19	37	123

Source: Internet Movie Database

APPENDIX G: MICHIGAN FILM PRODUCTION BY YEAR AND STUDIO

Michigan Film Production by Year and Studio

YEAR	20th Century Fox	Paramount	Sony	Universal	Walt Disney	Warner Brothers	Dreamworks	Total By Year
2000	0	0	0	0	0	1	0	1
2001	0	1	0	0	0	1	0	2
2002	1	1	0	1	0	0	1	4
2003	0	0	0	0	0	0	0	0
2004	0	1	0	0	0	0	0	1
2005	0	1	0	0	0	2	1	4
2006	0	0	0	0	0	1	0	1
2007	0	1	1	0	0	0	1	3
2008	1	0	0	0	0	2	0	3
2009	1	1	0	0	0	0	0	2
2010	1	1	1	2	0	1	0	6
2011	1	1	3	0	1	1	1	8
2012	0	0	1	1	0	0	0	2
Total (By Studio)	5	8	6	4	1	9	4	37

Source: Internet Movie Database

APPENDIX H: OHIO FILM PRODUCTION BY YEAR AND STUDIO

Ohio Film Production by Year and Studio

YEAR	20th Century Fox	Paramount	Sony	Universal	Walt Disney	Warner Brothers	Dreamworks	Total By Year
2000	0	0	0	0	0	0	0	0
2001	1	0	0	0	0	2	0	3
2002	1	0	1	0	0	1	0	3
2003	0	0	0	0	0	0	0	0
2004	0	1	0	0	0	0	0	1
2005	1	0	0	1	0	0	0	2
2006	0	0	0	0	0	0	0	0
2007	0	0	1	0	0	0	0	1
2008	1	0	0	0	0	0	0	1
2009	0	1	0	1	0	0	1	3
2010	1	0	0	0	0	0	0	1
2011	0	1	1	0	0	0	0	2
2012	0	2	0	0	0	0	0	2
Total (By Studio)	5	5	3	2	0	3	1	19

Source: Internet Movie Database

APPENDIX I: PENNSYLVANIA FILM PRODUCTION BY YEAR AND STUDIO

Pennsylvania Film Production by year and Studio

YEAR	20th Century Fox	Paramount	Sony	Universal	Walt Disney	Warner Brothers	Dreamworks	Total By Year
2000	0	2	1	1	1	0	0	5
2001	0	0	1	0	0	2	0	3
2002	3	1	2	0	1	1	1	9
2003	0	2	0	0	1	0	0	3
2004	2	1	0	0	2	0	0	5
2005	1	0	1	1	0	0	0	3
2006	1	2	1	0	2	2	0	8
2007	2	1	0	1	0	0	0	4
2008	3	0	0	1	0	1	0	5
2009	0	3	0	1	0	0	2	6
2010	3	2	1	1	0	0	1	8
2011	0	0	0	0	1	0	2	3
2012	1	2	0	1	0	1	0	5
Total (By Studio)	16	16	7	7	8	7	6	67

Source: Internet Movie Database

APPENDIX J: FILM PRODUCTION TOTALS BY YEAR AND STUDIO

Film Production Totals (PA/OH/MI) by Year and Studio

YEAR	20th Century Fox	Paramount	Sony	Universal	Walt Disney	Warner Brothers	Dreamworks
2000	0	2	1	1	1	1	0
2001	1	1	1	0	0	5	0
2002	5	2	3	1	1	2	2
2003	0	2	0	0	1	0	0
2004	2	3	0	0	2	0	0
2005	2	1	1	2	0	2	1
2006	1	2	1	0	2	3	0
2007	2	2	2	1	0	0	1
2008	5	0	0	1	0	3	0
2009	1	5	0	2	0	0	3
2010	5	3	2	3	0	1	1
2011	1	2	4	0	2	1	3
2012	1	4	1	2	0	1	0
Studio Totals	26	29	16	13	9	19	11

Source: Internet Movie Database

APPENDIX K: MEDIA PRODUCTION ESTABLISHMENTS BY MSA AND SCALE

Media Production Establishments by MSA and Scale

Column1	2005	2006	2007	2008	2009	2010	AVERAGE	STDEV	MIN	MAX
CLE Production EST (MSA 17460)	131	126	126	116	114	112	120.8333333	7.808115436	112	131
n= 1-4 Emp	111	104	106	99	92	93	100.8333333	7.521081483	92	111
n= 5-9 Emp	11	15	13	8	11	10	11.33333333	2.422120283	8	15
n= >10 Emp	9	7	7	9	11	9	8.666666667	1.505545305	7	11
DET Production EST (MSA 19820)	284	275	281	276	269	274	276.5	5.319774431	269	284
n= 1-4 Emp	225	212	225	222	222	230	222.6666667	5.988878582	212	230
n= 5-9 Emp	33	28	32	31	25	23	28.66666667	4.03319559	23	33
n= >10 Emp	26	35	24	23	22	21	25.16666667	5.115336418	21	35
PIT Production EST (MSA 38300)	110	114	125	114	115	114	115.3333333	5.046450898	110	125
n= 1-4 Emp	89	91	97	83	90	88	89.66666667	4.546060566	83	97
n= 5-9 Emp	8	8	17	19	14	15	13.5	4.593473631	8	19
n= >10 Emp	13	15	11	12	11	11	12.16666667	1.602081979	11	15
Source: U.S. Census Bureau										

Moran's I Results by MSA

MSA	I Statistic	R^2	t-value	StdDev	p
CLE	0.441264	0.38	1.14	0.0147	0.256
DET	0.395331	0.259	2.22	0.0178	0.0267**
PIT	0.241676	0.113	3.45	0.0145	0.000566*

* = Statistically Significant at a 99% Confidence Level

** = Statistically Significant at a 95% Confidence Level