

Chapter 8

Universities as Anchor Institutions: Economic and Social Potential for Urban Development

Michael Harris and Karri Holley

8.1 Introduction

Throughout their history, higher education institutions have frequently been associated with cities that often dominate the economic, social, and political life of countries (Bender, 1988). While many researchers have examined specific effects of universities on economic growth, we lack a comprehensive understanding of the numerous ways higher education institutions may impact the economic and social development of cities. With population changes and resulting rising urbanicity in the U.S. (Clifton, 2011), the relationship between city-regions and higher education institutions presents a valuable opportunity for higher education researchers. Despite much work in other disciplines and internationally (Benneworth & Arbo, 2006; Caloghirou, Tsakanikas, & Vonortas, 2001; Paul Chatterton, 1999; Pinheiro, Benneworth, & Jones, 2012), research regarding U.S. higher education fails to sufficiently address the potential and importance of higher education for fostering city development.

This chapter provides a review of the literature related to higher education's role in cities. Despite the arguments touting the benefits of higher education for cities, we argue that gaps exist in our knowledge because the research fails to consider the comprehensive impact of universities economically *and* socially. Specifically, much

The authors would like to thank Molly Ellis for her valuable research assistance with this chapter.

M. Harris (✉)

Southern Methodist University,

3101 University Blvd, Ste 345, Box 750114, Dallas, TX 75275, USA

e-mail: harrism@smu.edu

K. Holley

The University of Alabama, Box 870302, Tuscaloosa, AL 35487, USA

e-mail: kholley@bamaed.ua.edu

of the literature focuses on specific initiatives or programs at individual institutions without developing frameworks to broadly understand the effects of the university on the city. In addition, the current research provides limited evidence or consideration of the non-economic benefits of higher education on cities. The absence of comprehensive conceptual frameworks hinders researchers attempting to define and delineate the role of higher education as anchor institutions. To begin our discussion, we explain the current environment of cities and describe the role of universities in improving cities. We first discuss how researchers understand the role of knowledge networks supporting university-city development including research parks, innovation districts, and multi-layered cities. We then consider the anchor institution concept including the potential for city development, social purpose mission, and partnerships between universities and cities. Next, we examine the balance of global and local trends as well as the role of developing creativity to encourage economic competition. We also discuss higher education's influence on economic geography. The chapter concludes by offering suggestions for methodological approaches and research questions related to universities as anchor institutions that could benefit future researchers in this area.

8.2 Cities and Higher Education

Cities may possess multiple major universities, academic hospitals, research institutes, and intricate networks and linkages across sectors. Higher education institutions can play a significant role in the long-term social and economic success of their surrounding locales. The multifaceted needs of cities and the intricate web of relationships between cities and institutions increase the pressure on higher education institutions to participate as active members of their communities (Taylor & Luter, 2013). Particularly in the context of the knowledge economy, universities hold tremendous potential for improving the economic and social status of cities.

Modern competitive cities are those that support economic innovation, collaboration with the private sector, a healthy transportation infrastructure, and strong links between academia and business (McKinsey Global Institute, 2012). The decline of manufacturing industries and the shift towards a high skill knowledge economy in the latter twentieth century brought attention to how these features can be developed in cities. This shift requires urban areas to transition their local economies from a historical focus on industrial production to large-scale knowledge production and services.

With the transition to knowledge-based economies, the research literature assumes the benefits to be gained from the close location of particular kinds of industry, people, and other resources as well as the engagement of anchor institutions (Birch, 2013; D. Friedman, Perry, & Menendez, 2013; Glaeser & Gottlieb, 2009; Serang, Thompson, & Howard, 2010). For example, Glaeser and Gottlieb (2009) suggest that one reason for the existence of city-regions is the economic benefits that accrue from industrial clusters. The elements of agglomeration

economies, as suggested by Glaeser and Gottlieb, can be measured through various curves, including labor supply, housing supply, and labor demand. When productivity rises with the population, issues such as wages and prices are impacted. The concentration of industries, people, and generally higher incomes suggest the advantages of a city's size. Further, Glaeser and Gottlieb argue that people gather in cities for the advantages of agglomeration economies including the decrease of costs related to ideas, people, and transportation.

Cities possess unique characteristics that offer people and businesses the potential for a healthy economic advantage. As one basic example, it can be cheaper to provide fundamental services (such as water and electricity) to households that exist within close proximity rather than are spread across a wide geographical area. In addition, cities possess the advantages of location, a ready market, the opportunity to integrate with neighboring clusters, and human resources (Porter, 2000). A densely populated city-region makes creating infrastructure for logistics and physical plants easier due to the availability of resources. Urban economies exhibit highly complex interactions as a result of their size, scope, scale, and variety of stakeholders within the local environment.

Perhaps reflecting the idyllic small college town archetype, much of the current literature on the social and economic benefits of higher education focuses on small towns and rural locations (Beck, Elliott, Meisel, & Wagner, 1995; Cantor, Englot, & Higgins, 2013; Fowkes, 1983; Moore & Suffrin, 1974). Yet urban regions have long served as hubs of national development (United Nations, 2010), and today, the majority of the world's population lives in cities. In a 2012 policy report on cities and the emergent consumer class, the McKinsey Global Institute suggested that the definition of a "city" reflects an expansive city-region that not only includes the core city, but also the surrounding metropolitan area that forms a cohesive urban region. Using this broader definition, cities encompass sizeable geographical, economic, and social areas that feature a wide array of populations and activity.

The importance of cities will likely only grow in future decades. The United Nations (2010) estimates that, by 2050, 69 % of the world's population will be located in cities, defined as urban agglomerations with at least 750,000 inhabitants. This trend is especially evident in the United States where 80 % of the population currently resides in cities, a percentage estimated to rise to 90 % by the middle of the twenty-first century (United Nations). With the migration into cities, questions pertaining to urban challenges increasingly dominate the U.S. domestic policy as well as the global policy agenda.

8.3 Higher Education's Role in Improving Cities

The rise of the city as a pivotal hub of the global economy, the concurrent decline of national governments, and the lack of public funding pushed the university into a role as a regional economic booster (Ohmae, 1995; Russo, van den Berg, & Lavanga, 2007). Universities offer access to knowledge networks, deliver knowledge to

students and workers, and improve local business environments (Benneworth & Arbo, 2006; Chatterton & Goddard, 2000; Clark, 1998). In a case study of the University of Twente's role in supporting a formerly industrial economy, Benneworth and Hospers (2007) document how a university can create enthusiasm that supports the development of regional innovation. The University of Twente provided direct support for regional initiatives built on the institution's teaching, research, and service activities that then spread to involve other local actors. Ultimately, the university developed a regional mission and networks that built capacity for innovation and economic growth (Benneworth & Hospers). While this research demonstrates the ability of universities to play a networking role in a particular context, further scholarship can consider additional contexts and conditions as well as measure the ability of universities to influence long-term city growth.

Huggins and Johnston (2009) conclude that universities are influenced by the competitiveness of the city or region in which they are located. Competitive regions are those with economies that can attract and maintain firms with increasing market growth while also sustaining a high standard of living for residents. Competitiveness is defined by economic output per capita, employment rates, and density of knowledge-intensive firms (Huggins & Johnston). Less competitive regions are institutionally weak, relying heavily on small or medium-sized businesses with a low growth history (Huggins & Johnston). In competitive regions, universities are usually highly productive, as measured by the value added by the institution as a percentage of the total value added across the region.

Higher education institutions in highly competitive regions possess greater wealth generating capacity than those in less competitive regions. One reason may be that institutions in more competitive regions have access to other kinds of organizations involved in facilitating innovation. Higher levels of productivity are not simply a result of institutional capability, but also of access to ideas, people, and resources at neighboring organizations. Doutriaux (2003) submits that higher education institutions that co-exist in city-regions with government laboratories and industry are commonly catalysts of innovation as opposed to drivers. In addition, Doutriaux documented the presence of a large research university in each of the 11 high-tech knowledge clusters in Canada. Yet, higher education institutions are not the sole determinants of regional growth and innovation.

8.4 Knowledge Networks Supporting University-City Development

Higher education institutions contribute to the base of knowledge, ideas, and resources which are transported between different organizations and considered necessary reciprocal ingredients for economic benefit. For instance, the development of new technology-based firms provides a component of the diverse economy needed for twenty-first century city-regions (Dahlstrand, 2007). This type of

economic growth is most commonly seen in areas with research universities, knowledge industries, and existing firms, suggesting that the advantages to this development of economic networks with higher education institutions. Research parks and innovation districts offer large-scale, geographic evidence of the networks between multiple local and regional partners. By promoting geographic proximity, these models create knowledge networks to encourage a culture of innovation and entrepreneurship (Luger & Goldstein, 1991).

8.5 Research Parks

University-based research parks are directly situated on a university's campus. Link and Scott (2007) contend that the location helps the park to benefit from the university's research and knowledge base and also seeks to develop knowledge in concert with the university and park tenants. Research parks have a lengthy history; the first research parks were created in the 1950s, and since the 1970s, have been growing at an exponential rate (Luger & Goldstein, 1991). As defined by Luger and Goldstein, research parks are "organizational entities that sell or lease spatially contingent land and/or buildings to businesses or other organizations whose principal activities are basic or applied research or the development of new products" (1991, p. 5). This definition excludes such areas as Route 128 in Massachusetts, since there is not an organizational entity overseeing the corridor. A more encompassing notion of research parks reflects not only formally organized spaces for collaboration and innovation, but also areas where various organizations congregate and interact with each other without a formal designation. In informal corridors, the university presence is frequently less prescribed, but can be seen through such entities as spin-off and start-up companies (Bercovitz & Feldman, 2006; Link & Scott, 2007).

8.6 Innovation Districts

In a 2014 report, the Brookings Institution profiled the growth of "innovation districts," defined as geographic areas where anchor institutions and businesses group around and link with start-ups and business accelerators (Katz & Wagner, 2014). These districts reflect the characteristics of robust knowledge networks. Innovation districts are commonly small in physical size, easily accessible by public transportation, and home to a mix of retail, business, and residential spaces. With a goal towards open innovation, companies that thrive on new knowledge operate in close proximity to knowledge-rich organizations such as research universities. Innovation districts can be found in such urban cities as Atlanta, St. Louis, and San Diego and are supported by key anchor institutions (Webber & Karlstrom, 2009). Several characteristics differentiate innovation districts from research parks including a location

in a city's existing infrastructure with the goal of fostering physical proximity and the opportunity for residents to live within the district itself. The Brookings Institution identifies three models for innovation districts: anchor plus, where mixed-use development is organized around anchor institutions; re-imagined urban areas, where existing industrial space is converted and anchor companies consolidate; and the urbanized science park, where formerly isolated areas of innovation are urbanized by adding mixed-use activities. Across the different models, anchor institutions play a consistent role as a driver of innovation.

8.7 Multi-Layered Cities

The term multi-layered cities has been used in a variety of research contexts including explaining a diverse population (S. Thompson, 2000) or to describe numerous layers of government and forms of governance (Jansen-Verbeke & Govers, 2010). Over time, cities undergo various changes, including social, economic, cultural, and physical, that Egedy, von Streit, and Bontje (2013) compare to geological layers. Throughout their histories, the footprint of cities change, the economic fortunes rise and fall, and the population grows, declines, and changes composition (Musterd & Murie, 2010). Each layer influences subsequent layers that form (Egedy et al., 2013). For example, a U.S. city such as Houston possesses a variety of historical, economic, and cultural traditions, and as such, is able to draw on multifaceted approaches to contemporary problems. The economic history of Houston includes its agricultural and maritime origins. The oil industry built upon this infrastructure in the early twentieth century around the same time that the University of Houston and Rice University were founded. Now home to the Texas Medical Center, the world's largest medical complex, the city-region of Houston is considered one of the most economically vibrant cities in the United States (Bureau of Labor Statistics, 2015). In the first decade of the twenty-first century, the city of Houston increased the number of college-educated residents by 40 % (Bureau of Labor Statistics), suggesting its appeal to the type of workforce important to a competitive economy. By contrast, American cities that depend on single-layered economies often experience challenging transitions as social and economic changes occur. Single-layered economies are the typical one company town (Egedy et al., 2013) such as Rochester, New York that relied upon Kodak for sustaining the city's economic growth (Christopherson, 1999). Pre-Katrina New Orleans depended heavily on port operations and tourism as a base of its regional economy. The city lost nearly 95,000 jobs and \$2.9 billion in wages in the 10 months following Hurricane Katrina; these jobs disproportionately reflected the lowest-wage jobs in New Orleans, which caused a ripple effect of economic consequences across the city (Dolfman, Wasser, & Bergman, 2007).

A crucial ingredient for economic and social success of a city-region in light of globalization is an educated workforce suited for the region's industry needs. The rise of the "skilled city" (Glaeser & Saiz, 2003) can in part be attributed to an

economically productive, college-educated workforce, but also from the ability of such regions to adapt to new industries when existing ones decline. This ability ensures that cities are continuously re-inventing themselves as new opportunities and levels of human capital interact. Boston and Detroit, two examples from Glaeser's work, exhibited fairly similar economic conditions in the early 1980s. The different outcomes of the two cities, according to Glaeser, are a result of an abundance of skilled laborers. Boston has a long history of a surplus of higher education institutions positioning the city to take advantage of the growing skills base of the population (Glaeser & Saiz). Higher education institutions face changing expectations to serve traditional aims alongside additional economic and social imperatives. As a result, campus leaders not only consider what is best for the institution, but also the well-being of the community. In many ways, a blurring of what is in the best interest of the institution and the community occurs.

8.8 Anchor Institutions

Colleges and universities as anchor institutions hold great potential for university-city networks. One of the early advocates for the interaction between higher education institutions and local communities was Jacobs (1969), a seminal researcher of cities, who suggested that the widespread knowledge creation of higher education generates more local growth than specialized research and development operations of private companies. More recent work by Glaeser (2011) reveals how slight increases in the number of college-educated individuals within a city-region bring large gains in the per capita gross metropolitan product. Table 8.1 summarizes research related to higher education's role in improving cities.

Universities face the challenge of attempting to be innovative and groundbreaking while remaining physically bound to a specific location. The growth of international branch campuses expands the idea of the satellite campus, and the online presence of higher education continues to grow. Although these areas of growth challenge our understanding of anchor institutions, the research literature fails to fully explore the anchor institution concept in light of current challenges facing higher education. Universities are place-bound organizations with major ties to their local communities (Anchor Institution Task Force, 2009; Birch, Perry, & Taylor, 2013; Cantor et al., 2013; Friedman et al., 2013; Goddard, Coombes, Kempton, & Vallance, 2014; Initiative for a Competitive Inner City, 2011; Serang et al., 2010; Taylor & Luter, 2013; The Work Foundation, 2010). However, institutions also increasingly offer online courses which extending their reach beyond their city, state, or even nation. Despite this increased complexity surrounding the notion of place, research questions related to physical geography receive little attention in the higher education literature.

We use the concept of anchor institutions to describe the potential benefits of universities for city-regions. Similar to the role of a large department store providing an economic anchor within a shopping mall, proponents suggest anchor

Table 8.1 Summary of key research on higher education's role in improving cities

Author(s), year	Research design	Case or data source	Key findings
Anselin et al. (1997)	Spatial econometric	Technology-intensive research laboratory employment in 128 United States metro areas	Spatial relationship between universities & private sector research
Candell and Jaffe (1999)	Case	Massachusetts universities	Estimated impact of federal research funding; startup firms from publicly funded research tend to locate in vicinity
Cantor, Englot and Higgins (2013)	Case	Syracuse University	Civil infrastructure creates lasting social infrastructure
Feldman (1994b)	Case	Johns Hopkins University	Innovative infrastructure necessary for the benefits of proximity
Florax (1992)	Cross-sectional	Netherlands' (regions) investment in manufacturing	University proximity; unrelated to manufacturing firm investment
Glasson (2003)	Case	Sunderland University	Output multipliers
Goldstein and Luger (1992)	Case	Univ. of North Carolina at Chapel Hill	Impact of student migration
Goldstein and Renault (2004)	Quasi-experimental	United States wages by region	Universities have a significant impact on regional economic development
Huffman and Quigley (2002)	Case	University of California at Berkeley	Student migration
Jaffe (1989)	Economic modeling	University R&D expenditures	University R&D influences private patenting
Keane and Allison (1999)	Case	University of Sunshine Coast	Knowledge production and infrastructure possibly outweigh expenditure effects
Saxenian (1994)	Case	Silicon Valley, Route 128	Interorganizational collaborations help explain regional performance inequalities

institutions generate jobs, attract industry, provide cultural opportunities, and work to improve the condition of a community (Hodges & Dubb, 2012; Initiative for a Competitive Inner City, 2011; Taylor & Luter, 2013). Goddard et al. (2014) define anchor institutions as “large, locally embedded institutions, typically

non-governmental public sector, cultural or other civic organizations, that are of significant importance to the economy and the wider community life of cities in which they are based” (p. 307). In addition to universities, other examples of anchor institutions include hospitals and museums. As Fulbright-Anderson, Auspos, and Anderson (2001) suggest, anchor institutions have a significant investment of infrastructure in a specific place, resulting in relative immobility. In comparison, for-profit corporations may move for a variety of reasons, particularly in search for lower labor costs, relaxed government regulations, or governmental subsidies. Beyond their physical stability, anchor institutions typically possess a mission oriented towards community engagement and social service.

Rather than simply driving economic development, anchor institutions also value and advance the social development of their cities. The Anchor Institution Task Force (2009), an on-going coalition comprised of higher education leaders, notes that colleges and universities as anchor institutions offer advantages that can be leveraged to support a city’s development. Echoing this call, The Work Foundation (2010) contends that, while city development is often not a primary mission of these institutions, anchor institutions possess local connections and community relationships as well as the ability to scale resources that can serve as a valuable foundation for development strategies. Anchor institutions have numerous avenues for potential city involvement. The Initiative for a Competitive Inner City, a non-profit research and strategy group, reflected on the specific roles that anchor institutions might take to bring economic benefits to a city-region, including real estate developer, purchaser, employer, workforce developer, cluster anchor, a core service/product provider, and a community infrastructure builder (Initiative for a Competitive Inner City, 2011). Taylor and Luter (2013) take this argument further by suggesting that anchor institutions have an important role in creating more democratic and equitable cities by serving as social-purpose mission centered, place bound institutions to their surrounding cities.

The anchor institution concept idealizes the belief in the power of place-based institutions to support social and economic growth. The conceptual power of the term ‘anchor institutions’ allows for greater insight into the economic geography of a particular city-region, especially those institutions that provide a foundation for a community in significant economic and noneconomic ways (Birch et al., 2013, p. 8). However, despite widespread usage and potential value of the anchor institution concept (Friedman et al., 2013), the research literature is devoid of empirical studies examining the comprehensive influence and impact. Researchers have not substantially considered how strategies employed and considered effective with a university in one city might translate and work in another. Single case studies (Groves, Revel, & Leather, 2003; Hubbard, 2009; Macintyre, 2003; McGirr, Kull, & Enns, 2003) have explored and identified individual initiatives that collectively can be “cobbled together” to demonstrate a university’s impact. However, single case studies are less effective in suggesting the need and importance of a university’s efforts to promote a city’s economic and social development.

8.9 Potential of Anchor Institutions for City Development

When universities serve as community anchors, they make specific decisions to leverage various forms of capital, including economic, human, and intellectual, to advance the well-being of their local communities (Hodges & Dubb, 2012). Intellectual capital is the most fundamental benefit higher education institutions can offer to their communities (Shaffer & Wright, 2010). Despite the lack of empirical examination of universities as anchor institutions, the potential of higher education to serve as anchor institutions has been recognized for several decades. In the 1990s, researchers began to study the ways the potential of universities and hospitals to serve a broader role in growing their communities (Anchor Institution Task Force, 2009; Benson & Harkavy, 1994; Geruson, 1994; Harkavy & Zuckerman, 1999). As an example, Benson and Harkavy (1994) examined university-community schools as a vehicle for universities to work to improve their communities. Higher education institutions (“eds”) and hospitals (“meds”) have been labeled as a community’s hidden assets in terms of their development potential (Harkavy & Zuckerman). Nationally, 5 % of jobs are within these two sectors, a figure that increases to 11 % in inner-city areas (Initiative for a Competitive Inner City, 2011). Eds and meds bring several advantages to the community, including their purchasing power, local hiring initiatives, research and teaching functions, real estate ownership, and a “good neighbor” mentality (Harkavy & Zuckerman). During the 1990s, eds and meds appeared to be immune from broader economic decline and continued their growth even as other kinds of industries faltered (Parillo & De Socio, 2014). Especially when compared to manufacturing, construction, and retail sectors, higher education institutions and hospitals remain reliable sources of employment growth (Harkavy & Zuckerman, 1999; Parillo & De Socio, 2014).

Taylor and Luter (2013) contend that scholars frequently fail to clearly define and apply the anchor institution term. Anchor institutions demonstrate four major properties that serve as a useful framework for understanding their potential role and purpose, including spatial immobility, corporate status, size, and mission (related to social purpose, justice, and democracy). Table 8.2 summarizes these components.

The U.S. Department of Housing and Urban Development (2005) defines anchor institutions as (1) having regional significance and (2) serving as a key economic driver. More specifically, HUD identifies anchor institutions as those organizations that generate jobs, create business opportunities, and develop the human, social, and cultural capital of their city-regions. In order to satisfy all of these criteria, an institution will necessarily be fairly large in size. Small cultural institutions often lack the capital investment to significantly drive economic activity in their communities. Anchor institutions typically are not only the largest employers in their cities (Birch, 2007), but also possess substantial purchasing power (Camden Higher Education and Health Care Task Force, 2008). The largest expense for higher education institutions, like many large businesses, is employee salary and benefits, a share of which is often reinvested in the local city’s economy.

Table 8.2 Components of an anchor institution

Component	Definition
Spatial Immobility	Tied to a specific location due to mission, investment or community relationships (Webber & Karlstrom, 2009); provides anchor institutions a strong economic stake in the health of the surround community (Harkavy & Zuckerman, 1999)
Corporate Status	Institutions identified as anchor institutions are typically non-profit; private businesses are footloose in nature, thus may not stay place bound (Taylor & Luter, 2013)
Institutional size	Anchors employ large numbers of people and have significant purchasing power (Camden Higher Education and Health Care Task Force, 2008); scale matters (McCuan, 2007)
Institutional mission	Anchors commonly possess a social-purpose mission and have social and cultural influence in the community (Maurrasse, 2001)

Local allegiance, institutional identity, and support of local cities have been important in the location of higher education originating from the founding of the earliest colonial colleges (Thelin, 2004), emphasizing their potential to serve as anchor institutions. Colleges and universities may derive part of their identities from the local community or enjoy the benefit of subsidies to maintain their location. Universities may even be named for their cities, signaling meaningful ties between locale and institution. For example, institutions such as the University of New Orleans, University of Richmond, University of Denver, University of Chicago, and Portland State University would seem to have a connection to their cities simply because of their names.

Educational innovations are changing the way in which individuals learn and perceptions of “place-based” learning. Online and distance learning enables students to engage with university programs well beyond the boundaries of the city-region. Yet for institutions that assume the mantle of anchor institutions, the geographical bond to a community can result in the interconnected relationships through mission, invested capital, and/or connections to customers or employees and their specific location (Webber & Karlstrom, 2009). While close physical proximity is an important element of business-university engagement, it is not the sole requirement, or in some cases, an essential requirement (Bercovitz & Feldman, 2006). As Stachowiak and colleagues (2013) suggest, an “innovative infrastructure,” or internal structures that support research and innovation, helps extend the benefits of the university beyond the campus. Through a historical study of Johns Hopkins University and the city of Baltimore, Feldman and Desrochers (2003) conclude that a city needs a culture of innovation or policies that favor entrepreneurship to fully capture the benefits of a research university and support successful university-business engagement that achieves the aims of cities, businesses, and universities.

Although higher education institutions may have a service responsibility as part of their mission, Webber and Karlstrom (2009) argue that colleges and universities could serve a more prominent role in the community if they better understood the

costs, benefits, and range of strategic options available to anchor institutions. In a white paper discussing the potential of universities, they propose that institutions do not play a larger role in their communities because of misperceptions regarding the benefits of engagement and excessive fears of the dangers in getting involved. Institutions that are not actively engaged in their communities often undervalue the potential of engagement, overestimate the risks and costs, fail to conduct careful assessment of costs and benefits, and do not consider the full range of strategies and opportunities for promoting community change. Feldman and Desrochers (2003) echo this claim in their study of Johns Hopkins' impact on Baltimore. They conclude that the university did not seek to promote or develop the community as part of their research activities or mission. Their findings as well as those of other researchers (Miner, Eesley, Devaughn, & Rura-Polley, 2001; Slaughter, 2001) raise questions for further research about whether putting pressure on universities to serve this broader purpose is hurting institutions and damaging the U.S. system of innovation.

8.10 The Role of a Social Purpose Mission

Anchor institutions may not only serve a social purpose, but also use their economic might to support local businesses and communities. For instance, institutions may prioritize the purchase of locally-made products or may implement a hiring initiative designed for specific community populations. Even small changes in an institution's financial policies can create substantial social and economic benefits in the local community (Serang et al., 2010). The Business Alliance for Local Living Economies (Howard, 2012) offers several examples of universities directing their purchasing power locally, but little peer-reviewed scholarship examines this issue.

Debate exists over what role organizational mission plays in the definition of an anchor institution. The Anchor Institution Task Force (2009), a think tank supported by the University of Pennsylvania that focuses on long term strategies for anchor institutions, argues that anchor institutions should hold a social-purpose mission. The task force posits that these institutions demonstrate inherent core values of democracy, equity, and social justice that enable the organization to serve as a force of change. Benson, Harkavy, and Puckett (2007) extend this argument, calling for higher education institutions to "give full-minded devotion" to assuming the role and purpose of supporting civic and social responsibility. Although social responsibility plays an important role in the mission and activities of many higher education institutions (Saltmarsh & Hartley, 2010), the research literature suggests that, unlike size or immobility, a civic or social justice mission is not a specific requirement for anchor institutions (Taylor & Luter, 2013). Moreover, little empirical evidence exists regarding the degree to which institutions actively operationalize a social justice mission.

The concept of anchor institutions relates to other notions that invoke the social responsibility of higher education institutions, including the engaged university (Bok, 1982) and civic engagement (Kronick, Dahlin-Brown, & Luter, 2011). The engaged university movement has developed and evolved over the past few decades through programs such as service learning (Kronick & Cunningham, 2013) and community schools affiliated with higher education institutions (Benson et al., 2007). These types of programs bring students, faculty, and institutions together with the surrounding community, and ultimately help achieve the university's teaching mission. In a quantitative, longitudinal study of over 22,000 students in the United States, Astin and Vogelgesang (2000) compared the effects of formal, course-based service-learning to more general forms of community service. After accounting for student and institutional characteristics, they found benefits of course-based service for 11 different learning outcomes.

8.11 Partnerships Between Universities and Communities

Colleges and universities as anchor institutions may contribute to city-region development through community enhancement, including community service and service learning projects, continuing education courses, and public lectures. These city development efforts are closely related to the service mission of higher education (D. Watson, Hollister, Stroud, & Babcock, 2011). When higher education institutions partner with city leaders to benefit the surrounding community, they may focus on economic and social strategies where each partner can contribute expertise. In their study of college presidents, the American Council on Education (2012) found that 87 % of presidents serve on boards of nonprofit organizations. Additionally, 62 % of public institution presidents and 27 % of private institution presidents served on economic development boards.

Universities working as partners with their surrounding communities are not novel or unprecedented. The Latin root of the word *university* focuses on the notion of community, or combining individuals into a shared body of knowledge (Neave, 2000). As the mission of the university grew in complexity and scope during the twentieth century, the concept of a *university* could no longer be simply defined as a community of scholars working within the ivory tower. Numerous examples exist of ways that colleges and universities influenced their communities, and that communities in turn influence higher education institutions. As the American urban crisis escalated in the mid-twentieth century, urban universities could not avoid the problems of crime and physical deterioration that plagued their neighborhoods (Benson & Harkavy, 1994; Rodin, 2007). Many urban universities decided it was in their long-term interest, both for their core academic mission and the vitality of their cities, to focus on improving their local community. "Enlightened self-interest" drove these institutions to engage in the problems of their communities (Taylor & Luter, 2013).

The collaboration of multiple organizations including higher education institutions may contribute to strengthened civic indicators such as improved educational outcomes, reduced crime rates, and accessible public transportation systems (Savan, 2004). The Sustainable Toronto project, for example, is a community-based research initiative involving the University of Toronto, York University, the City of Toronto, and local environmental groups. Community-based research encompasses an array of research practices that engage members of the community and outside researchers in enquiry that promotes a deeper understanding of community issues (Savan & Sider, 2003). Using three types of partnerships (consultative, contractual, and collaborative), the project resulted in a variety of advantages for the community and project including promotional efforts in support of sustainability, assessment of monitoring, capacity building initiatives, and the successful submission of grant applications for future projects. In addition, Savan found in an evaluation of the initiative that the coordination of higher education, local government, and community groups created tight linkages between the partners and these linkages contributed to the project's positive outcomes. Community-based research proved beneficial as an effective and efficient approach for local research and development.

Real estate development is a common current strategy that universities may employ as anchor institutions and in support of their own aspirations. Universities work in concert with their neighbors and communities on matters related to land acquisition and physical infrastructure (Kysiak, 1986). Several decades ago, higher education institutions often were not interested in building connections with their cities. Instead, institutional leaders sought to isolate the campus from a deteriorating community by building literal walls around campus or purchasing surrounding property in an effort to shield the campus. Kysiak described relations between Northwestern University and Yale University and their cities as increasingly acerbic over time. The universities made unilateral decisions without consulting city leaders. In turn, cities saw their universities as non-taxpaying drains on city resources. The attempt to disengage ultimately failed to achieve the aims of either institution or their cities as urban economic and social problems escalated, threatening the long-term success of both cities and higher education institutions. Ultimately, city and campus leaders realized the value of linkages between campuses and cities and encouraged new partnerships, relationships, and a broader sense of togetherness (Kretzmann & McKnight, 1993; Martin, Smith, & Phillips, 2005).

Examinations of successful reform efforts suggest that universities create "communities of practice" (Scobey, 2002) and draw on coalitions and the collective expertise of communities to work on community problems. Reorienting the university to work collaboratively with the community helps the institution form more productive relationships with stakeholders better enabling the university to serve an anchor institution (Cantor et al., 2013). This collaborative effort moves the work from university solutions to shared solutions. The goal is to "merge *innovation* and *full participation*" [emphasis in original] in order to form productive relationships between higher education institutions and local stakeholders (Cantor et al., p. 21). Numerous examples exist of higher education institutions engaged in collaborative partnerships with their urban neighbors. The Great Cities Institute at the University

of Illinois at Chicago fosters connections among institutional stakeholders, both inside and outside of the university. For instance, past initiatives have included participatory budgeting for public funds, a process that lets community members directly determine how to spend part of a public budget (Baiocchi & Lerner, 2007). An evaluation report for the Participatory Budgeting Process showed an increase in participation in the budgeting initiative by people of color, low-income residents, and young people (Crum, Baker, Salinas, & Weber, 2015). Over \$1.6 million additional funds were allocated to community projects beyond the city's initial budget. Residents expressed satisfaction in learning how the Participatory Budgeting Process works, and 84 % felt they gained some influence over community improvement. As Cantor and her colleagues (2013) note, higher education institutions, as members of the community, both produce the problems that surround them, and also enable potential solutions.

8.12 Balancing Global and Local Trends Within Cities

Modern advances in areas such as communication and transportation as well as broader globalization trends have brought changes to major metropolitan cities and regional economies. Evidence of the growth of the knowledge economy can be seen in a move from economies driven by the production and distribution of goods to those driven by information exchange and the high-level provision of services (Kasarda, 1988). The twentieth century economic mainstays of manufacturing, warehouses, and retail have largely disappeared, replaced by white-collar jobs requiring postsecondary training. For example, large cities in the industrial Midwest and Northeast United States that historically relied on manufacturing such as steel or automotive struggled as those industries declined when firms moved to countries that provided lower wages and more advantageous economic conditions. Some of the cities, such as Pittsburgh, retooled their economies and focused on new areas of science, technology, and engineering (Power, Ploger, & Winkler, 2010). In a study of major American and European cities that successfully transitioned their economies, Power et al. (2010) found that universities served a valuable role in fueling scientific and knowledge advances as well as the ability to recruit knowledge workers. These cities were able to transition from their industrial base to an economically more viable bias that improved the social well-being of its citizens.

Extant research recognizes the import of large cities to global functions. In their discussion of "world cities," Friedmann and Wolff (1982) note that these locations play a significant role in global finance, decision-making, market expansion, and production. The definition of a world city is not wholly a question of population size, although the examples that Friedmann and Wolff cite (including San Francisco, Miami, Los Angeles, and New York) have millions of residents. Rather, a world city is one that is highly integrated, and in most cases essential, to the global network of economic interactions. World cities are further characterized by employment growth in professional sectors such as management, banking and finance, telecommunications,

research, and higher education. Sassen (2001) offers the complementary definition of a “global city,” or a city that serves as a vital hub for financial and production services necessary to the global economy. Even for those local regions whose economic infrastructure does not possess the global influences that define world or global cities, the two concepts suggest the possibilities of locally-specific influences in a global world.

Given the global influences noted above, city-regions face harsh competition for investment, which may indicate the potential value of the place-bound organizations such as anchor institutions for supporting city development. The result of globalization and concurrent transportation innovations is a mobile and flexible stream of capital and human resources. Using worldwide economic data, Ghemawat (2011) argues that, while globalization exists, the phenomenon has been overstated by contemporary researchers. In his book, Ghemawat describes how connectivity (i.e., communication and transportation) does not equal a merging or global integration—at least not to the degree argued by popular proponents such as Friedman (2007, 2008). Rather, regional differences still matter in terms of how people experience the world. Moreover, despite technology, proximity both within and across national borders explains some of the planet’s economic activity, in part because of unique regional characteristics that influence integration. For cities, this argument posits that building networks and reliance on local resources will drive the economic success even within a more globalized environment. Simply put, the proximity of universities matters to cities even as higher education and cities engage more globally (Bercovitz & Feldman, 2006).

Within this context, higher education institutions play a key anchoring role—developing industry concurrent with research priorities, fostering partnerships with industry, and producing and retaining graduates that contribute to future developments (Jones, Williams, Lee, Coats, & Cowling, 2006). The ways that the various actors in a city including higher education, government, and businesses engage with each other influences the direction of cities throughout the industrialized world. In Europe, the changing emphasis on leadership and government at the local level is called “localization” (Gaffikin & Morrissey, 2011). Simultaneous with the changing emphasis on local governance and the value of place, globalization results in a paradox, what Swyngedouw (1997) terms *glocalization*, where individual city-regions form webs of global interactions and networks of economic activity. Understanding globalization requires understanding the ways in which local activities, knowledge, and resources shape global perceptions and engagement (Quelch & Jocz, 2012).

Despite these changes that occur as a result of globalization, the importance of local context inside large cities has grown more important, not less (Malecki, 2013). Globalization forces seem isomorphic, but the interaction with local conditions, networks, and resources creates different outcomes (Morley, 2003). Audretsch (1998) and Jaffe (1989) in studies of university research and innovative activity find that, although material goods and information may be transported easily across global space, the nuances of tacit knowledge as a necessary component of innovation require a more local network to ensure a competitive advantage. Local environments

particularly at the policy level place greater importance on how actors engage with one another within a city as well as other unique local contexts.

8.13 Stakeholder Theory

Understanding the behavior of anchor institutions requires researchers to understand the ways anchor institutions act in partnership with other stakeholders. By their very nature, anchor institutions engage to varying degrees with many local organizations, businesses, and municipal governments. Used in the study of for-profit business corporations, stakeholder theory is useful for explaining the influence of cities and communities on universities (Jongbloed, Enders, & Salerno, 2008). Before discussing the use of stakeholder theory in higher education, we briefly explain the usefulness of the theory more generally. The central tenet of the theory is that stakeholders represent individuals or groups of individuals from inside or outside the organization who affect institutional behavior or conversely, are affected by institutional behavior (Freeman, 1984). As such, stakeholders play a key role in facilitating the resources that an institution needs to survive. The need for secure and stable resources drives the behavior of nearly all organizations, and specifically requires universities to diligently assess stakeholder relationships. Considering that stakeholders possess resources of value (policy decisions, funding, recommendations, and the like), university leaders benefit by considering the views and desires of these external communities when making decisions about the future of the university.

The influence of stakeholders depends on the nature of the stakeholders themselves as well as the university. Key stakeholders of an anchor institution typically include state and federal governments, students, parents, alumni, businesses, foundations, and donors (Burrows, 1999). A university that serves as an anchor institution may well have similar stakeholders to a university that does not operate as an anchor. Research has not explored if anchor institutions' stakeholders differ from other universities or if the interactions with specific stakeholder groups change with the expanded mission. Understanding how stakeholder groups and interactions may change when serving as an anchor institution remains an underdeveloped area of the anchor institution literature.

Although stakeholder theory implicitly assumes that stakeholders are relatively homogeneous, Wolfe and Putler (2002) extend the theory to suggest that a lack of analytic rigor and a focus on role-based stakeholders blurs the heterogeneity that exists between stakeholder groups. Rather, the authors theorize that subgroups may hold divergent views and require different approaches in organization-stakeholder interactions. Relevant for the study of anchor institutions is the value of bridging organizations, which are particularly important in a region with high stakeholder heterogeneity. Bridging organizations can operate in a way that reduces cultural barriers (Folke, Hahn, Olsson, & Norberg, 2005), and provide a shared space where different interests can be discussed and aligned with the larger city-region priorities.

They do this by first including multiple organizations and knowledge systems that can enhance decision-making by capturing the complementary skills and knowledge of partners (Berkes, 2009). The potential exists for knowledge to be generated as a sum of the various institutional contributions. Second, institutions can learn from engagement with others. The links between the various organizations can be horizontal, where individuals in similar positions of authority and expertise work in cross-institutional partnerships, or vertical, engaging multiple levels of the organization (Berkes). Cash et al. (2006) offer examples of cross-scale institutions involved in ecological protection, emphasizing the need for bridging organizations to communicate across the different groups and develop a shared message.

Several scholars have utilized stakeholder theory to explain the influence of cities on higher education institutions and expand the definition of anchor institutions. Stachowiak, Pinheiro, Sedini, and Vaattovaara (2013) suggest the concept of “spaces of interaction” as the venues where universities and external stakeholder groups interact with one another. The spaces integrate the city-region’s business, community, city development, and cultural efforts with the teaching, research, and “third mission activities” of the university. Third mission activities have historically been conceptualized as service, or the ways in which contemporary higher education engages with society and industry. Beyond the teaching and research function, service activities allow for the application of knowledge to economic and cultural development. One result of the interaction between cities and higher education is that both groups increasingly value the formal and informal networks that exist (Stachowiak et al., 2013).

Both types of networks can offer direct and indirect benefits for cities and universities. Engagement with the business sector occurs through such institutional functions as spin-off company development, technology transfer, and research partnerships. These shared interactions, reflective of what Clark (1998) labeled the extended development periphery of higher education, occur in locations including research parks and business incubators.

8.14 Developing Creativity for Economic Competitiveness

From an economic perspective, creativity is closely tied to innovation, which refers to the generation and application of new ideas. Without creativity to support the innovation pipeline, “innovation is an engine without any fuel,” concludes McLean (2005, p. 227). A perspective popular in policy circles suggests that, in order to succeed in recruiting, training, and retaining knowledge workers, large metropolitan cities require infrastructure and resources to provide the amenities and quality of life desired by what Richard Florida (2002) calls the “creative class.” McLean (2005) defines creativity as the production of work that is original and useful. Creative and knowledge-based industries include those in arts, media, advertising and publishing, finance, law, and telecommunications. These industries often resist outsourcing and provide high skill, high paying jobs for citizens. The concentration

of creative industries, defined as those that provide the material goods and services required for artistic, cultural or entertainment, is assumed to facilitate broader economic success (Caves, 2000; Hall, 2000; Landry, 2000; Musterd, 2004; Turok, 2004). As a result, cities are motivated to recruit firms and workers for creative industries (Bontje & Musterd, 2009; Chapain & Lee, 2009). Higher education institutions have the potential to play a key role in the development of technology, talent, and tolerance that are inherent to a creative economy (Florida, Gates, Knudsen, & Stolarick, 2006).

The concept of the creative class aligns with the increased realization that economic success depends on the growth and development of people, not simply the growth of industry. According to Florida (2002), large urban cities with vibrant cultural opportunities, a high tolerance for diversity, and engaged anchor institutions are able to attract more talented and creative people, who in turn drive innovation and growth. Florida's statement is built on assumptions regarding economic growth and the city-region. One assumption is that creativity is the driving force behind economic growth, and that the twenty-first century reflects not just a knowledge economy, but also a creative economy. The force of creativity shapes human behavior. As such, no longer is economic growth stimulated solely through business development, resulting in people moving to specific regions for employment. Rather, creativity shapes meaningful new forms of behavior recognized for their economic potential; the jobs then move to the people. When viewed from the perspective of anchor institutions, economic growth occurs not just from business development, but also from the civic engagement of key organizations that promote a culture that fosters creativity, diversity, and tolerance.

8.15 Attracting Talent: Creative Class Theory

In terms of talent, higher education institutions attract students, faculty, and administrators. Institutions with a reputation for fostering industry partnerships might also influence the location of surrounding businesses. When integrated with other components of the major cities, higher education institutions become the creative hub for economic development (Florida et al., 2006). The perception of higher education institutions as creative hubs is central to documenting a region's brain gain index (Mountford, 1997; Stark, 2003; Vidal, 1998) or creativity index (Florida, 2005; Kong & O'Connor, 2009). The former illustrates the transfer of human capital resources between different regions. The spatial influence of a concentration of human capital stimulates economic development as a high collection of college graduates increases wages and overall economic activity (Domina, 2006). The index is not solely determined on the residence of a single college-educated or high skilled worker, but rather, the overall increase (or decrease) in population and the percentage of those with a college degree or other particular skillsets. The creativity index examines indicators of technology, talent, and tolerance through an analysis of a city-region's skilled workforce, the representation of high-technology industry, the

number of patented innovations per capita, and the percentage of the population who identify with (and are open to) diverse lifestyles (Florida, 2005).

8.16 Challenges for Researchers in Using the Creative Class Theory

Despite its popularity with policymakers, urban planners, and the general public (Center for Cultural Policy Research, 2003; Eakin, 2002; Martin-Brelot, Grossetti, Eckert, Gritsai, & Kovacs, 2010; Wiesand & Sondermann, 2005), the concept of the creative class and its relationship to economic growth within large urban cities is not immune from criticism. Some economists believe various data on economic development support the notion that city-regions with a skilled workforce, healthy infrastructure, and an engaged market can find increased economic growth (Florida, 2005; Glaeser, 2011). Others argue that findings and additional analyses suggest that these attributes do not cause economic growth, but rather a city may offer a setting where risk is reduced and productivity can be enhanced, which are crucial ingredients for industry success (Bontje & Musterd, 2009; Peck, 2005; Puga, 2010; Shearmur, 2012). Skeptics also question the legitimacy of the creative class argument citing the limited empirical basis for the work and the lack of consideration of historical context (Hall, 2004; Peck, 2005; Sawicky, 2003; Shearmur, 2012). Critics point to two weaknesses in the relationship between the creative class and local economic advantages. First, the empirical evidence supporting the relationship between desirable amenities such as parks, restaurants, and high-end development is weak (Storper & Manville, 2006). Second, economic growth cannot be explained solely by understanding the needs and behavior of the creative class, but must also consider labor demand and industry preferences (Peck, 2005).

The question of which came first—the university or the business—challenges researchers in their understanding of local and regional economic development. The debate over the casual inferences aside, the key point for higher education researchers is to consider the role of higher education institutions in attracting the creative class, providing amenities, and developing an infrastructure supportive of creative work specifically and knowledge-based work more generally. By better understanding the role of colleges and universities in these elements of the creative class theory, higher education scholars can provide evidence on ways universities engage in these activities and better data for economists seeking to unpack the causal mechanisms at work in supporting creative cities.

Further, defining the creative class proves difficult. Florida (2002, 2005, 2006) describes the creative class as the individuals in occupations that support innovation (such as computer programming, engineering, science, etc.) in addition to creative professionals (in such sectors as healthcare, education, law, business, etc.) who hold advanced degrees. However, Markusen (2006), in a study of artists as an example of creative occupations, argues that clusters of such workers do little to demonstrate

creativity, but rather illustrate high human capital as indicated by numbers of years of higher education. Her findings reveal that artists demonstrate more complexity than described by Florida in their formation, location, urban impact, and politics. Higher education scholars can contribute to the knowledge in this area by considering two separate but related questions. First, how do students and later graduates differ by discipline, degree level, and demographically? This information could help clarify differences between occupations within the creative class. Second, how does institutional activity differ based on the diversity of academic programs? For example, do institutions with more STEM programs engage in public service activities in their communities differently than liberal arts colleges? As researchers tease out the ways a diversity of academic programs influence institutional activity, the resulting knowledge would be useful in classifying and describing how programmatic diversity contributes to the ways higher education functions as an anchor institution and promotes city development.

The literature also fails to fully resolve if low-income workers benefit from the higher wages earned by the creative class within a city. Future researchers should consider how economic and social growth of a large metropolitan city may accrue to the population unequally or unevenly. Florida and Mellander (2014) suggest that, if low-income workers earn higher wages in a creative region than in a non-creative region, this increase may be undercut by higher costs of living, including housing and food. The conceptual argument is that the trickle-down benefits of supporting the creative class grow the broader urban economy, but research has not yet determined how or why this trickle-down may occur. When workers are physically isolated from job opportunities or confined to areas with little to no industry, economic growth spreads unevenly across the region (Hanson, Kominiak, & Carlin, 1997; Ihlanfeldt & Sjoquist, 1998).

8.17 Human Capital, Labor Markets, and Student Migration

The description of a creative economy as envisioned by (Florida, 2002) provides insight into the structure of a city desired by many policymakers (Eakin, 2002). In creative cities, newcomers can quickly find communities where they have a shared identity. An increased likelihood of matches between worker skills and industry needs in a labor market results in higher productivity and wages (Moretti, 2012). Individuals also have a higher chance of finding another job in the event of unemployment. Diversity is important for the knowledge creative process by creating more possibilities for ideas and people to interact (Wedemeier, 2009). In addition, these cities possess soft conditions or the amenities and high quality of life (Musterd, Bontje, Chapain, Kovacs, & Murie, 2007) that are perceived as particularly vital to local culture. Larger cities that have a higher education institution hold probable advantages to the development of a creative economy, largely due to the role of

higher education institutions in promoting human capital. Polese (2009) argues that two parallel processes are involved, as highly educated knowledge workers move into rather than out of large cities and larger cities (with more and/or larger higher education institutions) produce more university graduates.

In an examination of the labor pool in 38 U.S. metropolitan city economies, Feser (2003) illustrates how a broad but complementary set of industries strengthens employment opportunities as well as the regional economy. Identifying occupational characteristics such as production and processing, economics and accounting, design, engineering and technology, and management allow for the grouping of occupations based on the skillset of the worker. Among the occupational clusters identified by Feser (2003) are artists and performers in Los Angeles and New York; life scientists in Boston; computer engineers in Austin; and financial services personnel in San Francisco. While these complementary industries form a knowledge network within the city, they also provide multiple opportunities for employment.

In order to better understand the flow of human capital, scholars developed the spatial mismatch hypothesis (Ihlanfeldt & Sjoquist, 1998), which suggests that employment and income levels are influenced by where people live and the proximity to job opportunities. Examination of intra-metropolitan labor markets reveals clear patterns by race, ethnicity, and income level (Hanson et al., 1997) and raises questions about how the spatial distribution of jobs explains high unemployment in urban central cores (Raphael, 1998; Thomas, 1998; Thompson, 1997; Zhang, 1998). Ihlanfeldt and Sjoquist (1998) review the research literature and conclude that there are fewer jobs per workers in areas with a high percentage of African-American residents as compared to areas with a high percentage of white residents (Gabriel & Rosenthal, 1996; McLafferty & Preston, 1992). These issues are complicated by questions of housing discrimination, limited public transportation options, and employment discrimination. Well-researched limits on how far people are willing and able to geographically travel for a job based on the income from the job (Gabriel & Rosenthal), the type of job (McLafferty & Preston, 1996), and the cost of commuting (Sanchez, 1999) add additional complexity to questions about city-region development.

For higher education scholars, improving understanding of labor market trends within a large urban city could prove useful in explaining students' decisions to attend postsecondary education. Future research might consider the interplay between job opportunities and income levels and how these variables influence higher education attendance. Research could also inform understanding of how a student's experience in higher education influences migration after graduation. This line of research would help to inform understanding of whether and how recruiting and retaining individuals with high educational attainment drives a city's growth and development. Also useful would be to improve knowledge of whether a student's experience while attending higher education influences where they live after graduation. Among the potentially fruitful question is: does participation in a co-op program or internship increase the likelihood of a student remaining in a city?

Higher education researchers can also consider the policy levers city leaders may use to retain students and limit a city's brain drain. Existing research largely consid-

ers student and state level factors that influence student migration (L. Zhang & Ness, 2010). Perna and Titus (2004) found an increase in state appropriations encouraged higher education enrollment of students from outside the state. In a study using a two-stage least-squares model, Baryla and Dotterweich (2001) found students are not concerned about price, but with academic quality and favorable post-graduation employment prospects. Future higher education researchers should explore the dynamics involved in academic quality and post-graduation employment so as to determine ways for cities to encourage and support these two factors and consequently advance their development. As additional studies build the knowledge base in these areas, scholars will be able to answer the key questions outlined and thus provide better specificity to the theories and empirical understanding related to the creative class theory.

8.18 Higher Education's Influence on Economic Geography

A discussion of economic development and the role of anchor institutions within urban settings is best framed by considerations of local social, economic, historical, and political contexts (Marquis & Battilana, 2009). Economic geography is a branch of economics that considers the location and organization of economic activity within geographic space including concepts such as agglomeration economies, gentrification, and urban economics. Economist Paul Krugman (1991) studies traits of economic geography and concludes that understanding local specialization offers tremendous insight into the drivers of regional growth. Moreover, he finds that the concentration of production in particular spaces is the most noteworthy feature of the geography of economic activity. The economic base serves as a foundation for new growth and development. Local conditions such as employment rates, employment by sector, and local gross domestic product are fundamental determinants of economic growth and change. Higher education institutions contribute to this process directly as well as indirectly by spending money locally, hiring local workers, and increasing the local level of human capital (Feldman, 1994b). Florax (1992) identifies the substantial regional effects of a university (see Table 8.3).

The “knowledge spillover” from colleges and universities influences local communities through the flow of knowledge into and out of the institution (Florax, 1992; Oort, 2002). One way that knowledge spillover occurs is through a codified process, such as patent development. Product innovations tend to cluster along geographic lines and are typically reflective of the presence of higher education institutions (Feldman, 1994a). Innovative discoveries do not travel on a linear path from the research laboratory to the store shelves.

In order to understand the impact of university behavior, scholars consider the presence of private industry, or private research and development sectors (Oort, 2002). Geographic clusters of related industries in large U.S. city-regions such as Dallas-Fort Worth, Austin, Raleigh-Durham, Denver, and Portland suggest that knowledge-exchange networks can facilitate positive economic impacts and that

Table 8.3 Classification and examples of the regional effects of the university

Regional effect upon:	Example
Politics	Changes in the political structure, an increase in citizen participation, improvement in the organization of political processes
Demography	Effects upon population growth, population structure and upon mobility
Economy	Effects upon regional income, industrial structure, job market, and labor mobility
Infrastructure	Effects upon housing, traffic, healthcare services, retail
Culture	Greater offer in cultural goods, influence upon cultural environment
Attractiveness	Influence upon the region’s image, regional identity
Education	Effects upon participation rate, changes in its quality
Social aspects	Effects upon the quality of life, the influence of the students, influence upon the region’s image and regional identity

higher education institutions might anchor these networks. Higher education institutions serve as a key ingredient by promoting regional growth through their knowledge networks (Florax, 1992), but the presence of (and interaction among) other kinds of regional institutions can support this growth.

This influence is especially evident in industries that require new economic knowledge (Feldman & Audretsch, 1999). For example, a larger effect of knowledge spillover has been found in the electronics and instruments industry than in pharmaceuticals and chemical industries (Anselin, Varga, & Acs, 1997). Institutional prestige is also important in the collaboration between higher education and different industries. As Laursen, Reichstein, and Salter (2011) found, industries are more inclined to collaborate with a higher-tier academic institution, particularly when the institution is located in close proximity.

8.19 Measuring Economic Impact

Cities may leverage the technical expertise of their universities to recruit high-level research, science, and technology based businesses by building on the research and academic programs of the universities. Employers moving to a new city may bring their most highly skilled and knowledgeable workers with them. Yet, these firms require a sufficient locally educated and trained workforce, which is the role of higher education (Power et al., 2010). Power and colleagues suggest that education levels within a region are a key indicator of economic growth, since businesses seek to locate in areas with a ready workforce and higher education levels are associated with higher income levels.

The economic impact of higher education institutions can be classified and measured in several different ways (Felsenstein, 1996; Stokes & Coomes, 1998). Table 8.4 summarizes examples of these approaches.

Table 8.4 Classification and examples of economic effects of the universities

Economic Effects:	Example
Employment at the university	Number of university jobs and related institutions
University income	State contributions, fees, benefits arising from book sales, etc.
University expenditures	Purchase of goods and services of the university
Income and expenditures of the university employees	Wages and salaries, social security costs expenses in businesses, entertainment and culture, and public transportation
Effects on the job market	Production of credentials and influence on productivity
Generation of businesses	Companies created by university students and employees, with or without employment knowledge and technology
Knowledge marketing	The sale of knowledge in a variety of ways: from ideas, courses and patents

Economic impact studies seek to measure these outcomes. Institutions themselves conduct many of the studies of this nature in an effort to demonstrate their value to the community. The challenge of university impact studies is determining what specifically constitutes an economic impact. Possible impacts include financial resources, which account for monies that flow into an institution and their subsequent impact elsewhere, and gross regional product, which examine the total value of a particular industry (Christophersen, Nadreau, & Olanie, 2014). Determining economic impact requires identifying the net change of a region’s economy based on what the economy would like without the institution being studied (Watson, Wilson, Thilmany, & Winter, 2007).

Another approach to measuring the economic impact of higher education institutions on large metropolitan cities is through university-induced growth, or examinations of how higher education institutions contribute to economic growth processes (Felsenstein, 1996). This growth is evident in multiple sectors, including small businesses, service industries, construction and real estate, and start-up companies. In a study of 300 start-up companies developed at Canadian research universities since 1995, Clayman and Holbrook (2003) noted that the majority of companies were still operating a decade later, and the majority were located in close proximity to the institution at which they were founded.

Higher education institutions positively contribute to local economic growth, especially in terms of the supply and demand for skilled human capital (Abel & Deitz, 2011b). This supply and demand can be seen in the labor market surrounding the institution. Degree production and research activities of higher education have a small positive relationship on a city’s level of human capital (Abel & Deitz, 2011a). Cities may see indirect human capital impacts from local universities as a result of increasing the overall education level (Siegfried, Sanderson, & McHenry, 2007). Using longitudinal data to estimate a model of non-random selection of a city’s workers, Moretti (2004) found that a 1 % point increase in college graduates influenced high school drop-outs’ wages (an increase of 1.9 %) as well as those for high school graduates (an increase of 1.6 %). It is not only the production of skilled

human capital that enhances cities, but also the fields, disciplines, or occupations in which the graduates are trained. Graduates in STEM fields, for instance, engage in higher levels of economic activity that raise the wages of other workers in the same labor market than do graduates from non-STEM fields (Winters, 2014).

Spatial clustering theory offers insight into economic impact by focusing on groups of organizations that share similar characteristics, interests, and motivations (Felsenstein, 1996). In an era of academic capitalism, higher education institutions operate closely and collaboratively with a network of other regional stakeholders (Slaughter & Rhoades, 2004). These relationships may be explicitly defined through organizational decision-making or result from spatial proximity and the presence of permeable organizational boundaries. As an anchor institution, the position of the university is of key importance for surrounding organizations. Higher education generates a diffusive fertilizing influence on the regional economy, stimulating growth and innovation through the spillover of knowledge, ideas, money, and people. Even if a university does not actively seek to promote economic activity, institutional policies and decisions may heavily impact a metropolitan economy (Felsenstein, 1996). Like much of the research on anchor institutions, empirical analyses of this perspective have proven challenging. In addition to the direct interaction between the institution and the economy, the intervening influence of the metropolitan area as well as the match between economic behavior and regional attributes influence outcomes.

Higher education's economic impact can also be understood through the behavior of students. Students are often valuable users of culture and recreational activities providing a reliable base of consumers of these services (Wynne & O'Connor, 1998). The constant presence of students provides a base of support upon which a city-region's business, entertainment, and nonprofit organizations can rely. By ensuring a base level of support, businesses, amenities, and services may grow, benefitting a city's population more broadly (Paul Chatterton, 1999, 2000; Elliott, Francis, Humphreys, & Istance, 1996; Hall, 1997; Kemp, 2013). Moreover, through academic programs, extracurricular activities, and social engagement, students serve as significant producers of a city's culture (Griffiths, Bassett, & Smith, 1999).

8.20 Negative Economic Impacts of Higher Education on Cities

Universities and their students may also create problems and challenges for major city-regions (Gumprecht, 2003; Kemp, 2013; Russo et al., 2007). A case study of the University of Cincinnati (McGirr et al., 2003) offers insight into how rapid growth in student enrollment in the 1960s negatively influenced the surrounding neighborhood. As part of campus expansion, street grids were re-designed and housing stock decreased, increasing the commute time of students and staff. Overall, the neighborhoods surrounding the university have slowly, yet dramatically,

deteriorated (McGirr et al., 2003). The authors point to a rapid decline in owner-occupied housing as well as the failure of dry cleaning, hardware, and other local businesses by the mid-1990s, at which time the university and the city began conversations about neighborhood revitalization. As a result of these efforts, both UC and the city prioritize neighborhood culture, collaborative goals, the recycling of existing institutional space, and more partnerships between the university and private owners (McGirr et al., 2003). In a study of 15 California college towns, the presence of a university imposed negative financial implications including lower property tax values and increased expenditures for services such as police and parks and recreation (Baker-Minkel, Moody, & Kieser, 2004). Many cities have expressed frustration with property tax exceptions for universities and have negotiated or demanded payments from institutions in lieu of taxes (Brody, 2002; Fischer, 2010).

Students' demand and economic behaviors can hurt weaker sectors of a city-region's economy. For example, student influence on housing availability (such as when undergraduate students live in the community) represents an oft-cited challenge in town-gown relations (Groves et al., 2003; Hubbard, 2009; Macintyre, 2003). Patterns of migration, income availability, and expectations of students can differ greatly from the rest of a city-region's population. In a study of white working class neighborhoods in England, Beider (2011) found that local residents believed students were distinctly "others," exhibiting different values and cultural norms compared to permanent residents. In contrast to what has been found about the broader positive economic effect of universities and students, research shows that the demand for cheaper, below-standard housing can potentially slow regeneration, hurt neighborhood revitalization efforts, and influence educational outcomes (Beider, 2011; Lipman, 2008).

8.21 Toward a Future Research Agenda

Higher education policy is inherently jurisdictional. The Center for American Progress and the Institute for Higher Education Policy identify 44 metropolitan areas that cross state boundaries and account for 29 % of national gross domestic product and 67.5 million people (Sponsler, Kienzl, & Wesaw, 2010). The considerable research focus on state level policy is understandable given that much of the funding to higher education comes from these governments. However, the economic, political, and social significance of multistate metropolitan areas and large cities more generally suggests the need to more adequately examine the higher education issues in these contexts.

Higher education research often fails to substantially consider questions related to the importance of place and geography. Local policies influence the environment of higher education institutions and should be given greater attention by higher education researchers. As one example, local policies in areas such as transportation and zoning may affect the work of universities. Funding priorities, social and cultural norms, and K-12 education quality may also impact higher education. We suggest

the need for a sustained line of inquiry that explores higher education issues within the context of cities as well as exploring the work of universities serving as anchor institutions; in the sections below, we build upon the future research questions introduced earlier in this chapter.

8.22 Considerations for Researchers

Within the U.S. context, city-regions have played a powerful role in the development of the social, political, and economic environments of people. One set of questions that future researchers should consider is how anchor institutions operate and what role they play in cities with varying levels of economic well-being. The competitiveness of city-regions relies on the support and encouragement of people, firms, and higher education institutions that create and utilize knowledge (Initiative for a Competitive Inner City, 2011; Porter, 2000; Turok, 2004). While globalization increases the importance of creating knowledge through research, locality remains a critical component for engaging and supporting the missions of higher education institutions (Audretsch & Feldman, 2003; Malecki, 2013).

To better conduct empirical analyses of anchor institutions, researchers need to improve or develop appropriate measures or proxies for university activities as part of the anchor institution mission such as the functions identified by Florax (1992) and noted in Table 8.2. Much of the available research uses limited measures of university activities including research funding, research expenditures, publications, or degrees awarded (Drucker & Goldstein, 2007). Potentially important criteria such as politics, attractiveness, and social aspects receive little attention in the literature. The challenge of measuring and quantifying these non-economic factors most likely contributes to the lack of attention. Despite the challenge of isolating these activities from others as well as the measurement difficulties, fully understanding the significance of universities as anchor institutions requires researchers to identify and create proxies for important non-economic activities.

Studies that examine particular programs or approaches by universities to support their cities should continue. Savan (2004) and Cantor et al. (2013) are two useful examples of case studies that consider specific university initiatives to support communities. Future research can use similar single case study approaches as modeled in these studies to explore in depth other ways universities influence their communities. The scholarly literature would also benefit from studies that further explore and explain how the culture, history, and tradition of cities and universities influence the activity and beliefs associated with the work of anchor institutions. By improving our understanding of the basic conditions under which universities and cities engage with one another, researchers can develop appropriate models and approaches for explaining anchor institution behavior.

Additional research is also needed to better understand the conceptual complexities of anchor institution effects and relationships. Pinheiro et al. (2012) built a theoretical framework from case studies of European cities. They describe the key

areas of engagement between universities and cities to include technology transfer, social services/continuing education, policy making, and cultural services/city life. Florax (1992), in a study of the regional impact of the University of Twente in the Netherlands using linear regression models, delineates examples of areas of the regional effects of a university. He identifies politics, demography, economy, infrastructure, culture, attractiveness, education, and social aspects. Similarly, Lambooy (1996) and later Pellenbarg (2005) describe categories of the demand and supply effects of universities. Stokes and Coomes (1998) develop a typology of college impacts, and emphasize that impacts of knowledge are relevant, in addition to traditional economic measures such as employment or government revenues. The literature reviewed by Stokes and Coomes (1998) shows that economic effects such as university expenditures will be important predictors of economic growth in the short run, but knowledge and human capital growth likely have greater long term economic impacts for cities. This line of research is useful for understanding how job market changes and human capital growth that occur because of higher education's influence and anchor institution role can improve a city's economy.

Additional scholarly attention should consider how to better explain and predict higher education's influence on the flow of human capital. For example, the migration of students, faculty, and administrators may influence the impact of universities on their surrounding locales (Drucker & Goldstein, 2007). Explaining higher education's influence on the movement of human capital within cities and across regions would improve our knowledge of the spatial impacts of universities. Some studies examine student migration patterns (Blackwell, Cobb, & Weinberg, 2002; Felsenstein, 1995; Goldstein & Luger, 1992), but the research that exists on human migration focuses largely on student migration and particularly inflow (as student enrollment data is readily accessible). For instance, Goldstein and Luger (1992) use student and graduate data from the University of North Carolina at Chapel Hill to estimate the number of students employed in the region. Research about groups other than students remains limited, but would provide a more comprehensive understanding about how universities influence human capital in their cities and beyond.

8.23 Conceptual Frameworks

The economic theory of human capital has been the primary conceptual framework embraced by scholars studying the impacts of anchor institutions and higher education institutions on cities (Abel & Deitz, 2011a, 2011b; Caragliu, Bo, & Nijkamp, 2011; Feser, 2003; Florida, 2002; Florida et al., 2006; Polese, 2009). Researchers that use other frames typically rely on stakeholder theory (Jongbloed et al., 2008; Russo et al., 2007) or other economic theories relying on spatial factors (Glaeser & Gottlieb, 2009; Martin-Brelot et al., 2010; McLafferty & Preston, 1992; Oort, 2002). However, these theories have limited ability to explain the specific actions of stakeholders or institutions. Rather, the theoretical approaches utilized to study the

issues in this chapter are general theories that scholars apply to many organizations or economic issues. We propose that more nuanced theories are necessary to address the complexities involved with different universities serving as anchor institutions with a variety of structures, processes, and missions.

Neo-institutional theory has been applied in research examining the relationships and blurring boundaries between universities and industry (Lam, 2010). For example, Baldini, Fini, Grimaldi, and Sobrero (2014) model university patent activity framed by neo-institutional theory and find that isomorphic behaviors constrained university activities limiting the effectiveness of regulatory policies. Frameworks from organizational sociology or the sociology of knowledge may be valuable for better understanding how factors within the university such as faculty norms and rewards may influence the ability of a university to serve as an anchor institution. Sociological frameworks may be helpful in understanding the influence of power and resistance largely missing from the current literature on higher education's relationship with and impact on cities.

The economic theories used in the existing literature shed light on the economic impacts of universities and suggest the potential of universities to serve as anchor institutions. Future research built on sociological frameworks could complement these studies by examining institutional responses and organizational activity in this area. Studies using these additional frameworks could offer new and distinctive explanations of the extent to which universities support the economic and social development of cities.

8.24 Methodological Issues

In this section, we describe the major methodologies that can be used to examine the role of higher education institutions as anchor institutions. More specifically, we discuss the strengths and weakness of four methodological approaches that build on the current research available: economic impact studies, longitudinal, comparative case, and quasi-experimental studies. The limitation of any single-method creates a challenge to approaching the complex questions inherent in investigating the holistic impact of anchor institutions. In order to build on prior research to examine and test the impacts of universities as anchor institutions, researchers should consider the benefits of a variety of methodological approaches.

In addition to the specific methodologies below, researchers should consider the different units of analysis needed to understand the role of universities as anchor institutions. First, there is the larger and comprehensive analysis of the anchor institution as an organization. Typical outcomes that might be measured with the anchor institution as the unit of analysis include income, the job market, or changes in education level. Within the anchor institution and at a more micro level are outcomes pertaining to the particular activities, programs, or initiative that an anchor institution might engage in that impact the city. Examples of relevant outcomes at

this level might include impacts of service-learning programs or the influence of arts programs on the cultural environment of a city.

Economic Impact Studies Scholars have utilized a number of different approaches to measure the effectiveness of universities in driving economic development. Much of the research in this area focuses on economic impact studies, that is, studies measuring an increase in the economic activity of a region based on the presence of a university. A sizeable number of economic impact studies are commissioned by universities as a justification for public funding (Drucker & Goldstein, 2007). Since the seminal work of Caffrey and Isaacs (1971) in developing a method for studying economic impact, most economic impact studies follow a similar approach analyzing components such as impact on government revenues, income levels, and business volume.

Several characteristics limit traditional economic impact studies. First, the methodology fails to fully consider long-term economic impacts such as improved worker's skills or technology transfer (Elliott, Levin, & Meisel, 1988). In addition, economic impact studies struggle to determine a causal link between university activities and specific outcomes. For instance, an outcome such as a city's level of technology firms and activity depends on many external factors apart from the university.

While other quantitative approaches to measuring economic impact exist such as benefit-cost analysis, a lack of appropriate data or the impossibility of assigning impacts to particular programs or institutions limits the approaches available to researchers (Bessette, 2003). In response to these challenges, scholars have sought to focus on qualitative data using information gained from interviews along with administrative data (Feldman, 1994b; Feldman & Desrochers, 2003; Glasson, 2003). As an example of this type of study, Keane and Allison (1999) use this methodological approach to study higher education culture, how embedded a university is in the region, and the quality of linkages between university and industry.

Despite the difficulties with economic impact studies, the approach remains the most common way to measure the local economic impact of higher education institutions (Stokes & Coomes, 1998). Given the popularity of this approach, researchers should continue to refine how to best conduct these studies to create better and more reliable findings. In particular, researchers can help develop a comprehensive list of important variables and how these could be applied to different types of institutions (e.g., research versus teaching universities). Developing multiple criteria could help future researchers undertaking these types of studies for specific institution reports or peer-reviewed scholarship.

Longitudinal Studies A type of observational research, longitudinal studies present the opportunity to examine the long-term effects of higher education institutions on their surrounding communities. To date, little research of this type exists regarding anchor institutions although some researchers note that a single snapshot view of institutional impact is not sufficient (Friedman et al., 2013). Unique to longitudinal studies is the benefit of identifying patterns that determine or explain long-term changes and impacts. Given that one of the key features of anchor institutions is

their continuing commitment to their surrounding communities (Taylor & Luter, 2013), longitudinal research designs allow researchers to examine the longer-term impacts that the conceptual literature (Birch et al., 2013; McCuan, 2007; Taylor & Luter, 2013) posits anchor institutions have on cities.

Comparative Case Studies A potentially useful design for understanding the impact of anchor institutions on the social and economic development of cities is comparative case studies. As a design that includes two or more parallel cases, this approach can produce theoretical insights into how and why programmatic or policy efforts succeed or fail to generate anticipated results (Merriam, 1998; Stake, 1994). Much of the existing research on anchor institutions focuses on single site case studies (Benneworth & Hospers, 2007; Camden Higher Education and Health Care Task Force, 2008; Cantor et al., 2013), which provide rich descriptions of a given setting. Single case studies allow researchers to collect data on a variety of aspects of anchor institutions and provide the most complete understanding of a particular university or context (Drucker & Goldstein, 2007).

Yet, disadvantages to the single case approach exist, including the lack of explanatory potential that comparisons across multiple cases would offer. Comparative case studies can be designed to shed light on the similarities and differences in how anchor institutions impact and interact with their communities. For example, Saxenian (1994) conducted comparison case studies of Route 128 and Silicon Valley using ethnographic data to help explain the differences between the two regions. This type of research design could aid in developing schema to understand the comprehensive impact and implications of universities operating as anchor institutions. The theoretical and conceptual frameworks developed through this type of qualitative analysis provide an essential base that can then be tested through quasi-experimental designs.

Quasi-Experimental Given the implausibility of randomly assigning higher education institutions to city-regions, quasi-experimental designs hold potential for studying the impact of anchor institutions. This methodology has been used occasionally in studies of regions and economic development (Drucker & Goldstein, 2007; Rogers & Tao, 2004). At its core, a quasi-experimental study allows for the measurement of the impact of a particular “treatment” (a higher education anchor institution) on some outcome of a city (Campbell, Stanely, & Gage, 1966). Before utilizing statistical controls for any possible intervening factors, researchers attempt to control for these factors by manipulating the sampling, time period, and study population to minimize or maximize variation in factors to limit the probability of omitted variable biases (Drucker & Goldstein, 2007). Although anchor institutions are not randomly assigned, issues of validity are handled by statistically accounting for non-random assignment (Isserman & Merrifield, 1982). The design uses proxies for the counterfactual (comparison group) to identify the effects of the treatment.

Several of the studies noted earlier in this section include useful measures of such constructs as economic growth, population changes, and tax revenue (Glaeser & Gottlieb, 2009; Initiative for a Competitive Inner City, 2011; Serang et al., 2010).

Goldstein and Renault (2004) used a quasi-experimental design to estimate the contributions of higher education institutions to economic development. They compared growth rates of wages between 1969–1986 and 1986–1998 and concluded that university entrepreneurial activities create more economic impact than other university functions. The use of quasi-experimental designs presents advantages over other types of research for considering the complex impacts of anchor institutions. The design controls for many events happening simultaneously and allows for the use of statistical tests for verifying the appropriateness of the control group.

8.25 Research Questions to Guide Future Studies

Guided by the theoretical and methodological issues outlined above, in this section we offer research questions for future researchers to examine in order to improve understanding of the relationship between higher education institutions and city-regions.

8.26 What Are the Systemic Effects of the University on the Economic and Social Development of Large Metropolitan Cities?

As noted throughout this chapter, many authors (Birch et al., 2013; Goddard et al., 2014; Taylor & Luter, 2013) extol the virtues of universities serving as anchor institutions to benefit the economic and social development of cities. Despite these claims, researchers need to better categorize what distinguishes a university acting as an anchor institution from a university not playing this role. Are there qualitative or quantitative differences between institutions serving this role and those that are not? Additionally, as Taylor and Luter note, research does not sufficiently define what makes an organization an anchor institution. While the research literature frequently highlights the potential for universities to play this role in cities, scholarship has not yet sufficiently tested these claims empirically.

8.27 How Do Different University Programs and Initiatives Impact Various Outcomes in Large Metropolitan Cities?

While continued examination of specific programs and activities proves beneficial to the field, it is also crucial that researchers provide a larger contextualization of these efforts. Such an approach would consider the broader social, economic,

political, historical, and other environmental factors influencing the university's role as an anchor institution within a city. For example, Harkavy and Zuckerman (1999) study urban employment by anchor institutions to measurably demonstrate the influence on a city's economy. Additional research along these lines measuring and classifying specific university effects can assist with clearly pinpointing how a university impacts a city. Moreover, do the ways in which higher education institutions influence a city differ based on the circumstances and characteristics of both the university and city? For instance, do the types of businesses and population located in the city as well as the level of research activity on a campus could influence how major urban cities and universities interact? Research that explores how the problems facing large metropolitan cities influence the role of higher education may provide a more nuanced and complete understanding of how the university serves as an anchor institution as well as the short and long term impacts of the university on large urban cities.

8.28 What Are the Factors and Policies That Foster and Induce Urban Universities to Serve as Anchor Institutions?

Policy studies can provide useful data on how to incentivize higher education institutions to serve as key anchor institutions in their communities. Scholars should explore the ways various local, state, and federal policies and regulations influence university activity supporting economic and social development. We know very little about the policies enacted by large metropolitan cities that might influence university behavior. Moreover, research has not considered possible policy interventions that cities might undertake to support or extend the influence of university activities. For example, should cities provide direct support for university activities known to create economic and social benefit? Or, should cities provide property tax abatements for university graduates to entice them to remain in the city? Can cities provide funding for university cultural activities to support their development? How can cities leverage a university's reputation to improve their attractiveness to outside businesses or individuals looking to relocate? These questions are just a small sample of policy interventions that cities could implement. Through related additional research, scholars can inform the direction city leaders should take.

Understanding how municipal policy influences universities holds the potential of connecting existing areas of research within the study of higher education. Many researchers explore the effects of public policy at the state and federal levels on outcomes related to college access and affordability (Heller, 2001, 2002; Perna & Titus, 2004). To expand the research base, researchers may apply existing analytic techniques and theoretical approaches toward studies of local policy contexts. Scholarship has not considered if studies from other policy contexts are applicable

to local settings. For instance, studies examining state policy changes on financial accessibility may be useful for cities looking to enact policies to support higher education access. Additional research on local policies can demonstrate the value of institutions serving as anchor institutions (Pinheiro et al., 2012). Higher education researchers can also build on existing excitement for the potential of anchor institutions and related ideas within the policy community. With the desire to promote local economic and social development of cities, researchers may find a receptive audience among local policy makers seeking to improve their locales.

8.29 Can for-Profit Higher Education Institutions Serve as Anchor Institutions?

As large, locally embedded organizations that have an economic and civic self-interest in their community, anchor institutions have the potential to serve vital roles in city development. Some observers (Benson et al., 2007) suggest that for-profit businesses are by nature less committed to a place and should not be considered anchors due to a lack of trust in their long term desire to stay in a location (Taylor & Luter, 2013), although other scholars note that industries may be locally dependent in ways that necessitate their permanent location in a city-region (Cox & Mair, 1988; Rosentraub, 2010). As one example, professional sporting teams have occasionally moved from one city to another, but are commonly identified with a specific community. Older Americans might still consider the Dodgers baseball team to have a Brooklyn connection, although the team moved to Los Angeles in 1957. Yet, even long-term partnerships with the local community may not be enough for a for-profit organization to remain in a region (Anchor Institution Task Anchor Institution Task Force, 2009). The complexity involved in how a largely place-based organization decides to leave remains unclear. Additionally, the influence of corporate status in decisions to move requires further research to better explain institutional behavior.

We suggest that scholars examine whether for-profit higher education institutions could serve as anchor institutions. Many will not likely have sufficient size within their locales, a necessary condition to have substantial influence over the economic and social development of the city (Taylor & Luter, 2013). Scholars should probe the degree to which for-profit higher education believes in or engages with a social justice mission also considered a frequent aspect of many anchor institutions. The scholarship on the economic impact of higher education focuses on the non-profit sector (Abel & Deitz, 2011b; Anselin et al., 1997; Chatterton & Goddard, 2003; Porter, 2000; Stokes & Coomes, 1998). Studies examining the for-profit sectors influence could prove useful not only for understanding whether for-profit higher education can serve as an anchor institution, but also expand understanding of the ways all higher education institutions impact the development of their cities.

8.30 What Role Can and Should Issues of Social Justice Play in Considering the Work of Urban Universities as Anchor Institutions?

The field of higher education could benefit from a deeper understanding of how issues of race, class, and poverty influence the work of anchor institutions. Maurrasse (2001) and Hodges and Dubb (2012) argue that a social justice orientation is central to the work of anchor institutions because of the ways this emphasis transforms a university's culture, values, and operations. However, studies that explore the interplay between race, class, poverty, and anchor institutions remain few (Webber & Karlstrom, 2009). As noted from the review of the literature, two important questions remain unresolved by the research. First, how important is a social justice mission for universities to serve as anchor institutions? Second, do universities have a responsibility to serve as an anchor institution and as an advocate for social justice?

Noted anchor institution researchers Ira Harkavy and colleagues (Benson et al., 2007; Harkavy & Zuckerman, 1999) argue that higher education should focus on issues of social responsibility. They believe that higher education institutions as social organizations have a moral responsibility to support social justice in their communities. However, other authors (Bok, 1982; Saltmarsh & Hartley, 2010) contend that social justice may serve as a part of an institution's mission, but this is not a mandate.

To date, little research examines the views of institutional leaders or policy makers regarding the necessity of a larger social purpose for higher education. In addition, the field lacks clear descriptions or categories of the extent to which universities participate in a civic mission or impact social justice issues in their cities. For example, the Carnegie Foundation created the Community Engagement designation in an attempt to provide a vehicle for a broader classification of higher education institutions (Driscoll, 2008, 2009). Yet, the categorization classification is so broad that it fails to consider the depth of activity or the centrality of civic engagement to a university's mission or purpose. Researchers can engage in single and comparative case studies to help unpack how much serving a civic engagement role or social justice mission motivates university activities. Interviews and ethnographic data could provide information regarding the ways faculty and administrators view and act on a civic or social justice orientation. Beyond case studies, scholars should measure to what extent the impacts of a university serving as an anchor institution differ based on the centrality of a civic mission. This line of research could help determine if a service orientation is required for performance as an anchor institution or simply a component of the mission of some institutions.

8.31 Conclusion

In order to fully understand how universities serve as anchor institutions, higher education scholars should consider factors, structures, and processes outside of higher education. Researchers seeking to understand the role of higher education as anchor institutions supporting large urban cities should consider the conceptual and methodological issues that we raise in this chapter. We suggest that understanding the behavior of universities as anchor institutions requires better understanding of the complexity surrounding the broader political, economic, and social influences in local, national, and international contexts. Specifically, higher education scholars should consider the how global and local forces interact and influence the institutional behavior and activity of universities.

Throughout history, the world's great cities have been hubs of innovation and creativity. From the earliest communities through modern day, cities have been built by and for a great variety of societies. Additionally, universities prove to be inherently stable organizations even during times of economic downturn. This stability makes universities useful institutions around which to develop economic strategies; city leaders can rely on the financial steadiness of universities even during poor economic situations (Goddard et al., 2014). Future research can help the field better understand the various ways large metropolitan cities and universities interact as mitigated by history, context, and culture. This information will not only improve practice and policy, but also expand the understanding of the role of universities in supporting the social and economic development of cities.

Existing research demonstrates the power and potential of higher education to help grow and develop major metropolitan city-regions (Abel & Deitz, 2011b; Anselin et al., 1997; Beck et al., 1995; Benneworth & Hospers, 2007; Chatterton & Goddard, 2003; Elliott et al., 1988; Feldman, 1994b; Pellenbarg, 2005; Stokes & Coomes, 1998). The linkages between institutions and their communities run deep and will likely continue to develop with the changes resulting from the knowledge economy. The review of research in this chapter suggests universities have impacts on their cities and hold potential value as anchor institutions, which warrant additional scholarship to better understand the ways universities and anchor institutions may operate and support a city's social and economic development. In particular, by examining the influence of place and geography studies of the anchor institutions could provide additional insights into the complex and major issues facing contemporary higher education including college completion, vocational training, innovation, accountability, and funding.

Although there is considerable variation in the quality and confidence in the claims of the potential of universities to serve as anchor institutions, the majority of the research suggests that universities have substantial impacts on their cities. The complexity of city-university interactions presents theoretical and methodological challenges that scholars will need to address in order to more fully develop our

understanding of these issues. The challenges and issues related to the local and global trend of escalating urbanicity only increases the need to better understand how cities and higher education interact. There is certainly sufficient evidence of the benefits of higher education to cities to warrant a sustained research agenda on the economic and social impacts of universities serving as anchor institutions.

References

- Abel, J., & Deitz, R. (2011a). Do colleges and universities increase their region's human capital? *Journal of Economic Geography*, 12(3), 667–691.
- Abel, J., & Deitz, R. (2011b). The role of colleges and universities in building local human capital. *Current Issues in Economics and Finance*, 17(6), 1–7.
- American Council on Education. (2012). *The American college president 2012*. Washington, DC: American Council on Education.
- Anchor Institution Task Force. (2009). *Anchor institutions as partners in building successful communities and local economies: A report*. Washington, DC: U.S. Department of Housing and Urban Development.
- Anselin, L., Varga, A., & Acs, Z. J. (1997). Local geographic spillovers between university research and high technology innovations. *Journal of Urban Economics*, 42(3), 422–448.
- Astin, A. W., & Vogelgesang, L. (2000). Comparing the effects of community services on service-learning. *Michigan Journal of Community Service Learning*, 7(1), 25–34.
- Audretsch, D. B. (1998). Agglomeration and the location of innovative activity. *Oxford Review of Economic Policy*, 14(2), 18–29.
- Audretsch, D. B., & Feldman, M. P. (2003). Small-firm strategic research partnerships: The case of biotechnology. *Technology Analysis & Strategic Management*, 15(2), 273–288.
- Baiocchi, G., & Lerner, J. (2007). Could participatory budgeting work in the United States? *The Good Society*, 16(1), 8–13.
- Baker-Minkel, K., Moody, J., & Kieser, W. (2004). Town and gown. *Economic Development Journal*, 7–9.
- Baldini, N., Fini, R., Grimaldi, R., & Sobrero, M. (2014). Organisational change and the institutionalisation of university patenting activity in Italy. *Minerva*, 52(1), 27–53.
- Baryla, E. A., & Dotterweich, D. (2001). Student migration: Do significant factors vary by region? *Education Economics*, 9(3), 269–280.
- Beck, R., Elliott, D., Meisel, J., & Wagner, M. (1995). Economic impact studies of regional public colleges and universities. *Growth and Change*, 26(2), 245–260.
- Beider, H. (2011). *Race, housing and community: Perspectives on policy and practice*. San Francisco: Wiley.
- Bender, T. (1988). *The university and the city: From medieval origins to the present*. New York: Oxford University Press.
- Benneworth, P., & Arbo, P. (2006). *Understanding the regional contribution of higher education institutions: A literature review*. Paris: OECD.
- Benneworth, P., & Hospers, G. J. (2007). The new economic geography of old industrial regions: Universities as global–local pipelines. *Environment and Planning C: Government and Policy*, 25(6), 779–802.
- Benson, L., & Harkavy, I. (1994). The university-assisted community school idea becomes a movement. *Universities & Community Schools*, 4, 5–8.
- Benson, L., Harkavy, I., & Puckett, J. (2007). *Dewey's dream*. Philadelphia: Temple University Press.

- Bercovitz, J., & Feldman, M. (2006). Entrepreneurial universities and technology transfer: A conceptual framework for understanding knowledge-based economic development. *Journal of Technology Transfer*, 31, 175–188.
- Berkes, F. (2009). Evolution of co-management: Role of knowledge generation, bridging organizations and social learning. *Journal of Environmental Management*, 90, 1692–1702.
- Besette, R. W. (2003). Measuring the economic impact of university-based research. *Journal of Technology Transfer*, 28, 355–361.
- Birch, E. (2007). The draw. *Next American City*, 15, 28.
- Birch, E. (2013). Anchor institutions and their megaregional influence. In S. Wachter & K. Zeuli (Eds.), *Revitalizing America's cities*. Philadelphia: University of Pennsylvania Press.
- Birch, E., Perry, D., & Taylor, H. L. (2013). Universities as anchor institutions. *Journal of Higher Education Outreach and Engagement*, 17(3), 7–15.
- Blackwell, M., Cobb, S., & Weinberg, D. (2002). The economic impact of educational institutions: Issues and methodology. *Economic Development Quarterly*, 16(1), 88–95.
- Bok, D. C. (1982). *Beyond the ivory tower: Social responsibilities of the modern university*. Cambridge, MA: Harvard University Press.
- Bontje, M., & Musterd, S. (2009). Creative industries, creative class, and competitiveness: Expert opinions critically appraised. *Geoforum*, 40(5), 843–852.
- Brody, E. (2002). *Property-tax exemption for charities: Mapping the battlefield*. Washington, DC: Urban Institute Press.
- Bureau of Labor Statistics. (2015). *Houston area economic summary*. Retrieved November 29, 2015 from http://www.bls.gov/regions/southwest/summary/blssummary_houston.pdf
- Burrows, J. (1999). Going beyond labels: A framework for profiling institutional stakeholders. *Contemporary Education*, 70(4), 5–10.
- Caffrey, J., & Isaacs, H. H. (1971). *Estimating the impact of a college or university on the local economy*. Washington, DC: American Council on Education.
- Caloghirou, Y., Tsakanikas, A., & Vonortas, N. S. (2001). University-industry cooperation in the context of the European framework programmes. *Journal of Technology Transfer*, 26(1–2), 153–161.
- Camden Higher Education Health Care Task Force. (2008). *A 5 year winning investment: Camden's anchor institutions provide jobs, services, and a bright future*. Camden, NJ: Author.
- Campbell, D. T., Stanely, J. C., & Gage, N. L. (1966). *Experimental and quasi-experimental design for research*. Chicago: R. McNally.
- Candell, A., & Jaffe, A. (1999). The regional economic impact of public research funding: A case study of Massachusetts. In L. M. Branscomb, F. Kodama, & R. Florida (Eds.), *Industrializing knowledge: University-industry linkages in Japan and the United States* (pp. 510–521). Cambridge, MA: MIT Press.
- Cantor, N., Englot, P., & Higgins, M. (2013). Making the work of anchor institutions stick: Building coalitions and collective expertise. *Journal of Higher Education Outreach and Engagement*, 17(3), 17–46.
- Caragliu, A., Bo, C. D., & Nijkamp, P. (2011). *A map of human capital in European cities*. Amsterdam, The Netherlands: Universiteit Amsterdam.
- Cash, D. W., Adger, W., Berkes, F., Garden, P., Lebel, L., Olsson, P., . . . Young, O. (2006). Scale and cross-scale dynamics: Governance and information in a multilevel world. *Ecology and Society*, 11(2), 8–17.
- Caves, R. E. (2000). *Creative industries: Contracts between art and commerce*. Boston: Harvard University Press.
- Center for Cultural Policy Research. (2003). *Baseline study on Hong Kong creative industries*. Hong Kong: Central Policy Unit, Special Administrative Region Government, University of Hong Kong.
- Chapain, C., & Lee, P. (2009). Can we plan the creative knowledge city? Perspectives from Western and Eastern Europe. *Built Environment*, 35(2), 157–164.

- Chatterton, P. (1999). University students and city centers-The formation of exclusive geographies: The case of Bristol, UK. *Geoforum*, 30(2), 117–133.
- Chatterton, P. (2000). The cultural role of universities in the community: Revisiting the cultural-community debate. *Environment and Planning A*, 32(1), 165–181.
- Chatterton, P., & Goddard, J. (2000). The response of higher education institutions to regional needs. *European Journal of Education*, 35(4), 475–496.
- Chatterton, P., & Goddard, J. (2003). The response of universities to regional needs. In F. Boekema, E. Kuypers, & R. Rutten (Eds.), *Economic geography of higher education: Knowledge, infrastructure, and learning regions* (pp. 19–41). London: Routledge.
- Christophersen, K., Nadreau, T., & Olanie, A. (2014). *The rights and wrongs of economic impact analysis for colleges and universities*. <http://www.economicmodeling.com/2014/01/07/the-rights-and-wrongs-of-economic-impact-analysis-for-colleges-and-universities/>
- Christopherson, S. (1999). *Regional workforce development strategies in “company towns”: The Rochester case*. Paper presented at the symposium on changing employment relations and new institutions of representation.
- Clark, B. R. (1998). *Creating entrepreneurial universities: Organizational pathways of transformation*. Oxford: Pergamon-Elsevier Science.
- Clayman, B. P., & Holbrook, J. A. (2003). The survival of university Spin-offs, and their relevance to regional development. Canadian Foundation for Innovation.
- Clifton, J. (2011). *The coming jobs wars*. New York: Gallup Press.
- Cox, K., & Mair, A. (1988). Locality and community in the politics of local economic development. *Annals of the Association of American Geographers*, 78(2), 307–325.
- Crum, T., Baker, J., Salinas, E., & Weber, R. (2015). *Building a people's budget*. Chicago: Great Cities Institute, University of Illinois at Chicago.
- Dahlstrand, A. L. (2007). Technology-based entrepreneurship and regional development: The case of Sweden. *European Business Review*, 19(5), 373–386.
- Dolfman, M. L., Wasser, S. F., & Bergman, B. (2007). The effects of Hurricane Katrina on the New Orleans economy. *Monthly Labor Review*, 130(6), 3–18.
- Domina, T. (2006). Brain drain and brain gain: Rising educational segregation in the United States, 1940–2000. *City & Community*, 5(4), 387–407.
- Doutriaux, J. (2003). University-industry linkages and the development of knowledge clusters in Canada. *Local Economy*, 18(1), 63–79.
- Driscoll, A. (2008). Carnegie's community-engagement classification: Intentions and insights. *Change*, 40(1), 38–41.
- Driscoll, A. (2009). Carnegie's new community engagement classification: Affirming higher education's role in community. *New Directions for Higher Education*, 2009, 5–12.
- Drucker, J., & Goldstein, H. (2007). Assessing the regional economic development impacts of universities: A review of current approaches. *International Regional Science Review*, 30(1), 20–46.
- Eakin, E. (2002, June 1). The cities and their new elite. *New York Times*, pp. B7, B9.
- Egedy, T., von Streit, A., & Bontje, M. (2013). Policies towards multi-layered cities and cluster development. In S. Musterd & Z. Kovacs (Eds.), *Place-making and policies for competitive cities*. Hoboken, NJ: Wiley Blackwell.
- Elliott, D., Levin, J. S., & Meisel, J. (1988). Measuring the economic impact of institutions of higher education. *Research in Higher Education*, 28(1), 17–33.
- Elliott, J., Francis, H., Humphreys, R., & Istance, D. (1996). *Communities and their universities: The challenge of lifelong learning*. London: Lawrence & Wishart.
- Feldman, M. P. (1994a). Knowledge complementarity and innovation. *Small Business Economics*, 6(3), 363–372.
- Feldman, M. P. (1994b). The university and economic development: The case of Johns Hopkins University and Baltimore. *Economic Development Quarterly*, 8(1), 67–76.
- Feldman, M. P., & Audretsch, D. B. (1999). Innovation in cities: Science-based diversity, specialization, and localized competition. *European Economic Review*, 43(2), 409–429.

- Feldman, M. P., & Desrochers, P. (2003). Research universities and local economic development: Lessons from the history of the Johns Hopkins University. *Industry and Innovation*, 10(1), 5–24.
- Felsenstein, D. (1995). Dealing with “induced migration” in university impact studies. *Research in Higher Education*, 36(4), 457–472.
- Felsenstein, D. (1996). The university in the metropolitan arena: Impacts and public policy implications. *Urban Studies*, 33(9), 1565–1680.
- Feser, E. (2003). What regions do rather than make: A proposed set of knowledge-base occupation clusters. *Urban Studies*, 40, 1937–1958.
- Fischer, K. (2010, November 29). As cities seek payments in lieu of taxes, colleges are urged to work out deals. *Chronicle of Higher Education*. Retrieved November 29, 2015 from <http://chronicle.com/article/article-content/125558/>
- Florax, R. (1992). *The university: A regional booster?* Aldershot, UK: Avebury.
- Florida, R. (2002). *The rise of the creative class: And how it's transforming work, leisure, community and everyday life*. New York: Basic Books.
- Florida, R. (2005). *The flight of the creative class*. New York: HarperCollins Publishers.
- Florida, R., Gates, G., Knudsen, B., & Stolarick, K. (2006). The university and the creative economy. Retrieved November 30, 2015 from http://www.creativeclass.typepad.com/thecreativityexchange/files/university_and_the_creative_economy.pdf
- Florida, R., & Mellander, C. (2014). The geography of inequality: Difference and determinants of wage and income inequality across US metros. *Regional Studies*, (ahead-of-print), 1–14.
- Folke, C., Hahn, T., Olsson, P., & Norberg, J. (2005). Adaptive governance of social-ecological systems. *Annual Review of Environment and Resources*, 30, 441–473.
- Fowkes, A. S. (1983). The economic impact of higher education in the Yorkshire and Humber-side region of England. *Higher Education*, 12, 591–596.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston: Pitman.
- Friedman, D., Perry, D., & Menendez, C. (2013). *The foundational role of the universities as anchor institutions in urban development*. Washington, DC: Coalition of Urban Serving Institutions.
- Friedman, T. (2007). *The world is flat 3.0: A brief history of the twenty-first century*. New York: Picador.
- Friedman, T. (2008). *Hot, flat, and crowded: Why we need a green revolution--and how it can renew America*. New York: Farrar, Straus and Giroux.
- Friedmann, J., & Wolff, G. (1982). World city formation: An agenda for research and action. *International Journal of Urban and Regional Research*, 6(3), 309–344.
- Fulbright-Anderson, K., Auspos, P., & Anderson, A. (2001). *Community involvement in partnerships with educational institutions, medical centers, and utility companies*. Aspen, CO: Annie E. Casey Foundation, Aspen Institute Roundtable on Comprehensive Community Initiatives.
- Gabriel, S. A., & Rosenthal, S. S. (1996). Commutes, neighborhood effects, and earnings: An analysis of racial discrimination and compensating differentials. *Journal of Urban Economics*, 40(1), 61–83.
- Gaffikin, F., & Morrissey, M. (2011). *Planning in divided cities: Collaborative shaping of contested space*. West Sussex, UK: Wiley-Blackwell.
- Geruson, R. (1994). Higher education medical complexes: The key to revitalizing West Philadelphia. *Universities & Community Schools*, 4(1–2), 70–82.
- Ghemawat, P. (2011). *World 3.0: Global prosperity and how to achieve it*. Cambridge, MA: Harvard Business Press.
- Glaeser, E. (2011). *Triumph of the city*. New York: The Penguin Press.
- Glaeser, E., & Gottlieb, J. (2009). *The wealth of cities: Agglomeration economies and spatial equilibrium in the United States*. Cambridge, MA: National Bureau of Economic Research.
- Glaeser, E., & Saiz, A. (2003). *The rise of the skilled city*. Cambridge, MA: National Bureau of Economic Research.
- Glasson, J. (2003). The widening local and regional development impacts of the modern universities – A tale of two cities (and north–south perspectives). *Local Economy*, 18(1), 21–37.

- Goddard, J., Coombes, M., Kempton, L., & Vallance, P. (2014). Universities as anchor institutions in cities in a turbulent funding environment: Vulnerable institutions and vulnerable places in England. *Cambridge Journal of Regions, Economy and Society*, 7(2), 307–325.
- Goldstein, H. A., & Luger, M. I. (1992). *Impact Carolina: The university of north Carolina at Chapel Hill and the state's economy*. Chapel Hill, NC: University of North Carolina at Chapel Hill.
- Goldstein, H. A., & Renault, C. S. (2004). Contributions of universities to regional economic development: A quasi-experimental approach. *Regional Studies*, 38(7).
- Griffiths, R., Bassett, K., & Smith, I. (1999). Cultural policy and the cultural economy in Bristol. *Local Economy*, 14(3), 257–265.
- Groves, R., Revel, K., & Leather, P. (2003). *The changing nature of the housing market in Selly Oak*. Birmingham, UK: Center for Urban and Regional Studies, University of Birmingham.
- Gumprecht, B. (2003). The American college town. *Geographical Review*, 93(1), 51–80.
- Hall, P. (1997). The university and the city. *GeoJournal*, 41(4), 301–309.
- Hall, P. (2000). Creative cities and economic development. *Urban Studies*, 37(4), 639–649.
- Hall, P. (2004). Creativity, culture, knowledge, and the city. *Built Environment*, 30(3), 256–258.
- Hanson, S., Kominak, T., & Carlin, S. (1997). Assessing the impact of location on women's labor market outcomes: A methodological exploration. *Geographical Analysis*, 29(4), 281–297.
- Harkavy, I., & Zuckerman, H. (1999). *Eds and meds: Cities' hidden assets* (The Brookings Institution survey series, 22). Washington, DC: The Brookings Institution, Center on Urban and Metropolitan Policy.
- Heller, D. E. (2001). *The states and public higher education policy: Affordability, access, and accountability*. Baltimore, MD: Johns Hopkins University Press.
- Heller, D. E. (2002). *Condition of access: Higher education for lower income students*. Westport, CT: Praeger.
- Hodges, R., & Dubb, S. (2012). *The road half traveled: University engagement at a crossroads*. East Lansing, MI: Michigan State University Press.
- Howard, T. (2012). Leveraging anchor institution purchasing to benefit communities. Retrieved from <https://bealocalist.org/leveraging-anchor-institution-purchasing-benefit-communities>
- Hubbard, P. (2009). Geographies of studentification and purpose-built student accommodation: Leading separate lives? *Environment and Planning A*, 41(8), 1903–1923.
- Huffman, D., & Quigley, J. M. (2002). The role of the university in attracting high tech entrepreneurship: A Silicon Valley tale. *The Annals of Regional Science*, 36(3), 403–419.
- Huggins, R., & Johnston, A. (2009). The economic and innovation contribution of universities: A regional perspective. *Environment and Planning C: Government and Policy*, 27(6), 1008–1106.
- Ihlanfeldt, K. R., & Sjoquist, D. L. (1998). The spatial mismatch hypothesis: A review of recent studies and their implications for welfare reform. *Housing Policy Debate*, 9(4), 849–892.
- Initiative for a Competitive Inner City. (2011). Anchor institutions and urban economic development: From community benefit to shared value. *Inner City Insight Findings*, 1(2), 1–9.
- Isserman, A. M., & Merrifield, J. (1982). The use control groups in evaluating regional economic policy. *Regional Science and Urban Economics*, 12, 45–48.
- Jacobs, J. (1969). *The economy of cities*. London: Jonathan Cape.
- Jaffe, A. (1989). Real effects of academic research. *American Economic Review*, 79(5), 957–970.
- Jansen-Verbeke, M., & Govers, R. (2010). Brussels: A multi-layered capital city. In R. Maitland & B. W. Ritchie (Eds.), *City-tourism: National capital perspectives* (pp. 142–158). Wallingford, UK: CAB International.
- Jones, A., Williams, L., Lee, N., Coats, D., & Cowling, M. (2006). *Ideopolis: Knowledge city regions*. London: The Work Foundation.
- Jongbloed, B., Enders, J., & Salerno, C. (2008). Higher education and its communities: Interconnections, interdependencies and a research agenda. *Higher Education*, 56(3), 303–324.

- Kasarda, J. D. (1988). Jobs, migration and emerging urban mismatches. In J. Michael, G. H. McGeary, & L. E. Lynn (Eds.), *Urban changes and poverty*. Washington, DC: National Academy Press.
- Katz, B., & Wagner, J. (2014). *The rise of innovation districts: A new geography of innovation in America*. Washington, DC: Brookings Institution.
- Keane, J., & Allison, J. (1999). The intersection of the learning region and local and regional economic development: Analysing the role of higher education. *Regional Studies*, 33, 896–902.
- Kemp, R. L. (Ed.). (2013). *Town and gown relations: A handbook of best practices*. Jefferson, NC: McFarland & Company.
- Kong, L., & O'Connor, J. (2009). *Creative economies, creative cities*. Nouten, The Netherlands: Springer.
- Kretzmann, J. P., & McKnight, J. L. (1993). *Building communities from the inside out: A path toward finding and mobilizing a community's assets*. Evanston, IL: Institute for Policy Research.
- Kronick, R., & Cunningham, R. B. (2013). Service-learning: Some academic and community recommendations. *Journal of Higher Education Outreach and Engagement*, 17(3), 139–152.
- Kronick, R., Dahlin-Brown, N., & Luter, G. (2011). Revitalizing the land grant mission in the South: One university's path to civic engagement via community schools. In T. Stewart & N. Webster (Eds.), *Exploring cultural tensions in service learning* (pp. 203–218). Charlotte, NC: Information Age Publishing.
- Krugman, P. (1991). *Geography and trade*. Cambridge, MA: MIT Press.
- Kysiak, R. (1986). The role of the university in public-private partnerships. In P. Davis (Ed.), *Public-private partnerships: Improving urban life*. New York: The Academy of Political Science.
- Lam, A. (2010). From 'Ivory tower traditionalists' to 'Entrepreneurial scientists'? Academic scientists in fuzzy university-industry boundaries. *Social Studies of Science*, 40(2), 307–340.
- Lambooy, J. (1996). Knowledge production, organisation and agglomeration economics. *GeoJournal*, 41(4), 293–300.
- Landry, C. (2000). *The creative city: A toolkit for urban innovators*. London: Earthscan.
- Laursen, K., Reichstein, T., & Salter, A. (2011). Exploring the effect of geographical proximity and university quality on university-industry collaboration in the United Kingdom. *Regional Studies*, 45(4), 507–523.
- Link, A. N., & Scott, J. T. (2007). The economics of university research parks. *Oxford Review of Economic Policy*, 23(4), 661–674.
- Lipman, P. (2008). *The new political economy of urban education: Neoliberalism, race, and the right to the city*. New York: Routledge.
- Luger, M., & Goldstein, H. S. (1991). *Technology in the garden*. Chapel Hill, NC: University of North Carolina Press.
- Macintyre, C. (2003). New model of student housing and their impact on local communities. *Journal of Higher Education Policy and Management*, 25(2), 109–118.
- Malecki, E. J. (2013). Network models for technology-based growth. In Z. J. Acs (Ed.), *Regional innovation, knowledge and global change* (pp. 187–204). New York: Routledge.
- Markusen, A. (2006). Urban development and the politics of a creative class: Evidence from a study of artists. *Environment and Planning A*, 38(10), 1921–1940.
- Marquis, C., & Battilana, J. (2009). Acting globally but thinking locally? The enduring influence of local communities on organizations. *Research in Organizational Behavior*, 29, 283–302.
- Martin, L., Smith, H., & Phillips, W. (2005). Bridging 'town & gown' through innovative university-community partnerships. *The Innovation Journal: The Public Sector Innovation Journal*, 10(2), 1–16.
- Martin-Brelot, H., Grossetti, M., Eckert, D., Gritsai, O., & Kovacs, Z. (2010). The spatial mobility of the 'creative class': A European perspective. *International Journal of Urban and Regional Research*, 34(4), 854–870.

- Maurrasse, D. J. (2001). *Beyond the campus: How colleges and universities form partnerships with their communities*. New York: Routledge.
- McCuan, J. (2007). Anchors: Not always institutions. *Next American City*, 15, 6.
- McGirr, D., Kull, R., & Enns, K. S. (2003). Town and gown. *Economic Development Journal*, 2, 16–23.
- McKinsey Global Institute. (2012). *Urban America: US cities in the global economy*. McKinsey & Company.
- McLafferty, S., & Preston, V. (1992). Spatial mismatch and labor market segmentation for African American and Latina women. *Economic Geography*, 68, 406–431.
- McLafferty, S., & Preston, V. (1996). Spatial mismatch and employment in a decade of restructuring. *Professional Geographer*, 48(4), 420–431.
- McLean, L. D. (2005). Organizational culture's influence on creativity and innovation: A review of the literature and implications for human resource development. *Advances in Developing Human Resources*, 7(2), 226–246.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education* (2nd ed.). San Francisco: Jossey-Bass Publishers.
- Miner, A. S., Easley, D. T., Devaughn, M., & Rura-Polley, T. (2001). The magic beanstalk vision: Commercializing university inventions and research. In C. B. Schoonhoven & E. Romanelli (Eds.), *The entrepreneurial dynamic* (pp. 109–146). Stanford, CA: Stanford University Press.
- Moore, C. L., & Suffrin, S. C. (1974). Syracuse University: The impact of a nonprofit institution on regional income. *Growth and Change*, 51, 36–40.
- Moretti, E. (2004). Estimating the social return to higher education: Evidence from longitudinal and repeated cross-sectional data. *Journal of Econometrics*, 121, 175–212.
- Moretti, E. (2012). *The new geography of jobs*. New York: Houghton Mifflin Harcourt.
- Morley, L. (2003). *Quality and power in higher education*. Berkshire, UK: Society for Research into Higher Education and Open University Press.
- Mountford, A. (1997). Can a brain drain be good for growth in the source economy? *Journal of Development Economics*, 53(2), 287–303.
- Musterd, S. (2004). Amsterdam as a creative cultural knowledge city: Some conditions. *Built Environment*, 30(3), 225–234.
- Musterd, S., Bontje, M. A., Chapain, C., Kovacs, Z., & Murie, A. (2007). *Accommodating creative knowledge: A literature review from a European perspective*. Amsterdam, The Netherlands: Amsterdam Institute for Social Science Research.
- Musterd, S., & Murie, A. (2010). *Making competitive cities*. Oxford: Wiley Blackwell.
- Neave, G. (2000). *The universities' responsibilities to society*. Oxford: Pergamon.
- Ohmae, K. (1995). *The end of the nation state and the rise of regional economies*. New York: Free Press.
- Oort, F. G. v. (2002). *Agglomeration, economic growth and innovation: Spatial analysis of growth and R&D externalities in the Netherlands*. Amsterdam, The Netherlands: Thela thesis.
- Parillo, A., & De Socio, M. (2014). Universities and hospitals as agents of economic stability and growth in small cities: A comparative analysis. *The Industrial Geographer*, 11, 1–28.
- Peck, J. (2005). Struggling with the creative class. *International Journal of Urban and Regional Research*, 29(4), 740–770.
- Pellenbarg, P. (2005). *How to calculate the impact of university on the regional economy. A case study of the University of Groningen*. Paper presented at the conference on knowledge and regional economic development, The Netherlands.
- Perna, L., & Titus, M. A. (2004). Understanding differences in the choice of college attended: The role of state public policies. *The Review of Higher Education*, 27(4), 501–525.
- Pineiro, R., Bennenworth, P., & Jones, G. A. (2012). *Universities and regional development: A critical assessment of tensions and contradictions*. London: Routledge.
- Polese, M. (2009). *The wealth and poverty of regions: Why cities matter*. Chicago, IL: University of Chicago Press.
- Porter, M. (2000). Regions and the new economics of competition. In A. J. Scott (Ed.), *Global city-regions*. Oxford: Oxford University Press.

- Power, A., Ploger, J., & Winkler, A. (2010). *Phoenix cities: The fall and rise of great industrial cities*. Portland, OR: The Policy Press.
- Puga, D. (2010). The magnitude and causes of agglomeration economies. *Journal of Regional Science*, 50(1), 203–219.
- Quelch, J. A., & Jocz, K. E. (2012). *All business is local: Why place matters more than ever in a global, virtual world*. New York: Penguin Group.
- Raphael, S. (1998). The spatial mismatch hypothesis and black youth joblessness: Evidence from the San Francisco Bay area. *Journal of Urban Economics*, 43(79–111).
- Rodin, J. (2007). *University and urban revival*. Philadelphia, PA: University of Pennsylvania Press.
- Rogers, C. L., & Tao, J. L. (2004). Quasi-experimental analysis of targeted economic development programs: Lessons from Florida. *Economic Development Quarterly*, 18(3), 269–285.
- Rosentraub, M. (2010). *Major league winners: Using sports and cultural centers as tools for economic development* (Public administration and public policy, pp. 1–215). Boca Raton, FL: American Society for Public Administration.
- Russo, A. P., van den Berg, L., & Lavanga, M. (2007). Toward a sustainable relationship between city and university: A stakeholder approach. *Journal of Planning Education and Research*, 27(2), 199–216.
- Saltmarsh, J., & Hartley, M. (Eds.). (2010). *To serve a larger purpose: Engagement for democracy and the transformation of higher education*. Philadelphia, PA: Temple University Press.
- Sanchez, T. W. (1999). The connection between public transit and employment. *Journal of the American Planning Association*, 65(3), 284–296.
- Sassen, S. (2001). *The global city: New York, London, Tokyo*. Princeton, NJ: Princeton University Press.
- Savan, B. (2004). Community–university partnerships: Linking research and action for sustainable community development. *Community Development Journal*, 39(4), 372–384.
- Savan, B., & Sider, D. (2003). Contrasting approaches to community-based research and a case study of community sustainability in Toronto, Canada. *Local Environment*, 8(3), 303–316.
- Sawicky, D. (2003). Review of R. Florida, The rise of the creative class and how it's transforming work, leisure, community and everyday life. *APA Journal*, 69(1), 90–91.
- Saxenian, A. (1994). *Regional advantage: Culture and competition in Silicon Valley and Route 128*. Cambridge, MA: Harvard University Press.
- Scobey, D. (2002). Civic engagement and the Copernican moment *Foreseeable Futures #11: Imagining America*.
- Serang, F., Thompson, J. P., & Howard, T. (2010). *The anchor mission: Leveraging the power of anchor institutions to build community wealth*. College Park, MD: University of Maryland.
- Shaffer, D. F., & Wright, D. J. (2010). *How higher education institutions are working to revitalize their regional and state economies*. Albany, NY: The Nelson A. Rockefeller Institute of Government.
- Shearmur, R. (2012). Not being there: Why local innovation is not (always) related to local factors. In K. I. Western (Ed.), *Foundations of the knowledge economy: Innovation, learning and cities* (pp. 117–139). Cheltenham, Gloucestershire: Edward Elgar.
- Siegfried, J. J., Sanderson, A. R., & McHenry, P. (2007). The economic impact of colleges and universities. *Economics of Education Review*, 26, 546–558.
- Slaughter, S. (2001). Professional values and the allure of the market. *Academe*, 87(5), 22–26.
- Slaughter, S., & Rhoades, G. (2004). *Academic capitalism and the new economy: Markets, state, and higher education*. Baltimore: Johns Hopkins University Press.
- Sponsler, B. A., Kienzl, G. S., & Wesaw, A. J. (2010). *Easy come, EZ-GO: A federal role in removing jurisdictional impediments to college education*. Washington, DC: Center for American Progress.
- Stachowiak, K., Pinheiro, R., Sedini, C., & Vaattovaara, M. (2013). Policies aimed at strengthening ties between universities and cities. In S. Musterd & Z. Kovacs (Eds.), *Place-making and policies for competitive cities* (pp. 263–291). Oxford: Wiley-Blackwell.

- Stake, R. E. (Ed.). (1994). *Case studies*. Thousand Oaks, CA: SAGE Publications.
- Stark, O. (2003). Rethinking the brain drain. *ZEF discussion papers on development policy*, 71.
- Stokes, K., & Coomes, P. (1998). The local economic impact of higher education: An overview of methods and practice *Professional File* (Vol. 67). Association of Institutional Research.
- Storper, M., & Manville, M. (2006). Behaviour, preferences and cities: Urban theory and urban resurgence. *Urban Studies*, 43(8), 1247–1274.
- Swyngedouw, E. (1997). Neither global nor local: “glocalization” and the politics of scale. In K. Cox (Ed.), *Spaces of globalization: Reassessing the power of the local* (pp. 137–166). New York: Guildford Press.
- Taylor, H. L., & Luter, G. (2013). *Anchor institutions: An interpretive review essay*. Anchor Institutions Task Force. University at Buffalo. Buffalo, NY.
- The Work Foundation. (2010). *Anchoring growth: The role of ‘anchor institutions’ in the regeneration of UK cities*. London: Author.
- Thelin, J. R. (2004). *A history of American higher education*. Baltimore, MD: John Hopkins University Press.
- Thomas, J. M. (1998). Ethnic variation in commuting propensity and unemployment spells: Some UK evidence. *Journal of Urban Economics*, 43, 385–400.
- Thompson, M. A. (1997). The impact of spatial mismatch on female labour force participation. *Economic Development Quarterly*, 11(2), 138–145.
- Thompson, S. (2000). Diversity, difference and the multicultural city. In R. Freestone (Ed.), *Urban planning in a changing world: The twentieth century experience* (pp. 230–248). London: Spon.
- Turok, I. (2004). Cities, regions, and competitiveness. *Regional Studies*, 38(9), 1069–1083.
- U.S. Department of Housing and Urban Development. (2005). *The power of partnerships: Celebrating 10 year (1994–2004), community outreach partnership centers*. Washington, DC: Office of University Partnerships.
- United Nations. (2010). *World urbanization prospects: The 2009 revision*. New York: United Nations.
- Vidal, J. (1998). The effect of emigration on human capital formation. *Journal of Population Economics*, 11(4), 589–600.
- Watson, D., Hollister, R., Stroud, S., & Babcock, E. (2011). *The engaged university: International perspectives on civic engagement*. New York: Routledge.
- Watson, P., Wilson, J., Thilmany, D., & Winter, S. (2007). Determining economic contributions and impacts: What is the difference and why do we care? *The Journal of Regional Analysis & Policy*, 37(2), 140–146.
- Webber, H. S., & Karlstrom, M. (2009). *Why community investment is good for nonprofit anchor institutions: Understanding costs, benefits, and the range of strategic options*. Chicago: Chapin Hall, University of Chicago.
- Wedemeier, J. (2009). The impact of the creative sector on growth in German regions. *European Planning Studies*, 18(4), 505–520.
- Wiesand, A., & Sondermann, M. (2005). *The ‘creative sector’ – An engine for diversity, growth, and jobs in Europe*. Amsterdam: European Cultural Foundation.
- Winters, J. V. (2014). STEM graduates, human capital externalities, and wages in the U.S. *Regional Science and Urban Economics*, 48(C), 190–198.
- Wolfe, R. A., & Putler, D. S. (2002). How tight are the ties that bind stakeholder groups? *Organizational Science*, 13(1), 64–80.
- Wynne, D., & O’Connor, J. (1998). Consumption and the postmodern city. *Urban Studies*, 35(5–6), 841–864.
- Zhang, L., & Ness, E. C. (2010). Does state merit-based aid stem brain drain? *Educational Evaluation and Policy Analysis*, 32(2), 143–165.
- Zhang, Z. (1998). Indirect tests of the spatial mismatch hypothesis in the Cleveland PMSA: A labour market perspective. *Urban Affairs Review*, 33(5), 712–723.

Michael Harris is associate professor of higher education and Director of the Center for Teaching Excellence at Southern Methodist University. His research focuses broadly on organizational and policy implications of market forces on higher education. His recent publications examine institutional diversity in American higher education as well as strategies for teaching effectiveness. He holds a B.A. in history from the University of North Carolina, and a Master's of Education and Ed.D. in higher education administration from the University of Pennsylvania.

Karri Holley is associate professor of higher education at The University of Alabama. She earned her M.Ed. and Ph.D. from the University of Southern California, and her B.A. from The University of Alabama. Her research examines the organizational, cultural, and economic influences on the structure and processes of the contemporary university, with a particular interest in graduate education. She serves as editor of *International Journal for Researcher Development*. Her current project examines the relationship between interdisciplinarity and innovation in the knowledge economy.