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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

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 consider-

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 fi 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 fiday, 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.

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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 infl

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).

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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).

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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

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.

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Colleges and universities as anchor institutions hold great potential for universitycity 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,

Author(s),	Research	Case or data source	Kay findings
year Anselin et al. (1997)	design Spatial econometric	Technology-intensive research laboratory employment in 128 United States metro areas	Key findings 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)			

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

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

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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 identifi

Local allegiance, institutional identity, and support of local cities have been

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.

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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 specifi

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

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 H_{n-1} , H_{n-1} , and e_{n} , o_{-1} , o_{-1} , f_{n-1} , f

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 eco-

nomic 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.

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

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.

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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 forprofit 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 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 benefi

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



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 (Bontie & Musterd, 2009; Peck, 2005; Puga, 2010; Shearmur, 2012). Skeptics also guestion 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 consider-

ers student and state level factors that influence student migration (L. Zhang & Ness, 2010). Perna and Titus (2004) found an increase in state appropriations

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

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. 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

deteriorated (McGirr et al., 2003). The authors point to a rapid decline in owneroccupied 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 cityregion'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, 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.

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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,

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 Coombes (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.

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

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

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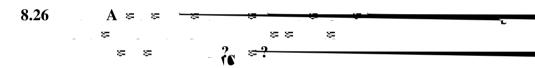
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Goldstein and Renault (2004) used a quasi-experimental design to estimate the contributions of higher education institutions to economic development. They compared growth rates of wages between 1969–1986 and 1986–1998 and concluded that university 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.

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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.

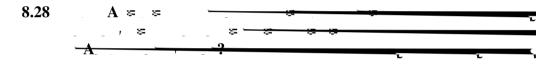


As noted throughout this chapter, many authors (Birch et al., 2013; Goddard et al., 2014; Taylor & Luter, 2013) extol the virtues of universities serving as anchor institutions to benefit the economic and social development of cities. Despite these claims, researchers need to better categorize what distinguishes 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.



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.



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.

As large, locally embedded organizations that have an economic and civic selfinterest 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,



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.

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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

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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.

■ 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 $\frac{1}{2}r_{\mu}\frac{1}{2}r_{\mu\nu}\frac{1}{2}r_{\mu\nu}\frac{1}{2}r_{\mu\nu}\frac{1}{2}r_{\mu\nu}\frac{1}{2}r_{\mu\nu}r_$