THE CIRCUITS OF CAPITAL MODEL IN A RURAL CONTEXT: 
THE CASE OF BROOKINGS COUNTY, SOUTH DAKOTA

BY

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The underlying reasons for growth in the built environment in rural communities are still open to considerable debate (Gottlieb 1994, Boyle and Halfacree 1998, Johnson et al. 2005). This study takes on an important issue in the rural sphere today: the role that developers, lenders, and realtors play in driving urbanization in rural places. David Harvey divides capitalist production into three interrelated circuits and argues that the oscillation of funds between them serves as an explanation for urbanization (Harvey 1978, 1982, 1985, 2001). The primary circuit is composed of the investment and production of consumer goods. The secondary circuit encompasses capital flows into the built environment essential to production (e.g. offices and factories) and to consumption (e.g. housing). The final circuit is composed of investment in technology and labor reproduction to enhance profits in the first two circuits (Wilson 1991). During times of economic crisis, investors faced with the prospect of diminishing returns in the primary circuit will attempt to move their funds into more profitable areas (Harvey 1985). Urbanization can be explained by the switch of funds from the primary circuit into the secondary circuit as investors chase new areas for profit. This study examines the applicability of the circuits of capital model in a rural context. Specifically, this study examines the temporal pattern of investment in the primary and secondary circuit in Brookings County, South Dakota. Key investors active in the secondary circuit are interviewed about their investment practices before and after a crisis in the local primary circuit. Results indicate an investment dynamic more complicated than described in the circuits of capital model. The theoretical and policy implications for this finding are discussed in the final chapter.
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Chapter 1

Introduction

The dynamics of urbanization in rural areas are poorly understood by academics and policy analysts (Gude et al. 2006, Paquette and Doman 2003). In the late 1970s through the early 1980s, rural America experienced a significant shift in population growth (Berry 1976). For the first time since the Great Depression, migrants started moving away from the metropolitan and suburban areas of cities and into the rural hinterland (Johnson and Cromartie 2006, Manson and Groop 2000). The underlying reasons for growth in built environments in rural communities are still open to considerable debate (Gottlieb 1994, Boyle and Halfacree 1998, Johnson et al. 2005). In particular, the importance of real-estate institutions in urbanizing rural areas has not been examined. This study takes on an important issue in the rural sphere today: the role that developers, lenders, and realtors play in driving urbanization in rural places.

The purpose of this study is to better understand the process of rural urbanization. In this context, this study will test the applicability of David Harvey’s circuits of capital model to the urbanization of rural areas. In order to accomplish this, the study will examine the urbanization of east-central South Dakota following a regional economic crisis. Harvey divides capitalist production into three interrelated circuits and argues that the oscillation of funds between them serves as an explanation for urbanization (Harvey 1978, 1982, 1985, 2001). The primary circuit is composed of the investment and production of consumer goods. The secondary circuit encompasses capital flows into the built environment essential to production (e.g. offices and factories) and to consumption (e.g. housing). The final circuit is composed of investment in
technology and labor reproduction to enhance profits in the first two circuits (Wilson 1991). During times of economic crisis, investors faced with the prospect of diminishing returns in the primary circuit will attempt to move their funds into more profitable areas (Harvey 1985). Urbanization can be explained by the switch of funds from the primary circuit into the secondary circuit as investors chase new areas for profit.

In *The Urbanization of Capital*, Harvey lays the theoretical groundwork for the circuits of capital model by examining capital investment in the United States and the United Kingdom preceding the economic crises of the 1930s and the 1970s (Harvey 1985). His analysis demonstrates that substantial capital investment in the built environment occurred prior to each crisis but it does not provide an empirical examination of investment switching from one circuit to another. Fiegen (1987) applied the circuits of capital model to the office building boom in Houston following the economic crisis of the 1980s. Fiegen’s study found that office building construction was tied to finance capital from global real estate syndicates rather than excess capital from the local primary circuit (Fiegen 1987). King compared the data on capital investments in the built environment to the gross domestic product in Australia from the 1930s through the 1980s. His study did not show clear support for the circuits of capital model. During the study period, some years show that investment in the primary circuit moves in tandem with investments in the secondary circuit while at other times they diverge (King 1989a, King 1989b, King 1989c). Beauregard (1994) applied the circuits of capital model to the 1980s property boom in the United States by comparing the gross national product (GNP), fixed capital investments, and changes in industrial production. He concluded that there was not a drastic shift in the allocation of the country’s GNP toward construction and that it was difficult to claim that capital switching occurred between the 1970s and 1980s (1994).
The Fiegen, Beauregard, and King studies indicate a gap in the literature that demonstrates an empirical connection between over production in the primary circuit and increased investment in the secondary circuit. My study will contribute to the theoretical understanding of the circuits of capital model by applying it to a specific economic crisis and subsequent instance of urbanization. This study will examine the connection between the farm economy in South Dakota during the 1970s and 1980s and investment in the built environment in an attempt to contribute an empirical evaluation of the circuits of capital model. The contribution of this study is to determine whether or not real estate institutions in rural areas can be understood through the circuits of capital logic.

Research Questions

This study examines the notion that urbanization in rural areas is driven by the underlying rhythms of capitalist investment activities. In order to accomplish this, the study looks at patterns of investment in the primary and secondary circuits from the period of 1970 to 2000. The following questions are explored to understand the applicability of the circuits of capital model in the case study:

a. What has been the temporal pattern of investment in the area’s built environment?

b. Where did the funds for investment in the built environment originate?

c. If investment funds in the built environment originated from agricultural sector (Harvey’s primary circuit), what were the underlying reasons for the switch?

The goal of the first question is to examine the temporal dynamics of investment in both the primary circuit and the secondary circuit and whether or not there was a decline in investment in the primary circuit along with a simultaneous increase in investment in the secondary circuit. The second question requires a discussion with developers, realtors, and lenders of where the funds for their projects originated. This addresses the heart of the circuits of
capital thesis that the necessary capital for large scale urbanization projects originates from the primary circuit. This question also addresses a criticism of the model that investment within the secondary circuit possesses its own actors and logic. The final question requires a discussion with real estate actors for their motives in moving their funds. This addresses the theory that the built environment is perceived as a safe haven for funds productive sphere. By asking this question, it is possible to examine whether or not the state enacted policies to attract capital that affected the decision calculus of producers. The role the state plays in attracting productive investment has important policy implications for urban development (Smith 1982, Wilson 1991).

Case Study

I examine the urbanization of Brookings County, South Dakota as a case study. Brookings County exemplifies the qualities of other rural places with increasing degrees of urbanization within the United States. During the 1970s, employment within Brookings County was largely dependent on the agricultural industry (BEA 2013). Following declines in agriculture during the 1980s, employment within the county diversified and the primary gains in population occurred from the 1980s onward (BEA 2013). The agricultural economy of South Dakota in the 1970s and the 1980s provides an ideal case study for the applicability of the circuits of capital model to a rural area. In the 1970s, technological innovations and high demand for agricultural commodities overseas drove agricultural prices to historic levels (White 2008). In order meet the high demand, agricultural producers leveraged farm assets to expand their operations (Calomiris 1986, Peoples et al. 1992). Agricultural lenders provided the necessary credit to producers based on inflated evaluations of farm assets. Following the 1979 season, profits from the agricultural economy collapsed due to the added cost of higher interest rates and the onset of a global recession (McCalla et al. 1986, Lobao and Meyer 2001). Recession depressed demand for agricultural commodities overseas and led to a devaluation of commodity prices. Increased
production and decreased demand led to a glut in supply of agricultural commodities (Vias and Nelson 2006). Falling prices, along with higher interest rates, decreased the willingness for lenders to put their funds into the agriculture sector (Fitzpatrick and Thompson 2010).

The resulting credit crisis in the agriculture economy provides a test case for overproduction and capital switching. Farm foreclosures increased substantially during the 1980s as lenders tried to recover losses from operations with toxic amounts of debt (Calomiris 1986). During the height of the crisis, lenders were unwilling to provide funds to producers even with healthy debt loads (Barnett 2000). The collapse of farming operations reverberated across the regional economy. Agricultural banks folded, small town businesses collapsed and profits from the manufacturing and sale of agricultural equipment diminished dramatically (Ginder et al. 1985, Albrecht et al. 1988, Goetz and Debertin 1996). While the majority of counties lost population in South Dakota, select counties grew both in population and economic resources immediately following the agricultural crisis (U.S. Census 2010). The economic growth of counties less dependent on agriculture represents a potential switch in investment strategy during the height of the crisis.

At the start of the case study period, South Dakota was heavily dependent on agriculture and Brookings County served a primary role as an agricultural center. While the population of the state and surrounding regions declined, Brookings county grew by 35% from 1969 to 2000 (U.S Census 2010). Changes in employment composition indicate a diversification of employment in the case study area. For example, manufacturing as a percentage of employment in Brookings County increased from 3% to 30% and farming declined from 18% to 5% (BEA 2013).
Purpose of the Study

The purpose of this study is test the applicability of the circuits of capital model to a rural area. The goal of this research is to help develop the theory explaining urbanization in rural areas. The most relevant literature on rural urbanization emerged in the late 1970s as an effort to model the population turnaround. Prior to the 1970s, migration patterns favored urban areas at the expense of rural areas (Ford 1999, Champion 1981). Two dominant perspectives emerged from this effort to understand the population turn-around. Both perspectives fail to discuss the role that capital plays in driving urbanization in non-metropolitan areas.

The existing explanations for urbanization in rural areas can be divided into two broad categories: consumer sovereignty and regional economic restructuring. The first explanation, the deconcentration perspective, puts an emphasis on consumer preference. The argument is that people would rather live in rural areas but the historic advantages of urban life forced them into the city (Brown et al 1997). During the 1970s, improvements in infrastructure and technology enabled residential space flexibility (Frey 1987). Consumer preference and the search for a rural idyll drove residents out of the city and into the rural hinterland. Developers, lenders, and realtors recognized the change in consumer preference and adjusted the housing market accordingly (Fielding 1982). Competition for highly skilled workers forced employers to follow workers into the hinterland and sped up the process of urbanization (Frey 1987).

The second explanation, the regional restructuring perspective, emphasizes the role that employers play in driving urbanization in rural areas (Frey 1993). Rural areas have a strategic benefit for firms because they offer less competition for highly skilled workers (Fielding 1982). The high density of jobs in urban areas gives labor the freedom to move from firm to firm and forces employers to offer competitive wages for workers. By moving into the hinterland, firms can ensure that they are the only employment opportunity available (Fielding 1982). This gives
the firm the power in setting wages and attracting workers. Advanced technology made capital more mobile and allowed firms to locate away from the city into the hinterland (Hanson 1983; Noyelle and Stanback 1984). A reduced need for firms to be located in cities, less labor militancy in rural areas, and municipal incentives contributed to the decision for firms to relocate from urban areas into rural areas (Fielding 1982). The change in employment structure forced laborers to follow employers into the hinterland and contributed to the urbanization of rural and non-metropolitan areas.

Yet the two dominant theories do not examine the role of capital switching in urbanization. The theoretical contribution that this study makes is to examine whether or not real estate institutions can be understood through the logic of the circuits of capital model. It is possible that investors switched their funds into the secondary circuit when it became increasingly difficult to extract a profit from the farm economy. Property serves as an attractive investment for a number of reasons. Property builders are motivated by private property rights and have near monopoly control over their parcels (Smith 1979). Investments in property take a long time to depreciate and the land maintains its value through ground rent (Smith 1979). This makes property seem like a sound investment for developers. Lenders are motivated by the creation of finance capital and long term interest payments from mortgage loans (Fiegen 1987).

The perceived strategic advantages of the secondary circuit help to drive urbanization as investors pour their funds into the built environment. The secondary circuit, neglected during the first round of investment, receives the necessary funds to build large scale projects (Gotham 2009). During times of crisis, the secondary circuit becomes an attractive outlet for investment. Yet, investment in property contains an internal contradiction. Capitalists need to make a quick turnover in time to realize profit but investment in the built environment is inherently slow in
actualizing profit (Gotham 2009). The state can help address this contradiction through regulatory actions and infrastructural developments the promote flows of investment between cities and regions (Hackworth and Smith 2001). State interventions in the form of infrastructural development and increased private investment in property create a supply of available buildings (Soja et al. 1983). After the initial supply of buildings is created, demand can be socially engineered (Walker 1981).

Harvey’s circuits of capital model may contribute to the existing literature on rural and non-metropolitan areas by examining the demand for the built environment as a product of supply. This helps address some of the problems in the deconcentration perspective as an explanation for rural urbanization. The deconcentration perspective lacks a component of supply in its explanation. A change in consumer preference does not matter unless there is money build new housing stock. Harvey’s circuits of capital theory may provide an explanation for the origins of the capital necessary to supply the demand for new housing in rural and non-metropolitan areas. The purpose of this study is to assess the applicability of Harvey’s model as an explanation of rural urbanization. Harvey’s model may expose some of the underlying reasons for increased investment in rural areas. By applying Harvey’s model to the rural environment, this study hopes to develop a theory that takes into account the role real estate institutions play in driving urbanization in rural areas.

Policy Implications

The circuits of capital model is theoretically rich and provides a powerful explanation for urbanization under capitalism. Despite this, there have been few empirical evaluations of the model. The empirical evaluations that have occurred (e.g. Feagin 1987, King 1989) have focused on large urbanized settings. If the assumptions of the model are correct, that crisis is inevitable under capitalism and that urbanization follows crisis, then we can expect the urbanization of
rural areas to follow a broader economic rational rooted in societal structural dynamics. A study that focuses on the urbanization of a rural area can provide insight into how the processes of urbanization unfold and whether or not they can be explained by capitalist crisis.

The circuits of capital model has important implications for urban and regional planning (Wilson 1991). The internal contradictions of the secondary circuit make state intervention necessary to move capital from the primary circuit into the secondary circuit (Gotham 2009). In the post 1970s economic environment, these state interventions manifested themselves as the entrepreneurial city where cities competed for capital and increasingly rolled back regulatory barriers to control the flow and movement of capital (Wilson and Wouters 2003, Wilson 2004, Hackworth 2007). Following the economic crisis of the 1970s, cities competed to attract capital by attempting to brand themselves as centers for upscale retail consumption and tourism, by defraying labor training, and by offering tax incentives for developers (Hackworth 2007). The tactics to attract capital have helped accelerate capital mobility and uneven development. It is this explanation for some of the underlying causes of uneven development that makes the circuits of capital model important to examine in a rural context. An important contribution of this study is to examine why investment in the built environment increased in the case study area while development in the rest of the state lagged behind.

One of the policy implications of this study is to help inform sound planning and development decisions. If capital switching occurs in rural places, policy makers need to be attentive to bottlenecks in the primary circuit when determining when to offer development incentives in the secondary circuit. When periods of investment in property follow crisis in the primary circuit, policy makers should scale back their incentives during times of crisis in the primary circuit. Actions by the state to attract and steer capital into a particular region may help to accelerate uneven development and urban sprawl (Smith 1982, Salamon 2003). Efforts to repurpose farm towns to meet the residential preference for a new class of in-migrants may result in conflict between longtime residents (Salamon 2007). Aggressive efforts by the state and developers to commodify rural values and attract migrants may destroy the rural character of the
place. Consequences of rural urbanization and suburbanization manifest as a decline in civic engagement, conflict over resources, and a change in cultural values (Salamon 2003).

Critics of Harvey’s model (Gottdiener 1990, Halia 1991, Charney 2001) have argued that the capital circuits are relatively autonomous from one another. Thus, critics argue that the primary circuit is autonomous from the secondary circuit. Investors engaged in primary circuit activity (e.g. producing consumer goods) will reallocate their funds within the primary circuit when faced with declining profit margins (e.g. produce stereos instead of batteries). Gottdiener has argued that cycles of investment in the built environment possess their own logic and do not serve as crisis managers for the primary circuit (Gottdiener 1990). According to Gottdiener, investment into the built environment is made up of a distinct group that invests in real estate rather than primary circuit capitalists switching their funds (1990). Halia argues that maximum rent is sought continuously and that the land in property market is an investment channel in its own right rather than a second best alternative (Halia 1991). In this view, investment is not determined by the primary sector but by demands in a highly differentiated real estate market (Beauregard 1994). Others have argued that real estate has its own dynamic and can be seen as a better hedge against inflation, a way of reducing dependency on stocks and bonds, and can enjoy greater tax benefits (Hudson-Wilson et al. 2003, Charney 2001). Recent literature has argued that switching occurs within sectors rather than between them. Switching in the secondary circuit entails a switch in mode (acquisition over development), type of property (residential verses commercial), and location (Charney 2001, Fainstien 1994).

One of the research goals of this study is to examine the relationship between the two circuits and develop the theory of capital switching. Following Fiegen (1987), it is possible that increased urbanization and declining primary circuit investment is coincidental and that the source of capital came from elsewhere. An important part of this study is to interview local
developers for the source of their funds. The theory that capital switches between circuits may have merit if the capital for new urbanization can be traced to a decline in investment in the local primary circuit. Otherwise, it is likely that capital moves within the circuits rather than between them in the case study area.

Data and Methods

The methods for this study can be divided into two parts. The first part of the study involves a longitudinal comparison of investment in the built environment and investment in the agricultural sector of the state. The second part of the study involves a series of interviews with investors, builders, and lenders about their decision making process during the case study period.

The first part of this study compares the temporal relationship between investment in the built environment and investment in the primary circuit in two independent datasets. The first dataset was derived from the U.S. Bureau of Economic Analysis local reports. The Bureau of Economic Analysis (BEA) provides a detailed summary of farm expenditures and employee compensation by industry. The summary of farm expenditures includes annual operating expenses for producers including the cost of seed, machinery, equipment and labor (BEA 2013). I use the annual expenditures in farm operations as the basis for investment in the primary circuit. The BEA employee compensation by industry shows the estimated total compensation of employees for a particular industry (BEA 2013). I use the estimated compensation of employees involved in the construction of buildings, heavy and civil engineering, and specialty trade contractors as the basis for investment in the built environment. I include the estimated compensation of employees engaged in the renting, leasing, and selling of real estate in this category. A comparison of employee compensation provides a meaningful proxy for investment in the built environment because labor represents a significant expense for firms engaged in construction and real estate (Christophers 2011).
The second data set I use to compare investment in the built environment and investment in the primary circuit was derived from the Federal Deposit Insurance Corporation (FDIC) annual survey of insured commercial banks. The FDIC reports include a detailed listing of each bank’s assets and lending information. Included in the reports are the total dollar amounts for agricultural production loans and loans secured by real estate. Agricultural production loans are used to fund the production of crops and livestock or to refinance capital investments like farmland and machinery (FDIC 2013). I use the dollar amount of agricultural production loans for each year as the basis of investment in the primary circuit. For the comparison of the secondary circuit, I use the dollar amount for loans secured by real estate. Real estate loans are primarily used as credit for the purchase of real estate where the collateral for the loan is the newly acquired property (FDIC 2013). An uptick of real estate loans along with a decline in agricultural production loans may indicate a change of preference for investment in the built environment over agriculture.

The second part of the empirical analysis involves interviews with key builders, lenders, and developers active in the study site following the farm crisis in the 1980s. Interviewees were selected based on the size of their businesses and the amount of investment activity they have made since the farm crisis. The study site is unique in that the largest players operate locally within the city of Brookings. Interviewees were asked what type of property investments they have made since 1990 and why they choose to invest during the study period. Interviewees were also asked if they had previously invested in agriculture and whether or not the economic realities of the agricultural sector affected their decision making to invest in the secondary circuit. This portion of the study examines whether or not there is a direct tie to investment in the primary circuit and investment in the secondary circuit.
The individuals interviewed were carefully selected to ensure that their investments had made an impact on the built environment within the study site. Like many rural places, Brookings County is dominated by a small number of investors active in the secondary circuit. This study includes interviews of the three largest property development and management firms active locally within the study site. Together, the developers represent a substantial portion of property investment within the study. Each developer was active in the time period immediately following the farm crisis. The timeframe for their investment activity is crucial in determining whether or not there is a direct connection between crisis in the primary circuit and investment in the secondary circuit. The investment decisions of the interviewees selected provide meaningful insights as to whether or not the circuits of capital model is applicable within the study site. A note of caution is that this study interviews investors active in the secondary circuit if they had previously invested in agriculture. It does not include interviews with investors active solely in the primary circuit. If property investors did not move their funds from agriculture, this study will be unable to track where investment from agriculture has moved over time.

Terminology

For the purpose of this study, I use the term “built environment” to refer to human-made surroundings such as housing, office space, and infrastructure. Harvey’s secondary circuit encompasses the production of the built environment. The Office of Management and Budget (OMB) defines metropolitan statistical areas as having at least one urbanized area of 50,000 or more population (OMB 2013). For the purpose of this study, the terms rural and non-metropolitan are used interchangeably. The term “rural urbanization” is used to refer to the growth of the built environment in rural or nonmetropolitan areas.
Moving the Analysis Forward

This study will examine the forces of urbanization in rural places. In particular, this study examines the applicability of the circuits of capital model to explaining recent growth and development in this rural area’s built environment. In order to accomplish this, the study tests the applicability of Harvey’s circuits of capital model to explain urbanization in Brookings County, South Dakota. I examine the temporal patterns of investment in the built environment within the study site compared to investment within the agricultural sector (Harvey’s primary circuit). This study tracks whether or not capital switching between the two circuits offers a reasonable explanation for urbanization in rural places. Existing explanations for rural urbanization are surveyed and are analyzed in the context of the study site.

The rest of this study is outlined as follows. Chapter 2 will survey the existing explanations of urbanization in rural places. This literature first emerged as an effort to understand changing migration patterns and the population turnaround in the 1970s. I will discuss this literature in context to urbanization in the study site. Chapter 3 will describe the case study and its institutional context in detail. In particular, chapter 3 examines the changing economic and population characteristics of Brookings County from 1970 through 2000. Chapter 4 will examine the changing temporal patterns of investment in the built environment. This includes a longitudinal comparison of investment between agriculture and the built environment as well as interviews with investors in the built environment. Chapter 4 will examine the applicability of the circuits of capital model as an explanation for urbanization within the study site. The final chapter examines the theoretical and policy implications of the study.
Chapter 2

Literature Review

The purpose of this chapter is to survey contemporary explanations for urbanization in rural areas and to identify weaknesses in this literature. Rural urbanization emerged as a major research focus during the late 1970s and has continued to inspire discussion and debate (Berry 1976, Champion 1989, Mitchel 2004, Halfacree 2013). Two key perspectives emerged from this research agenda, both emphasizing the role migrants play in driving urbanization in rural areas. Both perspectives assume that developers, lenders, and realtors play a reactive role in adjusting the housing market (Bierens and Knotuly 2008). The underlying assumption of both perspectives is that the housing market adjusts to the demands of migrants moving into the area rather than social engineering to encourage people to relocate. This study will examine the role that developers, lenders, and realtors play in driving urbanization in rural places as possible gatekeepers operating through a circuits of capital logic. Harvey’s circuits of capital model may contribute to the existing explanations for rural urbanization by examining population growth as a product of housing supply. It is possible that migration into rural areas was enabled by the growth of the local housing market.

During the late 1970s and early 1980s, population growth experienced a turnaround of a long standing tradition of rural areas losing population while urban areas gained (Brown and Wardwell 1980, Berry 1980). Berry (1976) identified a number of areas contributing to the decline in urban population growth in favor rural areas including the loss of urban industrial jobs, capital investment favoring the hinterland, and increased amenity migration in the south and west. To date, three key debates have persisted in the literature on the population turnaround and
rural urbanization including the perverseness and underlying causes of the turnaround, the relevance of net population change as an indicator of the turnaround process, and the significance of the turnaround in effecting social changes in the countryside (Lewis 2000). This chapter will survey the debate on the underlying causes of the population turnaround and rural urbanization and examine the important perspectives that emerged from this debate.

The Deconcentration Perspective

The deconcentration perspective for urbanization in rural areas emphasizes consumer preference as the driving force of the population turnaround. Following Berry in 1976, a number of authors have emphasized the importance of consumer sovereignty in driving rural population growth (Berry 1980; Wardwell 1980; Frey 1987; Long and DeAre 1988; Kontuly 1991; Halfacree 1994, Fuguitt and Beale 1996; Walmsley et al. 1998; Shumway and Otterstrom 2001; Gosnell and Abrams 2009). The central thesis of this perspective is that rural population growth is driven by an inherent consumer preference for living in rural areas over urban areas. Berry argues that improvements in technology and infrastructure established an “area of choice” that enabled people to live and work outside of urban areas (Berry 1980). Frey argues that population diffusion is associated with increasing location flexibility of employers and residents. Under this view, increased affluence and a decline in transport cost enables “residential space flexibility” whereby amenity rich areas attract workers. The competition for highly skilled workers forces employers to follow labor into the hinterland (Frey 1987, Frey 1988). Wardwell argues that technological developments and marketing opportunities available in the post-1970 made production in the hinterland more desirable for producers. Decreasing costs for transportation and communication made it possible for firms to select from a wider range of cities without
incurring additional production costs (Wardwell 1980). This made it cheaper for employers to pursue locations preferred by labor.

Berry compared the growth rate of industrial jobs from the 1970s through the 1980s to the growth rate of high growth sectors (Berry 1980). He argued that the highest growth occurred in managerial and service industries that afforded maximum spatial flexibility and allowed for the most migration at an individual level. Improvements in communication and transportation technology made these industries less location dependent (Audirac 2005). Berry argues that the increased mobility of service sector jobs lead to the specialization of real estate interests that promoted certain lifestyle communities throughout the country. This allowed workers to move from one part of the country to another without disrupting their desired lifestyle (Berry and Okulicz-Kozaryn 2009, Berry 1980). During the post-1970s shift in service industries, individuals were able to assert their individual lifestyle preferences in any region of the United States and were no longer tied to major metropolitan areas. This afforded consumers the opportunity to seek out and build communities based upon their individual lifestyle preferences (Berry and Okulicz-Kozaryn 2009).

Frey used census data estimates for the 1965-70 and 1975-80 period to compare the hypothetical population estimates offered by different turnaround theories (Frey 1987). Under the deconcentration perspective, large metropolitan areas should have seen declines in population growth while amenity rich areas in the South and West should have seen the greatest gains in growth. Frey’s comparison of census data favored the deconcentration perspective in that population growth estimates shifted evenly away from major metropolitan areas in the 1965-70 estimates in favor of smaller metropolitan areas in the South and West in 1975-1980 estimates (Frey 1987, Frey 1988). This comparison addresses some of the different viewpoints for rural
population growth, mainly the regional restructuring perspective explained later in this chapter. Frey concludes that the census data estimates indicated a trend in population deconcentration. Yet, amid the offer of meaningful insights, Frey’s analysis lacks an examination of the motives of consumers in moving away from metropolitan areas.

Long and DeAre (1987) also compare census estimates for projected population growth to explain urbanization patterns. Their study aggregates county level population growth projections into four regions and analyzes patterns of growth distribution. Their analysis suggests that diffusion out of metropolitan areas into rural areas was a pervasive trend during the 1970s (Long and DeAre 1987). They argue that scale of diffusion suggests a trend in migration toward rural areas rather than a simple reorganization of metropolitan counties. The most dramatic changes during the 1970s occurred in the counties with below average density. Prior to the 1970s, the trend was for population decline in the least densely populated counties. During the 1970s, a wide scale shift occurred where the least densely populated counties grew faster than the national average.

Kontuly offers possibilities for international comparisons of population redistribution in the post-1970s by analyzing demographic trends in the Federal Republic of Germany (Kontuly 1991). He concluded that the change in trends from rural-to-urban migration to urban-to-rural migration was not the result of oulmigration from old industrial areas. He concluded that the demographic trends in the FGR pointed toward the deconcentration perspective. He, like other deconcentration advocates, argue that employment in rural areas will increasingly favor white collar occupations rather than unskilled and low paid workers (Bierens and Kontuly 2008, Kontuly 1991). Increasing competition for skilled workers will force firms to locate into the hinterland and total employment in metropolitan areas will decline. Kontuly found that
metropolitan employment in the FGR declined by .54 million workers from 1970-1985 with only .15 million positions attributed to industrial occupations (Kontuly 1991). By contrast, rural areas in Germany increased in employment with the largest gains in managerial and service related jobs.

Kontuly argued that the high employment growth in the service and tertiary sectors in rural areas indicates the deconcentration perspective because there is no inherent need for these firms to operate in non-metropolitan areas. Regional restructuring authors, alternatively, argue that metropolitan areas will lose population as industrial jobs move into the hinterland. Faced with declining industrial jobs, metropolitan areas will refashion themselves into white-collar command and control centers. Kontuly found that the opposite occurred where the most managerial positions where added in rural areas rather than metropolitan areas (Kontuly 1988, Kontuly 1991). Kontuly surveyed citizens for their residential preferences and found that respondents preferred low density, amenity rich areas (Kontuly 1988). He concludes that the non-metropolitan growth in the former Federal Republic of Germany can be attributed to individuals moving out of metropolitan areas to match their locational preferences.

Furthering an international comparative frame, Halfacree (1994) conducted a biographical analysis of recent migrants to rural areas in the U.K. to understand the motivations for migration. Halfacree surveyed 229 migrants that moved into rural areas between the 1970s and 1990s and broke their migration patterns into four categories of short-distance rural-to-rural, long-distance rural-to-rural, short-distance urban-to-rural and long-distance urban to rural (Halfacree 1994). Respondents were asked to give as many reasons for moving as they wished in order to codify their reasons for migration. Halfacree’s short distance urban-to-rural and long distance urban-to-rural respondents indicated a strong importance in the 'physical quality of the
environment’ and the ‘social quality of the environment’ in motivating migration. Halfacree’s study indicates that urban to rural migration is driven by the respondent’s desire to attain the perceived advantages of rural areas (1994).

Walmsley et al. found that lifestyle migration was the prevailing force in rural urbanization in Australia in the post-1970s environment. Prior to the 1986-1991 period, population mobility in Australia moved toward primate cities rather than less populated places. (Walmsley et al. 1998). After 1986, migration shifted away from primate cities toward more rural regions in Australia. The authors identified migration to the North Coast region of New South Wales as a possible location for lifestyle migration rather than economic migration. The North Coast had higher unemployment rates than surrounding regions and it was unlikely that individuals made speculative moves (Walmsley et al. 1998). The lack of job growth preceding 1986 also indicated population gains were not the result of regional restructuring. The authors surveyed 250 recent migrants to the North Coast to identify the underlying motivations for migration. The authors broke behavioral motivations for moving into four broad categories: physical characteristics (climate, aesthetic landscape) of the destination, social characteristics, relative location and access to employment, and the characteristics (size, price) of the new dwelling (Walmsley et al. 1998). The authors also included four categories to characterize the migrants: socio-economic status, stages in life cycle, access to information about the destination, and the type of dwelling required by the migrant.

The authors surveyed households about their demographic characteristics and behavioral experiences during the migration. They found that 52% of migrants had secured employment prior to the move with a large degree finding managerial positions (Walmsley et al. 1998). The authors also found that 49% of the surveyed individuals had evaluated the choice to move to the
north coast vs. competitor locations. The authors asked the respondents to rank the most important factors in the decision to move. The respondents ranked a pleasant climate, a more relaxed lifestyle, and an attractive physical environment as the most important factors in moving (Walmsley et al. 1998). The authors also surveyed the respondents to rank the most important constraints in moving to the North Coast. The respondents ranked leaving family and friends as the most important constraint and a lack of money for the move as the least important constraint. The results of the survey indicate that there was a relatively high rate of economic flexibility for the move and that lifestyle choices were the most important factors in deciding to migrate. The authors conclude that lifestyle preferences rather than economic pressures represented the most significant factors in deciding to move. The low rate of economic growth prior to the move coupled with the motivations of the migrants indicates that urbanization was driven by consumer preference.

Fuigutt and Beale broke county level population growth estimates into three distinct periods: the turnaround period (1970-80), the downturn period (1980-86), and the most recent upturn period (1986-94). They found that non-metropolitan areas experienced near universal growth during the turnaround period and near universal decline during the downturn period (Fuigutt and Beale 1996). During the turnaround period, deconcentration extended to the bottom of the urban hierarchy where even the most remote counties experienced population gains (Johnson and Beale 1994, Fuigutt and Beale 1996). Non-metropolitan areas that specialized in extractive activities were especially hard hit by the early 1980s recession and experienced the greatest declines during the downturn period. During the upturn period (1986-94) the non-metropolitan counties with the most growth where amenity rich areas and retirement counties while non-metropolitan counties dependent on extractive activities experienced a decline
(Fuigutt and Beale 1996). The authors found that non-metropolitan counties dependent on manufacturing also experienced slow growth rates. The authors suggest that increased migration into amenity rich non-metropolitan areas indicate a consumer preference for living outside of metropolitan areas.

Gosnell and Abrams argue that amenity migration is a dominant force in the development of rural places during the post-1970s environment. The authors argue that globalization and technological advances have enabled individuals to act out consumptive preferences in the countryside (Gosnell and Abrams 2009, Abrams 2011). Amenity migration, the movement of people based on the draw of natural and/or cultural amenities represents a transformative process signifying changes in the population and socioeconomic dynamics of rural communities (Gosnell and Abrams 2009). Rasker uses a quality of life model to explain population growth in rural communities. According to the model, communities that are rich in natural amenities attract individuals that are self-employed or have the capacity to telecommute (Rasker 2006). Shumway and Otterstrom made a similar finding in the American Mountain West where counties with the most natural resources experienced the most rapid growth in both population and employment (Shumway and Otterstorm 2001).

**Regional Restructuring Perspective**

In contrast to the deconcentration perspective, the regional restructuring perspective emphasizes the role that employers play in driving urbanization in rural areas. A number of authors (Williams 1981; Fielding 1982; Dahms and McComb 1999; Domina 2006) have argued that population gains in rural areas were the result of economic restructuring in metropolitan areas. Regional restructuring theorists attribute population declines in metropolitan areas to selective disinvestment in older manufacturing areas. Under this perspective, metropolitan areas
take on the role of command and control centers for large firms (Frey 1987, Frey and Fielding 1995). Smaller, subordinate metropolitan areas grow to accommodate increases in routine production and consumer services. The metropolitan economy becomes more service oriented and the demand for highly educated workers and corporate office space increases. Industrial activity moves into the hinterland or into developing countries to save on labor and production costs (Domina 2006). The movement of industrial and service jobs metropolitan to nonmetropolitan areas prompts the growth of nonmetropolitan areas (Fielding 1982).

Fielding (1982) helped established the theoretical groundwork for the regional restructuring perspective. He argued that class distinctions affected the motivation for migration. While the affluent could afford to migrate for amenities, unskilled labor did not have the flexibility to move into the hinterland (Fielding 1982). Most manual workers have redundant skills and employers did not need to follow workers into rural places. Highly skilled workers were also more likely to migrate at the demands of their employers to seek career advancement opportunities (Fielding 1982, Fielding 1989). Prior to the 1970s, a large proportion of urban migration was driven by people leaving agricultural backgrounds to work at manufacturing firms in the city. Fielding argued that the slowdown in manufacturing diminished this type of urbanization and contributed to rural urbanization.

Williams (1981) compared migration flows from 1955-1960 to 1965-1970 and found that employment opportunities were strong indicators of growth in nonmetropolitan areas. The high growth rate of tourist and recreation activities, along with an increase in retirement communities contributed to employment growth in high amenity areas (Williams 1981). The increased employment opportunities associated with these industries facilitated metropolitan to nonmetropolitan migration during the 1965-1970 period. Survey data indicated that at an
individual level, residential preference played a role in determining migration but migration decisions were tied to employment availability (Williams 1981). This finding supports regional restructuring theories in that the changing nature of employment opportunities prompted nonmetropolitan migration.

Technological advances made the manufacturing process more flexible and allowed firms to move into preferred areas (Fielding 1982). The hinterland offered strategic advantages for firms due to the lack of competing employers. In areas with competition for skilled labor, highly skilled workers have the upper hand in negotiating concessions (Frey and Fielding 1995). Rural areas tipped the balance of power in labor negotiations for employers because fewer firms meant less flexibility for workers (Fielding 1982). Employers also benefited from state intervention to attract manufacturing into rural areas. Technological advances diminished the locational advantages of cities and allowed firms to benefit from state incentives (Cheshire and Lawrence 2005). This prompted firms to move into rural areas or abroad. Under the regional restructuring perspective, rural urbanization can be explained by population retention in rural areas, deindustrialization in cities, and the growth of manufacturing in rural areas (Fielding 1982).

Dahms and McComb argued that economic restructuring provided the best framework for their study site in Ontario, Canada. The study analyzed census data, migration information, and commuting patterns from 1971 to 1991 to evaluate the growth of the South Georgian Bay area near metropolitan Toronto. The authors found that most population growth in the area occurred in high amenity locations near the shorelines (Dahms and McComb 1999). Through interviews with real estate brokers, the authors found that there was a strong effort by developers and municipal governments to commodify a sense of rurality. While there was a strong effort to attract migrants based on amenities, workers were constrained by the realities of a post-industrial
economy. The most important factors in facilitating urbanization in the study site came from economic reorganization (Dahms and McComb 1999). During the study period, businesses specializing in personal services, financial services, and construction grew in the area. The growth of service industries outside of Toronto attracted migrants into the study (Dahms and McComb 1999). The movement of businesses into study site prompted population growth during the study period.

Domina studied demographic and migration trends from 1989 to 2004. The study found that non-metropolitan migration rates fluctuated unpredictably from negative to positive in the 1970s, to positive to negative in the 1980s, back to positive in the early 1990s. Since the late 1990s, migration rates have favored metropolitan areas over nonmetropolitan areas (Domina 2006). Domina concludes that residential preference cannot explain nonmetropolitan migration. Survey research indicates that Americans prefer nonmetropolitan living arrangements but migration patterns have benefited metropolitan areas (Domina 2006). This indicates that individuals are constrained by economic realities. Highly educated individuals were much more likely to migrate from nonmetropolitan areas to metropolitan areas than the other way around. Age was also a strong indicator of migration where 18-24 and 25-30 year olds were much more likely to migrate from nonmetropolitan areas than to metropolitan areas (Domina 2006). The trend of young, highly educated workers migration from nonmetropolitan areas can be explained by the economic advantage of metropolitan areas (Domina 2006). Since 1989, wage increases for metropolitan workers have been higher than nonmetropolitan workers (Domina 2006). After the late 1990s, economic incentives in metropolitan areas played an important role in determining migration.
Conclusion

The two perspectives of urban to rural migration question the motivations for migrants in moving to rural areas. The deconcentration perspective emphasizes the economic mobility of migrants whereas the regional restructuring perspective emphasizes the mobility of capital into rural areas. In particular, advocates of the regional restructuring perspective argue that increased economic mobility allowed firms to move into rural areas (Renkow and Hoover 2005). New employment opportunities in rural areas attracted migrants from cities and other rural areas. Changing economic realities led to the decline in manufacturing in urban areas and extractive activities in rural areas. Select counties grew as manufacturing and managerial firms moved their operations within them while other counties declined.

Both the regional restructuring and deconcentration perspectives fail to examine the role that real estate institutions play in driving urbanization. This study examines whether or not realtors, developers, and property managers played a proactive role in recruiting employers and in-migrants. The rest of this study will examine the applicability of Harvey’s circuits of capital model to urbanization in a rural context. Chapter 3 examines the changing economic and demographic characteristics of Brookings County, South Dakota from 1970 to 2000. I examine if there is a pattern of economic change that is consistent with either the existing theories on rural urbanization or the circuits of capital model.
Chapter 3
Case Study in Context

This chapter presents a brief overview of the economic and demographic progression of Brookings County, South Dakota from 1970 to 2010. The county seat, the City of Brookings, lies at the intersection of U.S. Highway 14 and Interstate 29 in east central South Dakota. As of the 2010 census, the population of the county was 31,965 with the majority (22,056) residing in the City of Brookings (U.S Census Bureau 2013). Figure 1 shows Brookings County in relation to the other counties in South Dakota. Figure 2 shows the towns and major roads within Brookings County.

Figure 1
Brookings County was selected as a study site because it has an active real estate market and historical connections to agriculture. Brookings County presents an ideal test case for the applicability of the circuits of capital model in a non-metropolitan area because the built environment grew during a time of upheaval in the primary circuit. In particular, one of the county’s largest industries experienced a dramatic decline in investment after a time of high profits (BEA 2013). This meets the conditions of Harvey’s model where investors pull investments from the primary circuit and move them into the secondary circuit when returns on investment begin to fall (Harvey 1985, 2001). Brookings County exemplifies the experience of many rural areas in the United States. In particular, at the start of the case period the county was
heavily dependent on agriculture and experienced an economic upheaval during the 1980s (BEA 2013, USDA 2009). Like many rural counties undergoing a process of urbanization, Brookings County experienced its most dramatic population gains from 1970 to 2000 (U.S Census Bureau 2013).

The population of Brookings County experienced a consistent rate of growth during the study period. Figure 3 illustrates the census reports for population in the county since 1970. While the county as a whole grew from 1970 to 2010, the surrounding rural population declined during the time period (U.S Census Bureau 2013). The U.S. Census Bureau identifies two types of urban areas: urbanized areas of at least 50,000 or more people and urban clusters of at least 2,500 but less than 50,000 people (U.S Census Bureau 2013). Rural encompasses all population, housing, and territory not included within an urban area (OMB 2013). In Brookings County, the persons residing in the City of Brookings are defined to live in urban clusters while the rest of the population is defined as rural. This Urban-Rural definition does not account for the eight villages in the county with a population of less than 2,500 persons. Figure 4 makes a distinction between the persons living completely outside of city limits with those that live within the county villages. Figure 4 illustrates that the population gains within the county have occurred either within the City of Brookings or the small villages (U.S Census Bureau 2013).
The decline in the rural population in Brookings County can be attributed to the farm crisis of the 1980s. During the 1970s, agriculture experienced a high rate of expansion propelled by low interest rates and high land prices (Calorimis 1986). A series of record profits in 1972 and 1973 encouraged more farmers to enter the market and increased speculation in farm inputs (Dimitri et al. 2005, Mishra and Sanderetto 2002, Brooks et al 1986). The increased value of farm operations and services to agriculture helped reverse a long standing tradition of outmigration in counties dependent on agriculture (Frey 1987, Dahms 1995).
demand for farm land drove up prices and allowed farmers to leverage their assets at inflated values (Barney et al. 1999). At the peak of farm expansion, operators leveraged their assets in farmland to make capital intensive investments like buying improved machinery and better seed varieties (Belyea and Labao 1990).

The farm crisis of the 1980s was foremost a debt crisis (Brooks et al. 1986). Interest rate hikes in the early 1980s lead to a peak in farmland values (McCalla et al. 1986). This spawned a debt crisis as the debt burden increased while the value of farm assets diminished (Brooks et al. 1986). Increased agricultural productivity in Western Europe and South America in the early 1980s decreased the demand for American agricultural commodities (Heffernen and Heffernen 1986). Falling profits made it difficult for producers to meet their debt obligations and loan defaults increased (Barney et al. 1999). Agricultural banks folded along with farm operations because their assets were also tied to the value of farmland (Dimitri et al. 2005). Fewer lenders exacerbated the crisis because it restricted access to credit (Brooks et al. 1986). Diminished credit lines lowered productivity because it forced producers to sell off equipment, delay repairs to machinery, or use suboptimal seed varieties (Calorimis 1986).

Murdock et al. surveyed agricultural producers in Texas and North Dakota in an attempt to understand the demographic characteristics of struggling operations. In 1985, 20 percent of farm operations in the United States had debt to equity ratios over 40 percent and the rates of farm foreclosures were at historic levels (Murdock et al 1986). The authors conducted telephone interviews with 2000 farm operators in Texas and North Dakota from March 1984 to May 1984. They found that over 33 percent of respondents had negative cash farm incomes and high debt to equity ratios. The producers most likely to be distressed were young, had large families, had entered farming after 1970, and used sophisticated machinery and management practices...
Murdock et al. indicated that producers using more capital intensive techniques such as hybrid seeds, herbicides, and advanced machinery were more likely to have toxic debt ratios. The demographic characteristics of distressed farmers indicated by Murdock et al. had profound implications for communities servicing agriculture. Young households with large families were the most likely to be forced from agriculture (Murdock et al. 1986). With fewer farmers, the value of agricultural land declined further and farm operations consolidated (Belyea and Labao 1990, Lindert 1988). This made it less likely for communities servicing agriculture to recover from a declining customer base. Adamchak et al. studied the effects of population decline in Great Plains states on the retail and wholesale industry. They found that a decline in rural populations lead to a consolidation of retail centers in a handful of counties. Completely rural or counties adjacent to metropolitan counties experienced the greatest declines in retail services (Adamchak et al. 1999). During the 1980s, retail employment had been a major source of off-farm income in rural counties. The declines in retail and agricultural employment reverberated across the region and magnified outmigration (Adamchak et al. 1999).

The farm economy in Brookings County followed a similar trend to the national average. The number of farms and businesses directly servicing the farm economy in the county declined from the 1980s onward (BEA 2013). Since the height of the crisis, consolidation has been the trend for commercial operations while the number of noncommercial farms has increased (USDA 2009). Figure 5 illustrates the decline in the number of farm operations in Brookings County from 1221 in 1974 to 986 in 2007 (USDA 2009). Figure 6 shows the growth of farms with fewer than 100 acres in the county. The increase in farms with fewer than 100 acres indicates a decline in the number of commercial farmers. Farms with fewer than 100 acres
demonstrate the influence of residents that choose to live on a farm but commute to the nearby cities for employment (Janssen et al 2007). The decline in the number the total number of farms, along with the increase of non-commercial farms indicates an increasing degree of corporatization in the farming sector within Brookings County. Figures 5 and 6 indicate that commercial farming has consolidated upward with larger agri-businesses dominating more of the market share.

Figure 5

![Total Farms Graph](image-url)
The Bureau of Economic Analysis provides detailed reports for annual personal income and GDP by industry. Using the Standard Industrial Classification for all industries in the county, Figures 7 and 8 illustrate the changing economic composition of Brookings County from 1970 to 2000. The figures mark the earnings of each industry as a percentage of the total earnings in the county. The decline in prominence of agriculture and retail trade from 1970 to 2000 follows the trend suggested by Adamchak et al. (1999). With fewer farm operations, the number of retail and wholesale operations servicing agriculture declined in the county. The greatest gains in percentage of earnings in the county occurred in the manufacturing sector. Figure 9 illustrates that manufacturing as a percentage of employment increased consistently from 1970 to 2000.
Agriculture experienced a consistent decline.

**Figure 7**

**Earning Reports 1970**

- Professional Services: 10%
- Farm Earnings: 18%
- Construction: 9%
- Manufacturing: 3%
- Utilities: 3%
- Trade Percent: 17%
- Government Services: 38%
- FIRE: 2%

**Figure 8**

**Earning Reports 2000**

- Professional Services: 12%
- Farm Earnings: 5%
- Construction: 4%
- Manufacturing: 30%
- Utilities: 4%
- Trade Percent: 12%
- Government Services: 29%
- FIRE: 4%
The growth of manufacturing in the county can be attributed to the influx of a number of large factories during the time period. During the 1960s, a manufacturer of storm doors based out of Albert Lea, Minnesota opened a plant in the City of Brookings (Larson Manufacturing 2013). Currently, the company employs 551 people from the surrounding area (BEDC 2010). One of the largest employers in the county today, Daktronics was founded in the City of Brookings in 1968 (Cecil 2007). The company started by manufacturing electronic voting systems and expanded to electronic scoreboards and LED displays in 1971 (Cecil 2007). The company currently employs 1,655 people in managerial, engineering, and shift positions (BEDC 2010). In 1971, a large manufacturer of adhesives and medical devices based out of St. Paul, Minnesota opened a plant in Brookings (Cecil 2001). The company currently employs 796 people in its Brookings operations (BEDC 2010). Founded in Brookings in 1975, Falcon Plastics provides industrial molding support to the other manufacturers in the region (Falcon Plastics 2013). The company currently employs 118 people from the around region (BEDC 2010). In 1985, a manufacturer of
residential play equipment moved its headquarters to the City of Brookings (Rainbow Play Systems Inc. 2013). They currently employ 150 people at the Brookings location (BEDC 2010).

The single largest employer in Brookings County is South Dakota State University (BEDC 2010). Founded under the provisions of the 1862 Morrill Act, South Dakota State University is the largest university in South Dakota (Allgrun 2010). The university’s largest academic programs are in agriculture, engineering, nursing, and pharmacy (U.S. News and World Report 2014). The university offers degrees at the associates, bachelors, masters, and doctoral level (U.S. News and World Report 2014). The Carnegie Foundation for the Advancement of Teaching classifies the university as Research University with a high rate of research activity (Carnegie Classifications 2010). In 2010, the graduate and undergraduate enrollment at the university was 12,816 students (Allgrun 2010). The growth of the university from 1970 to 2010 directly influenced the population and employment growth in the rest of the county. A 2010 study commissioned by the South Dakota Board of Regents estimated that student living expenses contributed $67 million to the regional economy (Allgrunn 2010). The university directly employs 2,285 people through the Brookings campus and the agricultural extension services in the county (Allgrunn 2010).

The university also contributes tertiary employment to the residents of the county. The 2010 study estimates that SDSU either directly or indirectly provides 5,710 full-time jobs in Brookings County and the rest of South Dakota (Allgrunn 2010). Students living off campus occupy a significant portion of housing units in the county. The full time students living in the city represent a significant portion of the overall population of the county. Figure 8 charts the increase of students enrolled at the university since 1992 (South Dakota State University 2013). Increased enrollment at the university helped stabilize population growth in the county following
out migration of persons employed in the agricultural sector (Allgrunn 2010). The absolute gains in the construction and real estate industries in the county reflect the growth of the university from 1970 to 2000. In addition to living expenses, the university students provide a pool of skilled labor to the county. The largest manufactures in the county employ students and graduates from the university in managerial, engineering, and research positions (Cecil 2007, Allgrun 2010). The pool of skilled labor provided by the university helps to reduce recruiting and operation costs for manufacturers in the county (BEDC 2010). The proximity of the university was cited as a reason for the expansion of a large cheese manufacturing plant to the county in 2012 (Curly 2012).
Conclusion

Since 1970, the employment and population trends in the study site have increasingly favored urban settings. The number of farm operations has declined from a high of 1113 operations in 1977 to 986 farms in 2007 (USDA 2009). The number of farmers working in commercial operations has decreased while farm operations have consolidated upwards (Janssen et al. 2007). The decrease in farming as a livelihood strategy has made secondary and tertiary services to agriculture less important and employment has shifted into new areas. The primary employment growth in the county has occurred in the manufacturing and service sectors (BEA 2013). The growth in manufacturing can be attributed to the success of a number of regional factories that were either relocated to or were founded in the study area since 1970. The growth of South Dakota State University has contributed substantial population and employment gains in the since 1970 (Allgrunn 2010).

The major employment gains in the case study from 1970 to 2000 have been in manufacturing or in support of the university located in Brookings (BEA 20103). The growth of the manufacturing and education industries is consistent with the regional restructuring perspective surveyed in Chapter 2. In particular, the influx of manufacturing in the county is consistent with the argument that rural places grew because firms relocated into the hinterland to capitalize on strategic advantages of rural areas (Fielding 1982). The growth of the university is also consistent with the regional restricting perspective in that more young people sought higher levels of education to remain relevant in a changing economic environment.

Chapter 4 will examine the temporal relationship of agriculture and the built environment in order to test the applicability of the circuits of capital model. Key developers, lenders, and
property managers are surveyed about their investment decisions. If developers were previously active in the agricultural sector and were proactive in moving their investments into property, there may be a strong basis of support for the circuits of capital model. If developers were more reactive in their investments and were responding to changes in the local economic, there may be a theoretical basis in another theory. In particular, the growth of manufacturing and the university are consistent with the regional restructuring perspective (Fielding 1982). The next chapter discusses this question in detail.
Chapter 4

Investor Behavior in Brookings County

The goal of this chapter is to perform an empirical analysis of the applicability of the circuits of capital model as an explanation for urbanization in rural places. In order to accomplish this, the chapter compares the growth of the built environment along with the trends in the farming sector from 1970 to 2000 in the study area. This chapter makes a quantitative comparison between the built environment and the agricultural sector using regional reports from the Bureau of Economic Analysis and the Federal Deposit Insurance Corporation. To round out the chapter, a number of developers and lenders that were active following the farm crisis were interviewed about their investment decisions. The interviews are used to track the connection between investment shifts in the primary circuit and the secondary circuit within the study area. The first part of this chapter examines investment in the built environment and agriculture in South Dakota from 1970 to 2000. State level reports from the Bureau of Economic Analysis are used where data at the county level is not available.

Circuits of capital model under the microscope

The figures presented in this chapter are a key analytic instrument in the investigation of the circuits of capital model. Figure 11 represents the share of overall expenditures attributed to agricultural investment compared to the combined total investment in agriculture, construction, and real estate investments from 1970 to 2000. This method provides a direct visualization of switching between the share of overall investment between one sector and the other (Christophers 2011). Figure 11 demonstrates two periods of capital switching from 1970 to 2000.
The first period shows a decrease in the share of expenditures focusing on agriculture from 1970 to 1978. The second period demonstrates the decline in investments in the secondary circuit from 1978 through 1982. While the absolute value of agricultural investments peaked in 1979, the switch from the primary circuit to the secondary circuit is not apparent until the uptick of investment in the secondary circuit following 1982.

![Agriculture Investment as a Percentage of Real Estate and Agriculture Investment](image)

**Figure 11**
Figure 12

Figure 13

43
Figures 12 and 13 provide a comparison of the absolute investment in agriculture, construction, and real estate. All values are in thousands of dollars and are adjusted for inflation using the Bureau of Labor and Statistics consumer price index calculator (BLS 2013). Figure 12 shows that expenditures in agriculture peaked in 1979 and experienced a long decline onward. After bottoming out in 1982, the total investment in real estate experienced a consistent rate of growth onward (Figure 13). The two charts indicate a decline in investment in agriculture along with an increase in investment in the secondary circuit following 1982 onward to 2000. This is important because it is possible that investment in the primary circuit increases simultaneously with investment in the secondary circuit albeit at a slower pace (Christophers 2011). Figures 12 and 13 demonstrate that growth in real estate and decline in agriculture occurred both in relative and absolute terms during the study period.

Financial institutions play a key role in capital switching by privileging certain investments over others (Fiegen 1987, Wainwright 2009). Loan officers are sensitive to profit margins and their strategy affects the scale and intensity of investment in a particular sector (Aalbers 2007, Gotham 2006). Their role as lenders is to seek out the most profitable venues to invest their funds. By tracing the strategy of lenders, it is possible to uncover whether switching occurred between the primary circuit and the secondary circuit (Gotham 2009). The Federal Deposit Insurance Corporation (FDIC) provides annual statistical information from reports filed by FDIC-insured commercial banks from 1934 onward (FDIC 2013). Two relevant FDIC reports for South Dakota include the balance of agricultural production loans and loans secured by real estate. Agricultural loans are used to fund the production of crops and livestock or to
refinance capital investments like farmland and machinery (FDIC 2013). Real estate loans are primarily used as credit for the purchase of real estate or as the collateral for loans of another purpose (FDIC 2013). Figure 14 charts the share of loans going to agriculture between agricultural production loans and real estate loans secured by single family residential properties. All dollar amounts are in thousands and are adjusted using the Bureau of Labor’s inflation calculator (BLS 2013).

![Production Loans as a Percentage of Real Estate and Production Loans](image)

**Figure 14**

Figure 14 shows a similar trend as Figure 11 where the proportion of loans going toward agricultural production declined compared to the proportion for real estate. The switch away from agricultural loans occurs in 1983, following an increase of real estate loans secured by single family homes. Similar to the production expenses dataset, the FDIC loans granted for agricultural production peaks in 1979 and experiences a sharp decline following the 1983 season.
Figure 15 shows the absolute values for agricultural production loans from 1970 through 2000. Following the trends in agricultural expenses, the peak in agricultural loans occurs in 1979. The decline in loans following the peak can be attributed to the start of the farm sector’s financial problems. In protest of the 1980 invasion of the Soviet Union, President Jimmy Carter canceled the sale contracts for 17 million metric tons of grain (Friedmann 1993). This lead to a brief decline in farm prices but the actual effect on the farm economy was negligible (McCalla et al. 1986). The major contributors to the decline in agriculture markets were higher interest rates, the start of a global recession, and the rising value of the U.S. dollar (McCalla et al. 1986). Higher interest rates increased the production costs for agricultural commodities and diminished economic growth in developing countries (Brooks et al. 2006). The depressed demand for U.S. grain exports in the developing world and higher production costs squeezed farm profits and may have decreased the willingness of lenders to loan to producers (McCalla et al. 1986). The decline in agricultural production loans even after the immediate effects of the 1980s recession subsided may indicate a long term shift in lending strategy.
In addition to state level industry reports, the BEA provides county level information for the Gross Domestic Product (GDP) by industry. The BEA aggregates the finance, insurance, and real estate industries as one report, so the comparison of the built environment will include finance and insurance in addition to construction and real estate (BEA 2013). Figure 16 demonstrates the GDP of the agricultural industry in Brookings County from 1971 to 2000. The chart shows a similar trend for agriculture in Brookings County as rest of the state with peaks in 1973 and 1979 and a general rate of decline from 1979 onward. Figure 17 charts the aggregate GDP for the construction, finance, insurance, and real estate industries in Brookings County from 1971 through 2000. Similar to the investment reports for the South Dakota, the GDP of these industries has increased steadily following a sharp decline in 1980. The immediate decline in real estate investment in 1980 corresponds to the onset of a recession in the 1980s. Agriculture and real estate both experienced declines in 1980 but real estate made a more pronounced recovery from the 1980s onward. Figure 18 charts a three year moving average of the percentage of GDP belonging to agriculture between the aggregate of agriculture, construction, finance, insurance, and real estate. Similar to the state level reports, the agricultural industry has declined in prominence in Brookings County from 1976 onward.
Figure 16

Agriculture GDP: Brookings County

Figure 17

Construction, Finance, Insurance, Real Estate GDP
Figure 18

Figure 19
An essential component of Harvey’s thesis is that switching from the primary circuit into the secondary circuit follows a crisis of over production in the primary circuit (Harvey 1985, Fiegen 1987). The theory is that investors will attempt to move their funds into more productive venues if they experience dimensioning returns in the primary circuit (Wilson 1991). Figure 19 shows a three year rolling average of the income that producers received in the agriculture sector after expenses. This figure provides general support for the switching thesis in that the peak of investment in agriculture (1979, Figure 11) occurred just before a dramatic decline in farm income following the 1979 season. A potential complication in the application of the theory to the case study is that a switch in investment in the built environment does not follow a crisis in the primary circuit. Figure 13 indicates that the increase in investment in construction and real estate did not occur until after 1982 and appears to follow in tandem with the uptick in the average income in agriculture. Recovery from the 1980s recession may explain the lag of the switch between the primary circuit and the secondary circuit. Following initial losses in the early 1980s, property expanded steadily in the study area while investment in agriculture declined. The FDIC loan dataset and the BEA agricultural expenses dataset provide compelling evidence for a switch of funds away from the agricultural sector. It is still not apparent whether or not the funds that would have been invested in agriculture were moved into property assets or into another investment outlet.
Investors on the Ground

The second part of this chapter involves interviews with key builders, lenders, and property managers active in the study site following the farm crisis in the 1980s. The first interview involved a second generation builder and developer active from the 1980s through present. The developer has one of the largest holdings of real estate in the study area and has made investment in retail, commercial, and residential property over the past 20 years. The respondent chose to invest in real estate because they felt that it was a “natural fit” with their family’s construction business and that it remained a relatively stable investment from the 1980s onward. The respondent listed the growth of the university as a major factor in his decision to invest in property during the last 20 years. Population growth played a dominant role in the decision to expand in the market.

Interestingly, the first respondent had invested in agriculture but during the height of the farm crisis rather than before. The developer’s success in the secondary circuit made it possible to move investments into farmland rather than from it. The respondent purchased farmland during the farm crisis while land values were low because the farm industry was not profitable at the time. Outside business options from construction and property management made it possible for the respondent to invest in farm land. The respondent listed personal reasons for the decision to purchase farmland rather than economic reasons. The farmland the developer invested in was marginal and had recreation opportunities like hunting and habitat restoration for wildlife. The first respondent did not feel that the farm crisis made a significant contribution to urbanization in the study area.

The next respondent is employed as the chief financial officer of a property management company active in Brookings County from the mid-1990s to present. The company manages commercial, retail, and residential properties and specializes in apartment rentals to students at
the university. The company’s founder works as a professor at South Dakota State University and first started investing in rental houses in Iowa City, Iowa during the early 1980s. After moving to Brookings in the 1990s, the founder purchased a series of small apartment buildings near the university and expanded primarily around the school.

The company’s founder inherited a farm in Iowa but did not make substantial investments in farmland or agriculture prior to investing in property. The respondent listed familiarity with real estate and early success in property management as a reason for investing in property within Brookings County. Since its foundation, the company has purchased farmland to trade for other development land near the city of Brookings. The respondent felt that farmland was in a bubble since 2000 and that a price correction was going to hit the farmland market. The company managers were more familiar property development and decided to use farmland as leverage for other opportunities. In retrospect, the managers would have kept the farmland they purchased rather than have traded it for other investment property.

The farm crisis did not have a substantial influence on the company’s decision to invest in real estate from the 1990s onward. The company’s founder was situated in the City of Brookings because of an appointment with the university and already had experience with property management before moving to the study area. The respondent listed the strength of the Brookings housing market as a primary reason for business expansion from the 1990s onward. The respondent felt that the housing market within Brookings remained relatively insulated from outside downturns because of population growth within the city. The respondent listed the growth of SDSU as a key decision point for investing in residential property within the City of Brookings during the study period.
The third respondent owns the largest development company local to the City of Brookings and manages commercial, retail, and residential properties throughout Brookings County. The developer graduated from South Dakota State with an engineering degree in 1953 and worked as a civil engineer for the army. The respondent moved back to Brookings in the late 1950s to start a business. The developer felt that there was a demand for housing within the city, so he started investing in apartment buildings. Previously, the developer’s family had rented apartments to college students and he felt comfortable with property management as a business. The developer built their first apartment building in the late 1950s near the university and rented primarily to students at the university. In the early 1960s, they received contracts from the Department of Housing and Urban Development to build elderly and subsidized housing within Brookings. This allowed them to expand their residential apartment holdings. In the late 1960s, they built the first industrial park in Brookings. The developer attributed the demand for industrial buildings in the late 1960s and the success of the industrial park for early growth in the company.

It seems unlikely that the downturn in the farm economy influenced the developer’s decision to invest in property rather than another investment outlet. Like the first two respondents, the third developer has invested in agriculture but only after founding a company specializing in residential and commercial real estate. Like the first developer, the third had familial connections to the property management industry and felt that it had a stable business model. The third developer listed the growth of the city as a major reason to invest in the property within the city and nearby area. The developer attributed the success of property to the growth of the university and manufacturing within the city.
The three developers interviewed did not invest in agriculture prior to investing in property. Each of the developers interviewed considered property investment foremost because of familial ties to the industry or personal reasons. Two developers were second generation property developers and managers and the third married a real estate broker. None of the developers interviewed indicated whether or not they had seriously considered any investment opportunity before investing in property. Each developer cited the favorable housing market within the study site as a reason for expanding investment within Brookings County. Property growth within the study site had been consistent for the time period studied and each developer attributed their investments decisions to this stability.

The final respondent works as the vice chairman of a community bank based out of Brookings. The bank is one of the largest agricultural banks in the South Dakota but also services the capital needs for property in the study site. For instance, all three of the developers interviewed identified the bank as a source of capital for their development projects since 1990. The interviewee emphasized the generalist nature of a community bank when asked whether or not the economic realities of the farm economy promoted the bank to shift its lending practices. The interviewee claimed that the 1980s were a “wake up call” for agriculture and that they highlighted the risk involved in investing in agriculture. The interviewee also claimed that the bank “stuck with farmers” and that its loan portfolio did not shift away from agriculture as a result of the farm crisis. Agriculture’s dominance in the bank’s loan portfolio has diminished in percentage since the 1980s but the respondent attributes the decline to farm consolidation. The respondent acknowledged that its lending to property grew since the 1980s but did not feel that it came at the expense of agriculture.
The respondent felt that the bank and its lending strategy were reactive to changes in the community rather than proactive in searching out new investments. The banker claimed that they felt a responsibility to accommodate all “reasonable loan demand in the area” and that they reacted to what the market presented them. The banker said that it was not their intent to favor real estate over agriculture as a lending strategy. As such, the respondent did not feel that there was a direct connection to the farm crisis and the decision to make property loans. Rather, the growing community elicited more loans from the bank for property. More families moved into the area and used the bank as a source of capital to buy homes. The decline in farming as a livelihood strategy depressed demand for agricultural loans and the prominence of property in the bank’s portfolio grew as a result.

The interview with the lender is particularly telling in that the strategy of the bank is reactive to the changes of the local economy. Like the three developers, the banker felt that the population growth of the town drove investment into real estate. This makes it difficult to conclude that there was a direct linkage to the farm crisis and the decision to invest in property within the study site. All three developers, and one of their chief financiers, reacted to structural changes within the community as a decision to invest. The developers were all active during the study period but were not prompted to invest in property rather than agriculture. The developers all cited the growth of the university or increased manufacturing within the city as the reason to expand or invest in Brookings. Importantly, none of the developers had previously invested in agriculture prior to the farm crisis and each of them had personal or familial connections to property management within the city.
The BEA and FDIC datasets indicate that agriculture declined while property and the built environment grew as an industry (BEA 2013, FDIC 2013). The interviews with developers suggested that property investment did not increase at the expense of agriculture. Rather, property grew as an industry because of structural changes within the economy of the study site. Manufacturing also increased substantially in the town and made significant contributions to population growth throughout the study period (BEA 2013). Population growth in the town and

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Main Investment Activity</th>
<th>Years Active</th>
<th>Previous investment in agriculture</th>
<th>Reasons for investing in property</th>
<th>Reasons for investing during the study period</th>
</tr>
</thead>
<tbody>
<tr>
<td>First respondent</td>
<td>Construction management/Property management</td>
<td>1980-Present</td>
<td>No</td>
<td>Second Generation builder-felt that property management was a natural fit with construction.</td>
<td>The University in town was expanding; the town’s population was growing.</td>
</tr>
<tr>
<td>Second respondent</td>
<td>Property management specializing in student housing.</td>
<td>1990-present</td>
<td>No</td>
<td>Company’s founder was a university professor that purchased rental houses to rent to students.</td>
<td>Moved to the Brookings for employment with the university. Increased investment when the university expanded.</td>
</tr>
<tr>
<td>Third respondent</td>
<td>Construction management/Property management. Owns a large portion of the city’s industrial land.</td>
<td>1955-Present</td>
<td>No</td>
<td>Family previously rented to university students.</td>
<td>Manufacturing grew in the town; the university expanded.</td>
</tr>
<tr>
<td>Fourth respondent</td>
<td>Vice-Chairman of a Community Bank.</td>
<td>1980-Present</td>
<td>Yes</td>
<td>Demand for home and property loans increased during the study period.</td>
<td>Cited the expansion of the town and the university for the growth of property. Attributed the decline in agricultural lending to farm consolidation</td>
</tr>
</tbody>
</table>

Table 1: Investment Profile of Developers Interviewed

The BEA and FDIC datasets indicate that agriculture declined while property and the built environment grew as an industry (BEA 2013, FDIC 2013). The interviews with developers suggested that property investment did not increase at the expense of agriculture. Rather, property grew as an industry because of structural changes within the economy of the study site. Manufacturing also increased substantially in the town and made significant contributions to population growth throughout the study period (BEA 2013). Population growth in the town and
around the university made property a sound investment for developers around the town. Figure 13 and 17 indicate that property was growing in the study site until the onset of a recession in the early 1980s. The recession in the early 1980s slowed a long trend of property growth within the study site and the property market rebounded with the local economy later into the 1980s. The farm crisis accelerated an existing trend in farm consolidation and decreased the demand for agricultural investment. After a recovery in the mid-1980s, agricultural investment remained at a consistent level.

**Conclusion**

The economic changes the developers discussed as a reason for investment are consistent with an existing explanation for urbanization in rural areas. The regional restructuring perspective discussed in Fielding (1982), Dahms and McCombes (1999), and Domina (2006) suggests that manufacturing growth was a leading cause of urbanization in rural areas. A number of manufacturing firms were either founded or moved into the study site during the time period study (Cecil 2001, Cecil 2007). The growth of the university is also consistent with an economic restructuring explanation. The decline of agriculture as a livelihood strategy increased the demand for higher education within the South Dakota and more people moved to the study site to attend the university. The developers interviewed were already in place to take advantage of the rising demand for housing within the study site. Employment opportunities from a growing manufacturing center and increased demand for education in a restructuring economy helped expand urbanization within the study site. The theoretical and policy implications of this finding are discussed further on.
This chapter performed an empirical analysis of the three research questions discussed in Chapter 1:

a. What has been the temporal pattern of investment in the area’s built environment?

b. Where did the funds for investment in the built environment originate?

c. If investment funds in the built environment originated from agricultural sector (Harvey’s primary circuit) what were the underlying reasons for the switch?

The first part of this chapter compared the investment in the built environment to investment in agriculture from 1970 to 2000 in the study site. The quantitative data indicates a general trend in decline of farm investment along with a simultaneous growth in investment in the built environment. It is important to note that the built environment did not grow after a period of overproduction in agriculture. Investment funds in the built environment did not originate in the local primary circuit. The interviews with the essential shapers of the built environment indicate that the circuits of capital model is not applicable to the study site. The developers and lenders interviewed account for a plurality of property investment in the study site and did not choose to invest in property because of a perceived slowdown in the primary circuit. The developers credit the growth of manufacturing and education in the town as the essential drivers of urbanization in the study site. The changing dynamics of the economy in the study site are consistent with the explanation for urbanization advanced by Fielding (1982) and Dominia (2006).

This chapter exposes a problem in applying the circuits of capital model to the fine-grained spatial scales of individual counties or cities. The Bureau of Economic Analysis reports aggregated at the State level (Figures 11, 12, and 13) and the FDIC reports (Figure 14) indicate a possibility of capital switching. The charts indicate the general trend suggested by Harvey in that
the built environment grew following a period of economic crisis in the primary circuit. The individual investors interviewed are limited in their capacity to move funds from one circuit into the other. Individual investors are much more likely to rely on personal experience or imperfect knowledge when making investments. Capital switching is more likely to occur at a regional, national, or transnational scale with a greater number of investors and institutions. The role of scale in the circuits of capital model is a key consideration for future studies.

The assessment of the circuits of capital model for this particular study site may not present an overarching trend in rural urbanization. In particular, investment in the urban environment within the study site is dominated by only a few developers and lenders. The rational for investing in Brookings County by the most prominent developers did not match the circuits for capital explanation for investment in the built environment. Each developer had their own particular reason for choosing to invest in property other than moving investments from agriculture. The trends of simultaneous growth in property along with decline in agriculture for the rest of the state may indicate that the circuits of capital model has applicability elsewhere. The final chapter of explores the theoretical implications for this study. The final chapter will also examine the policy implications for rural places that share similar characteristics with Brookings County.
Chapter 5

Conclusion

This chapter examines the theoretical and policy implications of my findings. This is a crucial chapter in the thesis: it fleshes out the repercussions of the findings for theory and practice in real estate investment dynamics. This chapter first reviews the theoretical implications for the study and then evaluates the policy implications for the rural built environment.

Theoretical Implications

The primary question I have posed in this study is whether or not the investment decisions of real estate institutions can be understood through the logic of the circuits of capital model. The study investigated whether or not the decisions of property developers in rural places were influenced by their relationship with the primary circuit. The model suggests that investors become active in the local property sector because of a perceived decline in the profitability of the primary circuit (Harvey 1985, Fiegen 1987). In particular, the model describes investors as making proactive decisions to move funds into property from other circuits (Wilson 1991).

This case study indicates that real estate institutions on the ground in rural settings do not universally follow the circuits of capital model. In particular, the motivations and actions of developers within this study site were not linked to the primary circuit. Each developer attributed the growth of the study site to the expansion of the university and manufacturing within the City of Brookings. The growth of the city made investors already operating within the secondary
circuit well situated to expand their operations within the study site. The largest developers in the study site were not motivated by overproduction in the primary circuit, but rather by the changing economic attributes within the study site.

Even with a small sample size, this study makes it clear that investment dynamics in rural areas are more complex than described by Harvey in the circuits of capital model. Each investor had a particular reason to invest in property that stemmed from personal life experience. For example, one investor started investing in property because they had married a real estate broker that had a knack for finding prospective investment homes. The other two investors each had familial connections to property and relied on personal experience when deciding to invest in property. The interview with the lender tells of an investment environment much more dynamic than neatly ordered investment switching periods. The bank did not attempt to steer investment into one particular circuit but rather evaluated loan requests on their individual merits. The lender claimed that the bank made all attempts to accommodate all “reasonable” loan requests within the study site. This meant that capital flow was highly subjective and relied on the experience and expertise of individual lending mangers.

Investment in rural areas is idiosyncratic and relies on the actions of prominent local officials and institutions that decide what and where to invest based on personal experience and values of place. Idiosyncrasy affects social concerns, political allegiances, choice of development site, and the timing of government support for private investment (Wilson 1991). Rural areas in particular are influenced by the actions of a few developers and policy makers because their smaller size and power concentration. The property market in this particular study site is dominated by only a few actors. Whereas urban areas may follow the pattern suggested by Harvey over a multitude of investors, rural areas impacted more by the particular decisions of
only a few investors. The largest developers in Brookings County were not attentive to the primary circuit and their decision making had dramatic effects on the secondary circuit within the study site. Property development within the study site is the outgrowth of a more complicated investor behavior than described in the circuits of capital model.

The contribution of this study is thus to demonstrate that real estate institutions cannot be understood by the logic of the circuits of capital model in rural places. Real estate institutions did not expand within Brookings County because of a crisis of overproduction in the agricultural economy. The reasons for growth in the built environment cited by developers most closely align with the regional restructuring perspective described by Williams 1981; Fielding 1982; Dahms and McCombes 1999; and Domina 2006. Manufacturing expansion within the study site helped to increase employment opportunities and attracted workers from elsewhere in the region. Two of the largest employers within the county opened additional manufacturing centers within Brookings County during the early 1970s (Larson Manufacturing 2013, Cecil 2001). In addition to plant expansions, new manufacturing firms were founded within Brookings County during the study period (Cecil 2007).

South Dakota State University also experienced significant expansion during the period of 1970 to 2000 (Cecil 2001). In turn, new service industries expanded within the study site to meet the demands of students and faculty at the university (Allgrun 2010, Cecil 2001). The expansion of education and service industries within Brookings County aligns with the experience of the South Georgian Bay area near Toronto, Ontario described by Dahms and McCombes (2006). Dahms and McCombes suggest that population growth within their rural study site was primarily influenced by economic reorganization that attracted new migrants from outside the area. The decline in farming as a livelihood strategy and the importance of higher
education in a post-industrial economy help to explain the expansion of the university and service industries within the study site. New employment opportunities made significant contributions to population growth within the study site and led to the expansion of the built environment within the study site.

Real estate institutions played a reactive role in the development of the built environment within Brookings County. Each developer cited population growth influenced by manufacturing and the university as the primary reason for investing within the study site during the timeframe surveyed. The developers did not invest in property because of a need to move funds from the declining primary circuit. The largest lender within the region did not feel that its lending strategy favored the secondary circuit over the primary circuit. Increased demand for housing and office space led to a growth of property loans as part of the lender’s portfolio but the lender did not make an explicit decision not to invest in agriculture. The reactive decision making described by the developers is distinct from the processes described by the circuits of capital model.

The experience of Brookings County, South Dakota is consistent with one of the primary criticisms of the circuits of capital model posed by Gottdeiner (1990), Halia (1991), and Charney (2001). Mainly, the authors argue that the circuits of capital are relatively autonomous from one another. The growth of manufacturing and service industries within Brookings County following the decline in agriculture may indicate a switch of funds from one part of the primary circuit (agriculture) into other parts of the same circuit but there is little evidence to support switching between the circuits in a well ordered temporal sequence. Gottdeiner’s (1990) argument that the secondary circuit is made up of a distinct group that invests in construction and real estate matches the experience of Brookings County. The dominant investors in the built environment
within the study site were already active in the secondary circuit before the start of the farm crisis. Each developer indicated that their reasons for investing in the secondary circuit were unrelated to crisis events within the primary circuit.

**Policy Implications**

In recent years, rural planners have increasingly looked to attract investment into the built environment within their localities (Barcus 2013, Abrams and Gosnell 2012, Abrams 2011, Kondo et al. 2012). The primary policy implication of this study flows out of the finding that the rural built environment is not always linked to the region’s primary circuit. If the two circuits were linked, a planner would need to be attentive to changes within the primary circuit to determine the need for incentives to encourage property development. In the case of rural areas with similar experiences as the study site, investment incentives do not need to be applied with any particular attentiveness to the primary circuit. The next part of this chapter explores relevant development incentives that can be applied to encourage investment in rural areas.

State supplied development incentives help to address a contradiction in property investment (Gotham 2009). Property investors desire a quick turnover in investment but property is inherently slow in actualizing profit (Smith 1979). Certain state incentives can help address this conflict by making funds immediately available to investors or by reducing risk in property investment (Kirkpatrick and Smith 2011, Gothman 2009). Other incentives like grants for elderly housing or housing subsidies for low income persons can help encourage investors to serve populations they would otherwise find unprofitable (Foote 2010). State supplied development incentives may encourage investors to build housing in rural areas where the market would otherwise be too small to consider investing in.
The most important development incentive employed within the study site has been the establishment of tax increment financing districts. Tax increment financing (TIF) is a widely used development incentive that finances development projects by borrowing against the projected increases in property tax revenue (Davis 1989, Anderson 1990, Chikow 1998). Tax increment financing involves the creation of special zones or districts where revenue growth within the area is earmarked for a period of years to pay for infrastructural improvements (Anderson 1990). It is a development strategy that leverages the expected increased tax revenue for real estate within the district to develop the area (Dye and Merriman 2000). In this way, the state pays for infrastructural improvements upfront in order to encourage real estate development within an area. Tax increment financing is a popular strategy for local governments to develop their tax base because it avoids the political and legal limits of increased local taxation (Briffault 2010). Unlike tax abatement programs which involve tax cuts, credits, or reduced regulation, TIF channels new money directly into the district (Briffault 2010). This makes them popular with local governments and private developers.

Tax increment financing laws were first codified into South Dakota law in 1978 and allow for the development of residential property (Long 2008). TIF laws are particularly flexible in South Dakota in that they can be used to pay for infrastructural improvements in most undeveloped areas within the state. Tax increment financing has been widely used within Brookings County and continues to be used as a development strategy in the City of Brookings (Curly 2014). The developers interviewed highlighted the southern part of the town as an important catchment for new real estate investment with the City of Brookings. The municipal government has established a TIF zone to pay for additional road and sewer lines to serve
planned subdivisions in the southern part of the city (Curly 2014). The new infrastructure spending has enabled the developers to increase investment within the TIF zone.

Tax abatement represents another development strategy relevant to rural areas (Drabenstott et al. 1987, Lansford and Jones 1991, Deewees et al. 2003). Tax abatement programs within the study site have been used to encourage both the construction and purchase of property within the study site. Brookings County has an ordinance that allows owner-occupied new industrial, distribution, or research structures to be taxed at lower rates (BEDC 2010). This reduces the tax burden of new or expanding businesses within the study site. The City of Brookings uses tax abatement to encourage the development of industrial zones and research parks within the city (Thornes 2014). Tax abatement laws reduce the cost of property purchases for residential, commercial, and industrial consumers in order to increase the demand for new property (Anderson and Wassmer 1995). In turn, this incentivizes developers to enhance property because of an increased demand for buildings. Similar tax abatement policies in other rural areas may attract new consumers and encourage investment from developers.

The developers interviewed were particularly attentive to new demand for property when deciding to invest in the built environment. Demand side programs that encourage consumers to purchase or use new properties may be particularly useful for the development of rural areas. In addition to tax abatement programs, Brookings County employs a development incentive called the Revolving Economic Development and Initiative Fund (REDI). The fund is a statewide initiative that provides low interest, revolving loans that can be used for the purchase of new land and associated site improvements as well as the construction and renovation of buildings (BEDC 2010). REDI acts as a purchasing incentive for firms relocating to or operating within South Dakota to acquire or improve new properties. State and local governments can provide similar
development programs that increase the purchasing power of consumers to buy properties (BEDC 2010).

The lack of affordable housing presents a chronic development challenge in rural areas (Lawrence 1995, Wallace 1995, Bevan 2013). Low income individuals in rural counties pay higher costs for mortgages (Mikesell 1998) and spend a higher percentage of their income on housing (Lazere 1989). In particularly remote areas where land values are low and opportunities for developers are limited, state intervention is essential to address housing needs of the rural poor (Satsangi 2013). Rural counties that experience persistent poverty are often geographically isolated, lack resources and economic opportunities, and suffer from decades of disinvestment (Housing Assistance Council 2012). Structural weaknesses in rural economies are caused by underinvestment in transportation and modern communication infrastructure, concentration of low skilled manufacturing employment, and poorly educated workforces (Eisnger et al. 1993). In persistently impoverished counties, state development policies must include programs to build the area’s economic base in addition to offering housing incentives. State and federal programs that address chronic unemployment, food insecurity, underinvestment in infrastructure, and affordable healthcare are necessary to stabilize chronically poor counties. Housing assistance programs can help provide stability to chronically poor regions when offered in conjunction with other development programs (Olsen 2003).

Low income housing grants are an important demand side development incentive for rural areas (Fitchen 1992, Cummins et al 1999, Susin 1999, Olsen 2003) Brookings County has a large number of tenant occupied housing units because of its proximity with the university (U.S Census Bureau 2013). Renter assistance like low income housing is particularly a salient investment incentive within the study site. Two of the developers interviewed manage subsidized
apartments for low income persons renting apartment space. These apartment buildings are supported by state and federal funds paid directly to the apartment owner. In turn, the property manager rents to low income persons at lower rates. One developer identified a grant by the Department of Housing and Urban Development to build low income and elderly housing as essential in his decision to expand property investment in Brookings County.

In addition to housing subsidies paid directly property managers, South Dakota operates a program called the Governors House Program for low income individuals. The Governor’s House Program allows consumers to purchase low cost (~ $35,000), pre-built homes from the state (Natalie-Lees 2013). Recently, South Dakota expanded the Governor’s House Program by allowing developers to purchase per-built homes directly and locate them on new lots or subdivisions improved by the developer (Natalie-Lees 2013). This encourages developers to make improvements like supplying utilities and concrete foundations to undeveloped land. The Governor’s House Program has been used to address housing shortages in particularly remote regions of the state including the Pine Ridge Indian Reservation (Natalie-Lees 2013). The program also allows remote school districts to purchase homes as a way to recruit new teachers. Similar programs that make substantial reductions in the cost of owner-occupied housing units may encourage residents to locate to rural areas. Rural municipalities may use similar programs to expand their tax base.
The Role of Scale in the Circuits of Capital Model

This study presents the problem of scale in evaluating Harvey’s circuits of capital model. In Brookings County, the individual investors responsible for shaping the built environment did not have a prior connection to the primary circuit. At the regional level, the Bureau of Analysis reports indicate the possibility of a capital switching dynamic. The decline of investment in agriculture relative to investment in the built environment follows the temporal sequence suggested by Harvey. The reports aggregated at the State level still point to the possibility of capital switching. Harvey’s model is limited when examined at the fine-grained spatial units of individual counties or cities. When applied to regional, national, or transnational scales, the circuits of capital model is more likely to provide an explanation for urbanization. On the ground, individual investors are limited by their own capacity to move funds between circuits. Individual investors rely on imperfect knowledge and personal experience when deciding where to put their investments. Across greater levels of scale and multitudes of investors, capital switching becomes more possible. I suggest that the model provides explanatory power for regional or transnational processes that are mediated by idiosyncrasy at the local level. Future studies will need to account for the role of scale when evaluating the circuits of capital model.

Future Work

While the case study exemplifies important aspects of rural places, there are additional factors that warrant further study. Further studies are necessary to track the universality of the findings from this study. Additional study sites may inform whether or not the economic restructuring that occurred within the study site was emblematic or idiosyncratic of rural places. We understand from this study that investor behavior is more complex than suggested by Harvey in the circuits of capital model but this complexity is still poorly understood by academics.
Additional studies can help to understand any latent trends in investor behavior. This study sought out real estate investors and asked whether or not they had previously invested in agriculture. Further studies that explicitly target investors in agriculture can help us understand the complexity of investment dynamics. Additional studies that examine the decisions of secondary circuit investors during periods of profit slowdown in property would also be helpful in understanding the layers of investor behavior. A key limitation of this study is that it did not follow the flows of investment moving into and out of the county. For example, the capital that was had been in farm production at the start of the study period is unaccounted for. Future work will need account for the dynamics of capital flow more closely.

**Conclusion**

This study finds that real estate institutions in Brooking County, South Dakota do not follow the logic of the circuits of capital model. The experience of Brookings County validates previous studies of urbanization in rural areas. This study helps to verify existing arguments in the literature on urbanization in rural areas and the circuits of capital model. The experience of Brookings County follows the process of urbanization described in Williams 1981; Fielding 1982; Dahms and McCombes 1999; Domina 2006 where urbanization was tied to the changing structures of the regional economy. Investors active in the secondary circuit within the study site based their decisions to build because of an increased demand from consumers migrating to the area in search of new education, service, and manufacturing opportunities. This study also supports the argument posed in Gottdeiner (1990) in that the dominant investors in the built environment were active only in the secondary circuit with no particular attentiveness to the primary circuit. The developers surveyed in this study help validate the argument presented in Chaney (2001) and Halia (1991) that investment in the secondary circuit is pursued in its own right rather than as a next best thing to investment in the primary circuit.
Bibliography


