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# Entrepreneurship, Creativity, and Local Food Systems: Essays on Regional Economic Development in South Carolina

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ENTREPRENEURSHIP, CREATIVITY, AND LOCAL FOOD SYSTEMS: ESSAYS  
ON REGIONAL ECONOMIC DEVELOPMENT IN SOUTH CAROLINA.

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A Dissertation  
Presented to  
the Graduate School of  
Clemson University

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In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy  
Policy Studies

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by  
Kristen K. Lientz  
December 2015

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## ABSTRACT

Within the existing economic development literature, there is a well-established linkage between the presence of skilled human capital and economic growth. A subset of this literature has focused on the role that a specific type of skilled human capital, known as the “creative class,” may play in facilitating regional economic development. This dissertation builds upon the existing creative class literature by examining the factors that have attracted the creative class to the state of South Carolina. In addition, this research gives special attention to the entrepreneurial activities of creative class professionals who engage in small-scale farming. Recent interest surrounding the economic, social, and environmental benefits of small-scale farming has led researchers and development practitioners to increasingly examine the role that local food systems may play in the regional development process. Accordingly, this dissertation examines how small-scale farm operators may be contributing to their communities and local economies by engaging in knowledge-intensive, entrepreneurial activities.

This dissertation includes three manuscripts related to the creative class and local food systems in South Carolina. Manuscript One examines the geographical, physical, and socioeconomic characteristics that may attract members of the creative class to certain communities in South Carolina. This research provides insight into the factors that may allow some rural or less populated areas to attract high-quality human capital. Manuscript Two transitions into an examination of entrepreneurship and local food systems and specifically, explores a linkage between small-scale farm operators and the creative class. Manuscript Two is intended to provide insight into the role that local food

systems may play in facilitating local economic development and should be especially relevant to rural or less populated areas looking to implement an entrepreneurship-led development strategy. Lastly, Manuscript Three explores the factors that may facilitate the development of well-functioning local food systems in certain South Carolina counties. This research may be especially relevant to development practitioners who are considering ways to improve the overall functioning of their local food systems.

## DEDICATION

This dissertation is dedicated to the following individuals:

- My husband, Lt. Dustin Lientz, who I met during my first month as a PhD student in Clemson. Thank you for patiently enduring five long years of my PhD work and for always believing that I would finish this degree.
- My mother, the author Roz Lee, who has been determined in her commitment to raising independent, successful, and hard-working daughters.
- My dad, Terrell, who has asked about the status of my dissertation every week for the past three years. He will be happy to know that it has finally been completed.
- My sister, Sarah, who lived with me in Clemson, kept me company, and embraced my love for reality television.

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## CHAPTER ONE

### INTRODUCTION

For many rural communities, the process of facilitating economic development can be both complex and challenging. Over the past several decades rural cities and towns have explored a range of public policy options intended to improve local economic performance. These economic development strategies are often intended to attract new business, create new jobs, encourage entrepreneurship, and improve the knowledge and skills of rural workers (see Goetz *et al.*, 2010; Moretti, 2004; and Hustedde *et al.*, 1993). However, despite the myriad of policies and programs that have been used to facilitate rural development, many small towns continue to struggle to bring long-term, sustainable growth to their communities.

This struggle can be attributed, at least in part, to the numerous challenges that many rural towns must overcome in order to achieve their development goals. From rural “brain drain” to geographical isolation, there are many issues that policymakers must address when attempting to stimulate economic activity within rural areas. In addition, rural development strategies have largely been the product of a highly complex and fragmented public policy system that includes multiple levels of government and the work of many government agencies (Drabenstott, 2006). In light of this, there is an ongoing need for research that examines the ways in which public officials, at all levels of government, can contribute to the development and implementation of effective rural development strategies.

Recent literature suggests that there are promising strategies for improving rural economic performance (see Blakely and Leigh, 2010; Porter and Kramer, 2011). As rural towns are discovering that traditional business recruitment strategies do little to facilitate long-term job security and economic growth, many areas have begun to embrace a more locally-based approach to economic development. Often, this new approach to economic development includes strategies that emphasize the importance of human capital and small business creation. Notably, much attention has been given to the role that entrepreneurship may play in the rural development process. Recent findings suggest that entrepreneurship (reflected by either self-employment or new business growth) can have a positive impact on rural economic development and may result in higher levels of employment growth (McGranahan *et al.*, 2010a; Henderson, 2006). Similarly, previous research has also indicated that improved telecommunications and more efficient transportation systems (including commuter air service) have allowed some rural areas to more effectively attract human capital and develop small export-oriented companies (see Beyers and Lindahl, 1996 and Heenan, 1991). Findings such as these suggest that entrepreneurial activity based in nonmetropolitan areas has become increasingly feasible and may serve as a realistic development strategy for rural cities and towns.

Despite these findings, there is an ongoing need for research that will provide insight into the factors that facilitate economic development in certain rural areas, while others seemingly struggle to achieve their goals. As evidence increasingly suggests that entrepreneurship may be an effective means of improving rural economic performance, there is a need for research that examines the conditions under which rural entrepreneurs

and their small businesses are likely to be successful. Undoubtedly, human capital will be important to the success of any rural area looking to pursue an entrepreneurship-led economic development strategy.

Retaining and attracting entrepreneurs has been an ongoing challenge for many rural areas. Over the past two decades, approximately half of nonmetropolitan counties experienced a loss of population due to outmigration (McGranahan, *et al.*, 2010b). According to the United States Department of Agriculture, “rising unemployment, housing-market challenges, and energy sector developments” have all contributed to rural population loss over the past decade (2014a). Factors such as these demonstrate the difficulties that many rural areas face in retaining human capital, especially when they may lack many of the economic opportunities or amenities that are more readily available in metropolitan locales. Given the important role that human capital plays in virtually all development strategies, there is a clear use for research that examines ways in which rural towns can more effectively attract and retain high-quality, entrepreneurial human capital.

### **Research Purpose**

This dissertation intends to contribute to the existing rural development literature by examining the role that entrepreneurs and more specifically, creative class entrepreneurs operating within local food systems, may play in the rural development process. This dissertation also intends to provide insight into how rural and less populated areas can more effectively attract and retain this specific group of entrepreneurs.

Recently, there has been a great deal of interest in the role that certain creative, entrepreneurial professionals play in the regional economic development process. These individuals, who are referred to as the “creative class,” often distinguish themselves from others by engaging in knowledge-intensive activities and complex problem-solving (Florida, 2002a). Members of the creative class can be found in a wide-range of industries, including the financial services and high-tech sectors, as well as the legal, health care, and business management industries (Florida, 2002a). Previous research has identified linkages between the creative class and regional economic development (see Florida, 2002a and Stolarick, 2011); however, few efforts have been made to examine the role that members of the creative class may play in the rural economic development process. The purpose of this dissertation will be to provide insight into the ways in which less populated or rural towns can successfully implement a creative class-led economic development strategy.

Often, entrepreneurship-led economic development strategies (especially those that are focused on creative class entrepreneurship) have focused on ways to attract and retain skilled individuals who work in knowledge-intensive sectors. For rural areas that often lack existing clusters of knowledge-intensive businesses, the process of attracting and retaining skilled entrepreneurs can be especially challenging. One of the primary goals of this dissertation is to identify ways that rural communities can more effectively attract entrepreneurs and more specifically, creative class entrepreneurs. In particular, this dissertation will examine whether local food systems can provide the type of knowledge-intensive, economic opportunities that often attract creative class entrepreneurs.

Local food systems were chosen as a lens through which to examine rural creative class entrepreneurship for several reasons. First, local food systems are increasingly being viewed as a way to generate economic activity and facilitate local economic development (see Martinez *et al.*, 2010). Second, local food systems are generally built around small-scale farming operations that sell their goods directly to nearby consumers (Martinez *et al.*, 2010). As Kahan (2012) notes, these farmers are required to be skilled entrepreneurs who must operate in a “complex and dynamic environment,” which requires them to be “technically competent, innovative, and plan ahead so they can steer their farm businesses through enterprise development.” This finding suggests that local food systems, and the farms that comprise them, may represent the type of knowledge-intensive business clusters that are often so attractive to the creative class. Third, there is reason to believe that rural towns may be well-suited for developing successful food systems. In many rural areas there is a historical precedent for farming and knowledge about food production is often readily available from friends, family members, or neighbors (University of Missouri Extension, 2015). Likewise, less urban areas often have available and affordable land that can accommodate small-scale farming operations.

Previous research suggests that many rural areas are capable of attracting members of the creative class. Specifically, McGranahan and Wojan (2007a) have found that the creative class may be especially likely to locate in rural areas with high-quality natural amenities or nearby colleges or universities. This research intends to build upon the existing creative class research by examining whether local food systems may provide an additional mechanism for attracting creative class entrepreneurs to rural communities.

Accordingly, this dissertation will include three manuscripts related to entrepreneurship in the state of South Carolina. These manuscripts seek to (1) identify the factors that have attracted the creative class to certain South Carolina communities, (2) affirm the existence of creative class entrepreneurs within knowledge-intensive local food systems, and (3) identify factors that may allow South Carolina towns to facilitate local food system development.

South Carolina was chosen as a setting for this research for several reasons. Increasingly, cities and towns throughout the state are viewing entrepreneurship as a viable economic development strategy (see Dunbar, 2015). In addition, South Carolina communities have become increasingly interested in local food system development. There are many initiatives in place at both the state and local level to encourage small-scale farming and the direct marketing of local food products (these initiatives will be explored in greater depth in Chapter Two). Given this growing interest in entrepreneurship within the context of local food systems, it may be useful to examine whether South Carolina's rural local food systems can also be used as a mechanism to attract and retain members of the creative class. Accordingly, the following section will provide an introduction to the state of South Carolina and its recent economic history. Subsequently, this chapter will conclude with a brief overview of the different manuscripts included in this dissertation.



## **South Carolina**

Over the past few decades, communities in South Carolina, especially those located in rural areas, have faced several economic challenges. Notably, increased international competition, particularly in the textile industry, has transitioned the state away from manufacturing activity to an economy that is largely rooted in the service and trade industries (Schunk and Woodward, 2000). Today, only eighteen percent of South Carolinians are employed by the manufacturing sector, while approximately 49 percent of the state's residents are employed in sectors that are largely service-based (professional and business services; finance, insurance, and real estate; leisure and hospitality; information services; retail; and education and health services) (S.C. Dept. of Commerce, 2015).

For rural counties that were once home to a successful textile industry, this transition toward a more service-based economy has been particularly challenging. As textile-related employment has declined steadily since the 1970s (Schunk and Woodward, 2000), many South Carolina cities have had to search for other ways to remain economically competitive. In some instances, new strategies for economic development have included efforts to attract established, out-of-state businesses through lucrative tax incentives and workforce-training subsidies. Although these incentives have drawn several well-known corporations to the state (BMW, Michelin, Boeing, to name a few), rural areas that are geographically removed from these new manufacturing operations are unlikely to benefit from their presence.

However, in addition to these business recruitment efforts, the state of South Carolina has implemented a range of initiatives intended to create new economic opportunities in both urban and rural areas. Recently, the state has provided funding for the establishment of seven regional economic development alliances to assist counties in achieving their economic development goals (Gassaway, 2013). Furthermore, the S.C. Department of Commerce has recognized the important role that small businesses may play in rural economies and has implemented several programs intended to encourage small business development. This programming includes the establishment of the Small Business Advisory Council and the “BuySC” program<sup>1</sup>, as well as “lender matchmaker” events and the development of online resource guides for small business owners (S.C. Department of Commerce, 2014).

Despite these efforts, there is reason to believe that some of South Carolina’s communities are continuing to fall behind. As of September 2015, forty-one of the state’s forty-six counties recorded unemployment rates that were above the national average<sup>2</sup>. Likewise, the state may also be struggling to develop and retain a workforce that is capable of supporting high-quality jobs. As the S.C. Chamber of Commerce (2015) reports, “critical needs”<sup>3</sup> jobs account for forty-five percent of the state’s workforce,

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<sup>1</sup> According to the S.C. Department of Commerce (2014), the purpose of the “BuySC” program is to utilize a supplier database program to match South Carolina-based small businesses with “buyer” companies that are looking for new suppliers.

<sup>2</sup> The national unemployment rate, as of September 2015, stood at 5.1% (Bureau of Labor Statistics, 2015a). As the state of South Carolina reports, forty-one counties within the state of South Carolina recorded an unemployment rate that exceeded 5.1% in that same month (S.C. Department of Employment and Workforce, 2015).

<sup>3</sup> According the S.C. Chamber of Commerce (2015), “critical needs” jobs are those that “require more education than a high school diploma, but less than a four-year degree.” This may include post-secondary

while only twenty-nine percent of the state's workforce has the necessary skills to fill these positions. This finding suggests that many areas within the state may be unable to adequately support existing businesses and most likely, will encounter additional challenges when trying to attract or develop new economic opportunities. Given these potential difficulties, there is a need for research that identifies viable strategies that can assist South Carolina communities, especially those in rural settings, with their efforts to create economic opportunity and maintain a stock of high-quality human capital.

In order to provide further insight into the factors that contribute to rural economic development, this dissertation will examine several interrelated topics pertaining to local economic development in the state of South Carolina. These research topics relate to the role that skilled human capital, entrepreneurship, and local agriculture may be playing in rural economies. With respect to the topic of human capital, this dissertation will focus primarily on the contributions that a certain group of skilled professionals, referred to as the creative class, may be making to their local economies and local food systems.

South Carolina provides a particularly interesting setting for examining these topics for several reasons. First, the state is home to both metropolitan counties and counties that are exceedingly rural<sup>4</sup>. This geographic diversity allows for comparisons between urban centers, which have historically found more success in facilitating economic development, and less populated areas that have often struggled to improve

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education or training such as an associate's degree, a vocational certification, or substantial on-the-job training (S.C. Chamber of Commerce, 2015).

<sup>4</sup> Approximately twenty-one of the state's forty-six counties satisfy the Office of Management and Budget's definition of a metropolitan county. The remaining 25 counties are rural (USDA ERS, n.d.).

their economic performance. Secondly, South Carolina is currently home to over 1,500 farms that participate in direct marketing (USDA, 2012a), as well as 118 farmers markets (USDA AMS, n.d). In addition, as of 2012, 97.1 percent of South Carolina's farms met the USDA criteria for a small farm<sup>5</sup>, and roughly a quarter of the state's farmers have been farming for less than ten years (USDA 2012a). Given these characteristics, South Carolina provides an appropriate setting for examining the factors that help to facilitate small-scale farming and direct marketing. This information could be useful to other states with agriculturally-oriented economies who might also be interested in developing successful local food systems. Furthermore, as farmers' markets are becoming increasingly popular as local amenities,<sup>6</sup>, rural development professionals have become more interested in the role that farmers' markets (and similar direct marketing arrangements) may be able to play in the rural development process. As a result, there is a need for research that can provide insight into the factors that contribute to the development of local food systems, especially in less populated areas.

### **Dissertation Overview**

As noted, the purpose of this dissertation is to examine the role that creative class entrepreneurs play in facilitating local economic development in the state of South Carolina. This research will focus heavily on creative class entrepreneurship in the context of local food systems. Hence, each of the manuscripts included in this

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<sup>5</sup> USDA defines small farms as all farms with \$250,000 or less in annual sales of agricultural commodities (USDA, 2007).

<sup>6</sup> According to the USDA (2014b) the number of farmers' markets in the U.S. increased by 123 percent between 2004 and 2014.

dissertation are intended to provide insight into the ways in which South Carolina communities can more effectively facilitate entrepreneurship, particularly in rural or less populated areas. The following sections will provide an introduction to each of the remaining chapters included in this dissertation. Lastly, this chapter will conclude with a glossary of terminology that is used frequently throughout this dissertation.

## Chapter Two

Chapter Two provides an introduction to the three topics that form the basis of this dissertation research: rural entrepreneurship, the creative class, and local food systems. This chapter also includes a discussion of policy theory and more specifically, an application of the Advocacy Coalition Framework (ACF) to the development of recent local food system policies. This discussion provides an overview of existing policies related to local food systems. More importantly, this chapter uses the ACF to explain how, over the course of several decades, policymakers at levels of government became increasingly supportive of policies and programs intended to promote local food system development.

Chapter Two's discussion of the ACF is valuable to this dissertation on several levels. First, it helps to explain how local food policies have become a favored economic development strategy in many policymaking circles. Second, this application of the ACF helps to demonstrate how the development of local food policies in the U.S. has largely been the result of a locally-based, grass-roots movement. This finding is notable because

it demonstrates the important role that local and regional organizations, local officials, and every day citizens can play in local food system development.

The idea that local organizations can be influential in facilitating local food system development may be particularly promising for cities and towns that are looking to develop a successful local food system. As it is the purpose of this dissertation to establish a linkage between entrepreneurship, local food systems, and regional development, it is important that this research also identifies mechanisms for ensuring the continued development of effective local food policies. As rural and less populated areas consider ways to encourage local food system development, it is important to understand how locally and regionally based organizations, as well as local governments, have previously been successful in influencing the development of useful local food policies. This discussion of the ACF hopes to provide insight into the ways that local governments and citizen-led organizations can continue to make important contributions to local food policy.

### Chapter Three

The first research manuscript, presented in Chapter Three, examines the reasons why certain South Carolina counties have been able to attract members of the creative class, while others have not. Utilizing county-level data on creative class populations obtained from USDA, this research intends to identify the local characteristics that have helped to attract creative class professionals to certain locations within the state. This research will build upon the existing creative class literature by providing insight into the

factors that can effectively attract members of the creative class to more rural or less populated locations.

Chapter Three sets the stage for the subsequent research chapters by affirming that South Carolina's rural communities are capable of attracting the creative class. This finding may be particularly promising for less populated areas that are hoping to encourage creative class entrepreneurship within the context of local food systems. This research also sets the stage for the remainder of this dissertation by affirming the potential for creative class-led entrepreneurship in South Carolina communities.

#### Chapter Four

Chapter Four will transition into an examination of creative class entrepreneurship within South Carolina's local food systems. Using ten case studies of new and beginning farmers, this research explores the degree to which the entrepreneurial activities of some small farm operators may be consistent with the creative and innovative activities of the creative class. This research hopes to identify knowledge-intensive activities that are taking place on small-scale farming operations and by doing so, seeks to establish small farms as important contributors to their local economies.

To date, small farm operators have not been recognized as a creative class profession. As entrepreneurship is increasingly being recognized for its contributions to rural economies, there is a need for research that identifies viable forms of entrepreneurship that can succeed in rural settings. Accordingly, Chapter Four intends to

build upon the existing entrepreneurship and creative class literature by identifying small-scale farming as a knowledge-intensive, income generating activity.

## Chapter Five

Chapter Five includes a county-level analysis of the South Carolina's local food systems and the local characteristics that may be helping to facilitate local food sales. The purpose of this manuscript will be to identify the reasons why some counties are experiencing high levels of direct-to-consumer sales of agricultural products, while others are not. Using data obtained from the U.S. Census Bureau and the 2012 Census of Agriculture, this research examines which local economic and social conditions may be most conducive to facilitating direct-to-consumer sales. As leaders throughout all levels of government increasingly view local food systems as important contributors to economic development, there is a need for research that can identify areas in which local food systems are most likely to succeed. In addition, this research may provide valuable guidance to local leaders who are looking for ways to improve the overall functioning of their existing local food system.

## **Terminology**

It should also be noted that this dissertation will utilize certain terminologies to describe the individuals and activities that are prevalent within local food systems. These terms and their corresponding definitions are presented in Table 1.1.



**Table 1.1: Terminology**

<b>Term</b>	<b>Definition</b>
<b>Direct Marketing or Direct-to-Consumer Sales</b>	A marketing arrangement in which farms sell their product directly to consumers, often through venues such as farmers’ markets, farm stands, or community supported agriculture (CSA) organizations. Although direct marketing strategies are often utilized by small farms (see Martinez <i>et al.</i> , 2010), farms of all sizes have been known to sell their products directly to consumers.
<b>Intensive Agriculture</b>	Agricultural practices that produce a high output per unit area of land. This is usually accomplished through the use of agrochemicals and mechanization. <sup>7</sup>
<b>Local Food</b>	No single definition of “local food” exists. For the purposes of this dissertation, “local food” will refer to food that is produced and sold within the same city, county, or region, with an understanding that most local food products are marketed through direct market channels ( <i>e.g.</i> farmers’ markets, CSAs, farm stands, farm-to-retail/foodservice) or locally-based intermediaries, such as food hubs or local grocery stores.
<b>Local Food System</b>	A system of activities related to food production, processing, distribution, and consumption that take place within the same city, county, or region. In general, local food systems are characterized by short supply chains.
<b>New and Beginning Farmer</b>	A farmer who has operated or worked on a farm for ten years or less. <sup>8</sup>
<b>Mass-Marketed Food or Mass-Produced Food</b>	Food products that are produced in large, uniform quantities and then sold to a large number of consumers through retail outlets. These products are often widely promoted through advertisements. Mass-produced food products are often marketed in locations far away from where they were produced ( <i>i.e.</i> long supply chains).
<b>Organic Food Production</b>	In accordance with current standards for “USDA Organic” labeling, organic food must be produced without the use of synthetic fertilizers, pesticides that are not from natural sources, and genetically modified organisms (GMOs). <sup>9</sup>

<sup>7</sup> Definition adapted from the Organisation for Economic Co-operation and Development (OECD), <http://stats.oecd.org/glossary/detail.asp?ID=1382>.

<sup>8</sup> This definition is based on the current USDA standards for obtaining a loan from the Beginning Farmers and Ranchers program.

<sup>9</sup> Definition adapted from the “USDA Organic” labeling standards, <http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateN&navID=OrganicSta>

<b>Small Farm or Small-scale farming</b>	A farm that has a gross cash farm income of less than \$250,000 a year.
<b>Small-Scale Farm Operator or Operator of a Small Farm</b>	An operator of a farm that has a gross cash farm income of less than \$250,000 a year.
<b>Sustainable Agriculture</b>	<p>An integrated system of plant and animal production practices that will:</p> <ul style="list-style-type: none"> <li>● Satisfy human needs.</li> <li>● Enhance environmental quality.</li> <li>● Make the most efficient use of non-renewable resources.</li> <li>● Sustain the economic viability of farm operations.</li> <li>● Enhance the quality of life of both farmers and society.<sup>10</sup></li> </ul> <p>Examples of sustainable farming practices include crop rotation, integrated pest management practices, managed grazing, use of alternative energy sources, and the payment of fair wages to all farm laborers.</p>

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ndardsLinkNOPNationalList&rightNav1=OrganicStandardsLinkNOPNationalList&topNav=&leftNav=&page=NOPOrganicStandards&resultType=&acct=nopgeninfo.

<sup>10</sup> Definition adapted from the National Sustainable Agriculture Coalition, <http://sustainableagriculture.net/about-us/what-is-sustainable-ag/>.

## CHAPTER TWO

### CONCEPTS IN ENTREPRENEURSHIP, LOCAL FOOD SYSTEMS, AND LOCAL FOOD POLICY

This dissertation adds to the existing rural development literature by examining a potential linkage between creative class entrepreneurship and local food systems. Accordingly, the purpose of this chapter is to provide an introduction to the concepts that provide the basis for this research: rural entrepreneurship, the creative class, and local food systems. As local food policies have been key in shaping the development of many existing local food systems, this chapter also includes a theory-based discussion of local food policy development over the past several decades. Using the Advocacy Coalition Framework (ACF), this discussion helps to explain the role that locally and regionally based organizations, local officials, and everyday citizens have played in advancing local food policies within virtually all levels of government. This application of the ACF may be especially relevant to leaders in rural and less populated areas who are looking for ways to increase awareness of local food systems and to advance policies that will further facilitate local food system development.

#### **Rural Entrepreneurship**

As rural communities continue to search for viable economic development strategies, entrepreneurship-focused development strategies continue to generate a great deal of interest. In South Carolina, where many rural towns continue to experience

population loss and high unemployment<sup>11</sup> (see USDA, 2015a; S.C. Dept. of Commerce, 2010), there is a clear need for development strategies that will create economic opportunity and generate local income. For many development professionals, strategies that can encourage or support entrepreneurship are increasingly viewed as a viable way to stimulate economic activity and to address the economic challenges present in many rural areas.

Within the existing literature, it is generally acknowledged that entrepreneurial human capital can be distinguished from other types of skilled human capital by the tendency of entrepreneurs to possess certain unique skill sets. According to Lyons (2002), successful entrepreneurship typically requires a broad range of skills, including,

...the skills necessary to be successful in one's line of business (technical skills); the skills needed to develop innovative products and services and to generate solutions to emerging needs in the marketplace (entrepreneurial skills); and the skills needed to attain self-awareness, emotional maturity, ability and willingness to accept responsibility, and creativity (personal maturity skills) (p. 4).

These skills, which are key to successful enterprise development, have increasingly been the focus of rural development professionals who are seeking new ways to generate economic activity. Previous research has also suggested that it is possible for cities to “cultivate” entrepreneurs by offering residents with learning opportunities that will help them to build entrepreneurial skills sets (Lichtenstein and Lyons, 2001). This finding may be particularly promising to rural areas that may not already possess a large population of skilled entrepreneurs.

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<sup>11</sup> According to USDA (2015a), nonmetropolitan counties in South Carolina have experienced, on average, a population decrease of -0.36 percent since 2010. South Carolina's metropolitan counties experienced population growth that was above the national average during this same time period.

Growing interest in rural entrepreneurship may also be attributed to the impact that entrepreneurial activity can have on a town's ability to create wealth and retain local talent. As Henderson (2002) notes, in addition to creating new jobs, entrepreneurs often contribute to local wealth by earning salaries that are almost one-third higher than those earned by other salaried or wage-earning workers. Local entrepreneurs are also more likely than large corporately owned businesses to reinvest their earnings back into their local economy (Henderson, 2002). Recent statistics also show that small enterprises accounted for approximately 64 percent of new job creation between 1993 and 2011 (Small Business Administration, 2012). Given this apparent linkage between small enterprises and local job growth, many rural areas are now seeking to enhance small business development through initiatives that encourage locally-based entrepreneurship.

However, past experiences suggest that the process of stimulating entrepreneurship in rural areas will not be easy. As Dabson (2001) suggests, the smaller populations and low population densities found in rural areas make it difficult for businesses to achieve economies of scale. Similarly, research suggests that rural businesses may lack many of the support services available to their more urban counterparts. Not only are entrepreneurs in rural areas less likely to have access to lending institutions and technical advice, they may also face challenges gaining access to suitable building space, adequate utilities, and high-speed internet (Dabson, 2001). Research also reveals that rural entrepreneurs tend to have, on average, less education than their metropolitan counterparts (Henderson, 2002). This finding suggests that programming aimed at improving the technical or business management skills of

entrepreneurs may be especially useful in rural settings. Likewise, at the local level, there are a variety of other policy and programming options that can be used to address many of the aforementioned obstacles to rural entrepreneurship.

In recent years, a great deal of attention has been devoted to the types of local services and programs that can assist entrepreneurs in the development of their businesses. Notably, much of this literature has focused on the role that business incubation<sup>12</sup> may play in supporting rural entrepreneurship. However, a review of the existing literature demonstrates that rural business incubators are experiencing varying levels of success and in many instances, are performing below the level of their metropolitan counterparts (see NBIA, 2001; Cheng *et al.*, 2008; Cheng *et al.*, 2009). Previous research also identifies a variety of other local development strategies that have shown promise in encouraging successful rural entrepreneurship. These include (but are not limited to) investments in local public schools and infrastructure projects (Mitra and Zheng, 2011; Butler Flora and Flora, 1990; Fox and Porca, 2001), educational and mentoring programs intended to build local leadership capacity (Williams and Lindsey, 2011), efforts to engage and support community development organizations in the entrepreneurial process (Dale and Newman, 2010; Malecki, 2003), and strategies intended to attract or retain high-quality human capital (Florida *et al.*, 2008). This extensive list of strategies may suggest that any effort to improve rural economic

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<sup>12</sup> According to Henderson (2002), business incubators are organizations that provide “business, management, and marketing resources, start-up firms, along with rental space, shared office services, technology support, and financing assistance.”

performance is likely to require a comprehensive, and multi-faceted economic development plan.

### **The Creative Class**

Previous research has emphasized the role that high-quality human capital can play in the process of regional economic development (see Barro, 1991; Becker *et al.*, 1994, Lucas, 1988; and Benhabib and Spiegel, 1994). As a result, local development professionals have begun to explore ways in which they can more effectively develop, attract, or retain an educated and skilled base of human capital. In particular, increasing attention has been given to the role that creativity and knowledge-intensive skill sets play in the success of a local economy. Notably, Richard Florida's research has demonstrated linkages between the presence of certain creative, highly skilled professionals and regional economic growth (see Florida, 2002a). Referred to as the "creative class," this group of professionals holds occupations "whose economic function is to create new ideas, new technology, and/or creative content" (Florida, 2002a). Specifically, Florida (2002b) identifies three interrelated types of creativity that are often used by creative class occupations, including (1) technology creativity (or "innovation"), (2) economic creativity (or "entrepreneurship"), and (3) artistic and cultural creativity. Examples of occupations that regularly engage in one or more of these creativity "types" include (but are not limited to) scientists, engineers, college professors, in addition to individuals that participate in the arts, design, music, and entertainment industries (Florida, 2002a). According to data published by the USDA's Economic Research Service (ERS),

approximately 26 percent of employed adults in the U.S. currently work in creative class occupations (USDA, 2014d).

As Stolarick *et al.* (2011) reveal, there is a strong linkage between regional employment in creative class occupations and entrepreneurship. Specifically, regions that are home to a high number of creative class professionals are also likely to experience a high level of new firm creation (Stolarick, 2011). Similarly, McGranahan *et al.* (2010a) suggest that many creative class occupations are likely to work in smaller firms (scientists and engineers, for example) and as a result, are more likely to transition into self-employment. The tendency of creative class professionals to transition into self-employment may be especially prevalent among those who are drawn to high-amenity rural areas where jobs are more scarce (McGranahan *et al.*, 2010a). These findings suggest that rural areas with high concentrations of creative class professionals may have a clear economic advantage. In addition, the tendency of the creative class to transition into self-employment makes them especially attractive to rural areas that may be struggling to stimulate economic activity.

As rural towns begin to consider ways to stimulate entrepreneurship and more specifically, creative class-led entrepreneurship, there is a need for research that further explores the factors that can attract creative class professionals to rural areas. While there has been a great deal of research on the factors that affect the location decisions of the urban creative class, less attention has been given to the strategies that can effectively attract the creative class to rural areas. In addition, as McGranahan *et al.* (2010a) have suggested, the creative class may be especially attracted to areas that are able to foster a



strong “entrepreneurial context” (as measured by high self-employment and new firm creation). Although this finding is significant, there is a need for additional research that further examines the type of self-employment and new business activities that are contributing to the “entrepreneurial context” of rural towns, as well as how these activities can be supported through local policies. By providing further insight into the ways in which self-employment and small business development is taking place in rural areas, local officials should be able to employ economic policies that can more effectively attract (and support) creative class entrepreneurship.

In particular, this dissertation will focus on creative class-led entrepreneurship in South Carolina’s local food systems. Local food systems provide an interesting context through which to examine rural entrepreneurship and more specifically, the creative class, for several different reasons. First, recent research has suggested that there are a range of entrepreneurial activities taking place in local food systems. According to Martinez *et al.* (2010), these activities include, “direct sales to consumers, value-added production of on farm goods, customwork, agritourism, alternative energy production, sales of forest products, sales through community supported agriculture, and organic production.” Second, South Carolina communities have experienced a sharp increase in direct marketing, as the value of agricultural products sold directly to consumers has more than doubled since 2007 (see USDA, 2012d). Third, despite the fact that direct sales of agricultural products are often higher in and around urban areas (Low and Vogel, 2011), recent research has suggested that local food sales may also provide a viable development strategy for nonmetropolitan areas (see Marsden *et al.*, 2000 and Ikerd,

2005). Given this information, it appears that local food systems may be playing an important role in facilitating entrepreneurship and local economic growth in both rural and urban settings. The remainder of this chapter will be devoted to introducing local food systems, the role that they play in many communities, and the policy environment that has helped to facilitate their growth.

### **Local Food Systems**

As consumers continue to seek out local food markets as an alternative to the mainstream system of mass-produced food, increased attention has been given to the role that local food systems play in many U.S. communities. From a consumer perspective, local food markets can provide fresh, safe, and healthy food products that are often perceived to be of a better quality than many mass-marketed food products. Recent findings suggest that consumers may also purchase local food as a means of supporting farms who favor sustainable production practices (Stephenson and Lev, 2004; Wolf *et al.*, 2005). From a community perspective, local food systems are multi-faceted entities that can contribute to community food security, create economic opportunity, and generate local income (see Martinez *et al.*, 2010). As local food systems can generate numerous social, economic, and environmental benefits for their surrounding communities, many policymakers are exploring ways to increase the production and consumption of locally-produced food.

Within the existing literature, the role that local food systems play in community and economic development has been well-documented. Previous research has

demonstrated that local food systems can contribute to regional development by generating local revenue, creating jobs, and increasing community food security (see O'Hara, 2011; Joannides *et al.*, 2012; Hughes *et al.*, 2008). Despite the range of benefits that can be associated with local food systems, it appears that direct-to-consumer marketing of agricultural goods is most heavily concentrated around urban areas (see Low and Vogel, 2011). However, as many rural areas deal with issues pertaining to food access and economic opportunity, policymakers and development professionals have begun to consider the role that local food systems may play in the rural development process. This was perhaps most evident in the Agricultural Act of 2014 (or the "Farm Bill," as it is more commonly referred to), which includes funding for a range of local food initiatives to be administered in rural areas. Similarly, at the state and local level, public officials have relied on a variety of measures to facilitate local food system development in rural areas including the establishment of farmers' markets, farm-to-institution marketing arrangements, and local food policy councils.

However, rural localities seeking to facilitate local food system development may be faced with several challenges. According to Feenstra (2002) there are several conditions that contribute to a community's ability to establish a self-reliant food economy, including the presence of a stable base of small farms and a policy environment that promotes local food production, processing, and consumption. For many rural areas, the process of establishing a cluster of successful small farms may prove to be especially challenging. By nature, farming is a highly entrepreneurial, technical, and science-based endeavor that can require operators to possess a high level of

knowledge on a variety of subjects. This may be especially true for operators of small farms, who must possess the technical expertise required to operate a farm, while also finding new and innovative ways to market and sell their goods. As a result, rural areas will have to ensure that they (1) have available human capital capable of operating successful farm-based businesses, and (2) the necessary support services in place to assist these new entrepreneurial ventures.

For many rural towns, the process of developing, attracting, and retaining skilled human capital can be quite challenging. As these areas continue to explore ways to stimulate local entrepreneurship (including farm-based entrepreneurship), there is a need for development strategies that will assist these communities in increasing their stocks of skilled workers. Furthermore, as funding for development initiatives can be quite limited in many rural areas, there is a need for research that can assist public officials and development professionals in making effective, targeted investments in local food systems. By examining the factors that have helped to facilitate farm-based entrepreneurship in rural South Carolina, this dissertation intends to provide useful insight into both of these topics.

### **Local Food Policy**

At the federal level, several agencies administer policies or programs related to local food systems, although the United States Department of Agriculture (USDA) is responsible for most federal involvement in local food system development. The USDA promulgates a variety of policies and programs pertaining to local food and provides

funding for a range of local activities, including farm-to-school programs, the establishment of direct market outlets, and loan programs for farmers and ranchers. In addition, several other federal agencies, including the U.S. Department of Commerce, the U.S. Department of Health and Human Services, and the U.S. Department of Transportation have developed policies or programming that impacts local food systems.<sup>13</sup> Although federal agencies develop and administer a wide range of local food policies and programs, state and local governments also make a variety of important decisions related to the production and marketing of locally-produced food. Table 2.1 provides an overview of the role that each level of government plays in the development of local food systems.

**Table 2.1: Government Roles in Local Food Systems**

<b>Issue</b>	<b>Federal Government</b>	<b>State Government</b>	<b>Local Government</b>
Farmer Education, Training, and Technical Assistance	Federal legislation provides funding for both public and private organizations to provide education, training and assistance to farm operators. Recent legislation has also provided funding for education and training programs	Several states have passed legislation that directs funding toward the establishment of their own educational and training programs for farm operators. Through the Cooperative Extension System (CES) states also	Some cities sponsor and administer their own education, training, or technical assistance programs for farmers. Frequently, these programs are offered in partnership with

<sup>13</sup> These agencies administer the following programs that support local food systems: the Community Economic Development Program (Dept. of Health and Human Services), the Community Development Financial Institutions Fund (Dept. of Treasury), “Local Foods, Local Places” (EPA, Dept. of Transportation, and USDA), EDA Public Works and Economic Development Program (Dept. of Commerce).

	that are specifically designed for new and beginning farmers ( <i>e.g.</i> the Beginning Farmer and Rancher Development Program, or BFRDP).	provide a variety of training and technical assistance to farmers of all experience levels.	local non-profit organizations or nearby colleges. State and federal funds are often critical to the administration of such programming.
Financial Assistance for Farm Operators	Federal legislation has helped to establish several financial assistance programs that are available to small-scale farm operators. These include both loan guarantee and grant programs that support a range of activities. Examples of these programs include: Sustainable Agriculture Grants (SARE), USDA's Microloan program, and the BFRDP.	Some states operate their own agricultural finance or grant programs. In some instances, these programs are specifically aimed at assisting small-scale or beginning farmers. Several states have also used tax incentives to encourage the production of specialty crops.	In general, most direct financial assistance that is provided to small-scale farm operators originates at the federal or in some instances, state level.
Marketing of local food	Federal legislation has helped to establish a wide range of programs that are intended to assist in the marketing local food. Currently, federal agencies administer programs that provide funding	Several states administer their own programs that provide funding for direct market venues such as farmers' markets and food hubs. Many states have tried to distinguish locally grown food by administering	Many local governments have directed funding toward the establishment of farmers' markets and food hubs. Local governments may also be responsible for the regulation of direct-to-consumer

	for a range of activities, including (but not limited to): the establishment of farmers' markets, food hubs, CSAs, producer networks and associations <sup>14</sup> . Examples of current programs include: the Farmers' Market Promotion Program (FMPP) and the Community Food Projects Competitive Grants Program.	food labeling programs that identify the fact that they were grown in-state (e.g. the "Certified SC Grown" program).	sales of agriculture goods (e.g. by requiring local permits for farmers' markets and/or farm stands).
Geographic Preference in Food Procurement*	Federal law now authorizes schools using National School Lunch Program (NSLP) funding to prefer food that is sourced from local growers. Federal legislation has also helped to fund farm-to-school programs that encourage public schools to source locally grown food.	Many states have altered to procurement guidelines to encourage public institutions to purchase locally-grown food products.	When authorized to do so by the applicable local, state, or federal procurement guidelines, many local agencies and institutions prefer to purchase locally grown food products.
Land Use and Zoning*	In some instances, federal law can	Statewide planning can mandate or	In most states, local governments

<sup>14</sup> According to the USDA (2015b), a producer network is a member-owned organization or business that "...provides, offers, or sells agricultural products or services through a common distribution system for the benefit of its members." Similarly, a producer association is an organization or business that assists, serves, or represents producers or a producer network (USDA, 2015b).

	restrain state and local land use regulations (particularly as they relate to rights that are protected by the constitution.	encourage certain local zoning and land use practices. Many states have enacted policies that create statewide protection of agricultural land or enable local governments to adopt land use planning techniques to preserve farmland.	have primary authority over zoning and land use matters. This authority can be used to protect and preserve agriculture land, to encourage urban agriculture, and to allow for the establishment of farmers' markets or farm stands.
Food Access and Food Security	Most food assistance programs are authorized and funded by the federal government. This includes nutrition assistance programs such as SNAP, TANF, and WIC. In addition, USDA's Healthy Food Financing Initiative is specifically aimed at expanding access to healthy foods in rural food deserts and other underserved areas.	Many states play an important role in administering many federal nutrition programs. State policies regarding the administration of SNAP and TANF can help to reduce barriers to participation in nutrition programs ( <i>e.g.</i> by simplifying application processes, educating citizens about their eligibility of benefits, increasing the amount benefits participants receive etc.). States may also contribute their own funds to nutritional assistance programs.	Local transportation authorities typically determine public transportation routes. Public transportation can play a key role in ensuring that all members of the community have access to farmers' markets, and other sources of healthy food.
Food Safety*	The federal government is responsible for	State governments implement food safety laws and	Local governments are tasked with enforcing state



	monitoring general food safety, including meat and poultry processing. When necessary, the federal government may exercise its authority to recall food products.	regulations in accordance with federal guidance. States can establish their own regulations regarding meat and poultry processing, so long as their requirements are at least as stringent as those set forth by the federal government.	food safety requirements, although some local governments develop their own local ordinances regarding food safety.
Nutrition Education	Federal legislation has helped to establish several programs designed to encourage healthy eating. Often, these programs highlight the benefits of eating local food products. In particular, USDA's farm-to-school programming provides financial assistance to schools that wish to develop agriculture-based curriculum.	The Department of Education in each state is responsible for setting curriculum standards and helps to administer food and nutrition programs for the state's schools. Some states have established mandatory nutrition education programs that intended to build nutrition-related skills.	Local school districts make targeted decisions regarding their nutrition education curriculum, so long as those decisions are in accordance with the applicable state and federal curriculum guidelines. Many schools have designed nutrition-related curriculum that involves school gardens, farm visits, and cooking classes.

\* Source: "Good Laws, Good Food: Putting Local Food Policy to Work for Our Communities, by the Harvard Law School Food Law and Policy Clinic (2012).

As Table 2.1 demonstrates, decisions affecting local food system development are made at all levels of government. At the federal level, legislation (such as the farm bill) has helped to provide funding for a range of programs aimed at promoting local food

systems and encouraging small-scale farming. Several of the federal programs noted in Table 2.1 provide funding for local food projects that are largely developed and implemented at the state or local level (*e.g.* the Beginning Farmer and Rancher Development Program, the Farmers' Market Promotion Program, and the Community Food Projects Competitive Grants Program). Accordingly, decisions made by the federal government can play an important role in shaping local food policies at the state and local levels.

State governments also play a key role in fostering local food system development by administering food assistance programs, providing extension services, administering regulatory programs related to food safety and the environment, and providing their own funding programs for important local food projects and programs. Local governments are equally as invested in the functioning of their local food systems, as they are often responsible for developing long-term plans and goals for local food initiatives, seeking out funding for local food projects, making zoning and land use decisions, and providing ongoing administration and oversight of local food projects once they are in place. State and local governments may be especially well-suited to administer local food programming, as they often maintain relationships with local or regional non-profit organizations that may assist in the implementation of local food projects. Although the role that non-governmental organizations play in local food system development was not included in Table 2, they can often be an important partner in the development and implementation of local food policies.

In order to effectively examine the factors that contribute to local food system development within South Carolina, it is necessary to fully understand how local food policies and programs are being developed and implemented throughout the state. The remainder of this chapter will examine the ways in which various local, state, and federal actors have worked together to implement local food programming within South Carolina's communities. As noted, local food policy is somewhat unique in that local actors, including those from outside of government, may play an important role in shaping how local food policies are developed and implemented. In order to fully account for the role that both governmental and nongovernmental actors may be playing in the policy process, this dissertation will examine the development of current local food policies through the lens of the advocacy coalition framework (ACF).

### **The Advocacy Coalition Framework**

The ACF posits that policy change is the result of interactions between competing coalitions of individuals who operate within a specific policy subsystem. Policy subsystems are organized around substantive topics (*e.g.* air pollution, agriculture, health care) and typically include two or more advocacy coalitions that are comprised of,

...actors from a variety of public and private institutions at all levels of government who share a set of basic beliefs (policy goals plus causal and other perceptions) and who seek to manipulate the rules, budgets, and personnel of governmental institutions in order to achieve these goals over time (Sabatier and Jenkins-Smith, 1993).

According to the ACF, policy change is often the result of changing belief systems within an advocacy coalition (Sabatier and Jenkins-Smith, 1993). Typically, changes in coalition

beliefs are the result of either policy-oriented learning (the accumulation of research, knowledge, or technical information regarding the problem at hand) or external events (changes in socioeconomic conditions, outputs from other subsystems, and changes in governing coalitions) (Sabatier and Jenkins-Smith, 1993). Policy oriented learning can have an important impact on a coalition's ability to affect policy change, as increased information regarding a problem, its causes, and its potential solutions can be an important resource when advocating that change is necessary. As Sabatier and Weible (2007) suggest, coalitions can use accumulated information in "solidifying coalition membership, arguing against an opponent's policy views, convincing decision making sovereigns to support your proposals, and swaying public opinion." Hence, in the ACF research, technical information, and learning play an integral role in the process of bringing about policy change.

The ACF was selected as a means of understanding how local food policies are developed for several reasons. Notably, this framework considers how various actors, from both within and outside of government, work together to advance various policies and programs. Given the many actors that are involved in the development of local food policies, it was necessary to ensure that any framework used to examine this policymaking process accounted for the activities of a multitude of actors, from elected officials and agency employees to everyday citizens and local nonprofit organizations. In addition, a central component of the ACF involves the role that research, information, and learning play in the development of new policies and programs. In recent years, those who advocate for local food systems have emphasized the various economic,

environmental, and health-related benefits associated with consuming locally-produced food (see Grewal and Grewal, 2012; O’Kane, 2012; Kremer and DeLiberty, 2011). This belief, which is widely supported by recent research, has allowed supporters of local food to generate a great deal of public interest and to capture the attention of important decision-makers. Accordingly, the ACF has been selected as a means of explaining the important role that research and learning has played in the development of local food policies.

### **The ACF and Local Food Policy**

The following discussion utilizes the ACF to explain the events and actions that have helped to facilitate the establishment of recent local food policies and programs. This discussion will begin by examining the various agencies, organizations, and individual actors that have sought to influence agriculture-related policies. Subsequently, the ACF will be used to examine how research and learning has generated increasing support (both within and outside of government) for local food policies and programs and hence, has helped to facilitate policy change.

### **The Agriculture Subsystem**

As noted, the ACF assumes that policymaking takes place within specialized “policy subsystems.” Policy subsystems are organized around substantive topics and include sets of actors who are involved in formulating policies to address specific problems (Sabatier and Jenkins-Smith, 1993). In the case of agriculture, there is a well-

defined subsystem that includes individual actors, government agencies, and private organizations devoted to the development and implementation of agriculture-related policies and programs. This subsystem, which can be referred to as the “agriculture policy subsystem,” is considered to be relatively “mature” in that it includes both agencies and private organizations that have accumulated expertise and sought to affect policy change over an extended period of time.

Although the agriculture subsystem has a long established history of developing and implementing agriculture policies, the desire of some actors within this subsystem to emphasize the importance of local food systems is a somewhat recent development. Historically, U.S. agricultural policy has been dominated by the interests of large-scale producers, who often garner a great deal of political support; largely due to the implications that their activities have on international trade and national food security (see Bellemare and Carnes, 2015; Sumner, 2014). In recent years, increased emphasis on issues pertaining to food access, community food security, food safety, and environmental sustainability have resulted in several policies aimed at promoting the production and consumption of local foods. These policies include a variety of grant and loan programs that are intended to establish or improve local direct-marketing venues (such as farmers’ markets), provide support services and educational opportunities to small farmers, and provide nutrition education within public school systems. This increased emphasis on local food policy was also evident in the 2014 Farm Bill, which included broad increases in funding for various local food initiatives. Given these

outcomes, it may be useful to examine the role that advocacy coalitions have played in advancing local food policies within this subsystem.

### The Advocacy Coalitions

According to the ACF, each policy subsystem includes one or more groups of individuals, from a variety of positions both inside and outside of government, that seek to influence policy change. These groups, which are referred to as advocacy coalitions, are typically comprised of elected and agency officials (at the local, state, and federal level), interest groups, nongovernmental organizations, community groups, researchers, scientists, members of the media, and target groups (Weible, 2006). Within the agriculture subsystem, it is possible to identify at least two competing coalitions that include various actors from both within and outside of government.

The older and perhaps more established of these two coalitions has deeply rooted interests in intensive agriculture and has largely advocated for policies that facilitate the mass-production and mass-marketing of food products. This coalition is primarily comprised of corporate (and often publically held) agribusiness interests, including large farm operators, food processors, distributors, insurance companies, and agrochemical or biotechnology companies. These various businesses are also represented by nongovernmental organizations, including the American Farm Bureau, the American Association of Crop Insurers, the National Association of Wheat Growers and the International Dairy Food Association, to name a few. However, it should be noted that agribusinesses of all sizes belong to the aforementioned organizations and that in recent

years these groups have often advocated for policies that are likely benefit smaller producers as well. Historically, this more established coalition has also included both elected officials and agency officials who provide support for policies that assist large agribusinesses in achieving economies of scale, and hence will provide consumers with access to large quantities of affordable food products.

In contrast, this subsystem also includes a competing coalition representing local food system interests, including those of small farmers, local communities, and concerned consumers. Those within the “local food coalition” are often motivated by their desire to create a food system that fosters economic, social, and environmental responsibility. This coalition has frequently advocated for policies that will provide assistance for small-scale farming operations that rely primarily on local, direct-to-consumer markets. This coalition also frequently advocates for policies that enhance the availability of healthy agricultural goods produced with organic or sustainable production practices.

As this dissertation is concerned with the policy environment that affects local food systems, it is important to understand the various actors that participate in the formulation of local food policies. At the federal level, several agencies have been involved in the development of local food policies and programs, with USDA taking primary responsibility for policies pertaining to local food production and marketing. The USDA, for example, employs an array of policymakers, researchers, and scientists, who share a common goal of advancing U.S. agricultural interests. Many of these individuals are likely to be involved with local food-related projects. For example, economists at the



USDA's Economic Research Service (ERS) have produced a growing body of literature related to local food systems and their associated economic impacts. Within the nongovernmental realm, there are a variety of organizations that work to promote local food system development. Although many of these organizations are locally or regionally-based, there are several that work on a national-scale to address issues pertaining to local food production and food security. Examples of these organizations include the National Sustainable Agriculture Coalition, the American Community Gardening Association, the Food Routes Network, and the National Good Food Network.

At the state and local level, there are a variety of governmental and nongovernmental participants that are committed to developing and implementing local food policies. For example, South Carolina has developed the S.C. Food Policy Council, which brings together public officials and representatives from nongovernmental organizations to work on issues pertaining to local food systems. Public participants in the S.C. Food Policy Council include representatives from Clemson University and the University of South Carolina (extension agents and faculty) and the South Carolina Department of Agriculture, while nongovernmental participants represent organizations such as Lowcountry Local First, the Carolina Farm Stewardship Association (CFSA), and the Hub City Farmers' Market. In addition, farmers from across the state and several local food bank representatives have also participated in the S.C. Food Policy Council. Participants in the S.C. Food Policy Council demonstrate the wide range of private organizations that are working to facilitate growth in local food systems.

## Belief Structure

The ACF assumes that the coalitions in each policy subsystem are organized around certain shared belief systems. These beliefs serve as causal drivers of coalition behaviors and are organized into three categories: “deep core” beliefs, “policy core” beliefs, and “secondary” beliefs. Deep core beliefs are largely normative and include personal philosophies on a variety of topics, including: individual freedom, distributive justice, social equality, and the welfare of present versus future generations (Sabatier and Jenkins-Smith, 1993; Weible *et al.*, 2009). These beliefs are typically shared by all participants in a coalition and are highly resistant to change. Policy core beliefs typically involve understandings of the problem that the subsystem is trying to address and its causes, as well as various strategies for achieving the coalition’s policy goals. Finally, secondary beliefs are highly narrow in scope and involve beliefs concerning “the seriousness of the problem or the relative importance of various causal factors in specific locales, policy preferences regarding desirable regulations or budget allocations, the design of specific institutions, and the evaluations of various actors’ performance” (Sabatier and Jenkins-Smith, 1993). Secondary beliefs are the most susceptible to change and are not always shared or agreed upon by all members of a coalition.

Within the agriculture subsystem, two coalitions have formed around very distinct belief systems. For those in the local food coalition, deep core beliefs reflect many of the basic values that have motivated the local food movement, including: equity, responsibility, unity, and respect for life. Deep core beliefs within this coalition also include perspectives on distributive justice and more specifically, the notion that we

should live in communities that minimize inequality and use resources responsibly. Accordingly, the policy core and secondary beliefs of this coalition are characterized by various policy positions and strategies that generate outcomes consistent with the aforementioned deep core beliefs. In the local food coalition, shared policy core beliefs are likely to include understandings of the importance of small-scale farming, sustainable agriculture practices, and direct marketing. On the other hand, the competing coalition, which is mostly rooted in large agribusiness, often prioritizes values such as efficiency, dependability, and expediency. These values largely form the basis of our current food system, which is characterized by large production volumes and mass-marketing, and is generally known for providing consumers with access to a diverse selection of low-cost food products. Likewise, policy core and secondary beliefs that are prevalent within this coalition relate to the importance of large-scale agricultural production and include a variety of specific policy proposals intended to support large agribusinesses, including subsidies, crop insurance programs, and other price support programs.

### Mechanisms of Change

The belief systems behind recent local food policies are largely the result of both policy oriented learning and external events. Policy oriented learning related to local food can be traced back to the cultural and environmental movements of the 1970s that emphasized the social and environmental benefits that could result from a more “local, ecologically sustainable, and democratically controlled food system” (Feenstra, 1997). Guided in part by published research that detailed the economic and political realities of

food that is mass-produced and then marketed on a global scale, both public officials and everyday citizens began to evaluate the potential benefits associated with a “re-localization” of our country’s food system (Feenstra, 1997). Similarly, increased public awareness of the environmental impacts associated with many large-scale agricultural operations led many consumers to consider the ways in which their food is both produced and transported (Martinez *et al.*, 2010). In particular, the release of Rachel Carson’s *Silent Spring* in 1962 resulted in increased public awareness of the detrimental effect that pesticides could have on ecological health. In the years following the publishing of *Silent Spring*, other notable reports, including the United Nation’s *Our Common Future* (1987) (also known as the Brundtland Report) and Wendell Berry’s *The Unsettling of America: Culture and Agriculture* (1977), drew additional attention to the environmental concerns associated with certain agricultural practices. Notably, *Our Common Future* (1987) also found that unprecedented growth in global food production has done little to alleviate food insecurity in many regions.

As research continued to highlight the environmental and social impacts associated with mass-produced food, the 1990s and 2000s produced a wave of new research that touted the benefits of sustainable agricultural practices and locally-marketed food products. This research included scientific examinations that highlighted the ecological benefits of sustainable agricultural practices (see Altieri, 1995 and Gliessman, 1990), as well as other works that noted the economic and social benefits that are associated with local food systems (see Feenstra, 1997 and Hinrichs, 2000). Recently, this research has been accompanied by a wave of highly popular, mainstream literature

that emphasizes the importance of consuming locally-grown food and in some cases, provides personal, first-hand accounts of individual experiences either producing or consuming local food products. Although many of these recent works are not research-based, they have nevertheless helped to generate widespread interest in “eating locally” by introducing local food systems to new audiences. Notable research contributing to policy-oriented learning within the agriculture subsystem is detailed in Table 2.2.

**Table 2.2: Notable Local Food Research and Literature**

<b>Year</b>	<b>Title</b>	<b>Author</b>
1962	<i>Silent Spring</i>	Rachel Carson
1971	<i>Diet for a Small Planet</i>	Frances Moore Lappe
1976	<i>Radical Agriculture</i>	Richard Merrill
1977	<i>The Unsettling of America: Culture and Agriculture</i>	Wendell Berry
1980	“Report and Recommendations on Organic Farming”	USDA Study Team on Organic Farming; United States Department of Agriculture
1987	<i>Our Common Future</i> (Also referred to as the “Brundtland Report”)	United Nations World Commission on Environment and Development
1995	<i>Agroecology: The Science of Sustainable Agriculture</i>	Miguel A. Altieri
1997	“Local Food Systems and Sustainable Communities,” <i>American Journal of Alternative Agriculture</i>	Gail Feenstra
1998	<i>Agroecology: Ecological Processes in Sustainable Agriculture</i>	Stephen R. Gliessman
2000	“Embeddedness and local food systems: notes on two types of direct agricultural market,” <i>Journal of Rural Studies</i>	C. Clare Hinrichs

2007	<i>Plenty: One Man, One Woman, and a Robust Year of Eating Locally</i>	Alisa Smith and J.B. MacKinnon
2007	“The place of food: mapping out the ‘local’ in local food systems,” <i>Geography</i>	Robert Feagan
2008	<i>Animal, Vegetable, Miracle: A Year of Food Life</i>	Barbara Kingsolver Camille Kingsolver Steven L. Hopp
2011	<i>Diet for a Hot Planet: The Climate Crisis at the End of Your Fork and What You Can Do About It.</i>	Anna Lappe Bill McKibben
2011	<i>Reclaiming our Food: How the Grassroots Movement is Changing the Way We Eat.</i>	Tanya Denckla Cobb

In addition to published research, several recent public events have helped to generate interest in local food systems. Specifically, throughout the 1990s and early 2000s, highly publicized health indicators regarding issues such as diabetes and childhood obesity brought increasing attention to the human impacts that result from the consumption of mass-marketed food. Likewise, recent economic instability has resulted in a historic number of citizens relying on food stamp programs (Oliveira, 2014) and as of 2010; nearly 30 million Americans were residing in low-income areas located more than one mile from a supermarket (USDA, 2015f). Developments such as these have brought increased attention to the issue of community food security and the need for policies that improve access to healthy and affordable food products. As a result, community-based strategies (*i.e.* farmers’ markets, CSAs, farm-to-school initiatives, and SNAP outreach programming) have received greater attention from policymakers who are searching for ways to alleviate food insecurity.

## Policy Outcomes

Those who advocate for local food policies have benefited from well-publicized research that emphasizes the benefits associated with local agriculture, in addition to several commercially successful books about the local food movement (see Kingsolver *et al.*, 2010; Lappe, 2010; Cobb 2011). This body of literature, in conjunction with economic and social developments, has succeeded in making both governmental decision makers and the general public increasingly aware of the impacts that can be associated with mass-produced food. This awareness has translated into increasing support (from both inside and outside of government) for policies and programming that expands the availability of locally grown food products.

After research related to intensive agriculture began to garner attention in the 1970s and 1980s, several events taking place at the state and local level signaled that policy change would soon follow. These events include widespread protests by California peach growers that called for the legalization of farmers' markets, the establishment of the first local Food Policy Council in Knoxville, TN, and the establishment of the country's first organization to provide organic certifications. A timeline of these notable developments, as well as others, are presented in Table 2.3.

**Table 2.3: Early Local Food Initiatives at the State and Local Level\***

<b>Date</b>	<b>Event</b>
1971	The opening of "Chez Panisse" in Berkeley, CA, a first of its kind restaurant that sources food directly from local, sustainable farms.
1973	The California Certified Organic Farmers (CCOF) is established. The CCOF was the first organization to provide organic

	certifications in the United States.
1977	A protest by California peach growers who had been prevented from selling their products directly to consumers results in the legalization of farmers' markets by then Governor Jerry Brown.
1982	The first locally-based food policy council, the First City Food Policy Council, is founded in Knoxville, TN.
1983	Grass Roots International is founded in Boston, MA with the purpose of addressing hunger and poverty through partnerships with small farm organizations.
1984	The first official CSA program is established in South Egremont, MA.
1988	The Coulee Region Organic Produce Pool (CROPP) Cooperative is founded by farmers in Wisconsin with the purpose of promoting the direct-marketing of certified organic products within their region. CROPP also dedicated itself to encouraging USDA to allow the labeling of organic meat and poultry products.
1991	The Food Project of Boston was founded with the purpose of educating local youth about sustainable agriculture.
1995	The state of California establishes the "A Garden in Every School" program, with the purpose of educating youth about growing the food that they consume.

\*Table is adapted from the Small Planet Institute (2015)

These events suggest that many of the earliest local food policies may have been initiated at the state or local level, with significant involvement and encouragement from private citizens; a grassroots movement. In fact, much of the recent federal programming for local food systems has continued to focus on community food projects (*e.g.* farmers' markets, farm-to-school programs, food policy councils) that were popularized very early on in the local food movement. This suggests that early efforts by state and local leaders to facilitate local food system development may have been integral to shaping our current, federal-level local food programming. Likewise, as community-led efforts to build local food systems become increasingly prevalent throughout the 1980s and 1990s,



a clear need developed for federal programming that could provide funding and technical support for future projects. In recent years, USDA and other federal agencies have responded to this need by developing several programs that support and assist local food system development. It could be argued that much of this programming was developed in response to growing pressure from a well-organized and influential local food coalition. Table 2.4 provides an overview of notable local food programs that have been implemented at the federal level in recent decades.

**Table 2.4: Notable Local Food Policies Administered by the U.S. Federal Government**

<b>Year</b>	<b>Program</b>	<b>Agency</b>
1992	Farmers' Market Nutrition Program	USDA
2000	Value Added Producer Grants Program	USDA
2000	New Markets Tax Credit (NMTC)	U.S. Department of Treasury
2002	National Organic Standards	USDA
2002	Farmers' Market Promotion Program	USDA
2002	Beginning Farmer and Rancher Development Program	USDA
2004	Specialty Crop Block Grant Program	USDA
2008	Know Your Farmer, Know Your Food	USDA
2008	Community Food Projects Competitive Grants Program	USDA
2010	Healthy Hunger-Free Kids Act	Legislative; set new policies for USDA's school nutrition programs.
2010	Healthy Food Financing Initiative	USDA, U.S. Dept. of Health and Human Services, and U.S. Dept. of Treasury
2011	People's Garden Grant Program	USDA

2012	Wireless Technology Funding to Broaden SNAP Beneficiaries' Nutrition Options	USDA
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Many of the programs presented in Table 2.4 are intended to provide funding or technical assistance for local food initiatives that will be administered at the local, county, or state level. Federal policies that provide funding for local food projects result in a range of locally-administered projects, including farmers' markets, food hubs, farm-to-school programs, and various educational and technical assistance programs, to name a few. Often, state and local governments, as well as local nonprofits, develop community food projects and then seek funding and technical assistance through federal programs. As a result, many of the local food policies that are implemented at the local level are still largely the result of local or state-level efforts. This has certainly been the case in South Carolina, where several recent community food projects have been funded through USDA local food programs, but largely developed and administered by local governments or local nonprofits. This experience suggests that local food policies, which were advocated so heavily for by grassroots organizations decades ago, may still be driven, in large part, by the initiative of local leaders. Table 2.5 details recent local food projects in the state of South Carolina that received USDA funding. Each of the projects in this table were developed, administered, and in many cases, partially funded by local organizations.

**Table 2.5: Recent USDA-funded Local Food Initiatives in South Carolina**

<b>Project Name</b>	<b>Location</b>	<b>Description</b>	<b>Local Partner(s)</b>
GrowFood Carolina	Charleston	A food hub that markets, sells, and distributes locally-produced food to grocery stores, restaurants, and wholesale customers.	South Carolina Coastal Conservation League
Hub City Farmers' Market	Spartanburg	A shopping plaza that includes a farmers' market, a produce garden, and café. The onsite garden is used to supply the café, as well as mobile market.	City of Spartanburg  Carolina Farm Stewardship Association  Certified South Carolina  Clemson Cooperative Extension Service  The Mary Black Foundation  S.C. Dept. of Agriculture
Dirt Works Incubator Farm	Johns Island	A farm that provides infrastructure and support for new farmers who are in the process of launching new farm businesses.	Lowcountry Local First
Freewoods Farm	Myrtle Beach	A historical living farm museum that administers programming intended to promote the sale and consumption of fresh, locally-grown vegetables.	Freewoods Foundation
Organic Certification and Production Consulting	State-wide	A program that provides direct consulting to South Carolina farmers seeking USDA Organic certification. This service is	Carolina Farm Stewardship Association

		available to both established and beginning operators.	
School District Five Farm-to-School Program	Lexington and Richland Counties	School District Five has received USDA funding to implement a farm-to-school program that includes school gardens, training for school foodservice personnel in the procurement and preparation of local foods, and food and nutrition education programs.	School District Five
Farm-to-School Conference	Columbia	Clemson University has received USDA funding to host a farm-to-school conference. The primary purpose of this conference will be to educate extension agents on the importance of farm-to-school initiatives.	Clemson University
South Carolina New and Beginning Farmer Program	State-wide	A multi-year training and educational program for new and beginning farmers.	Clemson University Carolina Farm Stewardship Association Lowcountry Local First

As Table 2.5 demonstrates, there have been many recent efforts to encourage local food system development in South Carolina communities. Despite this progress, there is an ongoing need for policies and programs that can expand access to healthy, locally-produced food. This need may be most pronounced in areas looking to improve their food security or economic performance. Accordingly, this dissertation intends to

provide additional insight into the factors that may contribute to the development of successful local food systems, especially in areas that may be less populated.

## CHAPTER THREE

### DOES RURAL MATTER? THE CREATIVE CLASS IN SOUTH CAROLINA

For rural communities, finding ways to achieve economic competitiveness in an increasingly knowledge-based economy presents several unique challenges. From cultivating and maintaining a skilled workforce to attracting high quality jobs, there are a variety of issues that rural communities must address in order to improve their economic positioning. Additionally, there is a burgeoning body of literature that has examined the complex relationship that exists between human capital and economic development. This literature has increasingly suggested that highly skilled and educated individuals are important drivers of economic growth (see Barro, 1991 and Mathur, 1999). However, in the field of regional economic development, there is a lack of consensus regarding the factors that affect the geographical distribution of high-quality human capital. This debate has led some economists to examine the ways in which cities can emphasize certain local characteristics in order to attract individuals who work in creative, or knowledge-based, occupations. Referred to as the “creative class,” these individuals represent a type of high-quality human capital that can drive economic growth within a regional economy.

According to Florida (2002a), the “creative class” is comprised of a variety of professions that are either heavily engaged in creative processes or in complex problem solving. Such creative class professions include individuals working in the arts, media, engineering, education, healthcare, business, and finance. These professions are considered to be members of the creative class since each requires some degree of creation, innovation, or complex usage of knowledge (Florida, 2002a). Likewise, various

researchers have drawn linkages between the presence of these creative professionals and higher levels of economic productivity within a local economy (see Florida 2010, Amabile 1996, and Andersson 1985). As a result of this connection, it may be useful for development professionals to understand the ways in which members of the creative class can be attracted to small cities that wish to expand their economic influence.

Accordingly, this research will address the following question: Why are creative class professionals attracted to some areas and not others?

Answering this question may be especially pertinent in state of South Carolina, where declining agricultural and textile industries have left many communities economically disadvantaged. In order to assist these communities, it may be beneficial to research the factors that have allowed certain South Carolina cities to be successful in attracting members of the creative class.<sup>15</sup> This research should also provide insight into the factors that influence the distribution of the creative class among various localities. By identifying several of the factors that affect the location of high-quality human capital, this research will fill an important gap in the existing economic development literature.

Although there a growing body of literature on the creative class, very little attention has been given to the factors that influence the location of creative class professionals in non-metropolitan areas. To date, the vast majority of this research has focused on the factors that have attracted the creative class to large metropolitan areas (see Florida, 2002a and Florida *et al.*, 2008). As a result, little attention has been given to

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<sup>15</sup> Roughly a quarter of the residents in Beaufort, Charleston, Greenville, Lexington, and Richland counties fit the creative class profile, while approximately ten-percent of the residents in Lee, Marlboro, Union, and Williamsburg counties can be considered creative class.

the factors that can assist smaller metropolitan areas, as well as non-metropolitan areas, in their efforts to attract creative class professionals. By identifying the factors that can attract the creative class to less populated areas, it will be possible to examine whether there are ways in which smaller (and possibly rural) areas can effectively market their strengths to attract high-quality human capital. South Carolina provides a unique lens through which to examine the creative class since the state does not contain a primary city.<sup>16</sup> Although South Carolina is home to several large cities (Columbia and Charleston, for example), these cities lack the geographical size, population density, and economic activity that can be found in nearby metropolitan centers such as Charlotte, NC or Atlanta, GA.

Within the existing literature, primary cities are recognized for their ability to offer a variety of entertainment, educational, and consumer opportunities that are not available in less populated areas (see Carol, 1960). Accordingly, previous research has demonstrated that these factors may be influential in attracting the creative class (see Florida, 2008). Despite the fact that South Carolina does not contain a primary city, smaller areas such as Greenville and Charleston have been quite successful in recruiting and retaining members of the creative class. Therefore, this research will fill a gap within the existing literature by examining the ways in which smaller cities have been able to

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<sup>16</sup> Primary cities typically provide a variety of higher order services including: highly advanced medical services, major professional sports teams, and artistic or cultural opportunities that are not available in smaller cities (such as a professional opera or ballet) (see Carol, 1960). Such higher order services are only available in highly populated areas that have enough consumer demand to support these unique activities. According to these criteria, South Carolina does not include a primary city. Nearby cities such as Charlotte and Atlanta do satisfy the conditions of primary cities.



attract the creative class, despite the fact that they may have fewer local amenities.<sup>17</sup> This information should also provide insight into whether or not smaller metropolitan areas, as well as rural areas, can rely on many of the development strategies that have proven successful in more populated, urban areas.

Even though the relationship between economic development and high-quality human capital is well established, economists do not always agree on the factors that affect the geographical distribution of these important individuals. This research should provide some clarity as to why many areas have been able to successfully attract a skilled and educated workforce, while others have struggled to develop a strong human capital base. These comparisons should lead to a better understanding of the reasons why high-quality human capital is often unevenly distributed among various localities. Within the development literature it is understood that skilled and educated workers tend to locate in cities that offer high-quality job opportunities (see Glaeser and Mare, 1994). However, less attention has been paid to the other factors that may influence the location decisions of these individuals. By identifying geographical characteristics that attract high-quality human capital, this research should provide insight into the ways in which rural areas can more effectively market themselves to creative class professionals. In order to bring some additional clarity to the issue of human capital recruitment, this research will attempt to identify the geographical characteristics that are most likely to attract high-quality human capital to a particular area.

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<sup>17</sup> “Local amenities” may include recreational, educational, entertainment, or consumer opportunities that would attract either visitors or residents to a particular area.

While the work of Florida (2002a) and Florida *et al.* (2008) has been quite relevant in the realm of urban economic development, there is also a need for research that examines the factors that attract the creative class in less developed regions. In recent decades, South Carolina has dealt with a variety of circumstances that have impacted economic growth, including the geographical isolation of many rural communities, increasing rural flight, and the economic transition away from textile-based industries. By examining the movement of the creative class throughout all South Carolina counties, it will be possible to examine some of the ways that certain parts of the state have been able to overcome these challenging economic circumstances. To date, few efforts have been made to examine the factors that may attract the creative class to less populated, rural areas.

### **Review of Literature**

There has been a great deal of literature focusing on the relationship between human capital and economic development. Mathur (1999) has suggested that human capital utilizes knowledge in order to break through barriers to economic growth. In many instances, human capital has been known to promote economic development through the creation of various knowledge-related externalities (Mathur, 1999). Specifically, high-quality human capital can lead to a diffusion of knowledge, which may increase both the productivity of labor and capital within a firm (Mathur, 1999). Similarly, it has demonstrated that areas with greater human capital stocks tend to experience faster economic growth (see Barro, 1991; Becker *et al.*, 1994, Lucas, 1988;

and Benhabib and Spiegel, 1994). In particular, Barro (1991) has shown that high-quality human capital helps to generate products and ideas that fuel economic progress.

Additionally, a larger stock of human capital makes it easier for an area to absorb ideas and information that have been discovered elsewhere (Barro, 1991).

In recent years, there has been growing interest in the role that the creative class plays in the economic development process. Accordingly, several economists have examined how this particular type of human capital influences regional economic growth. Florida *et al.* (2008) has demonstrated that education and creativity affect economic growth in very different ways. Although both are very important to economic growth, it appears that the size of the creative class is closely correlated with increases in both wages and productivity, while education tends to increase regional income and wealth (Florida *et al.*, 2008). This research also found that there is a strong correlation between high concentrations of creative class professionals and regional economic development (Florida *et al.*, 2008). However, Florida *et al.* (2008) also found that some members of the creative class effect economic development more than others. For example, occupations within the education and health care industries seem to have less impact on economic growth, while those working in computer science, engineering, and financial services tend to have a greater effect on development (Florida *et al.*, 2008).

A great deal of research has also examined the local and regional factors that influence the location decisions of members of the creative class. Florida *et al.* (2008) found that various factors can attract members of the creative class to a particular city or

region including the presence of colleges or universities, diverse consumer services,<sup>18</sup> existing cultural economies,<sup>19</sup> and tolerance.<sup>20</sup> Likewise, McGranahan and Wojan (2007a) found that members of the creative class are often attracted to high-amenity areas. Cities that have a mix of forest and open area, as well as extensive bicycle trails were more likely to attract the creative class (McGranahan *et al.*, 2010a). In addition, it appears that the creative class is more likely to locate in areas with warm or moderate climates, modest population densities, and high proportions of college education adults (McGranahan *et al.*, 2010a). In the Netherlands, Marlet and van Woerkens (2004) found that the creative class is generally attracted to ethnically and culturally diverse areas that have historical sites and environmental beauty.

This existing literature on the creative class has demonstrated that this unique group of individuals may have important implications for the future growth of local and regional economies. Furthermore, there are particular factors that may influence the decision of the creative class to locate in certain areas. It is necessary to further examine the circumstances that have led some communities to capitalize on the economic benefits associated with creative class employment, while others have struggled to attract and retain this important group of individuals. This examination should provide an important contribution to the ongoing discussion over human capital distribution. By bringing

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<sup>18</sup> Consumer services consist of any service or retail industry that could be considered attractive to consumers (Florida, 2008). Examples of consumer services may include restaurants, shopping malls, and grocery stores.

<sup>19</sup> Cultural economies include all economic activities in the realms of art, design, media, and entertainment (Florida, 2008). Examples of activities that are considered to be a part of the cultural economy include theater performances, art galleries, and graphic design.

<sup>20</sup> In most creative class research, the term “tolerance” has been used to describe the overall inclusiveness of a community. Specifically, tolerance may represent the degree to which a particular community is accepting of a variety of individuals and their lifestyles.

additional clarity to the relationship between high-quality human capital and various geographical characteristics, this research will provide significant insight into the factors that facilitate the development of a highly skilled workforce. Although the relationship between human capital and economic development has been well established, the geographical factors that influence the distribution of human capital are much less clear. By identifying some of these factors, this research intends to fill an important gap in the existing economic development literature.

### **Hypotheses**

Previous research suggests that a variety of factors contribute to an area's ability to attract members of the creative class. Specifically, examinations of the creative class have demonstrated that this group of individuals is often attracted to metropolitan areas that are conducive to business development and retail opportunities (see McGranahan *et al.*, 2010a, and Florida *et al.*, 2008). It also appears that members of the creative class may be especially attractive to areas that offer outdoor amenities (such as bike trails or waterfront land) (McGranahan *et al.*, 2010a), as well as various cultural or educational experiences (areas that are ethnically diverse or in close proximity to a college or university, for example) (Florida *et al.*, 2008). It appears that the creative class may be particularly drawn to areas that can simultaneously provide professional opportunities, entertainment activities, and educational experiences.

Within the existing literature it has been suggested the creative class is attracted to areas that maintain diverse consumer services. For example, Florida *et al.* (2008) found

that the creative class is more likely to locate in an area that has a range of retail and consumer opportunities.<sup>21</sup> In fact, the creative class appears to be more attracted to areas with diverse consumer services than individuals who work in non-creative class occupations (Florida *et al.*, 2008). In part, this finding may be explained by the fact that members of the creative class have more discretionary income that allows them to consume retail goods. However, Florida *et al.* (2008) has found that members of the creative class who work in business management, sales, or financial operations are especially likely to locate in areas that have a high number of consumer services. This finding may suggest that these individuals are more likely to locate in areas that will allow them to establish professional relationships with other local businesses. The presence of diverse consumer services may also signal that an area is already conducive to small business development, as well as a variety of entrepreneurial activities. As McGranahan *et al.* (2010a) has demonstrated, entrepreneurial activity is often closely correlated with a high concentration of creative class professionals. Consequently, this research will explore the following hypothesis: If a county has diverse consumer services, then it will have a higher concentration of the creative class.

Likewise, there is reason to believe that members of the creative class would be more likely to find strong entrepreneurial environments in metropolitan areas, as opposed to more isolated localities. This assumption has also been confirmed by previous research, which has suggested that the creative class has historically congregated in urban areas (McGranahan *et al.*, 2010a). This concentration of the creative class in urban

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<sup>21</sup> The term “consumer services” refers to a range of business activities that may take place within a community, including grocery stores, shopping malls, and restaurants.

localities may also suggest that these areas possess more of the characteristics that have typically attracted this group of individuals. As McGranahan *et al.* (2010a) has shown, metropolitan areas tend to have higher education levels, better job creation, and more new business formation than their rural counterparts. Hence, there are a variety of reasons to suspect that the creative class would concentrate in metropolitan areas. Accordingly, this research will test the hypothesis: If a county is metropolitan, then it will have a higher concentration of the creative class.

In addition to the previous two hypotheses, which were largely economic in nature, there are a variety of non-economic characteristics that may also play an important role in attracting the creative class. Given the high levels of educational attainment that are typical of many members of the creative class, it is likely that the creative class will be attracted to areas that can provide quality educational opportunities. This may be especially true for members of the creative class who wish to provide quality educational opportunities for their own children. In fact, previous research has indicated that educated and affluent individuals are often attracted to areas that have high-performing public schools. For example, Fernandez and Rogerson (1996) have found that wealthier, more educated individuals are attracted to areas that have made substantial public investments in their local school systems. Similarly, Goldhaber (1999) has found that an area's home prices tend to rise as local public schools improve their performance. These findings suggest that quality public school systems may allow a city to attract a higher-educated and higher-earning citizenry, including members of the creative class. In order to further explore the relationship between public education systems and the

creative class, the following hypothesis will be tested: If a county has a quality public school system, then it will have a higher concentration of the creative class.

Likewise, the research of Florida *et al.* (2008) has found that the creative class is often attracted to areas where there are large concentrations of other talented and creative people. Florida *et al.* (2006) has also demonstrated that an area's overall "tolerance index"<sup>22</sup> tends to be positively correlated with the number of residents who work as university faculty. This correlation may be attributed, at least in part, to the fact that many universities cultivate environments that are open to "free speech, self-expression, political activism and a broad diversity of ideas" (Florida *et al.*, 2006). These values may also be apparent in communities where high concentrations of university faculty reside. In order to further evaluate the relationship between university faculty and the creative class, the following hypothesis will be examined: If a county's residents include a high number of college or university faculty, then it will have a higher concentration of the creative class.

Furthermore, a great deal of literature has emphasized the relationship between ethnic diversity and high concentrations of creative class professionals (see Florida *et al.*, 2008; Florida, 2005; Andersson *et al.*, 2011). This relationship is not entirely surprising given the fact that the creative class is comprised of a rather diverse set of occupations. From mechanical engineers and computer technicians to artists and actors, the individuals that make up the creative class are incredibly diverse in their interests and skills. Assuming that these individuals would prefer to reside in an area where diversity is both valued and accepted, it is likely that areas with a great deal of ethnic and cultural

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<sup>22</sup> The tolerance index is comprised of separate measures of racial diversity, foreign born population, artistic and "bohemian" occupations, and the gay and lesbian population (Florida *et al.*, 2006).



diversity would have higher concentrations of the creative class. In this research, areas that are considered to be ethnically and culturally diverse will have a high concentration of racial and ethnic minorities. In part, the desire of the creative class to locate in ethnically diverse communities may be attributed to the fact that the presence of diverse individuals signals a sense of openness and acceptance that may be attractive to other talented, creative, and diverse citizens (Florida *et al.*, 2008). This research will test the following hypothesis: If a county possesses a high level of ethnic diversity, then it will have a higher concentration of the creative class.

It should be noted that ethnic and cultural diversity are not identical concepts. While ethnicity is largely characterized by a person's racial identity, culture is generally characterized by a set of beliefs, norms, and values that an individual may adhere to. Although various measures of ethnic and racial diversity exist, cultural diversity remains much more difficult to quantify. However, as previous research has found that ethnic identity is a significant predictor of cultural values (see Desmet *et al.*, 2015), this research will use ethnic diversity as a means of ascertaining, in a general sense, the ethnic and cultural diversity of South Carolina counties.

Finally, this research will also examine whether an area's natural environment affects its ability to attract the creative class. Previous research has suggested that the climate and geographical features of a particular area may affect its ability to attract potential residents. In fact, Glaeser *et al.* (1995) has found that climate can be an important determinate of migration and economic growth. Likewise, McGranahan (1999) have found that climate, topography, and water area are all features that can influence

population change in rural areas. Not surprisingly, areas that have a warm climate, a large water area, and a mountainous landscape may provide recreational opportunities that are not present in other areas. Previous research has suggested that the creative class may be attracted to areas that offer these natural features, as McGranahan *et al.*, (2010a) have found that the creative class has been attracted to areas with natural amenities that may facilitate outdoor recreational opportunities. In accordance with these findings, it will be useful to examine the natural characteristics that may be influencing the location decisions of the creative class throughout the state of South Carolina. Currently, 25 of the state's 46 counties are considered to be rural (US Dept. of Health and Human Services, 2009). Since high-quality natural amenities are typically found in more rural settings, it will be useful to explore the extent to which South Carolina's rural counties have used their natural characteristics to attract human capital. Accordingly, this research will test the following hypothesis: If a county has desirable natural characteristics,<sup>23</sup> then it will have a higher concentration of creative class professionals.

It appears that there are a variety of factors that may influence the geographical distribution of the creative class. Given the diversity of this group of individuals, it is not surprising that the factors influencing their geographical location would be equally as mixed. While some of the hypotheses that have been presented are rather economic in nature, others are intended to reflect the social and recreational desires of this distinct group of individuals. As a result of the diverse backgrounds of creative class professionals, any research that examines the distribution of these individuals should

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<sup>23</sup> Desirable natural characteristics may include: warm winter temperatures, low humidity, large amounts of water area, and mild summer temperatures.

recognize that the needs and interests of this group are likely to be quite varied. The hypotheses presented throughout this section have been developed with this in mind, as they represent a variety of economic, social, and recreational aspects of everyday life.

### **Data Collection**

In order to examine the factors that influence the location of the creative class throughout South Carolina, it is necessary to determine how this group is dispersed among the state's forty-six counties. To facilitate these county-by-county comparisons, this research will utilize a data set that specifies the percentage of creative class professionals that are residing in each of South Carolina's counties. This data, which was obtained from the United States Department of Agriculture (USDA)<sup>24</sup>, is currently available for each of the state's forty-six counties and will be used in this research as the dependent variable. In order to construct this dataset, USDA identified nine occupational categories<sup>25</sup> that are likely to involve a high-degree of "thinking creatively" (see USDA, 2015d). Specifically, USDA (2015d) defines creative thinking as, "developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions." USDA then utilized data from the U.S. Census Bureau's American

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<sup>24</sup> The creative class dataset constructed by the USDA has previously been used in rural development research conducted by the USDA's Economic Research Service (see McGranahan and Wojan, 2007a, 2007b, and McGranahan *et al.*, 2010a). This dataset reports the percentage of individuals in each county over the age of sixteen who work in certain creative class occupations.

<sup>25</sup> These nine categories include: management occupations, business and financial operations occupations; computer and mathematical occupations; architecture and engineering occupations; life, physical, or social science occupations; legal occupations; education, training, or library occupations; arts, design, entertainment, sports, or media occupations; and sales or related occupations.

Community Survey,<sup>26</sup> to identify individuals in each county that held an occupation in one of the aforementioned “creative” categories. This information was then used to calculate a percentage of individuals residing in each county that work in creative class occupations. Information regarding the specific occupations included in the USDA’s creative class dataset can be found in Appendix A.

In order to measure the quality of the natural amenities in each of South Carolina’s counties, USDA’s natural amenity scale will be utilized (see USDA, 2012c). Natural amenities can include physical characteristics of a particular area that enhance the location’s recreational opportunities, visual beauty, or overall quality of life. USDA’s natural amenity scale measures the quality of a county’s natural amenities by combining measurements of six different physical characteristics, including: winter temperature, winter sunlight, summer temperature, summer humidity, topographic variation, and water area (USDA, 2012c). This statistical index ranges from zero to two, where a score of “zero” would be assigned to an area with undesirable natural amenities, and a score of “two” would be given to those with the most desirable natural environments. Each of the six characteristics included in this index is intended to measure a physical characteristic that can enhance the desirability of a particular county. Areas with low summer humidity and high winter temperatures may facilitate outdoor recreational activities that would not be possible in other climates. Therefore, such an area would score highly on the natural amenity scale. Likewise, areas with greater topographic variation and more extensive

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<sup>26</sup> Data from the 2007 – 2011 American Community Surveys were used in USDA’s creative class calculations.

surface water area may facilitate boating, hiking, or mountain climbing activities. These areas would also be likely to receive high scores on the natural amenity scale. Past research has suggested that outdoor recreational opportunities may play an important role in attracting the creative class (see McGranahan *et al.*, 2010a); therefore it is important to examine the linkage between quality natural amenities and the location of the creative class.

It has also been hypothesized that the creative class is attracted to cities that are located within metropolitan areas. In order to determine whether this is true, an indicator variable was constructed using data from the U.S. Office of Management and Budget. This indicator variable will apply a value of “1” to areas that are metropolitan, and a “0” to areas that are non-metropolitan<sup>27</sup>. Indicator variables, which are also often referred to as “dummy variables,” are used to indicate the occurrence of certain characteristic or attribute. Indicators are most often used in regression analysis to account for qualitative characteristics that cannot be represented with a numeric value. In this instance, an indicator variable is being used to signal the presence of a metropolitan county.

As previously noted, this research has hypothesized that the creative class are more likely to locate in counties with a greater degree of ethnic and cultural diversity. This hypothesis is based on previous research by Florida *et al.* (2008), which suggests that the creative class may be especially attracted to cities that boast a great deal of ethnic and cultural diversity. As cultural diversity can be difficult to quantify, this research

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<sup>27</sup> This dummy variable will utilize the U.S. Office of Management and Budget’s definition of a metropolitan statistical area (MSA). Under this definition, an MSA contains a “core urban area” that has a population of 50,000 or more, and a surrounding “micro area” that contains a population of at least 10,000 (but less than 50,000) (US Census Bureau, 2010).

relies on quantitative measures of ethnic diversity as a means of gaging the overall ethnic and cultural diversity of South Carolina counties. Using data from the U.S. Census Bureau, a variable was created based the percentage of individuals residing in each county that identify as “non-white”.

This research hypothesizes that members of the creative class are more likely to locate in areas that have high-quality public school systems. In order to test this relationship, it was necessary to measure student achievement at South Carolina’s public schools. Currently, the South Carolina Department of Education requires all public schools to administer a standardized test known as the Palmetto Assessment of State Standards (PASS). The PASS test, which was introduced in 2008, is intended to measure a student’s overall proficiency in both English and mathematics. A total of 800 points is possible on each of the sections of the PASS test, with 1600 being the highest possible combined score. Using data from the South Carolina Department of Education, average combined PASS scores were computed for each county in South Carolina. This data was then used as a measure of the overall quality of a county’s public school system.

It has also been hypothesized that the creative class is especially attracted to areas that are in close proximity to a college or university. In order to test this hypothesis, it was necessary to construct an independent variable that measures the number of university faculty employed within each county.<sup>28</sup> This measure was selected in order to account for the presence of a college or university within a particular county, while also serving as an indication of the institution’s size.

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<sup>28</sup> This data has been obtained from the U.S. Department of Education’s Integrated Post-Secondary Education data set.

Lastly, it has also been hypothesized that the creative class is attracted to areas with extensive consumer services. These services may include a variety of retail-related activities, including grocery stores, shopping malls, movie theaters, and restaurants. In order to measure the size of an area's consumer service industry, a statistical index that combines three different measures: (1) the number of business establishments in the retail, (2) the number of business establishments in the arts and entertainment industry, and (3) the number of business establishments in the food and accommodation sectors. Each of the variables included in the statistical index was normalized on a scale ranging from zero to one. This was accomplished by dividing the value listed for an individual county by the largest value listed for that variable. The statistical index ranges from zero to three, with a score of "three" representing an area with extremely diverse consumer services. This data was compiled for the year 2010, and will utilize data obtained from the U.S. Census Bureau.

## **Results**

In order to test the relationship between the creative class and various local characteristics, an ordinary least squares (OLS) linear regression model was generated. To evaluate the validity of this model, several statistical tests were conducted. First, an F-test was conducted in order to ensure that the fitted regression model has a significantly better fit than a reduced model that would not include each of the independent variables. Additionally, in order to gage the overall fit of the model that was generated, an  $R^2$  statistic was computed. This measure, which is often referred to as the "coefficient of

determination,” demonstrates the proportion of the variance in the dependent variable that is effectively explained by the fitted model. Similarly, the adjusted  $R^2$  statistic is also intended to measure the proportion of the variability in the dependent variable that is explained by the estimated model, however, the adjusted measure of  $R^2$  accounts for the number of explanatory terms in a model. In other words, the adjusted  $R^2$  statistic will not increase if an insignificant independent variable is added to the model. In addition to these tests, individual hypothesis testing took place in order to evaluate the significance of each independent variable that was included in the model. This testing took place in the form of a “t-test,” which made it possible to test whether there was a significant linear relationship between the dependent variable and each independent variable.

The statistics included in Table 3.1 provided the basis for the analysis of the model’s overall significance and fit. The completed model appears to explain approximately 81 percent of the variation in the dependent variable. Table 3.1 also includes each of the parameter estimates, as well as the “*p*-values” that facilitated hypothesis testing for each of the independent variables. Of the independent variables that were included, two appear to be insignificant. These two variables, ethnic diversity and the presence of university faculty, did not appear to have a statistically significant relationship with the dependent variable. However, each of the other four independent variables satisfied the conditions of the hypothesis test, and appear to be statistically significant. The parameter estimates for each of the significant variables appear to be reasonable and as expected, with each displaying a positive relationship with the dependent variable. Each of these parameters represents the change in the dependent



variable that will result from a one-unit increase or decrease in the corresponding explanatory variable (while holding all other variables constant). Finally, the actual values of the dependent variable were plotted against the predicted values of the dependent variable, as generated by the estimated model. The relationship between the actual and predicted values of the “creative class” dependent variable demonstrates a clear linear association between the actual and predicted values.

**Table 3.1: Regression Results**

<b>Independent Variable</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>p-value</b>
MSA**	0.06	0.01	0.0001
Consumer Services**	0.02	0.01	0.0069
PASS*	1.71	0.94	0.0775
Natural Amenities**	0.10	0.04	0.0434
Diversity	-0.03	0.04	0.9306
Faculty	-0.06	0.01	0.2647
N=46			
R <sup>2</sup> =0.81			
Adjusted R <sup>2</sup> = 0.77			

\* Significant at  $\leq 10\%$ , \*\* Significant at  $\leq 5\%$

### **Conclusions**

Perhaps the most interesting aspect of these findings is that neither ethnic diversity, nor the presence of college or university faculty, seems to factor into the location decisions of the creative class. Within the creative class literature, a great deal of emphasis has been placed on relationship between ethnic diversity, institutions of higher learning, and creative class professionals. Specifically, Florida (2002a) and Florida *et al.*,

(2008), have noted that ethnic diversity and the presence of university faculty greatly contributes to a region's ability to attract the creative class. However, much of Florida's research has focused on comparisons between rather large, metropolitan cities. Possibly, ethnic diversity and proximity to a college or university may be less important to the subset of creative class professionals who are looking to locate in less populated areas. Hence, there may be key differences in preference among various groups within the creative class. These findings also suggest that there are dissimilarities between the geographical characteristics that attract creative class professionals to large metropolitan areas and those that attract them to less dense, or possibly rural, areas.

Even though the presence of university faculty did not appear to be statistically significant in the estimated model, the existence of high-quality public school systems was significant. This finding would suggest that members of the creative class who are looking to locate in smaller, or less dense, areas might have different educational priorities than those who are looking to locate in large metropolitan areas. While creative class professionals who are attracted to metropolitan areas may be concerned with an area's proximity to a college or university, those looking to locate in less populated areas seem to be more concerned with the availability of quality educational opportunities for their children. Furthermore, the results of this research suggest that the presence of desirable natural amenities and diverse consumer services may also play an important role in attracting the creative class. The statistical significance of the natural amenity variable may be particularly promising for less populated areas that have lakes, rivers, and other open spaces that can provide opportunities for outdoor recreation. Possibly,

investments in outdoor recreational opportunities (*e.g.* bike or hiking trails, public parks, picnic areas) could assist rural areas in effectively marketing their natural amenities to potential residents. Likewise, the consumer service variable indicates that retail opportunities may also play an important role in attracting creative class professionals. This finding may have interesting implications for exceedingly rural areas, where consumer services are likely to be less extensive. Perhaps, efforts to support entrepreneurship in the retail sector could be beneficial in rural areas where retail services are less developed.

The findings presented in this paper may also have implications for the field of rural economic development. Within the development literature, there seems to be a lack of agreement as to the ways in which less populated areas can attract and maintain high-quality human capital. This research demonstrates that there are a variety of factors that these regions can use in order to become more desirable to creative class professionals. From improving the quality of local schools to investing in the maintenance of natural amenities, it appears that there are a variety of realistic ways in which rural areas can make themselves more attractive to the creative class. Although these areas do not have many of the higher-order amenities that can be found in primary cities, they may still be able to build upon various strengths in order to become more appealing to the creative class. Therefore, this research demonstrates that small cities should play to their own strengths when formulating developing strategies. Currently, many small towns rely on development strategies that involve business recruitment through the use of tax breaks and other incentive packages. Rather than utilizing these expensive and risky

development strategies, these localities should consider investing in the quality of their public schools and natural amenities, while also providing support services to existing businesses.

The outcome of this research demonstrates that the factors affecting the geographical dispersion of human capital are quite complex. These findings show that there is no uniform strategy for attracting or retaining human capital. Rather, regions differ in how they must go about recruiting individuals who will be key to their economic growth. Additionally, locational preferences may vary substantially among members of the creative class. This finding demonstrates that smaller cities must work to effectively market their strengths to those who are looking for an alternative to a highly urbanized lifestyle.

## CHAPTER FOUR

### CASE STUDIES IN SMALL-SCALE FARMING: CREATIVE CLASS FARMERS IN SOUTH CAROLINA'S LOCAL FOOD SYSTEMS

Over the past two decades, the U.S. agricultural industry has witnessed a dramatic increase in direct-to-consumer sales.<sup>29</sup> Not surprisingly, this rise in direct sales has been accompanied by widespread growth in the number of farmers markets and community-supported agriculture (CSA) organizations throughout the country (see Martinez *et al.*, 2010). While these trends suggest that local food systems are flourishing in many communities, they also demonstrate the increasing prevalence of small-scale farming within our nation's agricultural industry. Currently, small farms<sup>30</sup> account for the majority of the industry's direct-to-consumer sales, with many of these farms being operated by an individual with less than four years of farming experience (Martinez *et al.*, 2010). As direct sales continue to grow, it appears that many operators of small farms have formed a highly innovative and unique subsector within the agricultural industry.

In addition to finding success in direct-to-consumer marketing, many small farms have distinguished themselves from their more conventional counterparts in a variety of other ways. Previous research has shown that operators of small farms are more likely to be female, non-white, or Hispanic (Martinez *et al.*, 2010), and are also more likely than larger operators to be college educated (Ahearn and Newton, 2009). Small-scale farm operators are also less likely than other operators to specialize in the production of a

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<sup>29</sup> Direct-to-consumer marketing was approximately \$1.2 billion in 2007, compared to only \$551 million in 1997 (Martinez *et al.*, 2010).

<sup>30</sup> According to the USDA (2010) the term "small farm" is used to describe farming operations with an annual gross cash income of less than \$250,000.

single agricultural commodity (USDA, 2013). As a result, these operators likely require the knowledge and skills to produce and effectively market a range of products, from row and specialty crops to livestock. Although many small-scale farm operators are relatively new to the agricultural industry, these individuals have quickly adapted to the challenges presented by a profession that is highly technical and entrepreneurial in nature.

Undoubtedly, many operators of small farms are incredibly versatile entrepreneurs who must be proficient in science, ecology, and a broad spectrum of business-related skills. Despite the knowledge-based<sup>31</sup> nature of their activities, small-scale farm operators have received limited attention within the existing entrepreneurship or human capital literature. However, the knowledge-based activities that occur within many small-scale farming operations are quite consistent with those that are characteristic of the “creative class.”

The concept of the creative class, which was originally developed by Richard Florida, acknowledges that human capital plays an integral role in the economic development process. Although the role that human capital plays in facilitating economic growth has been well-documented (see Lucas, 1988; Glaeser, 1999; and Benhabib and Spiegel, 1994), the process of measuring human capital generates less consensus. Previous research has often relied on various measures of educational attainment (*e.g.* the percentage of a population with a college degree) as a means of accounting for human capital. However, Florida *et al.* (2008) have suggested that talent and creativity, as opposed to educational attainment, are more appropriate measures of human capital.

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<sup>31</sup> The Organisation for Economic Co-operation and Development (OECD) describes “knowledge-based” activities as those that require “greater dependence on knowledge, information, and high-skills...” (2005, para. 1).

Specifically, Florida *et al.*, (2008) assert that individuals who work in certain creative, knowledge-based occupations make greater contributions to a region's economic development. Florida *et al.*, (2008) identify many occupations that require high levels of creativity, innovativeness, complex problem solving, and entrepreneurial capability, which are underlying drivers of regional economic development.

Currently, occupations involved in science, engineering, arts, culture, entertainment, business management, finance, law, healthcare, and education are considered to belong to the creative class (Florida *et al.*, 2008). Although they are not included on the aforementioned list, it appears that small-scale farm operators may, in fact, satisfy much of Florida's creative class "criteria." Not only do many in this group demonstrate a high degree of creativity and innovation with respect to both their production and marketing methodologies, but they possess many of the personal characteristics that Florida has also identified as being consistent with the creative class (*i.e.* they are a young, well-educated, and culturally diverse group of individuals).

It should be noted that this research seeks to identify the presence of "creative class" activities within local agriculture.<sup>32</sup> Previous research demonstrates that there are a variety of activities taking place within local agriculture that are inherently "non-conventional"<sup>33</sup> (*e.g.* direct-to-consumer sales and sustainable production practices). The

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<sup>32</sup> Local agriculture is generally characterized by short supply chains and direct-to-consumer sales of agricultural products. Typically, the terms "local agriculture" or "local food" are used to refer to products that have been produced, processed, and sold within the same general area (*i.e.* the same city, county, or region). Research suggests that the vast majority of local food products originate on small farms (see Martinez *et al.*, 2010).

<sup>33</sup> According to the USDA (2012b), conventional farming typically involves large capital investments, large-scale farms, single crops or row crops, extensive use of pesticides and fertilizers, and dependency on agribusiness.

purpose of this research will be to examine the degree to which these non-conventional activities may be consistent with creative class activity, while also examining how these activities may be contributing to community development and local economic growth. Although many small-scale farm operators may be engaging in activities that are creative or innovative, it is unlikely that all operators of small farms are operating in a manner that is consistent with the creative class. While Florida has traditionally used occupational characteristics as a means of identifying the creative class, efforts have not been made to determine what percentage of the individuals working in these occupations may actually be performing the creative, innovative, or entrepreneurial functions of the creative class. Similarly, as this research seeks to identify the presence of creative class behaviors among small-scale farm operators- particularly those operating within the context of local agriculture- it cannot make generalizations about small-scale farm operators as a whole.

In order to explore the potential relationship between small-scale farming and Florida's creative class, this paper examines the degree to which many small-scale farm operators may satisfy the creative, innovative, and entrepreneurial standards of this unique group of individuals. Hence, this research seeks to answer the following question: Why and how are the economic activities of some small-scale farm operators contributing to regional economic development in unique ways? Through twelve in-person interviews with operators of small farms, this paper examines the degree to which the professional activities and personal characteristics of small-scale farm operators may be consistent



with the creative class. This research also seeks to examine the contributions that these farmers may be making to their local and regional economies.

This research is highly important for several reasons. Within the existing human capital and economic development literature, farming is often entirely overlooked. This is especially true with respect to small-scale farming, where little, if any, attention has been given to the potential that high-skilled, highly educated human capital exists within the confines of local agriculture. To date, most efforts to draw linkages between local agriculture and economic growth have centered on farmers markets and their ability to generate revenue (see Oberholtzer and Grow, 2003; Lev *et al.*, 2003; Myers, 2004; and Henneberry *et al.*, 2008). This research seeks to fill a void in the existing literature by identifying and examining the knowledge-based activities of small-scale farm operators and demonstrating how these activities may be contributing to local economic growth. Within the existing literature, it has been demonstrated that small farms can be profitable, income-generating enterprises (see Brown and Miller, 2008). In response to this finding, this research takes an in depth look at a range of activities that have allowed many small farms to make measurable contributions to their communities and their local economies. By examining the knowledge-based activities taking place on small farms, this research identifies a variety of contributions that operators of small farms are making to their local economies. Although a small farm's ability to generate revenue is important, it paints a partial picture of the contributions that small-scale farm operators are making to their local economies. This research demonstrates that many operators of small farms deliberately generate income through a variety of unique, knowledge-based activities.

## **Local Agriculture: An Overview**

Within the existing literature, there is little consensus regarding the geographical definition of the term “local.” In fact, existing definitions of “local food” include products that are transported up to 400 miles from their origin to products that are consumed less than 100 miles from where they were grown (see Martinez *et al.*, 2010). Given this confusion, this chapter will use the terms “local agriculture,” “local food,” and “local food system” to describe a variety of direct market arrangements often used by small-scale farm operators. These market arrangements include farmers markets, farm-to-school programs and other farm-to-institution programs, on-farm sales, and direct-to-retail or direct-to-foodservice agreements. Arrangements such as these are unique from both a production and consumption perspective. For producers, local food systems provide shortened supply chains, as well as the opportunity to eliminate “middlemen” by performing a variety of functions “in house” (*i.e.* marketing, packaging, transportation, distribution, and advertising) (Martinez *et al.*, 2010). For consumers, local food systems provide access to high-quality, heterogeneous products not otherwise available through mainstream outlets. Although this research focuses on the supply-side drivers of local food systems, consumers have increasingly played an important role in the success of local agriculture by seeking out and embracing locally produced food products. Previous research has shown that consumers value agricultural products that are “high in quality” and are sold in a “local-oriented” environment (such as a farmers’ market) (Feenstra, 1997). While this paper explores the degree to which many small-scale farm operators

may be unique or innovative, it should be noted that consumers of local food may also share similar characteristics.

In recent years, several efforts have been made to document the positive impacts associated with local agriculture. Throughout the existing literature, researchers emphasize that local agriculture can be a viable and highly effective economic development strategy (see Otto and Varner, 2005; Ross *et al.*, 1999 and Marsden *et al.*, 2000). Not only do local producers provide their communities with fresh, high-quality food products, they also generate revenue that has broad implications for their local economies. For example, using data from Iowa farmers markets, Otto and Varner (2005) found that \$21 million in direct sales resulted in a total economic impact of \$31.5 million, including 140 full-time jobs that were generated as an indirect impact of the farmers' market sales. Farm operators who make direct-to-consumer sales also retain a greater share of each dollar they receive by effectively eliminating "middlemen" such as distributors and grocery stores (Martinez *et al.*, 2010). It appears that there are variety of benefits, both to the local economy and the farmer, that are associated with the production and sale of local agricultural goods.

In addition to the positive economic impacts associated with local agriculture, there is reason to believe that small farms (and the local food systems to which they belong) make several less tangible contributions to their surrounding communities. Previous research has suggested that local direct-to-consumer markets often promote social interaction and a sense of mutual exchange that can enhance community ties (see Hinrichs, 2000; Sage, 2003). As many communities are seeking to develop multi-faceted

local economies that are stable, equitable, and capable of providing challenging work opportunities, local food systems have become a viable option for income generation and job creation (Campbell, 1997). Previous research suggests that the production and marketing strategies used by local farmers are consistent with the type of community-controlled economic development that many communities are seeking (Campbell, 1997). Although these operations typically do not employ many laborers, they often purchase their inputs locally and partake in on-farm or local processing that reduce local economic leakage (Campbell, 1997). In addition, communities may receive a variety of other benefits from the existence of small, local farms, including land preservation (Martinez *et al.*, 2010), reduced food safety risks (Peters *et al.*, 2008), the development of social capital (Martinez *et al.*, 2010), and preservation of cultivar genetic diversity (Golan and Bauer, 2004). Although difficult to quantify, the benefits associated with small farms are both significant and multi-faceted.

It is also clear that small farms are highly diverse enterprises that take part in a variety of entrepreneurial activities. With approximately seventy-seven percent of small farms taking part in both direct sales and other income-generating activities such as value-added processing and agritourism (Martinez *et al.*, 2010), many small-scale farm operators are demonstrating that entrepreneurial activities play an integral role in local agriculture. In fact, there seems to be a consensus within the existing literature that small-scale farming is a highly entrepreneurial endeavor (see Alsos *et al.*, 2003; Haugen and Vik, 2008; and Bryant, 1989). This consensus is reaffirmed by the fact that direct-to-consumer sales are higher for farms who are involved in activities that can be considered

“entrepreneurial” (*i.e.* sustainable production practices, tourism, and customwork<sup>34</sup>) (Martinez *et al.*, 2010).

Previous research suggests that there may be a variety of non-monetary factors that motivate the entrepreneurial activities of small-scale farm operators. Mailfert (2006) has identified so called “neo-farmers;” individuals who often enter the agricultural industry with little or no experience or background in farming. As Mailfert (2006) suggests, these individuals are drawn to agriculture for a variety of different personal and professional reasons, including a strong desire to move “back to the land” in search of a fulfilling lifestyle that can provide “self-defined” economic success. Similarly, it appears that many operators of small farms are motivated to enter the agricultural industry for the residential amenities that are associated with living on a farm (Ahearn and Newton, 2009). Although lifestyle considerations appear to be a motivating factor for many small-scale farm operators, others are drawn to farming through their desire to engage in socially or environmentally responsible agricultural production. For example, Starr *et al.* (2003) has demonstrated that many farmers are motivated to operate a small, direct-to-consumer farm by their desire to maintain environmentally friendly agricultural practices that would likely be difficult to maintain when producing in larger volume. This research also found that many operators of small farms find it important to utilize sustainable methods of production, while also valuing their ability to sell their goods locally (Starr *et al.*, 2003).

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<sup>34</sup> “Customwork” involves planting, plowing, and harvesting for another individual (Martinez *et al.*, 2010).

## **Creativity and Small-Scale Farming**

Previous research suggests that many small-scale farm operators are forming a unique subculture within the agricultural industry. These individuals have set themselves apart from conventional producers through their utilization of sustainable methods of production, innovative marketing strategies, and explicit claims about socially and environmentally responsible business practices. Recent findings also suggest that farmers who partake in direct marketing are often younger and more educated than their conventional counterparts (see Hunt, 2007). Although their contributions to their local economies have also been well documented, it is useful to examine the reasons why this group of individuals has been able to contribute to their communities in such a unique way. In addition to improving food access, small farms benefit their local areas in a variety of ways, including contributions to biodiversity, land preservation, and environmental stewardship (Rosset, 1999).

Within the creative class literature, little (if any) attention has been given to the linkage between members of the creative class and local agriculture. However, the existing literature has noted that there is a strong historical linkage between the U.S. agricultural industry and the creative class. In fact, Florida (2002a) has suggested that the rise of conventional agriculture in the U.S. can be attributed to the desire of many farm operators to engage in the creative development of new methods of food production. Accordingly, Florida emphasizes that agriculture has historically been amenable to “elaboration and improvement,” which has made the industry especially attractive to those who are looking to utilize their creative faculties. Historically, the introduction of

creative processes into agricultural production has rewarded farm operators with both higher yields and improved crops or livestock (Florida, 2002a). To a great extent, these improvements in agricultural production have contributed to a variety of social and economic advances that would have otherwise been impossible.

It does not appear that any further effort has been made to examine the potential relationship between agriculture and the creative class. However, within the existing literature, several studies have examined the skill sets (both technical and entrepreneurial) that are often required to operate a successful farm-based business. A review of the existing literature suggests that there are a variety of factors that contribute to the success of farm-based entrepreneurs, including: cognitive and professional skills, the ability to innovate, problem-solving abilities, and social initiative (see McElwee, 2006). Similarly, Winter (1997) notes that sustainable agricultural production is not possible without specialized skills and knowledge. Findings such as these suggest that farm-based entrepreneurship may require many of the same knowledge-based skills that form the basis of the creative class. Although the aforementioned studies do not distinguish between small and large farming operations, they provide strong evidence that innovation, problem solving, and specific knowledge sets are often required to operate successful farm-based businesses.

### **Talent, Technology, and Tolerance**

Existing research on small-scale farm operators suggests that many may be acting (both personally and professionally) in a manner that is representative of the creative

class. Within the creative class literature, characteristics and activities of creative class professionals typically fall into three categories: talent, technology, and tolerance. Often referred to as the “three T’s,” this typology is used to describe the professional activities and capabilities, as well as the personal characteristics, of the creative class. Talent is used to describe individuals who have a high level of human capital (Florida, 2002c). Although Florida typically uses the percentage of a population with a bachelor’s degree as a measure of talent, he notes that there are a variety of other conditions that can signal the presence of talented human capital. Specifically, Florida (2002c) suggests that individuals employed in fields that require knowledge of science, engineering, or specialized technical skills, are considered to be “talented” human capital. Through his research, Florida (2002c) has shown that regions with a high level of talented human capital have higher regional incomes and a higher concentration of high-technology industries. This finding is due, at least in part, to the fact that members of the creative class disproportionately work in innovative, high-technology industries that have a positive effect on local income.

The relationship between technology, human capital, and economic development has been well documented (see Glaeser, 1999; Benhabib and Spiegel, 1994; and Barro, 2001). According to Florida (2003a), human capital capable of developing and using technology is an essential component of economic development. Not only has previous research shown that technological innovation is key to stimulating regional development, but it also appears that the creative class is more likely to locate in areas that have technology-intensive industries (Florida, 2003a). In addition, Florida (2009) has



identified professions that he refers to as the “super-creative core,” which are especially linked to economic growth. Within the super-creative core are what Florida (2009) describes as professional and technical occupations “related to natural and applied sciences.” Although farm-related positions have not implicitly been included in this measure, the science-based nature of agricultural activities would suggest that at least some small-scale farm operators merit inclusion in this category.

Within the context of the creative class, “tolerance” is a multi-faceted concept that includes cultural diversity, open-mindedness, and freedom of expression. In recent years, researchers have used a variety of different measures in order to gage the degree to which a community may be tolerant (see Florida, 2002a; Florida *et al.*, 2008; and Markusen and Schrock, 2006). Within the existing literature, measures of tolerance within a community have included: the prevalence of same-sex couples, the number of working artists or entertainers, and the number of foreign-born residents. More recent efforts by Florida (2012) to measure tolerance have included the “bohemian index,” which measures the number of working artists, musicians, writers, designers, and entertainers residing in a particular area. The bohemian index is designed to account for individuals who value “eccentric lifestyles and alternative cultures” and “creative forms of economic activity” (Florida, 2001, p. 57-58). As Florida (2001) suggests, occupations that are included in the bohemian index typically blend “business culture and counterculture into a new culture of ‘hip consumerism’” (p. 58).

## Hypotheses

Previous research has suggested that there are three identifiable characteristics among members of the creative class: talent, technology, and tolerance. In order to gauge the degree to which these traits can be found amongst small-scale farm operators, this research will test five hypotheses related to Florida's "three T's."

Central to Florida's concept of "talent" is the notion that members of the creative class possess a specialized, knowledge-based skill set that sets themselves apart from other professionals. According to the Organisation for Economic Co-operation and Development (OECD) (2005), a "knowledge-based" economy is one that trends toward "greater dependence on knowledge, information, and high-skills..."(para. 1).

Accordingly, there is reason to believe that farm-based entrepreneurship requires a variety of skills that could be classified as "knowledge-based." Specifically, previous research has suggested that successful farm-based businesses require specialized knowledge, problem-solving skills, and an ability to be innovative (see McElwee, 2006 and Winter, 1997). In order to further explore the linkage between knowledge-based human capital and small-scale farming, this research examines the following hypothesis: if operators of small farms belong to the creative class, then they will demonstrate certain knowledge-based skill sets.

Technology, which is the second of Florida's "three T's," suggests that there is a relationship between economic growth and the presence of technology-intensive occupations. Florida (2009) has previously suggested that individuals who work in professions related to the natural and applied sciences are especially important to regional

economic growth. It could be argued that a variety of farm-based activities require substantial knowledge of natural and applied science. From using computer technology to managing soil and employing irrigation systems, there are a variety of ways in which farmers utilize science and technology in their day-to-day operations. In order to further explore the role that science and technology plays in the realm of local agriculture, the following hypothesis is examined: if operators of small farms belong to the creative class, then they will demonstrate a regular and proficient use of science and technology.

A primary component of Florida's "tolerance" measure is a statistic referred to as the "bohemian index." The bohemian index, which is based on occupational data, includes the following professions: authors, designers, musicians, actors, artists, painters, sculptors, photographers, dancers, performers, and related workers (Florida, 2001). This index is intended to reflect the amount of cultural and lifestyle amenities within a region and is a direct measure of the local professionals who are involved with the production of cultural and creative assets (Florida, 2001). Although small-scale farm operators are not included in this group, they possess similar professional characteristics to many of the occupations that currently comprise the bohemian index. Many of these "bohemian" professions sell their products or services directly to consumers, often in local markets or festivals that are not too dissimilar from local farmers markets. Likewise, it could be argued that local food systems are both cultural and creative assets. Not only have farmers' markets become a social gathering place for those who are drawn to local agriculture, but increasing demand for locally produced food could also be seen as a cultural shift toward food systems that demonstrate social and environmental

responsibility. Additionally, creativity is often required to effectively and efficiently operate a farm that produces fresh, sustainably-produced food products. As a result of this, this research explores the following hypothesis: if operators of small farms belong to the creative class, then they will be involved in the production of creative and cultural assets. Although there are several components to Florida's "tolerance" measure, this research focuses primarily on the potential linkages between small-scale farm operators and the bohemian index.

### **Methodology**

This research utilized twelve in-person interviews<sup>35</sup> with fifteen small-scale farm operators to identify consistencies between these individuals and their professional activities and the creative class characteristics that have been outlined by Florida (2002a). Each of the interviewees resided in the state of South Carolina and had recently completed a USDA-funded educational and training program known as the South Carolina New and Beginning Farmer Program (SCNBFP). Of those who participated, fourteen owned and operated a small farm, and one was actively employed on a farm. The farming experience of the interviewees ranged from less than a year to approximately four years. It should also be noted that each of the participants in this research can be considered "second-career" farmers, in that they each had embarked on non-farming careers prior to owning or operating their own farm. In a few instances, the interviewees continued to work in their original career field while operating their farm.

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<sup>35</sup> The in-person interviews were conducted between June 10, 2013 and July 12, 2013.

This research may provide unique insight into the contributions that second-career farmers are making to their communities and local economies. Although few efforts have been made to examine the activities of second-career farmers, recent statistics reveal approximately one-third of all beginning farmers are over the age of fifty-five (U.S. Congress, 2013). This finding suggests that many individuals may be turning to farming after leaving or retiring from a previous career. However, this group of second-career farmers could differ from other small-scale or beginning farm operators in that they may benefit from the previous knowledge and financial resources that they accumulated during their previous careers.

New and beginning farmers (such as the ones interviewed) provide an especially appropriate lens through which to explore the connection between small-scale farming and the creative class. Previous research has demonstrated that small farms are more likely to be operated by new or beginning farmer, and as of 2007, approximately twenty-two percent of all U.S. farms were operated by an individual with farming experience of ten years or less (Ahearn and Newton, 2009). Given their increasing predominance within small-scale farming, the activities and viewpoints of new and beginning farmers provide a unique perspective through which to examine the recent rise in local food systems.

When selecting participants for this research, efforts were made to identify individuals from various regions throughout the state who partake in a wide range of agricultural activities. For the purposes of selecting interviewees, the state of South Carolina was divided into three separate regions: (1) the “low country”, which consists of the state’s coastal counties, (2) the “upstate,” which includes the state’s most inland

counties, and (3) the “midlands,” which includes the City of Columbia and its surrounding areas. Of those who participated, four resided in the Lowcountry, seven resided in the midlands, and four resided in the upstate. Table 4.1 provides details on each of the interviewees, including their production activities. In total, twelve in-person interviews were conducted with fifteen new and beginning farmers. In three instances, two farmers were interviewed at the same time. These interviews took place when a farm was co-owned and co-operated by two graduates of the SCNBFP who both agreed to participate in this research. Interviews in which two farmers participated are denoted in Table 4.1 by an “a” and “b” designation. This designation will be used throughout this chapter as a means of distinguishing between the co-operators of a single farm.

**Table 4.1: Interview Details**

<b>Interview</b>	<b>Years in Operation</b>	<b>Farming Activities</b>
#1	4 Years	Produce; over 30 different types
#2a #2b	4 Years	Heritage Turkeys
#3	3 Years	Eggs, Meat Birds
#4	1 Year	Primarily live animal sales: Turkey, Chicken, Goats, Rabbits, Ducks, Livestock Guardians.
#5	1 Year	Eggs, Meat Birds
#6a #6b	6 Months	Eggs, Chickens, Hogs, Quail, Turkey
#7a #7b	4 years	Alpacas
#8	3 Years	Produce
#9*	3 Years	Produce and Honey
#10	Currently interning on a farm	N/A

#11*	3 Years	Produce, Honey
#12	3 Years	Produce, Honey, Lamb, Berkshire Hogs.

\* Farmers and board members at a non-profit, community-based farm.

During each interview, participants were asked a set of sixty-four predetermined questions (See Appendix B). The interviews, which lasted between thirty-five minutes and two hours, were each recorded and transcribed. To facilitate an analysis of the interview data that was collected, a “descriptive coding” technique was utilized. Descriptive coding is a form of qualitative analysis that is commonly used as a means of searching for and identifying common themes and patterns within interview data. The process of descriptively coding an interview transcript involves assigning a “code” (*e.g.* a word or short phrase) to sentences or paragraphs of interview text that are connected to a “specific context or setting” (DeCuir-Gunby *et al.*, 2011). This research utilizes a “deductive” approach to descriptive coding, which involves the development of a standardized set of codes prior to the commencement of the coding process. These codes can be considered “theory-driven” in that they originate from “existing theory or concepts” or “structural” in that they are based on the project’s “research goals and questions” (DeCuir-Gunby *et al.*, 2011). In the case of this research, codes were developed based on previous research related to Florida’s creative class theory, as well as concepts related to the research question presented in this paper.

The purpose of assigning codes to interview data is to both identify major themes that exist across the twelve interviews and to organize interview data into manageable

groups or categories. In this instance, the first step in the coding process involved assigning descriptive codes (from the codebook) to phrases or paragraphs within the interview transcripts that could be linked to creative class theory. For example, discussions pertaining to technology, learning, problem-solving, and creativity were particularly relevant to this research and were assigned a descriptive code. Once each interview was coded, it became possible to organize similarly coded discussions into categories. To facilitate this analysis, coded interview data was sorted into one of three categories based on the descriptive codes that had been assigned: (1) technology, (2) talent, and (3) tolerance. The interview data within each of these categories was then reviewed in order to identify consistencies between the interviewees and characteristics of the creative class that are described in the existing literature.

## **Findings**

The twelve interviews revealed a great deal about the activities of small-scale farm operators in the state of South Carolina. The interviewees proved to be both highly educated and skilled, and had extensive professional experience in non-farm occupations. Despite their limited agricultural experience, these individuals have relied on their educational backgrounds, their technical skills, and recent learning to operate successful farm-based businesses. In fact, over half of the farms owned by the interviewees were expecting to earn a profit for the year 2013 (five of the farms had already experienced profitable years). However, the interviews reveal that these successes have been the product of extensive entrepreneurial and educational efforts. From networking and



spending long days at the farmers' market to continuously seeking out educational opportunities, there are multitudes of ways in which these small-scale farm operators have worked to advance their business opportunities. Similarly, the interviews reinforce the fact that small-scale farming requires a great deal of specialized knowledge (*i.e.* technical knowledge, scientific knowledge, and business-related knowledge). These findings, as well as others, suggest that small-scale farm operators may possess entrepreneurial, knowledge-based skill sets that would effectively link them to the creative class. The remainder of this section presents the detailed interview results and is divided into the following three areas of interest: talent, technology, and tolerance.

### Talent

Of particular interest to this research is whether or not small-scale agriculture requires a knowledge-based skill set and, similarly, whether operators of small farms possess such knowledge-based skills. As a result, each farmer was asked to provide details regarding their educational background, their previous professional experience, and the knowledge and skills that are required to operate their farm. Since each of the fifteen interviewees are new and beginning farmers, all had extensive professional experience in other occupations. Of those who were interviewed, six had left their previous professions (or drastically reduced their time at work) in order to make farming their full-time profession. The interviewees came from diverse professional backgrounds (see Table 4.2), and several worked in occupations that could be considered creative class (educator, nurse, engineer, entrepreneur, for example). Despite their lack of professional

experience in the agricultural industry, many of the interviewees described previous, informal involvement, in farming. In fact, nine of the interviewees described childhood experiences on family farms,<sup>36</sup> while one of the interviewees (7b) had worked on a farm during college (where he eventually earned a degree in agricultural education). In addition to this, several of the interviewees had extensive experience either owning or operating a non-farm business. Of those interviewed, five had previously owned or operated a business,<sup>37</sup> and one of those individuals continued to regularly engage in various off-farm entrepreneurial ventures.

**Table 4.2: Professional Background and Status**

<b>Interview #</b>	<b>Sub-identifier</b>	<b>Profession</b>	<b>Current Professional Status</b>
1		Educator	Works full-time away from the farm (most of the year). Works at the farm full-time during the summer.
2	a	Entrepreneur (advertising and cosmetics)	Works part-time in non-farm ventures.
	b	Professional Driver	Works full-time away from the farm.
3		Paralegal	Farms full-time.
4		Educator	Farms full-time; periodically teaches college-level courses.
5	a	Registered Nurse	Works full-time away from the farm.
	b	Police Officer	Works part-time away from the farm.

<sup>36</sup> Interviewees 1, 3, 4, 5b, 6, 7a, 7b, 10, and 12 all indicated that they had childhood experience on a family farm or in a family garden where food was grown.

<sup>37</sup> Interviewees 1, 2a, 3, and 12 had previously (or currently) owned a business and interviewee 9 had been responsible for the operation of a business he did not own.

6		Grants Administrator	Farms full-time.
7	a	Medical Technician	Works full-time away from the farm.
	b	Military Officer, ROTC Instructor	Farms full-time.
8		Engineer	Farms full-time; operates consulting business in spare time.
9		Television producer	Farms part-time; works in television part-time.
10		Computer Programmer	Works full-time; interns on a farm part-time.
11		Educator	Works full-time away from the farm.
12		Veterinary Technician	Farms full-time.

Although many of the farmers maintained off-farm employment, each was clearly committed to achieving success in the agricultural industry. In addition to their participation in the SCNBFP, each of the interviewees had sought out a variety of other educational opportunities. In fact, twelve of the fifteen farmers interviewed indicated that they had attended an agricultural conference or workshop (in addition to the SCNBFP programming) in the past year. Those who had participated in educational opportunities took advantage of a wide variety of agricultural-related programming, including: online seminars on farming technology, farm tours, agribusiness seminars (*i.e.* sales, marketing, or accounting-related programs), and workshops or lectures on production techniques. Similarly, each of the fifteen interviewees indicated that they enjoyed learning about agriculture, and four of the interviewees noted that they purposely sought out programming relating to the business aspects of farming. Despite their lack of

professional experience in agriculture, it appeared that the interviewees have worked hard to build specialized knowledge and skills.

Not surprisingly, the interviewees demonstrated a similar commitment to maintaining long-term, financially viable businesses. Thirteen of the fifteen interviewees<sup>38</sup> indicated that it was important for their farm to earn a profit, and several of the farmers emphasized the importance of generating farm profits to supplement household or retirement income.<sup>39</sup> In addition, interviewees 3 and 8 noted their desire to build a successful business that could one day be passed down to their children. During each interview, farmers were asked if they consider themselves to be entrepreneurs. All but one of the interviewees identified themselves as an entrepreneur, and each was able to provide a variety of examples as to why it is necessary to be entrepreneurial in the context of farming. In particular, interviewee 2a emphasized that farming requires an “entrepreneurial spirit” and noted that her previous experience as a business owner helped her to effectively transition into her role as a farmer. As interviewee 2a states,

...being an entrepreneur and working other businesses, I understand that it takes not only hard work, but you have to be willing to wear many hats. You have to be your advertising [and] your inventory control. You have to be hands on for all of that (personal communication, July 1, 2013).

Similarly, interviewee 9 noted that entrepreneurial activity is also important to the success of his farm. Despite operating a not-for-profit community garden, interviewee 9 states that his farm, “...is an entrepreneurial program in that we do want to make the farm self-sustainable” (personal communication, July 8, 2013). Since this farm does not

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<sup>38</sup> Interviewees 9 and 11 (who operate a non-profit, community-based garden) did not indicate that profits were an important long-term goal.

<sup>39</sup> These interviewees were 1, 2, 3, 4, 5, 6, and 12.

regularly generate income through the sale of its products,<sup>40</sup> interviewee 9 noted that entrepreneurial activities such as networking and advertising are important for generating public support for his activities.

Interviewees discussed a variety of ways in which they have relied on entrepreneurialism while operating their farms. Examples of entrepreneurialism that were provided by the interviewees included:

- Engaging in on-site processing or other value-added activities.
- Networking with potential customers, business owners (especially those in the restaurant or grocery industries), and other farmers.
- Seeking out low-cost business support services (examples: Natural Resource Conservation Service, Carolina Farm Stewardship Association, Lowcountry Local First, the Chamber of Commerce, and the Clemson Cooperative Extension Service).
- Learning to identify and produce “high value” crops that have greater profit margins.
- Maximizing farm efficiency and productivity (examples: maximizing soil health, increasing labor productivity, maintaining optimal crop diversity).
- Minimizing costs (example: using recycled or homemade structures and fencing).

Throughout the interviews, there seemed to be an overwhelming consensus that networking (with both customers and other farmers) was essential to operating a successful farm-based business. All but one of the interviewees emphasized the

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<sup>40</sup> Interviewee 9 noted that his farm periodically sells honey produced on its premises, but does not engage in the sale of any other products.

importance of networking,<sup>41</sup> and many discussed the ways in which their businesses had been enhanced through their networking efforts. For example, interviewee 2a took part in a wide variety of networking activities, including: attending events at the Chamber of Commerce, hosting farm tours for potential customers, and regularly interacting with other farmers at agricultural-related conferences or workshops. Specifically, interviewee 2a states that networking had “made us aware of resources out there that we wouldn’t have known about” (personal communication, July 1, 2013). Most of the interviewees indicated that their ability to network with other operators of small farms has been an essential resource. Twelve of those who were interviewed indicated that their ability to network with other farmers has either assisted them in finding solutions to problems on their farm, or has provided them with information or ideas that have resulted in improvements to the farm. Each of these individuals also emphasized the importance of their participation in the SCNBFP, and indicated that their ability to network with other participating farmers was one of the most valuable aspects of the program. These findings suggest that small-scale farm operators may be both capable and dedicated networkers, which can be a key component of entrepreneurialism.

During the interviews, the farmers repeatedly emphasized the importance of being a skilled “problem-solver” when owning or operating a small farm. Each of the fifteen interviewees emphasized the importance of being able to solve a diverse set of farm-related problems that ranged from predator management to maintaining compliance with state regulations. Interviewees 2b, 4, and 9 spoke to these issues in great detail and

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<sup>41</sup> Interviewee 8 was the only farmer to indicate that networking was not important aspect of his business.

emphasized the importance of being able to address a wide variety of problems (*i.e.* broken equipment, predator issues, and drainage problems) in a cost-effective and timely manner. Specifically, interviewee 9 discussed how he has had to find ways to quickly respond to changing weather conditions and invasive species, while also working under budgetary constraints. Interviewee 4 also emphasized the importance of problem-solving skills, as she stated that, “I’ve had a lot of things go wrong. You have to be patient and you have to work through it. There are a lot of variables in farming...the variables are very, very stressful” (personal communication, June 25, 2013). Despite this, each of the fifteen interviewees indicated that they enjoyed the process of finding solutions to the problems that they encounter on their farms.

On a similar note, many of the farmers also discussed the diverse knowledge and skill sets that are required to operate a successful small farm. Interviewee 10 described a variety of skill sets or areas of knowledge in which farmers must be proficient, including accounting, law, veterinary care, soil science, biology, marketing, sales, and mechanical work. Accordingly, many of the interviewees had both designed and constructed a variety of significant infrastructure projects on their farms. For example, many of the interviewees had designed and built structures on their property, including: sheds, barns, fences, brooding boxes, and chicken coops. The farmers also described a variety of creative, cost-effective, and sustainable ways that they were able to build these structures. Specifically, interviewee 5b utilized recycled building materials to construct a barn, chicken coops, and fencing, while interviewee 4 described how she relocated and redesigned several old structures in order to use them as barns on her property. Likewise,

interviewee 6 had designed and constructed several “chicken tractors” (*i.e.* “mobile” chicken coops) that could be easily relocated in order to accommodate free-ranging, and interviewee 7b had designed and built a structure that allowed him to easily move animals in and out of their pens in order to be sheared or to receive treatment. In fact, nine of the fifteen interviewees described instances in which they both designed and constructed structures or equipment that was used to enhance their farming operation.

### Technology

Although the role that technology plays in conventional agriculture is well-documented, less attention has been given to the relationship between technology and small-scale farming. As the development and use of technology is an important component to the creative class, efforts were made to gauge the degree to which the interviewees were utilizing technology on their farms. Accordingly, the interviews revealed that the farmers were utilizing technology to accomplish a broad range of farming and business-related tasks. Not only were the interviewees using and maintaining complicated farm equipment (and in some cases, designing or building their own equipment), they were also using accounting software, statistical software, and various social media platforms. In addition to this, the interviewees were engaged in a variety of tasks related to soil science, irrigation management, and pest management (to name a few) that required proficient knowledge of ecology, biology, and other science-based fields. Furthermore, all but one of the interviewees indicated that science and technology plays an important role in their business.



Throughout the interviews, it was apparent that computers play an essential role in each farmer's business-related activities. Ten of the interviewees indicated that they regularly use a computer to complete a wide-range of business-related tasks. These tasks included: accounting, website development, marketing, networking, farm-related research, and continuing education (*i.e.* online courses). The type of software being used by the farmers was also quite diverse. Seven of the interviewees were using Excel, Access, or Quickbooks to record and track their revenues and expenses. In addition, all but two of the interviewees indicated that they were using social media as a means of connecting with potential customers. Interviewees also emphasized the role that the internet plays in their professional development. Seven of the farmers indicated that they use the internet to learn about farming or to research potential solutions to problems on their farm. Similarly, interviewees 5a, 5b, 7a, and 7b discussed the importance of being able to network with other farmers via the internet, and interviewee 8 had taken an online, college-level course related to agricultural production. Many of the farmers also discussed the importance of using smartphones as a means of social networking, and one interviewee was using a phone-based accounting program to track her daily sales.

Many of the farmers who were interviewed emphasized the fact that farming is inherently a science-based profession. Interviewee 8 addressed this issue directly, as he noted that farming is much more than a "dirt business" and that people often do not realize how much technology and technical skill is required to farm. When asked what type of technical knowledge was required to do his job, interviewee 8 emphasized the science of knowing "when to plant and how to plant it," in addition to the biological and

ecological knowledge that is required for insect and weed control. Interviewee 1 provided a similar perspective, as he noted that a great deal of scientific knowledge is required to effectively use organic fertilizers, as well as to construct and operate irrigation systems. Other interviewees emphasized the importance of using various types of farm equipment (tractors, tillers, meat processing equipment), and interviewees 5a and 5b noted the importance of being able to operate, maintain, and repair this equipment without having to seek outside assistance (for cost-saving purposes). These findings suggest that operators of small farms rely on a broad range of technology and technical knowledge in order to carry out their operations. Not only were the interviewees actively using technology on a day-to-day basis, but many were also designing and constructing their own farm equipment or infrastructure improvements (*i.e.* brooding boxes, chicken tractors, and irrigation systems).

#### Tolerance: Bohemian Activity

Although local agriculture and its associated occupations have not traditionally been included in the bohemian index, many aspects of small-scale farming appear to be consistent with the activities and characteristics of Florida's "bohemian" professions. Through their active participation in local food systems, operators of small farms have created an alternative, non-traditional market for agricultural products. Within local food systems, both producers and consumers have been quick to embrace methods of production that are sustainable, environmentally friendly, and healthy for the consumer. Local food systems are truly multi-faceted markets that are heavily influenced by unique

economic and social norms. This research hypothesizes that small-scale farm operators contribute to tolerance through their participation in activities that can be considered to be “bohemian.” Using Florida’s descriptions of bohemian activity,<sup>42</sup> the interviewees were each asked a broad range of questions pertaining to their motivations for farming, their involvement in local food systems, and their relationships with their communities.

From the interviews, it was apparent that non-monetary factors played an important role in each interviewee’s decision to become a farmer. Although most of the interviewees emphasized the importance of operating profitable enterprises, the vast majority of the farmers also discussed their desire to work in a profession that allowed them to make positive contributions to their communities. In fact, all but three of the interviewees noted that their desire to help their communities played a role in their decision to farm. For several of the farmers, the desire to address issues of poverty and food access in their communities was motivating factors in their decision to farm. This was especially true of interviewees 9 and 11, who have made it their mission to produce and donate their food products to disadvantaged members of their community. Since 2010, interviewees 9 and 11 have operated a non-profit “community garden” that donates over 6,000 pounds of food to local food banks and shelters each year. As interviewee 9 states, “Our mission is to feed people around here that need food. They tend to be lost in the shadows...Our mission is nothing but local” (personal communication, July 8, 2013).

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<sup>42</sup> Florida (2001) describes “bohemian” activity as the production of cultural and creative assets. He emphasizes that those who work in bohemian professions are drawn to alternative lifestyles and often take the initiative to promote change within their communities (Florida, 2001). Florida (2001) also notes that “bohemian” businesses are known to combine “business” and “culture” in order to form businesses that are thought of as “alternative or cool.”

In addition to their food donations, the community garden has made it its mission to educate local children on healthy eating by offering on-farm workshops. Although the garden is not profit-driven, both interviewee 9 and 11 were able to describe a variety of ways in which their operation has required them to utilize networking, accounting, and marketing skills. In many respects, the community garden represents a unique blend of entrepreneurship and social responsibility.

Other interviewees had similar motivations for entering farming. Specifically, interviewee 1 discussed food access issues within his community and noted that many of his neighbors had to drive exceedingly long distances to reach a grocery store. Recognizing a need for local, fresh food products, interviewee 1 began growing several types of produce that he sells to members of his community. Similarly, interviewees 5a and 5b were motivated to begin farming after becoming disillusioned with the country's conventional food systems. Noting that it was difficult to find fresh and affordable food products in their local area, they decided to begin their own farm. Today, they sell their fresh produce and eggs at local farmers markets and to nearby restaurants. Interviewees 5a and 5b have also reached out to nearby elementary schools in order to provide farm tours for local children. They emphasized their desire to help younger generations become "self-reliant" by teaching them how to grow their own food.

Overwhelmingly, the interviewees displayed a deep commitment to production practices that were both environmentally friendly and healthy for the consumer. All but

one of the farmers was using production practices that they described as “organic”<sup>43</sup> (see Table 4.3), and every interviewee discussed the importance of using practices that are not detrimental to the environment or public health. This was especially true for interviewees 9 and 11, whose community garden supplies local food pantries and shelters. As interviewee 11 noted, it would be “disingenuous” to use anything other than sustainable, environmentally friendly practices on their farm, especially since their mission is to serve the community. Additionally, interviewee 12 emphasized that she has a “responsibility” to leave her land in the same condition as she received it. Interviewee 6 offered a similar perspective as she noted that, “We want to make the land healthier and we want to have happy, healthy animals that have a good quality of life...I would be in it for the money if we were doing it a different way” (personal communication, July 9, 2013). Likewise, interviewees 2a and 2b indicated that their desire to purchase farmland was partially motivated by their desire to protect a portion of their community from future development. They noted that their land had historically been used for farming and that it was important to ensure that it would continue to be used for that purpose.

**Table 4.3: Production Practices**

<b>Interview</b>	<b>Production Practices</b>
1	Sustainable production practices; in the process of getting USDA organic certification; no use of synthetic fertilizers, pesticides, or GMOs.
2a/b	Animal welfare approved, pasture raised, anti-biotic and hormone-

<sup>43</sup> Although many of the interviewees indicated that they use “organic” production practices, it should be noted that none of the individuals who participated in this research had received the “USDA Organic” certification.

	free.
3	Free-range, anti-biotic and hormone-free.
4	Free-range, anti-biotic and hormone-free.
5a/b	Pasture raised, anti-biotic and hormone-free; no use of pesticides.
6	Free-range, anti-biotic and hormone-free.
7a/b	Only uses anti-biotic when necessary (Note: does not raise Alpacas for human consumption), no use of synthetic fertilizers or pesticides on pasture.
8	Conventional practices, but uses minimal inputs (such as insecticide, which is used sparingly).
9	Sustainable production practices; no use of synthetic fertilizers, pesticides, or GMOs.
10	Current interning. Plans to use “restorative” grazing techniques and minimal inputs (such as minimizing on-farm oil usage).
11	Sustainable production practices; no use of synthetic fertilizers, pesticides, or GMOs.
12	Anti-biotic and hormone-free.

Across the interviews, it was also apparent that the interviewees saw their farms as a way to build relationships with other community members. Each of the farmers interviewed indicated that they enjoy having the opportunity to interact with their customers. This was especially true for interviewee 2a, who suggested that she would be less satisfied with her job if she was unable to interact with customers face-to-face. Similarly, interviewee 1 noted that customer interactions were his favorite part of the farmers market, and interviewee 4 indicated that her primary motivation for attending her local farmers market was because it was “fun.” The interviewees also seemed to value their relationships with other farmers. Each of the interviewees indicated that they enjoy being able to interact with other farmers, and eight said that they regularly seek out help and advice from other local farmers. In fact, seven of the interviewees said that one of the

best parts about participating in the SCNBF was that it allowed them to communicate with other farmers.

### **Conclusion**

The results of this interview-based research suggest that operators of small farms may be unique, but highly capable, entrepreneurs that engage in a variety of knowledge-based activities. In addition to this, they seem to possess a high degree of social awareness and environmental responsibility that has motivated them to seek out a career that will allow them to improve the overall wellbeing of their communities. These findings suggest that small-scale farm operators may be engaging in activities that are highly consistent with Florida's "three T's."

In the case of talent, it appears that the farmers were both highly educated and in many instances, had already worked in creative class occupations. Many of these individuals had specialized knowledge and technical skills from their previous professions that they were regularly using on their farms. Likewise, all of the farmers were participating in educational and training opportunities intended to increase their knowledge of both agricultural production and entrepreneurialism. Like most members of the creative class, the farmers appeared to be skilled networkers who enjoyed learning from other farmers and were also eager to share their knowledge with their counterparts. Finally, like most entrepreneurs, all of the farmers displayed a deep commitment to the success of their farms. Throughout the interviews they discussed ways in which they had improved efficiency, solved complex problems, and used networking to create new business opportunities. Each of these efforts was undertaken with profitability in mind,

and the farmers seemed to relish in their ability to utilize their knowledge and recent learning to bring about improvements to their businesses.

The interviews also demonstrated that the use of technology and science is a day-to-day occurrence on many small farms. Although small-scale farming may not be commonly thought of as a technology-intensive activity, the farmers described a variety of ways in which technical skills and scientific knowledge are essential to their businesses. From using accounting software and networking on social media to employing irrigation systems and maintaining healthy soil, there were a variety of ways in which the interviewees were employing scientific knowledge and technical skills.

Despite being a science-based occupation, the interviews also revealed that small-scale farming may be quite similar to many of the bohemian occupations that are so closely related to the creative class. From the interviews, it was clear that many of the farmers turned to small-scale farming as a means of embracing an alternative lifestyle that would allow them to engage in activities that they saw as socially and environmentally responsible. Each of the farmers demonstrated a commitment to selling their products locally, and the vast majority of the interviewees emphasized the importance of contributing to their community via their farming activities. Undoubtedly, through their participation in local food systems, many operators of small farms have helped to facilitate a cultural shift toward food markets that involve personal ties, community values, and environmental awareness. It is in this respect that small-scale farm operators (and their products) are both creative and culturally significant. Given the various social and environmental motivations for choosing to produce and sell their



products in the manner that they do, operators of small farms would likely be a fitting addition to the bohemian index.

With strong evidence of a linkage between small-scale farming operations and the knowledge-based industries of the creative class, further attention should be given to the relationship between local food systems and economic growth. This research has demonstrated that the activities of operators of small farms can be both knowledge-based and income-generating. In addition to this, many operators of small farms appear to be highly educated and highly skilled entrepreneurs who are deeply involved in both networking and information sharing. Although they may be operating successful and profitable enterprises, their mere presence within a community may be beneficial in and of itself. Previous research has shown that members of the creative class are especially drawn to areas that already have high concentrations of knowledge-based human capital (see Florida *et al.*, 2008), and their tendency to engage in networking and information sharing may lead to growth-generating, knowledge spillovers.

This research may be particularly useful to development professionals who wish to utilize local agriculture as a means of facilitating economic or community development. Previous research has shown that members of the creative class are particularly attracted to culturally-diverse areas that offer a range of amenities, including consumer services, nearby colleges or universities, and outdoor recreation opportunities (see Florida *et al.*, 2008 and McGranahan *et al.*, 2010a). In addition, McGranahan *et al.* (2010a) have demonstrated that members of the creative class may be especially attracted to certain rural areas because of the “quality of life” that is provided by living in

proximity to outdoor amenities (such as lakes, bike paths, and scenic areas). Accordingly, farming has become an increasingly popular occupation among individuals seeking a self-determined lifestyle that also allows them to partake in a variety of outdoor activities (see Wilson *et al.*, 2013; Herrmann and Uttitz, 1990; Gosling and Williams, 2010). For those who also seek an alternative to metropolitan living, small-scale farming may be especially attractive endeavor. As development professionals explore ways to attract potential “creative class” farmers, it may be necessary to identify certain amenities that would be attractive to individuals who may be seeking a more rural, farm-based way of life. While the importance of outdoor amenities has already been established, it may also be useful to examine the role that farmers’ markets, available farm land, and available support services may have in attracting creative, locally-oriented farmers.

## CHAPTER FIVE

### DIRECT AGRICULTURAL SALES IN SOUTH CAROLINA: CAN LOCAL FOOD SYSTEMS SUCCEED IN A RURAL SETTING?

In recent decades, consumer interest in locally-grown food has led to a dramatic increase in direct-to-consumer sales of agricultural goods. Since 1997, direct sales of agricultural products have nearly doubled, while both farmers markets and community supported agriculture (CSA) organizations have experienced similar growth (Martinez *et al.*, 2010). As local food markets<sup>44</sup> continue to expand, the various impacts associated with direct-to-consumer sales are becoming increasingly clear. From improving access to high-quality food products to increasing local income and expanding employment opportunities, these are examples of the ways in which local food systems benefit their surrounding communities (see Martinez *et al.*, 2010). As a result, many state and local governments are now viewing local food systems as a viable means of enhancing food security and improving local and regional economic opportunity.

Although the benefits associated with direct sales are well-documented (see Feenstra, 1997; Otto and Varner, 2005; Ross *et al.*, 1999; and Marsden *et al.*, 2000) less attention has been given to the factors that influence local food system development. In part, growth in local food sales can be attributed to a much larger movement, which seeks to develop viable alternatives to our existing system of mass-produced food. As some consumers have grown increasingly frustrated with mass-marketed food products,

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<sup>44</sup> “Local food” is generally characterized by short supply chains and direct-to-consumer sales of agricultural products. Typically, local food includes products that have been produced, processed, and sold within the same general area (*i.e.* the same city, county, or region). Research suggests that the vast majority of local food products originate on small farms (see Martinez *et al.*, 2010).

consumer interest and advocacy has facilitated a dramatic increase in the development of farmers' markets and similar marketing arrangements. These marketing venues have given operators of small farms direct access to a consumer base that values high-quality, locally grown food products. However, it is not always clear why some areas have been able to develop successful local food systems while others have not. Because local food systems are increasingly viewed as a mechanism for facilitating localized social and economic exchange, localities across the U.S. are looking for ways to promote direct-to-consumer sales of agricultural goods.

A better understanding of the factors that influence local food system development may be useful on several levels. As communities across the country seek to improve food access and economic opportunity, they have often looked for ways to promote local food production and sales. This is especially true at the state and federal level, where there are a variety of programs and policies aimed at supporting local food initiatives. In order to ensure the success of these initiatives, it may be useful for public officials to more fully understand the factors that influence local food system development. In fact, there may be a variety of conditions that contribute to high direct-to-consumer sales, including: the availability of farmers markets, the prevalence of nearby farming operations, and the presence of consumers who are willing and able to purchase local food products. Without a better understanding of the reasons why some localities are able to develop well-functioning local food systems, it may be difficult to formulate local food initiatives that successfully facilitate direct-to-consumer sales. As a

result, the purpose of this research will be to answer the following research question: *Why and how do some localities develop successful local food systems, while others do not?*

This chapter begins by providing an overview of local food systems and their increasing predominance in many regions in the U.S. This discussion is followed by a review of the existing literature on local food system development, as well as an overview of the current local, state, and federal policies being used to facilitate local food sales. Each of the hypotheses used in this research are then presented, followed by an overview of the data collection and statistical methodology. Lastly, the results of the analysis are presented and discussed.

### **Local Food Systems**

In general, local food systems are characterized by small-scale farming, shortened supply chains, diversified farming operations, and direct-to-consumer marketing arrangements. Often, direct-to-consumer sales are used as a means of measuring the amount of economic activity taking place within local food systems. As of 2007, direct-to-consumer marketing of agricultural goods in the U.S. was valued at approximately \$1.2 billion, with small farms accounting for most of these sales (Martinez *et al.*, 2010). Within the existing literature, there is little consensus as to what constitutes “local” food. Typically, the term “local food system” is used to refer to food products produced and sold within a certain geographic proximity. Efforts to ascribe a geographical limit to the distance food can travel while still being considered “local” are varied and range from 25 miles to up to 350 miles (Johnson *et al.*, 2013). Recent legislation has added to this

debate, as the 2008 Farm Bill suggests that food products must not be transported more than 400 miles from their origin if they are to be classified as “local”, while the FDA Food Safety and Modernization Act of 2010 uses a 275-mile limit (Johnson *et al.*, 2013).

In light of this confusion, local food is often viewed in terms of how it is produced and marketed. For the most part, local food includes products exchanged through various “direct-market” venues or outlets, such as farmers’ markets, farm stands, Community Supported Agriculture organizations (CSAs), U-pick operations, or other similar arrangements (see Table 5.1 for a list of common direct-marketing arrangements). Other marketing activities often associated with local food include farm-to-institution agreements (*e.g.* farm-to-school programs, for example) and direct marketing that occurs between farmers’ and local restaurants or grocery stores. In addition, local food is often closely associated with certain production practices often used by small-scale farming operations. Increasingly, consumers have come to expect that their “local” food originates on small farms and is produced using certified organic, sustainable, or other environmentally-friendly production practices, such as integrated pest management, intensive or controlled grazing systems, or “low input” farming systems.<sup>45</sup>

It should also be noted that there are a range of other marketing opportunities available to farmers who wish to sell their goods either locally or regionally. In many communities, food hubs, co-ops, food distributors, and wholesalers play an important role in the marketing of locally or regionally-grown food products. Although these intermediated marketing channels are important to the success of many local food

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<sup>45</sup> “Low input agriculture” typically refers to farming systems that seek to limit the use of “off-farm” production inputs in order to minimize production costs and environmental impact (USDA, 2015c).

systems, very few efforts have been made to quantify the role intermediated sales play in local food systems. This research focuses solely on direct agricultural sales and the local factors that influence direct-to-consumer marketing.

**Table 5.1: Common Direct-Marketing Arrangements**

<b>Direct-Marketing Arrangement</b>	<b>Description</b>	<b>Benefits</b>
Farmers' market	A place where farmers regularly gather in order to sell their products directly to consumers.	<p>Consumers have access to a wide variety of products.</p> <p>Farmers and customers are able to establish face-to-face ties.</p> <p>Farmers' markets serve as social gathering places where community members can interact.</p>
Community Supported Agriculture organization (CSA)	A system in which customers purchase a "share" of a farm's harvest and receive regular deliveries (or pick-ups) of agricultural products. Most CSAs require customers to have annual, monthly, or weekly memberships.	<p>Allows farmer's to earn "early season" capital.</p> <p>Provides customers with regular, direct access to locally grown food.</p>
Farm-to-school (or Farm-to-institution)	Programs that facilitate the purchasing of locally-grown food products for consumption in a school or similar institution.	<p>Establishes a relationship between local farmers and community members.</p> <p>Can be used as an educational tool to encourage healthy eating.</p>
U-pick events	An on-farm event or program where customers are allowed to harvest their own food.	Allows customers to see first-hand where their food comes from.

		<p>Can be an informative or educational experience.</p> <p>Allows farmers and customers to interact face-to-face.</p>
Roadside Farm Stands	A farm stand, typically located on the side of the road, where farmers sell their products directly to consumers. Many roadside farm stands are located “on-farm.”	Convenient way for consumers to purchase locally produced food.

Although there may not be a universally accepted definition as to what it means for food to be “local,” the increasingly important role that local food systems play in many communities is much clearer. Local food systems are predicated on local food production and sales that are tailored to meet the needs of a specific community or region (Feenstra, 1997). As Feenstra (1997) notes, local food systems provide individuals the opportunity to “adapt local food production and markets based on local environmental and community health priorities” (p. 28). In addition, recent research has highlighted various economic benefits associated with local food sales (see Otto and Varner, 2005; Hughes *et al.*, 2008). Many communities are viewing local food systems as a viable means of improving their economic performance. Typically, local food markets are intended to be both accessible and economically viable for both producers and consumers and are often viewed as a means of improving food security, quality of life, and economic opportunity within a community.



## Literature Review

In response to the recent success of direct marketing arrangements, several research efforts have examined the activities and attitudes fueling local agricultural sales. To a great extent, increasing direct-sales represents a growing trend toward alternative food markets that favor locally and sustainably produced food products. As Feenstra (1997) suggests, consumers are increasingly aware of the environmental, social, spiritual, and economic impacts associated with mass-produced and mass-marketed food products. In response to this, many Americans are now seeking a food system that is more “local, ecologically sustainable, and democratically controlled” (Feenstra, 1997). Participation in local food systems may also be largely rooted in a desire to improve access to fresh, healthy, and environmentally-sustainable food products.

As consumer interest in locally grown food products has increased, opportunities for the direct marketing of agricultural goods have drastically expanded. As of 2009, there were approximately 5,274 farmers markets in the U.S., a figure that nearly doubled over the previous decade (Martinez *et al.*, 2010). In addition, a variety of other direct marketing arrangements, including CSAs and farm-to-institution programs, are making it easier than ever for consumers to gain regular access to locally produced food. From a supply perspective, direct-market venues have made small, diversified farming operations increasingly viable. Not only are small-scale farming operations more likely to utilize direct marketing, research suggests that operators of small farmers are more likely than their larger counterparts to rely solely on direct-to-consumer marketing channels (such as farmers’ markets and roadside farm-stands) as a means of generating income (Low and

Vogel, 2011). While direct marketing efforts have clearly provided additional economic opportunity for small farms, research reveals that small-scale farm operators have demonstrated a clear preference for alternative marketing arrangements.<sup>46</sup>

Several research projects have begun to explore the underlying factors behind the growth in local food systems. In particular, Darby *et al.* (2008) demonstrates that consumers are willing to pay more for food products produced within their local area or region. This research also found that consumers of direct-market food tend to prefer products produced by a small family farm, as opposed to larger operations (Darby *et al.*, 2008). Despite this apparent preference for products from small farms, Darby *et al.* (2008) found that consumers seem to place more value on the geographical proximity of the farm than on its actual size. This finding seems to suggest that demand for local food may be somewhat independent of certain qualities that are often closely associated with the local food movement, including freshness and small-scale production. However, other research has suggested that consumers may be drawn to local food products for a variety of social, economic, and political reasons. For example, Laird (1995) finds that consumers purchase directly marketed food as a means of supporting local farmers, and that they often value the opportunity to meet the person who is responsible for growing their food (Laird in Kolodinsky and Pelch, 1996).

Within the existing literature, several studies have explored the correlation between different consumer characteristics and participation in local food systems. Specifically, Kolodinsky and Pelch (2008) have demonstrated that members of CSA

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<sup>46</sup> Alternative market arrangements typically involve agricultural sales that are made directly to a consumer, institution, restaurant, or retail establishment.

organizations are typically well-educated, prefer to consume organic food products, and are likely to indicate that economic and social factors are important when choosing a venue to purchase food. However, this research was not able to establish a clear relationship between household income and participation in local food markets (Kolodinsky and Pelch, 2008). Similarly, Zepeda and Li (2006) found that consumer food preferences, as well as attitudes and behaviors about shopping, were significant predictors of participation in a local food system. Specifically, this research suggests that consumers who value organic food are more likely to shop at farmers' markets, while those who noted that the cost of food is important were less likely to purchase local food products (Zepeda and Li, 2006). Zepeda and Li (2006) also found that consumers who regularly shop at health food stores were more likely to purchase locally-grown food. These findings suggest a variety of reasons why consumers purchase local food, with preferences for healthy, sustainably-produced products being a potentially strong indicator, along with other key social, economic, and political values.

Although some effort has been made to examine the reasons why consumers purchase local food, less attention has been given to the local characteristics that are most likely to facilitate the development of local food systems. While consumer preferences and values are important drivers of local food sales, there are a variety of other conditions that can influence the development of a local food system. For example, Slama *et al.* (2010) has suggested that the presence of small, locally-oriented farms is essential to local food system development. Specifically, this research reveals that areas where large farms are prevalent, there may be supply-side challenges when attempting to facilitate

growth in local food markets (Slama *et al.*, 2010). This research suggests that areas where small-scale agricultural is already prevalent may have a distinct advantage with respect to local food system development.

In addition, in an analysis of local food sales in the mid-Atlantic region of the U.S., Brown *et al.* (2006) found that areas with high home values, increased population density, a younger population, and a high number of nearby direct-market farms, are more likely to have well-developed local food systems. In addition, Brown *et al.* Perhaps not surprisingly, this research also found that areas with proximity to a metropolitan center were more likely to have high levels of direct-to-consumer sales (Brown *et al.*, 2006). Although findings such as these establish a clear linkage between metropolitan areas and direct agricultural sales, they do not fully explain the factors that influence local food system development in areas that are not in close proximity to a large city.

### **An Overview of Local Food Initiatives**

As many policymakers have begun to view local food systems as a viable mechanism for improving food access and enhancing economic activity, there have been a variety of policy-related efforts aimed at expanding local food systems. At the federal level, there are government agencies, including USDA, who administer a multitude of programs and services related to local food system development. These programs include funding for nutrition education programs, grants and loan programs for producers, community grant programs for local food-related projects, and promotional campaigns for local farmers' markets. Other notable initiatives, such as the WIC Farmers' Market

Nutrition Program and the forthcoming Food Insecurity Nutrition Incentive Program (which was included in the 2014 Farm Bill), have attempted to make local food more affordable for millions of low-income families who may be at nutritional risk.

At the state level, the formation of Food Policy Councils has been a common way for states to identify and address food system challenges in local communities. In 2006, the South Carolina Food Policy Council was formed with a mission towards improving the well-being and sustainability of the state's food sector enterprises (SC Food Policy Council, 2014). The SC Food Policy Council, which is facilitated by the South Carolina Department of Agriculture, has brought together representatives from government agencies, university faculty, agricultural commodity associations, food banks, farmers, elected officials, nonprofits, and members of the community to make recommendations related to food policy. Additionally, the state of South Carolina operates a variety of other programs related to local food system development including: the Certified SC Grown program, the Certified Roadside Market Program, the SC Farm to School Program, and the SC State Farmers' Market, to name a few. In particular, the SC Farm to School program has made considerable process, with twenty-two counties operating at least one farm-to-school program in 2013 (CFSA, 2013).

At the local level, cities and counties throughout South Carolina are undertaking a variety of measures to promote the production and consumption of local foods. Currently, twenty-two of the state's forty-six counties have provisions related to agriculture in their comprehensive plans (CFSA, 2013). However, only nine counties have incorporated local food systems in their economic development plans (CFSA, 2013). As of 2013, sixteen

South Carolina counties had appointed an “agricultural economic development coordinator,” and four counties had established their own Local Food Advisory Council (CFSA, 2013). Notable programming being conducted at the city or county-level also includes the city of Greenville’s “It’s More Than Just a Market” campaign, which is an educational and marketing campaign aimed at increasing attendance at local farmers’ markets. Programs such as these demonstrate that many communities are becoming more aware of the role that small farms and direct markets can play in regional development. As cities are increasingly looking for ways to facilitate local food system development, it has become important for policymakers to understand the factors that are most likely to facilitate local food system development.

### **Hypotheses**

As the existing literature reveals, there are a variety of local characteristics that have been linked to increased levels of direct-to-consumer food sales. Previous research has shown that proximity to a densely populated, metropolitan area can be a key factor in local food system development (see Brown *et al.*, 2006 and Martinez *et al.*, 2010). Due to growing consumer interest in local food products, a great deal of attention has also been given to the factors that influence or motivate individuals to purchase locally-grown food. Largely, this research has found that consumers of local food are health conscious, educated, and concerned about the social and political implications of an increasingly globalized food system (see Feenstra, 1997; Zepeda and Lee, 2006; and Kolodinsky and Pelch, 2008). However, this research has been largely focused on localities that are

located in or near a large metropolitan center. As consumer interest in fresh, high-quality food products exists in both urban and rural communities across the U.S., there is a clear need to examine the factors that influence local food sales and systems in a variety of geographical settings. Using a county-level analysis across the state of South Carolina, this research will attempt to identify the factors that influence local food system development in both urban and rural settings.

Previous research suggests that certain types of farms are more likely than others to participate in direct-to-consumers sales (see Martinez *et al.*, 2010 and Brown, 2002). In particular, fruit or vegetable production may be especially conducive to direct marketing due to the fact that these products do not require additional processing and are well-suited for “pick-your-own” activities (Gale, 1997). In addition, Low and Vogel (2011) note that fruit and vegetables account for most direct food sales. This research also demonstrates that direct sales tend to be concentrated in regions where fruit and vegetable production is prevalent (Low and Vogel, 2011). Likewise, the involvement of small farms in direct-to-consumer sales is also well-documented. As of 2008, small farms<sup>47</sup> accounted for approximately 81 percent of farms that reported direct sales, and 72 percent of small farms derive their income solely from direct-marketing (Low and Vogel, 2011). The prevalence of small farms within direct markets may be attributed, at least in part, to the difficulty that many small producers have in generating enough volume to work with large retailers or distributors (Low and Vogel, 2011). It has also been suggested that farmers’ markets may not be as financially beneficial for operators of large

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<sup>47</sup> According to the USDA (2010) the term “small farm” is used to describe farming operations with an annual gross cash income of less than \$250,000.

farms, who often seek out more commercialized marketing arrangements (Brown, 2002). In order to examine the relationship between the aforementioned farm characteristics and direct-to-consumer sales, this research will test the following two hypotheses:

- **H<sub>1</sub>**: If a county has a large amount of fruit and vegetable production, then it will also have a higher level of direct-to-consumer sales.
- **H<sub>2</sub>**: If a county has a large number of small farms, then it will also have a higher level of direct-to-consumer sales.

The availability of direct-market venues is an important component of any functioning local food system. Brown (2008) suggests that farmers' markets are considered the "historical flagship" of local food systems and have increased by nearly 150 percent since 1994. During the 2005 farmers' market season, farmers' market sales amounted to approximately \$1 billion nationwide. This represents a thirteen percent increase in sales since 2000 (USDA, 2006). Direct-to-consumer sales are also largely dependent on farmer participation in a variety of other direct-marketing arrangements, including CSAs, farm stands, and "pick-your-own" operations. Although limited data exists on these activities, it is possible that they may generate substantial revenue for direct-market producers. In order to further examine the relationship between direct-market participation and local food sales, the following three hypotheses will be tested:

- **H<sub>3</sub>**: If a county has a high number of farms participating in direct-marketing arrangements, then it will also have a higher level of direct-to-consumer sales.



- **H<sub>4</sub>**: If a county has a large number of farmers' markets, then it will also have a higher level of direct-to-consumer sales.

Many cities and counties have begun to implement programming that is intended to increase public awareness as to the benefits of local food. These efforts often include farm-to-school programming, community-based group activities (*e.g.* community kitchens) that teach skills related to purchasing and preparing local food, and various other outreach and educational programs intended to promote nutritional awareness. It is somewhat difficult to develop a singular measure that would reflect a county's outreach and educational efforts related to local food and healthy eating. However, this research attempts to examine a potential linkage between local food-oriented, educational programming and direct-to-consumer sales by testing the following hypothesis:

- **H<sub>5</sub>**: If a county has implemented farm-to-school programming, then it will also have a higher level of direct-to-consumer sales.

There are also reasons to believe that direct-to-consumer sales may be more concentrated in areas where farmland is readily available. Low and Vogel (2011) have demonstrated that direct-to-consumer sales are higher in regions with a high percentage of land dedicated to farming. In order to examine the relationship between direct-to-consumer sales and the availability of farmland, the following hypothesis will be tested:

- **H<sub>6</sub>**: If a county has a large amount of acreage devoted to farming, then it will also have a higher level of direct-to-consumer sales.

Although agriculture-intensive counties are often less densely populated, Census of Agriculture data suggests that many of South Carolina's metropolitan counties also

possess large amounts of acreage devoted to farming. Of the ten counties with the most acreage in farmland, six belong to a metropolitan statistical area (MSA): Aiken, Anderson, Darlington, Florence, Horry, and Sumter. Likewise, previous research has shown that the value of local food sales may be highest in metropolitan areas (Low and Vogel, 2011). In order to further examine the relationship between population density and direct-to-consumer sales, the following hypothesis is examined:

- **H<sub>7</sub>:** If a county has a high population density, then it will also have higher level direct-to-consumer sales.

At the local or regional level, there are a variety of socioeconomic conditions that may influence local food system development. However, within the existing literature, there seems to be a lack of consensus as to whether or not consumers of these local food systems share certain characteristics. For example, previous research has shown that consumers of local food tend to be well-educated and have above average household incomes (Eastwood *et al.*, 1999; Govindasamy *et al.*, 1998, and Brooker and Eastwood, 1987). However, other efforts have been unable to substantiate these findings and instead, have suggested that consumers of local food come from a wider variety of socioeconomic backgrounds (see Keeling-Bond *et al.*, 2009; and Zepeda and Lee, 2006). With this apparent lack of consensus in mind, this research further explores the relationship between education, local wealth and direct-to-consumer food sales by testing the following hypothesis:

- **H<sub>8</sub>**: If a county's socioeconomic performance<sup>48</sup> is high, then it will also have a higher level of direct-to-consumer sales.

In addition, previous research has suggested that both producers and consumers of local food may be younger, on average, than individuals who do not participate in a local food system. Specifically, Hunt (2007) has shown that producers participating in farmers' markets tend to be younger than farmers who did not participate in direct-marketing. As for consumers, Durham *et al.* (2011) has suggested that consumers of organic food products are most likely to be between the ages of nineteen and forty years of age, while Brown (2006) found that areas with a low percentage of older residents tended to have higher direct-to-consumer sales. In order to examine whether or not there is a link between younger residents and direct sales in South Carolina counties, the following hypothesis is tested:

- **H<sub>9</sub>**: If a county has fewer older residents<sup>49</sup>, then it will have a higher level of direct-to-consumer sales.

### **Data and Methodology**

Using direct-to-consumer sales as a means of measuring the size of a county's local food system, this research will examine the factors that facilitate the development of

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<sup>48</sup> A statistical index comprised of median household income (includes household income earned by individuals over the age of 15), median value of owner-occupied homes, and educational attainment (the percentage of individuals who have earned a high school diploma or higher) will be used to measure a county's "socioeconomic status." Each of these three measures was collected from the U.S. Census Bureau. Calculation of this index will be discussed further in the "Data and Methodology" section of this chapter.

<sup>49</sup> The percentage of a county's residents that are over the age of fifty-five will be used to measure the population of "older residents."

local food systems, including both the production and sale of locally-grown food. Data on direct-to-consumer sales of agricultural goods was obtained for each county in the state of South Carolina from the USDA's Census of Agriculture. This data, which will be used as the dependent variable, represents the value of agricultural goods produced and sold directly to individuals for human consumption (USDA, 2012d). These sales take place at venues such as farmers' markets, roadside stands, pick-your-own sites, and other similar arrangements (USDA, 2012d). Excluded from these data are non-edible products, such as nursery crops and cut flowers (USDA, 2012d). It should be noted that this county-level data may include some sales made to residents of other counties (or in some instances, residents of nearby states) who have traveled across county-lines to purchase food products. However, this analysis should capture in-state county spillover effects from customers buying locally grown food across country lines, even if it cannot clearly document the size of these effects. These effects are hypothesized to be small as previous research has shown that on average, Americans travel approximately 15 minutes (each way) to purchase groceries (Hamrick and Hopkins, 2012). This finding suggests that consumers are more likely to purchase food within relative proximity to their homes, and seems to indicate that only a few consumers (primarily those residing near a county or state line), would be purchasing local food outside of their county of residence.

The variables related to fruit and vegetable production, farm size, and farmland each reflect various aspects of farming activity and were also collected from the USDA's Census of Agriculture. The "fruit and vegetable" variable (FRVEG), represents the percentage of farms in each county engaged in fruit or vegetable production. The "farm

size” variable (SIZE) is a measure of the average farm size (in acres) in each county and should provide insight into the potential relationship between small farms and direct-to-consumer sales. Similarly, the farmers’ market variable (FMKT), which was collected from the USDA’s Farmers’ Market Directory, measures the number of farmers’ markets operating in each county. The variable DMFRM, which is intended to capture producer involvement in all forms of direct-marketing, consists of the percentage of farms in each county that participate in direct-marketing.

In order to test a potential linkage between the presence of farm-to-school programming and direct-to-consumer sales, this research will use a dummy variable (SCHOOL), where a value of “1” was applied to counties that have implemented some form of farm-to-school programming and a “0” was applied to counties that do not have programming in place. Information pertaining to the farm-to-school programming that is available in each of South Carolina’s counties was collected from the USDA’s 2015 Farm-to-School Census. The Farm-to-School Census asks school districts whether or not they have implemented a range of activities and programs, including (but not limited to): serving local foods, holding taste tests of local food, maintaining a school garden, and field trips to farms.

The variables related to the availability of farmland (FMLAND) and population density (POP), were intended to test the relationship between the geographic characteristics of rural, agricultural-intensive counties and direct-to-consumer sales. The farmland variable (FMLAND) measured the percentage of land devoted to farming and was intended to reflect the intensity of farming activities within each county. The

population variable (POP) measured the number of persons per square-mile in each county. This variable was intended to test the relationship between densely populated areas and local food sales. The data for the farmland variable (FMLAND) was gathered from the USDA's Census of Agriculture, while population data was collected from the U.S. Census Bureau.

The remaining two variables each relate to various social, economic, or demographic characteristics that may be closely associated with direct-to-consumer sales. The data for each of these variables was collected from the U.S. Census Bureau. The "over fifty-five" variable (OVER55) reflects the percentage of residents over the age of fifty-five in each of the forty-six counties. The socioeconomic performance variable (SOCIOECON) is an index comprised of the median household income, median home value, and educational attainment in each county. Each of the three measures that comprise the statistical index was collected from the U.S. Census Bureau. Median household income is based on the income of each householder and household member over the age of fifteen. Similarly, the median home value measure is based on estimates (provided by Census respondents) as to how much a home would sell for if it were for sale. The percentage of individuals in each county that have received a high school diploma, attended some college, or earned a college degree<sup>50</sup> is used to reflect a county's "educational attainment." This statistical index is intended to gauge the relationship between local wealth, education, and direct-to-consumer food purchases. Previous research has used similar variables as a means of measuring socioeconomic performance

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<sup>50</sup> Individuals who have received an associates degree, a bachelors degree, or a graduate degree are included in the "educational attainment" statistic.

at the county level. Notably, in their research on mortality and socioeconomic status, Steenland *et al.* (2004) constructed a “socioeconomic status” variable that included county-level measures of home value, income, and education. In addition, Krieger *et al.* (2003) developed a measure of socioeconomic status that includes educational attainment, median household income, and median home value.

Each of the variables included in the statistical index were normalized on a scale ranging from zero to one. This was accomplished by dividing the value listed for an individual county by the largest value listed for that variable. The socioeconomic performance was measured using a statistical index that was calculated as follows:

$$\text{Socioeconomic Performance} = \left( \frac{\text{Income}_{i,j}}{\text{Income}_{\max,j}} \frac{\text{Home Value}_{i,j}}{\text{Home Value}_{\max,j}} \frac{\text{Education}_{i,j}}{\text{Education}_{\max,j}} \right)$$

Where:

$i$  = unit for each county

$j$  = year

Income = Median household income

Home Value = Median value of owner-occupied housing units

Education = Percent of individuals with a high school diploma or higher

A multiple linear regression model will be estimated in order to examine the relationship between direct-to-consumer sales and each of the aforementioned independent variables. Therefore, the equation used to estimate direct-to-consumer sales will be as follows:  $DTCS_i = \beta x_i + \varepsilon_i$ , where the dependent variable, direct-to-consumer sales (DTCS), represents the value of direct-to-consumer sales in each South Carolina county ( $i$ ), and  $x_i$  represents a vector of nine independent variables. Within the existing

literature, OLS regression models have been used in a similar fashion as means of identifying local characteristics that have contributed to direct-to-consumer food sales in other regions of the country (see Brown *et al.*, 2006 and Cheng *et al.*, 2011). However, to date, little (if any) attention has been given to the factors that have facilitated local food sales within the state of South Carolina.

Each of the nine independent variables used in this analysis are described in Table 5.2 and are based on county-level characteristics believed to influence direct-to-consumer sales of agricultural products.

**Table 5.2: Data Variables**

<b>Variable</b>	<b>Definition</b>	<b>Source</b>
DTCS*	The natural log of the value of direct-to-consumer sales of agricultural goods per square mile. <sup>51</sup>	USDA, 2012 Census of Agriculture. <sup>52</sup>
FRVEG	The percentage of farmland in fruit or vegetable production.	USDA, 2012 Census of Agriculture.
SIZE	Average farm size, in acres.	USDA, 2012 Census of Agriculture.
DMFARM	The number of direct market farms.	USDA, 2012 Census of Agriculture.
FMKT	The number of farmers' markets.	USDA, Agricultural Marketing Service, Farmers Market Directory. <sup>53</sup>
SCHOOL	Indicator Variable. 1 if the county has farm-to-school programming in place, 0 if not.	USDA Farm-to-School Census (2015).
FMLAND	The natural log of the number of acres used in farming.	USDA, 2012 Census of Agriculture.

<sup>51</sup> Cheng *et al.* (2011) previously used the value of direct-to-consumer sales of agricultural goods per square mile as a means of identifying factors that contribute to farm-direct sales in the northeastern U.S.

<sup>52</sup> See USDA, 2012f.

<sup>53</sup> See USDA, 2014e.



POP	The natural log of the number of persons per square mile.	US Census Bureau (2012).
SOCIOECON	A statistical index comprised of median household income, median home value, and the percentage of adults that have received at least a high school diploma.	US Census Bureau (2012).
OVER55	The percentage of adults over the age of fifty-five.	US Census Bureau (2012).

\* Dependent Variable.

## Results

The results of the ordinary least squares (OLS) regression model are detailed in Table 5.3. Of the nine independent variables, only one, the dummy variable indicating the presence of farm-to-school programming, does not appear to be statistically significant. The coefficients for all of the variables, as well as their standard errors and *p*-values are presented in Table 5.3. Each of the variables pertaining to farm characteristics are statistically significant. This finding suggests that direct-to-consumer sales may be higher in areas with small farms and a high concentration of fruit and vegetable production. As for the marketing-related variables, the number of direct-market farms (DMFARM) and the number of farmers' markets (FMKT) are both statistically significant. This suggests that direct-to-consumer sales are higher in areas with a high number of farms that are engaged in direct-marketing activities.

**Table 5.3: Regression Results**

Variable	Category	Coefficient	Standard Error	<i>p</i> -value
FRVEG*	Farm	27.34	9.23	0.005

SIZE*	Characteristics	-0.90	0.37	0.021
FMKT*	Marketing	21.13	9.86	0.038
DMFARM*		1.13	0.54	0.044
SCHOOL	Educational	0.26	0.32	0.416
FMLAND*	Geographic	1.67	0.37	0.001
POP*		0.50	0.17	0.010
SOCIOECON*	Socioeconomic	2.17	0.94	0.026
OVER55*	Demographic	11.94	5.63	0.041
<b>N = 46</b>				
<b>R<sup>2</sup> = 0.77</b>				
<b>Adjusted R<sup>2</sup> = 0.72</b>				

\* Significant at  $\leq 5\%$

As expected, both of the geographic variables (FARMLAND and POP), were statistically significant. These results confirm a potential linkage between counties with high population densities and direct-to-consumer sales. However, the statistical significance of the FARMLAND variable suggests that direct-to-consumer sales may be highest in counties that are home to both large population centers and extensive acreage devoted to farming. As many of South Carolina’s metropolitan counties possess a large amount of land acreage devoted to farming, this finding is not unexpected.

Both of the socioeconomic and demographic variables included in the model are statistically significant. As expected, the model suggests that direct-to-consumer sales may be higher in areas where socioeconomic performance (as measured by median income, median home value, and educational attainment) is high. Although statistically significant, the “over fifty-five” variable (OVER55) did not perform as expected, and was unable to confirm a linkage between younger residents and direct-to-consumer sales. In

fact, the “over fifty-five” variable (OVER55) suggests that areas with high direct-to-consumer sales tend to have higher concentrations of older residents. This result indicates that hypotheses eight may be false. Details regarding each of the tested hypotheses are provided in Table 5.4.

**Table 5.4: Detailed Results**

<b>Identifier</b>	<b>Hypothesis</b>	<b>Result</b>
<b>H<sub>1</sub></b>	If a county has a large number of farms producing fruits or vegetables, then it will also have a higher level of direct-to-consumer sales.	Confirmed
<b>H<sub>2</sub></b>	If a county has a large number of small farms, then it will also have a higher level of direct-to-consumer sales.	Confirmed
<b>H<sub>3</sub></b>	If a county has a large number of farms involved in direct-marketing, then it will have a high-level of direct-to-consumer sales.	Confirmed
<b>H<sub>4</sub></b>	If a county has a large number of farmers’ markets, then it will also have a higher level of direct-to-consumer sales.	Confirmed
<b>H<sub>5</sub></b>	If a county has farm-to-school programming in place, then it will also have a higher level of direct-to-consumer sales.	Not Confirmed
<b>H<sub>6</sub></b>	If a county has a large amount of farmland, then it will also have a higher level of direct-to-consumer sales.	Confirmed
<b>H<sub>7</sub></b>	If a county has a low population density, then it will also have a higher level of direct-to-consumer sales.	Confirmed
<b>H<sub>8</sub></b>	If household incomes, home values, and educational attainment within a county are high, then it will also have a higher level of direct-to-consumer sales.	Confirmed
<b>H<sub>9</sub></b>	If a county has fewer older residents, then it will also have a higher level of direct-to-consumer sales.	Not Confirmed*

\*The results of the regression model suggest that counties with a *larger* concentration of residents over the age of fifty-five may, in fact, have higher levels of direct-to-consumer sales.

## **Discussion**

The results of the OLS model suggest that the factors influencing direct-to-consumer sales in the state of South Carolina may be in many ways similar to those that contribute to local food sales in highly urban settings. Within the existing literature, there seems to be some agreement that metropolitan areas provide important demand-side factors (such as a large consumer population and transportation networks) that are important to facilitating direct-to-consumer sales (Low and Vogel, 2011). This research suggests that proximity to a population center may also be an important driver of direct-to-consumer sales in South Carolina. However, even though many of the state's counties do belong to a metropolitan statistical area (MSA), most are geographically removed from the region's largest metropolitan cities: Charlotte, NC; Atlanta, GA; and Columbia, SC. Although a population center may be helpful in supporting direct-to-consumer sales, this research suggests that it may be possible for smaller cities, including those who may not be located near a major U.S. city, to develop a successful local food system.

The results of the OLS model also confirmed a potential linkage between small farms and direct-to-consumer sales. This finding, which is consistent with previous research on local food systems, suggests that small farms are important to the development of a local food system. This finding may also highlight the importance of providing support services to small-scale farm operators and specifically, new and

beginning farmers. By providing educational opportunities and technical assistance to operators of small farms, cities may be able to ensure the success of existing farms, while also encouraging other residents to consider careers in farming.

This research also suggests that a potential relationship between more affluent counties and local food sales may exist within South Carolina. From a policy perspective, this finding may be particularly interesting. Recent policy efforts, especially at the federal level, have attempted to make local food both more accessible and affordable for low-income households. However, despite this assistance, counties with lower household incomes or educational attainments may be lagging behind with respect to local food purchases. Similarly, this research found that areas with high levels of direct-to-consumer sales may have larger concentrations of residents over the age of fifty-five. Data published by the Bureau of Labor Statistics (BLS) demonstrates that workers between the ages of fifty-five and sixty-four out-earn their counterparts in other age groups (BLS, 2015b). This finding may further indicate a potential linkage between affluence and local food purchases, and suggests that there is a need for research that examine the factors that may be limiting local food sales in less prosperous areas.

Lastly, the research presented in this chapter focuses solely on direct-to-consumer sales. It does not consider the role that food hubs, direct-to-institution, direct-to-retail, or other similar “intermediated” marketing arrangements may be playing in South Carolina’s local food systems. As Low and Vogel (2011) estimate, nearly \$5 billion of locally produced food is sold through intermediated channels each year. However, it appears that large farms account for 93 percent of intermediated local food sales (farms

with gross annual sales over \$250,000) (Low and Vogel, 2011). This finding suggests that large farms and specifically, those who market through intermediated channels, may be playing an important role in many local food systems. Hence, there may be a benefit to future research that is able to more thoroughly explore the relationship between local food systems and intermediated sales.

## CHAPTER SIX

### SUMMARY, CONCLUSIONS, AND FUTURE RESEARCH

In the coming decades, rural communities will continue to look for ways to improve their economic standing and provide a better overall quality of life for their residents. However, as previous experience suggests, the process of improving rural economic performance can be inherently challenging. From declining rural populations to geographical isolation, there are a variety of issues that nonmetropolitan areas must address in order to effectively strengthen their local economies. As recent research suggests, there are many strategies that rural towns are using in order to address these challenges. With the introduction of high-speed internet service into many nonmetropolitan areas, it has become easier than ever for entrepreneurs to develop successful and competitive rural businesses. Likewise, previous research reveals that the presence of local amenities may be playing an increasingly important role in the location decisions of creative class professionals (see Florida, 2002a). This finding suggests that high amenity rural areas may be uniquely well-equipped to attract and retain high-quality human capital. As less populated areas look to the future, creative class-led entrepreneurship may serve as a viable strategy for improving local economic performance.

Historically, members of the creative class have worked in knowledge-intensive professions whose economic function is to “create new ideas, new technology and/or creative content” (Florida, 2002a, p. 8). A wide range of professions fit these criteria, including occupations in high-tech industries, financial services, business management,

and the legal and healthcare fields. Although McGranahan and Wojan (2007b) have identified concentrations of the creative class in rural communities, they have also noted that members of the rural creative class are somewhat less educated than their urban counterparts and are less likely to work as scientists or engineers. It also appears that the rural creative class may be especially concentrated in the wholesale, retail, and personal service industries (McGranahan and Wojan, 2007b). While less populated areas may be capable of attracting creative class professionals, these findings suggest that the rural creative class may differ from their urban counterparts in several key ways. As cities consider implementing creative class-led development strategies, there is a need for research that can assist local officials in identifying the types of economic activities that are most likely to succeed in their areas. This may be especially true in less populated areas, which have historically specialized in lower-skilled occupations (Abel *et al.*, 2012). These cities, in particular, may lack existing industry clusters that could be used to attract members of the creative class. As a result, rural communities may benefit from the identification of knowledge-intensive activities that can flourish in nonmetropolitan settings.

In order to better understand the relationship between skilled human capital and less populated or rural communities, this dissertation focused on several interrelated issues pertaining to the creative class in the state of South Carolina. Specifically, this research was intended to provide insight into the factors that may attract members of the creative class to less populated areas, while also examining the presence of the creative class within a specific occupation: small-scale farming. Recognizing that local food



systems are playing an increasingly important role in many local economies, this dissertation sought to examine whether operators of small farms may be engaging in creative class activities. This purpose of this research was to build upon the existing creative class literature by identifying a creative class occupation that may be able to succeed in both urban and rural settings.

The remainder of this chapter will include an overview and final discussion of each of the research topics explored within this dissertation. This chapter will conclude by discussing potential limitations of this analysis as well as several recommendations for future research.

### **The Creative Class**

Chapter Three sought to add to the existing body of creative class literature by identifying the local characteristics that have allowed some counties in South Carolina to effectively attract and retain creative class professionals. This research built upon previous creative class literature by examining the local characteristics that may attract members of the creative class to less populated areas. Researchers and development practitioners have become increasingly interested in the role that creative class professionals may play in improving local economic performance. This interest has been fueled, in large part, by a growing body of literature that suggests that creative class professionals make a variety of important contributions to their local economies. As a result, several recent studies have examined how some rural cities and towns have been able to attract and retain members of the creative class.

South Carolina makes a particularly interesting setting through which to examine the creative class. To date, only a few efforts have been made to examine the reasons why some members of the creative class choose to reside in less populated areas. Although South Carolina is home to both urban and rural towns, the state's most populated cities (*e.g.* Greenville, Columbia, and Charleston) are much smaller than many of the large metropolitan centers that have traditionally been home to high concentrations of the creative class (*e.g.* New York City, Boston, San Francisco). South Carolina provides an appropriate setting to examine the reasons why members of the creative class may locate in smaller metropolitan cities or in rural, nonmetropolitan areas.

The analysis presented in Chapter Three used a county-level analysis to identify the local characteristics that attract creative class professionals to South Carolina counties. Specifically, this research utilized data obtained from the U.S. Census Bureau and the United States Department of Agriculture to model the relationship between creative class populations in each county and the presence of certain desirable local characteristics. The independent variables included in this model consisted of several economic, social, and physical characteristics that could influence an individual's decision to locate to a particular area. These local characteristics included a quality public school system, a high concentration of residents who are employed as college faculty, high-quality natural amenities, diverse consumer services, and cultural diversity. This research also hypothesized that the creative class would be more likely to locate in metropolitan counties. The results produced by the OLS regression model suggest that the factors that attract the creative class to South Carolina's counties may differ

somewhat from those that have attracted creative class professionals to much larger, urban centers.

The results presented in Chapter Three suggest that South Carolina's creative class may be attracted to metropolitan areas that have diverse consumer services and high-quality natural amenities. Although the presence of university faculty did not appear to be significant, members of the creative class do seem to concentrate in counties that have well-performing public school systems. This finding suggests that creative class who reside in less populated areas may place special importance on quality educational opportunities for their children. In previous examinations of the creative class, proximity to colleges, universities, and university faculty seemingly provided educational and cultural opportunities that were attractive to the creative class. However, as the findings in Chapter Two suggest, these considerations may be less important to creative class professionals seeking to live in less populated areas.

Likewise, the results of the OLS regression model suggested that cultural diversity does not play a significant role in the location decisions of South Carolina's creative class. On several occasions, previous research has emphasized the important role that cultural diversity may play in attracting the creative class to certain cities. In particular, Florida (2003a) has suggested that culturally diverse communities attract higher numbers of talented and creative individuals, while also creating an open and accepting environment that fosters productivity and innovation. Florida *et al.* (2010) has also emphasized the important role that colleges and universities play in fostering diversity within communities. The fact that neither cultural diversity nor the presence of college

faculty appeared to influence the location decisions of South Carolina's creative class is particularly interesting.

The statistical insignificance of the cultural diversity and faculty variables indicates that the factors that attract the creative class to less populated areas may be fundamentally different from those that are present in more urban cities. Specifically, these findings suggest that lifestyle amenities, including consumer services and outdoor recreational opportunities, may carry greater weight than cultural experiences when creative class professionals choose to reside in South Carolina. In addition, these findings may also suggest that cultural and ethnic diversity, as well as proximity to a college or university, may not be a precondition for attracting the creative class. This may be particularly good news for rural and less populated areas that are geographically isolated from a college or university or may not possess the cultural and ethnic diversity that is often present in densely populated cities

However, the findings presented in Chapter Three are consistent with previous examinations of the rural creative class in that they seem to reaffirm a relationship between areas with high-quality natural amenities and higher concentrations of creative class professionals. The results of the OLS regression model suggest that areas with desirable natural amenities are more likely to have higher concentrations of the creative class. This outcome also demonstrates that members of the creative class may be especially attracted to areas that have climates and geographic features (*e.g.* lakes or mountains) that are conducive to outdoor recreation. This finding may be especially

relevant to development practitioners who are looking for ways to attract members of the creative class to areas that are capable of accommodating outdoor activities.

There are a variety of targeted investments counties can make in order to increase the overall appeal or quality of their community's outdoor spaces and natural assets. This may involve investing in the protection and restoration of natural resources, establishing visitor and nature centers, developing camping areas, and ensuring that outdoor facilities and grounds are well maintained. In order to adequately integrate natural amenities into state and local economic development strategies, there are a variety of steps that can be taken. At the state level, several steps may be taken to improve the quality of outdoor spaces. This may include establishing a task force to recommend actions related to environment-based recreation and developing a comprehensive outdoor recreation plan that helps to guide decisions related to outdoor spaces and the services that they provide. Similarly, local governments can develop their own outdoor recreation plans that identify specific recreation or natural resource-related projects that will benefit community members. These projects will vary from area to area, but may include the development of trails, walking paths, and public parks. Local governments should also consider acquiring and preserving land areas that can facilitate outdoor recreation, as well as ensuring that natural amenities (*e.g.* rivers and lakes) are easily accessible to members of the public via well-kept trails, roads, or walking paths. Furthermore, state and local governments both have a responsibility to promote outdoor recreation opportunities that are both environmentally and economically sustainable. Responsible conservation planning can

help to ensure that natural resources are able to accommodate outdoor recreation for years to come.

### **Entrepreneurship in Local Food Systems**

Chapter Four continued to focus on human capital within South Carolina by examining whether the activities taking place in local food systems are consistent with the innovative, knowledge-intensive activities of the creative class. This research consisted of ten in-person interviews with recent graduates of the South Carolina New and Beginning Farmer Program. Each of the individuals interviewed for this research were second career farmers who had recently started to pursue careers in farming. These interviews were intended to provide insight into the entrepreneurial activities that may be taking place on small farms and more specifically, to help determine whether these activities are consistent with Florida's "three T's" (talent, technology, and tolerance). During the interviews, the farmers were asked a series of questions regarding their previous educational and professional experience, motivations for farming, use of on-farm technologies, and production and marketing practices. Each interview was then transcribed and then qualitatively coded in order to identify common themes and responses.

The results presented in Chapter Four suggest that many small-scale farm operators may be engaging in innovative and knowledge-intensive activities. During the interviews, each of the farmers described their regular use of technology, their creative solutions to wide-ranging problems, and their need to utilize scientific knowledge in their day-to-day operations. In addition, the interviews revealed a variety of ways in which

operators of small farms may be acting entrepreneurially. Many of the interviewees had extensive experience owning and operating their own businesses prior to becoming farmers. Other entrepreneurial activities included networking with other farmers and customers, seeking out educational opportunities and new sources of information, and using a variety of advertising and marketing strategies to create new business opportunities. Furthermore, the interview results suggest that many small farm operators are deeply committed to operating profitable businesses that also contribute to local economic development and community food security.

The results of this interview-based research indicate that small farm operators and in particular, second career farmers, may be engaging in activities that are consistent with Florida's "Three T's" (talent, technology, and tolerance). In addition, this research appears to affirm that small-scale farming is highly entrepreneurial in nature and requires farm operators to possess a wide-range of skills and technical knowledge. This finding may be particularly relevant because it establishes a potential linkage between small-scale farming and creative class-led entrepreneurship and more specifically, identifies a form of creative class activity that may be able to flourish in rural settings. Historically, rural economies have not been recognized as places where knowledge-intensive activities tend to cluster. Previous research indicates that rural areas are responsible for fewer patents than their urban counterparts (Barkley *et al.*, 2006) and, as McGranahan *et al.* (2010a) note, rural towns are often geographically isolated from large research universities and from the industrial research and development activities that frequently take place in urban settings. As a result, finding ways to stimulate knowledge-intensive

economic activity is a theme that is frequently explored within the rural development literature. Although previous research has identified a range of strategies that may help to encourage rural entrepreneurship, there is no clear consensus as to what types of business activity may be most likely to succeed in rural settings. The research presented in Chapter Four hopes to add some clarity to this issue by establishing small-scale farming as a viable form of rural entrepreneurship that is capable of making a variety of important contributions to economic and community development.

Likewise, by identifying a potential linkage between small farm operators and the creative class, this research may provide valuable insight into the types of strategies that could be used to attract and support rural entrepreneurs. Although previous research has suggested that members of the creative class are often employed in high-tech industries (see Florida 2003b), the findings in Chapter Four indicate that South Carolina's "creative economy" may also include farm-based entrepreneurs who are likely in need of support services that are very different from those who engage in high-tech entrepreneurship. In fact, many of the farmers who were interviewed for this research emphasized the important role that educational programming has played in the development of their businesses. Although each of the farmers who participated in this research had recently graduated from the South Carolina New and Beginning Farmer Program, many continued to seek out educational opportunities related to agriculture science and technology, as well as business management. As many rural areas are now providing support services to local entrepreneurs, it may be necessary to evaluate the degree to which these services are also supporting farm-based entrepreneurship. Any policy-related effort to encourage



small-scale farming will likely need to include agriculture-specific educational programming and technical support services aimed at operators of small farms.

In addition, the results of this research also suggest that second career farmers may be particularly well suited for farm-based entrepreneurship. As individuals may be attracted to small-scale farming as a second career, it may be useful to examine how rural areas may be able to attract these unique members of the creative class. In fact, the results of the regression model presented in Chapter Three may offer insight into the ways that less populated areas may be able to attract and retain creative class farmers. Notably, Chapter Three establishes a potential linkage between South Carolina's creative class and a preference for areas that have desirable natural amenities. As previous research has suggested that farming careers may be especially attractive to individuals who enjoy nature and working outdoors (see Wilson *et al.*, 2013; Herrmann and Uttitz, 1990; Gosling and Williams, 2010), it is possible that many rural areas may already be well equipped to attract second career farmers. However, it may be beneficial to further explore the factors that motivate individuals to begin new careers in farming, possibly in rural locations.

### **Local Food Systems**

Chapter Five continued to focus on local food systems in South Carolina by examining the reasons why some counties have experienced high levels of direct-to-consumer sales of locally-produced food. Specifically, the purpose of this research was to identify the local characteristics and conditions that may be helping to facilitate local

food sales within certain counties. This research intends to provide guidance to local officials and development practitioners who may be considering whether or not to invest in community food projects. By identifying the marketing activities (*e.g.* CSA organizations or farmers' markets) and farm characteristics that may be most conducive to facilitating local food sales, this research may help to inform future investments in local food systems. Likewise, by providing insight into the social and economic conditions that are most associated with high levels of local food sales, this research should help to identify areas where investments in local food systems may be most beneficial.

The findings presented in Chapter Five suggest that areas that have a large amount of fruit and vegetable production, ample farmland, a large number of small farms, and established farmers' markets may have higher levels of direct-to-consumer sales. Similarly, more densely populated areas and areas where there are a higher concentration of residents over the age of fifty-five also appear to have higher levels of direct food sales. As expected, there may also be a linkage between socioeconomic conditions (*e.g.* local income levels, home values, and educational attainment) and local food sales. This finding indicates that areas with higher concentrations of educated or affluent residents may also have high levels of local food sales. Interestingly, there did not appear to be a relationship between the presences of farm-to-school programming and higher levels of direct agricultural sales.

In many ways, Chapter Five seems to reaffirm many of our common perceptions regarding local food systems. Previous research has demonstrated that local food sales

are more likely to occur in and around metropolitan areas (Low and Vogel, 2011), often in cities where there are many educated and affluent residents (Brown *et al.*, 2006). Similarly, the findings presented in Chapter Five indicate that direct-to-consumer sales may be highest in South Carolina counties that are affluent and more densely populated. This finding may suggest that policies to improve access to local foods in more rural, food insecure areas have yet to make substantial progress. In recent years, policy makers and development practitioners have championed local food systems for their ability to contribute to local economies, while also improving community food security. According to the South Carolina Food Access Task Force (2014), over a million low-income South Carolina residents are currently residing in a food desert. Not surprisingly, many of these food deserts are located in nonmetropolitan counties. In the coming years, it may be necessary for policymakers to further examine whether or not local food sales can be part of the answer to community food security and if so, what strategies will assist rural food deserts in developing viable local food systems.

Further complicating efforts to improve South Carolina's local food systems is the fact that many areas throughout the state are experiencing a rapid amount of land development. As recent research demonstrates, land development in and around South Carolina's urban areas has been taking place at an accelerated pace (see Campbell *et al.*, 2008). This pattern is likely to continue over the next decade and a half and, as Campbell *et al.* (2008) have suggested, the amount of developed land in South Carolina will more than double by the year 2030. Not surprisingly, this puts certain counties in the state at risk of losing much of their cropland, forest areas, and open space. This development

could have interesting implications for the state's local food systems. On one hand, farmers who currently reside in rural areas are likely to find that urban sprawl places them in closer proximity to large numbers of affluent, urban consumers. However, such rapid land development is likely to increase land values and hence, have a negative impact on the financial feasibility of small-scale farming. This urban growth could have wide-ranging impacts on South Carolina communities and may suggest a need for local zoning that can protect farmland from other uses.

### **Local Food Policy**

Chapter Two of this dissertation details the events and circumstances that have led to the development of many of our current local food policies. Using the Advocacy Coalition Framework (ACF) as a reference, Chapter Two suggests that much of the federal funding that is made available for local food projects is the result of a grass-roots effort to encourage increased government involvement in the future of local food systems. Although state and federal agencies have become increasingly involved in local food initiatives, local governments and local or regional nonprofit organizations continue to play an important role in the formulation of local food policies. Even though many of local food projects receive federal funding, the task of developing and administering local food programming is often left to local leaders. As a result, effective local food policies truly require collaboration and coordination across multiple levels of government, while also frequently involving the input and dedication of private citizens.

Given the important role that local leaders play in the development and administration of local food policies, it is somewhat surprising that only nine of South Carolina's forty-six counties mention local food systems in their comprehensive development plans (Carolina Farm Stewardship Association, 2013). This finding indicates that local food initiatives are rarely being incorporated into the broader economic development goals of South Carolina's counties. This finding is concerning for several reasons. First, Chapter Five of this dissertation establishes a potential linkage between socioeconomic performance and local food sales. This finding suggests that standalone local food policies are not sufficient to facilitate the development of a well-functioning local food system and highlights the need for local food policies that work in concert with general development initiatives. Second, the findings in Chapter Five also suggest that less populated, nonmetropolitan areas may still be struggling to facilitate local food sales. As previous research has highlighted the important contributions that local food systems make to both community food security and economic development (see Otto and Varner, 2005; Hughes *et al.*, 2008; and Ashman *et al.*, 1993), it may be particularly beneficial for less populated areas to incorporate value-generating local food projects into their economic development plans. By doing this, it may be easier for local officials to plan for future funding and staffing needs.

Although federal funding for local food projects has increased over the past several years, the need for funding for local food initiatives is likely to continue to grow. While the task of identifying viable local food projects may fall largely on the shoulders of state and local officials, federal officials will be charged with the task of ensuring that

U.S. agricultural policies adequately and fairly address the funding needs of local food systems. As a result, the work of those who advocate for the inclusion of local food initiatives into broader federal agricultural policies may continue in the years to come.

### **Limitations and Potential for Future Research**

The research presented in this dissertation suggests that entrepreneurial, creative class activities are taking place within many of South Carolina's communities. This finding is particularly promising for less populated or rural areas that are looking for ways to stimulate entrepreneurial activity. As this dissertation suggests, many rural areas possess local qualities that are particularly conducive to attracting and retaining members of the creative class. Furthermore, this research has also highlighted the various contributions that creative class entrepreneurs are making to the state's local food systems. This development is particularly interesting in that it suggests that local food systems may be a useful mechanism through which to encourage new entrepreneurship and stimulate new economic activity.

Given these findings, there is the potential for additional research that can further examine the relationship between the creative class, local food systems, and rural economic performance. Although this dissertation has identified the presence of creative class farmers within South Carolina's local food systems, the analysis presented in Chapter Four is limited to second career farmers who were each relatively new to the farming profession. Accordingly, those who participated in this research had prior career experience, including previous entrepreneurial experience, which may have especially

equipped them for owning or operating their own farm. It is also possible that many second career farmers may have access to financial resources (as a result of their previous professional experiences) that are not typical of all new and beginning farmers. While the presence of creative, second career farmers within South Carolina is promising for communities looking to enhance their local food systems, it may be useful to examine whether the experiences and activities of this group are consistent with those of other small-scale farm operators. By looking at a broader population of small farm operators (including those who are more experienced) it may be possible to better understand that contributions that small farm operators, in general, are making to local food systems. In addition, this research may provide insight into many of the challenges that small farm operators face when operating within the context of local food systems. Such information could help to better inform educational programming and support services for farm-based entrepreneurs.

Similarly, the local food system analysis detailed in Chapter Five is somewhat limited by its focus on direct-to-consumer sales. As previously noted, current USDA measures of direct-to-consumer sales do not include “intermediated” sales of agricultural products, including sales that are made directly to restaurant or local retailers, in addition to sales that are made through small-farm aggregators. In recent years, local leaders have embraced a range of marketing strategies intended to provide local producers with access to a broader base of consumers. For example, many areas have begun to use food hubs as a means of aggregating, storing, and distributing food that is produced locally. By aggregating the products local farms, food hubs make it easier for small farm operators to

market their products to wholesalers, retailers, and other large institutions. Although food hubs are not a form of direct marketing, they nevertheless play an important role in the overall functioning of many local food systems. As the research in Chapter Five does not account for local foods that are distributed through food hubs or products that are sold through other direct-to-institution or direct-to-retail arrangements, there may be a need for additional research that examines the many types marketing arrangements that exist within local food systems. While the role that farmers' markets, farm stands, and CSA organizations has been well documented within the existing literature, little information is available regarding the amount (or value) of food that is sold through intermediated channels and few efforts have been made to examine the effectiveness of these marketing arrangements. Such information would be particularly useful to local leaders who are looking to invest in food hubs or food-to-institution programs.



## APPENDICES

Appendix A

USDA Creative Class Occupations

**Table A1: USDA, Economic Research Service (ERS) Creative Class Occupations\***

<b>Occupational Title</b>		<b>Standard Occupation Code (As Reported by the U.S. Census Bureau)</b>
Top executives	Management Occupations	11-1000
Advertising, marketing, promotions, public relations, and sales managers		11-2000
Financial managers		11-3030
Operations specialties managers, except financial managers		11-3010, 11-3020, 11-3040 through 11-3070
Other management occupations, except farmers and farm managers		11-9020 through 11-9190
Accountants and auditors	Business and financial operations occupations	13-2011
Computer specialists	Computer and other mathematical occupations	15-1000
Mathematical science occupations		15-2000
Architects, surveyors, and cartographers	Architecture and engineering occupations	17-1000
Engineers		17-2000
Drafters, engineering, and mapping technicians		17-3000
Life and physical scientists	Life, physical, and social science occupations	19-1000 through 19-2000
Social scientists and related workers		19-3000
Lawyers	Legal occupations	23-1011

Postsecondary teachers	Education, training, and library occupations	25-1000
Librarians, curators, and archivists		25-4000
Art and design workers	Arts, design, entertainment, sports, and media occupations	27-1000
Entertainers and performances, sports, and related workers		27-2000
Media and communication workers		27-3000 and 27-4000
Sales representatives, services, wholesale, and manufacturing	Sales and related occupations	41-3000 and 41-4000
Other sales and related occupations, including supervisors		41-1000 and 41-9000

\*This table was adapted from the USDA, Economic Research Service, <http://www.ers.usda.gov/data-products/creative-class-county-codes/documentation.aspx#identifying>.

## Appendix B

### Interview Protocol

#### **General:**

- How long has your farm been in operation?
- What motivated you to begin farming?
- What was your profession before becoming a farmer, and what influenced your decision to leave that profession?
- Prior to starting your own farm (or starting the process of operating your own farm) what type of farming experience did you have?
- Prior to starting your own farm, had you ever owned or operated your own business?
- Is farming your part-time or full-time occupation? Is it your only occupation?
- Since graduating from the SCNBFP, how has your business changed?
- What were your primary motivations for participating in the SCNBFP?

#### **Farm-related:**

- What does your farm produce, or what are you expecting to produce? (*i.e.* cattle, poultry, dairy, hogs, vegetables, etc.)
- What is the acreage of your farm?
- How did you obtain the land that you farm on? (purchased, leased, inherited).
- How would you describe the area in which your farm is located (rural, urban, suburban)?
- Excluding yourself, do you employ other workers (or volunteers/interns) on your farm?
- Do you use any organic farming practices?
- Do you use any other practices that may be considered to be non-conventional? (*i.e.* free-range, grass-fed, anti-biotic or hormone free, agritourism).
- Do you expect to make a profit from your farm this year?
- How do you envision your farming changing over the next several years? Do you expect to increase production, increase your acreage, or stay the same?

#### **Goals/Motivations:**

- What is your long-term goal for your farm? (*i.e.* a full-time career, a part-time career, a hobby, etc.).
- How important is it for your farm to generate income or make a profit?
- Do you consider yourself to be an entrepreneur?
- Do you try to purchase your farming inputs locally? If so, is it important to you to try to support other local businesses?

### **Networking and Professional Development:**

- Where do you typically go to learn about farming or to get advice/help/information about farming?
- Are there any organizations or programs that have been particularly helpful to you in the development of your business?
- Now that you have graduated from the SCNBFP, are there any other professional or educational organizations that you have participated in?
- If you have participated in other farm-related or entrepreneurial-related organizations, how helpful would you say these organizations have been to you and your professional development?
- How available or accessible are organizations in your area or your region that provides professional development services or programs that would be suitable for farmers such as yourself? Has it been difficult or easy to find educational opportunities or support services since graduating from the SCNBFP?
- Since graduating from the SCNBFP, have you attended any agricultural-related conference, workshop or seminar?
- Since graduating from the SCNBFP, have you attended any conference, workshop, or seminar aimed at general entrepreneurship or business development?
- How important has professional networking been to the success of your business?
- Do you continue to keep in touch with fellow SCNBFP participants?
- Do you make an effort to network with entrepreneurs who are outside of the agricultural industry?
- Do you enjoy communicating with other farmers? Do you enjoy communicating with your customers?

### **Local Food Systems:**

- Does your area have a fairly established local food system?
- What aspects of your local food systems have been most beneficial to you and the development of your business?
- Have you found it easy to build professional relationships within your local food system?

### **Sales and Marketing:**

- Where do you sell (or where do you intend to sell) your products?
- If applicable, how often do you sell your products at a farmers market?

- What types of marketing techniques do you regularly use? (word of mouth, brochures, website, social media, etc.)
- Do you primarily sell your products within your local area? (*i.e.* within your city, county, or surrounding region).
- How important is it for you to sell your products locally or regionally?
- How important is it for you to sell your products directly to consumers?
- Has your participation in the SCNBFP helped you to improve your sales or marketing strategies?
- How integral has social media been to your marketing strategies?

**Innovation/Problem-solving/Technology:**

- In what ways has farming required you to be innovative or creative? Can you give specific examples?
- How important is it for a new or beginning farmer to have good problem-solving skills?
- Do you get enjoyment from finding solutions to problems on your farm?
- Similarly, do you get enjoyment from finding ways to be innovative or creative with respect to your farming practices?
- Do you enjoy learning?
- What kind of technological skills are required to do your job? (*i.e.* do you frequently use computers/computer software, smartphones, machinery, that has required you to exercise your technical skills or knowledge?)
- How essential has technology been to the success of your business?
- Do you encounter any challenges with respect to obtaining or implementing/using the technological resources that are essential to your business?

**Social Responsibility/Community Development/Tolerance:**

- How do you think that your farming activities have contributed to your city, town, or community?
- How important is it that you use environmentally friendly, sustainable, or organic farming practices?
- How do you envision your farm contributing to food security and/or healthy eating/lifestyles in your community?
- How diverse (culturally, politically, economically) is participation in your local food system? Do you notice that other local farmers come from a variety of backgrounds? Similarly, do you have a diverse consumer base?

**Challenges:**

- What major challenges have you encountered as a beginning farmer?
- How have you attempted to overcome these challenges?

- What support services would possibly assist you in better addressing such challenges/problems? Have these support services been useful or effective?
- Is there anything that the SCNBFP could have done in order to better prepare you for dealing with these challenges?

**SCNBFP:**

- In what ways has the SCNBFP enhanced your business?
- What aspect of the SCNBFP has been most valuable to you and your business?
- In what ways has your participation in the SCNBFP helped you to increase productivity on your farm? In what ways has it helped you to increase your environmental sustainability?
- Did your experience with the SCNBFP live up to any initial expectations that you might have had?

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