

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF AGRICULTURAL ECONOMICS, SOCIOLOGY,
AND EDUCATION

HOMEGROWN NOURISHMENT: TOWARD PLACE-BASED
DINING AT PENN STATE

GRACE EMMERLING
FALL 2014

A thesis
submitted in partial fulfillment
of the requirements
for baccalaureate degrees
in Community, Environment, and Development and Economics
with honors in Community, Environment, and Development

Reviewed and approved* by the following:

Theodore R. Alter
Professor of Agricultural, Environmental and Regional Economics
Honors Adviser

Timothy W. Kelsey
Professor of Agricultural Economics
Thesis Supervisor

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

This study is designed to be the first step in a larger process of exploring the complexity surrounding efforts to increase Penn State University's local food purchases. In recent years, focused effort has been directed toward incorporating local food products into the dining commons on the University Park campus. This study contributes to these efforts by beginning to explore and understand the context and actors involved in the situation as well as identify obstacles to increasing the presence of local food products in the dining commons. Through qualitative research methods and utilizing institutional and behavioral economics theory, I investigate the perspective of local food producers to understand in more detail the challenges they have faced in attempting to sell their products to Food Services. I have found that the phenomenon is complex, with many actors and varying performance goals and priorities. This research lays the groundwork for future inquiry by beginning to organize information, identify relevant actors, and identify essential questions and objectives for research.

TABLE OF CONTENTS

List of Figures	iv
Acknowledgements	v
Chapter 1 Introduction	1
Sustainability and food systems	1
State College, Penn State, and sustainable food awareness	3
Penn State’s food system, sustainability, and the dining commons	5
Operational definitions	6
Significance of this research	7
Problem statement	9
Research objectives	9
About this study	10
Chapter 2 Theory	11
Institutional and behavioral economics	11
Transaction as the unit of analysis	12
Situation, structure, and performance (SSP) model	13
SSP application to this study	15
Research questions	16
Hypotheses	17
Chapter 3 Methodology	18
Research design	18
Narrative inquiry	20
Procedure	22
Limitations	23
Chapter 4 Findings and discussion	25
Organization of this chapter	25
Direct barriers	25
Discussion	29
The purchasing model, economies of scale, and the definition of “local”	30
Uncertainty	34
The role of students	35
Time	36
Closing	36
Chapter 5 Recommendations	37

Objectives for future action and research..... 37

BIBLIOGRAPHY 41

ACADEMIC VITA..... 44

LIST OF FIGURES

Figure 1, SSP interactions	13
Figure 2, Framework for this study.....	15

ACKNOWLEDGEMENTS

Dr. Ted Alter – There are not words to describe my gratitude for your guidance, support, and mentorship throughout not only this thesis process, but also during the totality of my undergraduate education. I would not have cultivated the passions I have today without your encouragement. Thank you.

Dr. Timothy Kelsey – Thank you for setting an example as a passionate and invested educator. Your commitment to supporting your students is an inspiration and a direct contribution to my ability to complete this thesis. Thank you.

Dave Ader, Bernadette Brogden, and Lina Montopoli – You three have been instrumental in my development as a CED student. You have inspired and invigorated my passions for community consciousness and sustainable food movements, and I would not have cultivated the skills, interest, or desire to do this work without the three of you in my life. I love you each very much.

Katherine Watt – Your passion for proofreading, community organizing, support, mentorship, and guidance in this process has been invaluable. Your desire to catalyze change in your community has been an inspiration throughout the time I've known you and has truly influenced this thesis process. Thank you.

Justin Vernon and The Sundays –for guiding my writing with your beautiful tunes.

A. Yoho, J. VanFossan, C. Mefford, M. Emmerling, E. Ishler, L. Koenig, A. Berger, C. Pick, R.

Emmerling, R. Hoh, H. Brooks, R. Chapetta, S. Leon, T. Emmerling, A. Emmerling, J. Eisenstein, M.

Maloney, L. McPhail, B. Rollins, N. Kapp, M. Lynn - and all others from whom I have received gifts of support, encouragement, and inspiration. I could not be more fortunate to have you all in my life. Thank you.

Chapter 1

Introduction

In recent years, members of the State College and Penn State University communities have expressed a desire to increase the amount of locally sourced food served in the university dining commons. Attempts at doing so have been relatively unsuccessful despite student initiatives and multiple collaborative meetings between and among local food producers and university employees. Given this common desire, this study begins to explore and identify current obstacles to increasing locally sourced food products in the dining commons.

Sustainability and food systems

Concerns regarding food sourcing are nested in the context of the emerging concept of sustainability. As biological, ecological, and other scientific studies advance, human beings are beginning to more concretely understand that our existence is a function of the health of our context; human well-being is interdependent with the well-being of our natural, social, and economic environments. This understanding is the basis for sustainability, an increasingly popular concept most commonly defined in the Brundtland Report as meeting “the needs of the present without compromising the ability of future generations to meet their own needs,” (WCED, 1987, 43). This concept has influenced societies across the globe to consider how economic growth and resource use today will influence the well-being of the natural environment and human existence in the future.

Consequently, initiatives have emerged worldwide to address unsustainable human behaviors and systems. As previously mentioned, one critical area of focus has been food systems (see Knorr, 1983; *Agroecology and sustainable food systems*, 2013; and Marsden, 2014 for an introduction into sustainable

food systems). Consisting of a network of growth, harvest, processing, transport, marketing, consumption, and disposal processes, a food system includes players such as farmers, businesses, academia, consumers, and local, regional, and national governing bodies. Incorporating a diverse population and large quantity of resources, food systems interact with local, regional, domestic, and global economic, human, and environmental health and well-being. They evolve over time depending on human needs and preferences, and are a function of technological advancements and resource constraints. Universal and interdependent with the natural environment, food systems are an obvious focal point for sustainability initiatives.

Modern day food systems have been criticized for being damaging to the environment and society, yet have simultaneously provided many benefits to the growing global population. Current agricultural production processes have evolved and adapted over time to address fluctuations in the natural environment and human needs and preferences. In the last century, intensification of agriculture along with increases in food system efficiency have occurred at relatively high rates (Thompson, 2009). The result has been lower costs of production and consumption, and increased food availability globally (Thompson, 2009). Mechanization, fertilizers, and more efficient supply chain systems, among other technological advancements, have all increased efficiency and profitability for food producers while simultaneously increasing availability and affordability for consumers worldwide.

Though beneficial in some regard, the technological advancements that led to these benefits have not been adopted without unforeseen consequences. Recent research has linked modern day food and agricultural systems with undesirable environmental impacts such as excessive water extraction and fossil fuel dependence, loss of biodiversity, deforestation, and greenhouse gas emissions. Social consequences such as controversial cultural shifts and negative impacts on human health have also been well-documented (see Garnett, 2013; Thompson, 2009; Mead, 1970; Dorrough and Scroggie, 2008; Phelps, et al, 2013; Smil, 2000 for more information).

Movement leaders tasked with increasing the sustainability of food systems are challenged to address the negative consequences of intensified food production while not sacrificing its benefits; this is an especially complex challenge considering the vast diversity of players, resources, and elements of society that contribute to food systems. Given this complexity, the basic task of defining a sustainable food system proves challenging. Kloppenberg et al (2000) conducted focus groups with 125 persons at a conference hosted by the Michael Fields Agricultural Institute in order to generate the following definition for a sustainable food system: “relational, proximate, diverse, ecologically sustainable, economically sustaining, just/ethical, sacred, knowledgeable/communicative, seasonal/temporal, healthful, participatory, culturally nourishing, and sustainably regulated” (177).

This definition, and emerging food sustainability consciousness over time, has influenced individual and collective behavior toward altering food-related practices (see Jack, 2009; Viljoen and Wiskerke, 2012; and Blay-Palmer, 2010 for more information on sustainable food system practices). Businesses have adapted sourcing, packaging, and distribution practices, and households have altered purchasing behaviors and increased gardening and homesteading activities. These changes in individual and organizational behavior have been the result of economic and social incentives and are continually spreading and emerging as more food-related sustainability innovations emerge.

State College, Penn State, and sustainable food awareness

Influenced by sustainable food consciousness, individuals and organizations in State College, Pennsylvania have increased sustainable food practices in recent years. Examples include locally-sourcing restaurant businesses (e.g. Otto’s Pub and Brewery, Spat’s Cafe, Webster’s Cafe, among others), a food cooperative in its developing stages (Friends & Farmers Co-op), and the State College Borough’s curbside food waste composting program.

Penn State University as an organization has also been influenced by sustainability consciousness. In 2011, Penn State implemented a Sustainability Strategic Plan outlining its approach and goals for increasing sustainability throughout the University and broader community in various forms. A comprehensive, three-goal plan, the Sustainability Strategic Plan articulates a desire to educate, practice, and inspire sustainability through a “Living Laboratory” approach. The goal of the Living Lab is to “[infuse sustainability] into all facets of life at Penn State, supported and driven by a collective and collaborative effort,” (The Penn State Sustainability Strategic Plan, 2011, 3). Articulated within this plan is the goal to “Create strategies and programs for the implementation of sustainability solutions within the Penn State community,” as well as to “Integrate sustainability into the strategic plans of all Penn State units,” (The Penn State Sustainability Strategic Plan, 2011; 7,8). The plan has also impacted the overall food system at the university, discussed in more detail below. Currently, a new Sustainability Strategic Plan is to be published in the coming months.

Students of Penn State University have also engaged in food sustainability initiatives. In 2013, undergraduate students developed a partnership with the Real Food Challenge, a national organization dedicated to empowering students across the country to improve the justice and sustainability of their schools’ food systems (Real Food Challenge). Other students have helped organize various locally-sourced dinners in the dining commons on the University Park campus in 2013, and have founded clubs such as the Penn State Sustainable Agriculture Club, Food Recovery Network, and Penn State Community Food Security Club. In the Spring of 2013 a group of students united with the Sustainability Institute to consider a student-centered farm, an initiative currently underway. These are only a few of the numerous projects organized by Penn State students motivated to develop a sustainable food system.

Penn State's food system, sustainability, and the dining commons

Regarding Penn State's food system, the key units involved in food procurement exist under the umbrella organization Auxiliary and Business Services (A&BS). A&BS houses Food Services, Hospitality Services (including the Nittany Lion Inn and the Penn Stater Conference Center), and the Bryce Jordan Center. These units are supported by Foods Purchasing, also housed within Auxiliary and Business Services (About Us). Sustainable food projects at Penn State have been initiated within these units. Of particular focus is the Food Services unit, which encompasses Residential Dining (the five dining commons on the University Park campus); Retail Dining (food options located within the HUB-Robeson Center); and Campus Catering. The Food Services unit is the main interface with university students at the University Park campus and a large portion of the overall food system at Penn State, serving between 79,000 and 94,000 meals per week (Dining Services). Given the aforementioned goals within the Sustainability Strategic Plan, student interest, and the quantity of food it handles, Food Services is a main focus at Penn State for integrating sustainable practices.

Within Food Services, sustainability projects have included enormous recycling and compost initiatives, offering vegetarian options, offering reusable take-out containers, hosting a locally-sourced meal once each semester, and employing "Student Sustainability Coordinators" to act as mediators between students and Food Services in communicating sustainability-related desires and ideas from students to employees of Food Services (Dining Services). While these initiatives have been successfully established, Food Services has historically struggled to provide consistent and frequent local food products to consumers.

While the university has not formally articulated how it defines "local food," evidence suggests that it prioritizes food grown, produced, or processed within the state of Pennsylvania (Dining Services). University students and employees, as well as residents of the surrounding area, have expressed interest in working toward the goal of increasing Penn State's local food sourcing, evidenced by the occurrence of meetings held between potential food vendors and key stakeholders at Penn State University to discuss

this practice. The Director and Assistant Director of Residential Dining at Penn State have been present at these meetings, along with the Director of Purchasing. These meetings were intended to lay the foundation for local food integration into Penn State's food system through communication between producers and purchasers (Watt, 2012).

Given the evident interest of State College residents and university students and employees, the reasons Food Services has not increased its local food sourcing are yet undocumented. As with any organizational transition, the movement to increase local food sourcing is coupled with economic and social obstacles; both food purchasers and food producers experience a variety of obstacles to changing their current purchasing and production behaviors. In order to overcome the obstacles and increase local food sourcing, we need to more clearly understand both the nature and source of the obstacles being experienced by both producers and purchasers. As of yet, there is limited documented understanding of what obstacles local food producers have been experiencing in their attempts to vend to Food Services. While the perspectives of producers and purchasers are both essential to understand, due to limited time and resources, this thesis focuses on exploring the obstacles food producers local to the State College region are experiencing in attempting to sell their products to Penn State's Food Services unit.

This study is intended to be the beginning of a much larger inquiry into the situation and structure of the current food sourcing system of Penn State University as a whole. By focusing on the perspective of local food producers, I have begun to systematically identify and document relevant actors, variables, and circumstances that shape the given situation in an effort to provide a basis for future research.

Operational definitions

Barriers/barriers to change will refer to obstacles to changing the food purchasing system of Food Services experienced by local food producers. These obstacles may be real or perceived and manifest in

many forms. They include formal rules such as terms of a contract, insurance requirements, or food safety laws; and informal obstacles such as ideology, feelings of ill-will, or path-dependent behavior. Some barriers are unique to each food producer, while some are consistent across many or all of them.

Food Services is a unit within Auxiliary and Business Services at Penn State University. The unit is responsible for residential dining (the campus dining commons), Retail Dining such as food served in the HUB-Robeson Center, and Campus Catering (About Us).

Local food products refer to items grown or produced within a 50-mile radius of State College proper. Definitions of local food vary (see Eriksen, 2013; Blake et al, 2010 for more information on how local is measured and defined). For the purposes of this thesis, I will be interviewing food producers within a 50-mile radius of State College, a distance that falls within the measurements found within the literature cited above.

Local food producer will refer to food producers located within a 50-mile radius of State College proper. This term will also refer to the individuals interviewed for this research.

Sustainable Food System is defined as: “relational, proximate, diverse, ecologically sustainable, economically sustaining, just/ethical, sacred, knowledgeable/communicative, seasonal/temporal, healthful, participatory, culturally nourishing, and sustainably regulated” (Kloppenber et al, 2000, 177).

Significance of this research

This study lays the groundwork for future research regarding Penn State University’s position and influence within the local and regional food system, as well as research regarding various influences on

Penn State's food sourcing behavior both presently and over time. This study not only informs future research but also future action by organizing the current situation and circumstances to make them more understandable and accessible. This is particularly useful for those looking to understand, research, and change Food Services' food system both generally and regarding its sustainability.

This study will also provide a source of continuity for those working to increase local food sourcing, food system sustainability, or overall sustainability projects at Penn State. In a town with many individuals coming and going over time, particularly university students, this study will be a tool for informing the actions of those who may not be present in State College or the university currently, but will work on these projects in the future.

This study is also consistent with the first goal of the Sustainability Strategic Plan: for "All members of the Penn State community [to] realize, advocate, and contribute to sustainability literacy" (2011). This goal implies the necessity for all members of the university community to contribute to continual learning about sustainability and its components. This thesis is timely and will contribute to sustainability literacy by exploring barriers specific to the sustainable practice of localizing food sourcing. This research is itself a "sustainability learning opportunity" (Sustainability Strategic Plan, 2011). In this way, this research contributes to the broad goal of improving sustainable operations within the university.

In summary, this study benefits a range of parties: those interested in working toward increasing Penn State University's local food sourcing, Food Services, and local food producers. It begins to clarify otherwise unanswered questions, holds promise for shaping future research, and contributes to food-related sustainability initiatives within the university and State College community. Most generally, this study serves as the beginning of a larger process of transforming the food system at Penn State University into a more sustainable one by addressing transactions between local food producers and Food Services.

Problem statement

The Penn State and State College communities are committed to increasing sustainable practices within the food system. As evidenced, one element of this goal is to increase local food sourcing. As of yet, there has been limited progress in operationalizing this goal. In order to understand and ultimately address this problem, it is necessary to explore the circumstances surrounding attempts to increase local food sourcing. Currently there is limited documented information regarding the perspectives of Food Services employees and local food producers. It is uncertain whether either party is experiencing barriers to completing a transaction of local food products. If either party is experiencing barriers, they have not been identified or organized to date, nor have the reasons for their existence been identified. The purpose of this research is to understand the barriers to completing a successful transaction of local food products between Food Services and local food producers. This is to be accomplished by identifying the barriers experienced by food producers local to the State College region when attempting to sell their products to Penn State's Food Services unit.

Research objectives

1. To determine whether food producers local to the State College region are experiencing barriers to selling their products to Food Services.
2. To identify the barriers.
3. To understand why the barriers exist from the perspective of local food producers.
4. To generate suggested directions for future research.

About this study

This thesis is structured as follows: Chapter 2 outlines the behavioral and institutional economics theoretical framework I have used for analysis. Chapter 3 is a discussion of the qualitative methodology used to collect data. Chapter 4 includes a discussion of my findings, and Chapter 5 details a conclusion and set of recommendations for future action and research.

Chapter 2

Theory

This chapter provides a discussion of the theoretical framework I have used for this study. Schmid's (2004) institutional and behavioral economics framework, and Situation, Structure, and Performance (SSP) model are used to identify, organize, and analyze information gathered from key informant interviews with local food producers and advocates. In this chapter, I describe institutional and behavioral economics and Schmid's (2004) SSP model and explain how these two frameworks shape my analysis.

Institutional and behavioral economics

Institutional and behavioral economics is a tool for understanding human behavior. It incorporates a broad range of influences on individual and collective economic choices and decision-making, making it a flexible and adaptive tool for exploratory studies such as this one. This framework for understanding economic behavior is rooted in behavioral science, challenging the mainstream economic assumption that human beings are consistently rational, by incorporating more nuanced social and personal influences on decision-making, as well as formalized rules and regulations. When analyzing complex economic transactions in which there are multiple individual and collective actors using a diversity of decision-making mechanisms, it is essential to account for the variety of potential influences on economic behavior to truly capture the nature of the issue of concern. The case of localizing Food Services' food sourcing is precisely such a complex economic transaction in which relatively abstract and

diverse variables such as perceptions, personal relationships, history, and ideology, among others, must be considered.

Institutions are defined as “the humanly devised constraints that structure human interaction. They are made up of formal constraints (e.g., rules, laws, constitutions), informal constraints (e.g., norms of behavior, conventions, self-imposed codes of conduct), and their enforcement characteristics. Together they define the incentive structure of societies and specifically economies” (Douglas North, 1994, 360). Similarly, Schmid (2004) defines institutions as “sets (networks) of ordered relationships (connections) among people that define their rights, their exposure to the rights of others, their privileges, and their responsibilities. A set at one level is embedded in a set at a higher level to make up a complex system...Different levels are interdependent and mutually defined” (6).

From these definitions, we can understand institutions as rules that shape human interaction, interdependence, and distribution of costs and benefits. They are both formal (contracts, legislation) and informal (social norms, behaviors, habits) and guide economic activity. They are both a source and an outcome of human interdependence. Institutions emerge because of human interaction: a property right (formal institution) does not exist in a world of one individual, but rather is a result of multiple individuals’ relationships with each other (Schmid, 2004).

Transaction as the unit of analysis

Because institutions shape and are shaped by interaction between and among humans within the context of shared environments and resources, Schmid (2004) uses the transaction as the unit of analysis, as I will do in this study. The transaction is the moment (though it may last many “moments”) in which institutions are most clearly guiding individual and collective behavior. Over time, the institutions that guide those transactions are also shaped by human behavior through an evolving process. Transactions are diverse, including exchanges of goods and services, ideas, capital, and other things. They are moments

of exchange during which formal and informal institutions are most clearly manifest. We can analyze transactional behavior to understand how institutions influence and are influenced by that exchange.

Situation, structure, and performance (SSP) model

When analyzing the impact of institutions on transactions, Schmid (2004) utilizes the *Situation, Structure, and Performance (SSP)* model, as I do in this study. In this model, *situation, structure, and performance* interact over time and space to influence each other.

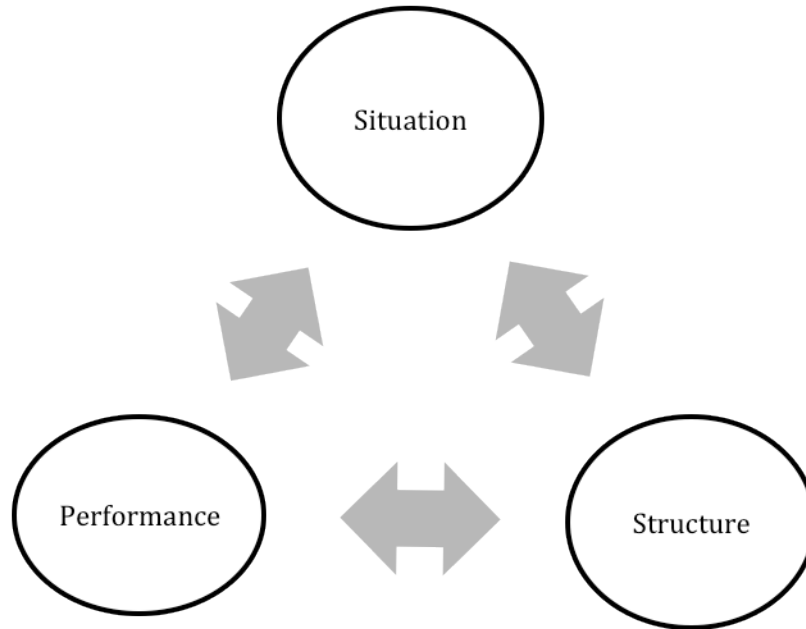


Figure 1, SSP interactions

“*Situation* refers to the inherent characteristics of goods and environments that affect human interdependence that must be sorted out by institutions giving order to human transactions,” (Schmid, 2004, 16). At any given time, the situation variable captures the characteristics of items exchanged in a transaction as well as the characteristics of the parties involved in the transaction. The situation also

captures the historical, political, social, and environmental contexts that shape the current moment, exchange, or transaction.

“*Structure* refers to the institutional alternatives that people can choose to order the interdependencies created by the situation of various technologies” (Schmid, 2004, 17). At any given time, structure refers to the formal and informal institutions that are shaping human interaction: the legislated and socially understood rules that guide the transaction process.

At any given time, a set of existing and functioning institutions generate a set of consequences referred to as performance. “*Performance* refers to who gets what,” (Schmid, 2004, 19). It is a measurement of relative distribution of benefits and costs. A *performance goal* is an agreed-upon distribution of costs and benefits to relevant parties; it may be unspoken or formally articulated. For this study, the assumed performance goal is a relative increase in local food purchases on the part of Penn State’s Food Services unit. Achieving this performance goal would generate a new set of costs and benefits (different from the pre-existing set) distributed between and among local food producers, Food Services and other parties.

As seen in Figure 1, *situation*, *structure*, and *performance* interact and influence each other over time. For example the *situation* and *structure* variables interact with *performance* held constant: as any given situation changes, the structure of the transaction will change in response. Similarly, with performance still held constant, when a structural change occurs, characteristics of individuals, goods, and environments engaged in transactions will change over time. The same process can be applied when either situation or structure are held constant: a change in any given performance goal will stimulate a change in structure, situation, or both in order to achieve that goal.

SSP application to this study

We now understand that institutions can be either formal or informal; are dynamic and interdependent, co-evolving over time and space; and influence the distribution of costs and benefits among individuals and organizations. It is useful to utilize the transaction as a unit of analysis because it is a moment during which the influence of institutions on individual and collective behavior is made clear. Also, we now understand the definitions and interactions of the situation, structure, and performance variables, or the SSP model.

In this study, I analyze the specific transaction(s) about local food between Food Services and local food producers at the present time. A different transaction occurs for each producer and is unique in that each involves different individuals and is shaped by context and history specific to those people.

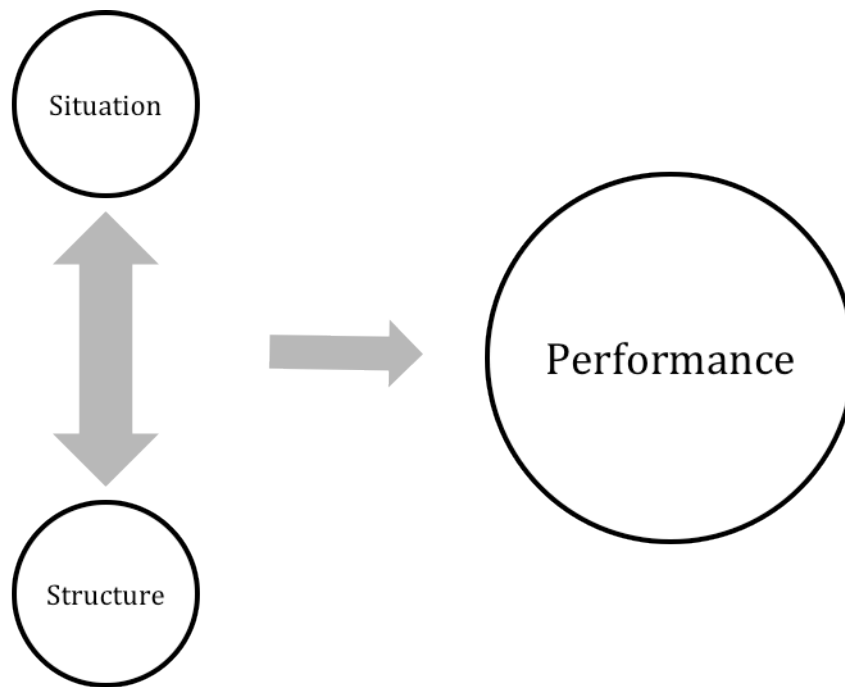


Figure 2, Framework for this study

In this study, *performance* is held constant and refers to the assumed goal of increasing Food Services' local food sourcing. While over time institutions have evolved and changed to allow the

emergence of this goal from the perspective of local food producers, this study will analyze only the present time. Evidently, the structure or situation that shapes the current transaction of local food products is not sufficient to meet this goal: local producers have not increased the sale of their products to Food Services. This study begins to explore what is preventing the achievement of the performance goal. Why has Food Services not increased local food purchases (institutional change) when preferences have reflected the desire to do so? I refer to the reasons the situation and structure have not adapted as “barriers to change.”

Depending on the assignment of the independent variable, either the situation or the structure can be perceived as a barrier to achieving the performance goal; refer to Figure 2 above, which depicts the framework for analysis when *performance* is held constant. If Food Services and local food producers were to choose to keep the current structure, a set of situational variables would surface as barriers to achieving the performance goal. If the parties agree to change the current structure and honor the current situation, an analysis of the structural barriers would be necessary to understand why the performance goal is not being achieved. In other words, depending on the assignment of independent and dependent variables, different categories of barriers surface. I will refer to this difference in chapter 4 during the discussion of my findings.

In this study I identify the variables, as they exist at the present time, which are preventing the achievement of this performance goal, as they have been communicated to me during key informant interviews. Some of these variables are situational and some are structural.

Research questions

1. Do barriers to vending locally produced food to Food Services exist from the perspective of local food producers?

2. If so, what barriers exist to vending locally produced food to Penn State University's Food Services unit and how are they manifest?
3. Why do these barriers exist?

Hypotheses

1. Local food producers are experiencing barriers to selling their products to Food Services at Penn State University.
2. These barriers include high transaction costs among other informal and formal institutions.
3. These barriers exist due to path dependent behavior, miscommunication, and collective economic ideology prioritizing price.

The above research questions and hypotheses are used to guide my research. The following chapter outlines my research design and methodology, explaining how I structured this study to effectively answer my research questions and meet my objectives.

Chapter 3

Methodology

This chapter outlines the methodological approaches I used in conducting this study, the reasons I chose these methods, their limitations, and how I address those limitations. I used narrative inquiry techniques to analyze qualitative interview data from key informant interviews within the broader context of case study methodology.

Research design

Most broadly, this research is a case study of the local producers' interactions with Penn State's Food Services administrative unit and the local and regional food systems. The more specific aim of this research is to begin to understand the perspectives of local food producers in their attempts to sell products to Penn State's Food Services unit, focusing on barriers they are experiencing. This research is structured as a case study utilizing key informant interviews and narrative inquiry techniques.

A case study, as defined by Yin (2009):

is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, *especially when the boundaries between phenomenon and context are not clearly evident...* The case study inquiry copes with the technically distinctive situation in which there will be *many more variables of interest than data points*, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical propositions to guide data collection and analysis, (18, emphasis added).

As I understood the nature of institutions, both formal and informal, that shape this phenomenon, case study methodology provided depth and captured social context and interactions between individuals and those contexts. Inclusion of context and recognition that in this specific case, there are “many more variables of interest than data points” (Yin, 2009, 18) has been essential in this research.

A main objective of this study is to provide more detailed information for informing future research. To produce a study that could lay this groundwork, I needed to develop a design that allowed me to capture as many factors that contribute to and influence the transaction as possible. Case studies allow for better understanding of issues, sharpen questions, and guide the direction of future research by incorporating context and other variables that other quantitative research models overlook.

The opportunity for richness and depth that the case study method provides was also essential for understanding the nuances of informal institutions that act as barriers to selling local food products. Informal institutions are subtle influences on behavior and decision-making. These institutions are impossible to grasp through quantitative methods and require deep investigation into the phenomena from multiple perspectives. As Feagin (1991) suggests, case study methodology:

provides information from a number of sources and over a period of time, thus permitting a more holistic study of complex social networks and of complexes of social action and social meanings...it can offer a researcher empirical and theoretical gains in understanding larger social complexes of actors, actions, and motives, (6-8).

The case study approach allowed me to capture and “retain the holistic and meaningful characteristics of real-life events—such as individual life cycles, small group behavior, [and] organizational and managerial processes,” all elements of, and influenced by, context (Yin, 2009, 4). Case study methodology allowed me to collect data that illuminated the complexity of the interaction between Food Services and the local and regional food systems.

This methodology, as previously emphasized, incorporates nuanced social and economic interaction. Context (social, political, environmental, historical) shapes the interaction between parties,

dictating how things came to be this way, and influencing how things will be in the future. Social and economic interactions themselves are involved in a feedback loop between informal and formal institutions over time, and are therefore essential for analyzing a phenomenon. Feagin (1991) writes: “A case study...can permit the researcher to examine not only the complex of life in which people are implicated but also the impact on beliefs and decisions of the complex web of social interaction,” (9). Case studies capture environmental context and permit the researcher to examine social phenomena in the space and context in which they occur rather than removed from that context.

Narrative inquiry

I chose to conduct and analyze the interview data through a narrative inquiry approach. Also referred to as storytelling, this approach was appropriate for this research for multiple reasons. Stories are the fundamental frame through which humans experience the world and therefore are the easiest method for humans to communicate experiences, beliefs, and perceptions (Fischer, 1984). Black (2008) also acknowledges storytelling as a useful tool for deliberation, allowing storytellers to construct collaborative space for problem solving. Narratives capture the complexity of a story, allowing for rich, nuanced descriptions unique to the individual and making them a good tool for case study analyses. Given the opportunity to tell their story, each interviewee had a method of communicating the context of their experiences, providing more insight into perceptions, behaviors, personal values, and ideologies. The narrative approach allowed me to capture culture, perceptions, ideas, history, and other nuanced information from a personal perspective (Polkinghorne, 1988).

Narratives provide a useful structure for collecting data to be analyzed through an institutional and behavioral economics lens as well. Shank (2006) describes personal narratives as a social process: “Stories are told as a means to link private and public discourse, thus connecting individuals not only to the immediate social context, but also to broader social and cultural contexts existing beyond the

immediate storytelling setting,” (714). Narratives acknowledge the evolutionary nature of institutions and provide an opportunity to incorporate this evolution into research findings, rather than separating the individual from his or her place in the broader context.

Abma (2003) describes the usefulness of storytelling - generating a narrative - with respect to organizational learning. Individuals and organizations are engaged in a rapid pace of change, causing them to continually learn and adapt. For example, Food Services and local food producers are in the process of adapting to a new interest in increasing local food sourcing. Abma (2003) suggests that storytelling is a helpful tool for this type of organizational learning because “[stories] enable participants to...talk genuinely about their experiences, concerns and the dilemmas they face...they enable participants to talk about issues that are taboo...stimulate the identification and clarification of underlying values, beliefs and assumptions,” (235-236). In this way, providing an opportunity for interviewees to share their stories simultaneously allowed them to share otherwise unspoken information and detail relevant to their transactions with Food Services.

Additionally, narrative inquiry is useful in solving problems experienced by local food producers. Shank (2006) discusses how storytelling and narrative can be used to foster collaborative learning and problem solving. Shank (2006) writes: “stories [are] mirrors of practice and windows into possibility,” (715). Narratives can illuminate opportunities for new actions that were otherwise unrecognizable. “When viewed as a social process...storytelling is a means of helping participants form new patterns of interaction, make sense of...practice, and imagine new practical and conceptual alternatives,” (Shank, 2006, 720). By incorporating depth, unique perspectives, and other complexities, narratives can help reveal opportunities for problem solving.

Narrative inquiry has also informed my method of analysis. This narrative interview structure permitted the interviewees to share the specific barriers they encountered, of which I took note, but also broader and sometimes subtle influences on the overall situation. Analyzing these stories allowed me to understand cultural and historical influences on interviewees’ claims interviewees, and to observe

historical influences on the situation. As Riessman (1993) explains: “Narratives speak in terms that seem natural, but we can analyze how culturally and historically contingent their terms are” (5). My analysis of the narratives for cultural, social, political, personal, historical variables and influences was the most useful method for supporting my research objective.

Procedure

Through IRB approved methods, I conducted five semi-structured, key informant interviews. Key informants were selected based on their specialized and detailed knowledge of the subject matter. To identify additional key informants, I utilized snowball-sampling methods in combination with purposive sampling techniques. Individuals who could provide the most insight and were the most familiar with the process of vending to Food Services were selected. Two of the key informants are produce farmers located within a fifty mile radius of State College. Three other informants included a local business owner; local foods advocate whose son is a produce farmer; and another local food advocate. To focus my research solely on the perspective of local food producers and not Penn State Food Services, I did not knowingly interview any individuals employed by Penn State University. University employees have unique perspectives regarding the barriers to localizing the food system that are a function of the university’s priorities, policy, history, and culture. I focused on the perspective of local food producers, who carry their own sets of priorities, history, and culture.

Pinning down interviewees proved challenging due to limited time and resources. Schedules rarely matched, and due to the fall harvest season, multiple farmers were unwilling to spare time for an interview. I was able to schedule and conduct five thorough interviews.

Using the narrative inquiry approach, each interviewee was asked to share his or her story of selling food products to Food Services and to describe what would have made the process easier. In the case of the local food advocates, I asked interviewees to share their knowledge and observations

regarding the process of increasing Food Services' local food sourcing. Each interview lasted 30 to 90 minutes, and each was recorded and listened to for analysis purposes. Two interviewees also provided informative documentary evidence, which informed my analysis of the reasons the barriers exist.

I listened to each recording first to identify the barriers each interviewee proposed. These barriers are listed in the following chapter. I listened for allusions to things that might have made their experiences easier, explicit complaints, personal biases or values, references to formal rules, and any other description of an obstacle to selling products to Food Services from the interviewees' perspectives.

Additionally, I listened to the recorded interviews for reasons these barriers exist, such as path-dependent behavior, cultural influence, formal laws or regulations and relationships between groups or individuals. Some of these barriers were specifically articulated by interviewees, and are provided in a list in the following chapter. Other barriers I observed are a result of my personal interpretation of the data as it applies to the broader context of increasing local food sourcing in the Food Services unit. These observations inform recommendations for future research and action, found in the final two chapters.

Limitations

Commonly identified shortcomings of qualitative research include limited generalizability and potential researcher bias. The findings of this study will not be used to generalize to any population, but rather to sharpen research questions and generate hypotheses for further study and action on a very specific and geographically isolated topic. This exploration into the perspective of local food producers lays a foundation for further inquiry, but does not generate findings applicable to the population of local food producers as a whole. Because of this exploratory nature, generalizability is not a goal of this research.

Additionally, because the researcher is intimately involved in every step of qualitative research such as this, there is opportunity for biases generated by the researcher. As Blalock (1970) writes: "One

of the fundamental difficulties with participant observation is the lack of standardization usually involved. Each social scientist is like a journalist writing his own story; there is little guarantee that several such journalists will report the same story,” (44). In fact, the open-ended nature of qualitative research and personal interviews prevented me from imposing restrictions on interviewee responses that are present in more focused questions common to surveys or quantitative research. One area of potential researcher bias, however, is present in data analysis. For my purposes, I listened to the interviews for explicit explanations of barriers as articulated by the interviewees. Further interpretation of their stories is presented in the form of hypotheses: proposed questions to inform further research rather than statements of truth. As discussed in “Democracy and Higher Education,” the stories provided are not firm knowledge claims or objective truths, and are not treated as such in analysis (Peters, Alter & Schwartzbach, 2010). These stories are interpretations from one perspective and are reported that way; therefore researcher interpretation bias is minimized.

Following is a description of results, a discussion of the findings, a summary, conclusion, and set of recommendations for future research and action.

Chapter 4

Findings and discussion

Organization of this chapter

This chapter opens with a description and discussion of four barriers interviewees reported having experienced while trying to sell products to Food Services. This list specifically pertains to my research objectives, which solely focused on the perspective of local food producers. However, during the interview process, information regarding the broader context surfaced, illuminating other factors that shape the phenomenon of interest. Following the list of direct barriers is a broader discussion of these contextual elements and considerations that shape the overall transaction of local food products between local producers and Food Services.

Direct barriers

During the interview process, it became clear that local food producers are encountering obstacles to selling their products to Food Services. I refer to these obstacles as “direct barriers” and describe each in greater detail below. These include, *the nature of the product, eligibility requirements, uncertainty, and non-responsiveness.*

1. Nature of the product

The nature of the product refers to the qualities of the individual products that producers would like to sell to Food Services. Products discussed in the interviews I conducted were produce, baked goods, and pasta. Produce is available seasonally; the baked goods and pasta products were described as specialty products by the producer, meaning they are designed to be unique products that differ from more conventional baked goods or pasta products and are sold at a relatively higher price and produced in relatively smaller quantity.

These product characteristics are barriers for multiple reasons. Three interviewees discussed the challenge of seasonality when selling produce to Food Services as a small-scale produce farmer. Menus in the dining commons do not reflect seasonality of available produce; Food Services requests the same produce products regardless of season (e.g. the dining commons purchases tomatoes in February even though tomatoes are a summer crop in Pennsylvania). Small-scale farm production in the surrounding region is typically restricted by season, causing produce farmers to have a difficult time producing certain crops outside of their season of production, making them unable to provide the supply of produce Food Services demands during the school year.

Additionally, the specialty baked goods and pasta products, one producer explained, were not suitable for serving in the dining commons. Designed to be higher quality and price, these specialty products are not produced in large enough quantity or a low enough price to be affordably purchased and sold to thousands of students each day.

2. Eligibility requirements

There are a number of requirements to be certified to sell products to Food Services that include certifications for production, insurance requirements, and delivery guidelines to the University Park campus. One interviewee was able to provide documents and notes that articulated some of these requirements. They include compliance with applicable USDA, FDA, PA Bureau of Food Safety

Regulations and/or other state inspection agency requirements, compliance with Penn State University's terms and conditions, and the inclusion of an electronically downloadable temperature data logger for cold deliveries. Additional guidelines for delivery exist, but were unknown to the producers I interviewed. Insurance requirements include a policy that includes indemnification, Commercial General Liability insurance not less than \$1,000,000 per occurrence, The University listed as an Additional Insured, Automobile Liability insurance not less than \$500,000 per accident, Statutory Workers' Compensation in accordance with governing law (or qualification as a self-insurer), and \$500,000 per accident of Employers' Liability insurance (Penn State Housing).

Fulfilling these requirements is challenging for local producers due to the time and resources needed to understand and comply with them. Certain requirements, such as USDA, FDA, PA Bureau of Food Safety Regulations and some insurance requirements, local producers already comply with, to sell at farmers markets or other venues. However, many of the additional requirements are burdensome to local producers who have limited time and monetary resources available to comply. One interviewee referred to these as "red tape" and explained that becoming certified to sell to Food Services involved excessive amounts of paperwork that most producers did not have the time and resources to complete.

Two interviewees had gone through the process of becoming certified vendors and explained that they did not believe other producers would have the same amount of time and resources to commit to going through the process. One interviewee expressed that the process of completing these requirements was "mind-blowing to people," and that not only does completing the requirements take time and resources, but finding out exactly what the requirements are is an additional challenge that requires unavailable time; "You've got to make it as easy as possible for the farmers."

The existence of these requirements is not a barrier, rather the time and resources needed to understand and comply with the requirements is burdensome for local food producers. As a result, many farmers are deterred from attempting to become certified to sell to the university, long before attempting to make a sale.

3. *Uncertainty*

Uncertainty in this context refers to the lack of assurance that an individual producer will be able to successfully complete a transaction with Food Services. All interviewees asserted that the uncertainty embedded in Food Services' purchasing system resulted in a high level of risk that deterred local food producers from trying to make a sale. As described by producers, the purchasing system, also referred to as the "low-bid model," functions as follows: Food Services sends out a request online twice each week specifying a product and quantity that the unit wants to purchase. Producers then each submit an anonymous bid, which includes the product, price, and quantity that they are willing to sell. After the bids are submitted, Food Services purchasing employees select the bid with the lowest price. There are no formal contracts that secure future sales, and all bids are blind and anonymous.

Small-scale farmers struggle with the lack of security involved in this purchasing system. As one interviewee shared when discussing whether local producers were interested in submitting bids to Food Services: "The sticking point as I recall...was that there's no guarantee to a farmer that they could actually make a sale." Another interviewee stated: "[Farmers] don't have time. There's no guarantee that they'll get anything. They can't count on it...Farmers need security." One interviewee shared: "What if we scale up and they don't buy?...[T]hey don't need to buy [our] product."

Another interviewee explained the risk as such: A farmer may choose to plant a field of tomatoes with the intention of selling them to Food Services, utilizing valuable time and resources. The farmer may submit a bid through the purchasing system with no understanding of a potentially winning price or guarantee her or she will win: "You cannot go and find out what they're paying for tomatoes, you have to submit a bid and then they'll tell you... and if you did [plant tomatoes with the intention to sell to Food Services], and you put the bid in, you might not get it!...it just [is] not attractive."

In the bidding model, producers submit bids for items they have already produced. Small-scale producers need to plan their production to meet the demand needs they face, meaning that they typically produce a pre-requested quantity. At a small-scale, producers are unwilling to designate a quantity of produce prior to planting for sale to the university if they are not guaranteed a sale.

4. *Non-responsiveness*

One interviewee I spoke with had been in regular contact with Food Services over the course of a year regarding a potential partnership for the sale of his products. This individual had completed all eligibility requirements and had gone through the bidding process. As this interviewee described, over time “communication stalled out.” This individual had sent in a bid, lost, and attempted to communicate with Food Services to find out what the winning bid was (this was something Food Services had assured them they would reveal). This individual had been in regular contact over email with individuals employed in Food Services, and after the producer requested information about the winning bid, the Food Services employee stopped responding to emails.

Why this individual stopped responding is unknown, but the sudden cessation of communication led to skepticism on the part of the producer. Prior to this experience, this interviewee was hopeful about developing a partnership with Food Services. This individual was less optimistic after the lack of communication: “If they’re gonna blow me off then I don’t have time for that.”

Discussion

In addition to the aforementioned direct barriers, a set of contextual themes surfaced during the interviews that shape and influence the transaction. To review, this study focuses on the transaction of local food products between local producers and Food Services at the present time under the assumption

that the performance goal of both parties is to increase the quantity of Food Services' local food purchases. Currently, local food producers are selling their products to a set of customers, including farmers market shoppers, community supported agriculture shareholders, and small business customers. Food Services buyers purchase food products from a given set of unknown suppliers, which might include aggregators or individual large-scale producers. This study is the beginning of an attempt to take a closer look at the circumstances and context influencing a change in current purchasing and production behavior toward increasing transactions between local food purchasers and Food Services.

We have already begun to understand this phenomenon by outlining the direct barriers local food producers are experiencing when trying to achieve their performance goal, as articulated above. As expected, there are many other variables, considerations, and contextual elements that shape this phenomenon. Those that I have gathered from key informant interviews I discuss below in greater detail. This discussion is intended to outline the current circumstances, articulate unknowns, and lay the foundation for further research and informed action.

The purchasing model, economies of scale, and the definition of “local”

Meetings were held in 2012 during which representatives of Food Services and local food producers discussed the potential to engage in transactions of local food products. During these meetings, representatives of Food Services emphasized their desire to increase local food purchases (Watt, 2012). The minutes from these meetings informed the assumption of this study that Food Services and local food producers shared a common performance goal of increasing Food Services' local food purchasing; however, evidence obtained from key informant interviews suggests that Food Services has multiple performance goals, some of which are prioritized over increasing local food purchasing.

Food Services' purchasing system is an anonymous bidding system. Recall that it functions as follows: an unknown employee of Food Services posts requests for products twice a week. Producers then

anonymously submit bids, which include quantity and price. The bidding is blind, meaning producers do not know what the competing bids are and must guess what they believe will be a winning price and quantity. In this system, the lowest-priced bid wins.

From this system, we can infer that one performance goal of Food Services is to keep costs as low as possible, evidenced by the priority to select the lowest bids and anonymity that encourages competition. As one interviewee shared: “Since they’re still sort of stuck in the old model of, the bidding model, of lowest price wins, not quality, then quality and local will never get into the consideration matrix, if you will. It’s all price.” This system prioritizes price before locality, freshness, organic production practices, or any other quality of product.

It’s also important to consider how other (non-price) qualities of products are defined. If Food Services were to agree to prioritize local products, what definition of local would they use? An undergraduate and a graduate student drafted a 2013 memo to employees of Food Services requesting a redefinition of “local” as it pertains to food purchasing. Currently, Food Services defines local as “grown or produced within the state of Pennsylvania.” This memo requested that the definition be altered to a three-tiered set of criteria:

“Tier 1: USDA Certified Organic + Local (within a 55 mile radius of UPark Campus)

Tier 2: Local (within a 55 mile radius of UPark Campus)

Tier 3: Sourced from within PA,” (Hoh and Engle, 2013).

Defining locality has critical implications for Food Services’ purchasing behavior. If the definition were to alter, some current food purchases by Food Services that are considered local would no longer meet the local standard. All parties need to better understand the benefits and costs of redefining local, for local food producers, students, Food Services, and the broader community. There are potential benefits in lower energy costs of shipment, but also costs such as increased transaction costs from dealing with multiple small-scale farmers in a smaller geographic region. It is necessary to understand how the

shift to this definition would alter the current distribution of benefits and costs (performance) and whether that is desirable, for the individuals and groups with control of the purchasing decisions.

Prioritizing lowest prices has implications beyond the cost of products purchased. In the bidding system, Food Services is able to purchase from a smaller number of suppliers who can supply larger quantities. To supply the large demand of Food Services with local food products from small-scale farms, Food Services would need to purchase from multiple producers, increasing transaction costs of purchasing, communication, shipment, and eligibility paperwork processing. In other words, from an economy of scale perspective, purchasing from local and small-scale producers is less cost-effective than continuing to source from fewer, larger producers.

While purchasing from a small number of suppliers assists in reducing transactions costs, an alternative perspective, and reason to increase local food purchasing from a variety of suppliers, is the relatively higher resiliency of redundancy (the opposite of brittle economies of scale). Having many small, widely distributed suppliers can contribute to the food system's ability to cope with the loss of any one supplier, rather than with the loss of one large supplier upon whom the entire system depends. This can reduce risk, and consequently costs, in the longer term.

Understanding some of the constraints on Food Services purchasing can help clarify the unit's performance goals. What are Food Service's current performance goals? How were they developed? To what extent are local food purchases prioritized? Organic food purchases? If local food purchasing is a priority, who decided that, and what is that individual's relationship to Food Services and Food Services' performance goals? The performance goals of Food Services shape their purchasing behavior and system. If lowest price is the highest priority, as it appears to be, the unit will structure its purchasing model to facilitate that goal. However, if other performance goals are important, such as purchasing organic, seasonal, or local produce, we need to understand how to more effectively incorporate those priorities into the current purchasing system. For example, could Food Services incorporate categories for organic, local, and seasonal products in their bidding system and prioritize them? As of now, the

purchasing system indicates the priority of a low-price performance goal. It is necessary to understand whether this is the only performance goal of the unit, if there are others, and whether the current purchasing system can be effective at achieving those other performance goals.

Complementary to these questions is further understanding of the nature and flexibility of the purchasing system. How and by whom has this system been developed over the years, and what performance goals has it been designed to prioritize? To what extent is the system able to accommodate the needs of local producers (price and sale security) and prioritize local food products over cheap food products? How do the interpersonal, political, and work relationships within Food Services as well as between and among the Food Services unit, Auxiliary and Business Services, and the University at large influence the performance goals of the unit, the ability to change the purchasing system, especially to prioritize local food products? Another way to frame these questions would be: if the Director of Food Purchasing and/or Food Services wanted to increase local food purchases, what obstacles would he or she experience, either political, interpersonal, economic, social, or otherwise? Individuals whose role it is to procure product (whatever that may be) are often incentivized through reducing cost. Purchasers may receive individual monetary bonuses based on performance to budget; the whole incentive structure for the department may have to be restructured in order to greater prioritize local food purchases. Answers to these questions will inform action and engagement efforts in the future.

An obstacle Food Services may experience includes the loss of valuable relationships that exist with current suppliers. The existence and nature of these relationships is unknown. Understanding the consequences of changing the existing relationships between current suppliers and Food Services contributes to understanding potential reasons Food Services purchasers are hesitant to change their current purchasing behavior.

These questions address the obstacles to changing the current structure of purchasing into a purchasing structure that could prioritize local food purchasing. Institutional change is a complex process, and involves political, social, and historical influences. To change the formal institution that is

the purchasing system, it is necessary to understand the dynamics of how the system was developed and why, who is involved in the construction and management of the system and why (distribution of benefits and costs), as well as what the most effective methods are to assess its efficacy and to catalyze change.

Uncertainty

Risk exists in any transaction and is generated by uncertainty. Institutions structure the distribution of that risk. An integral question when designing institutional structures of a transaction is “who should bear the risks?” As discussed previously, the current purchasing system increases risk to small-scale producers by generating uncertainty; the lack of purchasing contracts and concrete production requests is a deterrent to producers who fear a loss of valuable income if they were to lose a bid. The purchasing system is a useful tool for Food Services to protect *against* uncertainty: it ensures competitive and low prices and necessary quantities. But it increases risk to the small-scale producers who have trouble competing against large producers and wholesale aggregators who benefit from economies of scale.

Similar considerations are relevant when discussing the eligibility requirements to be a vendor to Penn State. While an impediment and deterrent to local producers, from Food Services’ perspective, the eligibility requirements buffer against uncertainty by providing protection against potential liability or other legal consequences. To generate a system that facilitates further transactions between local producers and Food Services, it is necessary to further understand not only the reasons for the existence of these requirements but also how flexible Food Services is to accommodating the needs of small-scale producers. In other words, is there a system that can be designed to make the eligibility process easier for local, small producers, and would Food Services be willing to help design such a system?

The role of students

Student involvement in this transaction surfaced as an important consideration and influence on the purchasing behavior of Food Services. The role of students in this transaction is uncertain. What is the role of student demand; what are students' performance goals and how do they influence Food Services' purchasing behavior? How is student demand currently measured and are these methods effective? In other words, if it were found that students desired local food products in the dining commons, would Food Services be more likely to purchase them? What is the most effective method for communicating that demand? Recent discussions during the Food.edu event put on by the Sustainability Institute on the University Park Campus in 2013 revealed that Food Services gauges student demand by calculating where the most students purchase food on campus each day, saying that students "vote with their feet." Is this the most effective way of gauging student demand? Is it possible for students to represent their desire for local food products through this method, or is there no current on-campus local food destination at which their feet can vote? More research must be done to understand the demand of students and the impact that demand has on Food Services' purchasing behavior.

Another element to consider is, how much cost would fall to the students? If costs increase due to higher-priced local produce and other food products, what costs would fall on the students and how much would it be? Recent local meals served once a semester have each involved the same upcharge of seven dollars, the price increase Food Services adds to the meals to cover the higher costs of local products. Why has the upcharge price not fluctuated with the changing price of various goods over time? Why has it remained the same price despite changes in menus and menu ingredients? If students were to bear the increased costs of local products, how is this upcharge being determined and does it truly reflect the price of the local products? To what extent do current real prices reflect the price of food products? This is important to consider if student opinion is going to be used to inform purchasing behaviors; students would need to understand the amount of additional money they would be paying for local products, and

the increase in price should reflect the actual difference in product costs, not arbitrary upcharges or unfounded estimates.

Time

The passage of time has thus far impacted these transactions significantly. As evidenced in interviews, as more time passes without any visible progress toward increasing local food sourcing, producer skepticism regarding Food Services intentions increases; if the unit is not changing behavior from the perspective of local producers, optimism that any change will take place in the future diminishes. The passage of time without action compounds the issue by generating skepticism and gossip that prevent further open, supportive collaboration, discussion and problem solving among relevant parties.

Additionally, students historically have been involved in initiatives to increase the presence of local food products on campus. Students are typically on an average four-year cycle in State College, leaving after their undergraduate or graduate educations. As time passes, students continue to come and go, and new students must learn who the actors are and what the situation is before they can engage in any effective work. In this way, the passage of time compounds some of the barriers preventing the incorporation of local food products into the dining commons.

Closing

These interviews were enormously informative. The above information is invaluable to the process of deconstructing the elements of the exchanges between Food Services and local producers. While complex, this information is necessary to unpack and document, to develop a foundation for further inquiry and action.

Chapter 5

Recommendations

Increasing local food purchasing at Penn State University is a priority for many members of the surrounding community, particularly local food purchasing for meals served in the dining commons. This study explored reasons why local food products have not yet been incorporated into the dining commons on a meaningful scale from the perspective of local food producers. Using qualitative research techniques including key-informant interviews and narrative inquiry, to examine a particular case situation, I explored barriers local food producers encounter when trying to sell their products to the Food Services unit at Penn State University.

After interviewing five knowledgeable individuals, I documented a set of four direct barriers to selling local products to Food Services: *the nature of the product*, *eligibility requirements*, *uncertainty*, and *non-responsiveness*. These barriers are nested in a broader context that includes consideration of performance goals and institutional and social interaction.

Much more research must be conducted to effectively increase the quantity of local food used in the dining commons. A myriad of unknowns still exist. Following is a list of objectives for future research that will complement this study and contribute to the overall goal of increasing the quantity of local food products served in the dining commons.

Objectives for future action and research

1. To understand what barriers Food Services is encountering when attempting to locally source food products.

In essence, this objective calls for conducting this study from the alternate perspective of the Food Services unit. If Food Services purchasers want to increase local food purchases but are unable to, we need to understand the constraints to identify opportunities for intervention to remove the barriers. Important to interview are the Director of Residential Dining and the Director of Food Purchasing, as well as other employees of the university who have specialized knowledge of the constraints blocking increased local food sourcing. Perspectives of individuals such as these will be imperative for designing future action regarding these topics and will help develop collaborative efforts between the university and producer communities.

2. To understand the performance goals of Food Services both as a unit and as an aggregation of individuals.

As evidenced above, it is unclear whether the initial assumption of this study, that the performance goal is to increase local food purchases, is shared by Food Services as a unit. Food Services may want to increase local food purchases, but may be constrained by other, higher-priority performance goals (e.g. keeping costs low). Understanding the development of, and influences on, the current performance goals of Food Services both as a unit and as a collection of individuals will support the process of adapting transactional behavior toward increasing local food sourcing. Important to interview are the Directors of Food Purchasing and Residential Dining, as well as employees of Auxiliary and Business Services, the umbrella organization of Food Services. This research will allow us to more fully understand not only the priorities and goals of Food Services, but also whether there are different goals in different parts of the unit. Additionally, it would be helpful to understand the university's role in structuring the purchasing system; there is a chance that Food Services is required to follow a university-wide policy and, as a unit, has little ability to change their system. This research objective will also help begin a process of collaboration in which the performance goals of Food Services and those of local food

producers can be incorporated into a newly designed purchasing system that prioritizes local food purchases.

3. To understand the current methods of engagement between local food producers, Food Services, and students, and whether these are effective methods for meeting the performance goal.

Effective interaction between these parties is essential for successfully increasing local food sourcing. It is yet unknown what the current methods of engagement are between and among each of these groups and whether those methods facilitate or impede progress toward that goal. Potential efforts at effective engagement could include surveys to students, focus groups conducted with students, local producers, and employees of Food Services, and/or designing and maintaining an online system of communication between local producers and Food Services employees.

4. To explore the efficacy of alternatives to the current purchasing system.

This objective will be useful in designing a purchasing system that can facilitate transactions between Food Services and local food producers under the given constraints. Options to consider include contractual agreements prior to planting, local producer prioritization, and more flexible pricing options. Additionally, it may be helpful for Food Services to designate a specific employee to handle transactions with small-scale, local producers, potentially reducing transaction costs by coordinating communication and purchasing activities.

5. To understand the experiences of individuals working under similar constraints, but in different circumstances, to locally source food products.

This will inform any future initiative to increase local food sourcing. Currently, the Food Service Director of the State College Area School District is working to incorporate local food products into the school district's food system. While not functioning in an identical context, the State College Area School District and Penn State's Food Services face similar economic and political constraints. By working with and learning from successful projects in similar contexts,

collaborative efforts at localizing food systems can continue and support each other. Another method is to identify other Big 10 universities that are more successfully sourcing local food products and learn how these purchasing programs are structure and used.

6. To understand the role of students.

This objective will aid in understanding how student demand and preferences influence the quantity of local food products purchased by Food Services. Several interviewees referenced the need for students to express greater demand to influence Food Services' purchasing behavior. What is unknown is how influential students are on the purchasing decisions of Food Services. More specific research objectives may include understanding methods of student engagement regarding purchasing decisions, understanding student preferences regarding local food products, and understanding the efficacy of current processes for gauging student demand.

Overall, we cannot fully understand the barriers to increasing local food purchases by Food Services with the current level of documented knowledge. Furthermore, effective and informed action to increase local food purchases requires more research. There are many unanswered questions, some of which are listed above, that must be answered prior to initiating more effective action steps. This study establishes a model for more clearly understanding and documenting existing barriers to the purchase of more local food products for the dining commons at Penn State University. It lays the foundation for future action and research, informing and shaping sustainable food initiatives at Penn State.

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ACADEMIC VITA

Grace Emmerling
813 Old Boalsburg Rd, State College Pa, 16801
grace.emmerling@gmail.com

EDUCATION

Pennsylvania State University, University Park, Pennsylvania; Schreyer Honors College
Majors: Community, Environment, and Development with a focus in International Development;
Economics

EXPERIENCE

Research Assistant, Penn State University Department of Agricultural Economics, Sociology and Education **2012-2014**

- Conducted qualitative and quantitative research alongside a team of undergraduate students, graduate students, and staff while working under professor Theodore Alter; 15 hours per week

Volunteer, Friends and Farmers Food Cooperative, State College, Pennsylvania **2013**

- Published an Op-Ed piece in local media source describing and advertising the formulation of the cooperative
- Assisted with a fundraising dinner at a local farm preparing, serving food, and cleaning
- Acquired student volunteers

PROJECTS

CED Alumni Network **2014**

- Designed an alumni network for the CED undergraduate program alongside a team of fellow students

CED Experimental Course **2013**

- Designed and conducted a community engagement-focused course for the CED undergraduate program

The Real Food Challenge **2013**

- Worked alongside a team of undergraduate students to incorporate local food into the food system at Penn State University

SKILLS

Lila Yoga Teacher Training

In progress