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The Relationship Between Food Retailers and Distributors

Madison Seigler

ms135407@umconnect.umt.edu

Julia Anderson

ja137869@umconnect.umt.edu

Aidan Morton

am132763@umconnect.umt.edu

Cassandra Williams

cw155086@umconnect.umt.edu

Victoria Bloomgren

vb134802@umconnect.umt.edu

See next page for additional authors.

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Recommended Citation

Seigler, Madison; Anderson, Julia; Morton, Aidan; Williams, Cassandra; Bloomgren, Victoria; and Tutty, Jacob, "The Relationship Between Food Retailers and Distributors" (2022). *Undergraduate Theses, Professional Papers, and Capstone Artifacts*. 391.

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Author

Madison Seigler, Julia Anderson, Aidan Morton, Cassandra Williams, Victoria Bloomgren, and Jacob Tutty

A Global Leadership Initiative Capstone Project

Produce:

The Relationship Between Food
Retailers and Distributors

*Written by Julia Anderson, Victoria Bloomgren, Aidan Morton,
Jacob Tutty, Madi Seigler, and Cassie Williams
5-10-2022*

Abstract

Our understanding of the science of anthropogenic climate change and its immediate and indirect impacts has grown within the last decade. Alongside an increase in concern for the inequities within the industrialized food system, climate change is impacting agriculture and the communities that depend on it in myriad ways. These challenges have catalyzed investment in sustainable agriculture, “eat local” food movements, and rethinking of all aspects of food systems, including consumers, producers, retailers, and distributors. The body of literature on food systems primarily focuses on the connection between consumers and retailers; however, there is a notable absence of literature on the relationships between food producers, distributors, and retailers, even though most consumers rely on this critical intersection to procure food. A great deal of social science research has explored farmer networks, consumer behavior around sustainable food, the marketing of more sustainable food products, and large-scale commercial food systems. Our research explores relationships between retailers and producers in western Montana to better understand how these two groups influence each other. We conducted one-on-one interviews with five retailers and five producers/distributors to better understand the relationships and influence that arise as these two critical stakeholders play their roles in a regional food system. The purpose of our research is to highlight the interconnectedness of producers, distributors, and retailers and how they directly influence each other. Additionally, our research helps to identify issues in more efficiently connecting these parties.

Keywords: distributor, produce, organic, local producer, customer, shrink, food systems, food, green, sustainability, retailer, producer, farmer, agriculture, grocery store, consumer, produce manager, western Montana, procurement

Introduction

Food production is one of the most important industries on the planet and it is necessary for our survival as humans at this point in time, as hunter-gatherer subsistence living is no longer a possible option to sustain the planetary population. The food industry is an anthropogenic system that has many detrimental impacts on the environment due to the ways in which large and moderate-scale production is typically done. According to a study by Liu et al. (2018) “water quality issues associated with agricultural runoff are the biggest concern”, but there are other environmental concerns related to agricultural production as well. Producers are adapting to climate change, not only to participate in growing practices that are more environmentally friendly, but to meet growing demands from consumers for foods grown sustainably. Global conversations around climate change are growing daily and it is certain that we must do what we can as a species to live more harmoniously with the planet we are on. Climate change has been directly impacting food producers and so it is imperative that solutions be researched and tested for cultivating a more sustainable future. We decided gather data about the purchasing behaviors of food retailers to understand food systems better to try and identify possible solutions.

Literature Review

Agriculture is one of the most prominent ways that human activity has impacted the planet. The agriculture sector comprises twenty-six percent of greenhouse gas (GHG) emissions worldwide (Poore and Nemecek, 2018). Seventy-one percent of land on Earth is habitable, and around half of the habitable land is used for food production (Ritchie/Roser). Seventy percent of the freshwater used globally is involved in food production (FAO). Agriculture is also responsible for seventy-eight percent of eutrophication, which is nutrient runoff that pollutes ecosystems and bodies of water (Poore and Nemecek, 2018). Agriculture is a threat for 24,000 of the 28,000 species threatened with extinction (Bar-On, et. al., 2018). Further, wild mammals are outweighed by livestock by a fifteen-to-one ratio (Bar-On, et. al., 2018). Projections show that the current agricultural systems will not be able to sustain population growth, which is estimated to reach nine billion by 2050 (Chartres and Noble, 2015).

Modern-day food consumer trends reflect an increasing awareness of and concern for the impacts food production methods have on human and environmental health, observable through the increase in demand for organic food, locally-sourced products, and products sporting other "green food" labels. Organic food sales alone increased from \$1 billion dollars in 1990 to \$25 billion in 2011, making it one of the fastest growing segments in agriculture and food retail (Chang, et. al., 2014). Studies have shown that consumers are generally willing to pay significant price premiums

for the perceived benefits of said products, thus creating a marketing incentive for producers to make appropriate adaptations to their production methods in order to meet various labeling requirements to supply for this trend in food retail (QIAO et al., 2018) (Caputo, et. al., 2013). The dissemination of information identifying the agriculture sector as one of the top consumers of water resources and top environmental polluters due to significant greenhouse gas emissions has spurred consumer motivation to shift their purchasing habits in order to mitigate the effects of climate change (Liu, et. al., 2018). As consumer demand for foods produced by more environmental and health-conscious methods continues to grow, grocery stores must accommodate their inventory to consumer's preferences by sourcing more products that are marketable for their "green" qualities. Therefore, in order to understand the interplay between grocery store manager's purchasing decisions and the methods of production utilized by food producers, it's important to understand the values and motivations backing consumer's decisions that shape their influence over the direction of the food system models.

The values of the general consumer population have been found to impact agricultural regulations which help determine the level of farmers' adherence to sustainable practices because these values shape structural and private agriculture standards (Codron et al., 2014). A study conducted by Jeanne-Marie Cordon and her co-authoring researchers on the tomato markets in Turkey and Morocco clearly exhibited this relationship through the two countries' stark differences in government-imposed regulations over farming practices. Morocco's national food standards reflected the population's higher prioritization of progressive production methods through stricter safety and quality standards than their Turkish counterparts. For Moroccan farmers to be considered viable food producers in their country, they were required to comply with a variety of regulations such as water resource management, pesticide residue regulations, and more frequent farm audits. In essence, this study identified that the different populations' values surrounding food-related environmental concerns affected the policies that determined farming and ranching sustainability standards.

The different values, attitudes, and beliefs that drive purchasing behaviors are a common area of research interest from a marketing perspective. However, for our research purposes, it's important to understand consumer motivations because of their potential to affect what grocery stores stock, and therefore their potential to impact the production methods that supply our food system. Naturally, the demand for green food stems from cultural and educational factors that characterize the consumer population. Today, consumers absorb a surplus of information concerning food and the information they are exposed to or seek out is partially responsible for directing their purchasing choices. A study of consumer motivations for purchasing organic products categorized consumer's reasoning into seven themes: perceived health benefits, better taste, environmental concerns, food safety concerns,

animal welfare concerns, local economy stewardship, and ideals of organic food being "wholesome, nostalgic, and/or fashionable" (Hughner, et. al., 2007). The same study found reasons that deterred consumers from choosing organic products were the higher prices, lack of availability, skepticism of certifications or labels, insufficient marketing, and satisfaction with conventional food choices. Another study found that college students were more inclined to choose more sustainable food options when foods were marketed as local, humane, and ecologically sourced, which they called "real foods" (Nuttavuthisit and Thøgersen, 2017). A different study that focused on consumer perceptions leading to more purchasing of local food found that people valued it as more natural, delicious, and environmentally friendly (Fricz, et. al., 2020). In an article that also explored food retail trends pertaining to local food production, the researchers attributed much of consumer motivation to a new and evolving "individualized understanding of health and safety" (Guptill and Wilkins, 2002). Two researchers from the University of Naples grouped people that regularly chose alternative food options into three categories of consumers: those that did so for the quality of food and health reasons; those that wanted to support environmentally sustainable production; and those choosing products based on ethical commitment to social, economic and environmental sustainability (Annunziata and Mariani, 2018). They determined that the third, more altruistic group was the smallest group and was likely so due to the lack of the other two groups' education on the matter and advocated for education efforts to increase the environmentally ethical values and choices of each group.

These studies focus on consumer motivations for seeking out and purchasing what they perceive to be more 'sustainable' food options, but if viewed collectively they highlight the fact that purchasing behaviors and different views on food are dependent on multiple influencing factors. Our exploration of the literature on consumer values and motivations uncovered a common scholarly observation of a general lack of clear definitions of alternative foods such as organic, local, or sustainable, which inevitably affects the values that consumers attribute to them. There is a clear correlation between how informed a consumer is regarding alternative agriculture practices and their willingness to pay for alternative food products (Amoako, et. al., 2020). Consequently, one of the major reasons consumers do not choose products labeled as more eco-friendly is confusion around what various labels mean and unfamiliarity with farming standards and their actual impact (Hughner, et. al., 2007). Many consumers are uninformed about the labeling factors that distinguish products because there are some, such as "natural" that do not have any certification requirements (Kuchler, et. al., 2018) and others such as USDA organic that have strict qualification approval processes. Therefore, consumers are often confused and doubt the credibility and integrity of labels that suggest alternative, sustainable methods are being employed by producers. Consumer ability to trust or distrust in labels plays a significant role in their willingness to purchase a product for their purported qualities (Rittenhofer and Klitgaard, 2015) (Nuttavuthisit and Thøgersen, 2017).

The importance of consumer trust arose as a common theme in several articles that discussed "green" consumer purchasing behaviors. As Nuttavuthisit and Thøgersen (2017) wrote, "consumer trust in environmentally friendly or, as they are often called, 'green' products is being undermined by business scandals, unsubstantiated 'green' claims (i.e., 'greenwashing'), and inconsistent standards, monitoring, and assessment practices." Consumers can be skeptical about paying the price premiums for alternative products because they lack sufficient awareness of different label certification procedures to make informed purchasing decisions (Nuttavuthisit and Thøgersen, 2017). A research article titled, "The Importance of Consumer Trust for the Emergence of a Market for Green Products: The Case of Organic Food," discussed the phenomenon of consumer apathy towards "green" marketing claims because the qualifications for those marketing claims is unclear and they don't feel confident in producers' transparency or commitment to making actual changes instead of just scheming for higher profits (Prakash, 2002). Conversely, it's been found that consumers whose purchasing habits are compelled by their concern for environmental considerations are willing to pay significant price premiums for products that claim to accommodate their values. A study conducted in Italy on the effectiveness of "green" labeling based on food miles reported that consumers were willing to accept a 31%-33% price increase for products that displayed the CO2 emissions the product was responsible for and a 38%-40% price increase for products that recorded the number of kilometers the food traveled (Caputo, et. al., 2013). They believed consumers were willing to pay more for the kilometer label because it was easier to conceptualize, which supports the idea that alternative products' success would be boosted by increased consumer awareness of the tangible benefits of various labels to create a more homogeneous understanding of what exactly they are paying for when choosing eco-friendly merchandise.

In our research we found a great deal of scholarly inquiry related to the relationship between consumers and their direct connections to the food system via supermarkets, grocery stores, and alternative markets but little was found on how producers are influenced by food retail trends. Product information, or lack thereof, drives trends in alternative food consumption. These trends shape an individual's values and perceptions about their responsibility as a consumer and the legitimacy of company's labels.

Scholars have determined that producers cannot continue to conduct business as usual considering the agricultural industry's role in pollution as well as factors such as climate change, water usage, and population growth. However, economic factors continue to be a crucial limiting factor in farmers' abilities and willingness to adopt sustainable farming practices. In light of agriculture remaining a prominent water polluter in developed and undeveloped countries, conservation practices, called best management practices (BMPs), have been developed to help farmers reduce water contamination (Liu, et. al., 2018). Economic considerations, by and large, are

the main factors that influence farmers' adoption of BMPs. A study on BMPs found that wealthy, resource-abundant farmers were most responsive to regulations that enforce or encourage adopting BMPs. Low-income farmers, on the other hand, are more likely to respond to financial incentives because financial barriers often prevent low-income farmers from enrolling in conservation programs (Liu, et. al., 2018). When analyzing what types of farmers have adopted BMPs, researchers found that these farmers tended to have more income and capital, more diverse operations, better access to labor, and higher gross farm sales (Liu, et. al., 2018). One of the economic considerations that played a critical role in the adoption of BMPs was the level of risk inherent in adopting new techniques, not knowing the effect that the new tactics could have on maintaining crop yields. Many farmers expressed that they didn't possess the necessary skills to maximize yields while abiding by BMP regulations. While this study found that economic factors pose barriers to small-scale farmers adopting conservation practices, a separate study found organic farming to be more economically advantageous for small-scale farmers than conventional agriculture (Qiao, 2018). Although BMPs and USDA organic follow different standards, it is worth noting that by comparing these two studies, it appears that it may be less economically feasible for low-income farmers to adopt BMP's than organic practices, though more research is necessary.

In a study on how food retailing influences food systems, researchers from Cornell University identified four main categories of grocery stores -- superstores, chain grocery stores, independently-owned grocery stores, and green grocery stores. Large, conventional stores obtain around seventy to eighty percent of their goods from a single "major purveyor," whereas their green counterparts obtain only sixty percent of their goods from a company warehouse (Guptill and Wilkins, 2002). One of the common goals for store management is to streamline the procurement process. Procuring local goods competes with the priority of efficiency in that it requires employees to be educated on how to invoice local producers and perform quality checks on the goods. These extra steps make the procurement process less efficient. Some of the challenges with obtaining local food are that the products are less retail-friendly and there is less consistency of product availability than non-local sources of food (Guptill and Wilkins, 2002). Challenges aside, independently-owned grocery stores tend to have an advantage over the other store types when it comes to accessing local products simply because food procurement in independent stores often takes place locally or in-house (Guptill and Wilkins, 2002). This finding coincides with a review of data from the United Kingdom's Economic and Social Research Council, which revealed that consumers feel more connected to small grocery stores because those stores allow for consumer input and are responsive to consumer needs (Clarke and Banga, 2010). These stores are also imperative to serving disadvantaged and socially-excluded populations (Clarke and Banga, 2010). Ultimately, retailers have power in choosing which producers they want to support by offering at their stores. A study on the fresh produce supply chain in the

United Kingdom revealed a great need for improved supplier-retailer relationships and collaboration (Hingley, et. al., 2006).

Although there is an extensive body of literature on consumer preferences and decision-making, less is known about the relationship between producers and retailers of food products. Additionally, researchers have indicated a need for further research into producer-retailer relations (Hingley, et. al., 2006). For this reason, the focus of our capstone project is exploring how retailers' procurement decisions influence producers' farming practices, particularly with regard to alternative foods.

Feasibility

When we were designing our interview process, we thought that it would not be feasible to contact and interview all the entities we could think of as being potential sources of valuable data. To allow for sufficient data collection within the timeframe we had available, we selected food retailers from four different overarching categories, including: superstore, chain store, green store, and independently owned store. We conducted one-on-one interviews in person or over the phone with produce managers and distributors instead of sending out surveys to a large sample size. Our justification for doing so was to allow for depth of information over breadth, to give respondents the opportunity for elaboration on their responses that surveys would not have allowed for, and to encourage maximum authenticity in our respondents' answers. We acknowledge that the sample size that we interviewed is not large enough to have substantial correlative or causal implications, but is to represent a case study of the purchasing habits and producer actions linked to our sample field of entities within western Montana and the distributors that they source from.

Research Methods

To execute this project, we surveyed grocery store managers and the distributors they use to determine how the procurement of sustainable and local food products is impacted by retailer decision-making and vice-versa (i.e., sustainability of the type of foods available, the label (or lack thereof), quantity and procurement process). We determined this method of research is the most efficient for our study because it allowed us to collect a large amount of information in a short period of time. Given our time constraint of a single semester, it was necessary for us to choose a method of research that worked with that parameter. To fill the gap in information that we had found in our literature review, we organized interviews with local retailers and their respective distributors.

Additionally, we wanted to establish surveys that would have been sent out to local farmers. Given much of our work was through interviews and direct Q & A with the target group, we compiled data based on questions that led to filling in the gaps found in our research. We expected that grocery store managers, influenced by the individual consumer's purchasing power, have an impact on producers' actions whether it be a shift towards more eco-friendly farming practices or engaging marketing strategies.

There were many retailers in and around Missoula, and as such, we opted to narrow them down to the stores to simplify the research process, since we had only a small period to conduct our research. For our superstore, we chose WinCo given its central location, popularity, size, and comparatively low prices. If we cannot interview WinCo, Walmart is an alternative due to its size, popularity is long-standing in Missoula at its two locations, and was founded in 1962. We ran into an issue of not being able to get an interview with WinCo or Walmart, so we had to omit them from our data. For our chain grocery store, we will be aiming to interview Albertsons, as they have been long-standing in Missoula, were founded in 1939, have four locations in the city, and is very popular. Rosauers is our alternative for a chain grocery store, as it's similarly long-standing, the business has been founded in 1934, has a central location, and is popular. For our green grocery store, we will plan to interview Good Food store, since it has been long-standing (since the 1970s), is in a central location, is popular, and has an aim to offer goods that are in the vein of 'green' goods (i.e., organic, cruelty-free, gluten-free, natural, etc.). Our alternative for a green grocery store is Natural Grocer since they offer 'green' goods, have been around for approximately nine years in Missoula, and are popular. For our independently owned store, we have decided to interview Orange Street Food Farm, since it is long-standing (since 1986), is popular, and has a central location. Our alternative is Pattee Creek Market since it is long-standing (since 1988) and is popular.

For our research pertaining to producers, we had decided to develop a survey that we will send out to as many farmers and ranchers, both locally and Montana-wide, as we can. By doing this we hope to be able to get a much larger sample size in a much shorter span of time, given the small amount of time we have allotted for our research. However, through our interviews with retailers we found that they do not work with producers very often, so we had to change our original research plan and instead of surveying producers we decided to interview the select distributors that our interviewees identified. With our switch to distributors, we decided to go with interviews for the same reasons we interviewed retailers. We reached out to Western Montana Growers Cooperative, Local Bounty, and Intermountain Distributor to get the local perspective so that we could still get some idea what the local producers go through. We also reached out to Spokane Produce, Peirone Produce, and Associated foods.

Our interview questions were like the ones we asked retailers. We had moderate success getting ahold of distributors of varying size so that we could try to get the best view of them with our smaller sample size. It is our hope that with the following questions, we could find trends of purchasing behaviors that lend further insight into how retailers buy, sell, and market their products. We also expect to accumulate data that shows us how and which retailer habits and consumer buying trends affect producer practices, as well as what is produced, how these shifts change what is produced and the methods used, and how often shifts in production occur. Additionally, discerning how transparent these organizations are with consumers, as well as their approachability and to what degree they take initiative in making distribution and production choices that positively effectively affect the community, could be valuable. By acquiring this data, we hope to put together a report that shows more clearly how consumer tendencies, retailer marketing, and buying, as well as producer production methods, labeling, certifications, and transportation all play a cyclical role in developing and driving one another.

The following questions are the questions we asked retailers, so that we may better understand how they make purchasing decisions, so that we may see how it correlates with the production of products.

1. Please share your name, your job title, and what you do (basically) in your position. We don't know much about produce managers and buyers, so a little background on your responsibilities would be great.
2. Can you describe for us your process purchasing food for your department?
3. PROMPT: Can you describe the process for us from the very beginning, if it's any different, as if a customer came in and requested a special kind of potato and you decide to try and buy some to sell here.
4. What factors go into your decision-making when it comes to deciding what produce to bring into the store? Do you have sole decision-making authority or is it a team decision? Other managers that weigh in?
 - Does your store have any guidelines or policies when it comes to procuring certain types of food or food with qualities (like certain sustainability criteria)?
 - Are cost and availability the primary criteria for decision-making or are there other more important factors?
 - What about customer preference or requests?

5. Let's shift a little and talk about your relationships with producers, processors, and distributors. Are there several main distributors or producers from whom you buy your food?

- Do you primarily work with distributors? Any opportunities to work with local or regional producers and processors?
- If you work with a distributor, would you be willing to share if there's a main contact with whom you typically work? (No pressure!)
- Do you ever have direct conversations with producers or processors as you research purchases?
- Are there producers/processors from whom you buy most of the food for your department?

6. Now I'd like to talk about the influence your store's procurement choices and your requests as a manager might have on others in the supply chain. Can you think of any past experiences where a request or purchase you've made has led to a farmer/producer making changes or offering something new?

- Same question of distributors: any requests that you know of that have led to a distributor intentionally seeking out a particular product or type of product?
- PROMPT: this might have to do with varieties, volume, growing/producing practices like Organic certification, etc.

7. Finally, just to get a sense of scale across the retailers we're interviewing, I'm wondering if you'd be able and willing to share with us the approximate dollar value of your annual produce purchasing. If so, and that's something you can email me (if it's not off the top of your head), that would be helpful.

8. Is there anything else you'd like to share with us on this topic? Any anecdotes related to your influence on those you buy produce from or your decision-making process? Thank you so much for your time. We'd be happy to send you our final capstone and findings if you're interested in seeing them. Otherwise, we can wrap things up.

- How would you describe your organization in terms of how it meets the needs of the local food economy?
- To what degree do the purchasing habits of customers immediately affect the purchasing decisions of this store?

- What is the foremost factor in deciding what goods to purchase?
- Could you tell us what your experiences here at your organization have been, working with local growers and producers?
- What are consumers saying they want in the store?
- Are there any trends in what consumers want to see on the shelves?

The following were questions we asked distributors to further grasp their reasoning when deciding what to producers to work with, in what ways it correlates with the actions of retailers and customer purchasing, and to get a more general understanding of how they balance working for both retailers and producers.

1. Could you describe from start to finish the process of purchasing a product from a farmer and getting it into a grocery store?
2. Do you have a few main producers that you buy from, and/or do you have many different producers that you buy smaller quantities from?
3. What factors into your decision making when it comes to choosing producers to work with? (e.g., characteristics, certifications, working relationship, etc.)
4. How does the distance of shipping and transportation influence where you get produce from?
5. Have you ever experienced a producer coming to you with a specific product that they specialize in which then influenced what you pushed out to retailers?
6. If a retailer makes a specific request (for product type/quantity/growing practice/etc.), what is your process in fulfilling that request?
7. Do any examples within produce come to mind?
8. What factors into your ability to fulfill a request? (i.e., necessary certifications, available crop-space, water needs, growing season availability/possibility, etc.)
9. How much influence do you feel that you have over what products farmers grow or retailers buy?
10. How do you balance the supply from farmers with the demand from retailers?

11. What does your ideal working relationship with producers and retailers look like?

12. Can you describe your idea of an ideal working relationship with producers/retailers?

Challenges to Implementation

The main challenges we experienced were with communication. Some of the produce managers and food distribution company representatives were reluctant to speak with us and in some cases rejected the engagement entirely. There were several organizations that did not respond to any communications from us whatsoever. We anticipated this unfortunate reality and created a list of first choices to interview from the four categories and we thought of alternatives as well, but in some cases, we had to try tertiary options before we obtained a willing interviewee such as the case with Orange Street Food Farm not responding, then the alternative option of Pattee Creek Market not being willing, and our third choice- Missoula Fresh Market finally obliging to be interviewed.

Our interviews became directed towards food distributors rather than producers due to the nature of retailers' responses. Retailer's purchasing sources consisted almost exclusively of distributors who purchased from producers and then resold it to the retailers who then sold it to the end consumers. For gathering data that most accurately depicted the relationships involved within the systems that the retailers we interviewed were a part of, it seemed most effective to interview the distributors our interviewees companies bought from. The main reason we did not reach out to all of the producers that the distributors we interviewed bought from was because it was not feasible to manage within the timeframe we had available to complete our project.

Findings

By conducting interviews with several food retailers and food distribution companies we were able to gain insights into the relationship dynamics involved between the cultivation of produce and the process leading up to the produce getting to the consumer. Nearly every retailer who sold produce directly to consumers obtained all their stock from a food distribution company and there were few examples of retailers purchasing produce directly from the growers. There were a few reasons expressed by the retailers interviewed for purchasing almost exclusively from distribution companies, those reasons were as follows: for the affordability, volume needed and consistency in availability of produce types desired; for the consistency in quality of products, as marketable produce is required by retailers to efficiently move products; how efficient the distribution companies were in maintaining demand needs; and some retailers had company policies that governed which distribution companies the store purchased from. In the interviews we conducted,

the items that retailers purchased were determined based off the following factors: seasonality, what products were available and when; how popular the types of produce were with customers and attached to that, how much of that product the store can sell; and finally, the upfront costs and potential for return on investment. The reasons expressed by representatives of distribution companies that we interviewed were as follows: who they purchased from was determined by the costs for produce and the distance that it needed to travel to ensure maximum freshness for the customer; what was purchased was based off retailer's purchasing habits, the upfront costs and potential for returns on investments, and the seasonality and availability of types of items. Large distribution companies were less responsive to consumer, retailer, or producer requests, however, Western Montana Growers Cooperative was receptive to attempting to market niche items from their different producer sources, and the Good Food Store was able to get one of the farms they purchase from to start growing a crop, green onions, to sell to them that customers were regularly purchasing during the operable grow season in western Montana.

Recommendations for Future Research

Much of the data we obtained was related to affordability and consumer purchasing habits. Consumers have the power to drive the market costs for produce options via their purchasing habits. It seems that sustainably-grown foods have the potential to become more affordable if there is a larger market for them. In the future, it would be valuable to conduct more analytical research into the power that consumers have with their purchasing habits to determine if broad-scale consumer purchasing behaviors have an immediate effect on which products, such as those grown sustainably, are able to be sold at cheaper prices without negatively affecting entities within the market chain from farm to table. Agriculture has a large role in affecting global climate change, and implementing more sustainable production operations for farmers has the potential to have positive implications. We believe it would be beneficial for future research to investigate how readily consumers can impact the marginal cost of units for a sustainable food producer.

Conclusion

On a global scale, agriculture has a sizable impact on climate, so understanding the factors that influence retailer and distributor decision-making can help us to understand what levers of change exist in these systems to make them more sustainable. While we originally set out to discover the role that sustainability considerations play in the decision-making of produce managers and distributors, our interviews revealed that, for mainstream grocery stores and distributors, sustainability did not land anywhere on the list of top priorities when making purchasing decisions. Rather, retailers' primary focuses revolved around volume, quality, efficiency, company policies,

seasonality, popularity, costs of goods, customer shopping trends, and storewide sales. Distributors focused on the cost of goods, distance from farmers and grocery stores, retailer purchasing habits, availability, and seasonality. The exception to this lack of focus on sustainability was the alternative, or “green,” store category. Given the clear absence of sustainability in retailer and distributor decision making, we identified a variety of inputs, or levers, for making changes. At the individual consumer level, buying more sustainable alternatives to produce staples will increase the demand for sustainable options, consequently influencing retailer purchasing habits. However, if the impetus for change remains on the individual, progress will continue to stall. Another lever of change is at the farmer level. When it comes to small-sized producers, collectivizing into cooperatives, like the Western Montana Grower’s Co-op, allows small farmers to sufficiently fulfill the volume of goods needed by grocery stores. Likewise, we encourage distributors to prioritize representation of farmers using sustainable practices in order to give retailers more convenient access to environmentally-friendly options. When it comes to retailers, we found that company-wide policies and mandates, when present, trumped all other decision-making factors. We encourage grocery store chains to adopt sustainability policies in order to build sustainability into store practices. Most important of all these suggested levers of change is systemic change. The primary factor affecting all parties’ decision-making was predictably costs, profits, and budgetary constraints. National policies and subsidies have the potential to level the playing field and eliminate cost as a barrier to widespread adoption of sustainable produce. All in all, it is clear that change is necessary, and we encourage further research and advocacy on these issues in order to secure a sustainable future for generations to come.

Reflections

Prompt #1: In what ways do you feel your project represents a multidisciplinary effort? What were the challenges and benefits of working across disciplines?

This is a multidisciplinary project because of the inherent importance that food systems have in Western societies and throughout the world. Many skillsets and disciplines are involved within food systems and our research required understanding of research methods, food systems, literature analysis, economics, journalism tactics, effective data collection and analysis strategies, political and bureaucratic governances and influences, among other things. Across disciplines, nothing intimidates students more than a group project. These projects test the patience and communication skills of each student. Additionally, each student is tasked with collaborating with others from unique backgrounds and skillsets, all the while being their own leader in initiating and completing necessary tasks for the group. However, one can see examples of the benefits reaped from these same challenges when exploring our group’s accomplishments over the past year. While we were met with

some challenges in project planning and implementation, our group benefited vastly from a diverse, multidisciplinary background that contributed to our creativity, project thoroughness and scope.

The immediate effects of putting students from various disciplines into the same room to brainstorm can be intimidating. The backgrounds of everyone, combined with the unique goals, aspirations, and expectations of each person, define our project as a multidisciplinary effort. Our group drew on our backgrounds in political science, journalism, business, parks and recreation, and environmental science. These diverse skillsets were critical in the brainstorming process. Everyone jockeyed for the lead in our capstone topic in this “forming and storming” phase. While it initially seemed inefficient, we quickly utilized our diverse skillsets to coordinate and complete our project’s tasks. We delegated certain tasks of our project to individuals who possessed the traits to complete them sufficiently. For example, our group members with scientific backgrounds provided much needed context to our ideas regarding sustainability and the environment. Alternatively, our group members that studied the Arts structured our research parameters and written proposals. Our diverse skillsets and experiences complimented each other and, in turn, contributed to a well-rounded project.

Prompt #2: Explain the challenges your group faced in designing and carrying out the substance of the project. For example: How did you attempt to address these challenges? How did the project change after the proposal stage? How might you do things differently?

Naturally, challenges arose when our multidisciplinary group began to put together the pieces of our project. We first encountered obstacles while trying to brainstorm our topic. Sustainability as a global theme is a universal and relevant subject. Yet, such a relevant but broad topic was met with ambiguity in our brainstorming sessions. Our first initial challenge was identifying which aspect of the vast food system to focus on. This meant coming up with a viable research angle that was relevant locally and globally, while still maintaining a narrow approach to do a thorough job. We addressed this challenge by casting a wide net in our preliminary literature reviews. Doing so allowed us to collect enough information to grasp an understanding of what existing research paralleled our initial ideas, as well as what potential avenues for our future research existed.

A recurring challenge we were met with while collecting data was the reluctance of stores or distributors to speak with us. Several representatives of companies we sought to interview declined speaking with us and we had to find alternatives that were comparable in market influence to ensure that the different types of stores we were interviewing were all represented, I.e., superstore, chain grocery store, green grocery store and small independently owned grocery store.

Additionally, we were met with challenges following the drafting and finalizing of our proposal in our planned research methods. Originally, we intended to interview both local retailers and local farmers/ranchers in western Montana to explore the relationship between the two and how they influenced each other. We assumed this would be the ideal way to take a snapshot of the local food system. However, we quickly found out that many local retailers rarely source produce from local vendors. We pivoted to instead interview the local and out-of-state distributors that represent the vendors (farmers and ranchers) that Missoula retailers purchase from. This allowed us to get a more adequate understanding of the players in our local food system and strengthened the accuracy of our findings. While we approached our interviews with realistic expectations, we repeatedly had to change our angle to accommodate the success rates of our interviews. These challenges were initially frustrating, but we learned to adapt our research to the responses we were receiving.

Prompt #3: Read the global context section above. How did considering the global context of the problem your group identified influence your thinking, the project, and the complexity of your work?

Our group determined that the best way to optimize the global relevance of our topic was to focus our research locally. This was because we decided that our research would be worth the most if we adequately covered at the local food system. In exploring the global context of our topic, we realized that we had to spearhead local retailers and the distributors that supported them to not take off more than we could chew. However, our findings remain applicable when you look at food systems and sustainability elsewhere. While it is no question that food systems across the globe are unique for various reasons, our research explored the relationships that reflect the global nature of agricultural and environmental sustainability, retail economics, supply, and demand.

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