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Evaluating the Barriers of Entry that Small Commercial Farmers Face and the Implications of Such Barriers on Rural Communities

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EVALUATING THE BARRIERS OF ENTRY THAT SMALL COMMERCIAL FARMERS FACE AND THE IMPLICATIONS OF SUCH BARRIERS ON RURAL COMMUNITIES

by
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Abstract

The research proposed in this thesis will identify the barriers of entry that small farmers face when entering the Agricultural Industry. The proposed research will also seek to discover how having these barriers in place affects rural communities. This thesis conducts a literature review of the topic, sets the context for the research to be done, and proposes a research project to further investigate the topic. The proposed research will be done through administering a survey to stakeholders, and then interviewing a small sample of those surveyed to get a comprehensive look at the effects of agribusiness on rural communities. The literature review identifies the repercussions likely to occur if current trends in the agricultural industry and rural communities continue, specifically looking at employment, poverty, and community development. Knowledge has been identified as a key barrier to entry for many stakeholders attempting to enter the agricultural industry at any level. Producers have been forced out of the industry as a result of the growth of agribusiness. The effects of these stakeholders leaving the industry go far beyond just their economic stability as ripple effects are felt in rural communities across the country. These community members are often faced with difficult choices as their sources of income are driven away, and as a result, they must look for jobs outside of their communities. Trends in the Agricultural industry also have ripple effects into rural communities across the country, and as a result the policy surrounding Agribusiness must be addressed to create sustainable development for small farmers, and also rural communities. Without policy changes to address these issues rural America will continue to slip through the cracks.

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Acronyms

AAA	Agricultural Adjustment Act (1933)
ACTE	Association for Career and Technical Education
CCC	Commodity Credit Corporation
CTE	Career and Technical Education
EPA	Environmental Protection Agency
EQIP	Environmental Quality Incentives Program
FAIR	Federal Agriculture Improvement and Reform Act (1996)
FAO	Food and Agriculture Organization of the United Nations
GCFI	Gross Cash Farm Income
MNC	Multinational Corporation
MAP	Market Access Program
NASS	National Agricultural Statistics Service
NIFA	National Institute of Food and Agriculture
TEA	Texas Education Agency
USDA	United States Department of Agriculture

Chapter 1

Introduction

Background

According to the USDA, the number of United States farms peaked in 1935 at 6.8 million farms. After that, the number of farms had a sharp decline until the early 1970s when the rate of decrease in farm numbers began to slow. As of 2020, there were only 2.02 million farms left in the United States. The decreasing number of farms has not, however, had an effect on the amount of land being used for farming. There are still over 890 million acres being farmed in the United States as of 2020, about the same as it was in 1933 (Figure 3.1) (USDA, Feb. 2021). This has caused land to be concentrated in larger scale farm operations. The industry is now driven through technological developments in the agriculture industry in order to increase productivity and production potential for the farms. This concentration of power, however, has led to less competition taking place in the market because of the limited number of players. See in Figure 3.1 the correlation between average farm size, land in farms, and number of farms from 1850 to 2020.

As of 2017, the USDA found that 62% of agricultural workers were over the age of 55. The upcoming retirement of the baby boomer generation brings many issues to the table. According to the USDA, the average age for a farm operator to retire is 62. Seeing as this milestone is rapidly approaching or has already been surpassed for 62% of agricultural workers there must be action taken to address how the United States is able to move forward (Castillo, et. al., 2022).

The purpose of this thesis is to propose research that will investigate the current barriers of entry that players within the agricultural industry are facing. This is particularly pertinent to modern agricultural policy as a large percentage of the farmers are beginning to reach retirement age. This research will establish the several areas where knowledge is acquired within the agricultural industry from local farmers. This thesis produces a literature review upon which to base the proposed research of the barriers of entry. The barriers that are identified through the literature review are startup capital, experience, and lack of knowledge.

The growing involvement of multinational corporations in the United States agricultural industry is worrisome to many communities. According to the USDA as of 2019 over 35 million acres were owned by foreign investors. This number increased on average 2.3 million acres per year since 2015. Figure 1.1 below shows the acreage, per state, of international land holdings.

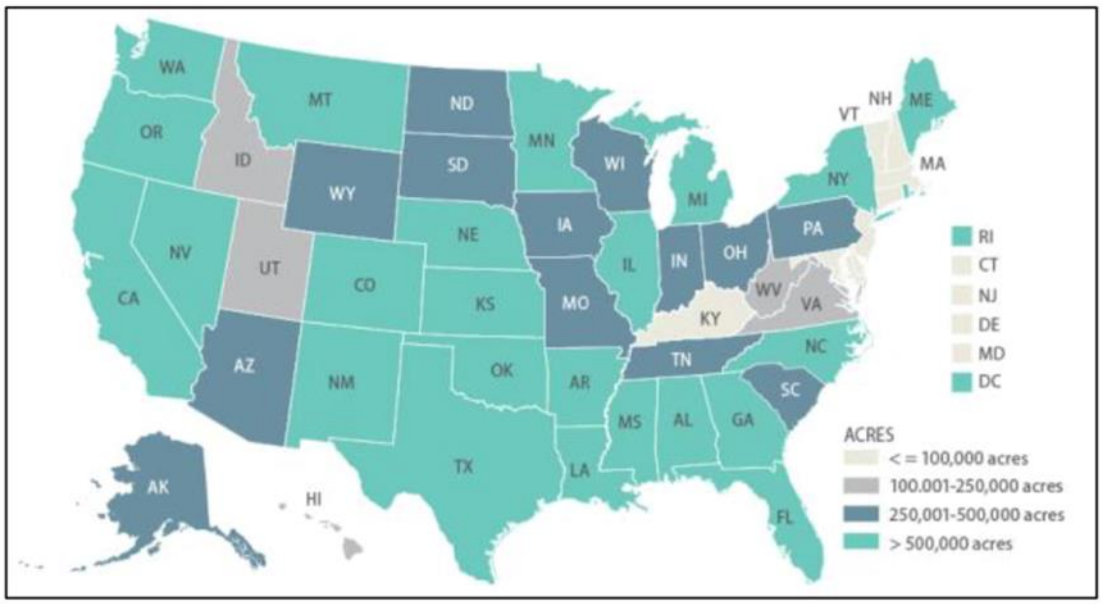


Figure 1.1 Map of Average Foreign Holdings of Agriculture Land by State (Barnes, et. al., n.d.)

Definitions

Word/Phrase	Definition in Context
Acreage Allotments	Acreage for commodity crops to farms based on the AA of 1938 (ECFR, 2022).
Agribusiness	Vertical system of technology, farming, grading, assembly, storage, processing, and distribution
Beginning Farmer	Farmers that have been operating their farm or ranch for ten years or less.
Cash Receipts for Agricultural Commodities	The gross income from sales of corps, livestock, and livestock products during a calendar year
Commodity Credit Corporation (CCC)	Federally owned and operated corporation within the USDA intended to stabilize, support, and protect agricultural prices and farm income. This is done through loans, purchases, and payments (USDA, 2015).
Community	The implication that there are relationships between a group of people, in a certain geographical locale (Bruhn, 2011, p.12).
Crop Year	The period from one year's harvest to the next for an agricultural commodity.
Deficiency Payments	Agricultural domestic support paid by governments to producers of certain commodities based on the differences between a target price and the domestic market price or loan rate (WTO,n.d.).
Family Farm	A majority of the business is owned by the operators and individuals related to the operator by blood, marriage, or adoption (Todd, et, al., n.d.) .
Farm Operator	The person that manages the day-to-day operations of a farm. Can be the owner, tenant, or hired manager.
Farming System	A place from which $1,000 or more of agricultural products were produced and sold. Government payments are included in sales.
Fixed Price Supports	A subsidy, a production quota, or a price control with the intended effect of keeping the market price of a good competitive market.
Market Access Program (MAP)	Allows the foreign agricultural service to partner with U.S. agricultural trade associations, cooperative, state regional trade groups and small business to share costs of overseas marketing and promotional activities to help build commercial export markets for the U.S. agricultural products and commodities (USDA FAS, 2021).
Mississippi Portal	The region created by the USDA that is characterized as having higher proportions of both small and larger farms than anywhere else. The main crops in this area are cotton, rice, poultry, and hog farms.

Multinational Corporation	A substitute for market as a method of organizing the international exchange of goods. Large firm operations in imperfect markets (Hymer, 1972, p.441).
Payment in Kind (PIK) Programs	This program, in the context of Agriculture, is aimed at reducing production. This pays farmers to not grow certain crops. Examples of these crops are corn, grain, wheat, rice, and cotton. The farmer is paid a percentage of the crops that would have grown
Permanent Legislation	The Agricultural Act of 1949 is known as the permanent piece of legislation for United States Agricultural policy. This Act has been amended since its enactment in 1949 but is still in effect today
Production Adjustments	Appraised Potential production and the Harvest Production of a crop.
Program Crops	Crops for which federal support programs are available to producers. EX: Wheat, Corn, Barley, Grain, Sugar, Oats, Rice, Oilseeds, Tobacco, Peanuts
Small Commercial Farm	An operation with GCFI under $250,000. Sales between $10,000 and $250,000 (Hoppe, et. al., 2010, p.5).
Small Non-Commercial Farm	Farms with a GCFI of less than $10,000 (Hoppe, et. al., 2010, p.5).
Stegall Commodities	Hogs, Eggs Chickens, Turkeys, Milk, Butterfat, certain dry peas, certain dry edible beans, soybeans, flaxseed and peanuts for oil, American-Egyptian Cotton (ELS), potatoes, and sweet potatoes

Table 1.1 Critical Definitions

Importance

In order to understand the motivations of this thesis it is pertinent to understand why small commercial farmers are being studied. Table 3.1 illustrates these statistics. In 1935 the number of U.S. farms peaked at 6.8 million farms. This number has been declining ever since then, to the point that in the most recent 2020 survey there were only 2.02 million farms left in the United States. The current average farm size is 444 acres. The average acreage of farms based on size is as follows, small family farms average 231 acres, large family farms average 1,421 acres, and very large family farms average 2,086 acres. When translating acreage to average earnings small farmers earn less than $250,000 while very large farms earn

more than $500,000. The repercussions of these numbers do not mean much without first understanding the technicalities that the USDA has placed around the agricultural industry. The definition of a small farm has changed 9 times since its creation in 1850 with the most recent definition being, “any place from which $1000 or more of agricultural products were produced and sold, or normally would have been sold, during the year” (Todd, et. al., 2021). As this definition has changed so has the policy and governmental programs that benefit small farms.

A large majority of United States farms are classified as small farms. The question has been raised in recent years, as previously stated, how the industry will react when faced with the removal of over 62% of agricultural workers over the next two decades. From July 2018 to July 2019 people living in nonmetro counties increased by about .02%. This, although nominally low growth, is a stark contrast to the historic trend of urban migration. The hope for small commercial farm revitalization is not yet lost. It is just a matter of understanding the barriers to entry that these players will face.

As of 2011, approximately 25% of United States farmers had college degrees (USDA,2012). This is below the national average of households having college degrees, and the question must be asked, “Why is this so?” There are several reasons that can be used when examining this information, but perhaps the most influential reason is that many farmers do not realize the knowledge that they are lacking within their operations. Approximately 30% of farm operators that operate million-dollar farms have college degrees (USDA,2012). The type of knowledge that farmers must obtain has changed significantly as the agricultural industry has adapted to the

growing wants and needs of consumers. As the industry has grown so has the need for higher levels of education. The process of growing, processing, and selling capacity has only increased in complexity as larger industrialized international players have entered the United States markets. These multinational players are able to bring advancements to the table that small American farmers cannot. This begins with the level of capital that corporations are able to utilize. This capital combined with substantial amounts of knowledge and researching capabilities at the disposal of these corporations are able to out produce the traditional American farmer. The irony of the situation is that although more food is being produced the United States is still left grappling with the same limitations around food. Food security, supply chain shortages, and sustainability are hot button issues that politicians and corporations seem unable to tackle.

The continuous shortcomings of the United States agricultural policy have resulted in power and market presence being taken away from small farmers over the past one-hundred years. The repercussions of these actions were seen directly during the COVID-19 global pandemic. This proposed research will produce a greater understanding of how the United States can work to create policy that will increase the efficacy of the agricultural sector. This will be done in order to create policies that will encourage new players to enter the market and give these players the necessary assistance to succeed. This thesis will provide historical context surrounding the agricultural industry to show the power shift from government to small farmers, to large corporations. This will create a timeline that shows policy changes over time in order to see the impacts of policy on large and small

producers. This thesis will also work to set definitions that will be used throughout this proposal, and in the proposed research. Definitions will be formatted in a chart for reference through the reading of this thesis.

This research aims to give small farmers a voice that policy makers have not heard in quite some time. These players do make up a majority of agriculture production, they are the backbone of the American economy, and as such the United States cannot afford for players to continue leaving the industry. The rapid decline of small commercial farmers has left land concentrated in the hands of foreign companies. The constant balance of power that once regulated the industry in a positive manner has now given control to foreign entities and taken economic power away from the American farmer.

This thesis will keep in mind the large majority of American producers that are left disadvantaged by policy that is intended to support the industry. These producers are the backbone of the industry and are most exposed to volatile market pressures. In order to understand the importance of examining these "middle ground farmers" a brief history of agriculture policy will be used. This will be displayed in the form of a table that will contextualize the agriculture policy in terms of how the legislation has benefited various players within the industry. The idea that a small commercial producer is currently defined as making anywhere from $1000 in sales annually to $250,000 in sales annually shows how the government and governmental programs have become disconnected from the needs of American farmers.

Throughout the COVID-19 pandemic producers were faced being paid very little for their goods while consumers were paying higher prices at the grocery store. The idea of having empty grocery shelves left the American people with the harsh reality of how disconnected the public is with the food supply chain. The pandemic occurred while farmers were already facing falling prices for commodity crops. David Widmar, an agricultural economist described the timing of the saying, "If you look back over the last 20 or 30 years of U.S. agriculture, the events of the last 36 months or so couldn't have come at a worse time" (West, 2011)This pandemic followed flooding, drought, and economic pressures, these events that have left the men and women operating farms grappling with increasing rates of bankruptcies, suicides, and mental health crises. These unprecedented road bumps have occurred alongside supply chain shortages during the pandemic that left families limited on the amount of meat and milk that they could buy. This pandemic left farmers, grappling with the implications of throwing produce away and pouring milk down the drain instead of selling in the market place (Pappas, 2020).

Prior to the tumultuous times that the pandemic brought, small farmers were already feeling economic pressures. "About 89 percent of U.S. farms are small, with gross cash farm income less than $350,000; the households operating these farms typically rely on off-farm sources for most of their household income. In contrast, the median household operating large-scale farms earned $402,780 in 2020, and most of that came from farming" (Kassel, Dec 2021).

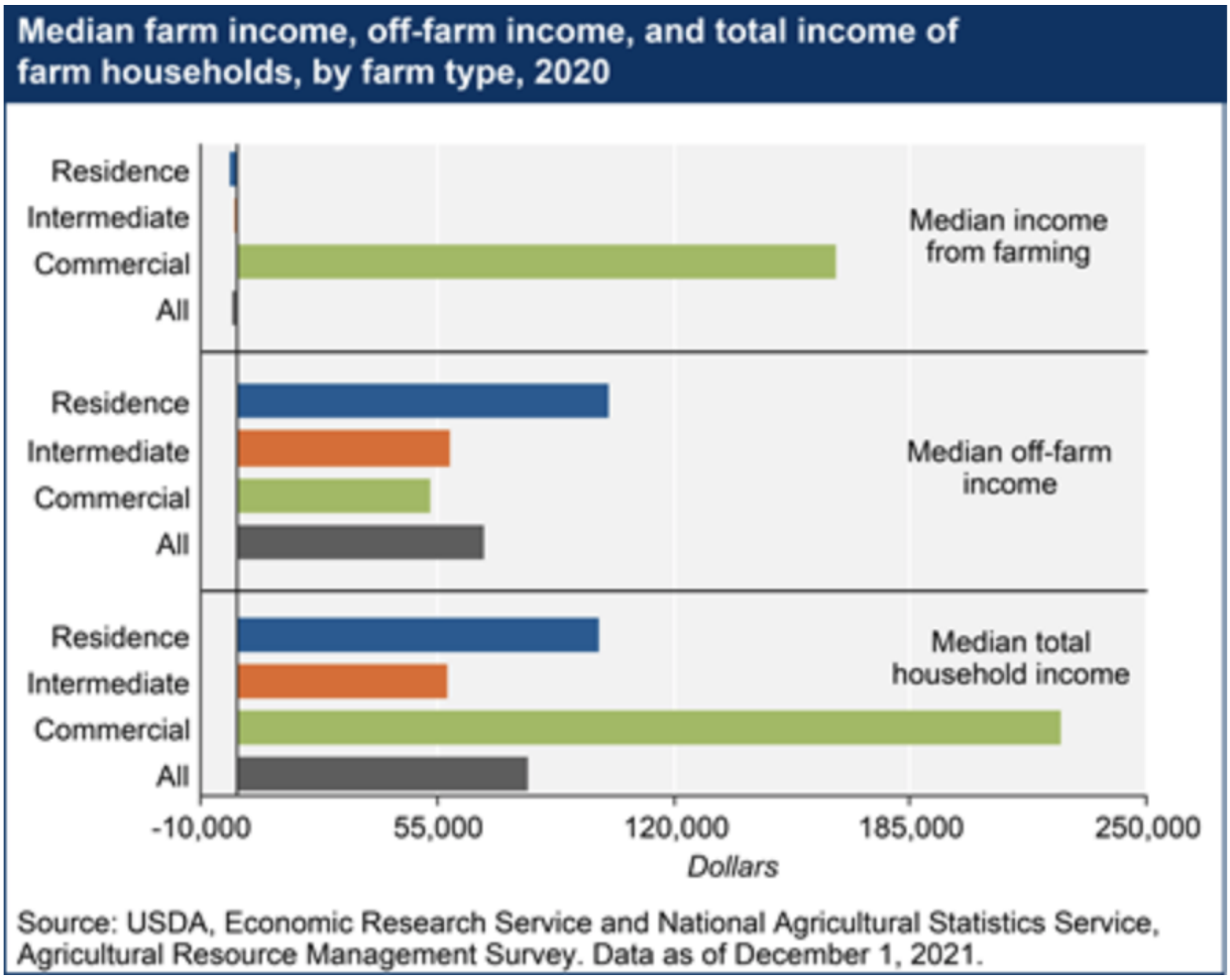


Figure 1.2 Income Comparisons (USDA, Dec. 2021)

Figure 1.2 above shows the significant earning differences that having an off-farm income has on total household earnings. Small farmers are relying heavily on the money made in second jobs. There are various factors that can impact farm income, primarily, location. The regional differences in farming can drastically affect what is produced and how crops are grown due to the soil, climate, and agronomic needs of the general area.

Mississippi Portal

This research will specifically evaluate the Mississippi portal of agriculture. Farming regions have been adapted over time to reflect the Old Farm Production Regions, USDA's land Resource Regions, and NASS Crop reporting districts. These regions are developed from cropping patterns overtime. The Mississippi Portal spans several states and has, higher proportions of both small and large farms than elsewhere (USDA,2000). Figure 1.3 shows the Mississippi Portal. This region is made up of Eastern Arkansas, Western Tennessee, Southeast Missouri, and Northwest Mississippi.

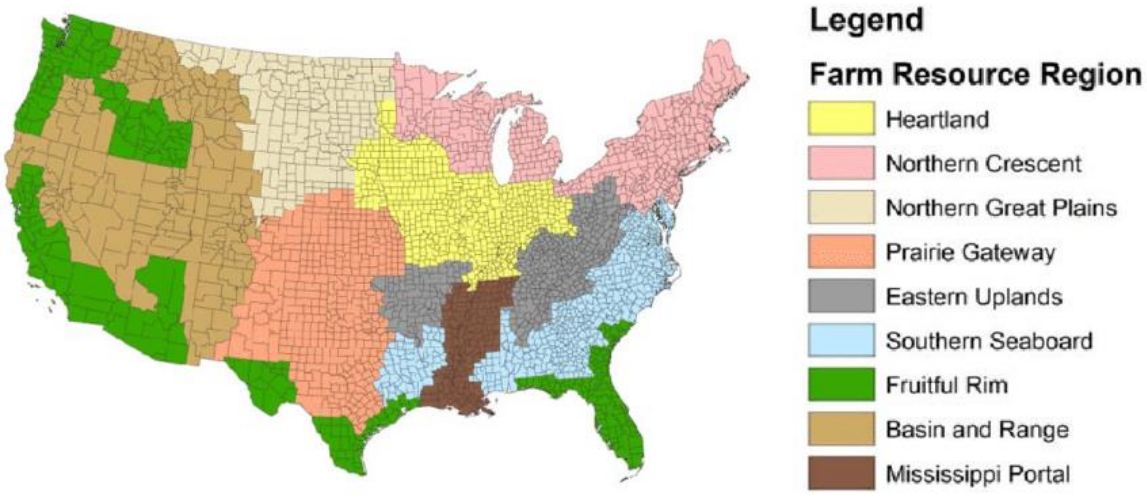


Figure 1.3. Mississippi Portal (West, et. al., 2011)

The agricultural industry is Mississippi's primary industry and is responsible for 17.4% of the state's workforce. In 2019 Mississippi had 10,400,000 acres of farmland and 35% of the state's land is dedicated to farming. The state produced an estimated $5.3 billion in agricultural cash receipts in 2019. Cash receipts are the

gross income from sales of crops, livestock, and livestock products during a calendar year. The average farm size is 301 acres with the state spanning from the Mississippi Delta to the Gulf Coast. There are 34,700 farms that range throughout the state's 82 counties. The United States most produced crops are corn, cotton, fruits, tree nuts, rice, soybeans and oil crops, sugar and sweeteners, vegetables, pulses, and wheat. Corn and Soybeans accounted for over 40% of the U.S. Crop cash receipts in 2020 with Mississippi producing 129,500,000 bushels of corn and 120,450,000 bushels of soybeans (MDAC, 2021). The same narrative could be taken for the other regions of states that are included in the portal such as: Louisiana, Tennessee, Missouri and Arkansas.

This thesis is intended to highlight the farmers that have been overlooked by the government's policy efforts, and the proposed research is intended to give these farmers a voice. Mississippi has commodity crops ranging from cotton, peanuts, peas, watermelon, tomatoes, and carrots. The small farmers are an integral part of the state economy and represent the numerous other farmers across the United States who feel left behind by United States policy. Following the impact that Covid-19 has had on the economy as a whole through supply chains and financial instability this proposed research is necessary. The stress has not only been felt in the farming households, but also in farming communities.

Chapter 2

History

Farm Bill

The Farm Bill was originally created in 1933 and called the Agricultural Adjustment Act. It was part of FDR's new deal policies that were rooted in regaining financial stability for farmers. It is an omnibus bill, meaning it governs over a variety of programs and policies (DeSimone, 2021). The original farm bill has been revised 17 times total since 1933. The timeline of farm bills can be seen below.

- *Agricultural Adjustment Act of 1933*
- *Agricultural Adjustment Act of 1938*
  - *Agricultural Act of 1948*
  - *Agricultural Act of 1949*
  - *Agricultural Act of 1954*
  - *Agricultural Act of 1956*
- *Food and Agricultural Act of 1965*
  - *Agricultural Act of 1970*
- *Agriculture and Consumer Protection Act of 1973*
  - *Food and Agriculture Act of 1977*
  - *Agriculture and Food Act of 1981*
    - *Food Security Act of 1985*
- *Food, Agriculture, Conservation, and Trade Act of 1990*
- *Federal Agriculture Improvement and Reform Act of 1996*
  - *Farm Security and Rural Investment Act of 2002*
    - *Food, Conservation, and Energy Act of 2008*
      - *Agricultural Act of 2014*

- *Agriculture Improvement Act of 2018*

Each of these will be touched on in the following sections. The causes behind the acts and their effects on the agriculture industry will be detailed in the right-most column of the tables. These sections are intended to provide a look at the evolution of United States Agricultural policy since 1820.

Introduction

These sections will be used to show the gradual changes that took place in policy that have incentivized the growth of large-scale producers and have disincentivized and driven small producers out of the market. These changes allowed for greater globalization in terms of the markets but have ultimately contributed to the fragile state of the supply chain that the United States has been experiencing over the past two years. These will be used to show the exchange of power that has been dictated by United States agriculture policy over the last two hundred years. The same story has been echoed across the United States as generational farmers have been forced to choose between making a livelihood or continuing to farm land that has been in their families for generations. Over two centuries of United States agriculture policy will be looked at in these sections with only the pertinent information being broken down and analyzed. This history is broken down into six sections that range from the beginning of United States agricultural policy to the present-day agricultural policies. These groupings are broken down to cover major events in American history in order to show the governmental reaction and support, or lack thereof, for the Agriculture Industry.

There will then be a description of each time period to provide historical context. There will be a table in each section to provide a clear layout of major policy that was enacted in each of the allotments of time.

At the turn of the century almost 40% of the U.S. population lived on farms. This has shifted dramatically over the past 120 years, and as of today, only 1% of the U.S. population lives on farms. This shift is one that has been noticed in the grocery stores, especially during the unprecedented supply chain issues that COVID-19 has drawn attention to. Between 1910 and 1940 there were 6-7 million farms in the United States. The 1940s started a sharp decline of these farms, while the average size of farms continued to grow. There are a number of factors that have caused this shift, but for the sake of this thesis the policy change over time will be evaluated.

1820-1899

Laying the Groundwork

This period in agricultural policy laid the groundwork for the next two hundred years of policy. The creation of an Agriculture Committee in both the House and Senate would serve to provide valuable oversight over the development of new programs and legislation that would shape the agricultural industry. The government continued to encourage farmers to cultivate the land by giving acreage allotments in exchange for farmers improving the land. The government also encouraged research and design through collaboration with schools during this time.

Policy	Year	Effect
Agriculture Committee House Established	1820	Recommends funding appropriations for various governmental agencies, programs, and activities that provide support for farmers.
Agriculture Committee Senate Established	1825	Provides legislative oversight on all matters that relate to the United States' agriculture industry
The Department of Agriculture Established	1862	Provides leadership on food, agriculture, natural resources, rural development, nutrition, and related issues based on sound public policy.
Homestead Act	1862	Granted settlers 160 acres of land under the condition that they would improve it.
Morrill Land Grant College Act	1862	Encourage innovations in technology by providing funding for agricultural and manufacturing schools.
Hatch Experiment Station Act	1880	Set up Federal-State cooperation in agricultural research
Second Morrill Act	1890	Broadened land-grant programs and set up funding for black land-grant schools

Table 2.1.1820-1899 The Groundwork of United States Agricultural Policy

This first section of policy history details the origin of United States Agriculture policy. The formation of the Senate and House of Representatives Agriculture Committees as well as the Department of Agriculture. This was the foundation for the future of American farming, and these committees are currently still responsible for enacting policies in the interest of farmers today. Followed shortly after was the Morrill Land Grant Acts that gave land to agricultural colleges around the country that would focus on innovations in technology for agricultural practices. The Homestead act was then able to motivate rural development in the United States by giving land to those who were willing to farm and cultivate the land. This drove people to begin a life of farming that was previously not common.

1900-1930

The Golden Age of Farming

Policy	Year	Effect
Reclamation Act	1902	The Act served to start 30 water projects from 1902-1907 in the west in an attempt to combat water insecurity in the area.
Country Life Commission	1908	A commission established to focus on rural issues in the United States. Mainly on the disparities from rural to urban areas.
Federal Farm Loan act	1914	Allowed for farmers to finance new land opportunities as well as machinery to farm the land.
Packers and Stockyards Act	1921	Protect farmers and ranchers from unfair practices by the meat packing industry.
Capper-Volstead Act	1922	Explicitly authorized and sanctioned the elimination of coemption among farmers through cooperative association.

Table 2.2. 1900-1930 The Golden Age of Farming

Farmers were able to prosper because of the high market prices for commodity crops. This Golden Age of agriculture led the United States markets into the crashes that would accompany the Great Depression. The rapid urbanization and industrialization that accompanied the 20th century provided new and untapped markets for many American farmers. As urbanization continued the pressures that farmers faced grew. The relationship is best described by, "This expansion of industrialization and increasing demand for agricultural production are in a continuous race with one another. (Balasurbramanian, et. al, 2010). Prices reached unprecedented levels as wartimes loomed in Europe in 1914. The demand for commodity crops was surging, and this success would carry American farmers for nearly a decade before the market crashes. During this time, farmers were expanding their reach in order to keep up with demand. This is common, "As

countries develop, agriculture's role as domestic employer declines, But the broader agri-food system also expands, and the scope for agriculture-related job creation shifts beyond the farm (Christiaensen, et. al, 2020)." Congress enacted the Federal Farm Loan Act to provide a way for farmers to finance the land and machinery needed to farm this land.

1923-1932

Surpluses Beyond Control

Policy	Year	Effect
Agricultural credits Act of 1923	1923	Ineffective in reducing surpluses and provided limited financial relief.
Agricultural Marketing Act of 1929	1929	Established a federal farm board to promote marketing of agricultural commodities interstate and through foreign trade.

Table 2.3. 1923-1932 Surpluses Beyond Control

As World War I ended, the United States was faced with large amounts of commodity surpluses that flooded the markets. As farmers in Europe began returning home from war they no longer needed to rely on American exports. As a result, Congress authorized intermediate term agricultural credits for farmers. The Capper-Volstead Act pursued the idea of "orderly marketing." Orderly Marketing was intended to establish nationwide cooperative agreements over agricultural markets. The Federal Credit Act of 1923 provided for funding for banks so that farmers would have access to loans to finance the costs of production that they were facing. This, however, did not fix the rut that the agricultural industry had fallen into. The Agricultural Marketing Act of 1929 attempted to increase foreign trade.

1933-1940

Introduction of Price Supports

Policy	Year	Effect
Agricultural Adjustment Act (AAA)	1933	A New Deal program intended to reduce export surpluses and raise commodity prices.
Domestic Allotment Act	1936	Linked farm programs with conservation incentives
Agricultural Adjustment Act	1938	Introduced the CCC in order to purchase surpluses of crops from farmers to protect the market price of crops.

Table 2.4. 1933-1940 Introduction of Price Supports

The Agricultural Adjustment Act of 1933 was a component of President Roosevelt's New Deal. The administration acted in response to issues on the horizon instead of following a set of policies or theories. Coming off of the heels of the worst economic depression the country had ever seen the Agricultural Adjustment Act was seen as necessary for struggling farmers. The AAA limited crop production, reduced stock numbers, and refinanced mortgages for struggling farmers (Thompson, 2016). This was in response to the large number of surpluses that had caused prices to bottom out.

In 1938 A new AAA was enacted that ensured all of the provisions of the program were constitutional following the U.S. Supreme Court's ruling. This removed the commodity tax provision while introducing soil conservation, acreage allotments, marketing quotas, and crop storage loans. World War II being in September of 1939 and brings with it a new demand for commodity crops that drives up the price of commodity crops.

1940-1947

War Time Price Supports

Policy	Year	Effect
Lend Lease Act	1941	Incentivized the large-scale production of goods.
Stegall Amendment of 1941	1941	Required support for non-basic commodities at 85% of parity or higher
Rationing Requirements Imposed	1942	Remained in place for 2 years. Placed limits on purchasing high demand items.
Agricultural Act of 1948	1948	Made price supports mandatory at 90% of parity for 1949 basic commodity crops.

Table 2.5. 1940-1947 War Time Price Supports

During the 1940s the United States was dealing with World War II and most of the policy released during this time was to increase production, export goods to allies, and ration the supplies that the United States did have. Farmers in the United States faced many challenges over the span of the war mainly shortages in labor. As more and more men were sent to war farmers were left with the question of how to handle the shortages. Despite these challenges, however, the farm industry saw growth throughout the war. This coupled with the increase of exports during the war positioned the United States to begin exporting high amounts over the next several decades. The Lend-Lease Act of 1941 increased the amount of aid going to allies to $13 billion (Library of Congress, n.d.). This program included a variety of goods including crops and food products. The Bracero Program was introduced as a solution to the lack of workers in the agriculture industry. This was an intergovernmental agreement that brought Mexican laborers to the United States to take low-paying agricultural jobs. This program was intended to only be used during times of worker shortages, but quickly became a program that farmers were

able to hire inexpensive laborers through as full-time employees and strikebreakers. This is when farm wages began to drop, and the use of undocumented laborers began to rise.

1948-1973

Rise of Commodity Crops in the United States

Policy	Year	Effect
Agricultural Act of 1949	1949	Fixed price supports and acreage allotments in permanent farm policy.
Agricultural Act of 1954	1954	Flexible price supports for commodity crop programs.
Agricultural Act of 1956	1956	Began the Soil Bank Act which provided for a short- and long-term removal of land from production by providing annual rental payments to participants.
Food and Agriculture Act of 1965	1965	Introduced new income support payments with reduced price supports and supply controls to manage the production of surpluses
Agricultural Act of 1970	1970	Established the cropland set aside program and a payment limitation per producer.

Table 2.6. 1948-1973 Rise of Commodity Crops in the United States

The Agricultural Act of 1949 established permanent fixed price support and acreage allotments. The Agricultural Trade Development and Assistance Act was created to export crop surpluses as a form of foreign aid.

As World War II ended the factories that were once used to create industrial technology used in the war were converted in order to produce farm tractors, pesticides, and fertilizer. The implementation of these new technologies created the ability for the industrialization of agriculture. This transitioned farming from a way of life into a business.

1973 -1996

Rise of Commercial Farming

Policy	Year	Effect
Agriculture Consumer Protection Act of 1973	1973	Began subsidizing crops to reward production. "Adapt or Die" Lead to an era of imbalanced supply and demand.
Food and Agriculture Act of 1977	1977	Increased price and income support. Established farmer owned grain reserves.
Agriculture and Food Act of 1981	1981	Lowered dairy supports, eliminated rice allotments, and marketing quotas.
Food Security Act of 1985	1985	Focused on conservation programs and Included income and price supports, disaster payments, and acreage reductions (Glaser,1986).
Food, Agriculture, Conservation, and Trade Act of 1990	1990	Created a framework that the Secretary of Agriculture used to administer agricultural and food programs from 1991-1995 (Pollack, et. al, 1991).
Federal Agriculture Improvement and Reform Act of 1996	1996	Simplified direct payment programs. Removed link between income support payments and farm prices. Authorized 7-year production flexibility contract payments.

Table 2.7. 1973-1996 Rise of Commercial Farming

President Nixon began the war on Hunger by changing the way that the United States viewed agricultural policies. The high levels of commodity exports that the United States were facing were in part due to the failures of the Soviet Union. The Soviet Union's agricultural industry crashed which led the country to buy nearly 25% of America's wheat. This caused food prices in America to rise. The solution was the Agriculture Consumer Protection Act of 1973, or the 1973 Farm Bill. This was devastating for small farmers and ultimately decreased the number of farms in America by 63%, and the rise of factory farms that lead to a less diverse makeup in farming (Wender, 2011). As the markets for American commodity crops began to grow so did the incentivization to produce higher quantities of crops. This policy saw the rise of industrial, mechanized agriculture in the United States. The

Federal Agriculture Improvement and Reform Act of 1996, or the Freedom to Farm Act, or FAIR Act, served to simplify direct payment programs. The 7-year production flexibility contract payments served to provide producers with fixed government payments that were not influenced by farm prices and production quantity.

2000-Present

Current State of Agricultural Policy

Policy	Year	Effect
Farm Security and Rural Investment Act of 2002	2002	support the production of reliable, safe, and affordable access to food. Facilitate to access to American farm products at home and abroad.
Food, Conservation, and Energy Act of 2008	2008	Continued long running subsidies. Pursued developments in energy, conservation, nutrition, and rural development.
Agricultural Act of 2014	2014	Changed commodity programs, created additional crop insurance options, streamlined conservation programs, and changed SNAP.
Agricultural Improvement Act of 2018	2018	Minimal changes except for in programs pertaining to trade, research and extension, energy, specialty crops, organic agriculture, local foods, and veteran farmers and ranchers (USDA, 2019).
Corona Virus Food Assistance Program	2020	Targeting Farm Operations during the Covid-19 pandemic. Involved two rounds of funding totaling $23.5 billion.
Paycheck Protection Program	2020	Allowed small business to keep employees on the payroll and bring back workers.
USDA Pandemic Assistance to Producers	2021	Provide financial assistance to those who were affected by the COVID-19 market disruptions. At least $6 billion allotted.

Table 2.8. 2000- Current State of Agricultural Policy

The 2002 Farm Bill was intended to address issues relating to agriculture, ecology, energy, trade and nutrition. These issues were pursued in much of the agricultural policy in the early 2000s. The continued focus on sustainability and specialized farming continued throughout recent agricultural policy. A shift

occurred prior to the Covid-19 pandemic as farmers faced droughts, over production, and continued industrialization of the agriculture sector.

The Covid-19 pandemic served to disrupt the supply chain beginning in 2019 and the effects are still being felt today. Prior to the pandemic the agricultural sector was struggling to cope with the effects of droughts and floods that were in previous years. This coupled with declining market prices provided a volatile market prior to the pandemic. The global pandemic had unprecedented effects on the supply chains around the world. Producers and consumers, alike, have felt the repercussions of these fragile supply chains.

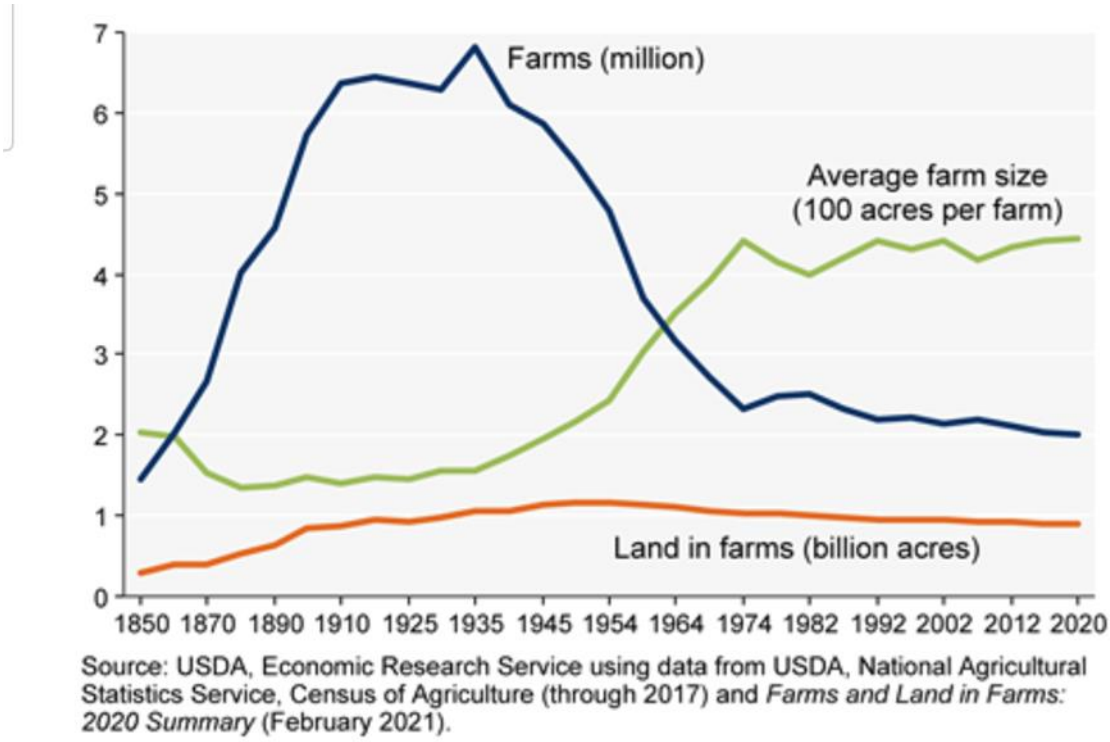
Chapter 3

Barriers that Small Farmers Face

Problem

As the agricultural industry continues to age, there are two truths left within the industry, Farmers are "aging out" and these farmers are not being replaced. This is the result of barriers to entry facing the farmers that have never been faced before. Due to the role of multi-national involvement in farming and large-scale industrial farms the American farmer is more powerless than ever before. The involvement of industrial agriculture has left small farmers without the economic power to control the price of their goods, and as a result their profit margins have been squeezed. These large, industrialized operations are able to set their prices at such low levels because of unsustainable practices that allow them to mass produce crops.

The result of these large players being heavily involved within the agricultural industry is that local farmers are unable to compete. As a result, these farmers are being driven out of the industry. Figure 3.1 shows the number of farms decreasing from 1935 to 2020. It also shows that the average farm size has grown from 1974 to 2020. These trends show the decline of the American Farmer.



Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, Census of Agriculture (through 2017) and *Farms and Land in Farms: 2020 Summary* (February 2021).

Table 3.1. Agricultural Presence Over Time (USDA, Feb. 2021)

As the number of farms has decreased so has the number of farmers. As of 2017 the average age of producers was 57.5 years, and the average age of primary producers reached 59.4. Beginner Farmers that have 10 or fewer years of farming only account for 27% of the U.S. producers as of 2017. According to the USDA, retired or retiring farmers currently account for over 25% of operators in U.S. farm business. The average age of farmer retirement is 62 years old (White, et. al., 2019). As the average age of farmers continues approaching this age policy makers are faced with the issue of intergenerational land transfers. Farmers are being incentivized into holding farmland until death in order to avoid capital gains taxes. The intergenerational transfer of farmland is essential to ensure the continuance of the United States agricultural sector at local levels.

Barriers to Entry

Barriers within the Agricultural industry, for the purpose of this thesis, can be put into three broader categories: Capital, Land Ownership, and Access to Land. These barriers particularly effect beginning farmers that are defined by the USDA as, "those who have operated a farm or ranch for 10 years or less." Beginning farmers face high startup costs and land ownership obstacles within their regions. These farmers operate farms of all sizes but are concentrated within smaller farms. It is pertinent that policy makers understand these challenges as new farmers are vital to this sector of the economy. These challenges are interconnected for many farmers to make structural barriers that many beginning farmers are unable to overcome.

The issue of capital will affect farmers for the first several years of owning a farm. The initial challenge is startup capital. The funding that is required to purchase equipment, land, and machinery often pose unique challenges. Within the first-year farmers are not likely to have commodity production. As a result, these farmers have less on-farm income. This often requires the need for many operators and producers to have an additional off-farm income to supplement their on-farm income. This is in part due to the increasing costs that farmers are forced to face, as well as the prices that are set by large industrial farms. The involvement of larger industrial farms has left small farms with little financial independence in regard to setting their prices.

Main issues that are capital intensive for new farmers are government standards and requirements that go into farming, purchasing intellectual property,

distributor agreements, supplier agreements, and access to markets. These barriers are often overlooked, because the full scope of farming is not understood at a basic level. Government intervention within the agricultural industry has created standards that are often include licenses and permits that require substantial investment. This can be zoning restrictions or taxes. Intellectual property is also a challenge due to the concentration of power within the industry. Companies like Monsanto, Dupont, Syngenta control 47% of the worldwide seed market and account for $10,282 million of the business (ETC Group, 2009). These companies genetically modify seeds in order to increase the productivity and efficiency of farming, but this comes at higher costs for farmers.

Access to land is another significant challenge that beginning farmers face. This is furthered by the issue of lack of capital. There are several ways to enter the industry through renting land, purchasing land, and intergenerational passing of land. Each of these have unique challenges that are capital intensive. Purchasing land is limited by high land prices and low availability in regions. Intergenerational passing of land faces unique challenges in terms of capital gains taxes.

Knowledge

Industrialized agriculture has shifted the focus from investment in knowledge and education to investing in technology and tools to increase crop yields. Small farmers often do not have the ability to invest in technology and machinery, so there is a greater need for investment in knowledge. The shaping of a farmer's knowledge is highly dependent on the region that they farm. The

characteristics and specific features of the area shape the farmer's knowledge of agricultural practices. Within this region information is readily passed between players. This knowledge that a farmer possesses is shaped by the characteristics of the area, the culture of the area, and the economy of the area. The matter of sustainability in farming has continuously placed greater focus on how knowledge is passed throughout the industry.

Knowledge is often passed from generation to generation within local communities. This is known as the intergenerational learning chain. The intergenerational learning chain is a vertical system of knowledge that is passed from parent to child, but the issue that these small farmers are facing is lack of generational retention in farming. The ambition for these children to become farmers is less and less present within newer generations, therefore there are less sources of knowledge present today. This generational knowledge is developed through experience. Experience is what cannot be taught or transferred by word of mouth.

This research will focus on the role that knowledge plays in being a barrier to entry for new farmers. The FAO provides that, "a country's ability to build and mobilize knowledge capital is as essential to sustainable development as the availability of physical and financial capital. The basic component of any country's knowledge system is its local knowledge. This encompasses the skills, experiences and insights" (FAO, n.d.). With this in mind, this research will establish how local farmers are able to expand their knowledge of the industry as well as pass along their knowledge. This knowledge encompasses far more than how to grow or the

best practices for planting but extend to the economy that farmers conduct business in and the markets where they are conducting business.

The government has begun to turn its focus towards training and education programs as a way for farmers to continue gaining knowledge. NIFA has focused on investing in training and educational programs for farmers and youth to cultivate their knowledge around sustainable agriculture and developing programs for underserved communities. One of these programs has focused on training farmers to incorporate technology into their daily operations. This is in a bid to increase efficiency on smaller farms. The training programs also focus on causing less harm to the environment, reducing food contamination, reducing the need for water and chemicals in farming, and increase profits (NIFA, n.d.).

Programs that are in local schools have proven to be effective in building knowledge within small communities. As players leave the agricultural industry it is important that beginner farmers are able to start accessing information at a young age. This development of knowledge can come at a regional level with the use of school-based agricultural programs. These programs not only benefit players within the agricultural industry, but also rural communities as a whole by creating sustainable development. Approximately 12 million students were being educated in rural areas in 2010 (Doolittle, 2015). The introduction of Career Technical Education programs into rural schools has proven to provide valuable knowledge to students. This knowledge can create a skilled workforce within rural communities that serve to cultivate development both in the economic sector as well as the work force.

The state of Texas is implementing an ACTE program for Agri-Science that has a Traditional and Non-Traditional approach. These programs focus on growing the knowledge of marketing, processing, budgeting, taxes, irrigation, and water management. The statewide program focuses on the elements of life such as: food, water, land, and air. The spectrum encourages a wide range of carreer paths from agribusiness, animal science, applied Agricultural engineering, environmental and natural resources, food science and technology, and plant science. This educational opportunity provides students with the knowledge to earn an annual average income of $32,406-64,792. Figure 3.2 shows the work-based learning opportunities through exploration activities and work-based activities (TEA, 2021).

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES	
Exploration Activities:	**Work Based Learning Activities:**
Tour a farm products or machinery plant Texas FFA	Earn a welding certification Intern at a farm products or machinery plant FFA Supervised Agriculture Experience (SAE)

Table. 3.2 Work Based Learning and Expanded Learning Opportunities (TEA,2021)

These technical programs are able to on-board students at level one with the principles of agriculture, food, and natural resources in ninth grade to the fourth, and final level, that has roots in research and design in the twelfth grade. This is a

way of helping new entrants to accumulate a vast knowledge of agricultural production, processing, and business.

Multi-National Corporations Role

A rather large barrier of entry for many farmers is the role of industrialized agricultural players that dominate the market. These producers are able to increase efficiency through the use of technology and machinery in order to produce large amounts of commodity crops. The control that these players exercise on the market has left many small farmers struggling to make ends meet with the prices that they are being faced with on the market. These prices are felt by farming families, and within rural communities. This shift has left rural economies increasingly dependent on exports, capital, off-farm jobs, and federal invention in order to keep farms running. As United States Agricultural policy has changed over time so has the definition of small farmers. The USDA established the definition of a small farmer as a producer earning less than $20,000 a year in the Agricultural Adjustment act of 1936. The USDA currently defines a small farmer as a producer who is earing anywhere from $1000 to $250,000 annually. This change in definition shows how United States policy has shifted to reflect the interests of industrialized agriculture over the interests of small farmers (MacDonald, 2021).

The gradual shift of policy that favored these large commodity producers began in the 1970s and has left small farmers struggling to live in the shadow of industrialized agriculture. The vertical integration of commodity crops has been pushed due to technological advances. This leads to an increase in efficiency and

profitability, but this is not felt at a local level due to the priorities of large corporations. This efficiency has resulted in a market that is unable to reflect the demand of the industry. Farm incomes are largely set by market prices, which these smaller players have little to no control over because of the price setting that the large multi-national corporations do in order to sell the quantity that they produce. Prior to the involvement of large, vertically integrated players, farmers were able to have more control over the supply of crops when demand fell, but now small producers are forced out of the industry.

This corporate control has granted companies power to control United States food systems and manipulate the marketplace in a way that smaller players could never do. The consolidation that the market is facing is affecting more than just the farmers as it reaches to the grocery store shelves with higher prices and fewer choices.

Chapter 4

WHY IS INVESTIGATING THIS IMPORTANT FOR SMALL COMMUNITIES

Importance

A community can be defined as, "a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings" (Maqueen, et. al., 2001). The interpersonal bonds, shared territory, livelihoods, and social interactions with one another can also be recognized as pillars of forming a community. The U.S. Census Bureau defines rural as, "any population, housing, or territory not in an urban area" (U.S. Census Bureau, 2022). The development of these communities has been jeopardized as a result of the increasing focus on globalization and industry. The removal of jobs from the United States and investment in technology has caused small communities to shift their priorities. Focusing on community action and community leadership can address issues that these small communities have been faced with as a result of urbanization. These communities are focused on strengthening their local economies, improving quality of life, and building on local assets (EPA, 2021). These growth strategies will be shaped through policies at a local and national level. The 2016 United States Census found that there are 60

million people who make up rural America. Please see Figure 4.1 to see the heavy concentration of rural populations in the Mississippi Portal. Mississippi, Tennessee, and Arkansas have over 30% of their state's population in rural areas. The concentration of these small communities contributes to why the Mississippi Portal was chosen as the area of interest in this proposal.

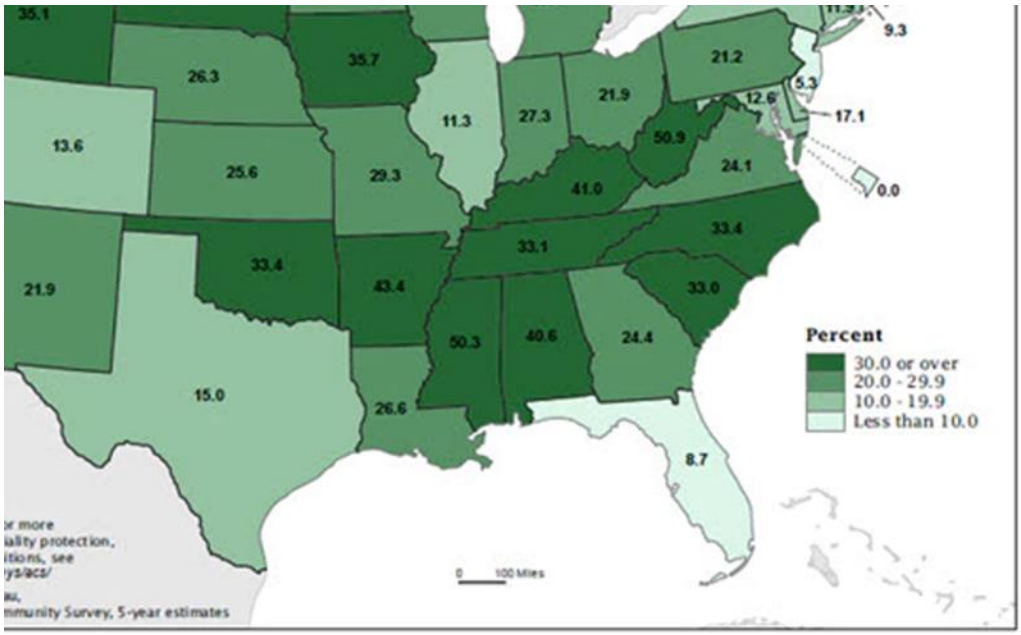


Figure 4.1. Percentage of Rural Populations in the Southeastern United States (Fields, et. al., 2016)

These small commercial farmers make up rural America. One out of every five Americans, or 60 million people totals are living on farms (U.S. Census Bureau, 2021). This being said, food production impacts more than just the producers. The social, economic and environmental impacts of these farms are vitally important. The multi-functionality of the agricultural industry is demonstrated in Figure 4.2

below. The economic, environmental, and social consequences of traditional food production shape communities. Figure 4.2 demonstrates how interconnected food production is to communities. The social, environmental, and economic welfare of communities is tied intricately to the food production in these towns.

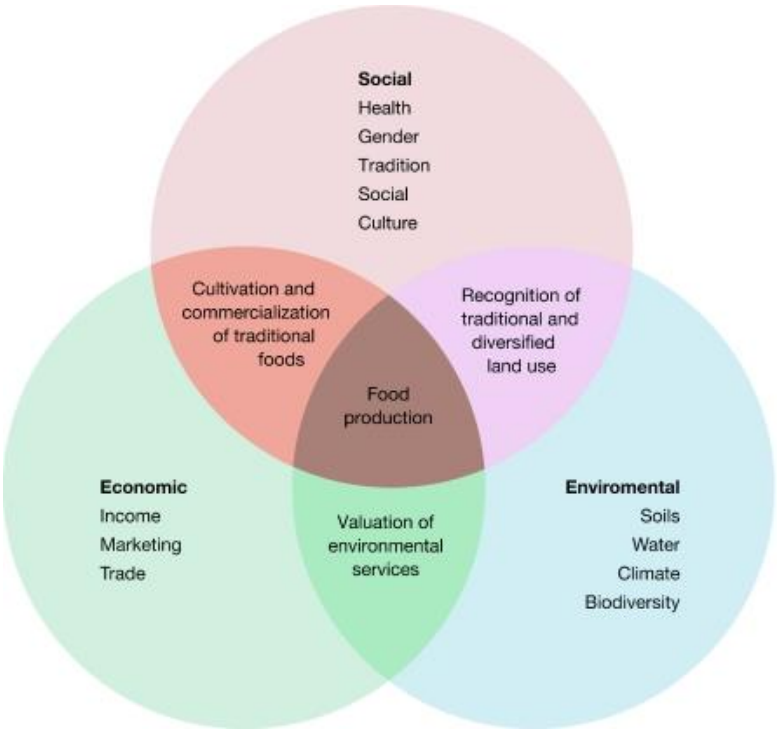


Figure 4.2. Influence of Food Production on Communities (IAASTD, 2009)

Rural Economies

The concentration of farming families in rural communities helps to support the schools, businesses, churches, and the community as a whole. As a result of the economic pressures that have been put on farmers many of the surrounding

communities have also had to endure negative consequences. According to Peter Rosset, “In farming communities dominated by large corporate farms, nearby towns died off. Mechanization meant that fewer local people were employed, and absentee ownership meant that farm families themselves were no longer to be found” (Rosset, 2013). The impact of this shift is felt heavily by rural communities because of the sparse populations, isolation, lack of social and financial resources, lack of government allocation for social services, and how transnational corporations view them. Rural economies are unable to be as resilient as urban areas, and as a result this shift into globalization has drastically impacted the development of rural economies. This shit has caused rural economies to be restructured in a way that further disadvantages the community.

In order to invest in the development of small communities there must also be substantial investment in small farmers. “When American farmers are financially healthy, they not only support themselves and their families, but also their employees, local equipment dealers, farm service suppliers and the rural communities where they live and do business” (Hafemeister, et. al., 2021). Therefore, the policies that impact farmers and ranchers serve to directly impact their communities, and the policies that impact rural communities directly impact the farmers and ranchers that live in the region.

The increased focus on developing rural economies began in the 1960s after it was observed that the country was experiencing economic growth through industrialization, but rural development was not progressing. Development within these economies refers to the policy and broader processes of change within these

societies. These policies often focus on targeting geographical areas, instead of economic sectors for rural communities, but within policy certain sectors are targeted.

Much of rural America depends either indirectly or directly on the Agricultural Sector. Please reference Figure 4.2. to see the interdependence of societal, economic, and environmental factors within food production. As a result, many rural development strategies include plans to strengthen small scale agriculture. Regardless of the strategy used to implement changes for rural economic development, it is clear that something must be done regarding development. Sectors within rural communities are interconnected because of small businesses that make up each community. "Historically, non-farm economic activity in rural communities reflected the numbers and sizes of farms and farm families." The cornerstone of the American economy is small business, and 93% of these small, family-owned farms rely on direct to-consumer marketing according to the USDA. This is primarily done through farmers markets and other similar store fronts. The challenge that many famers face aside from environmental challenges, is the ability to find consistent buyers for their produce. This is partly due to rural communities being on average older than urban communities. The median age of rural communities is 43 (Porter, 2018). The push of factory jobs overseas has taken jobs out of rural America. This coupled with declining employment possibilities within these communities has left them economically disadvantaged.

The interconnectivity of on-farm economic decisions and off-farm economic decisions are shown in the purchasing power of farmers and through the increased

focus on off-farm employment opportunities. As off-farm income has increased over the past fifty years, on-farm income has rapidly decreased. Please see Table 4.3 to reference the decline of on-farm income over the past four years. As median farm income has continued to be negative, the median off-farm income has risen.

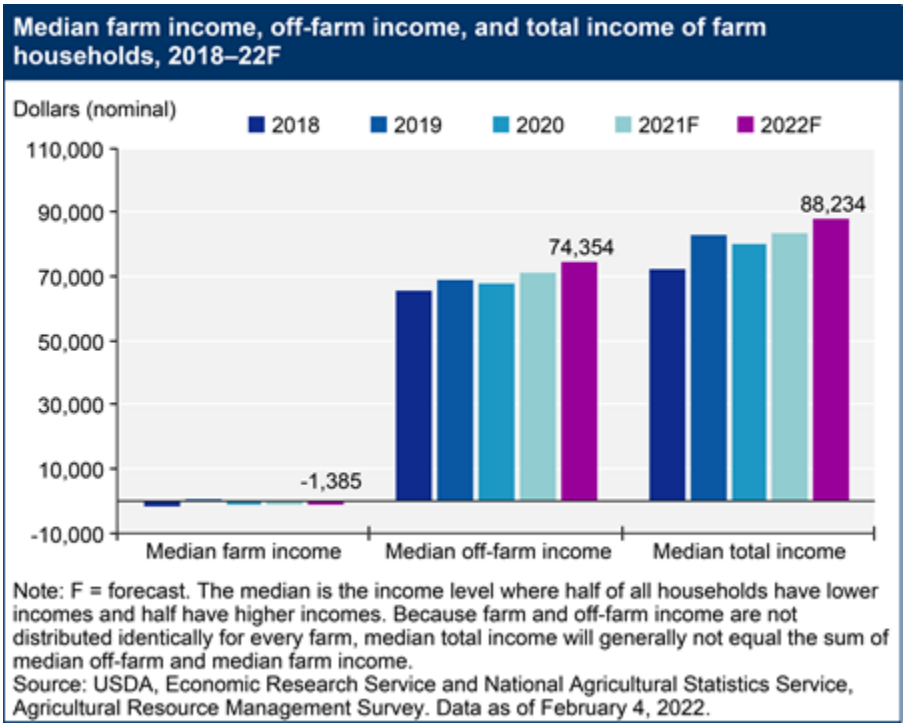


Table 4.3. Off- Farm Income (USDA, 2022)

Labor Force

The rural labor force has diversified as a result of corporate globalization removing jobs from regions. Globalization was a term first used in 1959 in the Economist and describes the increasing dominance of every facet of life by the transnational corporations (Merrill, 2016). The involvement of transnational corporations has led to the decreased need for a large workforce. As a result, the

distribution of employment in rural areas has shifted. Please see Table 4.4 to see how these trends have been reflected from 1970 to 2007.

Rural Economic Involvement of Industry

Sector	1970	2007
Agriculture Forestry, and Fishing	23%	12%
Manufacturing	10%	7%
Government	19%	18%
Services	15%	30%
Wholesale and Retail Trade	17%	13%
Finance, Insurance, and real estate	4%	6%
Mining	3%	3%
Other	8%	11%

Table 4.4. Rural Economic Involvement of Industry (National Archives and Records Administration, n.d)

The increased use and dependency on technology has reduced the demand for labor in all sectors. Machine operators and skilled tradesmen are no longer necessary for production, because of the industrialization and over-seas factories that now dominate the United States markets. The opportunities that once dominated rural communities are now limited. This, as a result, has led employment opportunities in rural communities to become more diverse. The goal of rural work force development is to strengthen rural communities through ensuring that workers have the opportunity and resources necessary to advance their economic circumstance. This can be through various facets but include education and skill development. According to , *Investing in America's Workforce*, there are six fundamentals that the labor force in rural communities must accept. These are connectivity, innovation, entrepreneurship, assets, collaboration, and regionalism.

Sustainability

These small communities will soon be forced to tackle pressing agricultural issues, such as: Sustainability. Many of these small, rural farms will be able to implement initiatives and practices that larger industrial farms will not be able to implement. The investment in these movements will serve to revitalize these communities through economic investment and investment in the creation of jobs for these communities. Small commercial farmers are more likely to practice intercropping as opposed to larger farms who profit from monoculture. Monoculture is far more harmful to the environment and causes land degradation. Smaller farmers are more likely to rotate crops and livestock to support soil fertility. Small farmers on 25 acres of land or less produce 70% of the world's total food (Nowakowski,2018). The dynamic environment that is cultivated on these farms allows for competitive and sustainable practices to emerge within the agricultural industry. The increase in competition allows for market prices to be set at a competitive price. The industrialized agriculture industry that dominates within the United States today is not necessary as the consumer demand for food has not grown at the rate that economy has grown.

These small commercial farmers make up rural America. One out of every five Americans, or 60 million people totals are living on farms. This being said, food production impacts more than just the producers. The social, economic and environmental impacts of these farms are vitally important. The multi-functionality of the agricultural industry is demonstrated in the chart below. The economic,

environmental, and social consequences of traditional food production shape communities.

Chapter 5

Proposal for Research and Design

Sample Group

This research will specifically look at farmers within the Mississippi Portal. This region has been chosen due to the abundance of rural communities and the balance of large-scale industrial agriculture and small farms in the area. The initial outreach will be through the U.S. postal service. This method was chosen due to the ability to access land titles through local courthouses. This was chosen due to the initial hesitance that many rural farmers may have on communicating about their livelihoods. By mailing out the questionnaire farmers will be able to look over the questions and fill out the information that they are initially comfortable with sharing. This survey will work to establish a sample pool to pull from for interviews that will be used to conduct more in-depth research pertaining to the rural communities that the producers live in. The initial survey will include paid postage to simplify the process of returning the survey.

Initial Survey

A survey will be used to have a systematic approach to gathering data. The survey will be composed of a set of questions focused on establishing a sample that

will move forward to the interview process. A survey was chosen because of the unique challenges that face certain farmers, and rural communities across the Mississippi Portal. The survey will be composed of closed, ranked, and demographic questions in order to give a more comprehensive view of the respondents and their feelings. The responses will be used to establish commonalities by state, and from there the sample will be chosen.

The stakeholders within the industry will be identified through land registry searches through rural areas. These can be accessed online or through an application that can be downloaded. Please reference Figure 5.1 to see how land is broken down. This application is used to identify landowners typically for hunting purposes, but can be used to identify the land owner in order to reach them. Figure 5.1 shows the division of land by ownership via highlighted sections. This is an application that is available with a subscription and can reach in the areas that are being researched for the purpose of this study.

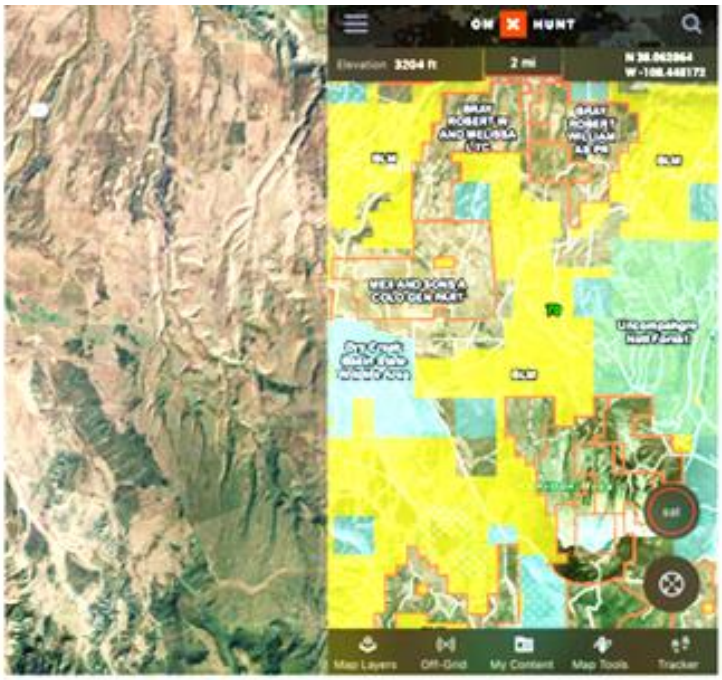


Figure 5.1. Overview of OnX Application (OnX, n.d.)

Upon receiving the information back each of the surveys will be initially sorted into two categories, those who are willing to move forward with further research, and the no responses or those who are unwilling to move forward. There is a risk of a low sample return as many rural farmers are going to receive this survey and either throw it away or forget to return it.

The survey will seek to answer questions surrounding the background of the producer and farm, as well as the local community that they interact with. This will help to establish the candidates that will progress to be in the sample for the interviews. The survey will serve to sort farmers into two categories of farmers, beginning, which is any producer or operator that has been doing business in a region for under ten years, or an experienced farmer who has been doing business

in a region for over ten years. These two groups were chosen to establish the interdependency of a producer within a rural community, as well as to evaluate the barriers of entry that these producers faced in their beginning years of farming. Please see an example of the survey that would be sent to farmers below.

The results of the surveys will be transcribed into an excel spreadsheet before being sorted based on state. The responses of each farmer will be recorded so that commonalities among respondents can be recorded. The surveys that were mailed in will be divided by region. This will allow an equal number of participants from Mississippi, Arkansas, Tennessee, and Missouri to participate. Once the survey responses are sorted into states, the commonalities amongst respondents in each state will be recorded.

Interviews

Interviews will be used to establish an informal interaction with the sample that is chosen. These are used in qualitative research because of the element of flexibility that they offer. The intention of this interview will be for the interviewer to be flexible in order to encourage the interviewee to be responsive. This will allow the interview to evolve in a way that will reflect their life experiences and the struggles that they have personally faced without the bias of the interviewer. These interviews are conducted to establish common themes amongst farmers and rural communities that will be analyzed. The use of open-ended questions will be helpful in allowing the interviewees to fully develop concepts that will be used to shape

policy in the future. The use of multiple interviews being compared will develop complex ideas that will be put forth after the analysis.

The aim of the interviews that will be conducted with farmers is to further establish the ideas that were expressed within the survey. This will serve as a way to better understand how the small, rural towns that the farmers consider community have changed over time. This will also serve to get a better understanding of what role that the farmers believe knowledge will play within rural communities as well as within the agricultural industry over the next decade as local farmers struggle to find their niches within the industry. Allowing these farmers to better explain what limitations of entry meant for their farming operations and their livelihoods a more comprehensive policy recommendation can be made.

The interviews will take place over a phone, and each interview will be recorded and then transcribed. With each of the towns chosen information pertaining to population size, industry within the county, and average income within the area. Questions that will be asked are as follows:

1.) What town would you consider is your community?
2.) How would you describe the community?
3.) Has the community changed since you began farming?
4.) What role do you believe the agricultural sector plays within the community?
5.) How do you see the agricultural policy adapting to ensure that small farmers are still valued players?

6.) What sets local farmers apart from large, industrialized farms?

7.) What issues did you face when initially beginning your farming operation?

8.) How did these issues shape your views of farming?

9.) Of the limiting factors we have discussed, how do you think lack of knowledge plays into this conversation?

10.) What can policy makers do to encourage generational retention within the agricultural industry, and encourage new players to enter the industry?

These questions will serve as a basis to guide conversation within the interviews. These interviews will be recorded so that they are able to be transcribed and analyzed.

Data Analysis

I will conduct a thematic analysis of data in order to establish common concepts within the data. This will be done by comparing the notes, audios, and impressions of each of the interviews. A thematic analysis allows for flexible interpretations of the data by coding. The interviews will be recorded, and later transcribed. This will serve to familiarize myself with the data. The data will then be coded in order to fit with the subject matter of the interviews. This will serve to establish patterns or themes throughout different interviews. This will be done in order to establish local, state, and regional themes. The importance of looking at the

data from each of the local, state, and regional views is to better understand the challenges that are propagated by state and local policies. The challenges that are identified will also be outlined throughout the interviews.

The commonalities between interviews will be coded with two different goals in mind. The challenges that new entrants face within the agricultural industry and the implications of farmers leaving the industry on rural communities. The role of knowledge will be evaluated by assessing how stakeholders learned the best farming and selling practices. The ways of attaining knowledge will be classified into several initial categories: generational, online, almanac, and college. These will be taken into consideration with each of the categories of farmers, and the education level that each of the farmers received off of the farm.

Chapter 6

Conclusion

Importance

This proposed research is meant to empower local small farmers by shedding light onto the unique challenges that they face upon entering the agricultural industry. These challenges will be identified by surveying and interviewing stakeholders within the Mississippi Portal. The intent of this research is to identify and evaluate the barriers of entry that new entrants within the agricultural industry face. This will then be used to evaluate the implications of these barriers to entry on rural communities.

The sociological impact that these communities faced has been widely studied, but there has been little change to address the issues at hand. This research will seek to identify how communities have changed since the agricultural industry has become more industrialized. As the continuation of industrialized agriculture progresses communities are faced with the harsh realities of jobs being driven out of their communities.

Contribution

The agricultural industry is involved within rural communities at every level. “Farmers invest in the community by employing workers, and purchasing inputs such as fertilizers, seeds, and farm machinery” (Bhuttor, 2019). Rural economies are

dependent on these stakeholders as rural areas with an increased number of agricultural stakeholders have a lower poverty and unemployment rate. This allows for further development within the community for educational opportunities and growth.

As Agribusiness has grown within the United States since the 1970's farmers have been faced with the impossible choice of becoming industrialized to produce large quantities or being forced out of the market. As the industry has shifted to reflect the growth of agribusiness so has the policy surrounding Agribusiness and as a result farmer are no longer guaranteed fair prices for their crops. Rural resilience within the United States is linked to the agricultural industry, and as a result there must be a shift in policy to reflect this. The lack of upward mobility, persistent gap in unemployment, and poverty rates within rural communities will continue to persist of these communities and within the agricultural industry.

Recommendations

Many rural communities have seen large strides being made through education. Education can empower communities and will cultivate leaders and programs within communities. This is critical for rural communities now more than ever. The use of high school educational programs that pertain to agriculture will allow a new generation of stakeholders to join the industry by overcoming one of the largest challenges, lack of knowledge. Career and technical education programs (CTE) serve to be, "an important tool that enables rural students to enter high-wage, high-skilled and high-demand careers" (School Superintendents Association, 2015).

CTE programs are providing new career opportunities in skilled professions for many high school students, especially those in rural communities. The Association for Career and Technical Education (ACTE), cites the goal of their programs as, "delivering education in a variety of models to facilitate student learned and engagement while working with financial, geographic, and access challenges (ACTE, 2015)." Rural investment is seen as the cornerstone of making a difference within these communities. Empowering community members to make a change starts with investing in community programs such as, the education system. Following the Covid-19 pandemic investment in these communities is even more crucial as the crisis, "further exposed the vulnerability of rural communities (Ajilore, et. al, 2020)." This investment will be from the bottom up, but first this research must identify the barriers that are faced by stakeholders across the United States, and how the

Repercussions

If nothing is done to address the issue of the centralization of agricultural power in the United States consumers will be left with fewer and fewer alternatives on the shelves of the supermarket. Further consolidation continues to take the power from small farmers, and instead place power into the hands of large multi-national corporations. This will serve to further push farmers out of the industry, and thus continue to contribute to the challenges new entrants face in the agricultural industry.

Embracing that farming has a direct impact on communities through the economy as well as through relationships. The slow loss of these farming communities being further disadvantaged as large-scale operations continue to grow. Empowering these communities begins with policy that focuses on expanding access to knowledge, access to land, and access to capital for players that are interested in entering the agricultural industry.

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