

The Effect of Reagan's Tax Policies on Farm Size Distribution in Washington State

Edward Zhang¹

¹ North Creek High School, USA

Correspondence: Edward Zhang, North Creek High School, Bothell WA, 98012, USA.

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Abstract

Recent developments with the election of Donald Trump and his tax policies have brought forward concerns of where the agricultural sector is headed in the near future. This paper examines the impacts of Ronald Reagan, a president with a similar economic ideology to Trump, and his tax policies on farm size distribution in America, in particular, Washington State. Data from the USDA's National Agricultural Statistics Service shows that the only factor which seems to have a significant negative correlation to average farm size in Washington is the quantity of wheat produced in the state. When examining the historical context and the policies passed by Reagan, it is concluded that there are many other factors which have a larger impact. It is actually the domestic and foreign policies which affect farm size distribution the most. Domestic policies like the shift toward conservation had a direct effect on farm size by incentivizing many farmers to get their land out of production. Foreign policy had the most significant effect on production quantity of wheat because when relations with big consumers like the Soviet Union deteriorated, so did the quantity produced. This paper highlights how the most important industry which provides everyone with food security, is most strongly affected by decisions made outside of the people operating businesses within the industry.

Keywords: agriculture, foreign policy, domestic policy, ronald reagan, reaganomics

1. Introduction

Traditionally an industry that focused solely on the production of foods and fibers, the agricultural sector, has shifted due to the process of globalization. Globalization has led to a direct increase in the trading of agricultural products and the formation of international food supply chains. This has raised questions regarding the role of agriculture in the foreseeable future (Erol et al., 2011.) Should agriculture focus on the production of food for basic necessities, or focus on maximizing profits?

This paper investigates the extent to which Reaganomics actually shifted the farm size distribution within Washington state or if there were other factors which led to a change in farm size distribution. When conservative Ronald Reagan was elected, change loomed on the horizon. His economic philosophy, known as 'Reaganomics', focused on combating inflation rates by lowering taxes and deregulating industries (Blanchard, 1987).

This paper uses a few strategies to determine whether average farm size in Washington was actually affected by Reaganomic policies. Data like price, production quantity, and farm size are all used to understand the historical context. A Freeman's P test was then used to determine the correlation between average farm size and many different factors.

Throughout this research, it is concluded that the only factor which had a significant correlation with average farm size within the state is the production quantity of wheat which has a p value of 0.018 and a correlation of -0.599. This means whenever the production of wheat increases, the average size of farms decreases and vice versa. This sounds counterintuitive because an increase in production would logically mean farms need more land to produce more crops. The increase in the number of farms could be one explanation to why this negative correlation exists. However, when looking at historical events, it is found that there is a relatively weak correlation between the two and it seems more like farm size is affected by other factors like domestic and foreign policy.

The remainder of the paper is structured as follows. Section 2 discusses the historical background and explains in depth what Reaganomics actually is. It goes on to elaborate how Reaganomics deregulates industries as well as the broader trends of the agricultural sector pre 1980. Section 3 presents the data compiled. Sections 4 and 5 talk about the impact of the data and potential limitations which could not be measured. Section 6 presents the take-

aways and an insight of what could be next. Section 7 concludes the research and presents new avenues for future research.

2. Historical Context

2.1 *The Agricultural Sector in America Pre 1980*

In Washington and throughout America, the early to mid 70s saw a big economic boom followed by a big bust in the 80s. This boom and bust is not the traditional up and down cycle of the economy but more of a “speculative bubble” (Bergsten, C. F., 1985). The main reason for this boom in the agricultural sector throughout the country was because of the increase of prices across the board for all agricultural commodities. As quoted by Carl Zulad of Ohio State University, “the 1970 period of farms can be characterized broadly as an asset driven period of prosperity.” This means that the boom of this decade was further exacerbated by the mass expansion of farm land throughout the country.

During the late 70s, America was stifled by Stagflation: an economic period characterized by both inflation and depression (Lerber, A.P., 1977). Despite the poor economic conditions, the agricultural sector actually saw unprecedented growth never seen before. Commodities like corn, soybeans, and wheat saw their values tripled (Rothe, 2025). This increase in value is what partially led to the skyrocketing demand for more farmland.

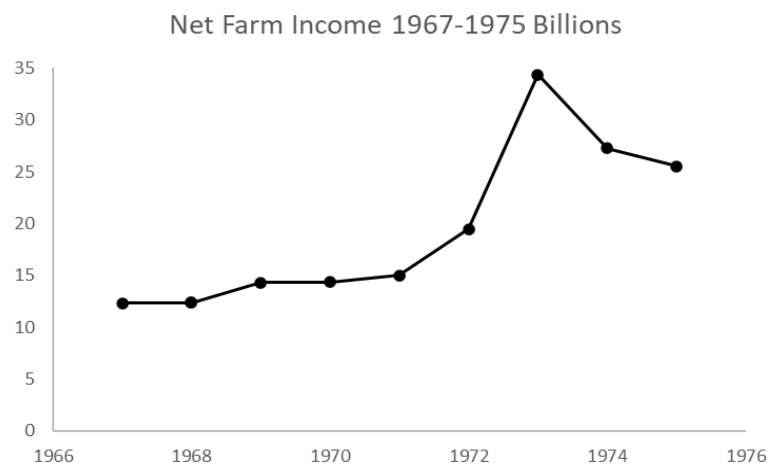


Figure 1. Index of Net Farm Income 1967-1975

Notes: This figure plots the net farm income in the United States from 1967 to 1975 measured in billions.

Source: U.S. Bureau of Economic Analysis

Figure 1 shows the net farm income between 1967 and 1975. In 1967, it was around 12 billion at best and skyrocketed to a peak of almost 35 billion in 1973.

The 80s were characterized by a farm crisis, global demand decreased and the Soviet invasion of Afghanistan led to a massive embargo which restricted an entire market. This time period also saw significant growth in interest rates. American economic journalist Paul Solman claims that rising interest rates are caused by 3 factors with one of them being inflation. When Former Chair of the Federal Reserve Paul Volcker was sworn in, he sought to combat the rising inflation by tightening the monetary fiscal policy. This tightening would eventually cause a lot of farms to default and marked the start of the bust period.

2.2 *Background of the Agricultural Sector in Washington*

Unlike the national average farm size which saw a steady growth even throughout the farm crisis of the 80s, Washington state did not see this trend.

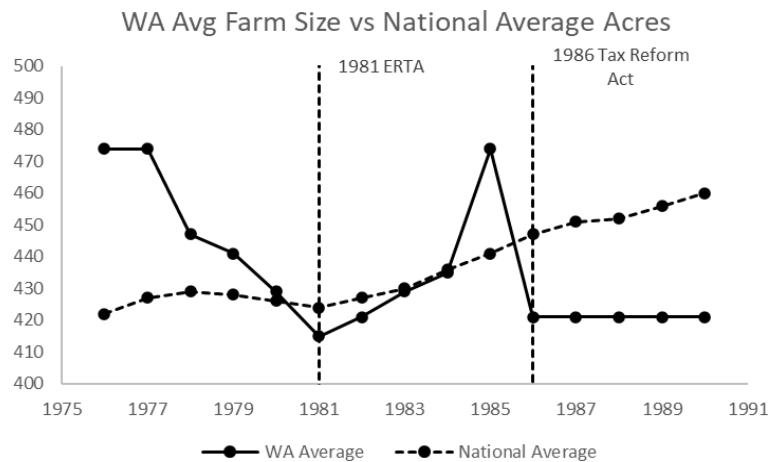


Figure 2. Washington Average Farm Size vs National Average in Acres 1976-1990

Notes: This figure plots the average farm size in Washington compared to the national averaged measured in acres between 1976-1990

Source: USDA NASS Pacific Northwest Regional Field Office

Figure 2 shows that Washington State sees a lot of fluctuations in comparison to the national trend of a steady increase. These fluctuations were mainly caused by the changes in wheat farming. According to Jim Kershner, the main reason for the decrease in wheat farming is because Iran was Washington's top consumer of wheat but this source stopped in 1979 due to the hostage crisis.

Wheat farming was particularly dominant in the Eastern side of Washington in particular the Columbia Plateau, Walla Walla, and Palouse (Kershner, 2018). The central region of the state primarily focused on utilizing technology to maximize efficiency with irrigation techniques to farm more specialized crops like apples on smaller plots of land (McGuire 2014).

The saving grace which did not prevent a catastrophe within the agricultural sector during the national farm crisis was the price increase of field crops from the year 1979-1980. Prices in field crops across the board all saw significant increases. Wheat, for example, went from around \$2.70 per bushel in 1976 to almost \$4.00 dollars per bushel in 1980. Barley saw similar growth going from \$1.80 dollars per bushel to \$2.90 per bushel in 1980. This massive price increase coupled with the increasing accessibility of newer farms to enter the industry meant that there were a lot more players in the market.

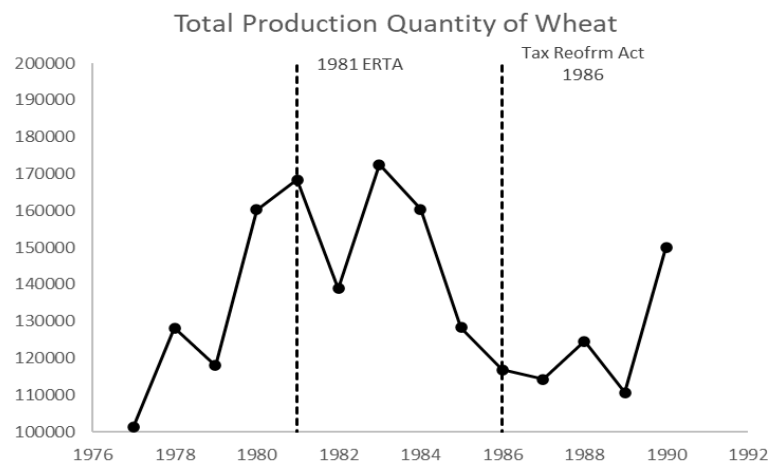


Figure 3. Washington Total Production Quantity of Wheat 1977-1990

Notes: This figure plots the total production quantity of wheat in bushels between 1977-1990

Source: USDA NASS Pacific Northwest Regional Field Office

This is seen in Figure 3 with 1980 producing almost 50% more than the previous year (“Historic Data,” n.d.).

2.3 Federal Policy at the Time

The decade leading up to the 80s was a very positive time for agriculture. When president Richard Nixon agreed to a multi-year contract with the Soviet Union for wheat and other grains in 1972, prices shot up (Shabecoff, 1972). Expansion was heavily encouraged with Nixon’s secretary of Agriculture, Earl Butz, famously telling farmers that they must either “get big or get out.” Earl Butz was involved in getting rid of many previous policies which provided aid to farmers. He believed that if he could increase demand, well-established farms would be forced to find further methods to maximize production (Pollan 2006).

In 1977, Jimmy Carter’s Secretary of Agriculture passed the 1977 Farm Bill. This bill implemented many new policies including price supports for many crops and established reserves for grains. A very important aspect of this bill comes in Title I where the bill proclaims the importance of family farms claiming “the maintenance of the family farm system of agriculture is essential to the social well being of the nation.”

When Reagan became president, he sought to implement his “Reaganomics” on all industries including agriculture. Reagan believed that the market should be the one which guides the economy, not the government (Reagan, 1981). His deregulation policies came at a very bad time, as the farm crisis of 1980 hit. It seemed like president Reagan would not do anything to help stabilize the situation like the new deal policies did 50 years ago. It wasn’t until 1985 when he finally passed a major food security act. This act focused primarily on conservation like the establishment of the CRP which incentivized farmers to be more environmentally conscious.

3. Data and Methodology

3.1 Data

The most important piece of data is the average farm size in Washington. Most of the data was found through the Northwest Regional Field Office, a part of the USDA’s National Agricultural Statistics Service Washington Field Office. This database provides key data like quantity produced, acreage farmed, and price for many agricultural products. This database also has a section called “Economics Historic Data” which provides key information about the actual land in farms, the value of production on farms, as well as employment data in the region. This paper uses wheat and barley prices, employment data, farm size data, and production value of crops.

By looking at the table showing the value of production, total production quantity can be derived from the following equation: Quantity * Price = Production Quantity.

When deciding the time frame of the data, 1977-1990 was the perfect time frame because it showed the 3 year trend pre Reagan and the results 2 years post him leaving office.

3.2 Methodology

To analyze the effects of Reagan's Tax policies, three big policies were analyzed: the 1981 Economic Tax Recovery Act, the 1985 Farm Bill, and the 1986 Tax Reform Act. For these benchmark years, trends were noted down and aligned with historical weather data to figure out if these acts had a direct effect on farm size distribution.

A Friedman’s P test is also used to figure out which data had a significant correlation with the average farm size. In a Friedman’s P test, a P-value of less than 0.05 indicates a significant difference between the groups. A Pearson Correlation Coefficient test was also used, this tool uses a scale from -1 to 1 with -1 indicating negative correlation and 1 indicating positive correlation to get a correlation score of -0.599 between wheat quantity produced and farm size in Washington.

4. Important Federal Policies

4.1 1981 Economic Tax Recovery Act

The 1981 Economic Tax Recovery Act was the first major piece of legislation passed by Reagan which had a significant effect on the agricultural sector of the nation. This act was the first major tax cut across the board in nearly 20 years and significantly favored those at the highest income bracket. The goal of this legislation was to curb inflation by encouraging more people to invest and save for the future as well as boosting employment. In the agricultural industry specifically, this heavily favored well established and larger farms and it can be seen from Figure 2 post 1981 (Fisher, 2022).

This act also introduced the ACRS (Accelerated Cost Recovery System) which is a new depreciation method. In short, this system allowed farmers to write off more on investments for more tax breaks (Muresinau, 2020).

In addition to general tax reductions, corporate tax reductions were also instated. This would encourage more farms to incorporate so they could report profit as capital gains (Williamson, Durst, Farrigan, 2013). As a result,

these new farms would now have more access to aid and resources. Due to higher cost barriers for more efficient technologies, small farms were unable to keep up with larger ones (Watters 2020).

When looking at the production quantity of wheat after 1981 from figure 3, there is a slight fluctuation in the data. Despite stable wheat prices, there was a significant dip the year following the ERTA. Although it may seem like the ERTA had a significant effect on the production quantity of wheat, the reality is the production dip was likely because of the drought in the winter of 81 combined with the eruption of Mt. St Helens which caused around \$100 million in damages (Cook et al., 1981).

4.2 1985 Food Security Act

The biggest change that came with the 1985 Food Security Act was the establishment of the CRP. This incentivized farmers to remove vulnerable land from production. This act also introduced “sodbuster” and “swampbuster” provisions which prevented the conversion of swamp and water land to agricultural land with the hopes of improving future sustainability. This act supported small farmers by introducing a cap to subsidies. Larger farms could not rely fully on price support to sustain large expansions of farm size due to this act. It wasn't until 1985 when these large farms were incentivized to follow sustainability guidelines that they started retiring farmland (Zacharias 2022).

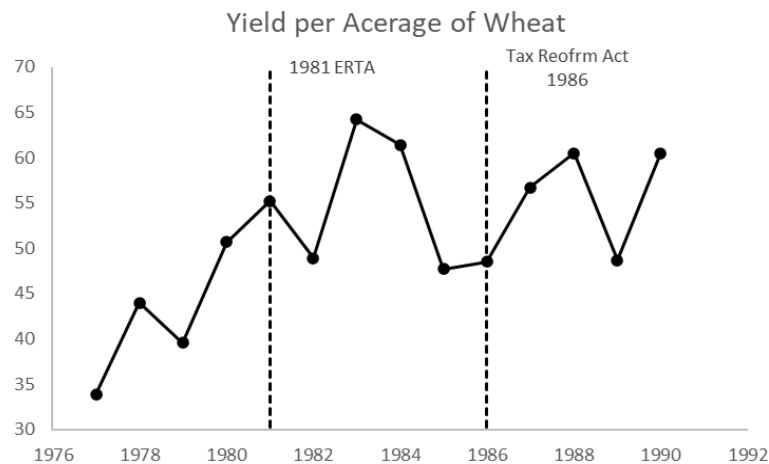


Figure 4. Yield Per Acreage of Wheat in Washington 1977-1990

Notes: This figure plots the yield per acreage of wheat in bushels from 1977 to 1990

Source: USDA NASS Pacific Northwest Regional Field Office

Figure 4 shows a significant decrease in yield per acreage in the year 1985 after a peak in 83 and 84. Due to declining wheat prices after a major high, small farms likely would have left because the profit margins were unsustainable.

4.3 Tax Reform Act of 1986

The 1986 Tax Reform Act was Reagan's main goal in his second term as president. This act significantly decreased the tax rates with the highest bracket for individuals decreasing from 50 to 28 percent and for corporations dropping from 46 to 34 percent. This act also replaced the previous ACRS with the MACRS (Modified Accelerated Cost Recovery System). This new modified system would respond to the concerns of the previous system by requiring longer straight line depreciation. This act also saw the continuation of previous conservation efforts (*U.S. Congress, 1986*). Previously, the Internal Revenue Code would automatically subsidize soil erosion and wetland destruction, now they would make sure only sustainable land would be eligible for deductions (Benfield, Ward, and Kingsinger 3).

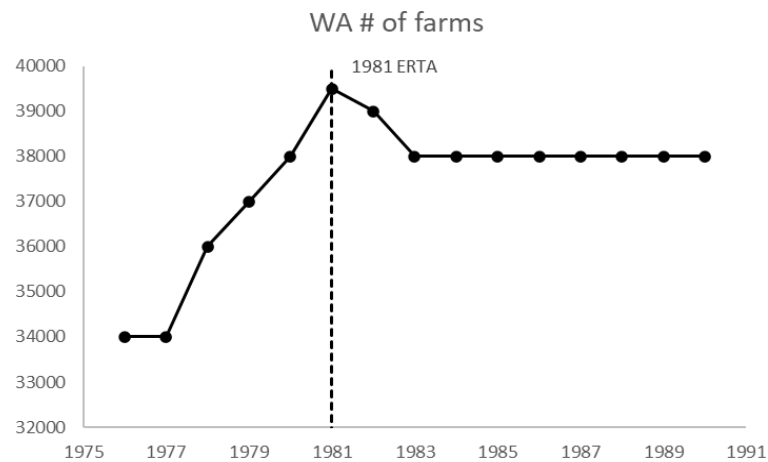


Figure 5. Washington Total Number of Farms 1976-1990

Notes: This figure plots the total number of farms in Washington from 1976 to 1990

Source: USDA NASS Pacific Northwest Regional Field Office

Figure 5 shows that the number of farms in Washington has stayed constant since 1983. Despite this, farm size dropped in 1986 and then stayed constant after that. This was likely because the act promoted larger farms to tone down on their production rather than incentivizing small farms for growth.

Another very important factor to address is the establishment of the MACRS. The purpose of the new MACRS aligns more with the recent efforts of conservation and sustainability. It allowed for more flexibility when it came to depreciation by spreading out the costs of depreciation throughout a longer time period than before. This helped out smaller farmers a lot because they would be able to reduce their total tax burden to free up some cash for other expenses.

5. Additional Factors

5.1 Weather and Climate

Since most of the data collected was related to the feasibility of production of crops, the most important factors which could affect production: the weather and climate, must be evaluated (American Farm Bureau Foundation for Agriculture). In 1977, there was a drought that according to the Washington State Department of Ecology, was purely economic. Despite this, drought, wheat prices shot up and so did the total number of farms in Washington. From December of 1982 to March of 1983, there were severe storms and floodings which caused almost 5 billion dollars in damage to many states including Washington (NOAA National Centers for Environmental Information). This poor weather is likely what caused both the price and quantity of wheat to decrease for the first time in 5 years. In 1985, Eastern Washington, the wheat producing region of Washington, saw abnormally dry conditions (USDA Crop Reporting Board). This dry weather could have also been a major factor in the changes in wheat price, quantity, and average farm size.

5.2 New Technologies

According to Agricultural Policymaker Kara Rowe, farmers grew their operations because of three main reasons: “Knowledge of risks, international markets, and the value of technology” (Rowe, 2018). AGNET is one tool used by Washington farmers. AGNET as quoted by Nebraska Farmer Curt Arens was “basically the google or smartphone apps of today back in the mid 1980s.” Whenever farmers were unsure of anything during the farm crisis era, they could access AGNET and it would help farmers with less resources make more educated decisions (Arens, 2024). Technology like CMMS (Computerized Maintenance Management Systems) has also become adopted on a widespread scale. This technology allows farmers to drastically improve the efficiency of their farms by utilizing software which tracks equipment and optimizes resource allocation (FTMaintenance). Technology which maximizes irrigation efficiency is also very important to consider because irrigation has been proven to more than double crop year prices and income (Rosegrant 290). Now Washington has 5.1 million acres involved in irrigation but in 1980, that number peaked at 9.2 million acres (Northwest Power and Conservation Council).

5.3 International Demand

During the 1970s, some of Washington's biggest wheat consumers were countries in Asia and the Middle East. One very important consumer was Iran but they stopped buying Washington wheat because of the hostage crisis from 1979-1981 (Kershner, 18). During the year 1980 when Mt Saint Helens erupted, nearly 85% of wheat were exported and the two biggest consumers were Bangladesh and Japan (NY Times, 1980). During the 1980s both Japan and Bangladesh saw growth in population, especially Bangladesh with an annual growth rate of 2.7% during the decade (World Bank, n.d.). This population boom indicates that there was a sustained market in Bangladesh for Washington wheat. China was a key consumer of wheat during this time period as well. Due to China's rising population, their grain imports in 1988-89 were around 15.3 million tons topping the Soviet Union with an import of 14 million tons (NY Times, 1989). The Soviet Union is another very important consumer of grain from America. Despite an embargo in the 80s caused by the Soviet invasion of Afghanistan, the Soviets and Americans eventually started trading again (Becker 7). Overall, demand is a very important factor to consider because abrupt changes like those caused by the Soviet Union could drastically change prices of grain like wheat even when the future seems prosperous (Drabenstott 3).

6. Results and Discussion

6.1 Results Analysis

The main finding from this paper is the fact that farm size in Washington correlates negatively with wheat production.

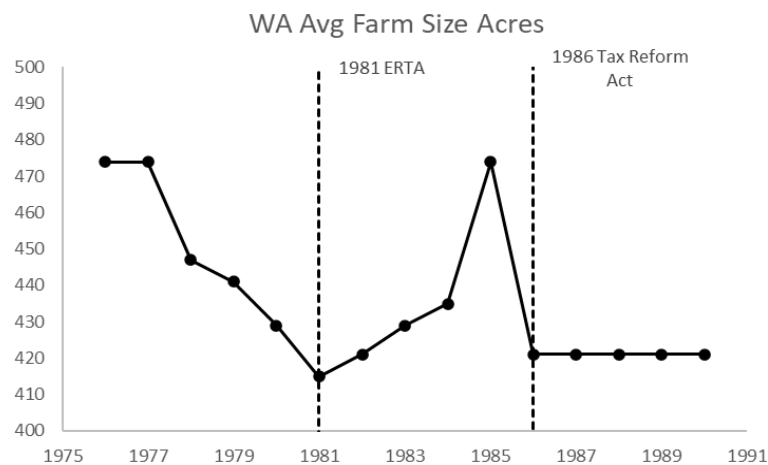


Figure 6. Washington Average Farm Size 1976-1990

Notes: This figure shows the average farm size in Washington in acres from 1976-1990

Source: USDA NASS Pacific Northwest Regional Field Office

Figure 6 shows a decrease in average farm size while the quantity of wheat produced shown in figure 3 skyrockets. This seems counterintuitive because it does not make sense that an increase in production would lead to a decrease in farm size. However, figure 5 shows that the total number of farms increased significantly. This means that all of those newer farms were on the smaller side and their establishment could be attributed to the increased production of wheat.

The years following leading up to 1985 saw a growth in farm size and a decrease in production. This time period also saw a decrease in the number of farms until it stabilized. The increase in farm size can be attributed to the collapse of a few smaller farms.

1985 was the year that the conservation policies were introduced so it makes sense that farm size decreased significantly. It can be concluded that these policies succeeded in decreasing farm size because the production quantity of wheat still remained relatively stable. Since vulnerable land was now out of production, average farm size became stabilized.

However, the results are much more nuanced.

Farmers who specialize in producing grain and wheat were forced to increase their land size because they simply made less per acre compared to other crops like apples which traditionally made more income per acre

(Washington: \$10 Billion Farm Sales in 2017). This means that since wheat farmers must have more land to sustain their ventures, these farmers have a significant effect on farm size distribution. Because of the large impact of wheat on farm size distribution, it makes sense that wheat production has a positive correlation with the average farm sizes of farms. However, the correlation is not positive due to Reagan's policy changes.

Before 1980, average farm size saw a decreasing trend while wheat production had gone up. This was likely caused by the increase in demand for wheat which made wheat farming seem like a profitable venture for new farms. In 1981 when Reagan implemented the Economic Tax Recovery Act, farm size increased because of the ACRS which made it easier to write off capital for depreciation.

In Figure 3, wheat production decreased because of a drought in 1983 and a Soviet embargo which decreased the acreage produced. When Reagan signed the 1985 Food Security Act, the grains sector changed. The goal of this act was to promote sustainability and to incentivize farmers to not damage vulnerable land. This caused farmers to decrease their land sizes to ensure that they followed the guidelines. The wheat production caps from this act also slowed overall wheat production. The 1986 Tax Reform Act further continued the conservation policies and implemented the MACRS. This meant larger farms with more capital would not have as large of an advantage in comparison to smaller ones. The wheat production then saw a slight increase but again saw another dip in 1989 due to another drought (Causes of the 1980 Farm Crisis).

It seems that the correlation between average farm size and wheat production was just a coincidence. However, it is not just a coincidence, some external factors like droughts and natural disasters which decrease production are uncontrollable factors that can't be easily predicted or measured. Government policy also plays a big role in the changing farm size because domestic policies like the push for conservation have a significant effect on farm size. Foreign policy like trade relations with other countries significantly impact production because if the demand for an agricultural commodity sees a sharp rise or decline, it will be reflected with its production. In short, domestic policies directly impact farm size distribution through incentives which reflect the goals at the time while foreign policy has an indirect impact on farm size distribution because it affects production.

6.2 Discussion

With the election of Donald Trump in 2024, an economic conservative in many aspects similar to Reagan, it can be attempted to try to predict what's next. The main difference between Trump and Reagan is in their foreign policy. Reagan wanted to decrease national debt and promote international trade while Trump has increased the debt and has also attempted to implement tariffs (York, Durante, 2025). When Reagan implemented tax cuts, the cuts tend to promote land consolidation like the 1981 Economic Tax Recovery Act. With Trump, it can be predicted that he will also implement a tax cut which will favor land consolidation. Since Trump has implemented tariffs while Reagan tried to promote international trade, it can be predicted that some demand for agricultural products from traditional markets like Asia will decrease. By understanding these trends, it is safe to predict that farm size will increase. Unfortunately, the future can never be predicted until it happens. Since food is a necessary part of survival, there is a chance that a new market opens which supplements the demand gap left from the previous one leaving.

7. Conclusion

This paper investigates how Reagan's tax policies have affected farm size distribution on a state level in Washington as well as on a National level. Using data collected from the USDA National Agricultural Statistics Service Washington Field Average, a correlation test was used to find out that there was a negative correlation between wheat production and average farm size. However, the results are not as they seem. When understanding the historical context, it can be understood that government policy is actually what impacts farm size distribution the most. Domestic policy directly impacts farm size while foreign policy impacts production which impacts farm size.

The results of this paper open the door to many interesting questions regarding domestic and foreign policies which affect the agricultural sector. Exploring the effects of high interest rates and inflation on small farms's feasibility for operations is one important factor to consider. Since wheat farms have such a significant effect on farm size distribution, diving deeper into policy making and the effects of these policies on monoculture in comparison to diverse farms is another potential venue for research. Disentangling the effects of monoculture farms like wheat farms on the average farm size would also be a very important consideration. By addressing these questions, further research could show how both domestic and foreign policy work with or against each other to affect the distribution of farm size.

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APPENDIX A



Figure A.1 Washington Farm Employment in Thousands 1976-1990

Notes: This figure plots the total employment of workers in the agricultural sector in thousands in Washington from 1976-1990.

Source: USDA NASS Pacific Northwest Regional Field Office

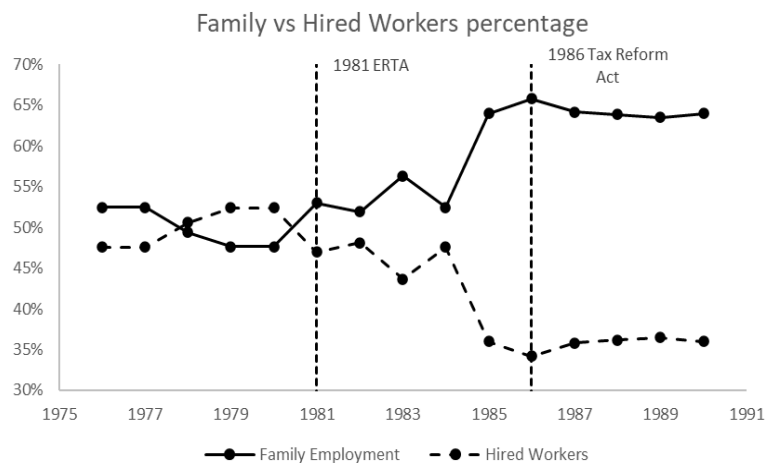


Figure A.2 Washington Farm Employment in Thousands 1976-1990

Notes: This figure plots the relative frequency of workers that were hired and family employed in Washington from 1976-1990.

Source: USDA NASS Pacific Northwest Regional Field Office

APPENDIX B

Appendix B.1 1981 ETRA

The ACRS system was criticized for creating a large disparity between cash flow from operations and earnings because many critics believed cash flow alone is not a good enough measure of financial health (Kenton, 2021).

When looking at Figure A.1, there is an interesting pattern between hired and family workers.

In the years leading up to 1981 starting from 78, hired workers made up a larger ratio of farm employment until 1981 when there was a sudden shift that seemed to favor family hired workers. The most logical reason for this increase is because family farms tend to be smaller than incorporated farms which hire workers. These family

farms were likely incentivized to join the industry because of the pull of rising prices for both wheat and barley. Another reason which could explain why there were more family workers than hired workers is because corporations and larger farms which hire non-family members have better, more efficient technology that would simply require less people to operate (Castillo, McDonald, 2020).

Appendix B.2 1985 Food Security Act

This act also promoted crop diversity and promised farmers that they would still receive aid even if they introduced new crops (*U.S. Congress, 1985*). When looking at the chart of average farm size across Washington there is a significant dip in average farm size after years of steady growth.

According to the LA Times Archive, the reason for a significant decrease in production was because “The government said the biggest decline occurred in wheat sales, which were down 40% from 1984, mainly because of reduced shipments to the Soviet Union.” Since the Soviet demand was a big reason for the success of the production of wheat within Washington, when the demand decreased significantly in one year, there were major repercussions.

Appendix B.3 1986 Tax Reform Act

Specifically in wheat producing areas like the Palouse region, the effects of the 1986 tax reform act and the 1985 Food Security Act were evident. According to Roger Veseth of Western Washington University in 1985, in the Palouse region 10 percent of the land lost its original top soil and another 25% of land saw upwards of 60% of its original top soil gone as well (Veseth Chapter 1). The actual number of land that saw major soil loss varies with some making estimates that up to 40% of land had seen its soil lost to erosion (Pimentel and others, 1995). This means that when the conservation incentives came in, it would be much less risky if the farmers simply removed their already vulnerable land from production.

The previously established ACRS was, according to Guido Van Der Hoeven of Iowa State, “an effort to incentivize tax payers, including farmers, to invest in capital goods.” This previous system was a big reason for the rapid expansion of farm size throughout Washington post 1981.

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