

The Dust Bowl and American Elections

by

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B.B.A., University of Dhaka, 2014

M.S.S., East West University, 2016

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Abstract

This paper examines the American Dust Bowl to understand the political impacts of the catastrophe which devastated the American Plains during the 1930s. I use county-level panel analysis to analyze whether the Dust Bowl led to a change in voting patterns in more eroded counties compared to less eroded counties. I look to see whether, in the years following the Dust Bowl, there was shift in vote shares against the Democratic Party who were typically the incumbents during the period of the Dust Bowl. I use presidential, congressional, senatorial and gubernatorial election return for approximately the three decades following the Dust Bowl, i.e. between 1940 and 1968. My results show that the Dust Bowl is associated with a shift away from the Democratic Party for more affected counties. I find these effects to last for at least a decade (throughout the 1940s). I also look at the potential effects of the net migration and New Deal expenditure in the Plains. I find that less net migration may have been one of the reasons behind this change in voting behavior of counties and that New Deal expenditure could potentially have been a strong mitigative tool for the Democratic Party.

Table of Contents

Abstract.....	iii
Table of Contents.....	iv
List of Tables.....	v
List of Figures.....	vi
Dedication.....	vii
Introduction.....	1
Historical Review.....	3
The Dust Bowl.....	3
The Politics of the Era.....	5
The Data.....	8
The Empirical Framework.....	10
The Results.....	11
Migration.....	13
New Deal Spending.....	15
Discussion.....	17
References.....	18
Appendices.....	21
Appendix A: Descriptive Statistics.....	21
Appendix B: Migration.....	22
Appendix C: The New Deal.....	24
Appendix D: Robustness Checks.....	32
Appendix E: Figures and Diagrams.....	38

List of Tables

Table 1: Regression Results - Republican Vote Share	11
Table 2: Summary of Robustness Check Results.....	12
Table 3: Agricultural County Characteristics.....	21
Table 4: Socioeconomic County Characteristics	22
Table 5: Net Political Impact of Migration	22
Table 6: Migration Interacted with Erosion Level.....	23
Table 7: Net Effect of the New Deal on Presidential Elections.....	24
Table 8: Net Effect of the New Deal of Congressional Elections	25
Table 9: Net Effect of the New Deal on Gubernatorial Elections	26
Table 10: Net Effect of the New Deal on Senatorial Elections.....	26
Table 11: New Deal Public Works Expenditure Interacted with Erosion.....	27
Table 12: New Deal AAA Payments Interacted with Erosion.....	28
Table 13: New Deal Relief Expenditure Interacted with Erosion.....	29
Table 14: New Deal Loans Interacted with Erosion	30
Table 15: New Deal Mortgages Guaranteed Interacted with Erosion.....	31
Table 16: Robustness Check - Only State by Year Fixed Effect	32
Table 17: Robustness Check: No Socioeconomic Covariates.....	33
Table 18: Robustness Check - Lagged Agricultural Covariates (No socioeconomic covariates)	34
Table 19: Robustness Check - Weighted by Farmland.....	35
Table 20: Robustness Check: No Regression Weights	36
Table 21: Robustness Check - Adjusting for only 1928 Election Data.....	36

List of Figures

Figure 1: Presidential Election Maps between 1924 to 1944	38
Figure 2: Visual Representation of Coefficients from Table-1	39

Dedication

To my parents.
For their endless love and support.

Introduction

The Dust Bowl devastated large parts of the American Plains during the 1930s causing tremendous hardship to the local agrarian communities (Worster, 2004). The 1930s was also a period of Democratic dominance in American politics (Kantor et al., 2012). In this study, I use county-level panel analysis, to see whether counties more affected by the Dust Bowl, exhibited different voting patterns than those counties which were less affected. I check to see whether the Dust Bowl led to these counties shifting away from the Democratic Party.

After many years of replacing native grasslands, the Plains went through a series of severe droughts during the 1930s which led to significant crop failure and eventually massive dust storms due to soil erosion (Goudie and Middleton, 1992). By 1940, many areas experienced a cumulative loss of 75% of their original topsoil (Hornbeck, 2012), leading to an economic catastrophe for inhabitants who were dependant on Agriculture for their livelihoods (Worster, 2004; Lockeretz, 1978; McLeman et al., 2014; Hornbeck, 2012). The political impact of the Dust Bowl has been a somewhat understudied topic in quantitative literature. Recent studies seeking to analyze the political impacts of the Dust Bowl, have found it to be either negligible (Kantor et al., 2013) or short-lived (Fleck, 2013). However, there is reason to believe that the political effects of the Dust Bowl may have been masked by these more pressing political issues of the time.

In this paper, I revisit this issue by building upon the work by Hornbeck (2012). My empirical analysis uses county-level election data from 1940 to 1968 for Presidential, Congressional, Senatorial and Gubernatorial elections. In efforts to determine if the Dust Bowl did in fact influence vote shares of counties, I test to see whether it led to a significant and persistent shift against the Democratic Party in more affected counties, for the decades following its occurrence. The analysis reveals that more eroded counties did in fact shift away from the Democratic Party. This effect is significant and lasts for at least a decade.

In the second part of my analysis, I delve deeper by looking at the potential effect of net migration on vote shares. Using a model to calculate a net effect net migration, I find that an increase net migration is associated with an increase in vote shares for the Democratic Party. This suggests that less net migration may have been one of the causes of this change in voting pattern in more affected areas. However, when using interaction terms, my results for the interaction effect is inconclusive. Lastly, I look at New Deal expenditure and its impact on voting behavior in the American plains. Using the same net effect

model, I find that an increase in New Deal expenditure is associated with an increase in Democratic vote shares for counties of the American Plains. This supports the views of contemporaries who demonstrate the popularity of the New Deal (Kantor et al., 2013). However, using an interaction term model, my results are once again inconclusive.

From a broader perspective, having occurred in an era of success for the Democratic Party across the nation, it may be that this shift in voting behavior in Dust Bowl affected counties was not enough to cause any major ripples in American politics at the time. However, these new findings not only add further insight to the literature surrounding the Dust Bowl and the politics of the era but also creates the scope for further research on this issue.

Historical Review

The Dust Bowl

The Dust Bowl was a major environmental catastrophe that impacted the American Plains during the 1930s. After years of replacing native grasslands, the region was hit by a series of droughts, throughout the 1930s (Worster, 2004; Baumhardt, 2003). These droughts triggered massive soil erosion and enormous dust storms which heavily impacted the lives of the farming communities of the region (Egan, 2006; Lockeretz, 1978; Riney-Kehrberg, 1992).

Between 1914 and 1930, many settlers came to the American Plains (Goudie and Middleton, 1992). Government policy of the period involved increasing crop production and the Homestead Acts allowed small farmers to purchase and cultivate new lands in the West, at low costs (O'Connor, 2009; McLeman et al., 2014). This period was also had a strong wheat market, greater than average rainfall, and increasing usage of machines in agriculture (Baumhardt, 2003; Lockeretz, 1978; Libecap and Hansen, 2001). Between 1918 and 1929, mean annual rainfall was approximately 100 mm more than the norm for the region (Baumhardt, 2003). The flat terrains of the Plains were also fit for mechanization, resulting in low wheat production costs (Lockeretz, 1978). These factors contributed to a rapid expansion of cultivation that removed drought-resistant native grasses and replaced them with drought-sensitive wheat, thereby exposing millions of hectares of soil that was vulnerable to erosion (Baumhardt, 2003; Cook et al., 2009; O'Connor, 2009).

The 1930s was a time of droughts, rainfall shortages and high temperatures for the American Plains (Schubert, 2004; Hornbeck, 2012). The causes for these droughts are associated with anomalous sea surface temperatures, wind patterns, atmospheric dust and human-induced land degradation (Schubert et al., 2004; Cook et al., 2008; Donat et al., 2016; Lee and Gill, 2015; McLeman et al., 2014; Cook et al., 2009). These droughts made the soil less cohesive and caused widespread crop failure, leaving the farms without the cover of vegetation and exposed to the wind (Cook et al., 2009). These droughts eventually triggered massive and destructive dust storms (Hornbeck, 2012).

The farming practises prevalent at the time, greatly contributed to these dust storms (McLeman et al., 2014; Cook et al., 2009). Farmers did not have knowledge about the climate of the Plains or the regionally appropriate tillage practices (Lee and Gill, 2015; Libecap and Hansen, 2001). Between 1880

and 1920, there were no accurate long-term weather records for the region (Libecap and Hansen, 2001). Farmers who had migrated from more fertile lands were continuing their traditional farming practices without the erosion protection technology. (McLeman et al., 2014; Worster, 2004; Lee and Gill, 2015; Phillips, 1999; Libecap and Hansen, 2001). The small homestead farm model was largely unsuitable for more arid conditions as small farmers lacked the capacity to invest in erosion control. (Libecap and Hansen, 2001). These farmers also suffered from a common pool resource problem as attempts to reduce externalities proved to be difficult. (Hansen and Libecap, 2004; Lockeretz, 1978).

The Dust Bowl is often referred to as having occurred in the 1930s or the period between 1931 and 1939 (Baumhardt, 2003; Hornbeck, 2012). Droughts were usually local, and the Dust Bowl shifted annually across the Great Plains (Libecap and Hansen, 2001; Baumhardt, 2003). The damage was most severe in the Southern Plains, between 1933 and 1938 and in the Northern Plains between 1933 and 1936. (Lockeretz, 1978). The boundary of the overall region affected by the Dust Bowl is also subjective, with the overall impacted region being thought to include not only states in the America but also parts of the Canadian Prairies and Mexico (McLeman et al., 2014; Porter and Finchum, 2009).

In 1934, the Soil Conservation Service announced that “65% of the Great Plains had been damaged by wind erosion, and that 15% were ‘severely damaged’” (Cutler et al., 2007). The storms were usually massive - several miles high - and would often reduce all visibility (Lockeretz, 1978). At Amarillo, Texas, there was a month when there were 23 days of storms (Goudie and Middleton, 1992; Lockeretz, 1978). During storms, ordinary life usually became impossible (Baumhardt, 2003) as everything would be buried under dust (Lockeretz, 1978; Baumhardt, 2003). The socioeconomic impacts of these dust storms have been widely documented (Worster, 2004; Egan, 2006; Lockeretz, 1978; McLeman et al., 2014; Riney-Kehrberg, 1992; Shindo 2000). The population of the region at the time was largely rural and the region’s economy was heavily dependant on agriculture (McLeman et al., 2014). The Dust Bowl resulted in an average of 480 tons of fertile topsoil per acre of land to be affected, causing lands which were once fertile to become unfertile (Cutler et al., 2007). Hornbeck (2012) finds the Dust Bowl caused an immediate, substantiate, and persistent reduction in agricultural land values and revenues. The hardships of the communities were also aggravated by the Depression which had decreased non-agricultural employment opportunities and resulted in a price drop for agricultural commodities (Lockeretz, 1978; McLeman et al., 2014; Worster, 2004). The health impact of these droughts and dust storms have also been discussed by researchers (e.g. Cutler et al., 2007; Taylor, 2002). Storms caused many occurrences of serious lung damage, and some also led to deaths (Lockeretz, 1978). Researchers

have recently studied the effects on infant and prenatal mortality (Fishback et al., 2011) as well as adverse later life human capital for those who had childhood exposure (Vellore, 2017).

The Dust Bowl eventually ended due to the conclusion of the droughts, implementation of erosion control and better economic conditions (Lee and Gill, 2015). Although the overall economy improved, recovering from the damage caused by the Dust Bowl proved to be difficult as more affected regions remained relatively worse-off, as shown by Hornbeck (2012). In his study, he also shows that adjustments in agricultural practices were able to recover only less than 25% of the initial difference in agricultural damage.

The Politics of the Era

The 1932 Presidential Elections saw President Franklin D. Roosevelt win a landslide victory with a popular vote of 58%. The primary issue of the election was the Great Depression and voters liked President Roosevelt's approach and policy recommendations to handle the crisis (Carcasson, 1998). This election, in a way, began an era of dominance for the Democratic Party in American politics (Kantor et al., 2012). In the elections between 1930 and 1936, Republican candidates were rapidly replaced by their Democratic counterparts in the house of representatives and the senate and by 1937, the Democratic Party had a 334 to 88 majority over the Republican Party in the house and a 79 to 16 majority in the senate (Poole and Rosenthal, 2000; Shesol, 2011). In the 1936 Presidential elections, President Roosevelt won once again. In that period, there was sometimes a view that businessmen and professionals used to support the Republican Party more and that working-class voters used to support the Democratic Party more (Shesol, 2011; Baum and Kernel, 2001). President Roosevelt enjoyed the support of a strong coalition of liberals, labor, women and minorities (Shesol, 2011; Baum and Kernel, 2001). Ahead of the 1932 elections, President Roosevelt was able to garner the support of farming communities, who shared a common optimism in President Roosevelt (Slichter, 1956). President Roosevelt continued his Presidency by winning the 1940 Presidential elections for a third term and the 1944 Presidential elections, before eventually passing away in 1945. From 1937 to 1943 he averaged an approval rating of 65 percent (Baum and Kernel, 2001). The Democratic candidate, President Harry S. Truman also went on to win the 1948 Presidential election. The Presidential Election maps for the years between 1924 and 1944 are shown in figure-1 of Appendix E.

Much of the political discussion at the time was centered on the New Deal (Kantor et al., 2012). Introduced by President Roosevelt's administration, the New Deal saw a massive increase in

government expenditure (Fishback, 2017) to tackle the Great Depression. The policy was popular (Kantor et al., 2012) and researchers have found the New Deal to be successful in both improving the country's socioeconomics conditions (Fishback et al., 2005; Fishback, 2017) and in developing long-run human capital in the American Plains (Vellore, 2017). When the Dust Bowl first began, the responsibility of helping affected families initially went to the local governments who did not have the necessary resources (McLeman, 2014). The New Deal farm policy introduced a series of complex and interrelated programs (Saloutos, 1974). The New Deal farm programs can be thought of as two types: they either provided immediate relief to the poor or they sought long-run reforms. (Saloutos, 1974). Across the country, approximately half of the New Deal grants went to relief programs (Fishback, 2017). To provide short-term help, emergency food relief and farming subsidies were provided (McLeman, 2014; Ilbecap and Hansen, 2001). Many farmers benefited from these programs and researchers generally report that these programs significantly lessened the sufferings of the people (Saloutos, 1974; Ilbecap and Hansen, 2001; Worster, 2014; McLeman, 2014). New Deal Public works infrastructure projects also helped by creating employment opportunities. Long-run efforts included planting trees and the establishing the Soil Conservation Service (McLeman, 2014). Meanwhile, the Agricultural Adjustment Act (AAA) sought to manage production and prices by giving benefit payments to farmers to voluntarily stop farming lands deemed unsuitable for cultivation (Saloutos, 1974; Fishback, 2017; Hurt, 1985). After the Supreme Court deemed the Act as unconstitutional, it was modified to have a similar effect by providing grants to farmers to take the soil conservation initiative of planting cover crops (McLeman, 2014; Saloutos, 1974). The AAA has received criticism from researchers, as the program is thought to have helped only the farmers (often large farmers) who received the payments but was of little benefit to the majority of small farmers and rather harmed a many tenants and sharecroppers (Fishback, 2017; Saloutos, 1974). There were also disagreements regarding landing valuation and eventually, a lot of lands acquired under the AAA, is thought to have had already been abandoned or were already not it use (Hurt, 1985). The New Deal has also been criticized due its fund allotment methods. Researchers have shown evidence that New Deal fund allocation was biased on 'swing counties' (Brauer, 1982; Bailey and Duquette, 2014). Recently, in his study, Hornbeck (2012) finds little evidence of New Deal expenditure being correlated with Dust Bowl erosion.

The Dust Bowl in the American Plains coincided with the period of Democratic dominance in American politics. Given the scale of damage, it seems unlikely that the Dust Bowl did not have any political impact in terms of vote shares for the Democratic Party. However, this has been a relatively understudied topic

in quantitative literature. Two recent studies (Kantor et al., 2013; Fleck, 2013) have looked at this issue. Kantor et al. (2013) finds little evidence to suggest that voters held President Roosevelt accountable for the Dust Bowl and Fleck (2013) finds that counties affected by Dust Bowl conditions had short-lived voting effect in favor of the Democrats, which were large in 1936 but mostly gone by 1940. However, it is important to note that the identification strategies used in both these papers, did not center on the Dust Bowl and there is reason to believe that the political impact of the Dust Bowl may have been hidden under other more pressing political issues at the time, such as the Great Depression and the wars.

The Data

My data consists of the 779 contiguous counties identified as consisting of the American Plains and their corresponding percentage of cumulative soil erosion at the end of the Dust Bowl from the Hornbeck (2012) study. Hornbeck (2012) uses the 1924 USDA Atlas of Agriculture to define his contiguous set of ecologically similar Plains counties. They include counties in Montana, Wyoming, North Dakota, South Dakota, Minnesota, Colorado, Nebraska, Iowa, Kansas, New Mexico, Oklahoma and Texas. He collects his soil erosion data from the National Archives cartographic records of the Soil Conservation Service. His erosion map, identifies the fraction of each county that is medium eroded (25 percent to 75 percent of topsoil lost) and the fraction of each county that is highly eroded (over 75 percent of topsoil lost). It is important to note that due to data limitations, I am taking the cumulative soil erosion at the end of 1940 as per Hornbeck's (2012) work and not the exact soil erosion which happened during the ten years of the Dust Bowl. This limitation in the data is adjusted for by taking the set of covariates for the agricultural land use and allocation at beginning of the Dust Bowl (1930).

In my study, I have omitted 31 counties, the majority of which do not exist all the way throughout the time frame of my data set¹. Many of these counties had been renamed within the period as they had incurred major border changes such as being split into two. I collect the data for the election returns from ICPSR (1999). My election returns are at the county-level and cover Presidential, Congressional, Senatorial and Gubernatorial elections between 1940 and 1968. Using this data, I construct four separate panels for each type of elections. My set of controls consist 1930 agricultural and socioeconomic characteristics. I have taken my 1930 agricultural county characteristics from Hornbeck (2012) who had drawn this data from the US census of agriculture, census of population, and census of manufacturing. The agricultural county characteristics at 1930 variables account for land use, population and farms, cropland allocations and animal productions. I have based my socioeconomic control variables from Kantor et al. (2013) and have collected the data from Fishback et al. (2006) who had drawn this data from the US Bureau of Census and a variety of other sources. For details regarding the sources of these data, see Appendix-A of Fishback et al. (2006). The 1930 socioeconomic control variables that I use, account for African American population, proportion of manufacturing workers, foreign-born population, literacy rate, the percentage of population belonging to religious organizations,

¹ The counties are defined as per the 1910 borders and to account for minor county border changes, we have assumed that the counties are homogenous and small changes to county borders do not affect the characteristic of the population.

tenant farming, home ownership, the percentage of households owning radios, tax returns per capita, unemployment rate and retail sales per capita. I also collect the county level election data from 1920 to 1930 from ICPSR (1999) to use as a control.

Tables 3 and 4 of Appendix A, provide descriptive statistics for the agricultural and socioeconomic covariates respectively. From the descriptive statistics, we see that medium eroded counties after the Dust Bowl, differ from the low eroded counties after the Dust Bowl, in terms of their fraction of population on farms and number of farms per county at 1930. Medium eroded counties also had a greater fraction of cropland allocated to corn and a greater fraction of cropland allocated to cotton at 1930. Lastly, they had a greater number of swine per acre and county and chickens per acre.

Furthermore, highly eroded counties differed significantly from medium eroded counties due to having an even greater fraction of cropland allocated to corn and a lesser fraction of cropland allocated to Hay and to Oats Barley and Rye at 1930. In terms of the pre-1930 socioeconomic characteristics, counties that became medium eroded differed from counties that became lesser eroded counties in terms of having a larger number of households owning homes, a greater percentage of population belonging to religious organization and fewer tax returns per capita. These differences may have been due to the demographic characteristics of these areas. Furthermore, higher eroded counties differed significantly from medium eroded areas in terms of having even fewer tax returns per capita and lesser retail sales per capita (as a proxy for GDP per capita). This indicates that these counties were poorer.

The Empirical Framework

My empirical strategy builds upon Hornbeck (2012). The methodology focuses on comparing more eroded counties (medium and high eroded counties) at the end of the Dust Bowl to less eroded counties (counties which are not medium or high eroded) at the end of the Dust Bowl in a given state with similar 1930 county characteristics. The identifying assumption is that given their similar characteristics, these counties would have displayed voting patterns had it not been for the Dust Bowl. It is important to note that the framework assumes that the Dust Bowl changes the socioeconomic characteristics (e.g. Unemployment rates, GDP) of the counties which it impacts, thereby changing the counties voting pattern. I therefore, estimate the average changes in vote share for more eroded counties compared to less eroded counties for each type of election.

In the equation below, the dependent variable for each county-level panel is the Republican vote share for the given time-period subtracted by the average vote share for Republicans in that county between 1920 and 1930 for that type of election. This is regressed this upon the fraction of the county that is medium eroded and the fraction of the county that is highly eroded. Therefore, each county will have two fractions (each between 0 and 1) representing the fraction of that county which has been medium eroded – 25 percent to 75 percent of topsoil lost - and the fraction of the county that has been highly eroded – more than 75% of topsoil lost. I also add state-by-year fixed effects and the set of covariates of the model. The regression results are also weighted based on the population as per 1930 (for approximation) and the standard errors are clustered by county to adjust for within county correlations.

$$Y_{ct} - Y_{1920s} = \beta_{1t}M_c + \beta_{2t}H_c + \alpha_{st} + \theta_t X_c + \epsilon_{ct} \quad (1)$$

The above equation is repeated for each panel (type of election). In the equation, Y_{ct} is the Republican vote share for the county in each year and Y_{c1920s} is the average vote share for that county between the years 1920 to 1930 for that type of election. M_c is the fraction of the county that has been “medium eroded” – 25 percent to 75 percent of topsoil lost. H_c is the fraction of the county that has been “highly eroded” – more than 75% of topsoil lost. α_{st} is the state by year fixed effect. X_c is the set of covariates and ϵ_{ct} is the error term. β_{1t} and β_{2t} are the coefficients whose values we are recording. It is important to note that since M_c and H_c are fractions (between 0 and 1), the outcome values for β_{1t} and β_{2t} are as if the entire county is medium or highly eroded (i.e. what would happen if an entire county were to be medium or highly eroded respectively). The coefficients β_{1t} , β_{2t} and θ_t are all allowed to vary with time.

The Results

The results are illustrated in the table below (Table-1). It can be seen from the table that for at least the first 10-year period, the Dust Bowl is associated with a shift in vote shares away from the Democratic Party for more eroded counties compared to less eroded counties. During this period, all the coefficients are in favor of the Republican Party and most of them are statistically significant. These coefficients are also quite large. Between 1940 and 1950, for Presidential elections, the Dust Bowl is associated with an increase in vote share of the Republican party between 0.95 and 2.88 percent in medium eroded and from 0.98 to 2.15 percent in highly eroded counties. For Congressional elections, the results are a 2.7 to 8 percentage increase in Republican vote share in medium eroded counties and a 3.9 to 9.3 percent increase for highly eroded counties. In Senatorial elections, the Dust Bowl associated with an increase in vote share of the Republican party between 2.6 and 7.6 percent in medium eroded and from 5.5 to 8.3 percent in highly eroded counties. Lastly, for Gubernatorial elections, the results are a 1.1 to 3.4 percentage increase in Republican vote share in medium eroded counties and a 2.5 to 3.5 percent increase for highly eroded counties. Beyond this 10-year period, the results are somewhat mixed. A graphical representation of the coefficient values from Table-1 can be found in Figure-2 of Appendix E.

Table 1: Regression Results - Republican Vote Share

Regression - Republican Vote Share								
Year Compared to Low Erosion	Presidential		Congressional		Senatorial		Gubernatorial	
	Medium Erosion (1)	High Erosion (2)	Medium Erosion (3)	High Erosion (4)	Medium Erosion (5)	High Erosion (6)	Medium Erosion (7)	High Erosion (8)
1940	0.0237* (0.0128)	0.0181 (0.0150)	0.0804*** (0.0175)	0.0927*** (0.0261)	0.0760** (0.0344)	0.0831 (0.0590)	0.0154 (0.0103)	0.0328** (0.0160)
1942			0.0585*** (0.0200)	0.0392 (0.0301)	0.0342** (0.0141)	0.0616*** (0.0169)	0.0335*** (0.00831)	0.0295** (0.0149)
1944	0.0288** (0.0147)	0.0215 (0.0170)	0.0464*** (0.0174)	0.0568** (0.0228)	0.0392** (0.0157)	0.0640*** (0.0182)	0.0227** (0.0113)	0.0249 (0.0176)
1946			0.0332* (0.0187)	0.0670** (0.0264)	0.0290 (0.0311)	0.0114 (0.0407)	0.0115 (0.0118)	0.0345* (0.0203)
1948	0.00950 (0.0125)	0.00985 (0.0149)	0.0535*** (0.0195)	0.0457* (0.0249)	0.0258* (0.0139)	0.0571*** (0.0159)	0.00659 (0.0112)	0.0254* (0.0148)
1950			0.0270 (0.0275)	0.0459 (0.0321)	0.0511*** (0.0187)	0.0552** (0.0218)	0.00443 (0.0128)	0.0293 (0.0200)
1952	0.00307 (0.0108)	0.00703 (0.0136)	0.0881*** (0.0185)	0.0840** (0.0329)	0.0667* (0.0361)	0.0466 (0.0455)	-0.00783 (0.0177)	0.0119 (0.0254)
1954			-0.0203 (0.0376)	-0.0689* (0.0412)	0.0286** (0.0130)	0.0485*** (0.0163)	0.0248** (0.0101)	0.0333** (0.0164)
1956	0.0176 (0.0113)	0.00891 (0.0141)	-0.0250 (0.0361)	-0.0312 (0.0354)	0.0241 (0.0165)	0.0498** (0.0197)	-0.000656 (0.0140)	0.0149 (0.0202)
1958			-0.00728	0.00120	0.0480	0.0196	0.0161	0.0295*

			(0.0309)	(0.0363)	(0.0313)	(0.0398)	(0.0119)	(0.0171)
1960	0.0175*	0.0193	-0.00301	0.0297	0.0251*	0.0488***	0.00237	0.0117
	(0.0106)	(0.0133)	(0.0303)	(0.0361)	(0.0130)	(0.0157)	(0.0131)	(0.0230)
1962			-0.0128	-0.0171	0.0193	0.0490**	0.0136	0.0450*
			(0.0265)	(0.0458)	(0.0152)	(0.0200)	(0.0145)	(0.0230)
1964	0.00304	0.00346	0.0267	-0.0271	0.0323	0.00275	0.0248*	0.0434**
	(0.0123)	(0.0166)	(0.0230)	(0.0395)	(0.0353)	(0.0464)	(0.0144)	(0.0206)
1966			-0.0130	0.0471	0.0273**	0.0480**	0.0177	0.0433*
			(0.0287)	(0.0368)	(0.0139)	(0.0188)	(0.0135)	(0.0229)
1968	0.0136	0.0145	0.0150	0.0337	0.0294	0.0504**	0.0498***	0.0817***
	(0.0118)	(0.0153)	(0.0284)	(0.0365)	(0.0179)	(0.0233)	(0.0184)	(0.0251)
N	5,525		9,536		5,166		8,537	
R-Squared	0.805		0.478		0.787		0.817	

Note: Columns 1 and 2 report the estimates for β_{1t} and β_{2t} respectively from equation (1) in the text for the Presidential elections panel. Reported in parentheses are robust standard errors clustered by county. Columns 3 and 4 report the estimates for β_{1t} and β_{2t} from the Congressional elections panel. Columns 5 and 6 for the Senatorial elections panel. Finally, Column 7 and 8 for the Gubernatorial elections panel.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Next, I look to apply robustness checks to see whether their results are robust for different empirical specifications. The table below summarizes my results. Detailed results can be found in tables 16 to 21 of Appendix D. My findings suggest that the results are robust and hold for a wide variety of specification. However, the coefficients lose significance when adding the lagged agricultural covariates. This somewhat undermines our findings.

Table 2: Summary of Robustness Check Results

Changes to Empirical Framework	Results (Similar Results/Mostly Insignificant)
No Covariates (Only fixed effects)	Mostly similar results – Table 16
No Socioeconomic Covariates	Mostly similar results – Table 17
Including Hornbeck’s lagged agricultural covariates and no socioeconomic covariates (Presidential elections only)	Different results – Table 18 (Mostly, no significance)
Regression weighted by farmland (instead of population) and no clustering	Mostly similar results – Table 19
No Regression weights	Mostly similar results – Table 20
Controlling for only 1928 election results (instead of average of elections between 1920 and 1928)	Different results – Table 21 (Mostly, no significance)

Migration

Next, I make a preliminary attempt to understand the role of net migration in affecting the voting behavior of these counties in the American Plains. Migration was a central theme of the Dust Bowl (Hornbeck, 2012; Gutmann et al., 2016; Shindo 2000; McLeman, 2014). A recent study by Long and Siu (2016) finds that, during the Dust Bowl, people who were typically unlikely to move, such as those with young children, became equally likely to move during the Dust. Their study also suggests that the large drop in population in the Plains may have been primarily driven by diverted in-migration.

Given that the Dust Bowl is linked with large scale migration, it is possible that the shift in vote shares associated with the Dust Bowl in the earlier part of the paper, could in fact have been due to supporters of the Democratic Party migrating. In my two-part analysis, I initially calculate the net political impact of net migration and then using an interaction term, I check to see whether the difference in vote shares between more-eroded and less-eroded counties increases in counties where there is a higher net migration rate. I take my county-level net migration data from Fishback et al. (2006) who uses census data on the change in population between 1930 and 1940 and adjusts for birth and death data throughout the 1930s which he collects from the US Census's vital statistics reports. The data represents the net migration for a county which is calculated as the population of a county at 1940 minus the population of a county at 1930 with an adjustment for births and deaths during this period. The data is represented as the net migration rate per 1000 using the 1930 population.

In the net effect model, I use the following regression equation:

$$Y_{ct} - Y_{1920s} = \beta_{1t}M_c + \beta_{2t}H_c + \beta_{3t}B_c + \alpha_{st} + \theta_t X_c + \epsilon_{ct} \quad (2)$$

Here, B_c refers to the net migration rate and the value of β_{3t} is one which we record. The results find the net effect of an increase in net migration is associated with a decrease in the Republican vote share (i.e. increases the Democratic vote share) in the counties of the American Plains. Detailed results can be found in table- 5 of Appendix B. This suggests that less net migration is associated with a decrease in the Democratic vote shares. These preliminary finding therefore suggests that net migration could have been the cause of the change in voting behavior associated with the Dust Bowl.

It is important to note that the identifying assumption of the empirical specification is now a stronger assumption that these counties would have displayed the same voting characteristics, had it not been for the Dust Bowl and the net migration. There is also reason to believe that the Dust Bowl erosion and

net migration rates for a county would be highly correlated. Given the assumptions of the model, significant precaution needs to be taken while interpreting the findings. The results should be thus ideally being viewed as preliminary.

In the second part, I use the specification below to uncover any potential interaction effect. I check to see whether higher net migration in a county, increases the voting differences between more eroded and less eroded counties of the American Plains.

$$Y_{ct} - Y_{1920s} = \beta_{1t}M_c + \beta_{2t}H_c + \beta_{3t}B_c + \beta_{4t}B_cM_c + \beta_{5t}B_cH_c + \alpha_{st} + \theta_tX_c + \epsilon_{ct} \quad (3)$$

Once again B_c refers to the factor, i.e. net migration. B_cM_c and B_cH_c refers to the interaction of the factor with the erosion levels. We are recording the values for β_{4t} and β_{5t} . The coefficients report whether more eroded counties (medium eroded or high eroded) behaved differently to less eroded counties when there was more net migration, compared to the difference between more eroded and less eroded counties when there was less net migration. It is once again important to use great precaution while interpreting these coefficients. My results are presented in table- 6 of Appendix B. I find the results to be mostly insignificant. Therefore, the findings for this part of the study are inconclusive.

New Deal Spending

Lastly, using the same preliminary methodology as with migration, I seek to ascertain whether the New Deal may have acted as a potential mitigation strategy for the Democratic Party. As discussed earlier in the paper, the revolutionary New Deal was perhaps the most important Democratic policy of the era. It was widely popular across the country, and its positive impacts were wide-ranging. Given the help which the New Deal provided to farmers in Dust Bowl affected regions, there is reason to believe that New Deal Expenditure could increase vote shares for the Democratic Party in the counties of the American Plains. I take my New Deal expenditure data from Hornbeck (2012) which was initially drawn from the Office of Government Reports. The data separately records five types of New Deal expenditure: AAA payments, Public Works spending, Relief spending, New Deal loans and mortgage loans guaranteed. Each of the New Deal expenditure data has been standardized within the sample. Therefore, the mean of the expenditure data within the sample is zero and the standard deviation is 1.

In my analysis, I look at the impact of each of the type of New Deal Expenditure separately. In the first part, I look at the net political impact of the New Deal on the counties of the American Plains. Like the previous migration section, I run the analysis five times, using the 5 different types of New Deal expenditure instead of the net migration rate as B_c . The framework is once again subject to the same strong assumption that the voting behavior of the counties would have been the same had it not been for the Dust Bowl erosion and the New Deal expenditure.

My findings suggest that New Deal expenditure is associated with an increase in Democratic vote share (i.e. decrease Republican vote share) in the counties of the American Plains. This is in-line with the findings of the other contemporaries who find the New Deal to have strengthened the Democratic realignment (Kantor et al., 2013). The findings suggest that the Public works, AAA and relief programs were particularly effective in increasing Democratic vote shares in the American Plains. The detailed results can be found in tables 7 to 10 of Appendix C. These results seem to be in accordance with the literature on the New Deal that describe the help that these programs provided to farmers. The findings also suggest that the Democratic Party may have continued to benefit in the region thanks to the New Deal for decades into the future. Only in Gubernatorial elections, do my findings suggest that the New Deal expenditure was an ineffective political tool. However, when I apply interactions terms to see whether the New Deal expenditure can be attributed to have decreased the vote share differences in more eroded counties compared to less eroded counties, the results are mostly inconclusive. The coefficients for the interaction term analysis, report whether more eroded counties (medium eroded or

high eroded) behaved differently to less eroded counties when there was more New Deal expenditure, compared to the difference between more eroded and less eroded counties when there was less New Deal expenditure. However, it is once again important to note that due to the strong assumptions at play, these results should rather be regarded with caution. The detailed results can be found in tables 11 to 15 of Appendix C.

Discussion

This study finds that the Dust Bowl was in fact associated with a strong and persistent shift in vote shares against the Democratic Party in the counties of the American Plains. The findings of this paper contribute to the literature surrounding the Dust Bowl and empirical work on the politics of the era (Kantor et al., 2013; Fleck, 2013; Brown, 1998; Wright, 1974). While the external validity of these findings is unknown, it does pose interesting questions for future research.

Scope for further research on this topic could include looking in greater depth at the mechanisms and causes at play behind the shift in vote shares. This may involve a more focused analysis of the political impact of migration and the New Deal in the American Plains. Looking at the impact of swing counties, pre-trends in voting data and incumbency effects may also prove fruitful. Lastly, in addition to election returns data, opinion polls and other data sources may be explored.

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Appendices

Appendix A: Descriptive Statistics

Table 3: Agricultural County Characteristics

Agricultural County Characteristics in 1930 by Dust Bowl Erosion Level				
Agricultural County Characteristics	All Counties (1)	Compared to Low Erosion Counties		Difference (3) - (2) (4)
		Medium Erosion (2)	High Erosion (3)	
Acres of county in farm per county acre	0.836** (0.013)	0.009 (0.018)	-0.037 (0.021)	-0.046* (0.019)
Acres of cropland per acre of farm	0.436** (0.020)	0.047 (0.028)	-0.008 (0.037)	-0.056 (0.029)
Population per county acre	0.026** (0.004)	0.010 (0.007)	0.013 (0.008)	0.002 (0.007)
Fraction of population in rural areas	0.820** (0.020)	-0.005 (0.031)	0.035 (0.043)	0.041 (0.042)
Fraction of population in Farms	0.517** (0.014)	0.047* (0.023)	0.058 (0.032)	0.011 (0.031)
Number of Farms per County Acre	0.002** (0.000)	0.001** (0.000)	0.002** (0.000)	0.000 (0.000)
Average Farm Size (acres)	890.277** (88.067)	-381.702** (124.260)	-418.142** (147.891)	-36.441 (97.407)
Fraction of Cropland allocated to Corn	0.116** (0.011)	0.062** (0.016)	0.193** (0.026)	0.131** (0.024)
Fraction of Cropland allocated to Wheat	0.247** (0.018)	-0.051 (0.027)	-0.122** (0.035)	-0.071 (0.036)
Fraction of Cropland allocated to Hay	0.154** (0.021)	-0.032 (0.026)	-0.082* (0.039)	-0.050* (0.020)
Fraction of Cropland allocated to Cotton	0.079** (0.012)	0.058** (0.019)	0.019 (0.019)	-0.040 (0.021)
Fraction of Cropland allocated to Oats, Barley and Rye	0.128** (0.006)	-0.000 (0.009)	-0.030* (0.012)	-0.030** (0.011)
Cattle per county Acre	0.050** (0.002)	0.005 (0.003)	0.010** (0.004)	0.005 (0.004)
Swine per county Acre	0.035** (0.004)	0.033** (0.007)	0.054** (0.012)	0.021 (0.011)
Chickens per county Acre	0.199** (0.014)	0.107** (0.022)	0.116** (0.033)	0.008 (0.031)

Note: Column 1 reports the average values for the counties within our sample. Counties are weighted by acres of farmland in 1930, and the standard deviation is reported in parenthesis. Columns 2 and 3 report coefficients from a simple regression of the county characteristic on the fraction of the county in medium erosion

and in high erosion, conditional on state fixed effects and weighted by acres of farmland in 1930. Column 4 reports the difference between the coefficients in columns 2 and 3. Robust standard errors are reported in parentheses.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 4: Socioeconomic County Characteristics

Socioeconomic County Characteristics in 1930 by Dust Bowl Erosion Level				
Structural Socioeconomic Variables	All Counties (1)	Compared to Low Erosion Counties		Difference (3) - (2) (4)
		Medium Erosion (2)	High Erosion (3)	
Percentage of African American population	2.743** (0.473)	-1.094 (0.777)	-0.724 (0.647)	0.370 (0.652)
Percentage of population who manufacturing workers (1929)	1.562** (0.222)	0.017 (0.322)	-0.472 (0.427)	-0.488 (0.441)
Percentage of foreign born population	5.943** (0.195)	0.318 (0.307)	0.001 (0.466)	-0.317 (0.427)
Percentage of Population that is illiterate	2.593** (0.282)	-0.152 (0.447)	0.157 (0.452)	0.309 (0.447)
Percentage of Population Belonging to Religious Organization (1926)	40.013** (1.588)	9.658** (2.495)	13.545** (3.694)	3.887 (3.654)
Percentage of Farms Operated by Tenants	32.641** (1.041)	3.564* (1.596)	5.076* (2.197)	1.511 (2.010)
Percentage of households owning homes	50.521** (0.659)	3.869** (1.041)	3.378** (1.185)	-0.491 (1.281)
Percentage of households owning radios	33.741** (0.797)	-1.624 (1.153)	-0.939 (1.471)	0.684 (1.296)
Tax returns filed per capita	1.829** (0.111)	-0.345* (0.164)	-0.686** (0.173)	-0.340* (0.168)
Unemployment Rate	2.595** (0.185)	0.035 (0.260)	-0.395 (0.333)	-0.430 (0.298)
Retail sales per capita (1929)	376.766** (12.106)	-33.517 (17.809)	-78.920** (20.829)	-45.403* (20.789)

Note: Column 1 reports the average values for the counties within our sample. Counties are weighted by acres of farmland in 1930, and the standard deviation is reported in parenthesis. Columns 2 and 3 report coefficients from a simple regression of the county characteristic on the fraction of the county in medium erosion and in high erosion, conditional on state fixed effects and weighted by acres of farmland in 1930. Column 4 reports the difference between the coefficients in columns 2 and 3. Robust standard errors are reported in parentheses.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Appendix B: Migration

Table 5: Net Political Impact of Net Migration

Net Effect of Migration on Republican vote share

Year	(1) Presidential	(2) Congressional	(4) Senatorial	(3) Gubernatorial
1940	-0.000783*** (0.000286)	0.000395 (0.000462)	-0.00101 (0.000957)	-0.000207 (0.000234)
1942		0.000687 (0.000483)	-0.000384 (0.000432)	2.85e-05 (0.000203)
1944	-0.000959*** (0.000308)	0.00113 (0.000696)	-0.000467 (0.000482)	-6.30e-05 (0.000279)
1946		0.000846 (0.000676)	0.000825 (0.000659)	-3.77e-06 (0.000270)
1948	0.000106 (0.000302)	0.000510 (0.000493)	-0.000227 (0.000411)	0.000222 (0.000281)
1950		0.000679 (0.000844)	-0.000710 (0.000462)	0.000608* (0.000312)
1952	-0.000136 (0.000280)	-3.59e-05 (0.000650)	-7.32e-05 (0.000760)	0.000800* (0.000443)
1954		0.00303*** (0.00109)	-0.000124 (0.000377)	0.000558** (0.000275)
1956	5.45e-05 (0.000264)	0.00311*** (0.00109)	-0.000266 (0.000426)	0.000688* (0.000358)
1958		0.00207** (0.000972)	0.000180 (0.000700)	0.000330 (0.000294)
1960	0.000212 (0.000284)	0.00239** (0.00104)	3.97e-05 (0.000380)	0.000915*** (0.000333)
1962		0.00228** (0.00109)	-0.000189 (0.000459)	0.00107*** (0.000368)
1964	2.29e-06 (0.000290)	0.00115 (0.000705)	-0.000747 (0.000729)	0.000389 (0.000318)
1966		0.00145 (0.00106)	0.000179 (0.000407)	0.000183 (0.000383)
1968	0.000348 (0.000290)	0.000795 (0.00112)	-4.38e-05 (0.000543)	0.000238 (0.000449)
N	5,525	9,536	5,166	8,537
R-Squared	0.806	0.486	0.787	0.819

Note: Columns 1 reports the estimates for β_{3t} from equation (2) in the text with B_c as the net migration rate, for the Presidential elections panel. Columns 2 reports the estimates for β_{3t} from equation (2) in the text with B_c as the net migration rate, for the Congressional elections panel. Columns 3 reports the estimates for β_{3t} from equation (2) in the text with B_c as the net migration rate, for the Senatorial elections panel. Columns 4 reports the estimates for β_{3t} from equation (2) in the text f with B_c as the net migration rate for the Gubernatorial elections panel. Reported in parentheses are robust standard errors clustered by county.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 6: Migration Interacted with Erosion Level

Interacted Effect of Migration and soil erosion on Republican Vote Share								
Year	Presidential		Congressional		Senatorial		Gubernatorial	
Compared to Low Erosion								
	Net migration rate interacted with medium erosion (1)	Net migration rate interacted with high erosion (2)	Net migration rate interacted with medium erosion (3)	Net migration rate interacted with high erosion (4)	Net migration rate interacted with medium erosion (5)	Net migration rate interacted with high erosion (6)	Net migration rate interacted with medium erosion (7)	Net migration rate interacted with high erosion (8)
1940	0.00123* (0.000681)	0.000947 (0.000877)	-0.000869 (0.000822)	-0.00180 (0.00148)	2.85e-05 (0.00222)	0.00600* (0.00317)	0.000619 (0.000470)	0.00127 (0.00104)
1942			1.12e-05 (0.000817)	-0.00403** (0.00166)	0.00202* (0.00116)	0.00225* (0.00119)	0.000568 (0.000348)	0.00108 (0.00110)

1944	0.00161** (0.000660)	0.000496 (0.000865)	-0.000558 (0.00150)	0.000468 (0.00159)	0.00193* (0.00116)	0.00240* (0.00134)	0.000657 (0.000642)	-0.000196 (0.00114)
1946			-0.000578 (0.00130)	0.00104 (0.00164)	0.00184 (0.00193)	0.00535** (0.00248)	0.000773 (0.000602)	0.000272 (0.00131)
1948	0.000213 (0.000795)	-0.000296 (0.000913)	-0.00154 (0.00102)	-0.000685 (0.00133)	0.00144 (0.000991)	0.00326*** (0.00114)	0.000530 (0.000685)	-0.00225** (0.00114)
1950			-0.00374** (0.00167)	0.00130 (0.00185)	0.00207* (0.00114)	0.00455*** (0.00150)	0.000127 (0.000679)	-0.000847 (0.00148)
1952	0.000857 (0.000710)	0.000534 (0.000833)	0.000176 (0.00126)	0.00221 (0.00208)	0.00331 (0.00250)	0.00396 (0.00245)	0.00172 (0.00118)	-0.00101 (0.00176)
1954			-0.00439* (0.00244)	0.00142 (0.00251)	0.00200** (0.000900)	0.00347*** (0.00109)	0.000158 (0.000584)	-0.00162 (0.00112)
1956	0.00109* (0.000625)	0.000896 (0.000890)	-0.00331 (0.00251)	-0.00352 (0.00219)	0.00166 (0.00110)	0.00317** (0.00133)	-0.000358 (0.000818)	-0.00315* (0.00160)
1958			-0.00313 (0.00217)	-0.00155 (0.00226)	0.00326 (0.00210)	0.00337 (0.00213)	4.93e-05 (0.000554)	-0.00258** (0.00112)
1960	0.000743 (0.000669)	0.00139* (0.000842)	-0.000950 (0.00248)	-0.00176 (0.00240)	0.00192** (0.000867)	0.00379*** (0.00106)	0.000401 (0.000743)	-0.00262 (0.00178)
1962			5.77e-05 (0.00214)	0.00556* (0.00307)	0.00216** (0.000986)	0.00332*** (0.00128)	0.000480 (0.000742)	0.000359 (0.00152)
1964	0.00150** (0.000688)	0.00300*** (0.00109)	0.000140 (0.00140)	0.00649*** (0.00232)	0.00573** (0.00222)	0.00291 (0.00240)	0.000487 (0.000681)	-0.00394** (0.00157)
1966			-0.00174 (0.00225)	-0.00160 (0.00252)	0.00318*** (0.000939)	0.00492*** (0.00120)	0.000361 (0.000702)	-0.000560 (0.00146)
1968	0.00106 (0.000726)	0.00209** (0.000974)	0.00304 (0.00231)	0.00249 (0.00238)	0.00178 (0.00118)	0.00382** (0.00156)	0.000842 (0.000956)	-0.00403** (0.00191)
N	5,525		9,536		5,166		8,537	
R Squared	0.808		0.492		0.794		0.820	

Note: Columns 1 and 2 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text with B_c as the net migration rate, for the Presidential elections panel. Columns 3 and 4 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text for the Congressional elections panel. Columns 5 and 6 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text with B_c as the net migration rate, for the Senatorial elections panel. Columns 7 and 8 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text for the Gubernatorial elections panel with B_c as the net migration rate. Reported in parentheses are robust standard errors clustered by county.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Appendix C: The New Deal

Table 7: Net Effect of the New Deal on Presidential Elections

Net New Deal Effect on Republican vote share in Presidential Elections (In terms of a one standard deviation increase)					
Year	(1) Public Works	(2) AAA	(3) Relief	(4) Loans	(5) Insurance
1940	-0.00117 (0.00207)	-0.00485 (0.00487)	-0.00783*** (0.00237)	-0.000760 (0.00172)	0.00181 (0.00239)
1944	0.000827 (0.00380)	-0.00457 (0.00442)	-0.00673** (0.00333)	0.000731 (0.00304)	0.00187 (0.00301)
1948	0.00242 (0.00184)	-0.00211 (0.00442)	-0.00313 (0.00223)	0.00497*** (0.00161)	0.00656*** (0.00200)
1952	-0.00133 (0.00209)	-0.00472 (0.00404)	-0.00454** (0.00225)	0.000323 (0.00187)	0.00379* (0.00224)
1956	-0.00494** (0.00201)	-0.00616 (0.00401)	-0.00575** (0.00229)	-0.00159 (0.00209)	0.00187 (0.00228)
1960	-0.00455 (0.00294)	-0.00716* (0.00404)	-0.00523* (0.00284)	-0.00254 (0.00249)	0.00269 (0.00271)

1964	-0.00469*	-0.00272	-0.00337	-0.000819	0.00299
	(0.00264)	(0.00451)	(0.00278)	(0.00258)	(0.00233)
1968	-0.00237	-0.00142	-0.00420	0.000141	0.00464**
	(0.00275)	(0.00477)	(0.00268)	(0.00242)	(0.00232)
N	5,525	5,525	5,525	5,525	5,525
R Squared	0.806	0.805	0.807	0.805	0.807

Note: Columns 1 reports the estimates for β_{3t} from equation (2) in the text for the Presidential elections panel with B_c as the Public Works expenditure. Columns 2 reports the estimates for β_{3t} from equation (2) in the text for the Presidential elections panel with B_c as the AAA payments. Columns 3 reports the estimates for β_{3t} from equation (2) in the text for the Presidential elections panel with B_c as the relief expenditure. Columns 4 reports the estimates for β_{3t} from equation (2) in the text for the Presidential elections panel with B_c as the New Deal loans. Columns 5 reports the estimates for β_{3t} from equation (2) in the text for the Presidential elections panel with B_c as the mortgage loans guaranteed. Reported in parentheses are robust standard errors clustered by county. The New Deal expenditure values have been standardized.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 8: Net Effect of the New Deal of Congressional Elections

Net Effect of New Deal Expenditure on Republican vote share in Congressional Elections (In terms of a one standard deviation increase)					
Years	(1) Public Works	(2) AAA	(3) Relief	(4) Loans	(5) Insurance
1940	0.00429 (0.00425)	-0.0135* (0.00718)	-0.00397 (0.00385)	0.00338 (0.00296)	0.00677*** (0.00260)
1942	-0.00981** (0.00495)	-0.0118 (0.00752)	-0.00838* (0.00499)	-0.00584 (0.00496)	-0.000263 (0.00312)
1944	-0.0191* (0.0102)	-0.00906 (0.00727)	-0.0196** (0.00847)	-0.00863 (0.00889)	0.00504 (0.00710)
1946	-0.0191* (0.00990)	-0.00671 (0.00742)	-0.0212** (0.00822)	-0.00658 (0.00874)	0.00259 (0.00572)
1948	-0.00286 (0.00582)	-0.00801 (0.00595)	-0.00320 (0.00504)	0.00364 (0.00486)	0.00460 (0.00316)
1950	-0.0151 (0.0117)	-0.0106 (0.00758)	-0.00633 (0.00920)	-0.00124 (0.0107)	0.00175 (0.00627)
1952	-0.0141* (0.00844)	-0.00160 (0.00760)	-0.0101 (0.00765)	-0.00869 (0.00708)	-0.000639 (0.00381)
1954	-0.00896 (0.0158)	-0.000797 (0.00813)	-0.0171 (0.0106)	0.00894 (0.0134)	0.0249*** (0.00868)
1956	-0.00692 (0.0157)	0.000369 (0.00811)	-0.0169 (0.0103)	0.00871 (0.0130)	0.0257*** (0.00964)
1958	-0.0102 (0.0136)	-0.00135 (0.00793)	-0.0145 (0.00981)	0.00511 (0.0115)	0.0205** (0.00912)
1960	-0.00784 (0.0156)	0.00165 (0.00799)	-0.0127 (0.0109)	0.00235 (0.0120)	0.0220** (0.00984)
1962	-0.0260 (0.0179)	-0.00492 (0.00860)	-0.0260* (0.0137)	-0.0133 (0.0144)	0.00368 (0.00888)
1964	-0.00758 (0.00952)	-0.00999 (0.00756)	-0.00601 (0.00824)	0.000261 (0.00739)	0.00906* (0.00480)
1966	-0.0149 (0.0134)	-0.00393 (0.00864)	-0.0200* (0.0103)	-0.00444 (0.0115)	0.0111 (0.00816)
1968	-0.00394 (0.00832)	-0.00396 (0.00815)	-0.0110 (0.00782)	-0.00660 (0.00560)	0.0103 (0.00857)
N	9,536	9,536	9,536	9,536	9,536
R-Squared	0.491	0.479	0.489	0.482	0.498

Note: Columns 1 reports the estimates for β_{3t} from equation (2) in the text for the Congressional elections panel with B_c as the Public Works expenditure. Columns 2 reports the estimates for β_{3t} from equation (2) in the text for the Congressional elections panel with B_c as the AAA payments. Columns 3 reports the estimates for β_{3t} from equation (2) in the text for the Congressional elections panel with B_c as the relief expenditure. Columns 4 reports the estimates for β_{3t} from equation (2) in the text for the Congressional elections panel with B_c as the New Deal loans. Columns 5 reports the estimates for β_{3t} from equation (2) in the text for the Presidential elections panel with B_c as the mortgage loans guaranteed. Reported in parentheses are robust standard errors clustered by county. The New Deal expenditure values have been standardized.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 9: Net Effect of the New Deal on Gubernatorial Elections

Net Effect of New Deal Spending on Republican vote share in Gubernatorial Elections (In terms of a one standard deviation increase)					
Years	(1) Public Works	(2) AAA	(3) Relief	(4) Loans	(5) Insurance
1940	0.00273 (0.00195)	0.00408 (0.00543)	-0.00455* (0.00247)	0.00169 (0.00189)	0.00137 (0.00184)
1942	-0.00225 (0.00149)	0.00329 (0.00450)	-0.00468** (0.00195)	-0.00240* (0.00124)	-0.00245** (0.00113)
1944	0.00882** (0.00398)	-0.000112 (0.00408)	-0.00341 (0.00428)	0.00624* (0.00348)	0.00342 (0.00228)
1946	0.00647** (0.00290)	0.00188 (0.00437)	-0.00674* (0.00362)	0.00433 (0.00278)	0.00298 (0.00266)
1948	0.00632*** (0.00169)	0.000397 (0.00357)	0.00206 (0.00320)	0.00727*** (0.00186)	0.00897*** (0.00248)
1950	0.00892*** (0.00212)	-0.000229 (0.00534)	0.000413 (0.00349)	0.00821*** (0.00173)	0.00699*** (0.00181)
1952	0.0144*** (0.00342)	0.0100** (0.00497)	-0.00519 (0.00619)	0.00980** (0.00401)	0.0120** (0.00488)
1954	0.00290 (0.00195)	0.00307 (0.00365)	-0.00375 (0.00262)	0.00219 (0.00184)	0.00419** (0.00212)
1956	0.00973*** (0.00214)	0.000782 (0.00454)	-0.000426 (0.00356)	0.0105*** (0.00197)	0.00968*** (0.00219)
1958	0.00521*** (0.00179)	-0.000488 (0.00567)	-0.00184 (0.00281)	0.00548*** (0.00202)	0.00516** (0.00211)
1960	0.00751*** (0.00233)	-0.000875 (0.00496)	-0.00360 (0.00413)	0.00619*** (0.00217)	0.00884*** (0.00307)
1962	-0.000277 (0.00365)	-0.00390 (0.00615)	-0.00675* (0.00387)	0.000953 (0.00291)	0.00439 (0.00270)
1964	0.00890*** (0.00281)	0.00144 (0.00690)	-0.00736 (0.0109)	0.00495** (0.00205)	0.00749*** (0.00217)
1966	0.00168 (0.00272)	0.00665 (0.00767)	-0.00158 (0.00324)	0.00111 (0.00222)	0.00269 (0.00181)
1968	0.00321 (0.00437)	0.00414 (0.00554)	-0.0125 (0.00930)	0.00288 (0.00249)	0.00524** (0.00214)
N	8,537	8,537	8,537	8,537	8,537
R-Squared	0.823	0.818	0.819	0.822	0.824

Note: Columns 1 reports the estimates for β_{3t} from equation (2) in the text for the Gubernatorial elections panel with B_c as the Public Works expenditure. Columns 2 reports the estimates for β_{3t} from equation (2) in the text for the Gubernatorial elections panel with B_c as the AAA payments. Columns 3 reports the estimates for β_{3t} from equation (2) in the text for the Gubernatorial elections panel with B_c as the relief expenditure. Columns 4 reports the estimates for β_{3t} from equation (2) in the text for the Gubernatorial elections panel with B_c as the New Deal loans. Columns 5 reports the estimates for β_{3t} from equation (2) in the text for the Presidential elections panel with B_c as the mortgage loans guaranteed. Reported in parentheses are robust standard errors clustered by county. The New Deal expenditure values have been standardized.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 10: Net Effect of the New Deal on Senatorial Elections

Net Effect of New Deal Expenditure on Republican vote share in Senatorial Elections (In terms of a one standard deviation increase)					
Year	(1) Public Works	(2) AAA	(3) Relief	(4) Loans	(5) Insurance
1940	-0.0161*** (0.00409)	-0.0118 (0.00783)	-0.0142*** (0.00376)	-0.0171*** (0.00504)	-0.0155*** (0.00408)
1942	-0.0133*** (0.00323)	-0.00378 (0.00511)	-0.0102*** (0.00262)	-0.00811** (0.00412)	-0.0105*** (0.00293)

1944	-0.00734** (0.00370)	-0.00617 (0.00723)	-0.00875 (0.00557)	0.00998** (0.00401)	0.00442 (0.00505)
1946	-0.00587 (0.00369)	-0.00820 (0.00596)	-0.00440 (0.00342)	-0.00457 (0.00462)	-0.00425 (0.00379)
1948	-0.0106*** (0.00299)	-0.00835 (0.00557)	-0.00638** (0.00281)	-6.53e-06 (0.00427)	-0.00528* (0.00295)
1950	-0.00763* (0.00430)	-0.00184 (0.00690)	-0.0164 (0.0110)	0.0112 (0.00723)	0.00828 (0.00941)
1952	-0.00145 (0.00367)	-0.00706 (0.00633)	0.00121 (0.00381)	0.00108 (0.00489)	0.00158 (0.00408)
1954	-0.0113*** (0.00262)	-0.00642 (0.00472)	-0.00758*** (0.00224)	0.000513 (0.00421)	-0.00456 (0.00320)
1956	-0.0138** (0.00535)	-0.00604 (0.00584)	-0.0180*** (0.00578)	0.00698 (0.00486)	-0.000325 (0.00618)
1958	-0.000747 (0.00343)	-0.00845 (0.00540)	0.00288 (0.00327)	0.00214 (0.00444)	0.00286 (0.00344)
1960	-0.00918*** (0.00260)	-0.00507 (0.00448)	-0.00537** (0.00230)	-0.00112 (0.00401)	-0.00564* (0.00297)
1962	-0.0139*** (0.00391)	-0.00519 (0.00680)	-0.0217*** (0.00612)	-0.00123 (0.00523)	-0.00522 (0.00618)
1964	0.00360 (0.00415)	0.000761 (0.00773)	0.00808** (0.00387)	0.00810 (0.00547)	0.00878** (0.00401)
1966	-0.00257 (0.00287)	-0.00193 (0.00515)	-0.000312 (0.00284)	0.00679 (0.00459)	0.00341 (0.00329)
1968	-0.0131*** (0.00482)	-0.00727 (0.00947)	-0.0125 (0.00881)	0.00672 (0.00614)	0.00392 (0.00761)
N	5,166	5,166	5,166	5,166	5,166
R-Squared	0.792	0.788	0.792	0.789	0.790

Note: Column 1 reports the estimates for β_{3t} from equation (2) in the text for the Senatorial elections panel with B_c as the Public Works expenditure. Column 2 reports the estimates for β_{3t} from equation (2) in the text for the Senatorial elections panel with B_c as the AAA payments. Column 3 reports the estimates for β_{3t} from equation (2) in the text for the Senatorial elections panel with B_c as the relief expenditure. Column 4 reports the estimates for β_{3t} from equation (2) in the text for the Senatorial elections panel with B_c as the New Deal loans. Column 5 reports the estimates for β_{3t} from equation (2) in the text for the Presidential elections panel with B_c as the mortgage loans guaranteed. Reported in parentheses are robust standard errors clustered by county. The New Deal expenditure values have been standardized.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 11: New Deal Public Works Expenditure Interacted with Erosion

Interacted Effect of New Deal Public Works Expenditure on Republican Vote Share								
Year	Presidential		Congressional		Senatorial		Gubernatorial	
	New Deal Public Works Expenditure interacted with medium erosion (1)	New Deal Public Works Expenditure interacted with high erosion (2)	New Deal Public Works Expenditure interacted with medium erosion (3)	New Deal Public Works Expenditure interacted with high erosion (4)	New Deal Public Works Expenditure interacted with medium erosion (5)	New Deal Public Works Expenditure interacted with high erosion (6)	New Deal Public Works Expenditure interacted with medium erosion (7)	New Deal Public Works Expenditure interacted with high erosion (8)
1940	0.00342 (0.00437)	-0.0190 (0.0122)	-0.00641 (0.00594)	-0.0544** (0.0240)	0.0229 (0.0245)	0.0703** (0.0324)	0.000668 (0.00330)	0.0189 (0.0143)
1942			-0.00579 (0.00732)	-0.0735*** (0.0227)	0.0315** (0.0150)	0.0409** (0.0185)	0.00277 (0.00238)	0.00304 (0.0115)
1944	0.00718 (0.00701)	-0.00690 (0.0123)	-0.0118 (0.0105)	-0.0207 (0.0213)	0.0261 (0.0189)	0.0133 (0.0190)	0.000242 (0.00520)	-0.00565 (0.0128)
1946			-0.00693 (0.0124)	0.0298 (0.0214)	0.0452** (0.0212)	0.0658*** (0.0212)	0.00302 (0.00415)	0.00428 (0.0148)
1948	-0.00258	-0.0145	-0.0109	0.000693	0.0209	0.0365**	0.00102	-0.0313***

	(0.00456)	(0.0127)	(0.0103)	(0.0198)	(0.0137)	(0.0165)	(0.00340)	(0.0121)
1950			-0.0235	0.0237	0.0529**	0.0804***	-0.00356	0.00359
			(0.0190)	(0.0216)	(0.0248)	(0.0274)	(0.00377)	(0.0171)
1952	0.00195	0.00236	-0.00762	0.0232	0.0446*	0.0687***	-0.000511	0.00378
	(0.00429)	(0.0103)	(0.00909)	(0.0275)	(0.0234)	(0.0256)	(0.00799)	(0.0203)
1954			-0.0492***	-0.0186	0.0289**	0.0563***	-0.00310	-0.0114
			(0.0165)	(0.0310)	(0.0113)	(0.0144)	(0.00329)	(0.0116)
1956	0.00331	-0.000803	-0.0472***	-0.0568**	0.0394*	0.0440**	-0.0111***	-0.0202
	(0.00438)	(0.0128)	(0.0166)	(0.0269)	(0.0224)	(0.0203)	(0.00353)	(0.0163)
1958			-0.0362**	-0.0496	0.0389**	0.0579***	-0.00427	-0.0256*
			(0.0144)	(0.0344)	(0.0185)	(0.0219)	(0.00326)	(0.0132)
1960	0.000842	-0.000705	-0.0351**	-0.0689**	0.0200*	0.0514***	-0.00412	-0.00761
	(0.00436)	(0.0107)	(0.0144)	(0.0342)	(0.0114)	(0.0142)	(0.00398)	(0.0180)
1962			-0.0156	0.0263	0.0217	0.0179	-0.00340	0.00590
			(0.0182)	(0.0356)	(0.0174)	(0.0238)	(0.00504)	(0.0164)
1964	0.00284	0.0177	-0.00522	0.0242	0.0339	0.0389	0.000540	-0.0174
	(0.00442)	(0.0134)	(0.0108)	(0.0277)	(0.0287)	(0.0312)	(0.00468)	(0.0231)
1966			-0.0302**	-0.0320	0.0370***	0.0609***	-0.00133	-0.0152
			(0.0137)	(0.0364)	(0.0130)	(0.0171)	(0.00452)	(0.0158)
1968	0.000755	0.00678	-0.000526	-0.0338	0.0312	0.0348	-0.00544	-0.0434
	(0.00474)	(0.0116)	(0.0130)	(0.0373)	(0.0223)	(0.0301)	(0.00528)	(0.0372)
N	5,525		9,536		5,166		8,537	
R	0.807		0.503		0.799		0.824	

Squared
Note: Columns 1 and 2 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text, with B_c as the New Deal Public Works Expenditure, for the Presidential elections panel. Columns 3 and 4 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text, with B_c as the New Deal Public Works Expenditure, for the Congressional elections panel. Columns 5 and 6 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text with B_c as the New Deal Public Works Expenditure, for the Senatorial elections panel. Columns 7 and 8 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text for the Gubernatorial elections panel with B_c as the New Deal Public Works Expenditure. Reported in parentheses are robust standard errors clustered by county. The New Deal expenditure values have been standardized.

- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%

Table 12: New Deal AAA Payments Interacted with Erosion

Interacted Effect of New Deal AAA Payments on Republican Vote Share								
Year	Presidential		Congressional		Senatorial		Gubernatorial	
	New Deal AAA Payments interacted with medium erosion (1)	New Deal AAA Payments interacted with high erosion (2)	New Deal AAA Payments interacted with medium erosion (3)	New Deal AAA Payments interacted with high erosion (4)	New Deal AAA Payments interacted with medium erosion (5)	New Deal AAA Payments interacted with high erosion (6)	New Deal AAA Payments interacted with medium erosion (7)	New Deal AAA Payments interacted with high erosion (8)
1940	-0.00163 (0.00968)	0.0361*** (0.0139)	0.00970 (0.0113)	0.0276 (0.0233)	0.0109 (0.0300)	0.0409 (0.0336)	0.0112 (0.00850)	0.0132 (0.0158)
1942			0.00864 (0.0119)	0.0434* (0.0231)	0.0101 (0.0137)	0.0159 (0.0154)	0.0142 (0.00918)	0.00641 (0.0150)

1944	0.0109 (0.00907)	0.0346*** (0.0132)	0.0206 (0.0139)	0.0307 (0.0212)	-0.00960 (0.0120)	0.00307 (0.0161)	0.0278*** (0.00824)	0.0317** (0.0156)
1946			0.0102 (0.0133)	0.0164 (0.0245)	0.0499*** (0.0192)	0.0233 (0.0246)	0.00878 (0.00819)	0.0208 (0.0166)
1948	-0.00152 (0.00821)	0.0261** (0.0122)	-0.00315 (0.0122)	0.0276 (0.0170)	0.00861 (0.0103)	-0.000811 (0.0127)	-0.00845 (0.00875)	-0.00528 (0.0153)
1950			-0.0142 (0.0150)	-0.0290 (0.0216)	-0.0245 (0.0169)	-0.0102 (0.0201)	0.00307 (0.00968)	-0.0269 (0.0181)
1952	-0.00304 (0.00915)	0.0303** (0.0141)	0.0128 (0.0150)	0.0898** (0.0451)	0.0254 (0.0257)	0.0245 (0.0206)	0.0287** (0.0126)	0.0259 (0.0221)
1954			0.0225 (0.0187)	0.0765*** (0.0277)	0.00662 (0.00912)	-0.0189 (0.0117)	0.0156** (0.00763)	0.00877 (0.0155)
1956	-0.00689 (0.00861)	0.0246* (0.0149)	0.0114 (0.0170)	0.0255 (0.0247)	-0.00628 (0.0139)	-0.0147 (0.0164)	0.0204** (0.00890)	-0.00536 (0.0195)
1958			0.0277 (0.0180)	0.0388 (0.0263)	0.0164 (0.0224)	0.0205 (0.0183)	0.00968 (0.00866)	0.00488 (0.0164)
1960	0.00107 (0.00896)	0.0258 (0.0167)	0.0306* (0.0181)	0.0436 (0.0274)	0.00724 (0.00880)	-0.000295 (0.0154)	0.0125 (0.00939)	0.0166 (0.0235)
1962			-0.00623 (0.0203)	0.0759** (0.0349)	0.00418 (0.0122)	-0.00556 (0.0170)	-0.0124 (0.0119)	0.00888 (0.0187)
1964	-0.00584 (0.00990)	0.00861 (0.0215)	-4.94e-06 (0.0172)	0.0845*** (0.0268)	-0.00243 (0.0266)	-0.00571 (0.0223)	-0.00172 (0.0107)	0.0175 (0.0208)
1966			0.000591 (0.0195)	-0.0108 (0.0268)	-0.00587 (0.0100)	-0.00901 (0.0137)	0.00226 (0.0110)	0.0192 (0.0232)
1968	0.00234 (0.00981)	0.0271 (0.0165)	-0.00736 (0.0204)	0.0371 (0.0257)	-0.00106 (0.0163)	-0.0166 (0.0202)	0.00778 (0.0125)	0.0257 (0.0272)
N	5,525		9,536		5,166		8,537	
R Squared	0.807		0.482		0.789		0.819	

Note: Columns 1 and 2 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text, with B_c as the New Deal AAA Payments, for the Presidential elections panel. Columns 3 and 4 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text, with B_c as the New Deal AAA Payments, for the Congressional elections panel. Columns 5 and 6 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text with B_c as the as the New Deal AAA Payments, for the Senatorial elections panel. Columns 7 and 8 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text for the Gubernatorial elections panel with B_c as the New Deal AAA Payments. Reported in parentheses are robust standard errors clustered by county. The New Deal expenditure values have been standardized.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 13: New Deal Relief Expenditure Interacted with Erosion

Interacted Effect of New Deal Relief Expenditure on Republican Vote Share								
Year	Presidential		Congressional		Senatorial		Gubernatorial	
	New Deal Relief Expenditure with medium erosion (1)	New Deal Relief Expenditure interacted with high erosion (2)	New Deal Relief Expenditure with medium erosion (3)	New Deal Relief Expenditure interacted with high erosion (4)	New Deal Relief Expenditure with medium erosion (5)	New Deal Relief Expenditure interacted with high erosion (6)	New Deal Relief Expenditure with medium erosion (7)	New Deal Relief Expenditure interacted with high erosion (8)
1940	0.0107 (0.00660)	-0.0106 (0.00753)	-0.00543 (0.0147)	-0.0438*** (0.0153)	0.146*** (0.0553)	0.148*** (0.0515)	0.00762 (0.00882)	0.0182* (0.00956)
1942			0.00152 (0.0118)	-0.0373*** (0.0132)	0.0514*** (0.00855)	0.0523*** (0.00794)	0.0142* (0.00776)	0.0191** (0.00905)

1944	0.0142* (0.00754)	-0.00149 (0.00808)	0.0128 (0.0174)	0.000945 (0.0159)	0.0787*** (0.0209)	0.0195* (0.0115)	0.000807 (0.00879)	0.00332 (0.00985)
1946			0.0167 (0.0190)	0.0165 (0.0181)	0.174*** (0.0592)	0.154*** (0.0519)	0.0110 (0.0105)	0.0142 (0.0116)
1948	0.000823 (0.0109)	-0.00763 (0.0105)	-0.00167 (0.0202)	-0.00771 (0.0188)	0.0369*** (0.00761)	0.0442*** (0.00670)	-0.000802 (0.00649)	-0.00460 (0.00724)
1950			-0.0117 (0.0279)	0.0176 (0.0233)	0.131*** (0.0201)	0.0773*** (0.0106)	-0.00405 (0.0112)	0.0101 (0.0126)
1952	0.00925 (0.00878)	0.00240 (0.00824)	0.0168 (0.0174)	0.0130 (0.0180)	0.192*** (0.0577)	0.187*** (0.0547)	0.00369 (0.0154)	0.00851 (0.0154)
1954			-0.0411 (0.0361)	-0.0426 (0.0321)	0.0373*** (0.00967)	0.0486*** (0.00844)	0.00724 (0.0115)	0.00568 (0.0120)
1956	0.0130* (0.00759)	0.00689 (0.00815)	-0.0404 (0.0357)	-0.0490 (0.0303)	0.0652*** (0.0218)	0.0434*** (0.0129)	-0.0116 (0.0128)	-0.00198 (0.0139)
1958			-0.0259 (0.0290)	-0.0162 (0.0310)	0.165*** (0.0521)	0.158*** (0.0489)	0.00268 (0.0106)	-0.00293 (0.0116)
1960	0.00960 (0.00736)	0.00694 (0.00692)	-0.0196 (0.0301)	-0.0207 (0.0322)	0.0238** (0.00952)	0.0431*** (0.00817)	0.000375 (0.0120)	0.000650 (0.0125)
1962			0.0285 (0.0334)	0.0391 (0.0323)	0.0545** (0.0237)	0.0263** (0.0119)	0.0126 (0.0173)	0.0148 (0.0168)
1964	0.0114 (0.00721)	0.0185** (0.00796)	0.0193 (0.0268)	0.0264 (0.0263)	0.199*** (0.0571)	0.190*** (0.0530)	0.0127 (0.0144)	-0.0203 (0.0180)
1966			-0.00910 (0.0309)	-0.0152 (0.0320)	0.0503*** (0.00797)	0.0596*** (0.00705)	0.0109 (0.0137)	0.00921 (0.0144)
1968	0.00899 (0.00924)	0.00605 (0.00885)	0.0224 (0.0240)	-0.00884 (0.0276)	0.105*** (0.0293)	0.0396** (0.0165)	0.00201 (0.0149)	-0.0684* (0.0401)
N	5,525		9,536		5,166		8,537	
R Squared	0.809		0.495		0.808		0.820	

Note: Columns 1 and 2 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text, with B_c as the New Deal Relief Expenditure, for the Presidential elections panel. Columns 3 and 4 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text, with B_c as the as the New Deal Relief Expenditure, for the Congressional elections panel. Columns 5 and 6 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text with B_c as the as the New Deal Relief Expenditure, for the Senatorial elections panel. Columns 7 and 8 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text for the Gubernatorial elections panel with B_c as the New Deal Relief Expenditure. Reported in parentheses are robust standard errors clustered by county. The New Deal expenditure values have been standardized.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 14: New Deal Loans Interacted with Erosion

Interacted Effect of New Deal Loans on Republican Vote Share								
Year	Presidential		Congressional		Senatorial		Gubernatorial	
	New Deal Loans interacted with medium erosion (1)	New Deal Loans interacted with high erosion (2)	New Deal Loans interacted with medium erosion (3)	New Deal Loans interacted with high erosion (4)	New Deal Loans interacted with medium erosion (5)	New Deal Loans interacted with high erosion (6)	New Deal Loans interacted with medium erosion (7)	New Deal Loans interacted with high erosion (8)
1940	0.00249 (0.00359)	-0.00513 (0.00768)	-0.000157 (0.00654)	-0.0294*** (0.00973)	0.0239 (0.0230)	0.0769*** (0.0260)	0.00427 (0.00285)	0.0220** (0.00888)
1942			-0.0140** (0.00673)	-0.0338*** (0.00825)	-0.00433 (0.0108)	0.0204** (0.0104)	2.52e-05 (0.00185)	0.0126 (0.00889)
1944	0.00903* (0.00491)	0.00363 (0.00667)	-0.0198 (0.0162)	-0.00507 (0.0111)	-0.00300 (0.0124)	0.00960 (0.0101)	0.00894* (0.00540)	0.0139 (0.00902)

1946			-0.0197 (0.0148)	0.0232* (0.0122)	0.0267 (0.0314)	0.0378 (0.0273)	0.00741 (0.00454)	0.0164 (0.0108)
1948	-0.000221 (0.00363)	-0.000746 (0.00590)	-0.0128* (0.00707)	0.00651 (0.00944)	-0.00748 (0.0106)	0.0156 (0.0109)	0.00840** (0.00383)	-0.00269 (0.0106)
1950			-0.0352** (0.0138)	0.0198** (0.00881)	-0.00243 (0.0173)	0.0457*** (0.0140)	0.00507 (0.00323)	0.0182 (0.0138)
1952	-0.000414 (0.00402)	0.00179 (0.00604)	-0.0169 (0.0112)	0.0117 (0.0133)	0.0533* (0.0320)	0.0668** (0.0290)	0.0167** (0.00741)	0.0234 (0.0148)
1954			-0.0367* (0.0220)	-0.00456 (0.0183)	-0.00381 (0.00833)	0.0267*** (0.00816)	0.00144 (0.00337)	0.00434 (0.00878)
1956	-0.00126 (0.00420)	0.00677 (0.00690)	-0.0356 (0.0226)	-0.0310* (0.0161)	-0.00911 (0.0141)	0.0242** (0.00961)	0.00122 (0.00354)	0.00819 (0.0132)
1958			-0.0286 (0.0209)	-0.0210 (0.0233)	0.0494* (0.0278)	0.0532** (0.0264)	0.00169 (0.00308)	-0.00260 (0.0100)
1960	-0.00320 (0.00513)	0.00191 (0.00663)	-0.0263 (0.0231)	-0.0290 (0.0220)	-0.00923 (0.00813)	0.0237*** (0.00756)	0.00398 (0.00438)	-0.00295 (0.0156)
1962			-0.0315 (0.0241)	0.0240 (0.0197)	-0.00896 (0.0154)	0.0188 (0.0118)	-0.00451 (0.00504)	0.00504 (0.0115)
1964	-0.000569 (0.00484)	0.0170*** (0.00622)	-0.00752 (0.0136)	0.0238 (0.0167)	0.0682*** (0.0227)	0.0593** (0.0241)	0.00399 (0.00451)	-0.0175 (0.0168)
1966			-0.0305 (0.0188)	-0.0248 (0.0189)	0.0102 (0.0106)	0.0305*** (0.0110)	-0.000962 (0.00365)	0.00349 (0.0116)
1968	-0.000854 (0.00490)	0.00647 (0.00672)	0.00123 (0.0149)	-0.0294 (0.0189)	-0.0134 (0.0158)	0.0284** (0.0138)	-0.00195 (0.00561)	0.0175 (0.0510)
N	5,525		9,536		5,166		8,537	
R	0.807		0.502		0.798		0.824	

Squared

Note: Columns 1 and 2 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text, with B_c as the New Deal Loans, for the Presidential elections panel. Columns 3 and 4 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text, with B_c as the as the New Deal Loans, for the Congressional elections panel. Columns 5 and 6 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text with B_c as the as the New Deal Loans, for the Senatorial elections panel. Columns 7 and 8 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text for the Gubernatorial elections panel with B_c as the New Deal Loans. Reported in parentheses are robust standard errors clustered by county. The New Deal expenditure values have been standardized.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 15: New Deal Mortgages Guaranteed Interacted with Erosion

Interacted Effect of New Deal Mortgages Guaranteed on Republican Vote Share								
Year	Presidential		Congressional		Senatorial		Gubernatorial	
	New Deal Mortgages Guaranteed interacted with medium erosion (1)	New Deal Mortgages Guaranteed interacted with high erosion (2)	New Deal Mortgages Guaranteed interacted with medium erosion (3)	New Deal Mortgages Guaranteed interacted with high erosion (4)	New Deal Mortgages Guaranteed interacted with medium erosion (5)	New Deal Mortgages Guaranteed interacted with high erosion (6)	New Deal Mortgages Guaranteed interacted with medium erosion (7)	New Deal Mortgages Guaranteed interacted with high erosion (8)
1940	0.00437 (0.00355)	0.00119 (0.00736)	-0.000831 (0.00405)	-0.0366*** (0.00901)	0.133*** (0.0452)	0.138** (0.0566)	0.00371 (0.00270)	0.0383*** (0.0114)
1942			-0.00710 (0.00434)	-0.0443*** (0.00872)	0.0402*** (0.0135)	0.0469*** (0.0110)	0.000906 (0.00184)	0.0241** (0.0116)
1944	0.00843** (0.00388)	0.0116* (0.00638)	0.000380 (0.0125)	-0.000795 (0.0119)	0.0993** (0.0450)	0.0358*** (0.00946)	0.00407 (0.00374)	0.0200* (0.0112)
1946			-0.00210 (0.0105)	0.0320*** (0.00976)	0.0911 (0.0557)	0.0642 (0.0540)	0.00590 (0.00391)	0.0328** (0.0138)

1948	0.00130 (0.00334)	0.00821* (0.00476)	-0.00922** (0.00419)	0.0102 (0.00971)	0.0256 (0.0171)	0.0416*** (0.0137)	0.00752** (0.00311)	0.0247** (0.0110)
1950			-0.0222*** (0.00788)	0.0265** (0.0113)	0.149*** (0.0480)	0.0840*** (0.0100)	0.00205 (0.00283)	0.0442*** (0.0158)
1952	0.00339 (0.00353)	0.00921** (0.00469)	-0.00387 (0.00728)	0.0107 (0.0165)	0.180*** (0.0643)	0.182*** (0.0613)	0.0122* (0.00683)	0.0573*** (0.0181)
1954			-0.0143 (0.0159)	0.0115 (0.0155)	0.0273** (0.0108)	0.0544*** (0.00829)	0.00226 (0.00323)	0.0148 (0.0138)
1956	0.00347 (0.00358)	0.0145*** (0.00524)	-0.0118 (0.0172)	-0.0184 (0.0153)	0.0817 (0.0507)	0.0566*** (0.00971)	-0.00102 (0.00321)	0.0309* (0.0166)
1958			-0.00684 (0.0162)	-0.0129 (0.0316)	0.165*** (0.0458)	0.142*** (0.0470)	0.00176 (0.00277)	0.00945 (0.0137)
1960	0.00324 (0.00435)	0.00932** (0.00474)	-0.00226 (0.0177)	-0.0197 (0.0295)	0.0247*** (0.00948)	0.0496*** (0.00826)	0.00462 (0.00411)	0.0278* (0.0150)
1962			-0.00415 (0.0163)	0.0348 (0.0280)	0.113*** (0.0384)	0.0468*** (0.00950)	0.00149 (0.00443)	0.0308* (0.0178)
1964	0.00409 (0.00353)	0.0290*** (0.00539)	0.00384 (0.00840)	0.0360 (0.0234)	0.219*** (0.0534)	0.211*** (0.0519)	0.00582* (0.00337)	-0.0123 (0.0291)
1966			-0.00883 (0.0144)	-0.0210 (0.0258)	0.0399*** (0.0149)	0.0620*** (0.0125)	0.000356 (0.00309)	0.0160 (0.0173)
1968	0.00311 (0.00373)	0.0171*** (0.00501)	0.0158 (0.0127)	-0.0284 (0.0239)	0.0949 (0.0641)	0.0568*** (0.0118)	0.000649 (0.00389)	-0.0241 (0.0393)
N	5,525		9,536		5,166		8,537	
R Squared	0.810		0.505		0.805		0.827	

Note: Columns 1 and 2 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text, with B_c as the New Deal Mortgages Guaranteed, for the Presidential elections panel. Columns 3 and 4 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text, with B_c as the as the New Deal Mortgages Guaranteed, for the Congressional elections panel. Columns 5 and 6 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text with B_c as the as the New Deal Mortgages Guaranteed, for the Senatorial elections panel. Columns 7 and 8 reports the estimates for β_{4t} and β_{5t} respectively from equation (3) in the text for the Gubernatorial elections panel with B_c as the New Deal Mortgages Guaranteed. Reported in parentheses are robust standard errors clustered by county. The New Deal expenditure values have been standardized.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Appendix D: Robustness Checks

Table 16: Robustness Check - Only State by Year Fixed Effect

Robustness – Only State by Year Fixed Effects								
Year	Presidential		Congressional		Senatorial		Gubernatorial	
	Medium Erosion (1)	High Erosion (2)	Medium Erosion (3)	High Erosion (4)	Medium Erosion (5)	High Erosion (6)	Medium Erosion (7)	High Erosion (8)
1940	0.0425*** (0.0153)	0.0386*** (0.0148)	0.0838*** (0.0204)	0.0803*** (0.0262)	-0.00447 (0.0556)	-0.00283 (0.0434)	0.0378** (0.0153)	0.0625*** (0.0172)
1942			0.0298 (0.0202)	0.0187 (0.0295)	0.0494*** (0.0135)	0.0680*** (0.0152)	0.0382*** (0.00990)	0.0380*** (0.0141)
1944	0.0550*** (0.0188)	0.0412** (0.0165)	0.0407 (0.0250)	0.0442* (0.0238)	0.103*** (0.0183)	0.107*** (0.0206)	0.0418** (0.0193)	0.0506*** (0.0185)

1946			0.0154 (0.0254)	0.0391 (0.0271)	-0.0574 (0.0502)	-0.0416 (0.0429)	0.0299** (0.0151)	0.0523*** (0.0180)
1948	0.0265 (0.0216)	0.0170 (0.0183)	0.0207 (0.0292)	0.00923 (0.0283)	0.0584*** (0.0185)	0.0692*** (0.0192)	0.0182 (0.0148)	0.0306** (0.0149)
1950			-0.00811 (0.0401)	-0.00859 (0.0334)	0.0873*** (0.0165)	0.0672*** (0.0200)	0.0138 (0.0159)	0.0219 (0.0192)
1952	0.0192 (0.0168)	-0.00390 (0.0170)	0.0199 (0.0332)	0.0217 (0.0409)	-0.0434 (0.0432)	-0.0324 (0.0379)	-0.0127 (0.0205)	0.00996 (0.0216)
1954			-0.0185 (0.0574)	-0.109** (0.0494)	0.0480*** (0.0164)	0.0447** (0.0174)	0.0193 (0.0158)	0.0236 (0.0179)
1956	0.0186 (0.0160)	0.00107 (0.0160)	-0.0190 (0.0595)	-0.0252 (0.0430)	0.0809*** (0.0221)	0.0723*** (0.0198)	-0.00401 (0.0261)	0.0199 (0.0226)
1958			0.0141 (0.0458)	-0.00860 (0.0396)	-0.0101 (0.0270)	0.0118 (0.0389)	0.0201 (0.0165)	0.0280 (0.0189)
1960	0.0358*** (0.0138)	0.0200 (0.0160)	-0.0245 (0.0548)	-0.00566 (0.0424)	0.0387** (0.0188)	0.0518*** (0.0162)	0.00918 (0.0172)	0.0166 (0.0233)
1962			-0.0138 (0.0375)	-0.0819 (0.0509)	0.0822*** (0.0216)	0.0808*** (0.0185)	0.0113 (0.0196)	0.0329 (0.0237)
1964	0.00645 (0.0133)	-0.00544 (0.0177)	0.0143 (0.0294)	-0.0876* (0.0452)	-0.0330 (0.0231)	-0.0364 (0.0336)	0.0178 (0.0215)	0.0325 (0.0251)
1966			0.00278 (0.0398)	0.0110 (0.0394)	0.0508*** (0.0138)	0.0513*** (0.0157)	-0.000374 (0.0202)	0.0221 (0.0235)
1968	0.0306** (0.0154)	0.00630 (0.0180)	-0.0187 (0.0360)	-0.00938 (0.0379)	0.0870*** (0.0211)	0.0861*** (0.0209)	-0.00606 (0.0367)	0.0196 (0.0306)
N	5,549		9,581		5,196		8,576	
R	0.692		0.249		0.650		0.729	

Squared

Note: Columns 1 and 2 report the estimates for β_{1t} and β_{2t} respectively from equation (1) – with the change that there is only the state by year fixed effects and no covariates (either agricultural or socioeconomic) - in the text for the Presidential elections panel. Columns 3 and 4 report the same estimates for β_{1t} and β_{2t} from the Congressional elections panel. Columns 5 and 6 for the Senatorial elections panel. Finally, Column 7 and 8 reports the same estimates for the Gubernatorial elections panel. Reported in parentheses are robust standard errors clustered by county.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 17: Robustness Check: No Socioeconomic Covariates

Robustness - No Socioeconomic Covariates (Only agricultural covariates)								
Year	Presidential		Congressional		Senatorial		Gubernatorial	
	Medium Erosion (1)	High Erosion (2)	Medium Erosion (3)	High Erosion (4)	Medium Erosion (5)	High Erosion (6)	Medium Erosion (7)	High Erosion (8)
1940	0.0183 (0.0136)	0.0126 (0.0165)	0.0929*** (0.0182)	0.116*** (0.0264)	0.0832*** (0.0306)	0.103** (0.0502)	0.0212* (0.0127)	0.0519*** (0.0168)
1942			0.0534** (0.0224)	0.0498* (0.0300)	0.0351** (0.0139)	0.0595*** (0.0175)	0.0274*** (0.00783)	0.0315** (0.0151)
1944	0.0340** (0.0158)	0.0203 (0.0182)	0.0430* (0.0238)	0.0782*** (0.0256)	0.0464*** (0.0159)	0.0691*** (0.0186)	0.0308** (0.0139)	0.0440*** (0.0168)
1946			0.0239 (0.0249)	0.0903*** (0.0288)	0.00198 (0.0362)	-0.00903 (0.0501)	0.0197* (0.0118)	0.0498*** (0.0190)
1948	0.00696 (0.0134)	0.00938 (0.0170)	0.0481** (0.0233)	0.0585** (0.0266)	0.0380*** (0.0139)	0.0698*** (0.0168)	0.00603 (0.0104)	0.0311* (0.0160)
1950			0.0143 (0.0373)	0.0589 (0.0360)	0.0576*** (0.0180)	0.0718*** (0.0237)	0.00770 (0.0121)	0.0407** (0.0198)

1952	0.00463 (0.0122)	0.0192 (0.0159)	0.0547*** (0.0210)	0.0799** (0.0335)	0.0494 (0.0336)	0.0586 (0.0455)	-0.00116 (0.0151)	0.0308 (0.0255)
1954			-0.0111 (0.0467)	-0.0374 (0.0459)	0.0362*** (0.0123)	0.0627*** (0.0165)	0.0213** (0.00987)	0.0398** (0.0161)
1956	0.00631 (0.0128)	0.00600 (0.0169)	-0.0196 (0.0459)	0.0115 (0.0399)	0.0339** (0.0161)	0.0599*** (0.0199)	0.00188 (0.0145)	0.0279 (0.0205)
1958			0.00254 (0.0393)	0.0328 (0.0412)	0.0149 (0.0275)	0.00997 (0.0445)	0.0194* (0.0117)	0.0415** (0.0174)
1960	0.0161 (0.0138)	0.0291* (0.0171)	-0.0122 (0.0383)	0.0472 (0.0403)	0.0323** (0.0136)	0.0630*** (0.0167)	0.00544 (0.0133)	0.0240 (0.0239)
1962			-0.0208 (0.0334)	-0.0177 (0.0485)	0.0294* (0.0164)	0.0608*** (0.0179)	0.00561 (0.0168)	0.0458* (0.0247)
1964	-0.00785 (0.0140)	0.00101 (0.0199)	0.0328 (0.0243)	-0.0226 (0.0422)	-0.00593 (0.0333)	-0.0136 (0.0491)	0.0131 (0.0163)	0.0462** (0.0222)
1966			-0.00577 (0.0391)	0.0779* (0.0420)	0.0415*** (0.0135)	0.0642*** (0.0184)	0.0120 (0.0131)	0.0453** (0.0223)
1968	0.0112 (0.0137)	0.0235 (0.0180)	0.00997 (0.0271)	0.0572 (0.0386)	0.0337* (0.0178)	0.0604*** (0.0217)	0.0224 (0.0238)	0.0792*** (0.0285)
N	5,549		9,581		5,196		8,576	
R squared	0.757		0.372		0.757		0.789	

Note: Columns 1 and 2 report the estimates for β_{1t} and β_{2t} respectively from equation (1) – with the change that the set of covariates only contains socioeconomic covariates and no agricultural covariates - in the text for the Presidential elections panel. Columns 3 and 4 report the same estimates for β_{1t} and β_{2t} from the Congressional elections panel. Columns 5 and 6 for the Senatorial elections panel. Finally, Column 7 and 8 reports the same estimates for the Gubernatorial elections panel. Reported in parentheses are robust standard errors clustered by county.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Table 18: Robustness Check - Lagged Agricultural Covariates (No socioeconomic covariates)

Robustness - Lagged Agricultural Covariates (No socioeconomic covariates)		
Year	Presidential	
	Compared to Low Erosion	
	Medium Erosion (1)	High Erosion (2)
1940	0.0181 (0.0148)	0.00640 (0.0175)
1944	0.0204* (0.0123)	0.0102 (0.0154)
1948	0.00466 (0.0130)	0.00178 (0.0159)
1952	0.00379 (0.0123)	0.00256 (0.0141)
1956	0.000987 (0.0126)	-0.0104 (0.0157)
1960	0.0173 (0.0117)	0.0109 (0.0146)
1964	-0.00668 (0.0127)	-0.00633 (0.0173)
1968	0.0124 (0.0122)	0.0120 (0.0159)
N	5,549	
R Squared	0.799	

Note: Columns 1 and 2 report the estimates for β_{1t} and β_{2t} respectively from equation (1) in the text – with the change that the lagged agricultural covariates are added to the model and no socioeconomic covariates are used - for the Presidential elections panel. Reported in

parentheses are robust standard errors clustered by county.

- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%

Table 19: Robustness Check - Weighted by Farmland

Robustness – Weighted by Farmland (Instead of population)								
Year	Presidential		Congressional		Senatorial		Gubernatorial	
	Compared to Low Erosion	Medium Erosion (1)	High Erosion (2)	Medium Erosion (3)	High Erosion (4)	Medium Erosion (5)	High Erosion (6)	Medium Erosion (7)
1940	0.0117 (0.0116)	0.00727 (0.0137)	0.116*** (0.0188)	0.123*** (0.0255)	0.0461 (0.0330)	0.00932 (0.0502)	0.0116 (0.00933)	0.0152 (0.0127)
1942			0.0524*** (0.0163)	0.0403* (0.0239)	0.00621 (0.0137)	0.00738 (0.0161)	0.0120 (0.0111)	-0.00131 (0.0133)
1944	0.0165 (0.0108)	0.0104 (0.0131)	0.0741*** (0.0143)	0.0640*** (0.0194)	0.0128 (0.0139)	0.0512*** (0.0162)	0.0220** (0.00941)	0.0231* (0.0126)
1946			0.0391** (0.0171)	0.0478** (0.0221)	0.0376 (0.0290)	0.00987 (0.0429)	0.00556 (0.0103)	0.0136 (0.0134)
1948	0.0149 (0.0109)	0.00802 (0.0130)	0.0633*** (0.0140)	0.0578*** (0.0188)	0.0365*** (0.0140)	0.0480*** (0.0141)	0.000363 (0.0117)	0.0151 (0.0128)
1950			0.0178 (0.0209)	0.0350 (0.0226)	0.00804 (0.0130)	-0.00383 (0.0153)	0.00662 (0.0110)	0.0148 (0.0136)
1952	0.00126 (0.0109)	-0.00720 (0.0127)	0.0725*** (0.0154)	0.0553** (0.0228)	0.0405 (0.0291)	0.00460 (0.0372)	-0.0148 (0.0131)	-0.0132 (0.0164)
1954			0.0253 (0.0209)	0.00775 (0.0238)	0.0348*** (0.0116)	0.0292** (0.0133)	0.00983 (0.00982)	0.0163 (0.0126)
1956	0.0129 (0.0113)	-0.00691 (0.0133)	0.0356** (0.0167)	0.0134 (0.0209)	0.00712 (0.0138)	0.0206 (0.0161)	-0.00202 (0.0112)	0.0104 (0.0145)
1958			0.0566*** (0.0177)	0.0445* (0.0238)	0.0318 (0.0254)	-0.00275 (0.0353)	0.0177 (0.0116)	0.0156 (0.0135)
1960	0.00913 (0.0120)	-0.00478 (0.0140)	0.0484*** (0.0172)	0.0660*** (0.0235)	0.0236* (0.0123)	0.0209 (0.0140)	0.0102 (0.0110)	0.0127 (0.0141)
1962			0.00496 (0.0199)	0.00490 (0.0274)	0.0140 (0.0142)	0.0302* (0.0161)	0.00911 (0.0143)	0.0108 (0.0171)
1964	-0.0180 (0.0143)	-0.0379** (0.0160)	0.0209 (0.0197)	0.00353 (0.0270)	0.00724 (0.0289)	-0.00730 (0.0399)	0.00281 (0.0135)	0.0142 (0.0165)
1966			0.00316 (0.0241)	0.0595** (0.0266)	0.0168 (0.0133)	0.0106 (0.0154)	-0.0115 (0.0116)	-0.00402 (0.0156)
1968	-0.000468 (0.0129)	-0.0121 (0.0149)	-0.00520 (0.0257)	0.0198 (0.0288)	0.0113 (0.0148)	0.0290* (0.0174)	0.0293* (0.0161)	0.0464** (0.0207)
N	5,525		9,536		5,166		8,537	
R Squared	0.787		0.469		0.810		0.805	

Note: Columns 1 and 2 report the estimates for β_{1t} and β_{2t} respectively from equation (1) – with the change that the equation is now weighted by farmland at 1930 in instead of population at 1930 - in the text for the Presidential elections panel. Columns 3 and 4 report the same estimates for β_{1t} and β_{2t} from the Congressional elections panel. Columns 5 and 6 for the Senatorial elections panel. Finally, Column 7 and 8 reports the same estimates for the Gubernatorial elections panel. Reported in parentheses are robust standard errors clustered by county.

- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%

Table 20: Robustness Check: No Regression Weights

Robustness – No Regression Weights								
Year	Presidential		Congressional		Senatorial		Gubernatorial	
Compared to Low Erosion								
	Medium Erosion (1)	High Erosion (2)	Medium Erosion (3)	High Erosion (4)	Medium Erosion (5)	High Erosion (6)	Medium Erosion (7)	High Erosion (8)
1940	0.0176 (0.0112)	0.0107 (0.0122)	0.0996*** (0.0173)	0.123*** (0.0251)	0.0518* (0.0274)	0.0184 (0.0440)	0.0148 (0.00934)	0.0163 (0.0118)
1942			0.0494*** (0.0161)	0.0341 (0.0238)	0.0186 (0.0125)	0.0176 (0.0150)	0.0126 (0.00864)	0.00545 (0.0112)
1944	0.0190* (0.0102)	0.0116 (0.0115)	0.0677*** (0.0143)	0.0629*** (0.0190)	0.0222 (0.0139)	0.0499*** (0.0168)	0.0225** (0.00893)	0.0231* (0.0120)
1946			0.0339** (0.0158)	0.0518** (0.0201)	0.00436 (0.0245)	-0.0211 (0.0365)	0.00724 (0.00949)	0.0194 (0.0131)
1948	0.0103 (0.0107)	0.00339 (0.0118)	0.0567*** (0.0141)	0.0485*** (0.0185)	0.0164 (0.0120)	0.0328** (0.0134)	0.00608 (0.0105)	0.0250** (0.0127)
1950			0.0166 (0.0193)	0.0382* (0.0207)	0.0171 (0.0124)	0.00708 (0.0158)	0.00739 (0.0107)	0.0277** (0.0131)
1952	-0.00367 (0.00989)	-0.00418 (0.0112)	0.0684*** (0.0163)	0.0481** (0.0224)	0.0245 (0.0263)	-0.00695 (0.0377)	-0.0161 (0.0127)	-0.00421 (0.0158)
1954			0.0220 (0.0196)	0.00103 (0.0222)	0.0162 (0.0105)	0.0133 (0.0127)	0.0122 (0.00951)	0.0168 (0.0120)
1956	0.00389 (0.0108)	-0.0102 (0.0122)	0.0201 (0.0163)	-0.00567 (0.0196)	0.00606 (0.0138)	0.0162 (0.0169)	-0.00306 (0.0107)	0.00823 (0.0140)
1958			0.0431** (0.0178)	0.0395* (0.0229)	0.00893 (0.0234)	-0.0216 (0.0350)	0.0112 (0.0109)	0.0184 (0.0128)
1960	0.00666 (0.0112)	0.00127 (0.0126)	0.0306* (0.0175)	0.0544** (0.0235)	0.00550 (0.0110)	0.00480 (0.0130)	0.00405 (0.0106)	0.00769 (0.0132)
1962			-0.00310 (0.0195)	0.00570 (0.0271)	0.0150 (0.0140)	0.0247 (0.0165)	0.00356 (0.0133)	0.00843 (0.0156)
1964	-0.0144 (0.0124)	-0.0202 (0.0137)	0.00968 (0.0197)	4.75e-05 (0.0273)	-0.00555 (0.0258)	-0.0328 (0.0378)	0.000510 (0.0131)	0.0128 (0.0155)
1966			0.00435 (0.0228)	0.0647** (0.0250)	-0.00436 (0.0118)	-0.00512 (0.0145)	-0.00789 (0.0116)	0.00689 (0.0152)
1968			-0.00713 (0.0236)	0.0247 (0.0263)	0.0140 (0.0149)	0.0250 (0.0178)	0.0261* (0.0156)	0.0471** (0.0197)
N	5,525		9,536		5,166		8,537	
R Squared	0.776		0.463		0.774		0.803	

Note: Columns 1 and 2 report the estimates for β_{1t} and β_{2t} respectively from equation (1) – with the change that there are no equation weights - in the text for the Presidential elections panel. Columns 3 and 4 report the same estimates for β_{1t} and β_{2t} from the Congressional elections panel. Columns 5 and 6 for the Senatorial elections panel. Finally, Column 7 and 8 reports the same estimates for the Gubernatorial elections panel. Reported in parentheses are robust standard errors clustered by county.

- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%

Table 21: Robustness Check - Adjusting for only 1928 Election Data

Robustness – Subtracting only 1928 election data				
Year	Presidential	Congressional	Senatorial	Gubernatorial

Compared to Low Erosion

	Medium Erosion (1)	High Erosion (2)	Medium Erosion (3)	High Erosion (4)	Medium Erosion (5)	High Erosion (6)	Medium Erosion (7)	High Erosion (8)
1940	0.0120 (0.0177)	0.0113 (0.0213)	0.0613** (0.0283)	0.0729* (0.0413)	0.0236 (0.0165)	0.00417 (0.0373)	0.00627 (0.0153)	0.0193 (0.0270)
1942			0.0326 (0.0332)	0.00460 (0.0500)	0.0426*** (0.0129)	0.0668*** (0.0221)	0.0225 (0.0138)	0.0152 (0.0261)
1944	0.0177 (0.0202)	0.0150 (0.0240)	0.0300 (0.0281)	0.0377 (0.0374)	0.0179 (0.0163)	0.0604*** (0.0199)	0.0116 (0.0166)	0.0109 (0.0286)
1946			0.00871 (0.0287)	0.0471 (0.0370)	0.00608 (0.0224)	-0.0838* (0.0468)	0.00124 (0.0166)	0.0202 (0.0313)
1948	-0.000982 (0.0166)	0.00495 (0.0205)	0.0316 (0.0318)	0.0268 (0.0396)	0.00340 (0.0205)	0.0424 (0.0262)	-0.00372 (0.0167)	0.0107 (0.0258)
1950			-0.00207 (0.0379)	0.0237 (0.0440)	0.0292 (0.0179)	0.0461** (0.0229)	-0.00531 (0.0180)	0.0149 (0.0303)
1952	-0.00811 (0.0141)	0.000483 (0.0177)	0.0730*** (0.0264)	0.0664* (0.0395)	-0.0186 (0.0253)	-0.0967* (0.0503)	-0.0184 (0.0213)	-0.00200 (0.0355)
1954			-0.0429 (0.0451)	-0.0893* (0.0504)	0.0217 (0.0133)	0.0429** (0.0205)	0.0145 (0.0160)	0.0184 (0.0273)
1956	0.00651 (0.0152)	0.00242 (0.0183)	-0.0391 (0.0456)	-0.0484 (0.0481)	0.00216 (0.0165)	0.0407* (0.0219)	-0.0110 (0.0203)	0.000504 (0.0313)
1958			-0.0231 (0.0409)	-0.0169 (0.0494)	-0.0227 (0.0205)	-0.0582 (0.0459)	0.00631 (0.0178)	0.0148 (0.0288)
1960	0.00635 (0.0128)	0.0127 (0.0158)	-0.0170 (0.0393)	0.0133 (0.0495)	0.000809 (0.0160)	0.0374 (0.0245)	-0.00849 (0.0180)	-0.00224 (0.0335)
1962			-0.0333 (0.0350)	-0.0368 (0.0530)	-0.00178 (0.0170)	0.0397* (0.0233)	0.00181 (0.0194)	0.0312 (0.0332)
1964	-0.00814 (0.0149)	-0.00309 (0.0201)	0.00527 (0.0316)	-0.0466 (0.0493)	-0.0232 (0.0222)	-0.0459 (0.0458)	0.0141 (0.0195)	0.0297 (0.0309)
1966			-0.0444 (0.0367)	0.0254 (0.0475)	0.0225 (0.0159)	0.0461* (0.0247)	0.00596 (0.0177)	0.0307 (0.0327)
1968	0.00236 (0.0143)	0.00922 (0.0188)	-0.0195 (0.0334)	0.0121 (0.0469)	0.00753 (0.0188)	0.0413* (0.0250)	0.0280 (0.0243)	0.0679* (0.0351)
N	5,525		9,832		6,809		8,747	
R Squared	0.748		0.406		0.786		0.774	

Note: Columns 1 and 2 report the estimates for β_{1t} and β_{2t} respectively from equation (1) – with the change that Y_{1920s} which is the average of the election returns between 1920 and 1930 is substituted by using only the vote share of 1928- in the text for the Presidential elections panel. Columns 3 and 4 report the same estimates for β_{1t} and β_{2t} from the Congressional elections panel. Columns 5 and 6 for the Senatorial elections panel. Finally, column 7 and 8 reports the same estimates for the Gubernatorial elections panel. Reported in parentheses are robust standard errors clustered by county.

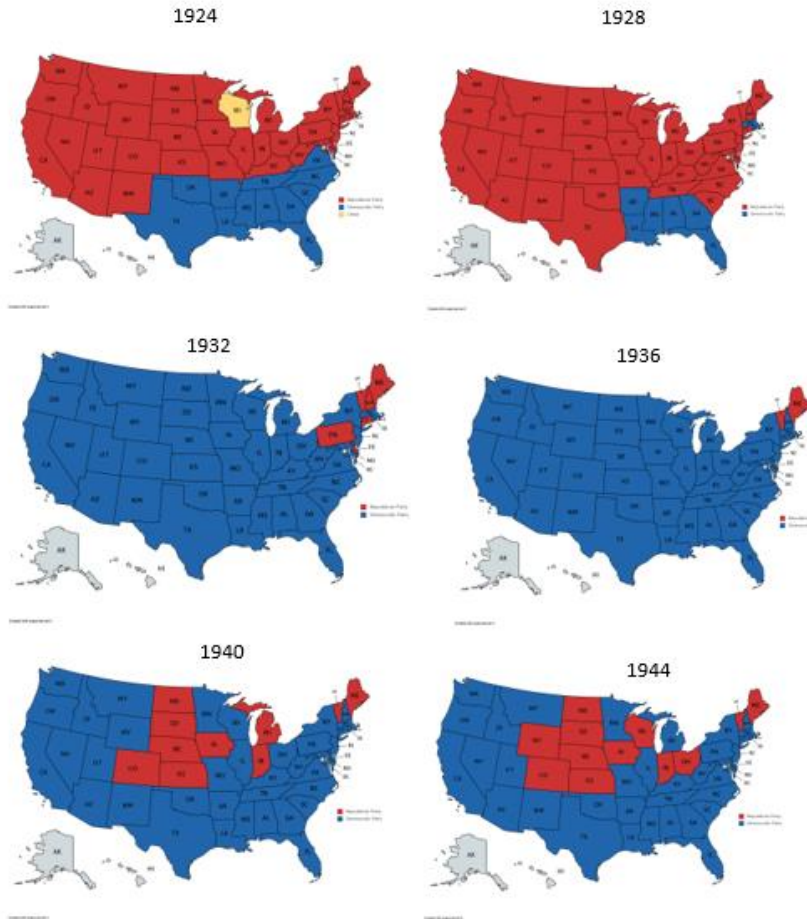
* Significant at 10%

** Significant at 5%

*** Significant at 1%

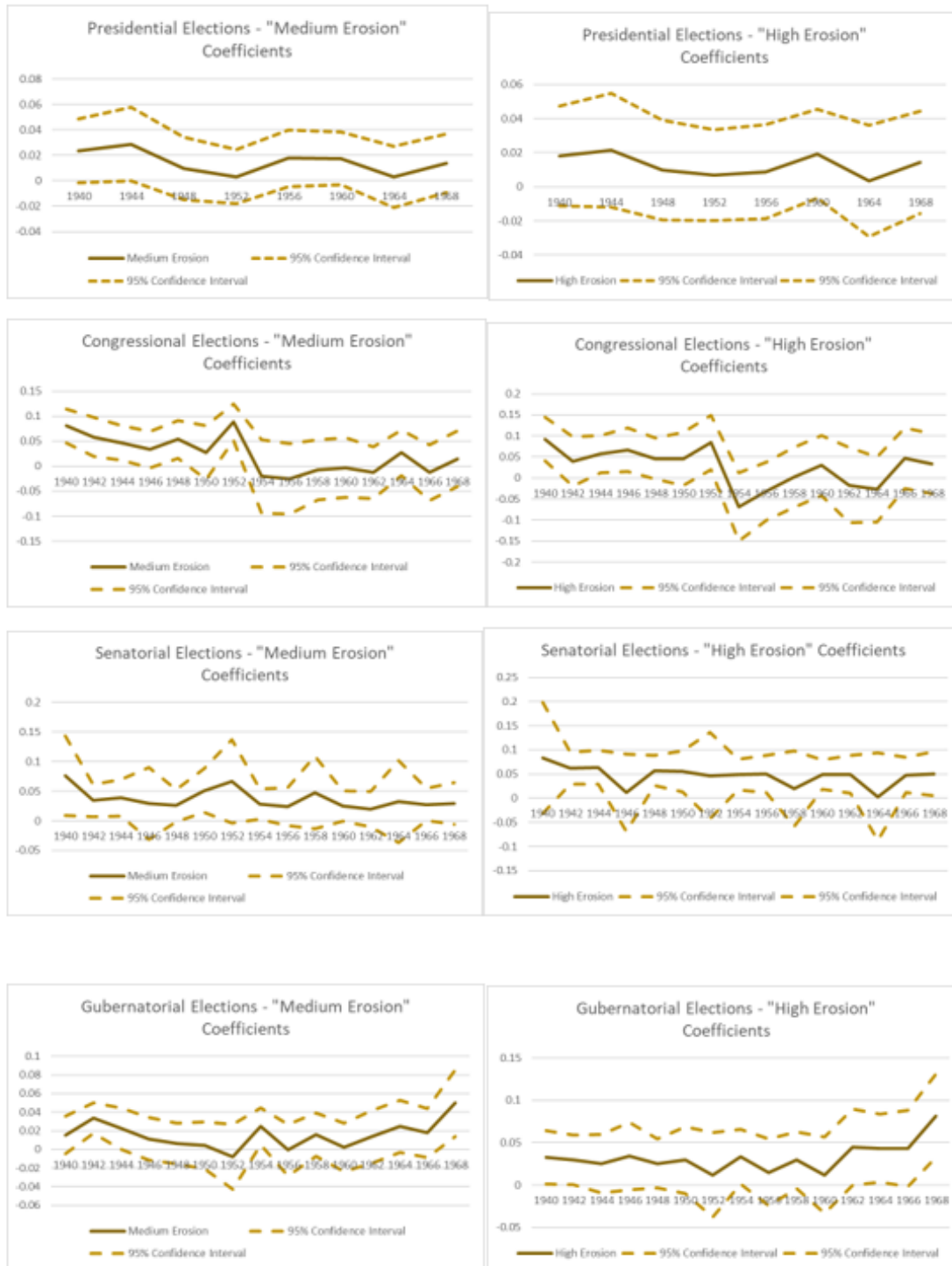
Appendix E: Figures and Diagrams

Figure 1: Presidential Election Maps between 1924 to 1944



Note: The figure shows the presidential election maps between the years 1924 to 1944. The blue shade represents the states won by the Democratic party and the Red shade represents the states won by the Republican party. The yellow shade represents other parties.

Figure 2: Visual Representation of Coefficients from Table-1



Note: The figure portrays the coefficient values from Table-1 in the text. The lines labeled "medium erosion" and "high erosion" represent the coefficient values from the table. Approximate 95% confidence intervals are also calculated and portrayed.