A GEOGRAPHICAL STUDY OF THE VARYING IMPACT OF DEMOMINATIONAL AFFILIATION AND POVERTY ON PRESIDENTIAL VOTING IN KANSAS: 1972 TO 2012

By

JOEL DAVID BARROW

Bachelor of Business Administration

University of Oklahoma

Norman, Oklahoma

1993

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
May, 2014

A GEOGRAPHICAL STUDY OF THE VARYING IMPACT OF DEMOMINATIONAL AFFILIATION AND POVERTY ON PRESIDENTIAL VOTING IN KANSAS: 1972 TO 2012

Thesis Approved:

Dr. Allen Finchum

Thesis Adviser

Dr. Brad Bays

Dr. Reuel Hanks

Name: JOEL DAVID BARROW

Date of Degree: MAY, 2014

Title of Study: A GEOGRAPHICAL STUDY OF THE VARYING IMPACT OF DEMOMINATIONAL AFFILIATION AND POVERTY ON PRESIDENTIAL VOTING IN KANSAS: 1972 TO 2012

Major Field: GEOGRAPHY

Abstract: This empirical study examines the claim made by political analysts such as Thomas Frank that, in Kansas, residents' presidential party affiliations are influenced more heavily by social issues than economic issues. A popular perception, which came to the forefront during the 2004 election cycle, is that lower income rural voters may be changing party affiliation due to identification with the Republican Party's stance on social issues. In this study, multiple regression analysis is utilized to evaluate the predictive force of both religious affiliation and poverty on voting habits in Kansas during Presidential elections in five survey years: 1972—2012. The data are grouped into four categories for each of the five survey years: liberal Protestant adherence, conservative Protestant adherence, urban county residence, and rural county residence. The independent variables are percent liberal/conservative Protestant adherence and percent of electorate at or below poverty level. The dependent variable is Republican presidential voting. The regression analysis results show that the conservative Protestant adherence data representing rural counties were the only consistent statistically significant predictors of Republican voting. The analysis indicates support for the contention that rural conservative Protestant adherents were influenced by social factors. The other variables were not significant predictors of Republican voting in any of the survey years, with the exception of the poverty data from the 1992 rural/liberal Protestant adherence regression. However, the results provide limited support for the contention that the influence of social issues, on Republican voting behavior, was a rural (versus urban or rural/liberal) conservative phenomenon.

TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

1.1 Statement of the Problem

This study examines empirically the claim that residents of Kansas' presidential party affiliations are influenced more heavily by social issues than economic issues. Historical voting trends would generally predict that low-wage earning rural Americans with an eroding economic base would be a Democratic mainstay (Archer and Taylor 1981). However, a popular perception in a recent political debate, i.e. 2004, is that low-income voters change party affiliation due to identification with the Republican Party's stance on social issues. Thomas Frank asserts in his book, *What's the Matter with Kansas?,* that by focusing on social issues, low-income rural Kansans are ultimately voting against their economic self-interests (Frank 2004). If Frank is correct there should be tangible evidence to support his claims. The attempt to determine that the Kansas electorate votes against its economic interest is a highly subjective endeavor at best and is not the purpose of this research. The goal is to perform a series of multiple regressions to evaluate the predictive force that religious affiliation and poverty have on

voting. The hypothesis being tested is that if Frank is correct, the ability of poverty, an economic indicator, to predict Republican voting behavior will decrease over the course of the study period, while the predictive power of conservative Protestant church membership, a social issues indicator, will increase over the same period.

Protestant denominations in the United States are many and maintain vast differences in belief. The continuum of social values held within Protestant church membership causes some Protestants to value economic policies in one political party and others to value social policies in another (Busch 2011). Conservative Protestant congregations are linked with the nation's growing Christian Right and are often labeled as social conservatives (Banwart 2013). Social conservatives are characterized by their policy stance on social issues (Busch 2011). Since the late 1970s, many conservative Protestant congregations have maintained or grown in membership, while traditionally robust liberal Protestant churches have waned in membership and influence (Smith and Kim 2005; Ellingson 2007). Therefore, in an effort to isolate Protestant social conservatives, and to test the influence of church membership on presidential voting, the church data (the first independent variable) is separated into two categories: liberal and conservative. Frank's hypothesis would require data to show that the impact of liberal Protestant membership is less substantial than conservative Protestant membership on Republican voting.

For the second independent variable, the percentage of poverty in a given county is employed as an indicator of economic influence on voting behavior (U.S.

Census Bureau 2012). The coefficient of determination of poverty is expected to decrease over the study period. The rationale is that as the social conservative movement gains momentum, economic issues become less important to voters. Furthermore, a central point of Frank's book is that the social conservative movement's impact on voting is primarily a rural phenomenon. As a result, there is also a rural versus urban component to this study. This study will examine two sets of counties: those with a percentage of urban population below 20 percent, and counties with a percentage of urban population above 80 percent (U.S. Census Bureau 2010). Once again, if Frank is correct, it is expected that the coefficient of determination for the rural county data will be greater than that for the urban counties.

1.2 Historical Context

Protestant voters have a significant influence on American politics. According to a 2003 Harris Poll, in the United States approximately 90 percent of adults state a belief in God, and 84 percent of the voting age population self-identify as Christian (Taylor 2003). Religious belief has had a significant impact on voting decisions throughout American history. A vivid example of this influence took place in the 1980s, when many white evangelicals from the Democratic Party (predominately from southern states) changed affiliation and joined the rising Republican juggernaut of the Reagan Revolution (Smidt and Kellstedt 1992; Bartels 2006). This political/religious shift, with its roots in evangelical Protestant Christianity and conservative Catholicism, is often referred to as the Christian Right. U.S. Protestantism evolves and remains an important voting bloc in

an increasingly polarized electorate. The social conservatives of the Christian Right in partnership with traditional fiscally conservative Republicans formed a powerful and successful political coalition (Hart 2001).

In the 1970s, the Christian Right coalesced out of the ineffective presidency of America's first evangelical president, Jimmy Carter (Hart 2001; Busch 2011). While it is true that conservative Christians became dissatisfied with the Carter administration, which embraced a more liberal economic and social agenda than expected (Regnerus et al. 1999), what is of importance is that the Carter campaign was the first in modern history to win the presidency by aligning with Christian Evangelicals (Chomsky 2006). However, successive movements like the Moral Majority and the Christian Coalition molded it into what it is today.

Both disenchanted and astute to the political climate of the time, the Reverend Jerry Falwell became the founder and figurehead of the Moral Majority, a conservative Christian group intent on impacting the electoral process with a socially conservative agenda. The Moral Majority lobbied for prayer and the teaching of creationism in public schools and opposed issues such as increased rights for women, abortion, and gay rights (Banwart 2013). The Moral Majority had a major political impact in the 1980s before fracturing due to various reasons, most notably the public disgraces of televangelists Jimmy Swaggart and Jim Bakker. The Moral Majority was later supplanted by Pat Robertson's Christian Coalition of America in the 1990s (Woodberry and Smith 1998).

The Christian Coalition is a political advocacy group made up of Christian fundamentalists, evangelicals, Pentecostals, Roman Catholics and members of mainline Protestant churches. According to their web site, the Christian Coalition of America "offers people of faith the vehicle to be actively involved in shaping their government—from the County Courthouse [*sic*] to the halls of Congress" (Christian Coalition of America 2013). The group is focused on mobilizing conservative Christian voters. In the lead-up to the 2000 presidential election the organization distributed over 70 million voter guides ("Our Mission and Vision" 2006).

Another group that is often associated with the Christian Right is the charismatic movement, which began on the west coast of North America in the early 1960s. Dennis Bennett, an American Episcopalian, is often cited as the movement's seminal influence. Charismatics are most notable for their belief in, and experience of, direct manifestations of the Holy Spirit, such as speaking in tongues and faith healing (Hughes 2006). A central goal of the movement is to create new religious forms, and restructure traditions, so they are acceptable and relevant to contemporary Christians who are dissatisfied with traditional religion (Thumma 2006). One of the most important outcomes of the charismatic phenomena is the rise of non-denominational churches (Smith and Kim 2005). Non-denominational and associated megachurches are politically active and increasingly influential in the polity that makes up the Christian Right (Warf and Winsberg 2010).

Charismatics, fundamentalists, evangelicals, and Protestants, along with other conservative Christian groups, are influential in shaping the Christian Right's political agenda. The most prevalent issues of the Christian Right include, but are not limited to, school prayer, anti-homosexuality, anti-abortion, promotion of creationism and intelligent design, and the advancement of public displays of Christian morality, e.g. the 10 commandments on a courthouse square (Bainwart 2013; Busch 2011). The Christian Right's purpose is to defend traditional Christian values in all areas of life (Christian Coalition of America 2013).

Outlined in the synopsis below, Grant Wacker identifies four major doctrinal themes that are associated with the Christian Right (Wacker 2000):

- The belief in moral absolutes. This is illustrated by the movements support for traditional gender roles, and the sanctity of unborn life.
- That metaphysics, morals, politics, and customs are extremely influential in shaping our daily lives, and as a result, they must be based on traditional Biblical values.
- That the government's proper role is to cultivate virtue, but not to interfere with the natural operations of the marketplace or the workplace.
- That the success of the United States is due to our Judeo-Christian adherence, and that any movement away from America's Christian past is a corruption of the system.

The social conservatives of the Christian Right, in political alliance with traditional Republican conservatives, have been very successful in contemporary U.S. presidential politics. The traditional secular conservative platform of the Republican Party was largely based on the size and role of government, as well as, economic issues, e.g. fiscal accountability, deficit reduction, taxes, national defense, etc. However, by the 1980s the Republican platform shifted its emphasis to include social issues (Busch 2012). Therefore, the spatial implications of the influence of Christian conservatives on the electoral process are a relevant and intriguing topic of geographic research.

1.3 Defining the Christian Right

There is a great deal of difficulty in providing a concrete definition of the Christian Right. The Christian Right (CR) encompasses many factions and terms, including, but not limited to, Moral Majority, Evangelicals, Fundamentalists, and Social Conservatives. The CR is largely and somewhat erroneously thought to be comprised entirely of evangelical Protestants. However, the Christian Right also draws support from Catholics, Jews, Mormons, and secularists (Wacker 2000).

In an effort to clarify the political motivations of the CR, it is imperative to understand that there are distinctions between Christian fundamentalists, evangelicals, and charismatics, as these three terms are often linked with the CR. However, as with defining the CR, there are diverse definitions for both evangelicals and fundamentalists. Nevertheless it is possible, in a contemporary American context, to broadly distinguish between the terms. Fundamentalists are a sub-group within the evangelical Protestant

movement. "The term fundamentalist has come to denote a particularly aggressive style related to the conviction that the separation from cultural decadence and apostate churches are telling marks of faithfulness in Christ" (Eskridge 2006).

The major difference between evangelicals and fundamentalists is the term evangelical is most often applied to Protestant groups that emphasize the authority of scripture and salvation by faith rather than good works. The term evangelical is a designation for Christians who hold to basic conservative interpretations of the Bible and it denotes a style as much as a set of beliefs (Eskridge 2006). Today, there are a considerable number of Christian churches with profound theological variations that embrace the label of evangelical.

The genesis of the CR was primarily a reaction to the rapid changes of the 1960s, and more distantly, the still lingering impact of New Deal era social policy. However, there is still a great deal of debate and interpretation of the causal forces that have led to the growth of the CR. Finke and Stark (1993) attribute the growth of conservative fundamentalism to the social demand attributed with membership in religious organizations. They assert that adherents measure religious value on how costly it is to them, and traditional churches have not imposed sufficient cost on their members. Bellah et al. argue that a pact between long-established Protestant leaders and the liberal welfare state cost mainline Protestant churches their conventional membership as the conservative rank and file became increasingly disenchanted with big government and mainline religion (Bellah et al. 1992).

Regenerus et al. define the Christian Right as:

> A loose-fitting and diverse group of competing religious and political organizations that form a broad social network. Therefore, we define the Christian Right as the people and organizations representing and expressing politically conservative ideas and policies grounded loosely in theologically conservative Protestant thought and firmly in a web of religious networks. (Regnerus et al. 1999, 1376)

However, this is a narrow definition—as it excludes groups (Catholics, Mormons, and anti-abortionist) with dissimilar theological beliefs (Wacker 2000).

1.4 What's the Matter with Kansas?

Frank (2004) examines changes in voting behavior of the Kansas electorate, focusing principally on the rise of the social conservative movement and its impact on the fortunes of lower income rural Kansans. He argues that poor rural Kansans ultimately vote against their economic interests by aligning with Republicans because of the party's stance on social issues. The following examination is not an attempt to determine what is in, or against, a voter's best interest—which is a subjective endeavor at best—but rather an attempt to empirically examine the relationship between religious adherence and poverty, and presidential voting behavior in Kansas over the past 40 years.

CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction

The Christian Right has grown its media presence since the 1970s to assert a powerful influence on contemporary American politics (Busch 2011), which has generated a number of studies relating to its development, motivations, objectives, and impacts.

2.2 Geography of Religion

American geographers have made several important contributions to our understanding of religion and region in the United States. A major contribution was made by Wilbur Zelinsky (1961). His landmark study of patterns of church membership in the United States was based on a 1952 survey conducted by the National Council of Churches and Church Membership in the U.S.A. This privately conducted census of American church membership has taken place approximately every ten years since. All of the annual surveys maintain a similarity in structure and emphasis—with only slight

modifications over time. For example, more categories are included in later polling. Later versions of these data will be used for this study (Johnson et al. 1974; Quinn et al. 1982; Bradley et. al 1992; Jones et al. 2002; Grammich et al. 2012). Zelinsky used religious membership to reflect areal differences in American cultural regions. He delineated seven main religious regions and several sub-regions (noted in parenthesis): New England, Midland (Pennsylvania German), Upper Middle Western, Southern (Carolina Piedmont, Peninsular Florida, French Catholic, Texas German), Spanish Catholic, Mormon, and Western. This study set the standard for a subsequent classification of the United States into religious regions (Hill 1985, 135).

During the 1970s, James R. Shortridge (1976) developed a new approach to understanding the patterns of religion in America. He focused on spatial variations based on religious affiliation, and the spatial dominance of particular denominations. His most significant observation was to examine the relative proportions of liberal and conservative Protestantism in the United States. He accomplished this by using a measure religious orthodoxy, along with church stricture, to create a liberal-conservative dichotomy. To check for accuracy, the listings were then compared with denominational memberships in religious cooperative associations. The Protestant classification list developed by Shortridge provides the basis for the liberal and conservative groupings used in analysis of this study.

Later, Shortridge (1977) developed a new map of American religious phenomena. He used cluster analysis to define five religious types: Transition, Intense-

Conservative Protestant, Diverse-Liberal Protestant, Catholic, and Super Catholic. In contrast to Zelinsky's broad yet concentrated regions, Shortridge's regions were scattered throughout the United States. This was possible primarily due to his use of county level data. This resulted in less coherent regions but allowed for greater spatial nuance in religious designation.

In a study by James Proctor, the level of "trust in authority" was measured across the United States (Proctor 2005). A telephone survey was conducted with questions that were designed to measure trust in religious institutions and government, as well as trust in nature and science. The author used factor analysis to further clarify and categorize the statements collected from respondents. The results provide support for the contention that religion, as defined by trust in authority, is prevalent in the United States.

Kong has made a considerable contribution to the geography of religion. She provides two overviews of the history of geographic research on religion (Kong 1990, 2001). She refutes the claim that geographic research on religion is incoherent. The papers are primarily focused on the politics and poetics of religious place, identity and community.

Warf and Winsberg (2010) examined the geography of megachurches in the U.S. They describe the causes of the growth of megachurches. The expansion is attributed to rising secularism, the focus on individualism in American culture, the variety of amenities that economies of scale allow, and the geographic distribution of

megachurches. The dataset did not allow for temporal analysis. The authors conclude that megachurches are primarily located in the Sunbelt. In addition, based the findings, there is virtually no megachurch presence in Kansas. Sedgwick was the only county reporting megachurch attendees, and these represent less than 2 percent of the county population.

Warf and Winsburg later examined the geography of religious diversity in the United States (Warf and Winsberg 2008). They used data from the 2000 Glenmary Research Institute religious survey, and utilized four empirical measures of religious diversity drawn from different disciplines:

1. The simple number of denominations present in each county, *n.* It represents the number of religious choices available to individuals without regard to their size.

2. Total adherents who belong to the county's largest denomination (n_{max}) as a proportion of the total (i.e., n_{max}/N, where N = total number of adherents). This measure assesses the relative dominance of one faith in particular areas.

3. Shannon's index (H), a widely used entropy-maximizing measure that quantifies diversity based on the number of denominations and their proportional areal distribution...

4. Simpson's index (D), which assesses the probability that two individuals drawn at random will fall in the same denomination. (Warf and Winsberg 2010, 41)

They conclude that the most religiously diverse regions in the United States are central Florida, the Pacific Northwest, and a wide area stretching from Denver to Pittsburg. Areas dominated by Mormons, Baptists, and Catholics are the least religiously diverse.

Roger Stump has produced two highly regarded books on the geography of religion. His book *Boundaries of Faith: Geographical Perspectives on Religious Fundamentalism* employs a geographical perspective in examining religious fundamentalist movements in the context of setting and geographical space (Stump 2000). The second book, *The Geography of Religion: Faith, Place, and Space,* is a geographical approach to the study of religion as an expression of human culture (Stump 2008).

2.3 Political Geography

Nearly all contemporary scholarship on American electoral geography recognizes the work of Daniel Elazar. He is most noted for his publications on American Federalism. *American Federalism: A view from the states* is a landmark work on the American political system as viewed from the states. The main point that he makes is that the American political system at its best is a partnership between governments, publics and individuals (Elazar 1966). Elazar's map, identifying four American political culture regions, is a closely associated antecedent of Shortridge's conservative and liberal Protestant divisions.

Stanley Brunn (1974) published another influential work on American political geography. In the book *Geography of Politics in America* he moved away from political geography's traditional world scale and international approach by focusing "on the variety and diversity of forms of political behavior, organization, and structure" of America (Brunn, 1974, xi).

In another seminal study, Shelley and Archer used T-mode factor analysis to study the historical geography of presidential voting in the South, 1872—1992 (Shelley and Archer 1995). T-mode factor analysis identified major temporal trends and sectional alignments over an extended period of time.

Shelley and Archer, in their 1995 article explain that,

> T-mode factor analysis extends the study of individual correlations between successive pairs of elections to a simultaneous statistical analysis of a complete matrix of correlations among all elections under scrutiny. Each factor represents a coherent set of elections characterized by a high degree of geographical similarity. Factors that represent a sequence of consecutive elections can be deemed to identify longer electoral epochs, or normal voting patterns, within the overall study period (Shelley and Archer, 1995, 29).

2.4 Religion and Political Geography

Gerald Webster examined the role of religion in southern politics in the 1990s (Webster 1997). The paper explores the influence of religious conservatism on voting in presidential and gubernatorial elections. To determine the impact of religion on voting decisions in Alabama, Webster calculated the total proportion of adherents to conservative religious faiths for all the counties in the state. Five independent variables (percent population with a high school degree, percent mean state income, percent African American, percent of urban population) were then used in a set of regressions with the percent of Republican vote as the dependent variable.

Geographers Heatwole, Tweedie, Brunn, Stanley, Webster, Archer, Clark and others, have attempted to define the geography of popular terms such as the “Bible

Belt" (Heatwole 1978; Tweedie 1978; Brunn et al. 2011). In "Viewing the Bible Belt" Stephen Tweedie used television viewing estimates of six popular religious programs to reveal previously unmapped dimensions of religion in the United States. Heatwole used Glenmary Research Center data to study the geographical extent of the Bible Belt. And recently in 2011, Brunn et al. updated Heatwole's study to include a statistical and cartographic analysis of 1980, 1990 and 2000.

2.5 Study on Politics

In a paper published in the *American Journal of Political Science,* John Petrocik applied an "issue ownership" theory of voting to analyze the role that campaigns play in setting the political agenda—and influencing voters. The analysis consists of logistic regression analyses on presidential elections, voter reports, and content analyses of news reports. The author concludes that candidates' exhibit distinctive patterns of problem emphases and that election results follow voters' problem concerns. He maintains that voters are significantly influenced by the criteria that campaigns set (Petrocik 1996).

2.6 Studies on Politics and Religion

There is a fascinating body of literature examining the historical influences of Protestantism on politics in the United States. D.G. Hart provides an informative history of 20th century American Protestantism and its influence on politics. Hart draws similarities between current evangelical Christian politics and "what Protestant modernists did seventy years ago when they advocated prayer and Bible reading in

public schools" (Hart 2001, 21). James Reichley, a political scientist, also published a detailed analysis of faith and its impact on American politics (Reichley 2001). He looks at religion and politics in American history in an effort to understand the influences of religion on contemporary politics. He determines that "the electoral behavior of religious groups during the 1990s moved away from divisions along denominational lines, and toward divisions within denominations based on religious practice and belief" (Reichley 2001, 175). These studies provide an important historical perspective on the current political climate.

A study by Smidt and Kellstedt compared evangelical voting behavior in the 1988 presidential election with the 1980 and 1984 elections of the Reagan years (Smidt and Kellstedt 1992). Prior to the 1988 presidential election it was unclear whether evangelicals were simply voting for the candidacy of Ronald Reagan or whether this shift in allegiance represented a more profound and lasting swing toward the Republican Party as a whole. In the study, respondents were assigned a numerical score based on how well their answers met the study criteria, such as whether they stated having a "born again" experience. The study utilized data from the 1980, 1984, and 1988 National Election Studies conducted by the Center for Political Studies at the University of Michigan. The percentage of white evangelicals voting Republican in the 1988 election was greater than it was in 1980, although not as great as 1984 when Reagan sought reelection. Thus, the holdover of evangelicals voting Republican after the 1984 election suggests that the shift in evangelical voting was not based on the charisma of

Reagan alone but represented a more lasting political shift, although how lasting remains unclear.

In an effort to measure the influence of conservative Christian political organizations on voting, a group of sociologists (Regnerus et al. 1999) use the logistic regression method to explain who uses the electoral advice of such organizations, and what their reasoning is for doing so. The results are displayed in the form of odds ratios: "the odds of relying on conservative Christian political organizations for help in deciding how to vote in elections" (Regnerus et al. 1999, 1381). The results affirm that Christian political organizations have the greatest influence on Protestant evangelicals. Furthermore, social conservatives that listen to the advice of conservative Christian political organizations view the United States as suffering from moral poverty.

A different study by Hoover looked at the differences in view that evangelicals have on political issues in the United States and Canada (Hoover et al. 2002). The data were collected from a 1996 phone survey conducted by the Canadian market research firm, the Angus Reid Group. The study used an OLS regression and the slope dummy approach to analyze the political strength of evangelicals in the United States and Canada. The study found that "on political issues where the evangelical tradition provides clear guidance, evangelical Protestants in the United States and Canada exhibited the same political tendencies" (Hoover et al. 2002, 367). However, on questions of economic justice, American evangelicals were more conservative than their Canadian counterparts.

A detailed exploration of conservative Protestantism was published in the late 1990s (Woodberry and Smith 1998). The authors note that religious factors have a significant impact on political views. They also identify the difficulty of obtaining accurate data on Protestant groups in general. The article gives a general overview of the history and various movements within the conservative Protestant community.

A recent article of note, published in the *Western Illinois Historical Review,* explores the political influence of the Moral Majority on the 1980 presidential election (Banwart 2013). The article provides detailed information on the movement's history, leaders, political agenda, and impact on presidential politics. The article concludes by suggesting that voters initially mobilized by the Moral Majority may now be shifting political parties, and that issues other than abortion and gay rights have gained traction with young voters.

CHAPTER III

METHODOLOGY

3.1 Definition of Study Period

The study period for this research spans the years 1972 to 2012. These years were selected for study in order to better understand the influence of social and economic factors on presidential politics. The 1970s marks the era in which the Christian Right began to gain momentum as a political force in American politics (Smidt and Kellstedt 1992). By the 1980s the Christian Right, as a lobbying power, was a recognized player in local and national politics (Finke and Stark 1993). Throughout recent decades, and continuing to today, this political/religious movement has been a significant force in contemporary affairs. Therefore, this period was selected to test the predicative ability poverty, and liberal and conservative Protestant adherence, on presidential voting.

3.2 Definition of Study Area

This study is an analysis of 58 of the 105 counties that comprise the State of Kansas (see Figure 1). As noted earlier, the State has recently been the subject of popular political examination. Thomas Frank's *What's the Matter with Kansas?* attempts to explain *how conservatives won the heart of America* by leading a "revolt against a supposedly liberal establishment." (Frank 2004, cover) In addition, several studies have been conducted on changes in denominational affiliation and on the importance of religion on voting decisions in the American South (Webster 1997, 2000). However, very few studies of this type have been conducted solely on America's heartland. Therefore,

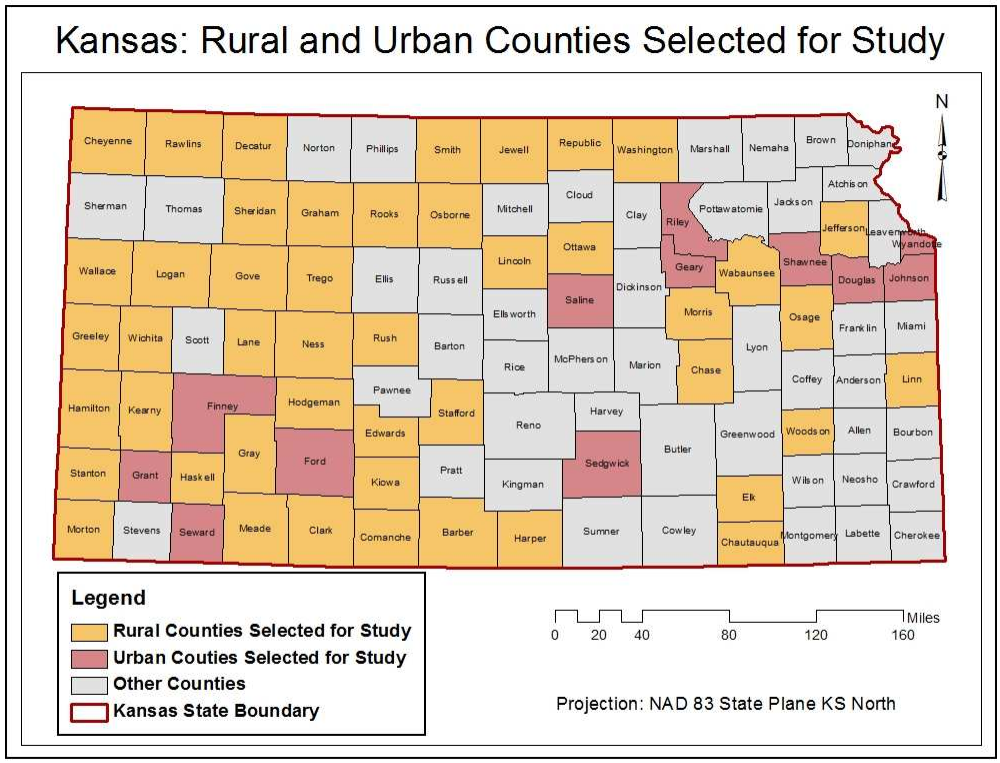


Figure 1: Study Area

Kansas is evaluated in an effort to better understand the dynamics of change in this region.

3.3 Rural and Urban Observations

Rural counties were represented by 46 observations and urban counties accounted for 12 observations. Each of the five sets of four multiple regressions apply to one of the corresponding survey years that encompass this study: 1972, 1980, 1992, 2000 and 2012. For each decade, the four multiple regressions utilize the percentage of Republican voting as the dependent variable, and either liberal or conservative Protestant church membership and the percentage of the population at or below poverty level as the independent variables. Two regressions were grouped based on conservative and liberal Protestant church affiliation in rural counties, and two regressions were grouped based on conservative and liberal membership in urban counties. The data were grouped in this way to facilitate the evaluation of differences in rural versus urban and conservative versus liberal church membership (and the impact of poverty) on voting behavior for each decade. In reference to the aim of this research, the most important statistics were those relating to rural voters. The liberal rural regressions, and both sets of urban regressions, were grouped in an attempt to isolate conservative rural voters, and the liberal rural regressions and the urban regressions were mainly of interest in direct comparison to the conservative rural regressions.

3.4 Limitations of the Observations

In the regression analysis, rural counties were represented by 46 observations and urban counties accounted for 12 observations. A large number of observations improve the predictive ability of the model. It should be noted that the 12 observations representing urban counties were few, and therefore provide a less than ideal sample. However, the 46 observations representing rural counties were well above an acceptable range. For the exploratory nature of this research, the number of urban observations was deemed to be acceptable, as the main emphasis of this research was to test voting behavior in rural areas. The urban regressions were provided as a means for comparison and no conclusions should be drawn about urban voters from this small sample.

3.5 Dependent Variable: Republican Voting

The dependent variable for all the regressions was the percentage of Kansas residents who voted for the Republican candidate, by county, in each of the five corresponding presidential elections. The data were calculated by dividing the number of Republican votes received by the sum of all votes cast by residents of each county. The Republican tally was selected to identify changes in the predictive force of the two independent variables over time. The voting data were manually transferred to a spreadsheet from a text based source for the years 1972, 1980, 1992 and 2000 (Scammon 1973, 1981; Scammon and McGillivary 1993; Scammon et al. 2001). A digital

copy was available for the 2012 election ("Full US 2012 Election County-Level to Download" 2012).

It is important to note that the voting data, church membership figures, and U.S. Census categories used in this analysis were not perfect matches in terms of the years in which the data was collected. The 1970, 1990, and 2010 Census data were paired with corresponding election results from 1972, 1992, and 2012 respectively. Furthermore, in contrast to the Protestant membership data, which were collected over a general time frame, the Census and voting data represent figures that were collected based on a specified date. For the exploratory purpose of this study, the collection date differences were assumed to be within an acceptable range.

3.6 Independent Variable(s): Liberal and Conservative Adherence

The church membership data amassed in all five surveys were collected over a period of years, and voluntary participants provided their membership data based on when they filled out the self-report forms, i.e. the survey is not based on a specified date; rather it reflects a general time frame. In most cases, the data collected on church membership were collected from within the administrative offices of each church (Webster 2000). In addition, membership statistics were reported for the county in which the congregation is located, rather than for the county in which specific members reside (Grammich et al. 2012). The 1971 church membership survey data were collected from 1971 to 1973. In this survey, fifty-three denominations participated, representing an estimated 81 percent of denominational church membership in the United States.

This was the first survey year to establish the category of "total adherents," which combined "communicant, confirmed or full members" in an effort to facilitate temporal comparability of data (Johnson et al. 1974).

The 1980 church membership survey includes 111 religious bodies and was estimated to represent 91 percent of United States adherents. In 1980 and 1990 congregational adherents were defined as "all full members, their children, and others who regularly attend services or participate in the congregation" (Quinn et al. 1982). For the 1980 survey, data were collected from 1979 to 1981. In 1990, data were collected from 1990 to 1991 on 133 church bodies (Bradley et al. 1992). In 2000 and 2010, total adherents were further defined as "all members, including full members, their children and the estimated number of other participants who are not considered members; for example, 'the baptized,' 'those not confirmed,' 'those not eligible for communion,' 'those regularly attending services,' and the like" (Jones et al. 2002). For the 2000 survey, data were collected from 1999 to 2001 on 149 congregations, and for the 2010 survey data were collected from 2009 to 2011 on 236 congregations (Grammich 2012).

The various surveys contain membership data for many religious congregations; however, they do not include data on every congregation in the United States, and participation varies from each survey to the next. Furthermore, not all participating religious groups were well represented in Kansas and a central aspiration of this research was to explore variations in conservative and liberal Protestant voting

behavior. To overcome these issues (discussed on the next page) two approaches were employed.

Liberal and Conservative Protestant Bodies as Defined by Shortridge

(groups highlighted in green are selected for this research)

Liberal Groups	Conservative Groups
American Baptist Churches	American Lutheran Church
Christian Church (Disciples of Christ)	Assemblies of God Church
Church of the Brethren	Associate Reformed Presbyterian Church
Episcopal Church	Baptist Missionary Association of America
Friends World Committee (American Section)	Brethren in Christ Church
Lutheran Church in America	**Christian Churches and Churches of Christ**
Moravian Church in America (Northern Province)	Christian Reformed Church
Moravian Church in America (Southern Province)	Christian Union
Nat'l Assoc. of Congregational Christian Churches	Church of God General Conference (Abrahamic Faith)
Presbyterian Church in the U.S.	Church of God (Anderson, Indiana)
Reformed Church in America	Church of God (Cleveland, Tennessee)
Seventh-Day Baptist General Conference	Church of Jesus Christ of the Later-Day Saints
Unitarian-Universalist Association	**Church of the Nazarene**
United Church of Christ	Cumberland Presbyterian Church of America
United Methodist Church	Evangelical Church of North America
United Presbyterian Church in the USA	Evangelical Congregational Church
Unity of the Brethren	Evangelical Covenant Church of America
	Evangelical Mennonite Brethren Conference
	Free Methodist Church of North America
	General Conference Mennonite Church
	Lutheran Church-MO Synod Mennonite Church
	North American Baptist General Conference
	Orthodox Presbyterian Church
	Pentecostal Holiness Church
	Plymouth Brethren
	Reformed Presbyterian Church (Evangelical Synod)
	Salvation Army
	Seventh-Day Adventists
	Southern Baptist Convention
	Wisconsin Evangelical Lutheran Synod

Table 1: Conservative and Liberal Protestant Groups (Shortridge 1976)

The Protestant groups included in the regression analysis were selected based on the classification list defined by James Shortridge of the University of Kansas. In the paper, "Patterns of Religion in the United States," Shortridge assigns Protestant denominations into two groups: liberal or conservative (see Table 1)—based on religious orthodoxy and church stricture (Shortridge 1976). To insure accuracy and improve the veracity of the assignments, the list was compared with membership lists provided by both liberal and conservative religious associations: Liberal—the National Council of the Churches of Christ in the U.S.A., the World Council of Churches, and the Consultation Church Union; Conservative—the National Association of Evangelicals, the Pentecostal Fellowship of North America, and the Christian Holiness Association (Shortridge 1976).

The classification list developed by Shortridge was useful as a guide for selecting conservative and liberal groups in Kansas. The classification was based on the entire United States, and as a result, not all of the religious groups covered by Shortridge's study were represented in Kansas. Therefore, the list provided a basis for selecting Kansas congregations that were also well represented in the Glenmary Research Center's religious data in all five survey years: 1971—2010.

To ensure that the conservative and liberal Protestant groups selected were well represented in Kansas, and therefore meaningful for the regression analysis, each of the congregations (Table 1) on the Shortridge classification list were compared to the data available for the five religious surveys. Congregations were selected based on three criteria: that they were represented on the Shortridge classification table, that they

were well represented in Kansas, and that they provided data for all five survey years. In the end, ten congregations were selected—five liberal and five conservative. The results are highlighted in bold and green on Table 1.

3.7 Independent Variable: Percentage of Poverty

The percentage of poverty was employed as the regression's second dependent variable. These county-level data estimate the percentage of the population that has an income that falls below the designated poverty level at the time of each census. "The Census Bureau uses a set of income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty" (U.S. Census Bureau 2014). The same thresholds are used nationwide, and are updated annually for inflation using the Consumer Price Index for All Urban Consumers (including American Community Survey data). The Census data for 1970, 1980, 1990 and 2000 were gathered from decennial long-form data (with each year representing about a 16.7 percent sample). The Census data utilized for 2011 represents a 12 month data estimate of the poverty level in 2011. The 2011 poverty data is calculated based on a 5-year average of American Community Survey data: 2007 to 2011 (representing a 2.5 percent annual sample: the 5 year average—necessary for areas with populations less than 20 thousand—has a 90 percent confidence interval) (U.S. Census Bureau 2009, 2012). The percentage of poverty as an economic indicator was included to provide a basis for comparison with the church membership social indicator.

3.8 Urban and Rural Selection Criteria

The urban/rural variable was derived from decennial Census data. The data were available for 1970 to 2010. The Census Bureau classifies urban areas as all territory, population, and housing units located within urbanized areas. The urban population data from 2010 were selected to group the urban-rural areas for this study. In 2010 the U.S. Census Bureau defines an urban area as census tracts and/or census blocks with 2,500 or more inhabitants (U.S. Census 2010). The population not classified as urban constitutes the rural population. For the purpose of this study (see Figure 2), counties with an urban population rate above 80 percent, and counties with an urban population

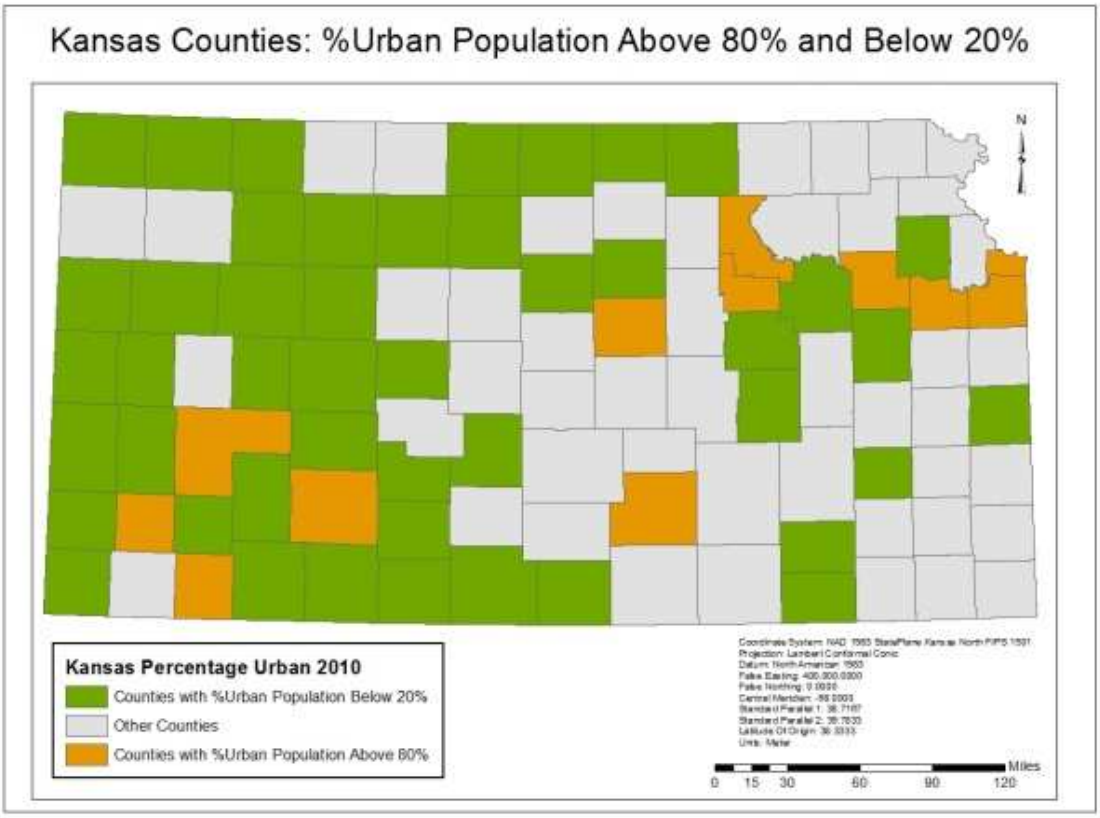


Figure 2: Urban and Rural Population: Kansas

rate below 20 percent, were chosen to isolate urban and rural voters respectively. Note that Frank's principal claim was that low income rural residents were influenced by the Republican Party's stance on social issues. To clarify and test this assertion, counties that fall in the middle of the urban/rural spectrum have been removed in an attempt to further define the regression outcome so that the study will better detect differences among the two groups. It should be noted that there was an option of using MSAs to represent the urban areas; however, this method had limitations, as there are only four MSAs in Kansas (per the U.S. Census Bureau): the Wichita MSA comprised of three counties, the Topeka and Lawrence MSAs represented by one county each, and the Kansas City MSA comprised of four Kansas counties. The combined Kansas MSAs consist of a total of nine counties. In other words, the MSA method would result in 25 percent fewer observations. In addition, several of the Kansas counties defined as within an MSA are in fact almost entirely rural, with only a small area of the county representing the urban population. Therefore, the upper and lower bounding 20 percent figure was selected (Figure 2) as a balance between two competing issues: the desire to capture counties (including seven of the nine MSAs) that accurately reflect urban and rural identities, and the necessity of having a large enough sample size to produce a meaningful regression outcome.

3.9 Regression Analysis

Multiple linear regression analysis explores the relationship between a response (dependent) variable and the explanatory (independent) variables. In this study, the regression analysis determines if, and to what extent, liberal/conservative Protestant

adherence and poverty predict Republican voting in presidential elections. "With *p* independent explanatory variables, the regression equation is

$$Y = a + b_1*X_1 + b_2*X_2 + ... + b_p*X_p$$

where Y is the predicted value of the dependent variable" (Rodgerson 2002). The analysis provides information on the contribution that the explanatory variables have on the predication outcome of the regression ("Regression Diagnostics" 2014).

The first step in a multiple regression is to state the research hypothesis (Saint-Germain 2014, 1). The hypothesis of this paper is that if Frank is correct, the ability of poverty, an economic indicator, to predict Republican voting behavior will decrease over the course of the study period, while the predictive power of Protestant church membership, as social issues predictor, will increase over the same period. The next step is to state the null hypothesis.

3.91 Hypotheses

Rural Counties:

Q1: Ho: rural/liberal adherence and poverty have no effect on Republican voting.

Ha: rural/liberal adherence and poverty have an effect Republican voting.

Q2: Ho: rural/conservative adherence and poverty have no effect on Republican voting.

Ha: rural/conservative adherence and poverty have an effect Republican voting.

Urban Counties:

Q3: Ho: urban/liberal adherence and poverty have no effect on Republican voting.

Ha: urban/liberal adherence and poverty have an effect Republican voting.

Q4: Ho: urban/conservative adherence and poverty have no effect on Republican voting.

Ha: urban/conservative adherence and poverty have an effect Republican voting.

The data for each variable were assessed separately by obtaining measures of central tendency and dispersion, frequency distributions, and graphs. This is done to determine if the variable is normally distributed. The independent variable is assessed with the dependent variable to determine if the two are linearly related by calculating the correlation coefficient and consulting the scatter plot. Once this is completed, it is necessary to measure the relationship between all of the independent variables. This is done by creating a correlation coefficient matrix for all of the independent variables. The purpose of the correlation coefficient matrix is to determine if the independent variables are too highly correlated with one another.

The final step is to calculate the regression equation of the data. Then calculate and examine the measures of association, and tests of statistical significance, for each coefficient and for the equation as a whole. The null hypothesis is then accepted or reject. The research hypothesis is rejected or accepted. And finally, the practical implications of the findings are explained (Saint-Germain 2014).

3.10 Regression Assumptions

The validity of the multiple regression results depends on a number of basic assumptions. The regression analysis will not produce reliable results if the assumptions are not satisfied.

- The relationship between the explanatory variables and the outcome variable is linear (see Appendix A.3).
- The regression equation describes the mean value of the dependent variable for a set of independent variables.
- The individual data points of Y (the response variable) for each of the explanatory variables are normally distributed about the regression line (see Appendix A.1).
- The variance of the data points about the line of means is the same for each explanatory variable.
- The explanatory variables are independent of each other (see Appendix A.2). ("Regression Diagnostics" 2014)

3.11 Potential Problems with Multiple Regression Analysis

To overcome inherent issues that may produce invalid regression results, it is important to test the data through various means. For example, it is necessary to check for heteroscedastic errors. Non-constant error variance is a frequent problem in regression analysis. If the error variance is not constant throughout the population regression line, the errors are heteroscedastic, i.e. there is a biased estimation of error variance, leading to invalid inference (Kahane 2002). This is diagnosed by plotting the residuals (Rodgerson 2002).

It is also important to check for nonlinear relationships. Scatterplots indicate the presence nonlinear relationships between the variables (see Appendix A.3). They indicate the strength and direction of the linear relationship between variables (Rodgerson 2002). If the data are a poor fit, it is possible that the residuals are non-independent. Residual plots are commonly used to check for violation of assumptions, such as: non-linear relationships, inconstancy in variance between variables, and if a distribution is normal ("Regression Diagnostics" 2014).

A major concern in regression analysis is the detection and alleviation of multicollinearity issues between variables. Perfect multicollinearity occurs when one of the independent variables has a perfect linear relationship to at least one other independent variable (Kahane 2002). The result is that one of the variables is redundant; therefore the least-squares method of estimation breaks down. The solution is to drop one of the variables from the model. High multicollinearity is also a concern, and is substantially more difficult to deal with. The problem occurs when trying to distinguish subtle differences between the variables. To detect the presence of multicollinearity, the method selected for this study, is to calculate the correlation coefficient of the two variables. This shows the linear relationship between the variables.

In addition, three other problems can occur. An incorrect set of explanatory variables (not an issue in this study) that may result in a poor regression analysis, outliers (detected by scatter plots of the residuals) that may affect the model estimates and fit; and missing data can lead to invalid estimation and inference (Rodgerson 2002).

The data in this study were inspected thoroughly and analyzed with summary statistics—there is no evidence of missing data.

CHAPTER IV

DATA ANALYSIS AND RESEARCH FINDINGS

4.1 Data Analysis Information

To test the statistical relationship of religious affiliation and poverty on voting, twenty multiple regressions were performed. The test results from each regression were analyzed at the 0.05 level of significance, and discussed at the 0.20 significance level. The most common cut-off for geographical research is 0.05, i.e. any value less than 5 percent probability is considered significant at the 95^{th} percentile. In addition, in an effort to examine weaker trends that occur within the data over time, the regressions were also scrutinized at a 20 percent level of confidence. However, the results at the 20 percent level were discussed only as a topic of interest; they were not considered significant.

A Pearson's contingency coefficient, and Durban Watson test statistic (see Appendix A.2), were employed to detect autocorrelation in all of the regressions. The Durban-Watson test produced results that were less than 2 but greater than 1, with DW equal to 2 indicating no autocorrelation. The results were reassuring, as there is cause

for alarm if the results produced were less than 1; values less than 1 indicate that successive error terms have similar values, i.e. that they were positively correlated (Freund, Wilson and Mohr 2010). The results from the Pearson's correlation depict Republican voting and conservative adherence consistently trending together, while poverty trends mainly in the opposite direction. The Pearson's r results indicate that a statistically meaningful correlation exists between the variables, but all the data fall within an acceptable range.

Histograms were produced for each of the regressions to determine if the data were normally distributed (see Appendix A.1). The combined histograms suggest that the data were normally distributed. This was the expected outcome since the variables are based on presidential voting returns, nationwide religious surveys, and decennial Census data.

Additionally, scatterplots were produced of the dependent variable: Republican voting, along with the standardized residuals and the standardized predicted values (see A.4: Homoscedasticity Tests). This test was used to check for heteroscedastic error. A heteroscedastic error occurs when the variance of error terms is not constant within the population regression line (Kahane 2001). The results produced show varied amounts of heteroscedasticity within the data. Overall, the points possess the desired homogeneity of variance required to confidently move forward.

4.2 Regression Analysis 1972

The output of the four regressions derived from the 1972 data produced mixed results. A model summary comparison chart can be viewed in Table 2. The results for the first regression (liberal adherence and poverty in rural counties) indicate that no statistically significant relationship exists (Sig. = 0.431) between the variables, therefore the null hypothesis is not rejected, i.e. any perceived relationship between liberal adherence and poverty and the dependent variable, Republican voting, may be due to chance alone. In addition, the regression produced an extremely low R^2 value (0.038). However, the rural/conservative adherence and poverty regression was significant with

1972 Rural Counties, KS (Dependent Variable: Presidential Voting_% Republican)

Liberal Adherence and Poverty

Regression Statistics	
R Square	0.038
Standard Error	3.432
Observations	46

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	20.213	10.107	0.858	0.431

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	71.344	2.740	26.035	0.000
% Liberal Adherence	0.061	0.058	1.056	0.297
% Poverty	-0.053	0.112	-0.476	0.637

Conservative Adherence and Poverty

Regression Statistics	
R Square	0.138
Standard Error	3.250
Observations	46

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	72.406	36.203	3.428	0.042

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	71.167	1.947	36.553	0.000
% Conservative Adher	0.159	0.064	2.487	0.017
% Poverty	-0.032	0.105	-0.306	0.761

1972 Urban Counties, KS (Dependent Variable: Presidential Voting_% Republican)

Liberal Adherence and Poverty

Regression Statistics	
R Square	0.331
Standard Error	6.366
Observations	12

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	180.536	90.268	2.227	0.164

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	65.998	10.052	6.566	0.000
% Liberal Adherence	0.694	0.493	1.408	0.193
% Poverty	-0.793	0.517	-1.533	0.160

Conservative Adherence and Poverty

Regression Statistics	
R Square	0.225
Standard Error	6.854
Observations	12

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	122.437	61.218	1.303	0.318

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	71.520	10.366	6.899	0.000
% Conservative Adher	0.460	0.668	0.688	0.509
% Poverty	-0.703	0.579	-1.214	0.256

Table 2: 1972 Regression Comparison Chart. Data highlighted in green were significant at 5% and data highlighted in blue were significant at 20%.

an F statistic of 3.428 and significance value of 0.042. Therefore, the null hypothesis was rejected (Ho: rural/conservative adherence and poverty has no effect on Republican voting). The regression accounts for nearly 14 percent ($R^2 = 0.135$) of the variation in voting, but only the percentage of conservative adherence has an acceptable p-value (0.017). Based on the coefficients, the conservative adherence variable has a positive correlation with Republican voting, and poverty has a negative correlation. The conservative adherence variable accounts for nearly all of the models predictive impact; with poverty (p-value = 0.761) having a minor negative impact on the regression's outcome. With a p-value of 0.761, the poverty variable falls well outside of any reasonable defined confidence level.

The fact that conservative adherence in rural counties is a statistically meaningful predictor of Republican voting provides partial support for the larger hypothesis of this thesis. There is a positive relationship between conservative adherence and voting in rural counties, while the liberal adherence variable was not statistically significant.

The outcome for 1972 the urban county regressions proved to be more inconclusive than the result for the rural/conservative adherence regression. In both cases, the regressions failed to exceed a 95 percent significance threshold. However, the liberal adherence and poverty regression was significant at 20 percent, with an F statistic of 2.227 and a significance value of 0.164. The regression has an R^2 of 0.331. The independent variables were both significant at 20 percent (liberal adherence =

0.191 and poverty = 0.160). Unfortunately, this is not an ideal result, as these values are rejected at a 5 percent level of significance; however, by raising the significance level to 20 percent, the regression provides weak support that a relationship exists between the independent variables (positive for liberal adherence and negative for poverty) and Republican voting.

The urban/conservative adherence and poverty regression was not significant. The regression has a significance value of 0.318. The R^2 value is 0.225. However, the independent variables did trend in the same directions as the other regressions (positive for conservative adherence and negative for poverty).

The results for the urban county regressions are not unexpected. The main goal of this study was to determine if Republican voting has a statistically meaningful relationship with conservative adherence in rural counties, and, in 1972, the only statistically meaningful predictor of voting (Sig. < 0.05), was in fact, conservative adherence in rural counties.

4.3 Regression Analysis 1980

The results for the rural county regressions are markedly similar to those produced for the 1972 analysis (see Table 3). As in 1972, the rural/liberal adherence and poverty regression was not significant (0.374). And even if the regression was significant, it only predicts 4 percent of Republican voting (R^2 = 0.044). For this regression the null hypothesis is not rejected (Ho: rural/liberal adherence and poverty

1980 Rural Counties, KS (Dependent Variable: Presidential Voting_% Republican)

Liberal Adherence and Poverty

Regression Statistics	
R Square	0.044
Standard Error	3.421
Observations	46

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	23.404	11.702	1.000	0.376

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	68.352	3.014	22.679	0.000
% Liberal Adherence	0.059	0.047	1.244	0.220
% Poverty	0.168	0.185	0.906	0.370

Conservative Adherence and Poverty

Regression Statistics	
R Square	0.124
Standard Error	3.275
Observations	46

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	65.218	32.609	3.039	0.058

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	68.436	2.479	27.602	0.000
% Con Adherence	0.115	0.049	2.363	0.023
% Poverty	0.193	0.176	1.094	0.280

1980 Urban Counties, KS (Dependent Variable: Presidential Voting_% Republican)

Liberal Adherence and Poverty

Regression Statistics	
R Square	0.287
Standard Error	6.573
Observations	12

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	156.409	78.204	1.810	0.218

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	70.595	12.634	5.588	0.000
% Lib Adherence	0.346	0.677	0.511	0.622
% Poverty	-0.738	0.543	-1.358	0.207

Conservative Adherence and Poverty

Regression Statistics	
R Square	0.284
Standard Error	6.588
Observations	12

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	154.717	77.358	1.783	0.223

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	72.501	9.970	7.272	0.000
% Con Adherence	0.332	0.707	0.470	0.650
% Poverty	-0.785	0.511	-1.538	0.158

Table 3: 1980 Regression Comparison Chart. Data highlighted in green were significant at 5%, data highlighted in blue were significant at 20%, and data highlighted in yellow is a stand-alone independent variable significant at 20%.

has no effect on Republican voting). Conversely, the rural/conservative adherence and poverty regression has again produced a meaningful result; however only at 20 percent level of significance. The regression result falls just outside of the 5 percent significance cut-off. On its own the conservative adherence variable would have met the standard for significance (R^2 = 0.099 and Sig. = 0.032), but the inclusion of the poverty variable dropped the overall significance level. With an R-squared value of 0.124, the model produced an F statistic of 3.039 and a significance value of 0.058. The percentage of conservative adherence has a p-value of 0.023, and the percentage of poverty produced a p-value of 0.280.

The urban county regressions for 1980 were not significant. Both regressions fall just outside of a 20 percent level of significance; which may be due to the limited number of observations that comprise these data sets. The liberal adherence and poverty regression had an F statistic of 1.810 and a significance value of 0.218, and the conservative adherence and poverty regression produced a similar result (F = 1.783 and Sig. = 0.223). However, the poverty variable for the urban/conservative adherence and poverty regression was significant a 20 percent—it is interesting to note that without the conservative adherence variable the regression would have been significant at 20 percent (R^2 = 0.266 and Sig. = 0.086). Lastly, the liberal adherence and poverty regression produced an R^2 of 0.287, and the conservative adherence and poverty regression produced a similar R^2 (0.284).

4.4 Regression Analysis 1992

The year of Ross Perot: In the 1992 election cycle, a significant percentage of the largely Republican electorate weary of professional politicians, anxious about the rising national deficit, and angry over President Bush's campaign pledge reversal on taxes decamped in favor of independent candidate Ross Perot. These factors effectively splitting the Republican vote (McCann et al. 1999). Additionally, it is interesting to note that the 1992 data produced the most statistically meaningful rural county results of all the regressions groups (see Table 4). The rural/liberal adherence and poverty regression fell just short of the 0.05 level of significance, so the null hypothesis is not rejected at 5 percent. The regression had an F statistic of 3.092 and a significance value of 0.056. The

1992 Rural Counties, KS (Dependent Variable: Presidential Voting_% Republican)

Liberal Adherence and Poverty

Regression Statistics	
R Square	0.126
Standard Error	3.272
Observations	46

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	66.201	33.100	3.092	0.056

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	66.490	2.347	28.328	0.000
% Liberal Adherence	0.069	0.052	1.327	0.192
% Poverty	0.299	0.155	1.932	0.060

Conservative Adherence and Poverty

Regression Statistics	
R Square	0.258
Standard Error	3.015
Observations	46

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	135.743	67.871	7.468	0.002

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	66.101	1.990	33.211	0.000
% Con Adherence	0.162	0.052	3.118	0.003
% Poverty	0.331	0.142	2.334	0.024

1992 Urban Counties, KS (Dependent Variable: Presidential Voting_% Republican)

Liberal Adherence and Poverty

Regression Statistics	
R Square	0.306
Standard Error	6.482
Observations	12

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	167.117	83.559	1.989	0.193

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	68.118	8.766	7.771	0.000
% Lib Adherence	0.650	0.560	1.160	0.276
% Poverty	-0.592	0.402	-1.472	0.175

Conservative Adherence and Poverty

Regression Statistics	
R Square	0.294
Standard Error	6.539
Observations	12

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	160.487	80.243	1.877	0.208

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	67.379	9.708	6.941	0.000
% Con Adherence	0.636	0.589	1.080	0.308
% Poverty	-0.477	0.432	-1.104	0.298

Table 4: 1992 Regression Comparison Chart. Data highlighted in green were significant at 5% and data highlighted in blue were significant at 20%.

regression has an R^2 value of 0.126. The liberal adherence variable has a p-value of 0.192. The rural/conservative adherence and poverty regression was significant at 5 percent, with a sizable F statistic of 7.468 and a notable significance value of 0.002. The conservative adherence variable had a p-value of 0.003 and the poverty variable had a p-value of 0.024. It is of note that in both of the rural regressions the poverty variables had acceptable p-values; however, they trend with Republican voting, which was unexpected, i.e. the coefficients were positive. This result undermines the hypothesis—it was expected that poverty would have a negative relationship with Republican Voting. The rural/conservative and poverty regression has an R-squared value of 0.126.

The results for the urban regressions were similar; they both have significant values that are near the 80th percentile. The urban/liberal adherence and poverty regression is significant at 20 percent, with an F statistic of 1.989 and a significance value of 0.193. The urban/conservative adherence and poverty regression is not significant. It has an F statistic of 1.877 and a significance value of 0.208. For both regressions the null hypothesis is not rejected at 0.05. However, the null hypothesis would be rejected for the urban/liberal/poverty regression at a 20 percent significance level. The R^2 for the liberal adherence regression is 0.306. The R^2 for the conservative adherence regression is 0.294.

4.5 Regression Analysis 2000

The results for 2000 (see Table 5) were similar to 1972 and 1980. Once again the rural/liberal/poverty regression had a low R^2 (0.051), and the regression was not significant (Sig = 0.322). However, unlike the data for 1972 and 1980, in 2000 poverty (p-value = 0.138) was a statistically viable predictor of voting at a 20 percent significance level. In a stand-alone regression, the Republican vote and poverty had an R^2 of 0.051 and a significance of 0.132. The liberal adherence data was not significant (p-value = 0.890). In contrast, the rural/conservative adherence and poverty model was significant with an F test of 4.068 and a significance of 0.024. The R^2 for the conservative adherence and poverty regression is 0.159. As in all of the regressions, the conservative adherence variable was the most significant (Sig. = 0.023). The percentage of poverty data (Sig. = 0.298) is not a significant predictor of voting.

2000 Rural Counties, KS (Dependent Variable: Presidential Voting_% Republican)

Liberal Adherence and Poverty

Regression Statistics	
R Square	0.051
Standard Error	3.408
Observations	46

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	27.016	13.508	1.163	0.322

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	75.763	2.845	26.630	0.000
% Liberal Adherence	0.008	0.057	0.140	0.890
% Poverty	-0.343	0.227	-1.513	0.138

Conservative Adherence and Poverty

Regression Statistics	
R Square	0.159
Standard Error	3.209
Observations	46

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	83.770	41.885	4.068	0.024

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	73.208	2.644	27.686	0.000
% Con Adherence	0.138	0.059	2.352	0.023
% Poverty	-0.231	0.219	-1.057	0.296

2000 Urban Counties, KS (Dependent Variable: Presidential Voting_% Republican)

Liberal Adherence and Poverty

Regression Statistics	
R Square	0.203
Standard Error	6.948
Observations	12

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	110.784	55.392	1.147	0.360

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	69.651	8.961	7.773	0.000
% Lib Adherence	0.433	0.599	0.723	0.488
% Poverty	-0.519	0.468	-1.110	0.296

Conservative Adherence and Poverty

Regression Statistics	
R Square	0.380
Standard Error	6.128
Observations	12

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	207.263	103.632	2.759	0.116

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	60.042	9.603	6.252	0.000
% Con Adherence	1.169	0.649	1.800	0.105
% Poverty	-0.314	0.431	-0.728	0.485

Table 5: 2000 Regression Comparison Chart. Data highlighted in green were significant at 5%, data highlighted in blue were significant at 20%, and data highlighted in yellow is a stand-alone independent variable significant at 20%.

The urban/liberal adherence and poverty regression had an R^2 of 0.203; however, the model has a significance value of 0.360, so the null hypothesis is not rejected (Ho: urban/liberal adherence and poverty ≠ Republican voting). The urban/conservative adherence and poverty regression was significant at 20 percent. The model has an F statistic of 2.759 and a significance value of 0.116. The percentage of conservative adherence variable had the major impact on the regression (p-value = 0.105), and the percent of poverty variable was not significant (p-value = 0.485). The urban/conservative/poverty regression produced a higher R^2 value (0.380) than in previous study periods.

4.5 Regression Analysis 2012

As in the previous decades covered by this study (with the exception of 1992), in 2012 the liberal adherence and poverty regression for rural counties has the lowest R^2 (0.038) of all the regressions (see Table 6). Even if the independent variables for this regression were statistically meaningful, which they are not, the model only predicts a meager 4 percent of Republican voting behavior. However, the conservative adherence and poverty regression was again significant at 5 percent (Sig. = 0.044). As in each of the previous decades of this study, conservative adherence variable was the strongest predictor of voting behavior (p-value = 0.017). The percentage of poverty variable is not significant (p-value = 0.625).

2012 Rural Counties, KS (Dependent Variable: Presidential Voting_% Republican)

Liberal Adherence and Poverty

Regression Statistics	
R Square	0.013
Standard Error	3.477
Observations	46

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	6.689	3.344	0.277	0.760

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	71.178	2.020	35.237	0.000
% Liberal Adherence	-0.011	0.056	-0.201	0.841
% Poverty	0.111	0.153	0.729	0.470

Conservative Adherence and Poverty

Regression Statistics	
R Square	0.135
Standard Error	3.254
Observations	46

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	71.247	35.624	3.364	0.044

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	69.820	1.722	40.551	0.000
% Con Adherence	0.147	0.059	2.479	0.017
% Poverty	0.070	0.143	0.492	0.625

2012 Urban Counties, KS (Dependent Variable: Presidential Voting_% Republican)

Liberal Adherence and Poverty

Regression Statistics	
R Square	0.399
Standard Error	6.036
Observations	12

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	217.401	108.701	2.984	0.101

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	79.647	9.097	8.756	0.000
% Lib Adherence	0.186	0.568	0.328	0.751
% Poverty	-0.910	0.426	-2.136	0.061

Conservative Adherence and Poverty

Regression Statistics	
R Square	0.398
Standard Error	6.041
Observations	12

ANOVA	*df*	*SS*	*MS*	*F*	*Sig. F*
Regression	2.000	216.834	108.417	2.971	0.102

	Coefficients	*Std. Error*	*t Stat*	*Sig.*
Intercept	84.883	12.084	7.024	0.000
% Con Adherence	-0.238	0.787	-0.303	0.769
% Poverty	-1.045	0.485	-2.156	0.059

Table 6: 2012 Regression Comparison Chart. Data highlighted in green were significant at 5% and are as highlighted in blue were significant at 20%.

In 2012, for the first time, both of the urban regressions are significant at 20 percent. The liberal adherence and poverty regression has an F statistic of 2.984 and a significance value of 0.101. In addition, the model has the highest R^2 (0.399) of all the regressions. The percentage of poverty variable had the main impact on the regression with a p-value of 0.061. The percentage of liberal adherence variable is not statistically significant (p-value = 0.751). Likewise, the urban/conservative adherence and poverty regression also had a higher R^2 (0.398) than in previous years. The percentage of poverty variable is nearly significant at 5 percent (p-value = 0.059). The conservative adherence variable is not significant (p-value = 0.769). Listed by decade, the null hypothesis regression results are provided next.

4.6 Hypothesis Testing Summary

1972_____

Rural Counties: % Conservative Adherence and % Poverty:

The null hypothesis was rejected. Ha: rural/conservative adherence and poverty had an effect on Republican voting.

Rural Counties: % Liberal Adherence and % Poverty:

The null hypothesis was not rejected. Ho: rural/liberal adherence and poverty had no effect on Republican voting.

Urban Counties: % Conservative Adherence and % Poverty:

The null hypothesis was not rejected. Ho: urban/conservative adherence and poverty had no effect on Republican voting.

Urban Counties: % Liberal Adherence and % Poverty:

The null hypothesis was not rejected. Ho: urban/liberal adherence and poverty had no effect on Republican voting.

For 1972, the only regression to successfully reject the null hypothesis was the percent conservative adherence and percent poverty regression for rural counties. The three remaining regressions failed to reject the null hypothesis. They were not significant at a 95 percent level of confidence.

1980_____

Rural Counties: % Conservative Adherence and % Poverty:

The null hypothesis was not rejected. Ho: rural/conservative adherence and poverty had no effect on Republican voting.

Rural Counties: % Liberal Adherence and % Poverty:

The null hypothesis was not rejected. Ho: rural/liberal adherence and poverty had no effect on Republican voting.

Urban Counties: % Conservative Adherence and % Poverty:

The null hypothesis was not rejected. Ho: urban/conservative adherence and poverty had no effect on Republican voting.

Urban Counties: % Liberal Adherence and % Poverty:

The null hypothesis was not rejected. Ho: urban/liberal adherence and poverty had no effect on Republican voting.

For 1980, all of the regressions failed to reject the null hypothesis. They were not significant at a 95 percent level of confidence. However, the percent conservative adherence and percent poverty regression for rural counties was close (Sig. = 0.058). If the poverty data were removed from the regression, the conservative adherence data

would be significant. Unfortunately, the regression's significance level was negatively impacted by the poverty data.

1992

Rural Counties: % Conservative Adherence and % Poverty:

The null hypothesis was rejected. Ha: rural/conservative adherence and poverty had an effect on Republican voting.

Rural Counties: % Liberal Adherence and % Poverty:

The null hypothesis was not rejected. Ho: rural/liberal adherence and poverty had no effect on Republican voting.

Urban Counties: % Conservative Adherence and % Poverty:

The null hypothesis was not rejected. Ho: urban/conservative adherence and poverty had no effect on Republican voting.

Urban Counties: % Liberal Adherence and % Poverty:

The null hypothesis was not rejected. Ho: urban/liberal adherence and poverty had no effect on Republican voting.

For 1992, the only regression to successfully reject the null hypothesis was the percent conservative adherence and the percent poverty regression for rural counties. The three remaining regressions failed to reject the null hypothesis. They were not significant at a 95 percent level of confidence.

2000

Rural Counties: % Conservative Adherence and % Poverty:

The null hypothesis was rejected. Ha: rural/conservative adherence and poverty had an effect on Republican voting.

Rural Counties: % Liberal Adherence and % Poverty:

The null hypothesis was not rejected. Ho: rural/liberal adherence and poverty had no effect on Republican voting.

Urban Counties: % Conservative Adherence and % Poverty:

The null hypothesis was not rejected. Ho: urban/conservative adherence and poverty had no effect on Republican voting.

Urban Counties: % Liberal Adherence and % Poverty:

The null hypothesis was not rejected. Ho: urban/conservative adherence and poverty had no effect on Republican voting.

For 2000, the only regression to successfully reject the null hypothesis was the percent conservative adherence and percent poverty regression for rural counties. The three remaining regressions failed to reject the null hypothesis. They were not significant at a 95 percent level of confidence.

2012_____

Rural Counties: % Conservative Adherence and % Poverty:

The null hypothesis was rejected. Ha: rural/conservative adherence and poverty had an effect on Republican voting.

Rural Counties: % Liberal Adherence and % Poverty:

The null hypothesis was not rejected. Ho: rural/liberal adherence and poverty had no effect on Republican voting.

Urban Counties: % Conservative Adherence and % Poverty:

The null hypothesis was not rejected. Ho: urban/conservative adherence and poverty had no effect on Republican voting.

Urban Counties: % Liberal Adherence and % Poverty:

The null hypothesis was not rejected. Ho: urban/liberal adherence and poverty had no effect on Republican voting.

For 2012, the only regression to successfully reject the null hypothesis was the percent conservative adherence and percent poverty regression for rural counties. The three remaining regressions failed to reject the null hypothesis. They were not significant at a 95 percent level of confidence.

For 1972, 1992, 2000 and 2012, the only regression to successfully reject the null hypothesis was the percent conservative adherence and percent poverty regression for rural counties. For 1980, the percent conservative adherence and percent poverty regression for rural counties was close (Sig. = 0.058). All of the remaining regressions failed to reject the null hypothesis. They were not significant at a 95 percent level of confidence.

CHAPTER V

CONCLUSION

5.1 Summary of Results

The aim of this study was to examine if social issues, as opposed to economic issues, increasingly influenced rural Kansas residents, when casting their presidential voting ballot. The hypothesis being tested was that if Frank is correct, the ability of poverty, an economic indicator, to predict Republican presidential voting would decrease over the course of the study period while the predictive power of Protestant church affiliation, a social issues predictor, would increase over the same period. The overall results of the regression analysis were somewhat inconclusive (see Figure 3); however, there were several findings of note.

Over the course of the study period, the conservative adherence data from the rural regressions most consistently predicted voting, of all the regression variables, at a 5 percent significance level. The rural/conservative adherence and poverty regressions were all significant at 5 percent; with the exception of the 1980 regression—which nearly met the standard for significance (Sig. = 0.058). In contrast, the rural/poverty

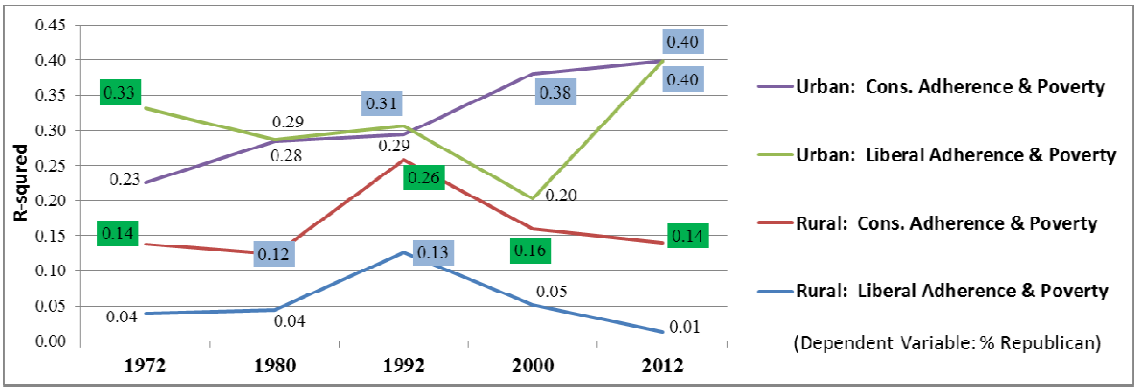


Figure 3: R-squared comparison. The R^2 values highlighted in green were significant at 5%, and values highlighted in blue at 20%.

data representing the economic predictor had little significance. The rural/liberal adherence and poverty regressions consistently scored the lowest R^2 values, and they all failed to meet the predefined 5 percent significance level necessary to be considered valid predictors of Republican voting. However, this provides partial support for Frank's claim that rural residents were voting for the Republican candidate due to social issues as opposed to economic concerns, as the only consistently valid predictor of voting in rural counties was the conservative adherence data (see Tables 2—6).

The rural county R^2 results for the conservative Protestant adherence and poverty regressions were statistically significant and relatively consistent over time. The R-squared statistical results for 1972, 1980, 2000 and 2010 ranged from 0.124 to 0.159; with one exception, the 1992 rural/conservative adherence and poverty regression had a noticeably heightened R^2 (0.258). The rural regression results undermine a fundamental prediction of the hypothesis; that if Frank was correct, conservative adherence as a social issues predictor would increase over the study period. However,

the data suggests otherwise, as the values tend to fluctuate back and forth more than originally predicted.

The independent variables in the urban regressions proved to be weaker predictors of Republican voting in comparison to the rural regressions, in that all of the urban regressions failed to reject the null hypothesis at a 5 percent significance level—the null hypothesis being that there was no relationship between liberal/conservative Protestant adherence and the electorate at or below poverty level, and Republican voting. As discussed earlier (see 3.4 Limitations of the Observations), the urban regressions were provided as a means for comparison and no conclusions should be drawn about urban voters due to the limited number of observations. However, the data results are worth discussing at the 20 percent significance level. Of the two independent variables, the percentage of poverty was the most consistently significant predictor of Republican voting behavior in urban regressions over the study period. At a 20 percent significance level, the urban/liberal adherence and poverty regressions were significant in 1972 (Sig. = 0.164), 1992 (Sig. = 0.193), and 2012 (Sig. = 0.101). In the urban/liberal adherence and poverty regressions, the poverty data had the greatest impact on predicting Republican voting and were significant in 1972, 1992, and 2012 (p-value < 0.20). The liberal adherence variable was only significant (p-value < 0.20) in 1972.

The urban/conservative adherence and poverty regression was significant at 20 percent in 2000 (Sig. = 0.116) and 2012 (Sig. = 0.102). The 1972, 1980, and 1992

regressions were not significant even at the questionable 20 percent significance level. However, the urban regression results provide limited support for the contention that conservative adherence as a social issue predictor was a rural phenomenon. With the exception of 2000 (Sig. < 0.20), the conservative adherence data was not a significant predictor of Republican voting. In contrast to the rural county data, in urban counties the economic indicator percentage of poverty was the more pronounced predictor of voting behavior, while religious adherence proved to be a meager predictor of voting.

It was expected that the most significant regressions would have higher R^2 values than the less significant regressions; however, this was not the case. In all the survey years, the urban regressions had higher R^2 values than their corresponding rural regressions. This was likely the result of the difference in the number of observations that comprise the regression groups (12 urban versus 46 rural observations).

The main emphasis of the study was to examine statistics related to conservative rural voters. The liberal rural regressions and the urban regressions were grouped in an attempt to isolate conservative rural voters, and they were mainly of interest in comparison to the conservative rural regressions. The results show that the conservative rural regressions were consistently the best predictors of Republican voting. The results of the other regressions have modest significance at best, with the percentage of poverty mainly having an inverse predictive relationship with Republican voting in urban areas. This suggests that conservative rural voters were influenced by social factors, as revealed by the predictive power of the social indicator utilized in the

regressions. Additionally, there is some evidence that urban voters were predicted at a questionable level of significance by the economic indicator, percent of poverty, in Republican presidential voting.

5.2 Potential for Future Research

The results of the regression analysis indicate that expanding the study area would improve the significance of the findings, because the analysis was limited by the small sample size available for the urban dataset. From a regional perspective, the outcome of the urban regressions results would benefit the most from an increased number of observations. In light of this, for future research, the study area should be expanded to include more counties. By including data from surrounding, demographically similar, states, or by creating an enlarged sample space by other means (perhaps a method based on distance) researchers can capture data from a greater number of counties. Therefore, by increasing the representation of urban areas and allowing for a dataset that is more balanced between urban and rural voters, data will clarify differences in urban versus rural regional characteristics.

The most promising choice for future research is to expand the regression analysis to include data from the entire United States. This approach facilitates analysis of regional differences, in addition to providing insight on local patterns and phenomena. In a nationwide survey, datasets derived from the decennial religious surveys could be expanded to include a greater range of conservative and liberal Protestant congregations (in this study, the data was limited to congregations with

adherents in Kansas) as well as Catholics and other groups. Additionally, the data employed to represent the economic predictors could be expanded to include the national government's data on median household income. Therefore, a nationwide approach affords the greatest range of meaningful options and potential for additional research.

REFERENCES

R.1 Works Cited

Archer, J. C., and P. J. Taylor. 1981. *Section and Party.* New York: John Wiley & Sons Ltd.

Banwart, D. 2013. Jerry Falwell, the Rise of the Moral Majority, and the 1980 Election. *Western Illinois Historical Review* V (Spring): 131–157.

Bartles, L. M. 2006. Review: What's the Matter with *What's the Matter with Kansas?*. Quarterly Journal of Political Science 1: 201–226.*

Bradley, M. B., N. M. Green, Jr., D. E. Jones, M. Lynn, and L. McNeil. 1992. *Churches and Church Membership in the United States*. Glenmary Research Center: Mars Hill, N.C.

Brunn, S. D. 1974. *Geography of Politics in America*. New York, NY: Harper & Row.

Brunn, S. D, D. Stanley, G. R. Webster, R. Gerald, J. C. Archer, and J. Clark. The Bible Belt in a Changing South: Shrinking, Relocating, and Multiple Buckles. *Southeastern Geographer* 51 (4): 513–549.

Busch, A. E. 2011. Social Conservatives and Economic Conservatives. *Society* 49 (1): 13–23.

Chomsky, N. 2006. Failed States: The Abuse of Power and the Assault on Democracy. C-SPAN2: Book TV, May 29, 2006.

"Christian Coalition of America". 2013. Christian Coalition of America Home Page. http://www.cc.org/our_agenda (last accessed 26 December 2013).

Elazar, D. J. 1966. *American Federalism*. New York, NY: Crowell.

Ellingson, S. 2007. *The Megachurch and the Mainline: Remaking Religious Tradition in the Twenty–First Century.* Chicago, IL: University of Chicago Press.

Eskridge, L. 1995, revised 2012. "Defining Evangelicalism." *Institute for the Study of American Evangelicals*. http://www.wheaton.edu/isae/defining-evangelicalism (last accessed 26 December 2013).

Finke, R., and R. Stark. 1993. *The Churching of America, 1776—1990: Winners and Losers in Our Religious Economy*. New Brunswick: Rutgers University Press.

Frank, T. 2004. *What's The Matter with Kansas? How Conservatives Won the Heart of America*. New York: Metropolitan Books.

Freund, R. J., W. J. Wilson, and D. L. Mohr. 2010. *Statistical Methods*. Burlington, MA: Academic Press.

Grammich, C., K. Hadaway, R. Houseal, D. E. Jones, A. Krindatch, R. Stanley, and R. H. Taylor. 2012. *2010 U.S. Religion Census: Religious Congregations & Membership Study.* Association of Statisticians of American Religious Bodies: Lenexa, KS.

"Full US 2012 Election County–Level to Download". *The Guardian*. Last modified 14 November 2012. http://www.theguardian.com/news/datablog/2012/nov/07/us-2012-election-county-results-download#data (last accessed 17 March 2014).

Hart, D. G. 2001. Mainstream Protestantism, "Conservative" Religion, and Civil Society. *Journal of Policy History* 13 (1): 19–46.

Heatwole, C. 1978. The Bible Belt: A Problem in Regional Definition. *Journal of Geography* 77 (2): 50–55.

Hill, S. 1985. Religion and Region in America. *Annals of the American Academy of Political and Social Science* 480: 132–141.

Hoover, D. R., M. D. Martinez, S. H. Reimer, and K. D. Wald. 2002. Evangelicalism Meets the Continental Divide: Moral and Economic Conservatism in the United States and Canada. *Political Research Quarterly* 55 (2): 351–374.

Hughes, B. 2006. History of the Charismatic Movement. Unity Publishing Home Page. www.unitypublishing.com/Hist-of-Char.html (last accessed 29 August 2013).

Johnson, D. W., P. Picard, and B. Quinn. 1974. *Churches and Church Membership in the United States*. Glenmary Research Center: Washington, D.C.

Kahane, Leo H. 2001. *Regression Basics*. Thousand Oaks, CA: Sage Publications, Inc.

Knox, R. A. 1950. *Enthusiasm: A Chapter in the History of Religion with special reference to XVII and XVIII centuries*. Oxford: Clarendon Press.

Kong, L. 1990. Geography and Religion: Trends and Prospects. *Progress in Human Geography* 14 (3): 355–71.

—. 2001. Mapping 'New' Geographies of Religion: Politics and Poetics in Modernity. *Progress in Human Geography* 25 (2): 211–233.

McCann, J. C., R. B. Rapoport, and W. J. Stone. 1999. Heading the Call: An Assessment of Mobilization into H. Ross Perot's 1992 Presidential Campaign. *Journal of Political Science* 43 (1): 1–28.

"Our Mission and Vision". 2006. People for the American Way website. http://www.pfaw.org/about-us/our-mission-and-vision (last Accessed 29 August 2013).

Proctor, J. D. 2005. Religion as Trust in Authority: Theocracy and Ecology in the United States. *Annals of the Association of American Geographers* 96 (1): 188–196.

Quinn, B., H. Anderson, M. Bradely, P. Goetting, and P. Shriver. 1982. Glenmary Research Center: Mars Hill, N.C.

Regnerus, M. D., D. Sikkink, and C. Smith. 1999. Voting with the Christian Right: Contextual and Individual Patterns of Electoral Influence. *Social Forces* 77 (4): 1375–1401.

"Regression Diagnostics". 2014. *Oxford Journals*. http://www.oxfordjournals.org/our_journals/tropej/online/ma_chap5.pdf (last accessed 17 March 2014).

Reichley, J. A. 2001. Faith in Politics. *Journal of Policy History* 13 (1): 157–180.

Rogerson, P. A. 2002. *Statistical Methods for Geography*. Thousand Oaks, CA: Sage Publications.

Saint–Germain, M. A. 2014. California State University Long Beach web site. http://www.csulb.edu/~msaintg/ppa696/696regmx.htm (last accessed 9 March 2014).

Scammon, R. 1973. *America Votes 10, A Handbook of Contemporary American Election Statistics, 1972*. Governmental Affairs Institute, Congressional Quarterly: 136–137.

—. 1981. *America Votes 14, A Handbook of Contemporary American Election Statistics, 1980*. Elections Research Center, Congressional Quarterly: 159–160.

Scammon, R., and A. V. McGillivary. 1993. *America Votes 20, A Handbook of Contemporary American Election Statistics, 1992*. Elections Research Center, Congressional Quarterly: 218–219.

Scammon, R., A. V. McGillivary, and R. Cook. 2001. *America Votes 24, A Handbook of Contemporary American Election Statistics, 2000*. CQ Press, A Division of Congressional Quarterly Inc.: 180–181.

Shelly, F. M., and J. C. Archer. 1995. The Volatile South: A Historical Geography of Presidential Elections in the South, 1872—1992. *Southeastern Geographer* Vol. 35(1): 22–36.

Shortridge, J. R. 1976. Patterns of Religion in the United States. *Geographical Review* 66 (4): 420–434.

—. 1977. A New Regionalization of American Religion. *Journal for the Scientific Study of Religion* 16 (2): 143–153.

Smidt, C., and P. Kellstedt. 1992. Evangelicals in the Post–Reagan Era: An Analysis of Evangelical Voters in the 1988 Presidential Election. *Journal for the Scientific Study of Religion* 31 (3): 330–338.

Smith, T. W., and S. Kim. 2005. The Vanishing Protestant Majority. *Journal for the Scientific Study of Religion* 44 (2): 211–223.

Stump, W. 2000. *Boundaries of Faith: Geographical Perspectives on Religious Fundamentalism.* Lawham, MD: Rowman and Littlefield.

—. 2008. *The Geography of Religion: Faith, Place, and Space.* Lawham, MD: Rowman and Littlefield.

Taylor, H. 2003. The Religious and Other Beliefs of Americans. The Harris Poll – Harris Interactive Home Page. http://www.harrisinteractive.com/vault/Harris-Interactive-Poll-Research-The-Religious-and-Other-Beliefs-of-Americans-2003-2003-02.pdf (last accessed 29 August 2013).

Thumma, S. 2006. *Exploring the Megachurch Phenomena: Their Characteristics and Cultural Context.* The Hartford Institute for Religious Research home page. http://hirr.hartsem.edu/bookshelf/thumma_article2.html (last accessed 23 May 2014).

Tweedie, S. W. 1978. Viewing the Bible Belt. *Journal of Popular Culture* 11 (8): 65–76.

U.S. Census Bureau. 2009. *A Compass for Understanding and Using American Community Survey Data.* https://www.census.gov/acs/www/Downloads/handbooks/ACSAIANHandbook.pdf (last accessed 29 August 2013).

—. 2010. *2010 Census Urban and Rural Classification and Urban Area Criteria*. http://www.census.gov/geo/reference/ua/urban-rural-2010.html (last accessed 29 December 2013).

—. 2012. Kansas—Percentage Poverty 1970 to 2000. *American Fact Finder*. http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml (last accessed 28 December 2013).

—. 2012. 2011 ACS 5-Year Estimate_Poverty_Kansas. American Fact Finder. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?fpt=table (last 28 December 2013).

—. 2013. Kansas – 2010 Census Results: Total Population by County. http://quickfacts.acensus.gov/qfd/states/20000.html (last accessed 28 December 2013).

—. 2014. *How the Census Bureau Measures Poverty.* *http://www.census.gov/hhes/www/poverty/about/overview/measure.html* (last accessed 8 March 2014).

Wacker, G. 2000. *The Christian Right*. http://nationalhumanitiescenter.org/tserve/twenty/tkeyinfo/chr_rght.htm (last accessed 29 August 2013).

Warf, B., and M. Winsberg. 2008. The Geography of Religious Diversity in the United States. *The Professional Geographer* 60 (3): 413–424.

—. 2010. Geographies of Megachurches in the United States. *Journal of Cultural Geography* 27 (1): 33–51.

Webster, G. R. 1997. Religion and Politics in the American South. *The Pennsylvania Geographer* 35 (2): 151–172.

—. 2000. Geographical Patterns of Religious Denomination Affiliation in Georgia, 1970–1990: Population Change and Growing Urban Diversity. *Southeastern Geographer* 40 (1): 25–51.

Woodberry, R. D., and C. S. Smith. 1998. Fundamentalism et al: Conservative Protestants in America. *Annual Review of Sociology* 24: 25–56.

Zelinsky, W. 1961. An Approach to the Religious Geography of the United States: Patterns of Church Membership in 1952. *Annals of the Association of American Geographers* 51: 139–93.

R.2 Other References

Bellah, R. N., R. Madsen, S. M. Tipton, W. M. Sullivan, and A. Swinler. 1992. *Good Society*. New York: Alfred A. Knopf.

Berg, N. 2012. U.S. Urban Population Is Up…But What Does 'Urban' Mean? The Atlantic Cities Website. http://www.theatlanticcities.com/neighborhoods/2012/03/us-urban-population-what-does-urban-really-mean/1589/ (last accessed 8 March 2014).

Dudley, C. S., and N. T. Ammerman. 2002. *Congregations in Transition: A Guide for Analyzing, Assessing, and Adapting in Changing Communities*. San Francisco: Jossy–Bass and Wiley Company.

Healy, A. E. 2005. *The Postindustrial Promise: Vital Religious Community in the 21st Century*. Virginia: The Alban Institute.

Hervieu–Léger. 2002. Space and Religion: New Approaches to Religious Spatiality in Modernity. *International Journal of Urban and Regional Research* 26 (1): 99–105.

Hopson, R. E., and D. R. Smith. 1999. Changing Fortunes: An Analysis of Christian Right Ascendance within American Political Discourse. *Journal for the Scientific Study of Religion* 38 (1): 1–13.

Johnston, R. J. 1982. The Changing Geography of Voting in the United States: 1946–1980. *Transactions of the Institute of British Geographers* 7 (2): 187–204.

Margurran, A. 2004. *Measuring Biological Diversity.* Oxford, U.K.: Blackwell.

Marty, M. E. 1998. Revising the Map of American Religion. *Annals of the American Academy of Political and Social Science* 558: 13–27.

Proctor, J. D. 2006. Theorizing and the Study of Religion. *Annals of the Association of American Geographers* 96 (1): 165–168.

Roof, W. C., and W. McKinney. 1987. *American Mainline Religion: Its Changing Shape and Future*. New Brunswick and London: Rutgers University Press.

Sherkat, D. E. 2001. Tracking the Restructuring of American Religion: Religion Affiliation and Patterns of Religious Mobility, 1973–1998. *Social Forces* 79 (4): 1459–1493.

Shelley, F. M., J. C. Archer, F. M. Davidson, and S. D. Brunn. 1996. *Political Geography of the United States*. New York: The Guilford Press.

Shibley, M. 1996. *Resurgent Evangelicalism in the United States: Mapping Cultural Change Since 1970*. Columbia: University of South Carolina Press.

Simpson, E. 1949. Measuring of Diversity. *Nature* 163: 688.

Sopher, D. 1967. *Geography of Religions*. Englewood Cliffs, N.J.: Prentice–Hall.

Sutton, M. A. 2005. Clutching to "Christian" America: Aimee Semple McPherson, the Great Depression, and the Origins of Pentecostal Political Activism. *Journal of Policy History* 17 (3): 308–338.

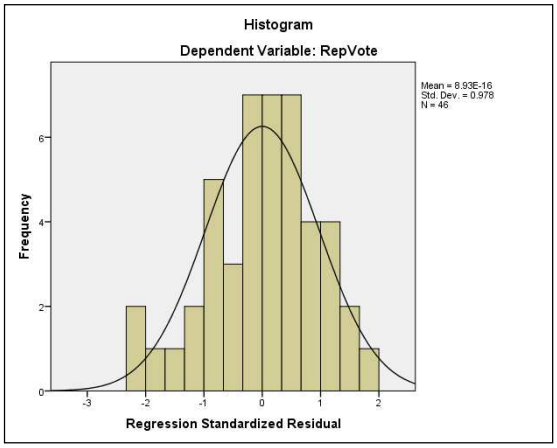
Woolever, C., and D. Bruce. 2002. *A Field Guide to U.S. Congregations: Who's Going Where and Why*. Kentucky: John Knox Press.

Zelinsky, W. 2002. The Uniqueness of the American Religious Landscape. *The Geographical Review* 91 (3): 565–585.

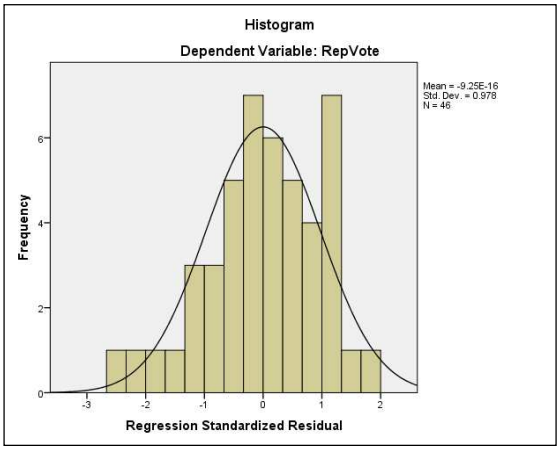
APPENDICES

A.1 Histograms of the dependent variable–Republican voting, and the standardized residuals for 1972, 1980, 1992, 2000, and 2012.

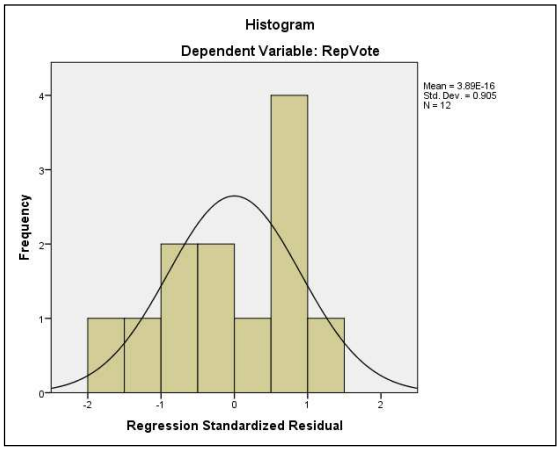
Figure 4: 1972 Histograms



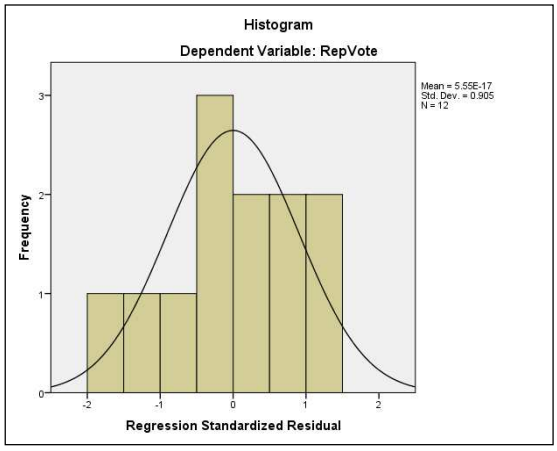
1972 Rural/Conservative Adherence & Poverty



1972 Rural/Liberal Adherence & Poverty



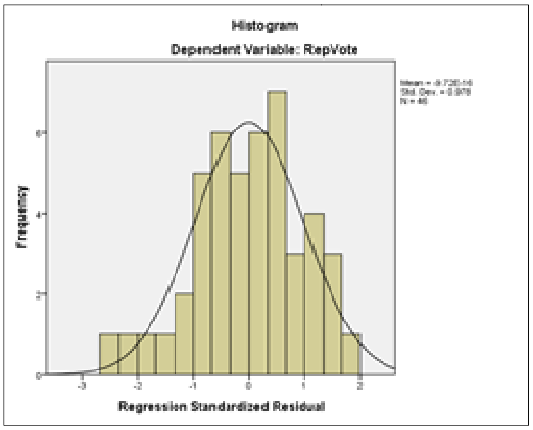
1972 Urban/Conservative Adherence & Poverty



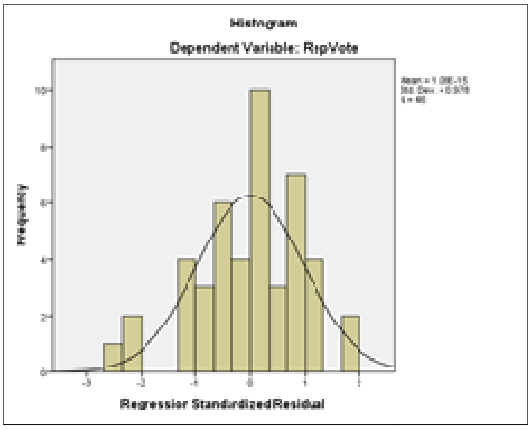
1972 Urban/Liberal Adherence & Poverty

Check of the assumption about normal distribution: The 1972 histograms for the Republican voting data and the standardized residuals are normally distributed.

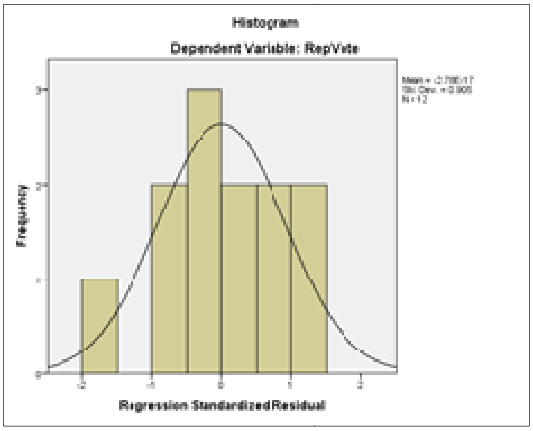
Figure 5: 1980 Histograms



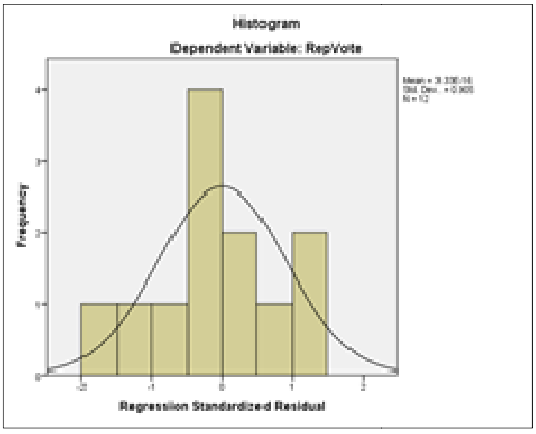
1980 Rural/Conservative Adherence & Poverty



1980 Rural/Liberal Adherence & Poverty



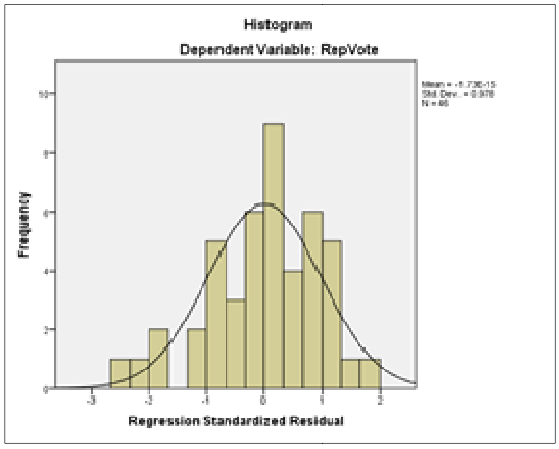
1980 Urban/Conservative Adherence & Poverty



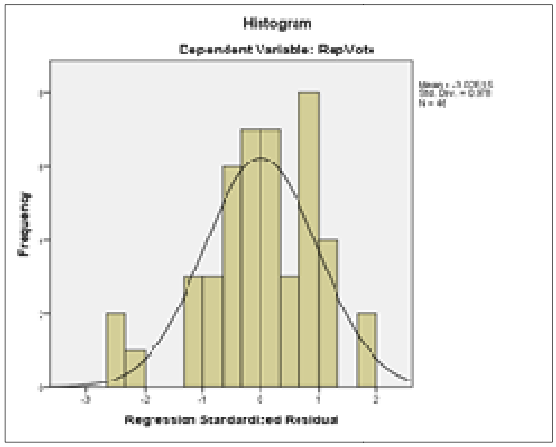
1980 Urban/Liberal Adherence & Poverty

Check of the assumption about normal distribution: The 1980 histograms for the Republican voting data and the standardized residuals are normally distributed.

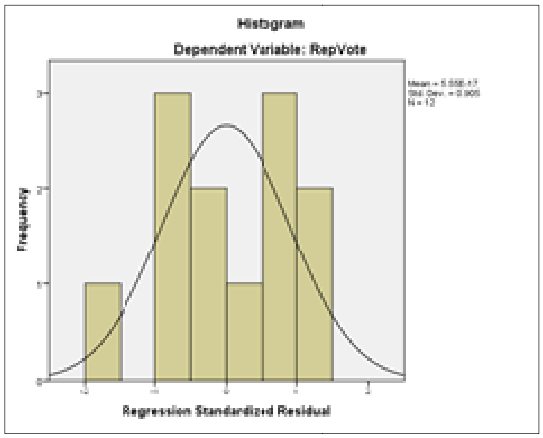
Figure 6: 1992 Histograms



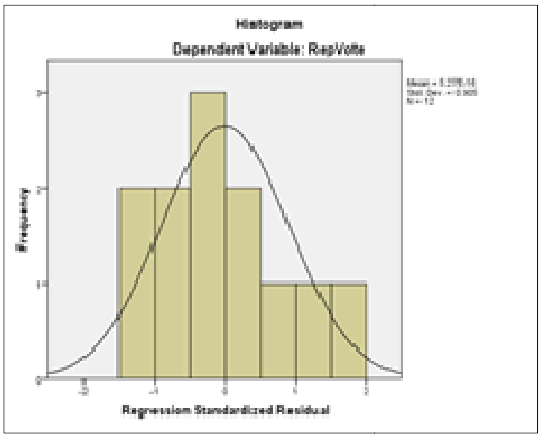
1992 Rural/Conservative Adherence & Poverty



1992 Rural/Liberal Adherence & Poverty



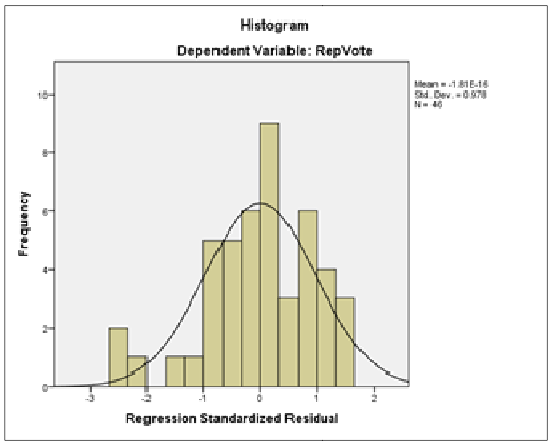
1992 Urban/Conservative Adherence & Poverty



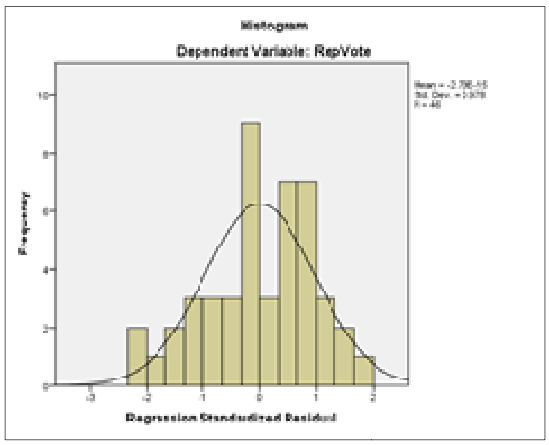
1992 Urban/Liberal Adherence & Poverty

Check of the assumption about normal distribution: The 1992 histograms for the Republican voting data and the standardized residuals are normally distributed.

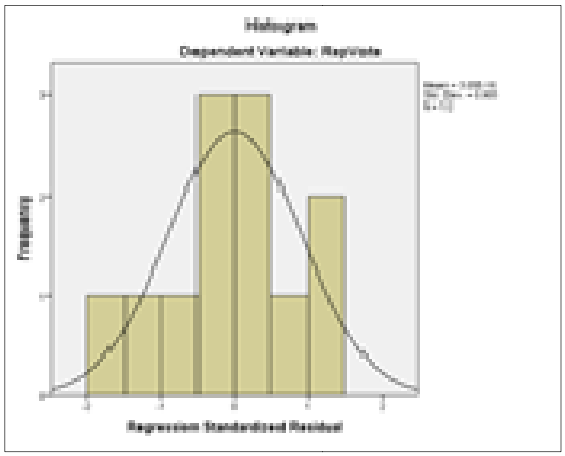
Figure 7: 2000 Histograms



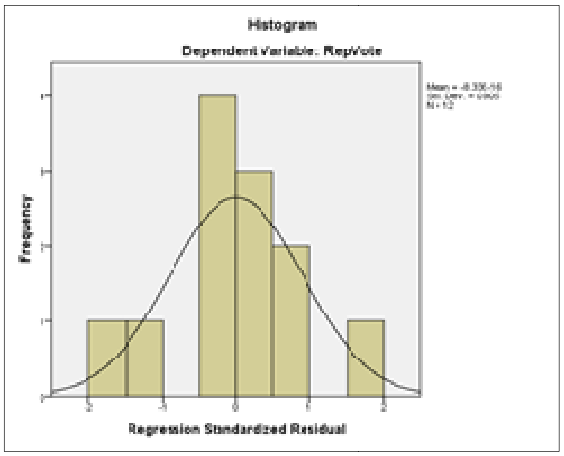
2000 Rural/Conservative Adherence & Poverty



2000 Rural/Liberal Adherence & Poverty



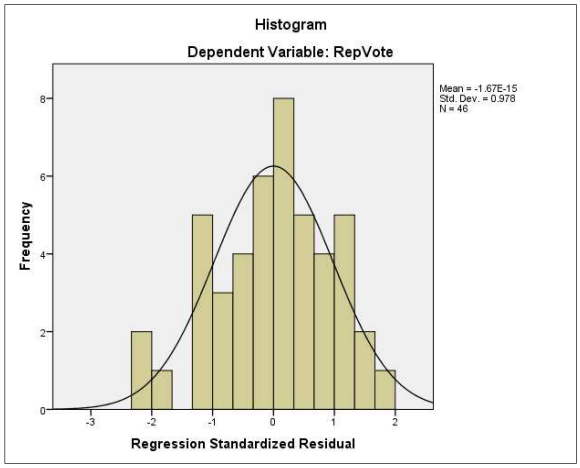
2000 Urban/Conservative Adherence & Poverty



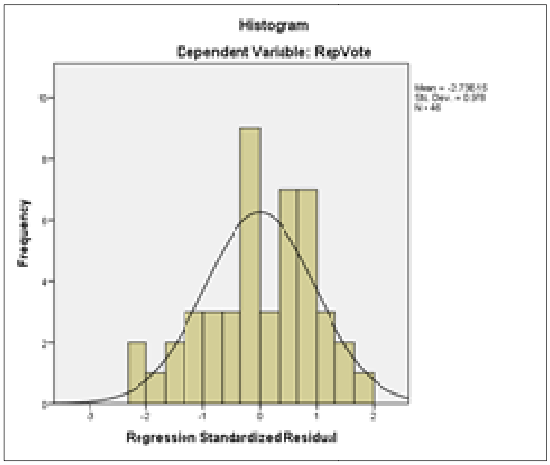
2000 Urban/Liberal Adherence & Poverty

Check of the assumption about normal distribution: The 2000 histograms for the Republican voting data and the standardized residuals are normally distributed.

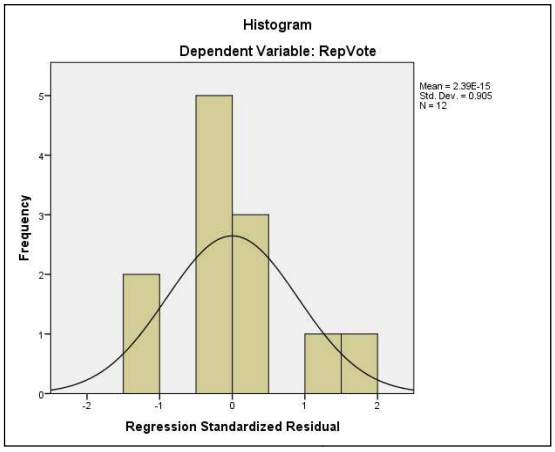
Figure 8: 2012 Histograms



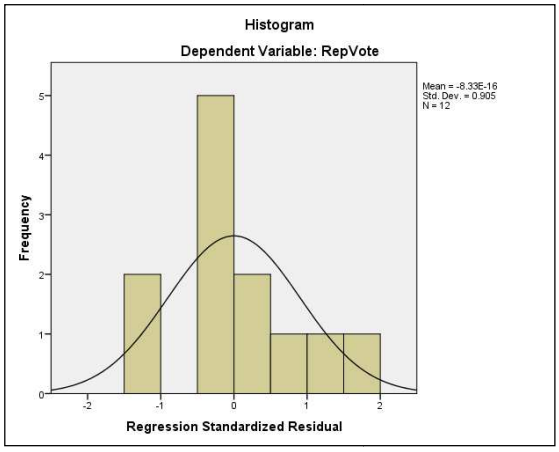
2012 Rural/Conservative Adherence & Poverty



2012 Rural/Liberal Adherence & Poverty



2012 Urban/Conservative Adherence & Poverty



2012 Urban/Liberal Adherence & Poverty

Check of the assumption about normal distribution: The 2012 histograms for the Republican voting data and the standardized residuals are normally distributed.

A.2 Durban–Watson Test (for multicollinearity) Results:

Table 11: 1972 Durban–Watson Test Results

1972 Rural/Conservative Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	43[a]	.042	1.714

1972 Rural/Liberal Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	43[a]	.431	1.716

1972 Urban/Conservative Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	9[a]	.218	1.357

1972 Urban/Liberal Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	9[a]	.164	1.262

The results for 1972 were all less than 2 but greater than 1, with DW equal to 2 indicating no autocorrelation. Values less than 1 indicate that successive error terms have similar values. Values less than 1 indicate that successive error terms have similar values.

Table 12: 1980 Durban–Watson Test Results

1980 Rural/Conservative Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	43[a]	.058	1.657

1980 Rural/Liberal Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	43[a]	.376	1.774

1980 Urban/Conservative Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	9[a]	.223	1.412

1980 Urban/Liberal Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	9[a]	.218	1.357

The results for 1980 were all less than 2 but greater than 1, with DW equal to 2 indicating no autocorrelation. Values less than 1 indicate that successive error terms have similar values. Values less than 1 indicate that successive error terms have similar values.

Table 13: 1992 Durban-Watson Test Results

1992 Rural/Conservative Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	43[a]	.002	1.799

1992 Rural/Liberal Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	43[a]	.056	1.767

1992 Urban/Conservative Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	9[a]	.208	1.448

1992 Urban/Liberal Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	9[a]	.193	1.522

The results for 1992 were all less than 2 but greater than 1, with DW equal to 2 indicating no autocorrelation. Values less than 1 indicate that successive error terms have similar values. Values less than 1 indicate that successive error terms have similar values.

Table 14: 2000 Durban–Watson Test Results

2000 Rural/Conservative Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	43[a]	.024	1.703

2000 Rural/Liberal Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	43[a]	.322	1.729

2000 Urban/Conservative Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	9[a]	.116	1.632

2000 Urban/Liberal Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	9[a]	.360	1.592

The results for 2000 were all less than 2 but greater than 1, with DW equal to 2 indicating no autocorrelation. Values less than 1 indicate that successive error terms have similar values. Values less than 1 indicate that successive error terms have similar values.

Table 15: 2012 Durban–Watson Test Results

2012 Rural/Conservative Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	43[a]	.044	1.595

2012 Rural/Liberal Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	43[a]	.760	1.661

2012 Urban/Conservative Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	9[a]	.101	1.825

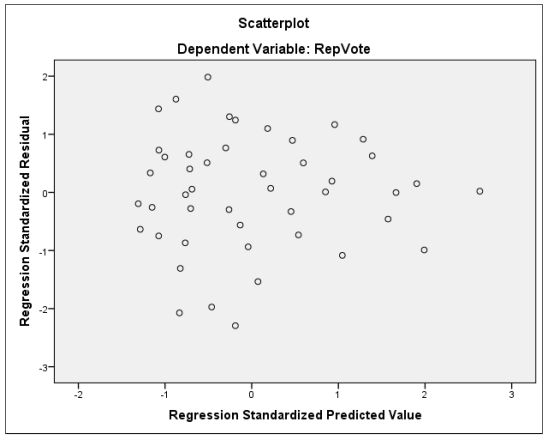
2012 Urban/Liberal Adherence & Poverty

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	9[a]	.102	1.790

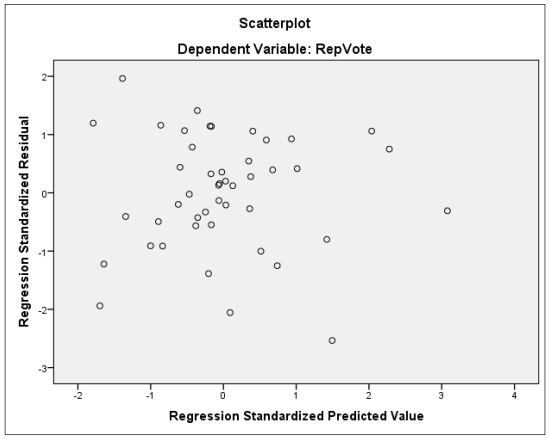
The results for 2012 were all less than 2 but greater than 1, with DW equal to 2 indicating no autocorrelation. Values less than 1 indicate that successive error terms have similar values. Values less than 1 indicate that successive error terms have similar values.

A.3 Homoscedasticity Tests

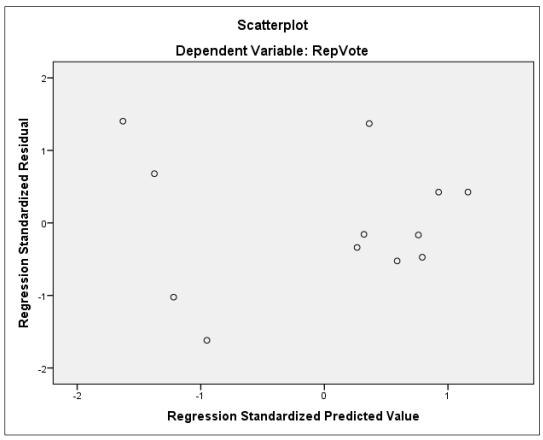
Figure 10: 1972 Homoscedasticity Tests



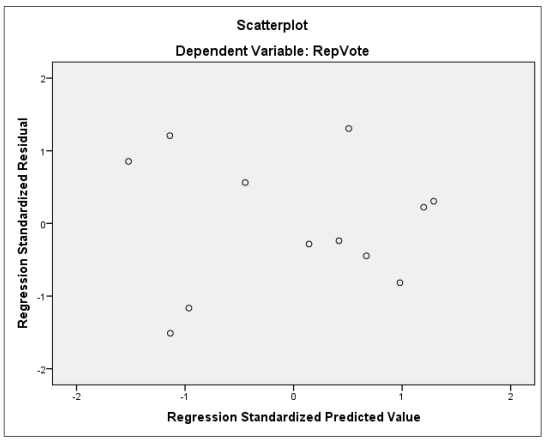
1972 Rural/Con. Ad. & Poverty



1972 Rural/Liberal Ad. & Poverty

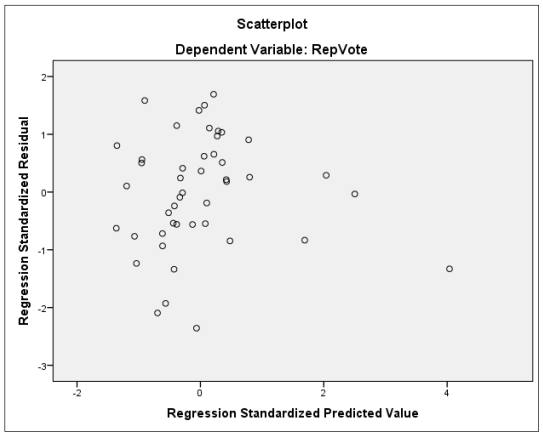


1972 Urban/Con. Ad. & Poverty

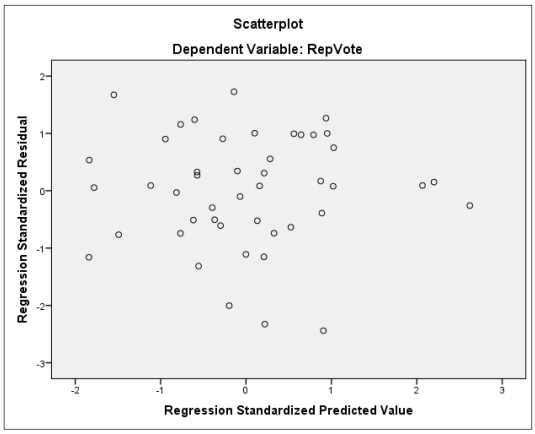


1972 Urban/Liberal Ad. & Poverty

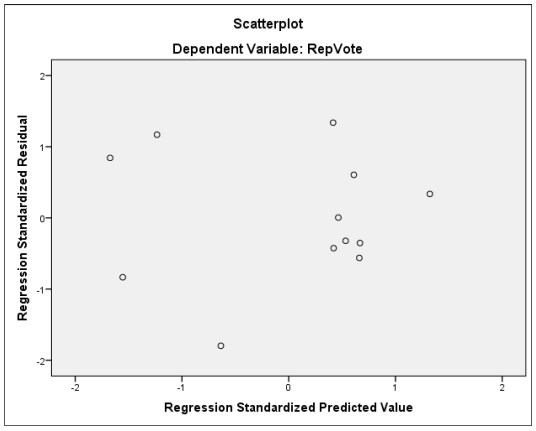
Figure 11: 1980 Homoscedasticity Tests



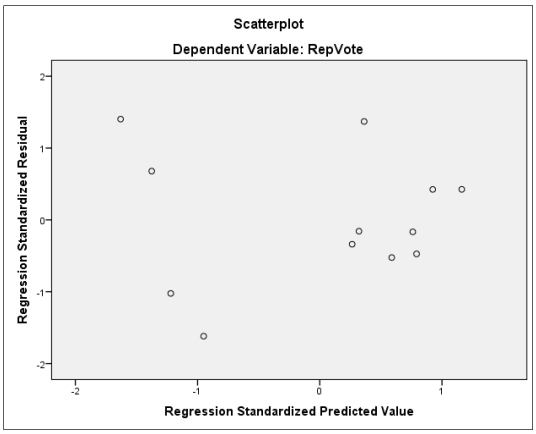
1980 Rural/Con. Ad. & Poverty



1980 Rural/Liberal Ad. & Poverty

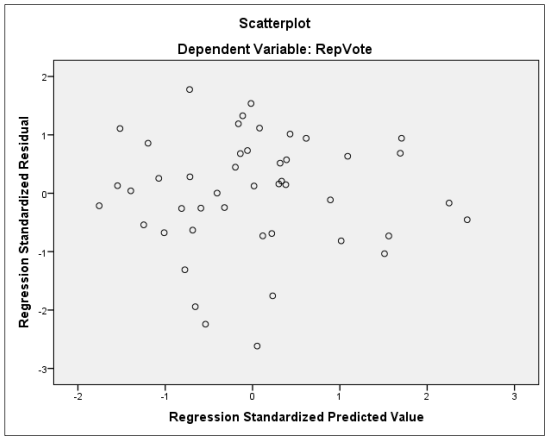


1980 Urban/Con. Ad. & Poverty

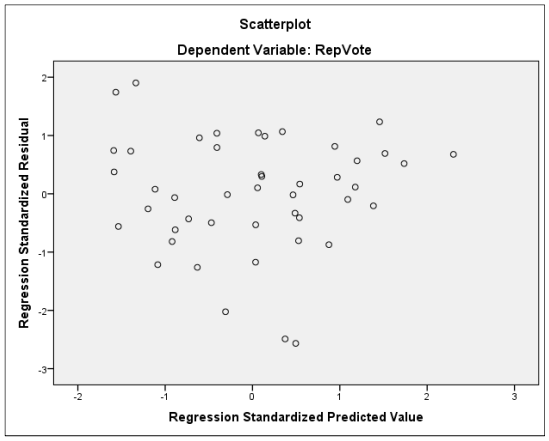


1980 Urban/Liberal Ad. & Poverty

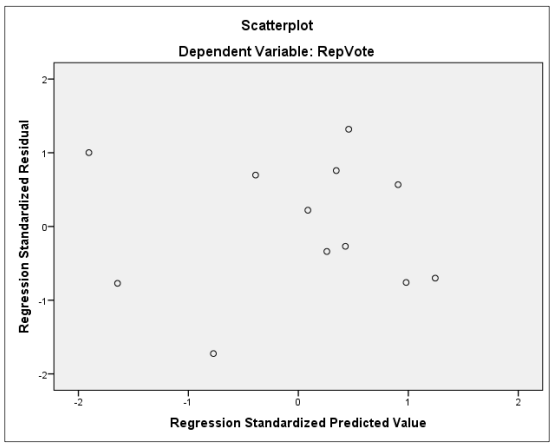
Figure 12: 1992 Homoscedasticity Tests



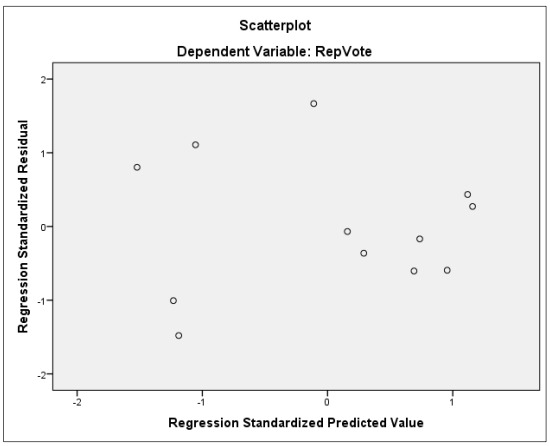
1992 Rural/Con. Ad. & Poverty



1992 Rural/Liberal Ad. & Poverty

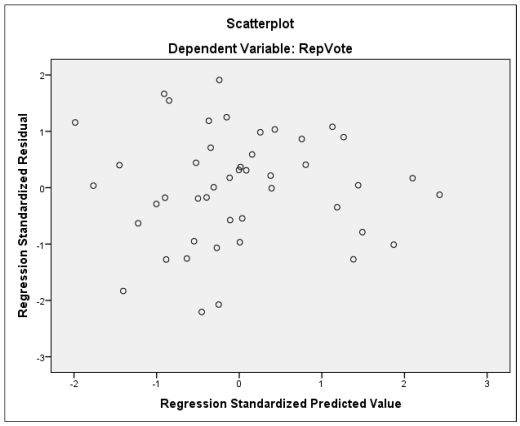


1992 Urban/Con. Ad. & Poverty

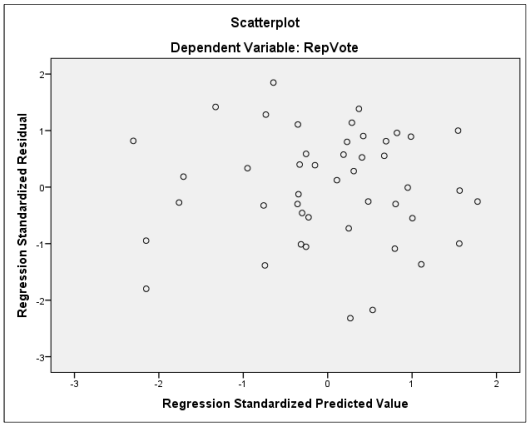


1992 Urban/Liberal Ad. & Poverty

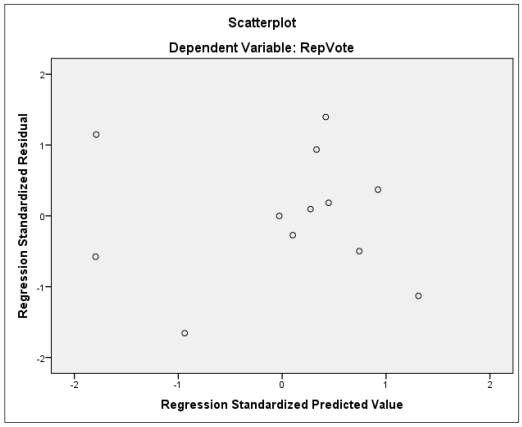
Figure 13: 2000 Homoscedasticity Tests



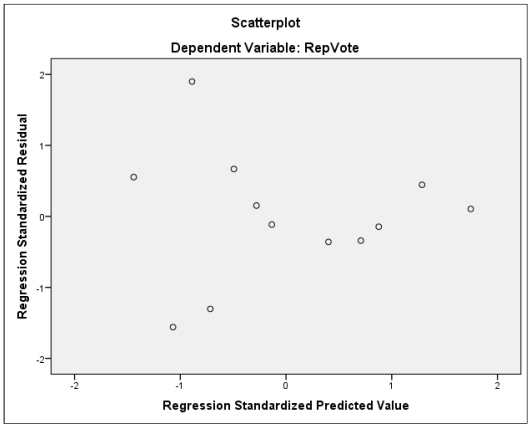
2000 Rural/Con. Ad. & Poverty



2000 Rural/Liberal Ad. & Poverty

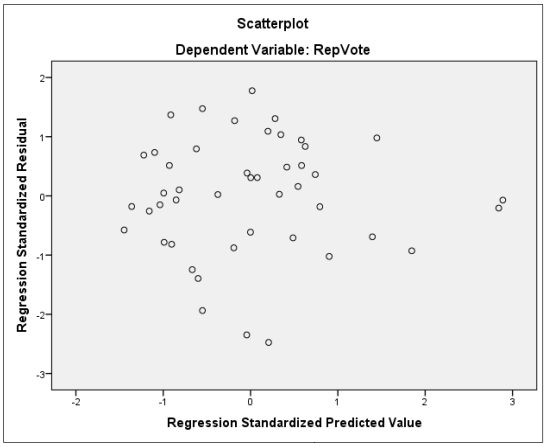


2000 Urban/Con. Ad. & Poverty

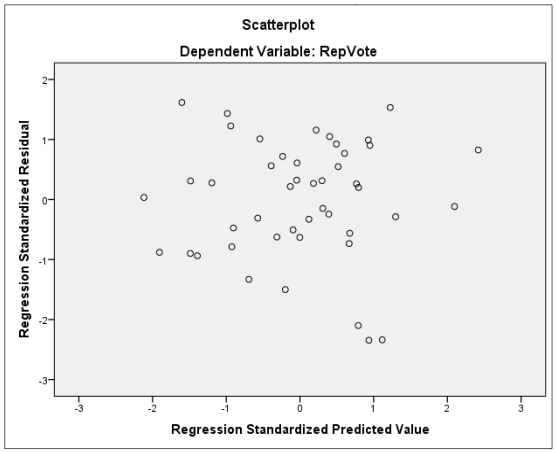


2000 Urban/Liberal Ad. & Poverty

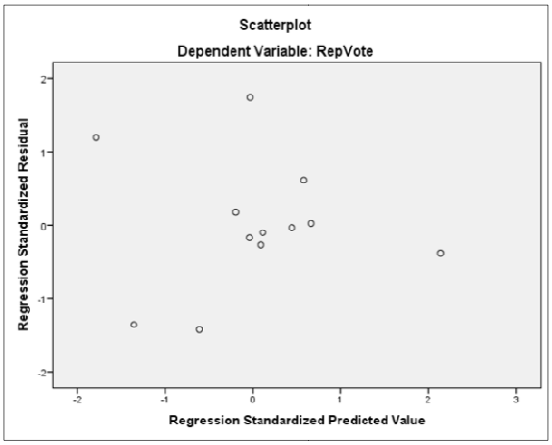
Figure 14: 2012 Homoscedasticity Tests



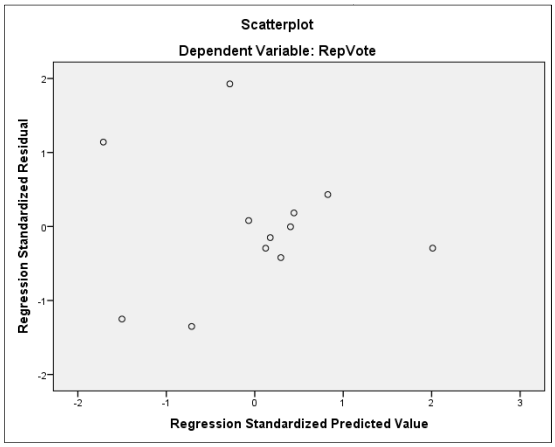
2012 Rural/Con. Ad. & Poverty



2012 Rural/Liberal Ad. & Poverty



2012 Urban/Con. Ad. & Poverty



2012 Urban/Liberal Ad. & Poverty

VITA

Joel David Barrow

Candidate for the Degree of

Master of Science

Thesis: A GEOGRAPHICAL STUDY OF THE VARYING IMPACT OF DEMOMINATIONAL AFFILIATION AND POVERTY ON PRESIDENTIAL VOTING IN KANSAS: 1972 TO 2012

Major Field: Geography

Biographical:

Education:

Completed the requirements for the Master of Science in Geography at Oklahoma State University, Stillwater, May in 2014.

Completed the requirements for the Bachelor of Business Administration in Petroleum Land Management at the University of Oklahoma, Norman, Oklahoma/1993.

Experience:

Geography Lab Technician. 07/2013 to 05/2014. Oklahoma State University.

Supervisory Geographer. 10/2007 to 10/2012. U.S. Census Bureau.

Geographic Specialist. 01/2007 to 10/2007. U.S. Census Bureau.

Teaching Assistant. 08/2004 to 07/2006. Oklahoma State University.

GIS Intern. 05/2004 to 07/2004. Strategic Consulting International.

Research Assistant. 05/2003 to 08/2003. Oklahoma State University.

Professional Presentations:

MidAmerica GIS Symposium in 2008, 2010 and 2012—Kansas City Metro GIS 2008, 2009 and 2011—OSU Research Symposium 2014.