Relationship Between Absentee Landownership and Quality of Life in Alabama

by

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Abstract

This study examines the relationship between absentee land ownership of farm and forestland and quality of life in Alabama. Quality of life is measured with a set of variables including per capita income, educational attainment, percentage of students in public schools eligible for free or reduced priced food, total amount of local funds spent per student in school, and percentage of female headed households. The extent of absentee land ownership is documented by detailed examination of county tax records. I distinguish between absentee owners who live in a different Alabama county from the land they own and the owners who live in a different state. Owners of agricultural and forestland in Alabama benefit from a current-use tax system which results in a lowest property tax rates in Alabama. These low tax rates in turn limit the ability of local governments to meet citizen needs in some of the poorest counties of the nation. Correlation was found between the percentage of absentee owned land and quality of life in Alabama. Findings from ordinary least square regression supported the correlation results. The result of this study indicates that the benefit of forest and farmland tax policy is mostly enjoyed by absentee owners in Alabama, including the owners from outside of the state. Therefore, this study suggests reconsideration of the tax policy of Alabama to foster the socio-economic development in many of the poorest counties in this state.

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Chapter I

Introduction

Background of the study

Since the Civil War, Alabama has been one of the poorest states in the United States (Encyclopedia of Alabama 2007). Found within this state are eight of the nation's 100 poorest counties. The origin of this economic condition is not straightforward. The scarcity of natural resources, like in some other states of the United States (U.S.), is not the reason for poverty or poor quality of life in Alabama. Alabama contains an abundance of natural resources (Bliss et al. 1998). The southern terminus of the Appalachian Mountains shapes northern Alabama's landscape of small farms and family forestlands. The southern half of the state is part of the coastal plains that run from Virginia down through the Carolinas and then west to east Texas. This region was the heart of the old plantation South, dominated by cotton production and large landholdings. Over the past fifty years, row crop agriculture in both regions has declined in favor of forestry. Today over 60 percent of land in the South is commercial timberland (Smith et al. 2010). The figure for forestland in Alabama is 71 percent (22.9 million acres) with an additional 26 percent (8.6 million acres) in agricultural land (Hartsell and Brown 2002; USDA n.d.).

In spite of this abundant quantity of natural resources, Alabama is the seventh poorest state, with 17.5 percent of its residents living in poverty as compared with the U.S. average of 14.3 percent (U.S. Bureau of the Census 2010). In Alabama only Shelby County has a single-digit poverty rate, which is 6.9 percent. The United States Department of Agriculture's (USDA)

Economic Research Service (ERS) considers an area as persistently poor if more than 20 percent of the population is below the poverty level for three successive decades. As shown in Table 1, 19 counties out of 67 can be persistently poor measured by the percentage of people over poverty level in each decade from 1980 to 2000 (U.S. Census Bureau 1989, U.S. Census Bureau 1999 and U.S. Census Bureau 2009a.). Moreover, the average percentage of population below the poverty threshold was more than 20 in another 21 counties and close to 20 in an additional 12 counties during the last three decades. Most of the persistently poor counties are situated in the Black Belt region of Alabama. The Black Belt region is defined by counties where African Americans make up over 40 percent of the population and is characterized by the poorest quality of life (Wimberly and Morris 1996). Figure 1 shows the geographic location of Alabama's persistently poor counties.

What are the factors that determine this poor economic conditions that lead to poor quality of life in Alabama? It is not easy to indicate one specific reason. Various issues, such as access to natural resources, income level, average age of the population and racial discrimination, can influence the quality of life in a society. Along with other components, access to land is a considerable issue. The literature reviewed for this study strongly supports the view that land and land ownership is fundamental to economic freedom at the individual level and for the development of a community as a whole. Zabawa (1991) argues that the use of land, leading to a sense of personal power and independence, is what makes landownership valuable. The control of and access to land by local people is crucial for the socio-economic development of a community (Nelson 1978).

Walter Goldschmidt's (1978) classical anthropological study on two agricultural farm based towns of California, Arvin and Dinuba, supports this argument. Walter Goldschmidt

(1978) conducted a study on two communities, Arvin and Dinuba, and contrasted the social and economic characteristics of the two towns. Arvin, which was a large-scale farming town, had slow development in comparison to Dinuba, a small-scale farming town. According to Goldschmidt (1978), large-scale farming is synonymous with absentee landownership and capitalist agriculture, and small-scale farming is related to locally owned land. He argued that social and economic development of a community was related with farm size and ownership patterns. His study revealed that people from Arvin blamed absentee landownership for the retarded development of that town. They stated that nobody lived permanently in Arvin. No one there planned for the future and 80 percent of the people had no roots in the community. Non-residential owners of farm land did not have any interest in welfare of the local community.

Goldschmidt's hypothesis that a strong relationship exists between farm size and patterns of farm ownership and the quality of life in a community, especially rural has been debated and expanded over the intervening years (see for example, Barnes and Blevins 1992; Green 1985; Gilles and Geletta 1993; Lyson et al. 2001; Heffernan and Lasley 1978; Lobao et al. 1993; Harley 2010; Welsh 2009). Due to differences in methodology, geographic focus, and research settings, those studies generated mixed support for the Goldschmidt hypothesis. While some of those studies corroborated Goldschmidt's conclusion, others questioned and proposed further closer examination of the hypothesis. For example, Barnes and Blevins's (1992) study did not support the Goldschmidt hypothesis. They concluded that farm size was inversely related to poverty. However, Labao et al. (1993) and Gilles and Geletta (1993) pointed out the methodological errors of Barnes and Blevins's (1992) study. Recently Welsh (2009) pointed out that Goldschmidt (1978) conducted his study in the 1940's and that the agricultural market and

farming structure have changed dramatically from 1940 to present. Therefore, a new generation of studies should be attempted to explore the effects of structural changes (Welsh 2009).

The present study was an attempt to test a hypothesis inspired by Goldschmidt's work by examining the relationship between absentee landownership and quality of life in Alabama. Although the inspiration for this study was Goldschmidt's conclusion, this study departs from Goldschmidt and others who have focused exclusively on the relationship between quality of life and farm size. Instead, this study investigated the relationship between the quality of life and ownership of both forest and farm land. The primary purpose of this study was to document the relationship between absentee land owners and the quality of life in Alabama.

Objectives

The purpose of the study was to examine the relationship between absentee land ownership and quality of life in Alabama. To examine the relationship, the percentage of absentee land for both forest and agricultural sector in each study county was documented. Distinction was made between absentee owners who live in a different Alabama county from the land they own and owners who live in a different state. A differentiation between the percentage of absentee land in metropolitan (metro) and non-metropolitan (non-metro) Alabama counties was also determined.

The specific objectives pursued are the following.

Objective 1: Based on review of academic literature, develop a clear understanding of the importance of land ownership for socio-economic development at both individual and community levels and to understand what differences have been found where land is locally

owned compared to land owned by non-resident owners on the quality of life of a community.

Objective 2: Document the percentage of forest and agricultural land in Alabama counties owned by Alabama residents who live in counties other than where the land is located.

Objective 3: Document the percentage of forest and agricultural land in Alabama owned by people who live outside of the state.

Objective 4: Document the percentage of land in both types of absentee ownership (in-state and out-of-state) in metro and non-metro counties of Alabama.

Objective 5: Document the quality of life in those counties of Alabama for which landownership data are available.

Objective 6: Analyze the statistical relationship between absentee land ownership of both types (in-state and out-of-state) and quality of life variables in Alabama for both forest and agricultural areas.

Meeting Objective 1 involved a review of academic literature. A common theme of this literature was to draw connections between land ownership and socio- economic development. Previous studies that defined and examined the importance of absentee owners also were reviewed. However, very few studies were found which emphasized particularly the issue of absentee owners on quality of life.

Under Objective 2 the task was to collect and examine in detail tax record data. Zip code data was used to document where owners lived, the crucial assumption being that the address on the tax records was in fact where the owners lived. Combining zip code data and data on number of acres owned provided the basis for calculating the percent of forest and agricultural land

owned Objective 3 was actually the extension of objective 2 where the task was to use zip code data to identify owners who lived outside Alabama and how much land they owned. .

The task under Objective 4 was to identify the metro and non-metro counties and to find out the percentage of absentee land in these two sets of counties. There are several ways to define the metro and non-metro counties. I used the criterion established by U.S. Census Bureau (2010). The exact definition is provided in Chapter 3 on methods. Figure 2 shows the Metro and non-metro distinction of Alabama.

The task under Objective 5 was to determine the variables that could measure the quality of life in Alabama. Previous literature was reviewed for proper understanding of what variable could be used. The following variables were used to represent quality of life at the county level: a) per capita income b) students eligible for reduced price or free food c) female headed household d) educational attainment and e) local fund per student.

The most important task under Objective 6 was to choose the appropriate statistical approach to analyze the relationship between the variables. After selection of the approach, the next task was to analyze and explain the relationship in terms of the statistical results.

Who are absentee owners?

In general, absentee land owners are those who live in a different place from their land. In 1984, Nancy Bain provided some basic characteristics of absentee owners. She developed six ownership studies in the Appalachian section of four states. According to Bain there is no large variation among the characteristics of absentee landowners in different regions. They are generally mature, well educated, upper income professional people and retirees. Her studies report a majority of absentee owners are in the age category of 55 years and above. Bain pointed out that one possible reason of why people hold land as absentee owners could be the

recreational use. Recent research by Butler and Tyrrell (2007) emphasize that a significant number of owners who are not permanent residents but hold their land are interested in the amenities such as, beauty, scenery, and privacy that their lands provide. Hunting is also mentioned as a major attraction to keep the land by the non-residents owners in forested areas. Another group of non residence owners, the corporate or other business owners, are not interested in the amenities. They primarily are interested in doing business and making money at low cost since the property tax for farm and timberland in Alabama is the lowest in the nation (Joshi et. al. 2000).

Significance and implication of the study

Land underlies all – ownership of this fundamental asset determines the flow of material benefits and serves as a store of wealth that can be used to generate additional income and wealth (Lewis 1980). Land ownership is important for both metro and non-metro areas. Land serves the functions of investment and control (for example, buildings and factories) which can produce wealth and power. In addition, land and land ownership also provide personal and economic freedom (Sen 2000). Land is routinely identified as a source of wealth and the absence of land ownership often is overlooked as a cause of poverty and poor quality of life (Giesler 1995).

There is a clear relationship between land ownership and wealth and power. But the relationship between land ownership patterns and the local community's well being is a complex issue (Bliss et al. 1998). It becomes more complicated when a major portion of land is owned by those people who do not live in the same area where they have land. Those people who are absentee may exploit the resources they own for short term profit rather than considering the long-term benefit of the resources (Peluso et al. 1994). They are generally disinterested in

making any effort for local community and to increase taxes to support local well being (Joshi et al. 2000). Since tax policy is an important instrument of fostering economic development of a community, the role of absentee owners becomes an issue of community well being.

Property taxes are a major source of revenue for local governments and local development (Oates 2001). In the case of Alabama, property tax policy is controversial. Alabama has the lowest property tax rate in the nation (Joshi et al. 2000). Alabama taxes are calculated by using assessed value (Alabama Department of Revenue 2010). The assessed value is generally determined by multiplying the appraised value (fair market value) by the assessed rate of a particular property class. Once the assessed value of land (whether current use or not) is calculated then that value is multiplied by the appropriate millage rate of the area to calculate the unadjusted tax value. Millage is the tax rate expressed in decimal form, determined by the county commissions and other taxing agencies. The millage rate is the amount of tax per thousand currency units of property value. Therefore, Alabama tax is calculated as follows.

Appraised value x Assessed rate = Assessed value (1)

Assessed value x Millage rate = Tax (2)

The assessed rate is 10 percent for agricultural and timber land under current use laws. The same rate is applied to owner-occupied residential property (Alabama Department of Revenue 2010). Thus, for example, residential land with an appraised value of $100,000 has an assessed value of $100,000 x 0.1 = $10,000. If the millage rate in the county is 0.0325, property tax on the land is $10,000*0.0325 = $325.00.

In 1978, Amendment 373 to the Alabama Constitution led to residential, agricultural and timber property being taxed at 10 percent as assessed value (Hamell 2002). In the same year Gov. George Wallace's tax package introduced the concept of "current use" which means to be

taxed on the basis of how the land is used at present but not on where the land is located or what the owners plan to do with it in the future. Owners who have 5 acres or more of farmland, pastureland or timberland which produce agricultural products, livestock or wood products can be qualified for "current use" taxation. For most of the forest and agricultural land, "current use" (taxed on the basis of the current use) value is used instead of appraised value. Current use tax rates were established to protect owners of farm and forest land from experiencing rapid increases in property tax assessments if urban or other development increased the value of their land. If a farmer owned land near a city, the market value of that land might be so high that taxes based on market value would force the farmer to sell the land. By limiting the tax rate to current use (i.e., farming), the farmer would be protected and, presumably, would be able to continue farming the land.

According to the report from Alabama Department of Revenue, October 1, 2000, owners who qualify for "current use" status can choose to value their property at its market value or its "current use" value. At present in Alabama agricultural and forestland owners pay "current use" property taxes that are as low as $1.00 per acre. The impact of "current use" system and low property tax in Alabama can be understood using an example of Montgomery County. On the basis of its "current use" a parcel of land was taxed at $1.84 an acre in Montgomery County. Later, it sold for more than $200,000, which means it could have been taxed at $35,000 an acre (McPhail 1994). The property tax rate (especially for forest and agricultural land) and the per capita tax revenue is extremely low in Alabama which is lower than the surrounding states. Where Mississippi and Georgia ranked 41 and 33, respectively, Alabama ranked at 50 for per capita tax revenue (Public Affairs Research Council of Alabama 2009).

Property tax at the local level is also limited in Alabama. The 1901 Constitutional Convention imposed significant limitations at both state and local levels (Hamell 2002). At the county level, Article XI, Section 215 of the Constitution limits the property tax rate to 7.5 mills and Section 216 limits the property tax rate at the municipal level to 5 mills. This provision set a range of limitations between 3 and 15 mills. The constitution also limits the property tax millage rate that can be enforced by any local area to support local public schools. There was a combined affect of Article XIV, section 269 and Amendments 3,202 and 382 that limit the tax rate, which can be imposed to support public schools, to 15 mills. However, the current millage rates are higher than 15 mills for some counties. The necessity of passing a constitutional amendment whenever a local jurisdiction seeks to increase property tax rates is one reason why Alabama's property tax rates are so low. Table 2 shows the current millage rate of all counties in 2010.

This tax structure is definitely attractive to land owners and can encourage non-residential owners to keep their land in Alabama. The tax benefits of Alabama forest and farm land are enjoyed not only by people from other counties but from other states. For the local poor people, the situation is that they do not have their own land which can be a source of security and wealth, and low property tax revenue limits the ability of local governments to provide education and social services and improve their community's quality of life.

No well documented study was found that recorded the percentage of absentee owners in Alabama and how they benefit from tax breaks which lead to low revenue and retarded local development. The reason for the absence of such a study has to do with the difficulty of obtaining the data. This study documents the percentage of agricultural land and forestland in Alabama owned by absentee owners and whether there is a statistical association between the extent of absentee ownership and the quality of life in Alabama. Data were obtained for 50 out

of 67 Alabama counties. This study can be a starting point for policy makers to rethink state's tax policy to address chronic under-funding of schools and other governmental functions.

Chapter II

Theoretical Framework

Social theory to understand the broader perspective of the study

Conflict theory

Conflict theorists have often argued that differences in economic resources give one group the ability to control the ongoing apparatus of the state (Jacobs 1979). Conflict theory has a long history which is commonly associated with Karl Marx (Allan 2010). Karl Marx's work in the early to mid-1800s constituted the initial view of conflict. Class and the contradictions of capitalism are the primary concerns of a Marxist analysis where the conflict between two classes (owners and workers) constitutes the driving force of society. Max Weber, a German sociologist, eventually refined Marx's concept of conflict. The nature of conflict adopted in this study is more related with Weber's explanation.

Weber emphasized that conflict over property not only exists between owners and workers but more than one conflict over property can exist in a social setting (Allan 2010). Conflict does not only involve economic relationships, conditions for conflict may be set up by the state and economy together. Weber explained that class is more complex than Marx initially stated and economic relationships are not the only point of conflict. There are other factors that also contribute to social inequality, including status and power. Power derives from the individual's ability to control various "social resources." These resources can be anything and everything and may include the control of land as well.

Conflict theory supports the view that society is a complex system with inequalities that result in conflict. Moreover, conflict can lead to social change. Lewis Coser (1957) explained that conflict leads to social change and is a source of innovation and structural change. Moreover, it is a common belief among conflict theorists that social change is driven by the need to identify solutions for social conflicts.

The present study did not investigate any immediate or active conflict between two classes that Marx mentioned, owners and workers, but it was an attempt to find the reality of the conflict between 'haves' and 'have not' - the conflict of socio-economic status due to limitation of accessibility to a particular resource (land). The basic idea of this study was that one group (absentee land owners) benefits more than others (local people) due to the ongoing structure (land ownership patterns and tax policies) which leads to an opposition of economic interests. Resolution of this conflict could involve change in tax policy. Therefore, the broad theoretical orientation of this study lies with the basic idea of conflict social theory, following more on Weber's explanations of conflict and Coser's illustration of conflict and social change.

Social capital theory

Besides conflict theory, a more recent theory that can be linked to this study is social capital theory. Social capital theory emphasizes social relationships. Social capital refers to the institutions where residents are connected and interact with each other to solve problems and to achieve a common goal. Two forms of social capital are often discussed: bonding social capital which is the bond or link between individuals; and bridging social capital, which is the tie between communities.

The theory of social capital was developed in its current form during 1990's. Sociologists. Bourdieu (1986) and Coleman (1990) helped to develop the theory of social capital,

the central insight of which was that social relationships represent a resource that allows individuals and communities to work together to meet common objectives. Bourdieu's concept of social capital emphasized conflict and power relations. He connected this with class structure and explained social capital as a resource in social struggle where individuals can obtain specific objectives with this resource. In the discussion of social capital, Coleman emphasized the importance of trust. He explained that a group which has excessive trust and trustworthiness can achieve more than a group without this characteristic. Social capital according to him exists within the structure of the actor's relationship in a society.

In Robert Putman's (1993)'s analysis, the concept of social capital emphasized benefits at the community level that come from confidence and trust that good deeds will be reciprocated. Putman (1993:35-36) defined social capital as the "features of social organization, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit." Studies on social capital support the view that communities with strong social capital are better able to work together to address problems such as poverty (see for example, Moser 1996; Pretty 1993). Especially in a resource based community, a strong bond between people provides the access to land which is difficult to achieve otherwise. Thus, social capital (more emphasized in its bridging form) can provide a better life.

Social capital is an important tool for stability and development of a community. But what will happen if one of the crucial productive resources (land) is owned by outsiders? Can strong social capital be established with outsiders? Or does external ownership of land impede development of social capital? Can this resource be utilized to promote local development when most of the owners are outsiders? Do non-residents owners get involved in local affairs to build stronger social capital which can be used for local development?

Cynthia Duncan's (2000) remarkable study on Appalachia can be mentioned here. She noted the importance of social capital and identified that absentee owners are not available to participate in local civic associations or contribute to the social capital of the communities. Walter Goldschmidt's (1978) study also documented a strong relationship between larger absentee ownership and weak social institutions. Following these explanations, the present study assumes that more absentee owners leads to less chances to improve the level of social capital and to utilize the most productive resource (land) of a community. This limitation eventually impedes community development.

This is consistent with conflict theory, which draws attention to the opposition of interests between actors. Recognizing that there are exceptions, as a general statement absentee landowners are not involved in community affairs with the possible exception of opposition they would express to increasing property taxes. Absentee owners benefit from low property taxes, but local residents do not when (as generally is the case in Alabama) local governments do not have the tax revenues necessary to support quality education or adequate roads. Goldschmidt (1978) found that the dominant presence of absentee owners in Arvin weakened the social and economic institutions of that community and that social capital (as we would call it today) was far stronger in Dinuba, the community organized around locally-owned family farms.

Other conceptual considerations

Reviewing the previous works, three sets of literature were identified which highlight issues which are closely related to this study. These literatures include research on property rights in general, conflict between public and private property ownership, and finally the importance of land as a crucial form of productive property.

Property rights

Property rights over land are a fundamental asset for an individual, especially for the rural poor (Tucker 1999). Land is an essential asset on which they can depend for their livelihood. Secure property rights mean not only a secure income stream for the present, but also security for the future (DiGregorio et al. 2004). Land provides both an incentive and a mechanism (collateral) for investment (Alston et. al. 1996). A stable property right over land, water, trees, livestock or other natural resources provides power to the poor to break the cycle of poverty. However, normally the rural poor have the weakest property rights because they have the least land (DiGregorio et al. 2004).

The concept of property rights is complex and open to debate (Weimer 1997). Classical theory defines property as a thing, but most twentieth century property theorists argue against this limited understanding. They elaborate the meaning of property and explain it as a benefit (or income) stream. The accepted view of mainstream economic theory emphasizes that property rights are motivated by economic efficiency (Barzel 1997; Demsetz 1967; Libecap 1989; North and Thomas 1973). Furubotn and Pejovich (1972) define property rights as a relationship among people concerning the use of things. It involves a relationship between those who have specific rights and those who have the duties to honor the rights.

The term ‘rights’ itself is a complex term that can arouse questions about what exact right property owners have (Barzel 1997:1-5). For example, if a person owns a house, she has the right to live in it but the zoning laws may deny her the right to use it for business; she can have the right to sell it, but civil rights laws can restrict her if she refuse to sell to a protected class of people. She may have the right to use it for her own purpose but she may not have the right to violate the environment for that purpose. In discussing the concept of land rights, Coase (1960)

emphasized that the land owners do not have unlimited rights. Land owners basically posses the right to carry a limited list of actions. The rights of a land-owner are not unlimited." There are restrictions in property right and sometimes rights cease where the restriction begins (Kelleher 1966).

Conflict between private and public property

Ownership of any type, "public" or "private," bears both rights and responsibilities (Wiebe 1998). Cordes (1999) emphasizes that among the many contending interests in the field of property, especially land use controls, the conflict between the rights of private property owners and the rights of the public is most common and fundamental. The issue of private property and public access to resources is one of the most critical and politically controversial issues that affects several social issues including the level and dynamics of poor quality of life (DiGregorio 2004).

Several mainstream economic thinkers (for example Coase 1960; Demsetz 1967; Simmons et al. 1996) hold the view that private property is the most efficient form of ownership. It is not only economic thinking which encourages the superiority of private property but it also is a socially and culturally dominant viewpoint. Some of the key thinkers of those fields, including Aristotle, John Locke, Hegel, Thomas Jefferson and John Stuart Mill have supported the importance of private property on the basis of utility, social freedom and moral development (Carter 1989).

Hardin's (1968) argument on the 'tragedy of the commons' supports the importance of private property as well. The main idea of the 'tragedy of the common' emphasizes that people normally overuse resources that they have in common with others and they do so because they have no positive motivational influence to preserve the resources. Every individual has a

tendency to invest less and over consume from common property and when they do so, think less about the long term sustainability of resources. In this context, private property is advocated by Hardin as the way to save the world and to avoid the 'tragedy of the commons.'

While justifications for private property are made, acceptance of common property and support for the needs of public access to resources are also a prominent theme. Marshall's (1998) idea of collective action is closely related to the explanation of the importance of public property. He emphasized the importance of collective action which is an action taken by a group of individuals to fulfill their common interests. People in many communities work together to achieve those local goods and services they would not be able to get as a single individual (DiGregerio et al. 2004). Collective action which is obtained by using social capital can be a way for minority groups who lack economic alternatives and opportunities to gain private property access (Tucker 1999). The existence of collective action and common property is important for the poorer population who often depend on common resources for their survival. Deininger and Michael (2003) explain that collectively managed resources provide security to poor peoples' income and also reduces their vulnerability at the time of crisis. The privatization of those resources means the impoverishment of economically marginalized groups. And when the ownership of land is controlled by owners who do not reside in the same area, may have few connections to the local community, and are not part of a local system of social capital, the separation of ownership and residence creates conditions that are challenging and complex, particularly for the poor.

Importance of land as a productive form of property

Land is one of the crucial productive resources that provide socio-economic and political power at individual and community levels (Geisler 1995). Good management of land

can promote development of policies for poverty eradication and economic well being. Proper management of land and available access to land can serve as a primary source for economic development of poor communities, but most of the time, the importance of land is omitted in poverty reduction programs (Deininger and Michael 2003). But land should be taken into account as a force of poverty reduction (Dudenhefer 1993). Dally and Cobb (1989) pointed out that land become negligible as way to reduce poverty and improve life not only by economists but by other disciplines as well. Geisler (1995) emphasizes that to omit land from the poverty reduction discussion means to omit a significant source of raw materials, a major contributor to employment, and a secured escape from poverty when emergency comes.

Land is an asset for poor people and secured land rights and ownership provides a sustainable economic life to them. The use of land can provide a sense of personal power and independence which is difficult to achieve otherwise (Zabawa 1991). Gaventa (1998) points out the importance of land from a political economy standpoint. In his explanation he states control over land translates to political power. And landless means powerless. The powerless group loses control over the civic engagement and thus loses the way to improve social capital. Thus, political power derived from land ownership limits the advancement of social capital which restricts an important pathway to the development of the community as a whole. Buttel (1984) also discussed the importance of land from a political point of view. His discussion primarily focused on the agricultural land and protection of family farm in the U.S. He emphasized the need to protect family farm which can play an important role to agricultural land reform. However, along with the family farm, Buttel also underlined that the change of strategy (e.g. tax policy, public regulation of land market and improvement of the working condition of agricultural wage labors) should be emphasized for the land reform in the U.S.

Harvey Molotch's (1976) classic study, 'city as a growth machine' describes the importance of land and land use and the political issues related with it in urban areas by explaining the cycle of growth. His study explains that in a city land use and benefit from land is highly controlled by interests of land-based elites. Molotch assures us that land owners have vested interests that encompass social, economic, political, commercial and psychological domains. Growth machine elites compete with each other to increase the benefit and growth of resources on their land (rather than that of their competitors), but the net effect is growth of the city as a whole. This growth machine brings together certain social, political and economic forces which have consequences on community life (Molotch 1976). Thus the socio-economic and political structure of the city is shaped by the competition and use of land to promote growth of a city as well.

Salamon's (1993) study shows a different view of how land issues impact socio-economic life. She explains that culture and tradition are important in shaping how people utilize land. Her study on the agricultural land tenure system shows that culture shapes the decisions of land use and management. Seven Illinois farming communities which are dominated by two ethnic groups, German and Yankees, were examined in Salamons' study which shows that land issues are very intimately related with culture. This study especially indicates that the intergenerational land transmission practice is often influenced by cultural practice and this often affects the socio-economic life of the community as a whole.

Bliss, Sisock and Birch (1998) state in their forest ownership study of Alabama that the linkage between land ownership patterns and the local community's well being is a complex issue and that land ownership sets up the right to decide how a piece of land will be used and fixes responsibility for that use. A comparative study between a northern (Winston) and southern

(Wilcox) counties of Alabama was done by Bliss, Walkingstick and Bailey (1998) which shows that sustainable development in forest communities in Alabama is shaped by the resource ownership along with other factors. Inequitable land concentration can lessen social cohesion within a community.

Of the literature which focus on the relationship between ownership patterns and management of land and quality of life, few among them (for example, Bain 1982; Goldschmidt 1978; Heasley and Guries 1998; Shaffer 1997; Goodstein 1989) emphasized the importance of absentee ownership and its relation with quality of life. Walter Goldschmidt's remarkable study on Arvin and Dinuba, California is an exception in that he draws attention to absentee ownership as a factor that makes a difference in development of a local area.

The Appalachian Land Ownership Task Force (Task Force 1983, *Who Owns Appalachia*) conducted a study which provided significant information about absentee owners in Appalachia. Fifteen northern Alabama counties were included in this study, which has been the subject of continued discussion and has inspired other studies of absentee ownership in the region (Gaventa and Horton 1994; Goodstein 1989; Horton 1993; Scott 2009). The Appalachian study indicates that corporate and absentee ownership of land made it difficult for local communities to have adequate economic and social development. The high percentage of absentee owners in these regions led to high poverty rates, local inequality, and lower quality of life. The Task Force explains that absentee owners have no interest in the prosperity of local communities where their land is located (Task Force 1983).

Goodstein's (1989) study echoed the Appalachian study and explained that absentee land owners generally are interested in tax revenues which reduce county expenditures on social services and physical infrastructure and make local development a difficult goal to achieve

(Goodstein 1989). Gaventa (1998) also pointed out that control of land means achieving economic independence and that the presence of large numbers of absentee land owners means wealth will be drained from the region to other areas. Thus absentee owners can obstruct development of local areas. He also emphasized that property taxes are a key source for local revenue which is important to support local school systems and other human services which can contribute to local well being. But when the local lands are owned primarily by absentee owners, it is hard to support local well being by tax revenues.

Of the studies that focus on the relationship between absentee owners and quality of life, it is notable that most of them concentrate on agricultural or mining land. Literature with the primary focus on the relationship between absentee owners of forestland and quality of life is limited. For example, Heasley and Guries (1998) show in their study in rural Wisconsin that forest ownership was shifting to absentee owners and that this shift changed the rural economics and ecologies of that region. The valley's forests are slowly turned to the maple wood from oak-hickory communities. As the forest has changed, human population also changed which also effects the economic settings. Shaffer (1997) developed a thorough study of absentee ownership in Virginia which indicated that 16 percent of Virginia's non-industrial private forest land industries were absentees and those owners were not involved and less informed about local area where their lands were situated. Their attachments with local issues were weaker than local owners.

From the available literature, no well documented study was found which provide the information about the influence of absentee owners and quality of life in Alabama. In large part, this is true because there has been no systematic examination of the extent of absentee ownership in Alabama. The closest to such a study was a *Birmingham News* analysis which provided

information from 149,500 tax records across ten counties of Alabama's Black Belt region. This news story reported that almost two thirds of all land was owned by people or companies located outside the county lines (Archibald and Hansen 2003). Although this news analysis contains interesting information, the authors provided no documentation on how the data were collected or analyzed. There is, however, no other study which addresses the question of absentee forest and agricultural land ownership and or provides a statistically tested analysis of the association between absentee ownership and quality of life in Alabama or any other state in the nation. The broad purpose of this thesis is to address this gap in the literature and thereby provide a research-based approach to considering policies to address quality of life problems which are anticipated to exist in counties with high proportions of land owned by absentee owners.

Chapter III

Methods

Definition of absentee owners

Absentee land owners, in general, refer to those land owners who reside in a different place from their land. It can be in a different county, city, state, nation or at a specific mileage distance from the land. Since this study is totally based on secondary tax record data, definition of absentee owners is based on the tax address. Therefore, in this study I defined absentee owners as those owners who reside in a different county than the county where the land on county tax records is located. Those owners who live in a different state than Alabama were identified as absentee. A few owners were found who live outside the United States, mostly in Canada. They are also were considered as absentee owners.

Quality of life

Quality of life is generally indicates the general well being of the individual or a society or community as a whole. Researchers often argue about the definition of the quality of life. Diener and Suh (1997) mentioned that there are commonly three indicators used to define quality of life- social indicators, subjective well being measures and economic indices. These alternative indicators depend, respectively, on normative ideals, subjective experiences, and the ability to select goods and services that one desires. For this study the indicators of quality of life are closely to economic indices. The basis of this study is land issues and land is a material object which is directly related with socio-economic well being. Indicators which measured quality of

life were chosen on the basis of how it define the socio-economic quality of life in each county. Different individuals may have the different levels of desires and explanation of quality of life, but for this study quality of life indicates the socio-economic well being at the aggregated level, that is, county level.

Metro and non-metro counties

There are several ways to define metro and non-metro counties. I used the criterion that is used by the U.S. Census Bureau. The standard definition for metropolitan area, according to the U.S. Census Bureau (2000) is as follows:

A metro area contains a core urban area of 50,000 or more population, and a micro area contains an urban core of at least 10,000 (but less than 50,000) population. Each metro or micro area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core.

Following this standard, 39 Alabama counties are identified as non-metropolitan and 28 counties as metropolitan.

Study Area

Alabama: geographic, demographic and socio-economic structure

Alabama is located in the southeastern region of the United States. It is bordered by Tennessee to the north, Georgia to the east, Florida and Gulf of Mexico to the south and Mississippi to the west. Figure 3 shows the exact geographic position of Alabama. It is the 30th largest state in the nation with 131,168 sq. miles (including land and water) of total areas (U.S.

Census 2010). According to the 2010 estimation of the U.S. Census Bureau (USCB), the total population of Alabama is 4,779,736 where the total population of the U.S. is 308,745,538 . Of this population, 68.5 percent is white and 26.3 percent is black (USCB 2010). For the U.S., the percentage is 72.4 and 12.6 respectively. According to the USCB (2009b) estimation (five years estimation), 80.8 percent of the people above 25 years old were high school graduates and 21.5 percent of people above 25 years old were bachelor or higher degree holders where the percentage for the whole nation is 84.6 and 27.5 respectively. The per capita income of the state was $22,732. The number for the whole U.S was 27,041. 17.5 percent people lived below poverty level in Alabama compared to the national average of 14.3 percent people under poverty threshold.

Land and land ownership patterns in Alabama

The total land area of Alabama is 50,644 sq. miles (32,412,160 acres). More than 71 percent of the land is forested and 26 percent is agricultural land (Hartsell and Brown 2002). The southeastern U.S. holds the least publicly owned land compared to any region in the country (Bliss et al. 1998). The same pattern is found in Alabama. According to the Natural Resources Council of Maine (NRCM 2010) only 3.81percent land is owned publicly in the state. The Federal government owns 2.59 percent of total land and 1.22 percent is owned by the state government. Only 1.2 million acres of forestland is controlled publicly. Hartsell and Brown's (2002) report documents that non-industrial private forest owner groups as a whole control 78 percent of Alabama's forestland. Since the land information data for this study comes from the county tax records, only privately owned taxable lands (individual and corporate), forest and agriculture, are included in this study.

Study counties

The initial hope for this study was to include all 67 counties of Alabama. But due to the difficulty of obtaining tax record data from each individual county, this was not possible. Data from 50 counties were obtained. Among these 50 counties, 19 were metropolitan and 31 were non-metropolitan. Figure 4 shows the particular study counties and the distinction of metro and non-metro. These 50 counties cover 13,821,787 acres of private owned forest land (65 percent of the state total) and 3,870,235 acres of privately owned agricultural land (around 45 percent of the state total). 17 out of these 50 counties are persistently poor. Similar to the state as a whole, the population of the study counties is predominantly white (almost 70 percent; U.S. Census 2000).

Variables

In order to test the relationship between quality of life and absentee landownership in Alabama, seven different variables were used in statistical analyses. One was (distinguished between owners living in and outside Alabama) the percentage of absentee land in each county and other five were used to measure the quality of life. These are a) per capita income, b) educational attainment, c) students in public schools eligible for free or reduced priced meals, d) total amount of local funds that was spent for students in public school, and e) female headed households. Age of the population was used in regression analysis to control the demographic characteristic. A dummy variable, metro, was created and used to find the distinction of the relationship between absentee land ownership and quality of life in metro and non-metro counties.

The operational variable definitions are described below.

Absentee land

Absentee land is defined as the percentage of private land owned by individuals who live in a county other than where the land is located. Absentee land is further divided into two categories, land whose owners of record have addresses inside Alabama and those who live outside Alabama. The focus of this study is on forestland and agricultural land, which combined account for almost 97 percent of all land in Alabama. The percentage of forest and agricultural land owned by absentee owners was calculated using county tax records and zip code data. These records made it possible to determine if owners had addresses of record in the county where the land was located, in a different Alabama county, or had addresses of record outside Alabama. The addresses are where annual tax bills are sent. The working assumption is that with few exceptions, the address of record provides an accurate reflection of absentee status.

Income

Income level is related with better quality of life. Income allows individuals to meet their basic needs (Denier and Biswas 2002). Previous studies (e.g., McBride 2001) reported that a strong relationship exists between income and better quality of life. On the basis of the previous research, the present study considers income as an indicator of quality of life - that is high per capita income as an indicator of good quality of life. This variable is defined as the average per capita income in each county.

Student meal

Students eligible for reduced price or free food usually belong to poor families (Park et.al. 2002). The greater the percentage of students with this eligibility, the higher is the level of poverty. Therefore, a higher percentage of eligible students with reduced price or free food can

be assumed to be associated with poorer quality of life. The percentage of students in each county with the eligibility of reduced price or free food is used in this study as one of the measures of quality of life.

Female headed household

Female headed households are poorer than male headed households. Household poverty is highest for female-headed family that does not have any other earning members (Snyder et. al. 2009). Poverty in female headed household is based on women's access to employment and property. Less access to employment and productive resources such as land, results in high economic vulnerability in female headed households (Buvinic and Gupta 1997). This study also assumes this relationship and uses female headed households as an indicator of reduced quality of life. This variable is defined as the percentage of female headed households in each county.

Educational attainment

Education is the key to a better quality of life (Oxaal 1997). Human capital theory asserts that education provides skills which induce higher levels of productivity and power towards development. Therefore, a large number of educated people in a community can result in a better quality of life. Following this concept, the present study uses educational attainment as an indicator of quality of life. The percentage of people (25 years and above) with a high school or above degree in each county is considered as the level of the educational attainment.

Local funding for student

The amount of local funding available for students in public schools indicates the extent of support for education in the local community. Since education level is an indicator of quality of life, it is assumed here that better quality of life is associated with the amount of local funds

for students. This variable is defined as the total amount of local funding available per student in each county. In Alabama, the majority of funding per student in most counties comes from the state, but local tax revenues provide important supplemental funding and often makes the difference between a school system which is underfunded or adequately funded. Differences in funding available per student between counties in the state are directly related to differences in local tax revenues dedicated to public schools.

Population over age 65

Old age population is more vulnerable to poor quality of life (Barrientos 2002). It is argued often that population with a high percentage of old age people is in a poorer condition than population with young age group. However, this argument can be verified on the basis of income level, education and other characteristics of the population. In this study, age is used to control the demographic characteristic in regression analysis. This variable is defined as the percentage of the population of 65 years age or over.

Like population age, race was initially considered to control the demographic characteristic in regression analysis. The percentage of black population was used to identify race. But after including race, it affects the relationship between absentee land ownership and quality of life. Therefore, finally the variable race was dropped from the analysis.

Metro

A dummy variable was used to examine the differential impact of absentee landownership in metro and non-metro counties. This variable took the value of 1 for metro counties and 0 for non-metro counties.

Data sources

All data were collected from secondary sources. The county tax record data and zip code data were used to document the percentage of absentee land ownership. Data for all other variables were collected from the U.S. Census Bureau and the Alabama Department of Education. The following discussion provides a detailed description of data sources.

Data to record the percentage of absentee land

Two types of data were collected to document the percentage of absentee land: tax record data and zip code data.

A. Tax record data

Tax record data were used to find out the owner's address and number of acres owned for each parcel of forest and farm land in each of the 50 counties. At first, effort was made to collect all data from one particular source. A phone call was made to the property tax section of the Alabama Department of Revenue, Montgomery in the hope of getting all the data from a single source. But all data could not be obtained from that source or any other one source. Finally four different sources were used: S&W Mini Computers, Inc., Delta Computer Inc., individual county tax offices, and a website known as Alabama Flagship GIS. Depending on county, the data came from 2007, 2008 or 2009. The detail discussion of the data sources for tax record (or land) data is following.

A. 1. S&W Mini Computer

S&W Mini Computer, Inc. is a company that maintains property tax records data for some Alabama Counties. Most of the counties for which they maintain data are non-metropolitan. A total of 26 out of 50 study counties tax record data were bought from that company for $300 per county. All data was in MS-Excel format and was sent electronically by

S&W. All of 26 counties had the same data format. Each parcel of all counties had the complete record of the owner's address (including the state and zip code), total land acres and also the type of land. A separate column in the dataset was provided for forestland information. Agricultural land was obtained from a column listing land type.

Data for the following counties were collected from S&W: Autauga, Barbour, Bib, Bullock, Chamber, Coosa, Covington, Crenshaw, Dale, Dallas, Fayette, Franklin, Hale, Lamar, Lawrence, Lowndes, Macon, Marengo, Marion, Perry, Pickens, Pike, Randolph, Russell, Tallapoosa, Walker.

A. 2. Delta Computer Inc.

Delta computer Inc. is another company which maintains tax record data for Alabama county governments. Data obtained from Delta Computer Inc. had previously been obtained by professional colleagues working in the School of Forestry and Wildlife Sciences at Auburn University. Data from 10 counties were obtained from this source. The format used by this source was different from other sources. All data were obtained electronically and in MS-Excel format. Each parcel of individual county had the complete information of owner's address including state and zip code. These data had specific information of total land and forestland acres but not the agricultural land. Based on interviews with tax assessor offices in several counties, a decision was made to define as agricultural land all parcels over 20 acres that were not identified as forest land, that is lands of 20 acres or more than were not forested were considered to be agricultural land.

Data for the following counties came from Delta Computer, Inc.: Baldwin, Blount, Calhoun, Cullman, Conecuh, Etowah, Greene, Houston, Marshall, Lauderdale.

A. 3. County Tax offices

A total of nine counties were willing and able to provide data directly. Six of these came from the efforts of a faculty member serving on the advisory committee of this thesis. Data for three other counties were obtained by colleagues in the School of Forestry & Wildlife Sciences at Auburn University, Al. The counties from which data were collected directly were: Clarke, Elmore, Mobile, Montgomery, Sumter and Wilcox. Phone calls were made to all of these 6 counties tax offices and the electronic dataset was requested. Data for three other counties were obtained from the Department of Forestry are: Escambia, Lee and Shelby. The format of the data varied from one county to another.

All but one (Wilcox) counties had the record of address of each parcel owner that indicates state and zip code separately. The land acreage data were formatted differently in each county. Some counties included codes that differentiated the land type: 8110 (good quality), 8120 (better quality) and 8130 (best quality) stands for agricultural land and 8310 (good quality), 8320 (better quality) and 8330 (best quality) are the forestland codes. Montgomery had the total and forestland acres but no specification for agricultural land. It had the schedule code of each parcel which was used to calculate the agricultural land (according to tax record data, A1, A2 and A3 schedule codes stand for agricultural land). Clarke had all the specific land information-total, forest and agricultural land separately. Elmore, Escambia, Sumter and Shelby had the total and forestland information. Again for these counties the 20 acres land area was used as a criteria for defining as agricultural land any non-forested parcel which has 20 acres or more. Mobile had the description of land for each parcel which was used to calculate forest and agricultural land.

A. 4. Alabama Flagship GIS

Alabama Flagship GIS is a company which has a free public access to its site for the tax record data of some counties. Data for five counties were collected from this site. All of these 5 counties had data in the same format. Each parcel contained the owner's address including state and zip code in separate columns separately. Each parcel had the total, forest and agricultural land records. Particular land codes were used by these five counties to indicate the specific land type- forest (8310, 8320 and 8330) or agricultural (8110, 8120 and 8130).

B. Zip code data

Zip code information for each county was collected from Datasheer L.L.C. This company has free access to the zip code information of all counties in the U.S. Each county has several zip codes. The collected zip codes were used to determine absentee status of land owners.

Data for Quality of life variables.

Two sources are used to collect the information for all other variables: the U.S. Census Bureau and the Alabama State Department of Education.

A. U.S. Census Bureau (USCB)

Data for per capita income, educational attainment and female headed household were collected from the website of the USCB (2009 b). This data were cleaned and organized in a table format.

B. Alabama Department of Education

The data to document the percentage of students eligible for free or reduced price food and local funding per student in public schools was collected from the website of the Alabama Department of Education (2009-2010). This data was cleaned and organized in a table format.

Data Cleaning

A total of 978,368 parcels were found on the tax records of the 50 study counties. There were numerous cases where the same parcel number showed up more than once on the tax rolls. After removing redundancies, a total of 608,071 separate privately owned parcels were identified. To filter and to remove the duplicate parcels, formula in MS Excel was used. Different data sources had different data formats, making it necessary to reformat some of the dataset.

For some of the counties, some parcels had errors and instead of large amount of timber acres, was labeled as agricultural land. For example, in one parcel the total acres column said the total acres were 345. Under this same parcel the timber acres column said 290 acres were timberland. But the land type said it is agricultural land. So, if I relied only on the land type information I could have been misguided in calculating the amount of agricultural land. To deal with this error, at first the amount that was provided for timberland was subtracted from the total land amount. Then the type information was identified. If the type information said it was “A”, then the subtracted value counted as agricultural land.

As it mentioned above that some counties did not have any specific information for agricultural land and 20 acres limit were used to determine agricultural land, the formula in MS Excel was used for that. For those counties where the schedule codes or specific land codes were used to find out the land type, it was filtered by MS Excel.

Statistical Models

Correlation coefficient

Pearson's correlation coefficient was used to test that an association existed between quality of life variables and percentage of absentee landownership in Alabama. To investigate whether there were any differences between the relationship of absentee ownership and quality of life in metro and non-metro counties, two separate tests for metro and non-metro counties were also conducted. Another two tests were conducted to examine these associations separately for absentee ownership of forest and agricultural land. To find the relationship between the variables for land owned by out-of-state owners, one other correlation test was conducted.

Pearson's correlation coefficient test is a basic technique to investigate the relationship between two quantitative continuous variables. The primary use of this test is to measure the strength or degree of linear association between two variables. Correlation coefficient ranges from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation and a value of +1.00 represents a perfect positive correlation. A value of 0.00 represents no correlation between the variables. Positive correlation indicates that both the variables increase or decrease together and negative correlation indicates that if one variable increases then the other decreases and vise versa. Large correlation indicates stronger relationship between the variables. The statistical significance of the relationship is expressed in the probability level p (for example, significant at p= .05). A small p value indicates a more significant relationship between two variables. Correlations provide evidence of association between variables but do not demonstrate causality.

Regression

In addition to the correlation analysis, ordinary least squares (OLS) regression models were estimated to examine possible influence of absentee landownership on quality of life in

Alabama. Five regression equations are estimated regressing *Income*, *Student_meal*, *Female_house*, *Education* and *Local_fund* on *Absentee* and *Pop_Over_65*. A second set of regression equations are also estimated including *Metro* and an interaction term between *Metro* and *Absentee* in the models as explanatory variables. The estimated parameter of the interaction term between *Metro* and *Absentee* would determine if the impact of absentee landownership is different in metro and non-metro counties. For example, if the estimated parameter of *Absentee* is negative and significant and the estimated parameter of *Absentee***Metro* is positive and significant, this would imply that the negative impact of absentee landownership is less severe in metro counties.

In the preliminary analysis, significant Shapiro-Wilk tests for the regression models suggested non-normality of error terms. Inference from OLS regression depends on the normality of error terms (Wooldridge 2003, p. 171). The bootstrapping technique, which is basically a computer based methods to generate the data (Efron and Tibshirani 1993), is thus used to estimate the regression models. Bootstrap is a method of sample reuse technique which is used to estimate standard errors and confidence interval. Bootstrap is a technique to manage the small number of observation by using random sampling with replacement. It is useful for OLS models when the sample size is small and the assumption of normality of error terms is violated (Keele 2008; 185).

Bootstrap method offers the reliability and bring some new insights to some of the difficult problems of data analysis (Stine 1989) The bootstrapping technique has been widely used and discussed in previous social science research including sociological studies (see for example, Goodwin and Featherstone 1995; Shu et al. 2011; Kassab 1990; Bollen and Stine

1990). However, it is more common in economics in comparison to sociological research (see for example, Bjorklund and Janitti 1997; Li and Maddala 1997).

The following steps were used for the bootstrapping pairs algorithm (Keele 2008:185) in estimating the regression models in this study.

1. A bootstrap resample of the same size (50) as the original sample is formed by sampling, with replacement, paired dependent and independent variables.
2. The regression model is estimated on the bootstrap resample.
3. The parameter estimates from this regression are saved.
4. Finally, Steps 1 through 3 are repeated a large (1,000) number of times taking a new bootstrap sample each time.

This procedure produces a bootstrap sampling distribution for each regression coefficient. The standard errors of coefficients are then estimated from their sampling distributions.

Chapter IV

Results

This chapter summarizes the results of the study. Descriptive statistics and statistical test results are reported here. This chapter is organized as follows: Firstly, findings from tax records data are reported. The discussion will start with information on total land and then provide specific information for forest and agricultural land. This section will conclude by describing absentee ownership in metro and non-metro counties.

Secondly, findings from quality of life data are reported following the same pattern as the previous section. Firstly, the information for total land is reported; then specific information for forest and agricultural land is reported and finally the distinction of metro and non-metro counties is reported.

Thirdly, the Pearson's correlation results are reported. For reporting the results, a similar pattern is followed. At first, the correlation between the variables for total land (including forest and agricultural) is reported; then, correlation test results for forest and agricultural land are reported; correlation results with the percentage of total out-of-state absentee owners are also reported and finally test results for metro and non-metro distinction are reported.

Finally, the regression test results are reported which followed the same pattern. The report starts with total land and then the distinction between metro and non-metro is reported. In regression, no report is presented separately for forest and agricultural land because these two sectors are highly correlated.

Absentee landownership in Alabama

Total absentee land

This section presents descriptive statistics based on tax record data for farm and forest land in the 50 Alabama counties included in this study. A total 17,692,022 acres land (including forest and agricultural) is examined in this study representing around 60 percent of total land (private) in Alabama, 45 percent of total farm land (private) in Alabama, and 65 percent of total forest land (private) in Alabama. The results demonstrate that more than half (56.1 percent) of total farm and forest land (9,949,784 acres) in the 50 study counties is owned by absentee owners. Of this percentage, 84 percent (8,360,227 acres) is forestland and 16 percent is agricultural (1,582,964 acres). Some counties have high percentages (for example, Coosa, Lowndes, Macon, Wilcox and Sumter) of absentee land and some (for example, Cullman, Lauderdale, Marshall and Montgomery) have relatively low percentages. The range of absentee ownership is 85.5 percent (Coosa County) and 21.2 percent (Cullman County). Descriptive statistics information of absentee land is provided in Table 3 and Figure 5 shows graphically the distribution of counties with relatively more and relatively less absentee ownership of forest and agricultural land.

Of total absentee acres, 34.6 percent (3,439,456 acres) land is owned by the owners who live outside of Alabama. Of the land that is owned by out-of-state absentee owners (absentee owners who live out of Alabama), 90.1 percent land is forested and 9.9 percent is agricultural (Table 4). Few cases are found where the land is owned by the owners who live out of the country, mostly in Canada. However, this number is very low and included in the out-of-state records. Total absentee land information for each county is shown in Table 5.

Absentee forest and agricultural land

Of the total (forest and agricultural) privately owned land in the 50 study counties, 77.9 percent (13,821,787 acres) is forestland and 21.8 percent (3,870,235 acres) is agricultural. Of this total, 60.5 percent (8,360,227 acres) is forestland in absentee ownership and 40.9 percent (1,582,964 acres) of total agricultural land is in absentee ownership (Table 6). There are outliers in the percentage of forest and agricultural absentee land. Some counties have a high percentage (more than 70 percent) of forestland in absentee ownership (for example, Hale, Sumter, Covington and Coosa) while other counties have less than 35 percent of their forestland in absentee ownership (Montgomery, Etowah and Cullman).

Agricultural land follows a similar pattern with some counties (for example, Greene, Barbour and Tallapoosa) having high percentages (more than 60 percent) of absentee agricultural land, while the percentage for other counties (for example, Mobile, Marshall, Cullman and Clay) is less than 20 percent.

Of the absentee forestland, more than 35 percent (2,970,118 acres) is owned by the owners who live out of Alabama. The percentage for agricultural land owned by out-state owners is 29.4 percent (465,699 acres). The specific records for the percentage of absentee land in forest and agricultural unites in each county is described in Table 7.

Absentee land in metro and non-metropolitan counties

Of the total land in 50 counties, 12,021,542 acres is located in non-metropolitan counties and 5,670,479 acres in metropolitan counties. In non-metropolitan counties, 58.4 percent (7, 056,485 acres) of total land is in absentee ownership; most of this land is forested. Approximately one-third (2,517,925 acres) of absentee land in non-metropolitan counties is owned by out-of-state absentee owners; most of this is forestland.

In metropolitan counties the percentage of absentee land is somewhat lower but still more than half (51 percent, 2,893,299 acres) of total private land in the 19 metro counties of this study. Also for metropolitan counties, most of the absentee land is forested. Just under one-third (31.8 percent, 921,530 acres) of all absentee land in metro counties is owned by out-state owners with forestland accounting for the major portion. Detailed information of forest and agricultural land in metro and non-metro counties is provided in Table 8.

Quality of life

Quality of life in all study counties

In 2009, the average per capita income in the 50 study counties was $19,203. The maximum and minimum range of per capita income varied from $12,258 (Wilcox County) to $33,607 (Shelby County). More than 60 percent of students in public schools in the 50 counties were eligible for reduced priced or free meal which indicates that the average poverty rate was high in the study counties, with some notable exceptions. The percentage of students with this eligibility was extremely high for some counties (for example, Wilcox, Sumter, Barbour, Bullock and Dallas). In contrast, some other counties (Shelby, Baldwin and Lauderdale) have low percentages of children with free or subsidized meals.

In the study counties, more than 75 percent of the population 25 years or over had a high school degree. The percentage of bachelor level or higher degree was comparatively small, only 14 percent. However, some of counties had high percentage of population with bachelor degree and above (for example, Lee Montgomery and Shelby).

The average percentage of the population of 65 years age and above was 15.1percent. Average percentage for the female headed household was 15.8 percent. The percentage of female headed households was higher in those counties where the per capita income was low and a high

percentage of students were under the poverty level. For example, Wilcox County had the highest female headed household percentage, the lowest per capita income, and 100 percent students were eligible for free or reduced cost meals. In contrast, Shelby County had the lowest percentage of female headed households, the highest per capita incomes, and a lowest percentage of students eligible for free or reduced cost school meals.

The average local funding per student in the 50 study counties was $1,257. Similar with other variables, the figure for local funding also varied from one county to another. Some counties (for example, Baldwin and Shelby) used local taxes to provide more than $2,000 per student to fund local schools, while other counties (Sumter, Coosa and Lamar) provided less than $900 per student. Descriptive statistics on quality of life indicators used in this study are provided in Table 9. Table 10 provides the information for the indicators of quality of life in each county.

Quality of life in metro and non-metropolitan counties

The difference of the average percentage of quality of life indicators between metro and non-metro counties is large for one indicator -- percentage of students eligible for reduced or free meals. For non-metro counties, the figure was 73 percent compared to 58.7 percent for metro counties (Table 11). This difference indicates that the poverty level was higher in non-metro counties than metropolitan counties. However, for the other quality of life variables, differences between metro and non-metro counties were not large.

Overall, the results of this research indicate more than half of the Alabama forest and agricultural land is owned by absentee owners. Forestland is more likely to be absentee land. Non-metro counties have a higher percentage of total absentee land than metro counties.

However the difference between the percentage of absentee land for metro and non metro counties is not large.

In the next sections, results of correlation and regression tests will show that an association exists between absentee ownership and quality of life.

Results of correlation analyses

Results for total absentee land

The estimated Pearson's correlation coefficients indicate that an association exists between quality of life and total absentee landownership in Alabama (Table 12). Results suggest a significant relationship between four out of five quality of life variables and the percentage of absentee land. A strong statistically significant negative correlation was found between per capita income in a county and the percentage of absentee land. This implies that per capita incomes were low in the counties which had a high percentage of absentee land. These findings establish that a positive association exists between poor economic conditions and the percentage of absentee land in a county. These correlations do not demonstrate causality, only association. Figure 6 shows the linear trend line for negative correlation between per capita income and percentage of absentee land.

A positive correlation was found between the percentage of total absentee land and the percentage of students eligible for reduced priced or free meals in school (Table 12). This implies that the percentage of students eligible for reduced priced or free meals was high where the percentage of absentee land also was high. Figure 7 demonstrates the linear trend line of positive correlation between the percentage of absentee land and students eligible for reduced priced or free meals.

Percentage of female headed households is a strong indicator of diminished quality of life. Data presented in Table 12 demonstrate a statistically significant association between female headed households and absentee landownership in the 50 study counties. This relationship indicates that the percentage of female headed households is high in those counties where the percentage of absentee land is also high. Figure 8 indicates the linear trend line of positive relationship between the percentage of female headed household and absentee land.

Educational level is commonly accepted as an indicator of quality of life. The result shows that a strong negative correlation exists between the percentage of population with high school degree or above and percentage of absentee land in Alabama. Counties which have a high percentage of educated people have a relatively low percentage of absentee land (Table 12). Figure 9 shows the linear trend line of the relationship between the percentage of high school graduates and absentee land ownership.

Lastly, it has been found that there is a negative correlation between local funding per student and absentee land. However this correlation is not statistically significant (Table 12). According to correlation test, local funding of public education is positively associated with educational attainment, which has a strong negative correlation with the percentage of absentee land (Table 12). Figure 10 demonstrates the negative relationship between the percentage of absentee land and the total amount of local fund per student. The figure shows that the plot is largely scattered and there are several outliers.

Results for forest and agricultural land considered separately

For forest land the correlation results between quality of life and absentee land follow the same pattern as total land. Absentee forestland has positive correlation with female headed household and students eligible for free or reduced price food. A negative correlation was found

with absentee ownership and educational attainment, local fund and per capita income. Except for local funding, all relationships were statistically significant (Table 13).

Similar results with forestland, were found for agricultural land where absentee land has the similar trend of relationship between quality of life variables. All the relationships but local funding per student are statistically significant (Table 14). Results for both forest and agricultural land considered separately are consistent with and close to results for all absentee owned land.

Results for-out-of-state owners

A separate correlation test was conducted with the percentage of land owned by out-of-state absentee owners and quality of life. But the results were different from the other three correlation estimations. Education and funding and income had insignificant positive correlations and the other two had insignificant negative correlations. When disaggregated, the forest and agricultural land separately followed the same results as the percentage of total absentee land (Table 15).

Results for metro and non-metro counties

The estimated Pearson's correlation coefficients for metro and non-metro counties show that in metro counties the relationship between absentee landownership and quality of life is more significant than in non-metro counties (Table 16 and 17). The result obtained for non-metro counties shows education, local finding and per capita income have negative, and student eligible for reduced price or free meal and female headed household have positive correlations with absentee land ownership. However, the p value is only significant for student meals in non-metropolitan counties. Results for metropolitan counties show the same negative and positive relationship and in this case, the p values are significant for all the relationships except local fund per student and absentee land.

Regression results

Results for all study counties

Mean parameter estimates and standard errors for the bootstrapped, OLS models are presented in Table 18. The estimated coefficients of *Absentee* in the five models are consistent, in their signs and significance, with results found in correlation analyses described above. Regression coefficients directly measure the magnitude of the influence of absentee land ownership on the quality of life variables. For example, in the regression model of *Income*, the coefficient of *Absentee* suggests that 1 percent more absentee landownership reduces the per capita income of a county by $82.24, holding everything else constant. Similarly, a 1 percent increase in absentee landownership reduces the number of people (aged 25 years and above) with at least high school education by 0.11 percent, *ceteris paribus*.

The negative effect of *Absentee* on the amount of local funding available per student in a county is not statistically significant. Absentee landownership does have a significant positive effect on the percentage of students eligible for reduced price food and the percentage of female headed households in a county. Percentage of population over 65 years of age, although significant in only two models, is generally found to have a negative influence on quality of life.

As was mentioned above race was initially included in the regression analyses but after it was included, the estimated coefficients of *Absentee* in the five models were inconsistent and the p value was not significant (Table 19). It was suspected that this was because of the multicollinearity. To check if there any co-relation exists between race and absentee landownership, a separate correlation test was done which showed that race and absentee land ownership have a very strong positive correlation (Table 20).

Results for metro and non-metro counties

Estimation results of the OLS models with dummy variable on metro/non-metro counties are shown in Table 21. The coefficients of Absentee and Absentee*Metro are not significant in most of the estimated models. The statistical insignificance of these variables indicates that the influence of absentee landownership is not different between metro and non-metro counties.

Chapter V

Discussion

The majority of forestland (60.5 percent) and (40.9 percent) agricultural land in Alabama is owned by absentee landowners, including owners who live outside Alabama (34.6 percent of all land in the state, including 35.5 percent of all forestland and 29.4 percent of all agricultural land). This pattern of landownership is found to be positively correlated with poor quality of life in Alabama. Analysis of data in the previous chapter shows that the percentage of absentee land is negatively correlated with per capita income, educational attainment and local funding per student in each county. It implies that where the income and local funding per student is high, percentage of absentee land is low. Previous studies have demonstrated that income and educational attainment is associated with better quality of life, it can be concluded that the absentee land percentage is high in those counties where the quality of life is poor. A positive correlations between absentee land and students eligible for free or low cost meals and female headed household were found. Female headed households, eligible students for free and low cost meals suggest poor quality of life. Therefore, it can be assumed that the percentage of absentee land is associated with quality of life. All the relationships between absentee land ownership and each quality of life indicators were significant except the relation between local fund per student and absentee ownership.

Statistical analysis using least squares regression offered the opportunity to help explain the nature of correlations found. For the most part, findings matched expectations based on available literature, showing that quality of life declined as absentee landownership increased.

Quality of life is marginally better in metro counties than non-metro counties. The trend of absentee ownership is higher in non-metro counties than in metro. However, since the result is not significant, statistically it can not be said that there is a difference between the effects of absentee landownership on quality of life for metro or non-metro counties. This study showed that the poor or better quality of life is determined by the percentage of absentee land. Although the estimated regression models suffer from the limited number of control variables, the findings of this study are unique because, to the author's knowledge, no previous study has statistically established the relationship between quality of life and absentee land ownership in Alabama.

A commonly accepted view in social research is that the economic structure of a community, especially a rural community, is significantly affected by the use of land and patterns of landownership (Jacobs 1998; Giesler 1984; Zabawa 1991; Gavende 1998). The findings of this study strongly support this argument. Along with the economic settings, it also revealed that when land is largely owned by outsiders, the level of educational attainment is highly affected. This effect is crucial since education is an important way to produce maximum human capital in a society and to promote socio-economic development. In the case of Alabama, to provide a better educational opportunity is more important since many counties (especially rural counties) are natural resource, especially timber, dependent. According to Bliss and Bailey (2005), a timber dependent county is one where 25% or more manufacturing employment is in forest based industries. In 2000, by this standard, 24 non metropolitan counties in Alabama could be considered as timber dependent counties.

Resource dependent communities can be characterized as economically deprived and politically marginal (Taskforce on Persistent Rural Poverty 1993). Because of their dependency on a particular source, resource dependent communities face several challenges (Bailey and

Pomeroy 1996). A poor resource dependent community is vulnerable since it has few alternative ways for local residents to earn a living. With regard to this issue, educational attainment can obviously provide the pathway to build an alternative way of earning for a sustainable life. But for Alabama counties, supporting schools using by local government funds is a challenge as the property tax rate and revenue are very low. More importantly, it is difficult to raise the tax that is necessary to support local schools when most of the land is in absentee ownership.

Though the statistical test suggested an insignificant but negative correlation between local funding per student and absentee ownership, it was found in the basic data that county schools are poorly funded in Alabama. A large variation in local funding between the county schools was also found in the basic data. It varies from 695 dollars to 2367 dollars per students. There were some exceptions but in general, county level schools had low funding. In contrast, municipal schools were relatively well funded. The reason of this can be tied to the importance of property tax. Municipalities have other taxes (for example, sales tax) with property tax to support the fund that the county government do not have.

The bottom line is that Alabama county government has low property tax to provide necessary support for local development. Moreover, absentee owners, in general, do not support raising property taxes. Therefore, the presence of absentee landownership for more than half of the Alabama forest and agricultural lands makes it more difficult to increase the property tax to raise county government funds for supporting school systems and other governmental function. As a result the quality of life is highly affected by the land ownership patterns and the tax structure of Alabama.

Chapter VI

Conclusion

Land is an important prerequisite for economic development. It serves as a source of wealth and power. Ownership of a piece of land provides personal independence and satisfaction for the present, and security for the future. Land, especially in rural areas, is an asset for poor people. Secured land rights and ownership provides a sustainable economic life for owners. Ownership of a particular land determines the right to decide how a piece of land will be used and also sets the responsibility for that use. The benefits that are produced by land ownership are closely related to the size and value of land holdings and to the type of ownership. Ownership of land not only provides the opportunity to have the economic freedom and security for one generation, it may also provide the power to secure the next generation's income. This importance of land is more prominent in rural and natural resource based regions like Alabama where a large number of people live their life depending on natural resources. However, land is not equally distributed in Alabama and in the United States. The implications of such inequality are particularly important when those who control the land are not part of the community where that land is located. If land is mostly owned by absentee owners, it is difficult to use this crucial resource for local well being.

It is often argued that if the percentage of absentee land ownership is high in an area then the local well being will be at a low level. Large numbers of absentee land owners can affect the socio-economic well being of a region in two ways. First, all the income and other material benefits from the land are drained away if most of the land is owned by the non-resident owners.

Secondly, absentee owners are generally less tied to the local community and do not contribute much to local development. The reviewed literature suggests that they are less interested in the local development since they do not live in that community. If in a region, a large portion of land is not owned by the local people, land still can be utilized through a proper property tax system. Where land is not equally distributed, those who have the land can contribute to the development of the community (including the development of those who does not have land) by paying a fair tax for their land. Property tax is an important tool to enhance local government funds. The revenue that comes from property tax is used to meet the local needs (e.g. school or road system). But the complication starts when the land is owned by absentee owners who are, in general, disinterested in local development and opposed to raise tax.

In Alabama, where most of the land is owned by absentee owners, to raise a property tax is a complex issue. Alabama is one of the least heavily taxed states in the nation, and property taxes are the lowest. Current use taxes protect forest and farm land from higher property taxes. Limited tax revenues have the effect of limiting the services that local governments can provide, including education and other social services that can be used to improve local quality of life. This study documents that a large proportion of the beneficiaries of such taxes are not local residents, and that with much of the land base owned by outsiders, local residents have few options available to improve local quality of life with the existing tax code.

Therefore, property tax structure is a vital issue to use Alabama forest and agricultural land to promote socio-economic development. But Alabama's existing tax structure obstructs use of forest and agricultural land for local well being. This structure should be changed to support the local government in each county which depends significantly on property taxation. Property

tax is the major source for county government to support local development, especially the school system.

The question can be asked now about the role of local people. Why do they not mobilize to increase property taxes, most of which would be paid by absentee owners? Such increased tax revenue could be used to improve local schools and roads. In spite of the reality that low Alabama property tax rates for both forest and agricultural land provide benefits primarily to absentee landowners, why do Alabamians support the current tax system? The straight forward answer is "people hate property tax more than the other taxes" (Cabral and Hoxby 2010: 1). As a result, people are less likely to support an increase in property taxes. The Constitution of the State of Alabama also makes it very difficult to increase property taxes.

Therefore, the situation is politically complex in Alabama. On one hand, Absentee owners are unlikely to support a tax increase on land where they do not live and would enjoy few of the benefits of public investments in roads and schools. On the other hand, local people are not well informed and may not realize how much land is owned by non-residents and how the local economy would benefit from a change in the tax structure. The findings of this study provide that information of who benefits more from the tax structure of Alabama for forest and agricultural land. It documents the likelihood that absentee landownership is negatively correlated with quality of life in Alabama.

On the basis of the findings reported here, this study suggests reconsideration of property tax policy in Alabama. Change is especially needed in the forest and agricultural sector where the land is taxed according to the "current use" value of the property. According to the author's knowledge, the present study is providing the first well documented information about the issues related to absentee landownership in Alabama. This study supports the Goldschmidt hypothesis

that absentee land ownership is negatively correlated with quality of life. Further, statistical analysis supports the view that there is a causal relationship in this correlation, that absentee ownership directly affects quality of life. Specifically, as the percentage of absentee ownership increases, quality of life decreases. As a continuation of this research, the present study suggests that future research should focus on the question of why local people are unlikely to support increased property tax, even though the current tax system mostly benefits the absentee owners and adversely influences the wellbeing of the local people.

References

Alabama Department of Revenue. 2010. Available at http://www.revenue.alabama.gov/advalorem/index.html (Accessed on April 23, 2011).

Alabama State Department of Education. 2009-2010. Annual Reports. Available at http://www.alsde.edu/general/AlabamaEducationReportCard.pdf (Accessed on April 2, 2011).

Allan, K. 2010. *The Social Lens: An Invitation to Social and Psychological Theory*. Sage Publication: USA.

Alston, L., G. D. Libecap, and R. Schneider. 1996. *The Determinants and Impact of Property Rights: Land Titles on the Brazilian frontier*. NBER Working Paper No. W5405. Cambridge, MA: National Bureau of Economic Research (NBER).

Archibald, J. and J. Hansen. 2003. Land is Power, and Most Who Wield It are Outsiders. Birmingham News. October 12.

Bailey, C. and C. Pomeroy. 1996. "Resource Dependency and Development Options in Coastal Southeast Asia." *Society and Natural Resources* 9(2):191-192.

Bain, N.R. 1984. "Nonresident Land Ownership: A Potential Factor in Rural Change." *Land Use Policy* 1(1):64-71.

Barnes, D. and A. Blevins. 1992. "Farm Structure and the Economic Well Being of Nonmetropolitan Counties." *Rural Sociology* 57(3): 333-346.

Barrientos, A. 2002. "Old age, Poverty, and Social Investment." *Journal of International Development* 14(8):1133-1141.

Barzel, Y. 1997. *Economic Analysis of Property Rights*. Cambridge: Cambridge University Press.

Bjorklund, A. and M. Janiti. 1997. "Intergenerational Income Mobility in Sweden Compared to the United States." *American Economic Review* 27(5):1009-1018.

Bliss, J.C., M.L. Sisok, and T.W. Birch. 1998. "Ownership Matters: Forestland Concentration in Rural Alabama." *Society and Natural Resources* 11(4):401–410.

Bliss, J.C., T.L. Walkingstick, and C. Bailey. 1998. ‘‘Development or Dependency?’’ *Journal of Forestry* 96(3):24–30.

Bollen, K. A. and R. Stine. 1990. “Direct and Indirect Effects: Classical and Bootstrap Estimates of Variability.” *Sociological Methodology* 20:115-140.

Bourdieu, P. 1986. “The Forms of Capital.” Pp. 241-258 in *Handbook of Theory and Research for the Sociology of Education*, edited by J.G. Richardson New York: Greenwood.

Butler, B. J. and M. Tyrrell. 2007. “Understanding and Reaching Family Forest Owners: Lessons from Social Marketing Research.” *Journal of Forestry* 105(7): 348-357.

Buttel. F.H . 1984. “Agricultural Land Reform in America.” Pp.55-72 in *Land Reform, American Style*, edited by C.C. Geisler and F.J. Popper. Totowa, New Jersy: Rowman & Allenhead.

Buvinic, M. and G.R. Gupta . 1997. “Female-Headed Households and Female-Maintained Families: Are They Worth Targeting to Reduce Poverty in Developing Countries?” *Economic Development and Cultural Change* 45(2): 259-280.

Cabral, M. and C. Hoxby. 2010. “The Hated Property Tax: Salience, Tax Rates, and Tax Revolts.” *Working Paper.* Available at http://www.stanford.edu/~mcabral/Tax_Salience.pdf (Accessed on July 18, 2010).

Carter, A. 1989. *The Philosophical Foundations of Property Rights.* London: Harvester Wheatsheaf.

Coase, R. 1960. “The Problems of Social Cost.” *Journal of Law and Economics* 3:1-44.

Coleman, J. S. 1990. *Foundations of Social Theory*. Cambridge, MA: Belknap Press of Harvard University Press.

Cordes, M.W. 1999. “Property Rights and Land Use Controls: Balancing Private and Public Interest.” *Northern Illinois University Law Review* 19:629-655.

Coser, L.A. 1957. “Social Conflict and the Theory of Social Change.” *The British Journal of Sociology* 8(3): 197-207.

Daly, H. and J.B. Cobb. 1989. *For the Common Good: Redirecting the Economy toward Community, The Environment, and a Sustainable Future*. Boston: Beacon Press.

Deininger, K. and K. Michael. 2003. “Land Policy, Poverty Alleviation and Sustainable Rural Development.” *Agriculture and Rural Development* 10(2): 44-47.

Demsetz, H. 1967. “Toward A Theory of Property Rights.” *American Economic Review* 57(2): 347-359.

Diener, E. and E. Suh. 1997. “Measuring Quality of Life: Economic, Social and Subjective Indicators.” *Social Indicators Research* 40(1-2):189-216.

Diener, E. and R. Biswas. 2002. “Will Money Increase Subjective Well-Being? A Literature Review and Guide to Needed Research.” *Social Indicators Research* 57(2):119–169.

Di Gregorio, M., K. Hagedorn., M. Kirk., B. Korf., N. McCarthy, R. Meinzen-Dick, and B. Swallow. 2004. “Property Rights and Collective Action and Poverty: The Role of Institutions for Poverty Reduction.” Paper prepared for the *Tenth Biennial Conference of the International Association for the Study of Common Property (IASCP)*, Oaxaca Mexico. Available at http://www.nric.net/poverty/pubs/IASCP.pdf (Accessed on September 9, 2010).

Dudenhefer, P. 1993. “Poverty in the Rural United States.” *Focus* 15(1):37-45.

Duncan, C. 2000. *World’s Apart*. New Haven, CT: Yale University Press.

Efron, B. & R. J. Tibshirani. 1993. *An Introduction to the Bootstrap*. New York: Chapman and Hall.

Encyclopedia of Alabama. 2007. Available at http://www.encyclopediaofalabama.org/face/Home.jsp (Accessed on May 2, 2011).

ERS. 2004. Rural Income, Poverty, and Welfare: Rural Poverty. Washington, D.C: Economic Research Service, U.S. Department of Agriculture. Available at http://www.ers.usda.gov/briefing/incomepovertywelfare/ruralpoverty/ (Accessed on July 14, 2010).

Furubotn, E. G. and S. Pejovich. 1972. “Property Rights and Economic Theory: A Survey of Recent Literature.” *Journal of Economic Literature* 10(4):1137-1162.

Gaventa, J. and B. Horton. 1984. “Land Ownership and Land Reform in Appalachia.” Pp. 233-244 in *Land Reform, American Style*, edited by C.C Geisler and F.J. Pooper. Totowa, New Jersy: Rowman & Allenhead.

Gaventa, J. 1998. “The Political Economy of Land Tenure: Appalachia and the Southeast.” Pp. 227-244 in *Who Owns America? Social Conflict over Property Rights*, edited by H.M. Jacobs, Madison: University of Wisconsin Press.

Giesler, C. 1995. “Land and Poverty in the United States: Insights and Oversights.” *Land Economics* 71(1): 16-34.

Gilles, J. and S. Geletta. 1993. “Farm Structure and Economic Well-Being: A Look at Three Methodological Sins.” *Rural sociology* 58(2): 269-276.

Goldschmidt, W. 1978. *As You Sow*. Montclair, New Jersey: Allanheld, Osmun and Co. Publishers, Inc.

Goodstein, E. 1989. "Landownership, Development and poverty in Southern Appalachia." *The Journal of Developing Areas* 23(4): 519-534.

Goodwin, B.K., and A.M. Featherstone. 1995. "An Empirical Analysis of Participation in US Government Farm Programmes." *Applied Economics* 27(1):39–50.

Green, G.P. 1985. "Large-Scale Farming and the Quality of Life in Rural Communities: Further Specification of the Goldschmidt Hypothesis." *Rural Sociology* 50(2): 262-274.

Hamell, S. P. 2002. "Constitutional reform in Alabama: A necessary step towards achieving a fair and efficient tax structure." October, 15. Prepared under the Auspices of the Cumberland State Constitutional Law Project, Samford University.

Hardin, G. 1968. "The Tragedy of the Commons." *Science* 162(3859): 1243-1248.

Harley, D. 2010. "Better for Whom? The Laborers Omitted in Goldschmidt's Industrial Agricultural Thesis." *Human Organization* 69(1):97-106.

Hartsell, A.J. and M.J. Brown. 2002. Forest Statistics for Alabama, 2000. Research Bulletin SRS-67. Ashville, NC: Southern Research Station, USDA Forest Service.

Heasley, L. and R. P. Guries. 1998. "Forest Tenure and Cultural Landscapes: Environmental Histories in the Kickapoo Valley." Pp. 182-207 in *Who Owns America? Social Conflict over Property Rights*, edited by H.M. Jacobs. Madison: University of Wisconsin Press.

Heffernan, W. D. and P. Lasley. 1978. "Agricultural Structure and Interaction in the Local Community: A Case Study." *Rural Sociology* 43(3):348-361.

Horton, B.D. 1993. "The Appalachia Land Ownership Study: Research and Citizen Action in Appalachia." Pp. 85-102 in *Voice of Change: Participatory Research in the United States and Canada*, edited by. P. Park, M.B. Miller. B. Hall, and T. Jackson. Toronto: Ontario Institute for Studies in Education.

Jacobs, D. 1979. "Inequality and Police Strength: Conflict Theory and Coercive Control in Metropolitan Areas." *American Sociological Review* 44(6): 913-925.

Jacobs, M. 1998. "Who Owns America." Pp. 245-250 in *Who Owns America? Social Conflict over Property Rights*, edited by H.M. Jacobs. Madison: University of Wisconsin Press.

Joshi, M L., J. C. Bliss, C. Bailey, L. J. Teeter, and K. J. Ward. 2000. "Investing in Industry, Under-Investing in Human Capital: Forest-Based Rural Development in Alabama." *Society & Natural Resources* 13(4): 291-319.

Kassab, C. 1990. "Studying Economic Change: Are Robust Regression Procedures Needed?" *Rural Sociol*ogy 55(3): 357–75.

Keele, L J. 2008. *Semiparametric Regression For the Social Sciences*. New York: John Wiley & Sons.

Kelleher. R. J. 1966. "Private Ownership: Its Basis and Equitable Conditions." New York: M. H. Gill and Sons Ltd.

Lawson, B. 2011. Alabama Property Tax Trial Opens in Huntsville, Grim History Recalled. The Huntsville Times. March 22.

Lewis, J. A. 1980. *Land Ownership in the United States, 1978.* Agricultural Information Bulletin No. 435. Washington, D.C.: U.S. Department of Agriculture, Economics, Statistics, and Cooperatives Service.

Li, H. and G.S. Maddala. 1996. "Bootstrapping Cointegrating Regressions." *Econometric Reviews* 80(2):297-318.

Libecap, G.D. 1989. *Contracting For Property Rights*. Cambridge University Press: NewYork.

Lobao, L.M., M.D. Schulman, and L.E. Swanson. 1993. "Still Going: Recent Debates on the Goldschmidt Hypothesis." *Rural Sociology* 58(2):277-288.

Lyson, T.A., R. Torres, and R. Welsh. 2001. "Scale of Agricultural Production, Civic Engagement and Community Welfare." *Social Forces* 80(1):311–327.

Marshall, G. 1998. *A Dictionary of Sociology.* New York: Oxford University Press.

McBride, M. 2001. "Relative-Income Effects on Subjective Well-Being in the Cross- Section." *Journal of Economic Behavior and Organization* 45(3): 251–278.

McPhail, C.B. 1994. Current Use Losses Millions for Alabama. The Mobile Register. December 11.

Molotch, H. 1976. "The City as a Growth Machine: Towards a Political Economy of Place." *American Journal of Sociology* 82(2): 309-332.

Moser, C. 1996. *Confronting Crisis: A Comparative Study of Household Responses to Poverty and Vulnerability in Four Poor Urban Communities.* Washington, DC: The World Bank.

NRCM (Natural Resources Council of Maine). 2010. Available at http://www.nrcm.org/documents/publiclandownership.pdf (Accessed September 30, 2010).

Nelson, W.E. 1978. "Black Political Power and the Decline of Black Land Ownership." *The Review of Black Political Economy* 8(3): 253-265.

North, D.C. and R.P. Thomas. 1973. *The Rise of the Western World: A New Economic History*. Cambridge, UK: Cambridge University Press.

Oates, W. E. 2001. "Property Taxation and Local Government Finance: An Overview and Some Reflections." Pp.1-31 in *Property Taxation and Local Government Finance*, edited by W.E.Oates, Cambridge, MA : Lincoln Institute of Land Policy.

Oxaal, Zoe. 1997. Education and Poverty: A Gender Analysis, Bridge Development-Gender Report No. 53. Brighton, England: Institute of Development Studies.

PARCA (The Public Affairs Research Council of Alabama). 2009. A Progress Report on Research Aimed at Improving State and Local Governments. Available at http://parca.samford.edu/PARCA2/newsletters/fall2009.pdf (Accessed on 20 June, 2011).

Park, J. T., A.P. Turnbull, and H. R. Turnbull. 2002. "Impacts of Poverty on Quality of Life in Families of Children with Disabilities." *Exceptional Children* 68(2):151-170.

Peluso, N. L., C.R. Humphrey, and L.P. Fortmann. 1994. "The Rock, the Beach, and the Tidal Pool: People and Poverty in Natural Resource-Dependent Areas." *Society and Natural Resources* 7(1):23-38.

Pretty, J. 2003. "Social Capital and the Collective Management of Resources." *Science* 302: 1912-14.

Putman, R.D. 1993. "The Prosperous Community: Social Capital and Public Life." *American Prospect* 13(1995): 335-42.

Salamon, S. 1993. "Culture and Agricultural Land Tenure." *Rural Sociology* 58(4): 580-598.

Scott. S. L. 2009. "Discovering What the People Knew: The 1979 Appalachian Land Ownership Study." *Action Research* 7(2): 185-205.

Sen, A. 2000. *Development as Freedom.* New York: Alfred A. Knopf.

Shaffer, R. 1997. "Absentee Forest Landowners in Virginia." *Virginia Journal of Science* 48(3): 219-223.

Shu, L. L., F. Gino, and M. H. Bazerman. 2011. "Dishonest Deed, Clear Conscience: When Cheating Leads to Moral Disengagement and Motivated Forgetting." *Personality and Social Psychology Bulletin.* 37:330–349.

Simmons, R.T., F.L. Smith. Jr, and P. Georgia. 1996. *The Tragedy of The Commons Revisited: Politics Versus Private Property*. Washington, D.C: The Center For Private Conservation.

Smith, W.B., P.D. Miles., C. Perry, and S. A. Pugh. 2010. Forest Resources of the United States, 2007. Gen. Tech. Rep. WO-78. Washington DC: USDA Forest Service.

Snyder, A. R. and D.K. Mclaughlin. 2004. "Female-headed Families and Poverty in Rural America." *Rural Sociology* 69(1):127-149.

Stine, R. 1989. "An introduction to Bootstrap Methods." *Sociological Method and Research* 18(2-3): 243–291.

Task Force (The Appalachia Land Ownership Task Force). 1983. *Who Owns Appalachia? Landownership and Its Impact.* Lexington, KY: The University Press of Kentucky.

Task Force on Persistent Rural Poverty, Rural Sociological Society. 1993. *Persistent Poverty in Rural America.* Boulder, CO: Westview Press.

Tucker, C.M. 1999. "Private versus Common Property Forests: Forest Conditions and Tenure in A Honduran Community." *Human Ecology* 27(2): 201–230.

USDA. n.d. Alabama Agricultural Statistics, 2008. Bulletin 50. Montgomery, AL: National Agricultural Statistics Service, U.S. Department of Agriculture.

U.S. Census Bureau. 1989. Small Area Income and Poverty Estimates. Available at http://www.census.gov/did/www/saipe/county.html (Accessed on April 12, 2011).

U.S. Census Bureau. 1999. Small Area Income and Poverty Estimates. Available at http://www.census.gov/did/www/saipe/county.html (Accessed on April 12, 2011).

U.S. Census Bureau. 2000. Available at http://www.census.gov/population/www/metroareas/metroarea.html (Accessed on May 14, 2011).

U.S. Census Bureau. 2009a. Small Area Income and Poverty Estimates. Available at http://www.census.gov/did/www/saipe/county.html (Accessed on April 12, 2011).

U.S. Census Bureau. 2009b. American Community Surveys. Available at http://www.census.gov/hhes/www/poverty/data/index.html#saipe (Accessed on April 12, 2011).

U.S. Census Bureau. 2010. The 2010 Statistical Abstract. Available at http://www.census.gov/compendia/statab/cats/income_expenditures_poverty_wealth.html (Accessed on May 15, 2011).

Weimer, D. L. 1997. "The Political Economy of Property Rights." Pp. 1-18 in *The Political Economy of Property Rights: Institutional Change And Credibility In The Reform of*

Centrally Planned Economies, edited by D. L. Weimer, Cambridge: Cambridge University Press.

Welsh, R. 2009. "Farm and Market Structure, Industrial Regulation and Rural Community Welfare: Conceptual and Methodological Issues." *Agriculture and Human Values* 26(1-2): 21-28.

Wiebe, K.D., A. Tegene, and B. Kuhn. 1998. "Land Tenure, Land Policy, and the Property Rights debate." Pp. 79-93 in *Who Owns America*? *Social Conflict over Property Rights,* edited by H.M. Jacobs, Madison: University of Wisconsin Press.

Wimberley, R.C. and L.V. Morris. 1996. *The Reference Book on Regional Well-Being: U.S. Regions, the Black Belt, Appalachia.* Mississippi State, Mississippi: Southern Rural Development Center.

Wimberley, D.W. 2010. "Quality of Life Trends in the Southern Black Belt, 1980-2005: A Research Note." *Journal of Rural Social Sciences* 25(1): 103-118.

Wooldridge, J. 2003. *Introductory Econometrics: A Modern Approach*. Cincinnati, OH: Thompson and Southwestern Publisher.

Zabawa, R. 1991. "The Black Farmer and Land in South-Central Alabama: Strategies to Preserve a Scarce Resource." *Human Ecology* 19(1): 61-81.

Appendix

Tables and Figures

Table 1. Percentage of population below poverty level in Alabama

County	% of people below poverty level 1989	% of people below poverty level 1999	% of people below poverty level 2009	Average
Autauga	14.3	11.4	11.2	12.3
Baldwin	13.2	10.5	13.3	12.3
Barbour	26.2	22.3	32.8	27.1
Bibb	18.9	17.1	18.1	18.0
Blount	13.4	12.3	14.6	13.4
Bullock	34.1	26.6	34.7	31.8
Butler	26.3	21.9	29.4	25.9
Calhoun	15.2	16.3	19.0	16.8
Chambers	15.6	16.6	20.7	17.6
Cherokee	14.2	15.4	18.4	16.0
Chilton	17.1	15.4	18.7	17.1
Choctaw	25.4	20.0	22.8	22.7
Clarke	23.7	20.7	29.1	24.5
Clay	15.6	14.7	19.2	16.5
Cleburne	13.7	14.4	17.0	15.0
Coffee	12.9	14.6	15.7	14.4
Colbert	14.8	13.6	16.0	14.8
Conecuh	27.4	24.2	27.5	26.4
Coosa	16.9	15.0	16.7	16.2
Covington	19.5	18.5	22.5	20.2
Crenshaw	23.6	20.2	20.6	21.5
Cullman	14.9	12.9	19.3	15.7
Dale	14.3	16.4	16.2	15.6
Dallas	33.7	26.3	35.0	31.7
De Kalb	16.8	15.3	21.7	17.9
Elmore	14.6	11.8	14.2	13.5
Escambia	22.2	18.7	22.0	21.0
Etowah	14.9	15.9	17.2	16.0
Fayette	17.2	16.2	19.6	17.7
Franklin	16.8	16.9	21.8	18.5
Geneva	18.6	18.5	19.4	18.8
Greene	42.2	28.5	28.4	33.0
Hale	35.9	23.0	26.6	28.5

(*Table continues on following page.*)

Table 1. Percentage of population below poverty level in Alabama (*continued from previous page*)

County	% of people below poverty level 1989	% of people below poverty level 1999	% of people below poverty level 2009	Average
Henry	18.3	16.9	18.7	18.0
Houston	15.7	15.8	17.7	16.4
Jackson	15.1	14.0	16.4	15.2
Jefferson	17.3	13.7	16.5	15.8
Lamar	15.7	16.5	18.2	16.8
Lawrence	16.5	14.7	16.2	15.8
Lee	15.5	14.2	20.7	16.8
Limestone	13.3	13.1	13.5	13.3
Lowndes	39.0	25.8	28.8	31.2
Macon	34.1	27.1	38.6	33.3
Madison	11.0	11.1	10.3	10.8
Marengo	28.9	21.8	24.9	25.2
Marion	16.4	15.6	21.2	17.7
Marshall	13.8	15.0	19.1	16.0
Mobile	22.6	18.3	18.7	19.9
Monroe	21.7	20.0	23.4	21.7
Montgomery	18.8	16.9	19.9	18.5
Morgan	11.5	11.7	15.9	13.0
Perry	49.0	30.8	31.0	36.9
Pickens	25.2	21.3	28.0	24.8
Pike	25.7	21.0	27.6	24.8
Randolph	17.6	16.8	21.1	18.5
Russell	19.8	17.9	19.9	19.2
St. Clair	13.7	13.2	13.8	13.6
Shelby	7.7	6.8	6.9	7.1
Sumter	37.5	28.5	35.1	33.7
Talladega	20.8	17.6	18.9	19.1
Tallapoosa	15.7	16.2	17.8	16.6
Tuscaloosa	18.7	15.6	19.9	18.1
Walker	16.3	14.5	16.0	15.6
Washington	20.3	18.1	19.3	19.2
Wilcox	45.5	31.6	34.6	37.2
Winston	16.1	16.1	24.9	19.0
Alabama	**17.7**	**15.3**	**17.5**	**16.8**

Sources: USCB,1989; USCB,1999 and USCB, 2009a

Table 2. Millage rates in Alabama counties

County	County millage	School millage	Total
Autauga	10.5	10.0	20.5
Baldwin	11.5	12.0	23.5
Barbour	9.0	20.0	29.0
Bibb	9.5	10.0	19.5
Blount	16.0	16.5	32.5
Bullock	18.5	18.5	37.0
Butler	11.5	12.0	23.5
Calhoun	12.5	21.1	33.6
Chambers	18.3	13.7	32.0
Cherokee	13.5	22.0	35.5
Chilton	22.5	10.0	32.5
Choctaw	10.5	14.0	24.5
Clarke	11.0	15.5	26.5
Clay	11.0	13.5	24.5
Cleburne	13.5	17.0	30.5
Coffee	10.5	17.0	27.5
Colbert	8.5	20.0	28.5
Conecuh	18.0	10.0	28.0
Coosa	7.5	12.0	19.5
Covington	10.5	10.0	20.5
Crenshaw	21.5	10.0	31.5
Cullman	9.5	10.0	19.5
Dale	13.5	10.0	23.5
Dallas	16.0	11.5	27.5
De Kalb	14.5	14.5	29.0
Elmore	8.5	10.0	18.5
Escambia	11.5	17.0	28.5
Etowah	14.5	16.0	30.5
Fayette	11.5	10.0	21.5
Franklin	16.5	10.0	26.5
Geneva	14.6	11.0	25.6
Greene	23.0	8.0	31.0
Hale	16.5	10.0	26.5
Henry	18.5	12.0	30.5
Houston	11.5	10.0	21.5
Jackson	13.5	10.0	23.5
Jefferson	13.5	34.1	47.6
Lamar	15.0	10.0	25.0
Lauderdale	10.5	18.0	28.5
Lawrence	13.5	10.0	23.5
Lee	13.5	21.0	34.5
Limestone	13.5	10.0	23.5
Lowndes	23.5	15.0	38.5
Macon	12.5	32.0	44.5
Madison	14.0	21.0	35.0
Marengo	14.0	5.0	19.0

(*Table continues on following page.*)

Table 2. Millage rates in Alabama counties (*continued from previous page*)

County	County millage	School millage	Total
Marion	7.5	10.0	17.5
Marshall	13.5	17.5	31.0
Mobile	20.5	29.5	50.0
Monroe	11.5	10.0	21.5
Montgomery	12.5	10.0	22.5
Morgan	13.8	11.3	25.1
Perry	25.5	9.0	34.5
Pickens	16.4	11.2	27.6
Pike	12.8	10.7	23.5
Randolph	13.5	12.0	25.5
Russell	12.0	21.5	33.5
Shelby	7.5	30.0	37.5
St. Clair	11.0	13.5	24.5
Sumter	17.0	13.8	30.8
Talladega	9.5	18.0	27.5
Tallapoosa	8.5	15.0	23.5
Tuscaloosa	10.5	21.0	31.5
Walker	9.0	10.0	19.0
Washington	11.5	12.0	23.5
Wilcox	19.5	10.0	29.5
Winston	7.5	12.0	19.5

Source: Alabama Department of Revenue 2010.

Table 3. Descriptive statistics of total absentee land

Variable	N	Mean	Standard deviation	Minimum	Maximum
Absentee	50	56.1	16.0	21.2	85.5

Source: County tax records, S & W Mini Computer Inc., Delta Computer Inc., Alabama Flagship GIS.

Table 4. Percentage of total absentee land (including land owned by in-state and out-of-state owners) in 50 study counties

Type of land	Total absentee land	Total out-of-state absentee land	Total in-state absentee land
As percent of all land	56.1	34.6	65.4
Percent of which is forestland	84	90.1	82.7
Percent of which is agricultural land	16	9.9	17.2

Source: County tax records, S & W Mini Computer Inc., Delta Computer Inc., Alabama Flagship GIS.

Table 5. Percentage of total absentee land in each study county (including in and out-state)

County	(%) Total absentee land	(%) Total absentee land owned by out-of-state owners
Autauga	38.0	22.9
Baldwin	69.7	34.1
Barbour	53.9	45.8
Bibb	67.5	20.2
Blount	53.6	21.5
Bullock	68.1	38.0
Butler	50.7	34.9
Calhoun	43.9	22.1
Chambers	67.4	30.5
Cherokee	63.2	50.4
Chilton	62.8	12.9
Clarke	53.9	44.2
Clay	74.2	17.8
Conecuh	81.3	30.8
Coosa	85.5	31.1
Covington	55.3	73.1
Crenshaw	68.3	33.0
Cullman	21.2	22.6
Dale	36.1	40.4
Dallas	59.6	27.5
Elmore	48.1	26.1
Escambia	46.9	49.2
Etowah	38.4	43.6
Fayette	68.9	38.2
Franklin	44.0	60.3
Greene	74.5	23.8
Hale	68.3	11.6
Houston	30.5	46.8
Jackson	35.4	45.7
Lamar	55.6	55.5
Lauderdale	32.2	64.0
Lawrence	65.0	20.2
Lee	42.7	61.7
Lowndes	74.7	36.2
Macon	74.5	29.6
Marengo	64.4	29.8
Marion	62.4	51.2
Marshall	23.3	19.0
Mobile	33.5	58.1
Montgomery	28.4	40.1
Perry	80.6	19.8
Pickens	60.3	29.9
Pike	40.1	35.0
Randolph	43.6	38.9
Russell	61.2	61.3
Sumter	68.0	28.1
Shelby	53.8	19.0
Tallapoosa	62.4	21.2
Walker	43.9	31.3
Wilcox	63.1	40.1

Sources: County tax records, S & W Mini Computer Inc., Delta Computer Inc., Alabama Flagship GIS.

Table 6. Percentage of absentee forest and agricultural land (including land owned by in and out-of-state owners) in 50 study counties

Absentee forestland			Absentee agricultural land		
As percent of total forest land in Alabama	Percent out-of-state owners	Percent in-state owners	As percent of total agricultural land in Alabama	Percent out-of-state owners	Percent in-state owners
60.5	35.0	65.0	40.9	29.4	74.6

Source: County tax records, S & W Mini Computer Inc., Delta Computer Inc., Alabama Flagship GIS.

Table 7. Percentage of absentee forest and agricultural lands in each county

County	Absentee forestland	Absentee agricultural land	Absentee forestland owned by out-of-state owners	Absentee agricultural land owned by out-of-state owners
Autauga	39.0	35.0	25.0	15.6
Baldwin	77.8	43.3	33.2	39.0
Barbour	55.7	47.5	48.5	34.5
Bibb	68.3	35.5	20.4	9.9
Blount	54.9	50.2	22.9	17.6
Bullock	71.4	58.0	39.9	30.5
Butler	50.8	39.3	34.9	32.1
Calhoun	44.4	43.1	28.1	12.8
Chambers	69.3	53.2	31.3	22.3
Cherokee	78.9	31.5	55.1	26.4
Chilton	63.2	30.5	13.0	9.0
Clarke	54.0	44.4	44.3	17.0
Clay	74.7	16.9	17.8	24.2
Conecuh	84.2	52.1	30.6	34.7
Coosa	85.6	61.8	31.2	3.0
Covington	56.5	29.3	73.9	40.0
Crenshaw	72.8	42.6	34.2	21.2
Cullman	23.3	17.8	23.8	19.9
Dale	44.8	33.1	41.0	40.2
Dallas	63.9	52.3	30.7	21.2
Elmore	54.6	34.2	25.9	26.5
Escambia	46.7	50.0	48.2	59.8
Etowah	32.8	43.2	35.0	49.0
Fayette	69.8	55.2	39.6	10.9
Franklin	47.0	23.6	63.0	23.4
Green	74.9	72.5	25.5	13.2
Hale	75.7	51.8	11.5	12.1
Houston	35.4	27.5	56.1	39.4
Jackson	35.7	29.2	45.7	46.1
Lamar	59.5	38.4	56.5	46.4
Lauderdale	35.0	29.9	55.2	71.9
Lawrence	76.1	45.8	14.8	35.7
Lee	44.9	20.9	61.7	38.7
Lowndes	79.6	63.0	39.8	25.3
Macon	80.2	61.7	29.7	29.4
Marengo	68.8	44.7	30.4	25.5
Marion	65.4	37.3	53.7	16.4
Marshall	38.4	14.1	21.0	14.4
Mobile	37.0	11.6	58.0	61.0
Montgomery	29.1	20.7	40.8	29.1
Perry	83.4	75.3	20.9	17.5
Pickens	63.1	35.3	30.2	26.0
Pike	45.2	29.2	36.6	29.6
Randolph	47.9	26.1	38.0	46.1
Russell	64.2	45.8	62.2	54.6
Sumter	75.0	47.7	27.1	32.5
Shelby	63.7	41.6	20.3	16.5
Tallapoosa	62.4	61.8	21.4	13.9
Walker	45.2	25.4	31.3	32.3
Wilcox	64.4	60.1	40.3	38.0

Sources: County tax records, S & W Mini Computer Inc., Delta Computer Inc., Alabama Flagship GIS.

Table 8. Percentage of forest and agricultural absentee land (including land owned by in and out-state owners) in metro and non-metro counties

County type	In-State absentee		Out-of-State absentee	
	Farm land	Forest land	Farm Land	Forest Land
Metro	69.5	67.8	30.4	32.1
Non-Metro	71.2	63.2	28.7	36.7

Source: County tax records, S & W Mini Computer Inc., Delta Computer Inc., Alabama Flagship GIS.

Table 9. Descriptive statistics for quality of life variables

Variable	**N**	**Mean**	**Standard deviation**	**Minimum**	**Maximum**
Income	50	19202.6	3526.0	12258.0	33607.0
Student_meal	50	67.6	16.7	29.2	100.0
Female_house	50	15.8	5.5	8.8	30.8
Education	50	75.9	5.3	68.5	91.5
Local_fund	50	1256.9	382.1	695.1	2367.9
Pop_over_65	50	15.1	2.3	8.8	18.8

Sources: USCB (2009b) and Alabama Department of Education (2009-2010).
Income: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school; Pop_over_65: percentage of population over 65 years old.

Table 10. Selected variables reflecting quality of life in 50 study counties

County	Absentee	Income	Student_meal	Female_house	Education	Local_fund	Pop_over_65
Autauga	38.0	23774	40.4	13.4	85.0	1258.1	11.6
Baldwin	69.7	26197	42.1	10.6	87.5	2081.7	17.0
Barbour	53.9	15842	100.0	12.4	70.3	1012.7	13.8
Bibb	67.5	18953	62.0	11.9	72.2	997.4	13.5
Blount	53.6	20360	50.1	9.1	72.9	803.3	14.7
Bullock	68.1	17746	93.2	23.4	69.9	1092.6	10.8
Butler	50.7	17221	78.3	21.3	81.1	1006.2	16.2
Calhoun	43.9	21372	54.8	14.9	78.4	1392.3	15.0
Chambers	67.4	17072	70.1	15.4	72.0	1256.3	16.8
Cherokee	63.2	20434	59.2	9.1	70.0	1399.2	18.6
Chilton	62.8	20326	59.0	11.4	74.6	987.1	13.4
Clarke	53.9	16790	73.3	14.6	76.9	1096.3	15.9
Clay	74.2	18267	64.6	11.4	70.8	927.8	18.3
Conecuh	81.3	16960	90.5	15.6	73.3	1848.3	17.8
Coosa	85.5	18563	74.8	11.0	71.9	845.8	17.4
Covington	55.3	18958	60.1	13.0	75.6	1382.2	18.8
Crenshaw	68.3	19900	61.5	15.1	72.4	1037.2	16.2
Cullman	21.2	20339	58.1	11.4	75.2	1109.9	15.6
Dale	36.1	21299	54.5	12.7	83.3	1011.8	13.0
Dallas	59.6	16304	85.1	24.6	75.3	891.3	14.8
Elmore	48.2	21866	48.9	12.8	83.1	947.0	12.1
Escambia	46.9	16711	77.6	15.2	74.0	1572.5	15.2
Etowah	38.4	20354	46.9	13.3	80.5	928.7	16.2
Fayette	68.9	18228	56.2	12.6	74.9	1386.0	17.3
Franklin	44.0	17610	69.3	11.4	68.5	1525.8	15.0
Green	74.5	14564	68.1	26.9	68.6	1708.5	15.4
Hale	68.3	15221	76.2	22.5	68.7	903.9	13.5
Houston	30.5	22797	58.1	14.3	81.3	1106.5	15.8
Jackson	35.4	18742	63.4	11.5	73.1	1647.7	16.1
Lamar	55.6	19926	57.8	11	74.8	695.1	18.2
Lauderdale	32.2	21737	44.4	11.7	81.0	1168.6	17.1
Lawrence	65.0	19795	56.8	11.8	75.0	1449.5	13.5
Lee	42.7	22384	50.2	12.1	84.6	1884.1	8.8
Lowndes	74.7	16466	96.4	28.3	73.4	1082.4	14.1
Macon	74.5	15494	99.3	22.8	77.9	1151.2	15.6
Marengo	64.4	17403	81.5	20.9	79.9	1116.2	15.4
Marion	62.4	18654	57.8	13.3	70.0	816.1	18.6
Marshall	23.3	19654	66.2	14.7	73.2	1413.4	14.6
Mobile	33.5	21274	68.0	18.1	82.1	1409.4	12.5
Montgomery	28.4	25102	71.0	19.4	84.3	1669.8	12.2
Perry	80.6	14266	96.8	26	73.0	950.6	15.1
Pickens	60.3	16475	73.6	18.3	76.7	1054.3	17.0
Pike	40.1	19085	76.3	18.2	76.9	1881.4	13.0
Randolph	43.6	18813	62.4	11.1	71.0	819.8	17.1
Russell	61.2	18386	72.2	19.1	75.9	1032.7	14.0
Shelby	53.8	33607	29.2	8.8	91.5	2367.9	9.2
Sumter	68.0	13667	93.2	25.3	72.5	865.4	14.9
Tallapoosa	62.4	22595	66.2	13.6	74.3	1940.6	18.2
Walker	43.9	20321	62.2	14.1	75.6	1760.1	16.7
Wilcox	64.0	12258	100.0	30.8	71.1	1148.1	13.9

Sources: USCB (2009b) and Alabama Department of Education (2009-2010).

Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per students; Pop_over_65: percentage of population over 65 years old.

Table 11. Descriptive statistics for quality of life variables in metro and non-metro counties

Variables	Metro (N=19)	Non-Metro (N=31)
Absentee (average %)	50.5	58.1
Income (average)	20982.0	18112.0
Student_meal (average %)	58.7	73.0
Female_house (average %)	15.4	16.0
Education (average %)	78.3	74.4
Local_Fund (average %)	1308.3	1225.3
pop_over_65 (average %)	13.6	16.0

Sources: County tax records, S & W Mini Computer Inc., Delta Computer Inc., Alabama Flagship GIS, USCB (2009b) and Alabama Department of Education (2009-2010).
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school; Pop_over_65: percentage of population over 65 years old.

Table 12. Correlation analysis results for total absentee land

	Absentee	*Income*	*Student_meal*	*Female_house*	*Education*	*Local_fund*
Absentee	1.00					
Income	-0.42 (0.00)***	1.00				
Student_meal	0.43 (0.00)***	-0.79 (0.00)***	1.00			
Female_house	0.32 (0.02)**	-0.61 (0.00)***	0.74 (0.00)***	1.00		
Education	-0.42 (0.00)***	0.73 (0.00)***	-0.51 (0.00)***	-0.20 (0.15)	1.00	
Local_fund	-0.15 (0.31)	0.50 (0.00)***	-0.25 (0.07)*	-0.16 (0.27)	0.38 (0.01)**	1.00

Notes: *p*-values are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level.
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school.

Table 13. Correlation analysis results for absentee forestland

	Absentee	*Income*	*Student_meal*	*Female_house*	*Education*	*Local_fund*
Absentee	1.00					
Income	-0.28 (0.04)**	1.00				
Student_meal	0.34 (0.01)**	-0.78 (0.00)***	1.00			
Female_house	0.25 (0.07)*	-0.60 (0.00)***	0.74 (0.00)***	1.00		
Education	-0.33 (0.01)**	0.73 (0.00)***	-0.51 (0.00)***	-0.20 (0.15)	1.00	
Local_fund	-0.05 (0.70)	0.49 (0.00)***	-0.25 (0.07)*	-0.16 (0.27)	0.38 (0.01)**	1.00

Notes: *p*-values are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level.
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school.

Table 14. Correlation analysis results for absentee agricultural land

	Absentee	*Income*	*Student_meal*	*Female_house*	*Education*	*Local_fund*
Absentee	1.00					
Income	-0.38 (0.00)***	1.00				
Student_meal	0.44 (0.00)***	-0.78 (0.00)***	1.00			
Female_house	0.49 (0.00)***	-0.60 (0.00)***	0.74 (0.00)***	1.00		
Education	-0.33 (0.01)**	0.73 (0.00)***	-0.51 (0.00)***	-0.20 (0.15)	1.00	
Local_fund	-0.07 (0.62)	0.49 (0.00)***	-0.25 (0.07)*	-0.16 (0.27)	0.38 (0.01)**	1.00

Notes: *p*-values are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school.

Table 15. Correlation analysis results for out-of-state absentee land

	Absentee	*Income*	*Student_meal*	*Female_house*	*Education*	*Local_fund*
Absentee	1.00					
Income	0.07 (0.61)	1.00				
Student_meal	-0.09 (0.52)	-0.78 (0.00)***	1.00			
Female_house	-0.17 (0.22)	-0.60 (0.00)***	0.74 (0.00)***	1.00		
Education	0.12 (0.39)	0.73 (0.00)***	-0.51 (0.00)***	-0.20 (0.15)	1.00	
Local_fund	0.08 (0.55)	0.49 (0.00)***	-0.25 (0.07)*	-0.16 (0.27)	0.38 (0.01)**	1.00

Notes: *p*-values are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level.
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school.

Table 16. Correlation analysis results for metro counties

	Absentee	*Income*	*Student_meal*	*Female_house*	*Education*	*Local_fund*
Absentee	1.00					
Income	-0.53 (0.01)**	1.00				
Student_meal	0.43 (0.06)*	-0.69 (0.00)***	1.00			
Female_house	0.39 (0.09)*	-0.60 (0.00)***	0.69 (0.00)***	1.00		
Education	-0.70 (0.00)***	0.89 (0.00)***	-0.62 (0.00)***	-0.46 (0.04)**	1.00	
Local_fund	-0.14 (0.55)	0.56 (0.01)**	-0.27 (0.24)	-0.05 (0.23)	0.49 (0.03)	1.00

Notes: *p*-values are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level.
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school.

Table 17. Correlation analysis results for non-metro counties

	Absentee	*Income*	*Student_meal*	*Female_house*	*Education*	*Local_fund*
Absentee	1.00					
Income	-0.24 (0.19)	1.00				
Student_meal	0.33 (0.07)*	-0.82 (0.00)***	1.00			
Female_house	0.27 (0.13)	-0.70 (0.00)***	0.76 (0.00)***	1.00		
Education	-0.10 (0.58)	0.41 (0.00)***	-0.27 (0.13)	-0.02 (0.89)	1.00	
Local_fund	-0.11 (0.54)	0.43 (0.00)***	-0.20 (0.27)	-0.22 (0.23)	0.25 (0.17)	1.00

Notes: *p*-values are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level.
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school.

Table 18. Bootstrapped estimates for OLS models of quality of life attributes

	Mean Parameter Estimates		
Dependent Variable	*Constant*	*Pop_Over_65*	*Absentee*
Income	27,870.65 (4,745.66)***	-275.54 (324.84)	-82.24 (23.42)***
Student_meal	50.32 (19.13)***	-0.54 (1.27)	0.46 (0.13)***
Female_house	18.39 (5.78)***	-0.67 (0.38)*	0.14 (0.05)***
Education	92.98 (5.50)***	-0.73 (0.37)*	-0.11 (0.04)**
Local_fund	1,788.59 (492.27)***	-26.43 (31.93)	-2.45 (3.05)

Notes: Asymptotic standard errors are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level.
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school.

Table 19. Bootstrapped estimates for OLS models of quality of life attributes including race as an independent variable

	Mean Parameter Estimates			
Variable	*Constant*	*Pop_Over_65*	*Absentee*	*Race*
Income	31610.06 (4080.60)***	-607.08 (286.15)**	-4.21 (38.17)	-98.07 (27.02)***
Student_meal	25.88 (11.06)**	1.57 (0.71)**	-0.01 (0.10)	0.60 (0.08)***
Female_house	1905.76 (525.38)***	-37.07 (35.32)	0.26 (4.42)	-3.45 (3.27)
Education	93.85 (5.84)***	-0.80 (0.41)**	-0.08 (0.05)	-0.02 (0.03)
Local_fund	1905.76 (525.38)***	-37.07 (35.32)	0.26 (4.42)	-3.45 (3.27)

Notes: Asymptotic standard errors are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level.
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school; *Race*: percentage of black population.

Table 20. Correlation analysis results including the variable race

	Absentee	*Income*	*Student_meal*	*Female_house*	*Education*	*Local_fund*	*Race*
Absentee	1.00						
Income	-0.42 (0.00)***	1.00					
Student_meal	0.43 (0.00)***	-0.79 (0.00)***	1.00				
Female_house	0.32 (0.02)**	-0.61 (0.00)***	0.74 (0.00)***	1.00			
Education	-0.42 (0.00)***	0.73 (0.00)***	-0.51 (0.00)***	-0.20 (0.15)	1.00		
Local_fund	-0.15 (0.31)	0.50 (0.00)***	-0.25 (0.07)*	-0.16 (0.27)	0.38 (0.01)**	1.00	
Race	0.45 (0.00)***	-0.57 (0.00)***	0.79 (0.00)***	0.90 (0.00)***	-0.17 (0.22)	-0.16 (0.26)	1.00

Notes: *p*-values are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level.
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school; *Race*: percentage of black population.

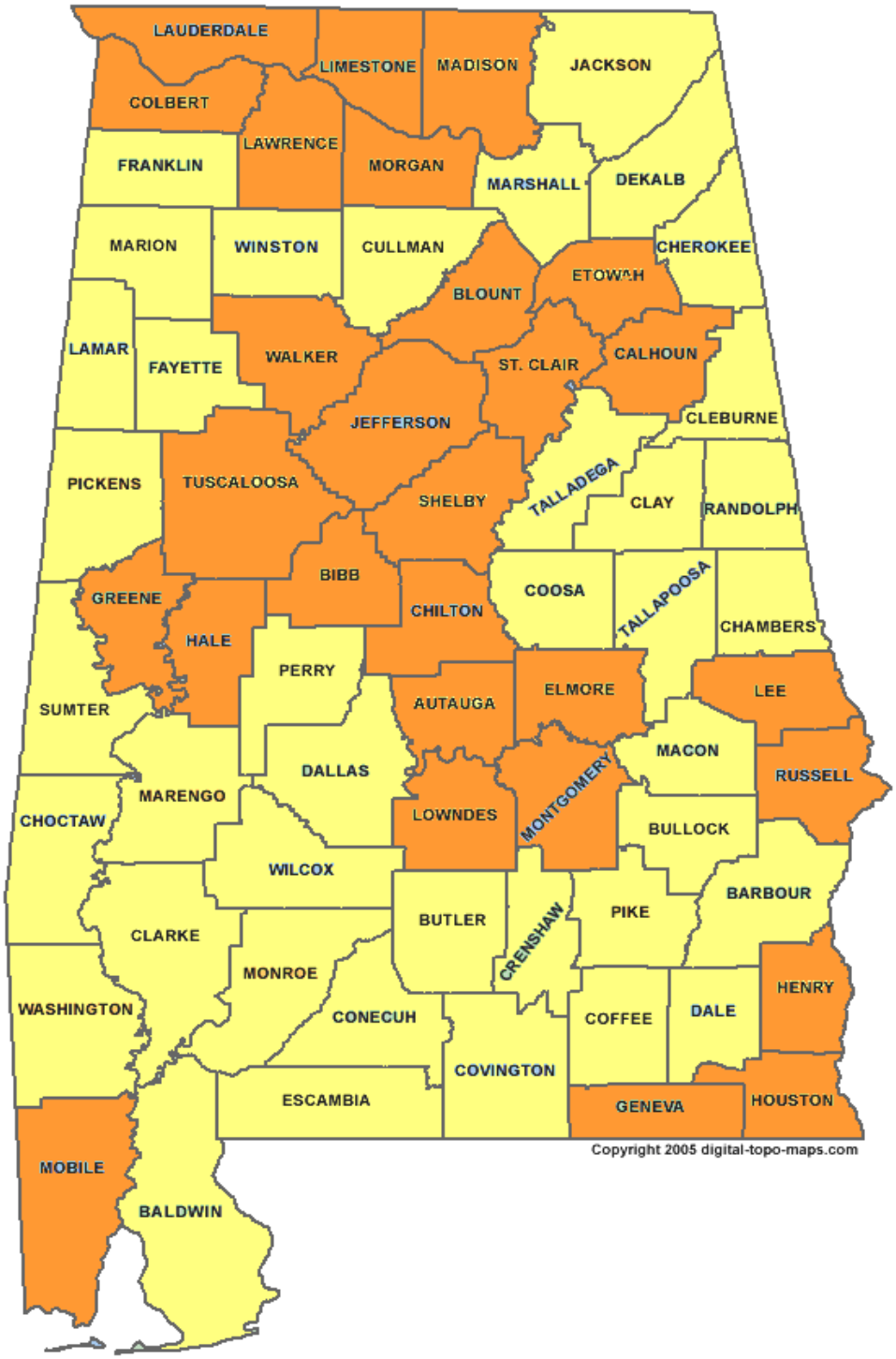
Table 21. Bootstrapped estimates for OLS models of quality of life attributes with dummy variable on metro/non-metro counties

	Mean Parameter Estimates				
Variable	*Constant*	*Pop_Over_65*	*Absentee*	*Metro*	*Absentee*Metro*
Income	22,090.04 (4,827.40)***	-125.41 (338.78)	-33.99 (27.50)	7,698.26 (2,110.97)***	-106.02 (44.16)**
Student_meal	84.14 (19.84)***	-2.13 (1.32)	0.39 (0.13)***	-17.58 (15.06)	0.02 (0.30)
Female_house	21.91 (6.44)***	-0.82 (0.43)**	0.13 (0.05)*	-2.04 (5.88)	0.01 (0.13)
Education	21,998.02 (4,897.45)***	-121.81 (341.31)	-33.52 (28.48)	7,696.62 (2,154.45)***	-105.83 (46.05)**
Local_fund	1,788.01 (588.72)***	-29.47 (35.83)	-1.54 (4.43)	124.09 (361.61)	-2.62 (6.82)

Notes: Asymptotic standard errors are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level.
Absentee: percentage of absentee land*; Income*: per capita income; *Student_meal*: percentage of students eligible for reduced or free meals; *Female_house*: percentage of female headed households; Education: percentage of people (25 years or above) with high school degree or above; *Local_fund:* local funding per student in public school.

Persistently poor counties

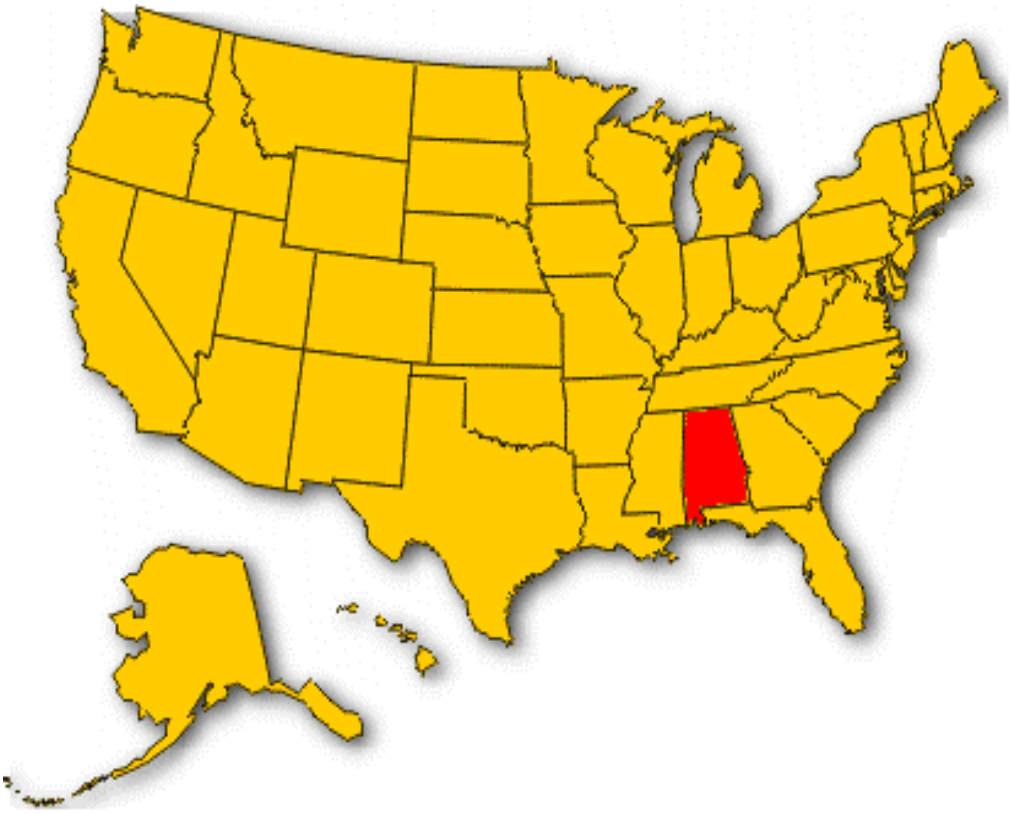
Figure 1. Persistently poor counties in Alabama
Source: http://www.google.com/imghp?hl=en&tab=wi



Metropolitan Area
Non-metropolitan Area

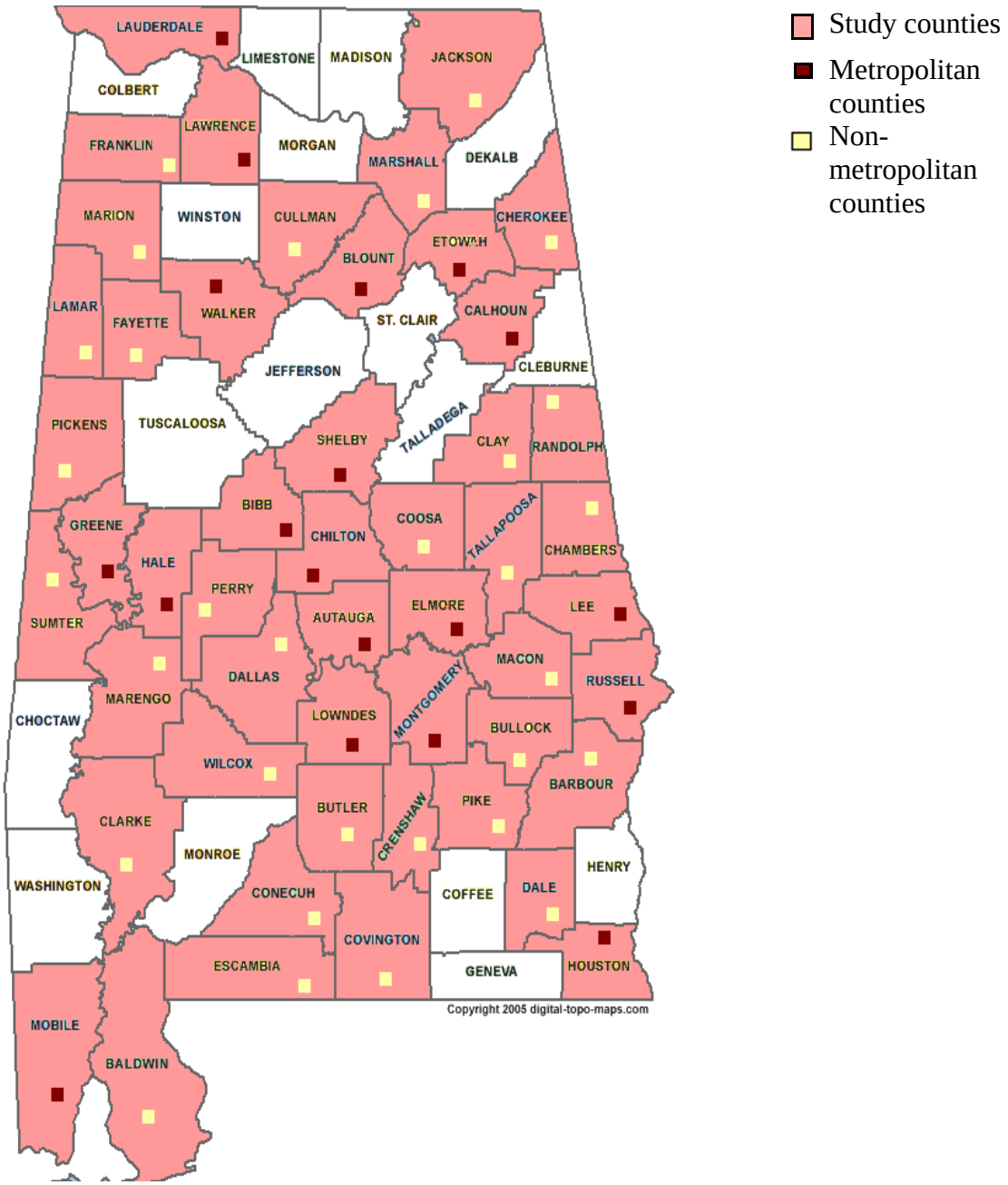
Sources: http://www.google.com/imghp?hl=en&tab=w

Figure 2. Metro and non-metro counties of Alabama



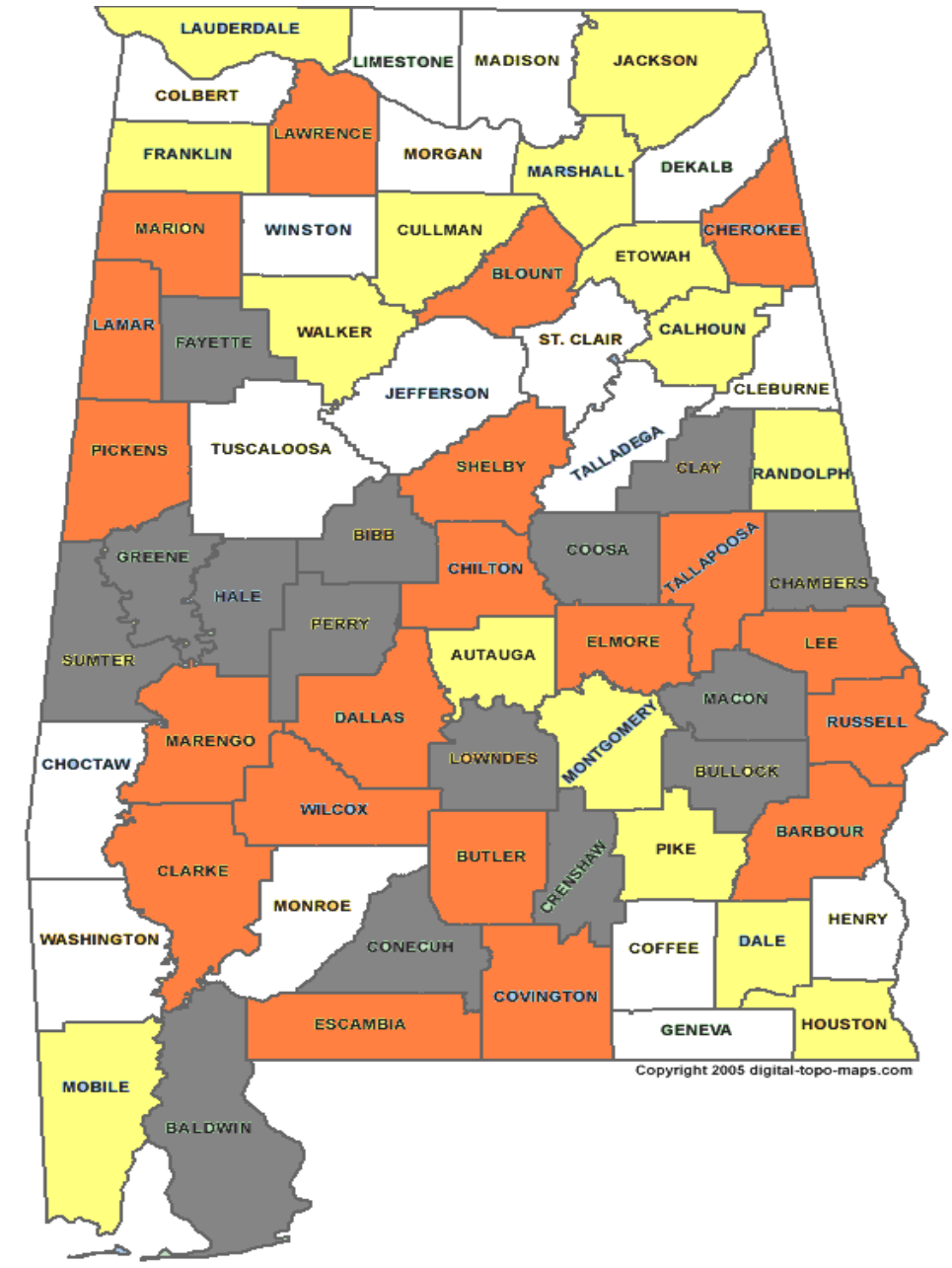
Alabama
Source: http://www.google.com/imghp?hl=en&tab=w

Figure 3. Geographic position of Alabama



Source: http://www.google.com/imghp?hl=en&tab=w

Figure 4. Particular study counties with metro and non-metropolitan distinction



45% and below
46 - 64.9%
65% and above

Source: http://www.google.com/imghp?hl=en&tab=w

Figure 5. Percentage of absentee land

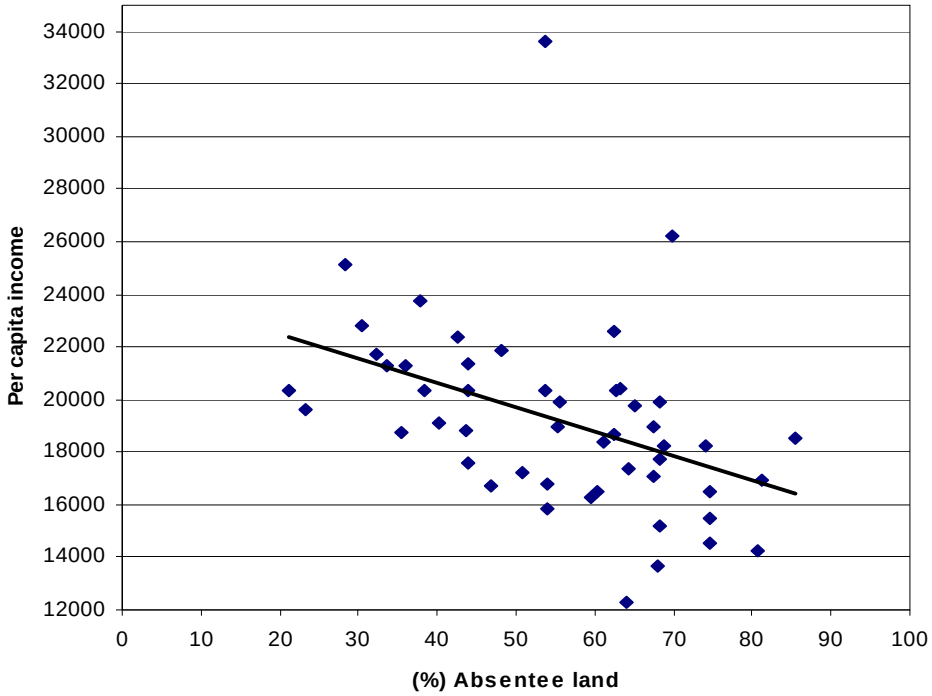


Figure 6. Relationship between the percentage of absentee land and per capita income

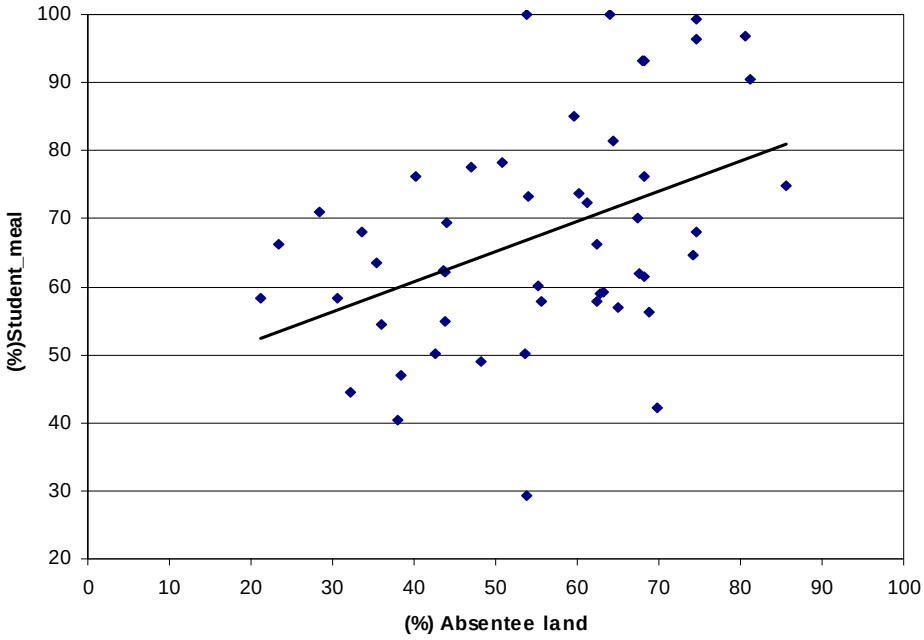


Figure 7. Relationship between absentee land and eligible student with reduced price or free meal

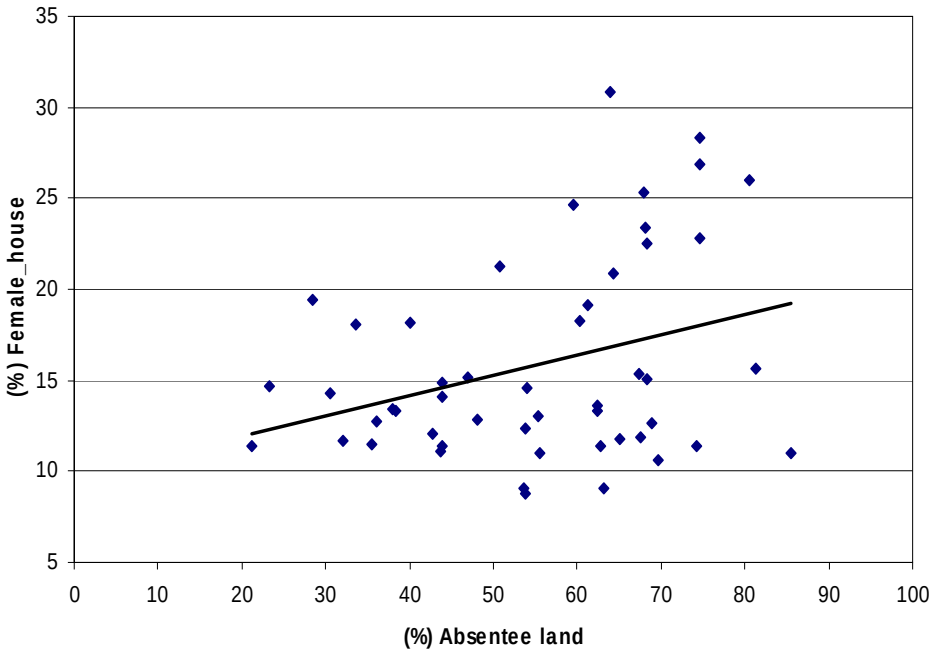


Figure 8. Relationship between the percentage of absentee land and female headed household

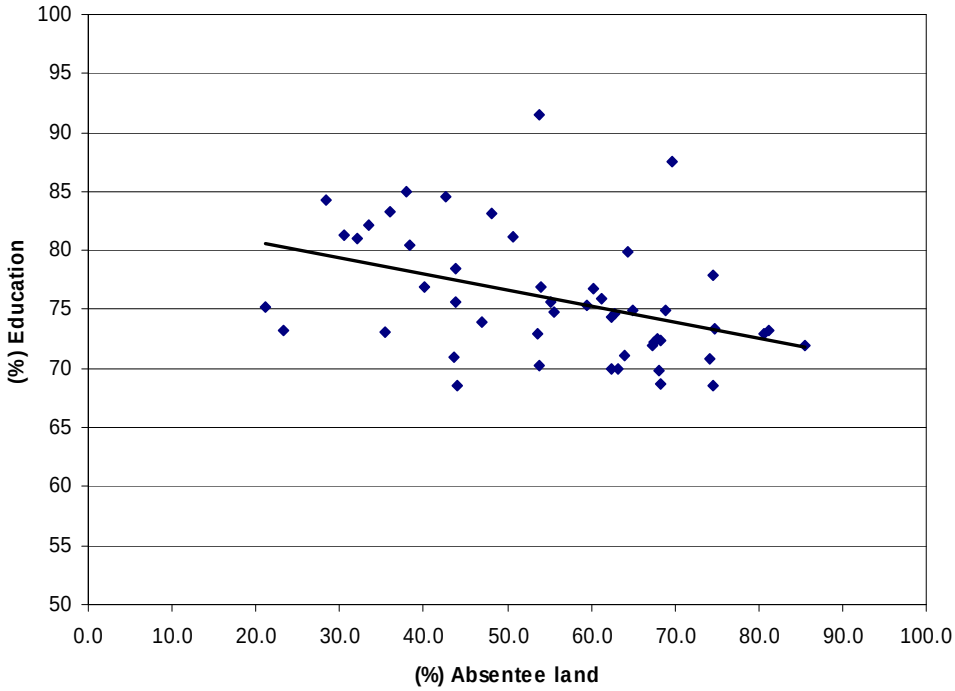


Figure 9. Relationship between percentage of high school graduate and absentee land

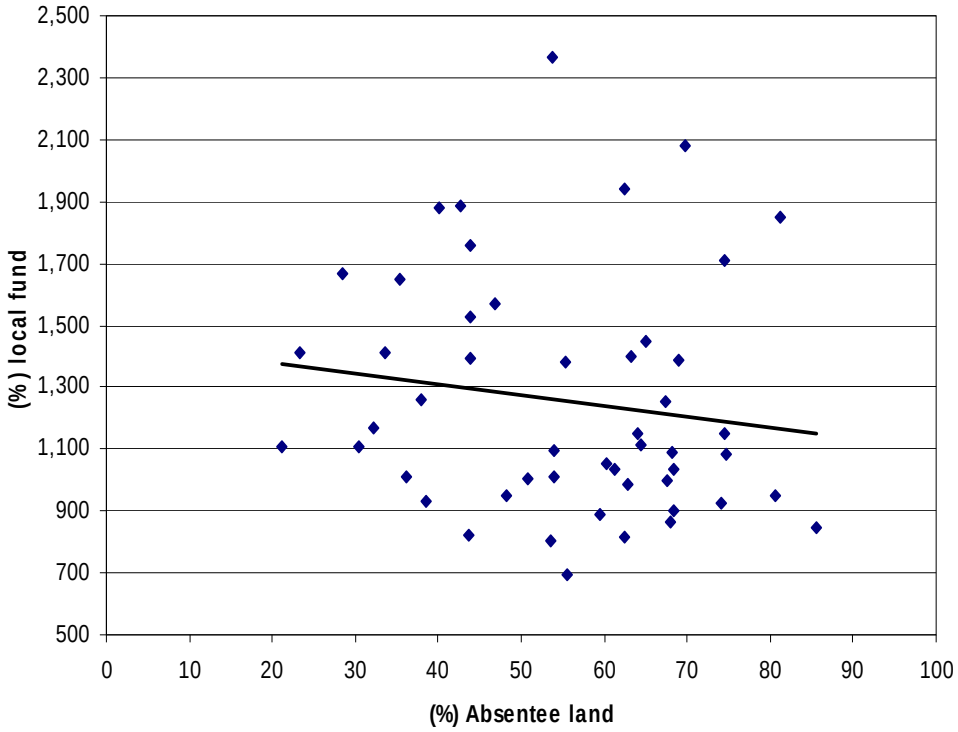


Figure 10. Relationship between local fund and the percentage of Absentee land