Investigating the Objectives of the New Owners of Alabama's Timberlands

by

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Abstract

Alabama has over 71% of its land area covered with forests and boasts of the third largest commercial forestland area in the United States. The forest products industry is a major employer in Alabama. This industry accounts for over 15% of payroll and employment of about 170,000 people both directly and indirectly. Recent developments in timberland ownership in Alabama have seen a move of ownership of timber lands from corporations in the forest product industry to Timberland Investment Management Organizations and Real Estate Investment Trusts. Ownership changes have the potential to propel land use changes. This could open up new opportunities but can also have several undesirable consequences for rural people and communities dependent on forest resources. Using detailed interviews with leaders within Timberland Investment Management Organizations and Real Estate Investment Trusts, previous land owners, and knowledgeable persons in both governmental and non-governmental organizations, and the theory of financialization, this study presents a comparative study on the management objectives of new forestland owners in three Alabama counties.

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List of Abbreviations

GMO	Grantham Mayo van Otterloo
GSA	General Services Administration
HBU	Highest and Best Use
IAAO	International Association of Assessing Officers
INC	Incorporated
IP	International Paper
LLC	Limited Liability Company
LLLP	Limited Liability Limited Partnership
MWV	MeadWestvaco
OSB	Oriented Strand Board
REIT	Real Estate Investment Trust
ROI	Return on Investment
RMS	Resource Management Service
TIMO	Timberland Investment Management Organization
US	United States
USDA	United States Department of Agriculture

CHAPTER I

INTRODUCTION

Background of the study

Alabama has over 71% of its land area covered with forests and boasts of the third largest commercial forestland area in the United States (Alabama Forestry Commission 2012). The forest products industry in the state represents the state's second largest manufacturing industry, producing an estimated $12.78 billion of products in 2010 (Alabama Forestry Commission 2012). Over the past several decades, the forest products industry in Alabama has sold about 22 percent of its forestland holdings (Hartsell and Brown 2002). This has resulted in major ownership changes of some of the most productive lands in the state. The large-scale transfer of land ownership creates opportunities and also raises concerns. The concerns rest in the unclear commitment of new owners to long-term sustainable forest management (Fernholz, Bowyer and Howe 2007). Kaetzell (2011) suggests that the unclear commitment of new forestland owners to sustainable forest practices could lead to total loss of forestlands. The purpose of this thesis is to determine how these forestland ownership changes have affected certain counties of the state.

The study was conducted in Dallas, Wilcox and Lee counties in Alabama. Table 1 gives an overview of population statistics in the study areas. The choice of these counties presented a two case scenario for the work. Firstly, Dallas and Wilcox represent areas where forestry is likely to be the highest and best use of land in the foreseeable future. This means that forestlands that have changed owners in these two areas are most likely to stay forested. Lee County, on the other hand, may see more conversion of forestlands into other land use options and possibly out of timber production. Dallas and Wilcox were chosen specifically due to the presence in these counties of two major corporations in the forest products industry. These two corporations have

taken different approaches to divestiture of forest products industry land. The approaches stem from the structures of new investors and forestland buyers, including private individuals and environmental organizations, but particularly TIMOs (Timberland Investment Management Organizations) and REITs (Real Estate Investment Trusts). TIMOs may not necessarily own lands. They buy, manage and sell lands on behalf of certain wealthy families, pension funds or endowments. REITs on the hand are actual land owners. The distinction between REITs and TIMOs is important for this study and influenced the choice of Dallas and Wilcox counties.

This study is part of a larger USDA sponsored project entitled "Millions of Acres, Billions of Trees." The project seeks to shed more light on the issue of forestland ownership transitions in Alabama. The motivation behind the study is the possible changes in land use and economic structure of many local economies that revolve around the forest products industry in Alabama. The potential for adverse impacts on the economic structures of affected counties is enormous and warrants careful inquiry to not only enlighten but to possibly avert negativities as well.

New owners and their management structures have raised concerns about possible land use change. New owners may be considering management alternatives which will yield maximum short term returns (Little 2006; Block and Sample 2001) or may also choose not to alter existing land uses (Clutter et al. 2005). For instance, growing human population and the need to provide basic amenities like schools, roads, hospitals and homes can propel new owners of timberlands to convert timberlands into residential or commercial purposes. New owners may consider this option more attractive for immediate business and economic reasons where population growth has increased demand for these purposes (Ahn, Plantinga and Alig 2002). Malmsheimer et al. (2008) revealed that forestland in the southeastern United States is appraised

as low as $415 per acre for forest use. This is in sharp contrast to a value of $36,216 per acre when forestlands are directed towards urban usage. Zhang and Nagubadi (2005) reiterated this by stating that human population growth is a major threat to the long and short term sustainability of forestlands.

According to Kennealy et al. (2007) the concentration of timberland ownership is negatively correlated with social and economic well-being in Alabama. This shows the intimate link the forest products industry has with economic well-being in Alabama. The management objectives of new timberland owners will dictate future economic well-being in Alabama especially in areas or counties where existing land uses are changed by owners. Despite the importance of the aforementioned problem, very little attention has been paid to the impacts of timberland ownership changes on vulnerable economies and communities which are largely dependent on the forest products industry, as is the case in many counties in Alabama (Bliss et al. 2010).

Smith et al. (2009) report that forests cover almost 751 million acres (about 32 percent) of land of the total 2.3 billion acre land area of the United States. 514 million acres (about 22 percent) of the land out of the total forested area is described as timberland by virtue of the capacity to produce 20 cubic feet per acre of industrial wood annually (Smith et al. 2009). Private individuals and firms own 69 percent of all timberlands with federal, state and other public owners accounting for the remaining 31 percent (Smith et al. 2009). 2007 forest industry rankings indicated that the forest products industry in Alabama was the second largest in the United States with more than 900 primary and secondary manufacturing establishments which translated into about 18.3 percent of the state's total manufacturing output (Alabama Forestry Commission 2007).

The past twenty years has witnessed massive ownership changes of timberlands with a reported 28 million acres of timberlands nationwide changing owners (Sampson, Decoster and Remuzzi 2000). Most of these lands moved from one company to another. A substantial amount also went out of corporate ownership into more tax-advantaged financial ownerships, such as REITs, or into tax-exempt conservation organizations (Sampson et al. 2000). Sale of timberlands by the forest products industry in Alabama has followed the national trend where lands are sold mainly to REITs and TIMOs (Alabama Forestry Commission 2010).

Changing Land Uses in Alabama

The history of land ownership in Alabama can be traced back to the cotton economy of the pre-civil war era. Boom and bust periods of cotton production have been recorded as far back as 1772 and during the Civil War (Encyclopedia of Alabama 2013). Abram Mordecai's first cotton producing plant in the present day Montgomery area and the success he reaped set the tone for a rapid investment in cotton plantations in Alabama in the 1800's. Existing farms and other lands were converted into cotton production. Though cotton production was widespread in the State, some areas focused more on other agriculture related activities like cattle raising and groundnut cultivation. Cattle rearing for instance was more characteristic of the southern portions of the state which was more conducive for cattle rearing because of the relatively mild winters. Cotton was, however, the dominant crop (Encyclopedia of Alabama 2013).

Cotton planting led to surges in the population of Alabama with a significant percentage being slaves to work on cotton fields. A vibrant slave labor supply and a ready global cotton market in the 1820s greatly enhanced the movement and trade of cotton. This propelled Alabama's cotton production to about 22.8 percent of national cotton production in 1849. The abolition of slavery led to new forms of labor organization using sharecroppers and tenant

farmers. Cotton production significantly plummeted during this period. There were signs of recovery but never to the level at which it was before the Civil War. Although cotton is still a relatively important crop in Alabama, it never recovered fully from a well noted bust period recorded during the invasion of the Mexican boll weevil in 1911. This forced people to seek other ways to put their lands into use (Oliver 1995). Since 1953, there has been a gradual conversion of both agricultural and cotton lands into forests in Alabama, making forest/timber the dominant land use (Alabama Forestry Commission 2007).

Natural regeneration and plantation efforts created a good opportunity for vertically integrated pulp and paper companies in terms of raw materials. In addition to this the Alabama state government provided tax abatements and other inducements for pulp and paper companies (Bailey et al. 1996). Giant timber companies like International Paper took good advantage of this opportunity to acquire millions of acres of forestlands, and build massive saw and paper mills.

During this same period, Yin et al. (1998) reported that most of the forest products industries and companies in the United States acquired between 18 to 60 percent of their wood from their own timberlands. Apart from wood supply from direct ownership of timberlands, companies acquired wood through purchase agreements, sale contracts and agreements with private timberland owners (Ellefson and Stone 1984). The preferred choice for most forest companies was to have their own lands to supply them with a steady flow of timber. Some companies also relied on outside sources for their supply of wood and only harvested timber from their lands (reserve supplies) when timber prices were not favorable. This provided a safeguard for companies against timber price fluctuations. In the end, owning timberlands appeared to be a wise and attractive economic decision for companies. This became the trend and

strategy for most forest product companies and their managers well into the 1980s. The decade that followed this period brought with it a series of market and non-market factors that broke the trend of timberland accumulation and forced many forest product companies to divest their timberland holdings.

Who are the new owners of forestlands in Alabama?

Facing tough competition and difficult economic conditions over the past 20 years, many of the vertically integrated pulp and paper companies and industrial forest owners have either sold off their forestland or restructured in order to separate forestland ownership and ownership of manufacturing facilities. Other noted reasons for this trend were low shareholder returns and a change in the business strategy towards purchasing raw materials from the open market rather than owning lands and bearing the cost of managing it. "Companies realized they could take an undervalued (by Wall Street) asset, sell it, and convert it to sorely needed cash, all the while continuing to produce paper and other products through long-term wood supply contracts with the new land owners" (Hagan, Irland and Whitman 2005:2).

Gunnoe (2012) went further to reveal that the "hostile takeover" of timberlands began in the 1980's through the efforts of one James Goldsmith. Goldsmith, according to Gunnoe, was a leader of a group of financiers who engineered the sale of timberlands owned by vertically integrated companies in the United States through a gradual financialization process (discussed in the next section). This process was critical to the changing norms about timberland ownership among managers of forest products firms. Changes in organizational structures of companies towards one where institutional investors held the majority of stock also propelled the sale of timberlands. The new land owners/purchasers of forestlands have included tax advantaged timberland investment management organizations and the institutional real estate investment

trusts. Investment periods for new owners are usually within a 10-15 year period within which they make management decisions to favor regimes that provide the highest returns possible (Clutter et al. 2005).

TIMO

TIMO refers to a Timberland Investment Management Organization. Fiacco (2010) notes that the first word is not Timber (refers to trees) as many authors have used. Timberland is land with trees on it and is the right word to use. TIMOs can be described as managers of timberland and may not necessarily own it. The owners are actually investors, such as pension funds, endowments, foundations, and high-wealth families. The TIMOs manage money from these investors and buy, manage, and sell timber and timberland. Generally, the TIMOs' investors are looking to invest within a period of 10 to 20 years. Timberland has become popular with investors because it offers competitive returns and has a low correlation with other investment classes, which lowers the investors' overall portfolio risks (Harris 2007). This means that the main focus of TIMOs is increasing market value through identification of highest and best uses or returns on investment over a relatively shorter time horizon than was common within the forest products industry. Rather than simply supplying raw material for the mills, TIMO managers often apply modern portfolio theory to make decisions about when to buy, sell, or hold timberlands (Clutter et al. 2005; Block and Sample 2001).

TIMOs may differ based on their investment strategies. Investors or clients choose which TIMO to deal with based on the investment strategy. There is a wide array of TIMO options for investors. Some may choose to invest in natural forests, apply advanced technology to improve tree harvesting, hire forest consultants to manage timberland, and conduct field audits or not. According to Fiacco (2010), TIMOs manage about 25 million acres of forestlands nationally

with an estimated market value of more than 30 billion dollars. Some well known TIMOs in the United States are Resource Management Services, Hancock Timber Resources Group, The Campbell Group, RMK Timberland Group and Timbervest.

REIT

REIT refers to a Real Estate Investment Trust. REITs are special tax designations for a corporation that invests in timberland real estate that reduces or eliminates corporate income taxes. In return, REITs are required to distribute 90 percent of their income back to the investors. Shares of REITs can be traded publicly or purchased by private individuals or groups and can even be listed on public stock exchanges (Harris 2007). REITS are designed to emphasize increasing stock prices through decreasing operating costs and increasing revenue (Block and Sample 2001). REITs are known to manage about 17 million acres of forestlands nationally valued at more than 28 billion dollars (Fiacco 2010). REITs, unlike TIMOs, are actual owners of timberlands. Weyerhaeuser is one of the most recent (in 2010) corporations in the forest products industry to have changed its organizational structure into a REIT. Other major REITS are Plum Creek and Rayonier.

Tax related issues are among the core reasons for the divestiture of timberland by the forest products industry. Most corporations in the United States, including corporations in the forest products industry, are subject to federal taxes and, further, shareholders are subject to federal income taxes on dividends paid by the corporation. Under federal tax law, REITs are a special tax entity which do not pay federal corporate taxes provided that at least 90 percent of earnings are passed directly to shareholders. The clear advantage of REITs is reduction of double taxation.

Objectives

The study aimed to identify the management objectives of new owners of timberlands previously owned by corporations in the forest products industry in Lee, Dallas and Wilcox counties in Alabama. Face-to-face interviews were conducted with people knowledgeable about the forest industry in Alabama and the study areas in particular. Respondents included staff of the Alabama Forestry Commission, Natural Resources Conservation Service, and the Alabama Cooperative Extension Service. Consulting foresters, private and commercial forest land owners as well as community individuals also were interviewed. A theoretical framework of land and ownership was also developed from existing literature and theories to place the study within a sociological perspective. The following is a list of specific objectives that were pursued.

Objective 1: Document the transfer of ownership of commercial timberland from corporations in the forest products industry to REITs and TIMOs or other owners in the study counties.

Specific tasks: An update of existing data on forestland sales through review of data from county court houses was done. Other sources including corporate press releases, Forest Inventory Assessment data and other legal documents were also reviewed to obtain up to date forestland sales data for the study areas.

Objective 2: Document land use changes associated with change in timberland ownership in the selected counties.

Specific tasks: For objective 2, the research identified representatives of REITs and TIMOs (current owners) as well as previous forestland owners in all the study areas who were willing to

participate in interviews. Semi-structured interview questions were developed and administered to all identified respondents.

Objective 3: Identify the impact of timberland sales as they relate to existing and previous timberland management objectives.

Objective 3 followed the same procedure as was done in objective 2 but with a different set of questions administered to other stakeholders involved in or who were knowledgeable about forestland sale and ownership issues.

Objective 4: Compare management objectives of new versus old owners, changes in patterns of ownership and reasons why the new owners bought the land.

Specific tasks: Research under objective 4 involved a synthesis of interview notes taken from both new and old forestland owners as well as other respondents. There were specific questions in the interview guide directed towards answering this objective. Reasons or motivations for forestland acquisition were also picked from interview notes.

CHAPTER II

LITERATURE REVIEW

The goal of the review that follows is to align some theoretical concepts to the purpose of this study. The main concept I apply is the theory of financialization. There were no studies that linked financialization directly to the forest products industry in Alabama. Alabama, being one of the hubs of the industry in the United States, has experienced a significant amount of timberland changing owners or timberland owners changing their organizational structures in a bid to hold on to their lands. The first part of the discussion on financialization will explain the reasons behind forestland sales. The second part will look at the consequences of forestland sales.

Forestland, ownership patterns and contribution in Alabama

The total land area of Alabama is 50,644 sq. miles (32,412,160 acres). Out of this land area, 71 percent is forested. The biggest category of forestland owners are the private non-industrial owners who account for 79 percent of forestlands in Alabama. The forest industry then follows with about 15 percent forestlands ownership. Public forests account for the remaining 6 percent (Alabama Forestry Commission 2008). The forest industry employs about 170,000 people (translating into about 12 percent in direct and indirect employment) in Alabama with yearly payrolls of over $2.2 billion (Alabama Forestry Association 2008). The state can boast of about 28.3 billion cubic feet in volume of growing-stock timber with 72 percent being naturally regenerated trees and the remaining 28 from plantations. The total acreage of timberlands in Alabama was about 22.7 million in 2010 (Hartsell 2011). Timber types are hardwoods (45 percent), pine (41 percent) and mixed pine and hardwoods (14 percent). It has been estimated that over the last 30 years, the forested land area in Alabama has increased by about 1.1 million

acres (USDA Forest Service 2012). The total percentage described as timberlands has remained somewhat constant since 2000 and has not changed by more than 5 percent since 1963. The Alabama Forestry Commission estimates that there are about 440,000 timberland owners. The state ranks second in the US in pulp production and third in paper production (Auburn Forest Products Development Center 2013)

Resource (Timber) Dependency

Many counties in rural Alabama have their local economy built on forest based enterprises such as sawmills, pulp and paper mills and furniture making plants. This is indeed characteristic of the entire rural southern United States (Bliss, Walkingstick and Bailey 1998). This trend began as far back as the 1880's when sawmilling became the major industry in the South (Teeter, Bliss and Henry 1993). The paramount role played by the forest products industry in Alabama has just been over the last few decades with many counties becoming heavily reliant and dependent on forest resources in the process. Dependency on a resource can be explained as situations in which communities or certain areas are overwhelmingly reliant on one resource such as timber or minerals for a significant portion (i.e., 25 percent or more) of their employment opportunities and source of income (Humphrey 1990). In an era of a no-mercy global economy, dependency stifles economic diversification and increases vulnerability to economic uncertainties (Colocousis and Rogers 2010, Luloff and Bridger 2003).

Many communities in Alabama are timber dependent. This means that a high percentage of their employment and income comes from the forest products industry. It is therefore no surprise to discover that in Alabama, two out of every three acres of land are covered with trees (Barlow, 2008). The importance of forests and timber to Alabamians is perhaps summed up in the statement that "without the forest products industry, many Alabama communities would not

survive economically" (Howze, Robinson and Norton 2003:2). Despite the richness in forest/timber resources in timber dependent counties, they remain the most economically disadvantaged in Alabama. Non-timber dependent counties have been found to be better off in terms of community and economic well-being than dependent ones in Alabama; a situation which perhaps explains the continuous decline in population, high infant mortality, high unemployment, lower education and high levels of people depending on food stamps in timber dependent counties (Howze et al. 2003).

Timber dependency is particularly endemic to Black Belt counties in Alabama (Howze et al. 2003). According to Wimberley and Morris (2002), the Black Belt region in general is a historical area in the southeastern United States where black residents are mostly concentrated. The area spans across 11 states (Virginia, North and South Carolinas, Georgia, Florida, Alabama, Mississippi, Tennessee, Louisiana, Arkansas and Texas). 623 counties in these states reported at least 12 percent black persons in 2000. The Black Belt is an area that has been plagued with persistent poverty over the years. In 2000, Black Belt states represented 30 percent of the US population and 34 percent of poverty stricken people. This makes the area the largest region in terms of poverty in the US.

The history of timber dependency in rural Black Belt counties of Alabama evolved from the cotton plantation economy in the 19th Century. This, however, gave way to tenant farming once slavery was abolished. In addition to economic and political reasons, tenant farming also suffered the same fate in terms of profitability and so the lands were returned to forests. Thus the forest industry grew and dominated local Black Belt economies until today (Howze et al. 2003). Two out of the three counties (Dallas and Wilcox) selected for this study are Black Belt counties (Figure 1). Records indicate that the percentage of black Americans within Alabama was 26.5

percent in 2011. Black populations in Dallas and Wilcox counties however are 69 and 73 percent respectively.

The association of timber dependency with poverty, unemployment, out migration and community instability (Howze, Bailey and Bliss 1994), especially within a period when Alabama is witnessing a transition of forestland owners nationwide, presents a critical issue to review. The concerns rest in the divergent objectives of communities in comparison to those of new forestland owners concerning the use and management of forestlands. The issue gets more complicated when superimposed on the long-lasting poverty and low economic status of the forest endowed areas in the nation.

The history behind timber dependency is necessary to set the tone for a thorough discussion and also to explain existing conditions and relationships between communities and forest resources (Howze et al. 2003). Without it, it seems the quickest solution most will propose is the diversification of the local economies in such places, but it goes beyond that. Many authors have shown that people ascribe more than just economic values to land (e.g., Lupo and Bailey 2011; Dyer, Bailey and Nhuong 2009; Dyer and Bailey 2008; Bliss and Bailey 2005; Gilbert, Sharp and Felin 2002; Joshi et al. 2000; Zabawa 1999; Bliss et al. 1998; Zabawa 1991; Pennick 1990). For instance Gilbert et al. (2002) noted that there are political and cultural connotations to land ownership in rural parts of the southeastern United States. These reveal themselves in a number of social issues such as inequality/racism, prestige, democracy, community citizenship as well as the distribution of wealth and power. Further, land ownership and related issues are precursors of economic development and investment as well as children's education.

Majumdar (2010) illustrates the intricate connection between those who own land (with emphasis on absentee owners) and how that affects community well-being. Her study concluded that absentee land ownership is negatively correlated with community well-being. Majumdar's work is a perfect epitome of the Goldschmidt Hypothesis, which stated that a strong relationship exists between farm size and patterns of farm ownership and the quality of life in a community (especially in rural communities). This hypothesis stressed the relation between absentee owned agricultural farms and resident owner farms in two communities. Absentee owners by virtue of their weaker ties to communities are less interested in community development. The same may be able to be said of REIT and TIMO owners, which in most cases are absentee owners with very large acreages of forests in communities. Their lesser ties to these communities may result in a lower interest in community development compared to locally resident owners. So far as their business and economic interests are being satisfied, community issues are hypothetically not of paramount interest to them. Land ownership provides an avenue for people to identify themselves with the community (Dyer and Bailey 2008). Meadows (1945:1) sums all this by saying that "land use affects the institutional pattern of human beings, the pattern of their settlement, organizations, community services - the quantity and quality of their community life." Land ownership and management intentions therefore warrants core sociological concern.

Lupo and Bailey (2011) continued the community identity topic by looking at factors that affect occupational community within pulp and paper industries in Alabama. They defined occupational community as bounded work culture characterized by common norms, values, work practices, and conceptions of identity closely related to work. It is interesting to note within this research that the pulp and paper mills provided an avenue within which people shared their lives with others by talking about personal problems, breakthroughs and worldviews. Lupo and Bailey

clearly state how important forestlands remaining forested and pulp and paper mills remaining in operation are core to the existence of communities. This I believe is of great concern in the timber dependent areas not only in Alabama, but the rest of the nation.

There is widespread uncertainty regarding both long and short term management objectives of new forestland owners in light of their unclear commitment to sustainable forest management practices. For the highest standard of living to be realized in such communities, it is essential to create a balance between population and natural resources with an invocation of sustainable management of timber (for those who are timber dependent) (Kaufman and Kaufman 1946).

The management objectives and structures of new forestland owners seems to suggest a sustained interest in the identification of land use options that yields the highest returns (HBUs). The pursuit of these options has a high propensity to shift existing forestlands into other uses. Some may be considering other uses of their forestlands, like for recreational opportunities or homesteads (Ahn et al. 2002). In either case, land could be taken out of production forest status to serve the interests of its owner.

According to Riechel (2009), land ownership transitions have a very high tendency to shift existing land uses. Conversion of forestlands in particular to other uses is most likely during periods of ownership changes or during moments of significant change in the living conditions (e.g., age related changes, during retirement or death of an owner) of the owner.

Bliss, Kelly and Abrams (2008) added that there are four main issues related to changing forestland ownership trends that makes it an important subject to be investigated. The first concern deals with the tremendous rate at which forestlands have changed owners. They

described this trend as 'unprecedented' in modern day United States. Secondly, ownership transitions are happening at a time when a significant number of rural communities are in very fragile economic and social situations as a result of job losses in the timber sector and dwindling populations. The third issue deals with the kind of opportunities that transitions could bring for rural populations. The level at which a community can benefit from this is dependent on how strong existing socioeconomic structures are. Lastly, very little scholarly attention has been given to forestland ownership transitions.

This research is therefore timely and necessary considering the linkage between people and the forest products industry in general as well as the fact that ownership transitions are ongoing in Alabama. Although the study and its conclusions are not exhaustive, the study aimed to shed more light on the all important issue of forestlands owner transitions and its possible impacts. It is hoped that the findings will provide a benchmark for future studies on the subject.

Timberland Ownership Change/Economic Segmentation Theory and Community Impacts

There is a significant relationship between forestland/timberland ownership and social measures of well-being where benefits of land ownership flow not only to individual landowners, but to communities as well (Bliss et al. 1998; Gilbert et al. 2001; Fraser et al. 2005). Beyond providing economic independence and stability for landowners, land ownership has relevance to both individuals and communities because it can stimulate economic investment and also serve as a form of political and cultural power (Gilbert, Sharp and Felin 2001). Research has substantiated the relationship which exists between land ownership patterns and economic well-being, especially in natural resource dependent areas, such as Alabama's Black Belt where poverty levels are very high although there is a vibrant forest products industry (Schulman

1991). This relationship however, has not been found to exist in all studies (Overdevest and Green 1994).

Fraser et al. (2005) discovered that race, education, employment, income, population density, and land cover have statistical associations between them. Using an economic segmentation theory, Drielsma (1984) segmented labor force between a core sector, which provides good paying, stable jobs, and a peripheral sector, which consists of low-paying jobs with few benefits. In his work, he took logging as a peripheral occupation, pulp and paper mill work as core, and sawmilling as occurring between these two occupations. Drielsma (1984) concluded that the prominence of forest industries in forest dependent communities is associated with higher incomes, low poverty and higher educational levels.

Bailey et al. (1996) also utilized economic segmentation theory in their research on labor markets in Alabama's pulp and paper industry but rather used primary and secondary labor markets in place of Drielsma's core and periphery labor sector forces. They segmented the labor market in Alabama structurally and culturally. Structural segmentation referred to core jobs in pulp and paper mills being the primary labor market jobs in these mills which provided attractive remuneration and added benefits for workers. But there also were secondary labor market jobs in these mills which provided an unattractive working environment for employees (low remuneration and few benefits). Cultural segmentation defined jobs on the basis of gender and race. Here, jobs in the pulp and paper industry discriminated between race and gender with whites being more likely to get into the primary labor market jobs where conditions of service are attractive whereas blacks were pushed to the lacklustre secondary labor market. Females were also assigned to lower paying clerical jobs as well as made to distance themselves from the

then highly physical jobs in the mill. This trend has however changed in recent times with the introduction of computers and more productive hydraulic machinery.

Elo and Beale (1983) discovered that forest dependent counties have relatively higher index of well-being in terms of median household income, high school graduates, and poverty among other variables. This was revealed when these counties were compared to other natural resource dependent counties. In their study, they defined forest dependency as having at least 20% employment in the forest industry.

Fortmann et al. (1991) sought to determine the connection between private and public timberland ownership and its repercussions on well-being in California. They reported that the well-being of forest dependent counties is negatively associated with high levels of both public and private timberland.

Financialization and its impact on the Forest Industry

Contemporary capitalism is characterized mainly by three paradigms; neoliberalism, globalization and financialization. Much attention has been devoted to the first two paradigms in the literature but very little on financialization. Epstein (2005) defined the term based on a variety of explanations given by several authors as "the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies." Epstein further explains that financialization has become the predominant feature of contemporary capitalism. What this means is that financial institutions, agencies and bodies have in recent times accumulated significant finances, a situation that was created by changes in the structure of operations of financial markets as well as government policies. Other noteworthy factors that propelled profit accumulation by financial institutions

were financial liberalization and reduction in power of labor unions (Epstein 2005). According to Phillips (2002), financialization has led to significant differences in income and wealth which goes further to threaten the process of democracy in the United States. The United States has been identified as the epicenter of the global financialization process (Palley 2007).

The forest products industry's fairly recent change in organizational and ownership structure is related to financialization. Prior to this change, many forest products industry corporations purchased timberlands with the assumption that, apart from the provision of raw materials and being an investment with low risk, owning timberland also would make them more competitive on the market. Gunnoe (2012) used political economy and economic sociology grounding to indicate that vertically integrated forest products industries in the United States were compelled to sell their firms to what he described as "corporate raiders" in the 1980s. This period saw many capitalists in the United States striving to overcome the harm that had been done by increasing business competition from abroad, rising inflation, and a stagnating economy which had led to the accumulation crisis of 1973. The desperate attempt made by capitalistic entities to recover from the shock of this crisis saw them turn to financial profits. The impact of this move was felt in many sectors of the economy including the forest products industry. The marked interest in financial profits culminated in the rise of financial institutions such REITs and TIMOs.

Clutter et al. (2005) explained that the forest products industry was motivated to sell land to improve shareholder returns, reduce debt through the sale of timberland assets, and increase tax efficiency through the movement to more efficient tax entity structures such as REITs. Forestland ownership transitions ushered in an era where the interests of shareholders adopting different economic models than were used by the forest products industries (which seek the

highest possible returns) became the main business agenda of investors. The business environment around the time of takeovers was that of survival of the fittest, characterized by many layoffs, mergers and a general break down of the vertically integrated structure. New timberland investors almost always choose the best management option in terms of profitability and sometimes converted forestlands into other land uses to maximize profits. These management options are referred to as highest and best use, or HBU (Block and Sample 2001) and will be discussed in greater detail below.

Consequences of Financialization

The rapid expansion of the US financial sector has seen the appearance of forestlands as a commodity on the market. Rising attention to shareholder interests have given rise to a cycle of buying, selling and reselling of forestlands to keep economic portfolios and returns attractive. It is likely that most owners and shareholders of forestlands have not even seen their own properties before. The interest is how to manipulate it to reap high returns. If selling seems the best option on a spreadsheet, then so be it. The consequences of ownership transitions will be borne by community residents; where the land itself is located. The discussion that follows draws attention to possible consequences of forestland ownership changes within the thinking of financialization using the Alabama context.

Dependency (discussed above) on timber is endemic to many counties in Alabama. This means an overreliance on the forest industries to supply jobs, income and ultimately to support well-being in communities. Despite the existence of poverty, income and racial inequality in many Alabamian timber dependent communities, the forest industry has been supportive in terms of jobs like loggers, saw and paper mill workers, forest equipment operators, forest managers, among several others. Forests, timber and timber businesses signify the livelihood of these

communities. In 2010 for instance, the U.S Census Bureau recorded more than 26,000 mill workers in Alabama. This translated into an annual payroll of $1.3 billion, and about $12 billion in total value of shipments (U.S. Census Bureau 2012).

Financialization of this all important industry could leave irreparable dents to local economies by disrupting the life sustaining benefits derived from forests. The consequences will translate mostly in the distribution of power, income, and wealth, and in the pattern of economic growth (Dore 2008).

Several authors have documented the potential impacts of financialization and I believe these are readily applicable to Alabama's case. Epstein (2001) for instance revealed that financialization can result in increasing income inequality and removal of benefits derivable from financial assets (forests in this case) from communities to asset owners. Stockhammer (2004) also notes that financialization can stall economic growth. This he says happens because of the shift from managers wielding corporate power to profit minded shareholders who have a lesser inclination to actual growth rates. Previous managers mostly had an "intimate knowledge of the operations of the organization they run" which is in sharp contrast to new owners and representatives who "closely monitor their activity with an eye to maximizing the returns to capital" (Dore 2008:6). The eagerness of previous managers which was to create a lasting social legacy has been clouded by the insatiable "carrots and sticks of stock options" (Dore 2008:7).

Many authors make calls for societal reforms to control the activities of financially motivated investors. For instance, Lazonick (2012:28) mentions that this new ideology of financial investors needs to change in order to achieve "sustainable prosperity." Freeman (2010:17) also added that "it would be criminal negligence to allow the financial system to

continue to operate as it has in recent years." In describing the nature of the needed action to be taken, Freeman (2010:17) added that "reforms will not come easily but we must succeed, so we will succeed."

Highest and Best Use (HBU) and its Influence on Land use Decision

HBU is a term that is used extensively in the valuation of real estate. It is used to determine value of land and how much a developer will earn on returns from that investment. Several definitions of the term have been found in the literature. These are mostly very similar but give slightly different details. I will talk about three of them.

The first definition explains that HBU is a determinant of the actual value of a parcel of land and by definition refers to "the use that is reasonably probable, physically possible, supported by the market, and returns the highest value to the land." The final estimate of land value obtained using HBU must be based on strict observance of consistent logic and well supported documentation of facts (Schwenker 1998). Ellenberger (2007:7) defines HBU as "the use that generates the highest profit or satisfaction for the typical buyer at that moment in time." The Property Assessment Valuation 2nd Ed., IAAO (1996:31) defined HBU as "that use that will generate the highest net return to a property over a reasonable period of time." Finally, the US General Services Administration defines HBU as "the most likely use to which a property can be put, which will produce the highest monetary return from the property, promote its maximum value, or serve a public or institutional purpose" (GSA 2013). This must be based on land parameters as the economic potential, social and environmental values and other utilization factors controlling land use (e.g., zoning, roads, location, and land history). Projected highest and best use should not be remote, speculative, or conjectural (GSA 2013).

In determining HBU, Schwenker (1998) suggested the consideration of three major factors. The first is physical factors as size, shape, topography, geotechnical issues, and environmental considerations. Also important are the regulatory and legal considerations. These include zoning, access to utilities, presence of wetlands and land fees. Lastly, an owner needs to consider location and market factors in determining the best land use option. This should go beyond just looking at current market trends but also forecasting future market trends.

There are reasons to suggest that some new owners of timberlands, especially the REITs and TIMOs, are more inclined towards the financial aspects of their investments with a goal of profit maximization for shareholders and clients (Block and Sample 2001, Little 2006). Browne (2000) observed that new forestland owners are more willing to sell off land for economically rewarding land use options than previous owners. Gunnoe and Gellert (2010) added that choosing how to use lands based on HBU could bring about the problem of fragmentation and or parcelization. Fragmentation refers to actual landscape changes in the size and shape of forested lands (Rinkus and Markham 2006). Economies of scale dictate that for timber production and harvesting, big forest acreages are more viable economically than small ones. Forestland fragmentation and its resultant individual parcel size reduction means that managing lands for timber production is going to be an economically challenging venture.

Parcelization on the other hand is seen in most cases as a precursor to fragmentation and is defined as "the subdivision of land under a single ownership into smaller parcels under a diverse ownership" (Drzyzga and Brown 2002:3). They all pose a potential threat to forest sustainability and biodiversity (Barlow et al. 1998). Despite the increased possibility of forestland conversions, Clutter et al. (2005) point out that this conclusion is not entirely true for all cases of ownership changes. Not all lands undergoing ownership changes and fragmentation

will necessarily undergo land use changes as well. For instance, Kelly and Bliss (2008:9) agreed with the concerns associated with forestland fragmentation but also pointed out the opportunities to create community forests out of the once "tightly-held" industrial timberlands.

Another view of HBU can be taken with regards to the investment periods of new owners in comparison to that of previous owners. Block and Sample (2001) for instance made a comparative analysis of forestland ownership strategies of industrial owners and institutional investors. They discovered among other things that although there are exceptions, there is generally a higher probability, especially for TIMOs (due to financial or economic motives and perhaps considerations for HBUs), to manage their forestlands for relatively shorter rotational periods than industry owners. The same holds when it comes to silvicultural treatments, research, long term ownership/stability and landscape planning and habitat conservation plans. Clutter et al. (2005) share the same view on the long term approach of industrial forestland owners in comparison to the generally short term approach of TIMOs when it comes to research and ecological forestland management activities.

Forest conversion is defined as the turnover of forestland to other long-term uses such as roads, development and agriculture. Conversion of forestland to other uses can have significant and undesirable impacts on water quality, recreational value of land, habitats, wildlife value and production forests (Thorne and Sundquist 2001). The probability for pockets of forestland to be converted to alternative use under new owners is significantly higher in areas where there is a demand for residential or other usage of land (Johnson and Stewart 2007). Alig et al. (2010) emphasized that 55 percent of conversion of forestlands was due to urban development between 1982 and 1997. This suggests that areas that will witness the most conversion of forestlands will likely be adjacent to urban areas experiencing sprawl. For instance, Stein et al. (2005) showed

that rising population in an area results in forestland conversion into other usages and a move towards an urbanized community. Forestlands apart from their common usage for residential purposes provide homeowners with shade, scenic views, wildlife and bird watching opportunities and opportunities for forest-based recreation like hiking and hunting.

Agreeing that population growth propels land use change, Alig et al. (2010) pointed out that population growth also has a contradictory effect on forestland conversion since increasing demand for forestland for residential purposes also increases the demand for wood products. This could counter the need to convert forestlands for residential purposes when rising prices for wood increases the relative rent of keeping lands forested to provide wood. They went further to detail five major ways under which forestland use may change significantly. These are deforestation, afforestation, forest fragmentation, forest parcelization, and increased number of structures (e.g., houses). Forest fragmentation and parcelization have been discussed already so I will talk about the other three.

Deforestation refers to the conversion of forestlands from forest to nonforest uses. Non-federal forestlands in the United States saw a 23 million acre loss between 1982 and 1997 due to deforestation alone. Population totals and personal income levels are the determinants of deforestation correlated with conversion of forestlands for development. Afforestation on the other hand refers to the direct human-induced conversion of non-forest to forest land through planting, seeding, and/or the human-induced promotion of natural seed sources. Many states have witnessed losses in forests but some, including Alabama, have had increasing forestlands. Increasing number of structures relates directly to development. Between 1960 and 2000, there has been a 130 percent increase in areas described as urban by the United States Census Bureau

(Alig et al. 2004). Forestlands are the lands that have and are being converted most for development purposes across all the 48 contiguous States.

Most studies in the literature (e.g., Alig et al. 2010, Stein et al. 2005) have singled out conversion of forestlands into urbanized and developmental purposes as the biggest contributor to the process of land use change. There are others such as conversion into agricultural land that have been mentioned less frequently. The reason why urbanized and developmental usage has been singled is due to the potential losses associated with it. Agricultural lands still hold the potential to be converted to forestlands along their cycle and may not present much of a threat to forestland. Shifting forestlands into urban and developmental usage usually represents a permanent change. This obviously draws more attention especially when an attempt is made to quantify the many essential services provided by trees and forests. Alig et al. (2010) outlined several national and state policies that seek to streamline conversion of forestland in the interest of long and short term economic, social and economic considerations. Some of these policies (at the state level) include land use planning, transfer of development rights, differential farm tax assessments, Forest Legacy Program and Conservation Easements.

Concerns Associated with REIT/TIMO Forestland Management

Browne (2001) identified seven specific concerns associated with REIT and TIMO forestland ownership and management. These are timber rotation, silvicultural intensity, conversion of forestland, stability/long-term ownership, protecting sensitive lands, research, and lastly landscape planning management plans.

Timber Rotation

Both previous forest industry managers and new REIT and TIMO forestland managers gear pulpwood and sawtimber rotational periods to suit mill requirements. According to Browne (2001), sustainability is paramount to both types of owners as it relates to protection of wood supply for industry owners and financial returns to REITs and TIMOs. For purposes of this thesis and the larger project, this remains an open question.

Silvicultural Intensity

Industrial forestland owners engaged in intensive forest management practices to maximize wood production as well as to accrue the highest possible financial returns. Although REITs and TIMOs apply silvicultural practices to maximize their wood and financial returns, they are most likely to consider practices that are applicable within their investment period (Browne 2001).

Conversion of forestland

Industrial owners often held unto their lands to supply their mills with raw materials for as long as it was possible and had a very low probability of converting their lands for other uses. REITs and TIMOs, on the other hand, have a high tendency to convert their forestlands into other uses so far as it will reap them maximum returns (Browne 2001).

Stability/long-term ownership

Industrial forestland owners were typically long term investors who held unto their lands for as long as it was possible. Recent mergers and acquisitions is one major reason which accounted for divestiture of such lands. TIMOs are usually short term investors. Their investment period is usually within a 10-15 year period after which they may sell mostly to

another investor. REITs on the other hand may hold unto land for longer periods with less motivation to sell off like TIMOs (Browne 2001).

Protecting sensitive lands

Forest industries were motivated to donate or sell environmentally sensitive forestland property for conservation purposes. They were also interested in the tax write-offs associated with selling such lands at relatively cheap prices. They utilized conservation easements to protect environmentally sensitive forestlands. The profit oriented motive of both REITs and TIMOs placed them in a position where they were most likely to sell off environmentally sensitive lands so far as it reaps them favorable returns (Browne 2001).

Research

Forest products industries and their long term forestland investment plans saw them investing into research to maximize their wood output. According to Browne (2001), REITs usually have long term investment periods and are also likely to invest in research. Block and Sample (2001:18) stressed that "it is in the best interest of a REIT to fully fund research." TIMOs on the other hand are short term investors and are less motivated to invest in research (Browne 2001).

Landscape planning management plans

Following in the pattern of research interests, forest industries due to their long term objectives included landscape planning into management strategies. REITs also did likewise. TIMOs are least likely to engage in landscape management because of their short investment periods (Browne 2001).

The common theme here is that all these activities are done to provide a more lucrative avenue for profit maximization. This issue obviously poses a threat to long term forest sustainability. However, Little (2006) sees a positive aspect of such ownership transitions. Since new owners are willing to sell off land, he believes that this creates a very good opportunity for land conservation agencies and bodies to procure such lands and skew management of forestlands towards biodiversity conservation. Bliss et al. (2008), in agreement with Little (2006), also mentioned that REITs and TIMOs selling lands could also mean that lands with exceptional ecological value could be made available to conservation buyers. Sampson et al. (2000) also believe that new owners could most likely succumb to public pressure to practice sustainable forest management. Many changes that may occur on lands managed for timber may take more time to play out. My research aims to examine what change in land use has occurred in the study areas if there has been any and what possible impacts it will have on rural and urban populations.

CHAPTER III

METHODS

Choice of Methods

This study forms part of a bigger study in Alabama which seeks to understand the impact of ownership transfer of commercial timberlands, identify the management objectives of the new owners of timberland, understand the social and economic impacts associated with ownership changes and to identify policies to reduce possible negative impacts of ownership transfers. I employed qualitative semi-structured interviews as my main technique for collecting primary data. Qualitative research according to Strauss and Corbin (1998: 10 - 11) is "any type of research that produces findings not arrived at by statistical procedures or other means of quantification. It (qualitative research) can refer to research about persons' lives, lived experiences, behaviors, emotions, and feelings as well as about organizational functioning, social movements, and cultural phenomena."

Qualitative methods were the most suitable for the objectives of the study, which was exploratory in nature. Using Bliss and Martin's (1989) description of this method, this study fits the criteria for a qualitative research in that no hypothesis and questions were predetermined. Though I had my own perspective on the issues under investigation, this was not made evident to interviewees in an effort to capture as much unbiased information as possible from them. This is characteristic of qualitative research. Interview sessions were conversational in nature as Sayre (2004) noted as core to the qualitative research process. I made a lot of effort to present myself as a person willing to learn and did not create any impression that I had any sort of superior information regarding the subject matter. Respondents who knew about the subject matter were specifically chosen for interviews. In a calculated effort, this study sought to remove all potential

setbacks by making sure that all interview notes were typed immediately after the session ended in order to avoid the possibility of getting overwhelmed with data. Prior to the actual field work of my research, I reviewed the relevant academic literature to help position my objectives within a theoretical viewpoint.

Data Collection

My research mostly concentrated on identifying the management objectives of new owners and how those objectives differed from that of previous owners, if any. Stakeholder perspectives were solicited on this as well as the anticipated effects ownership changes was going to have on local Alabama economies. First an interview guide with questions was drafted and other members of the research team, a blend of faculty from rural sociology and forestry at Auburn University, evaluated and vetted them to ensure that they addressed the objectives. Initial respondents were chosen based on recommendation by committee members and others who in most cases have had some sort of contact with such people along their career paths. This was done to facilitate the interview process. The guide had a range of questions not exceeding twenty five with different sections for the different types of respondents. There were three categories of respondents: representatives of REITs/TIMOs and other companies, individual timberland owners/community members/loggers and county officials, and finally previous timberland owners from the forest products industry. The names and contacts of other respondents who fit the objectives of the study were collected from websites, leaflets, and brochures from the USDA, Alabama Forestry Commission, Natural Resources Conservation Service, Alabama Chapter of the Association of Consulting Foresters, and the Alabama Cooperative Extension Service. It was particularly difficult finding private owners to interview. I also used Google searches to identify respondents (e.g., forest consultants in Alabama, foresters in Alabama, forestland owners in

Alabama). Land ownership data acquired from Alabama Flagship GIS and S & W Computers also had the names and contacts of land owners. Private owners were randomly selected and their addresses verified using yellow pages. Since some of these contacts had no email addresses, a signed and sealed letter introducing the research was sent out to them (Appendix). We waited for a few days after dispatching the letters and then made follow up calls. Most (80%) did not respond to the phone calls. Out of those who answered, only two people responded affirmatively with the remaining being indisposed (e.g., blind or sick).

Questions focused on the knowledge respondents had on recent timberland ownership transfers, the factors that had led to these transitions, opinions on the end game of ownership transitions as well as the impact it has had or will have on local economies. A copy of the interview guide can be found in the appendix. Snowball sampling was used to find more respondents for interviews. This sampling method ensures that the initial pool of contacts will identify others who can be useful to the study mainly because of their preexisting social networks or work relations. This method became very useful particularly because of the number of potential respondents who never responded to emails or phone calls. The limitation of this procedure is that people often refer others of similar interests, subsequently limiting the diversity of opinions. However, in this particular case, because knowledge of forestland and the forest products industry is not common knowledge for everyone, this was determined to be an acceptable limitation.

Interviews were designed to ask a few general questions to prompt respondents' knowledge about the subject matter (e.g., are you aware of the transition of timberlands to new owners in Alabama? do you know anything about the new owners?). A lot of the specific questions were answered this way without even asking. However, if at the end of the interview

some questions were not answered, they were asked separately. Interview sessions were designed not to exceed 45 minutes to respect time of the respondents. Some interviews, however, exceeded this time. Some of the people I interviewed got so involved in the conversation that they ignored time. I never attempted to stop them. In a few cases, however, I had to use a lot of skill and instinct to maintain focus to my research. For instance, I was asked what my religious affiliation was in one of my interviews. Upon answering that I was Methodist and from Ghana, I had a tough time shifting the interviewee's focus from telling me about a Methodist mission trip he took to Zambia. A little off the line I went (without being rude) but it proved very useful in the end as he became my best "snowballer" giving me a list of six people he personally contacted on my behalf. The people I interviewed shared both professional and personal opinions about my research topic.

Although the initial idea was to record interviews with an audio voice recorder, the first interview clearly proved that it makes respondents uncomfortable. In this case, the best time within which the bulk of information was gathered was after the voice recorder was turned off. This problem was foreseen and so adequate provision was made to take notes and write them up immediately after the session ended. There were cases where respondents invited other staff/people to provide specific information after which some stayed or left the room. Interviews were conducted face-to-face except for a few occasions (three times) over the phone. The location for the interview was at the respondents' residence, restaurant, office, work area/site or any convenient place at the preference of the respondents. Field work or interviews took place within all week days. I usually drove state vehicles to my study areas and spent the night in motels in Selma and Camden when it was too late to drive back to Auburn. Those in

Auburn/Opelika were return trips. There were a few instances I had to miss classes to conduct interviews.

As associated with all types of research strategies, the procedure used in making contacts did not always work according to plan. There was an approximate distance of about 280 miles that was traveled in vain. In such instances, I drove all the way to meet up with some respondents only to be told that the interview could not come on as planned because most of the information I requested or was requesting was proprietary in nature; a problem we did not see coming. The research team had to employ other tactics in getting the information we wanted. For instance, some questions were restructured. A class in the School of Forestry had invited some persons knowledgeable about Alabama's Forest Product Industry to give presentations to students. I sat in these classes and met and arranged interviews with presenters, some of whom had initially failed to respond to my emails and phone calls. We had motivation to do this with the faith that the questions being asked did not implicate or break any ethical code and confidentiality of any individual or organization in any way. The Institutional Review Board (IRB) on Human Subjects determined that this research was not human subjects' research since no human subjects were at risk or in harm's way.

Study Areas and Demography

The choice of Dallas, Wilcox and Lee Counties for my study was done for a variety of reasons. The broader research project seeks to cover all of Alabama as a case study. Dallas and Wilcox were two counties chosen initially based on the level of importance of the forest products industry. These two have their economies intimately interwoven around the forest products industry (forest dependent), can be described as being rural, belong to the Black Belt region where poverty is persistent and have predominantly black populations. It was envisaged

therefore that any change in the main economic activity (which is the forest industry) would have an effect on the local economies. Lee County came into the frame during data collection in the other two counties. It was chosen based on convenience (home county of Auburn University). Lee County, unlike Dallas and Wilcox, is not forest dependent, poor or dominated by black populations. Moreover, Lee County has a rapidly growing population so that HBU issues are more likely to be a factor in land use changes compared to Dallas and Wilcox counties. The demographic differences and similarities between study areas gave the platform for a more interesting comparative study. Detailed demographic characteristics of study counties can be found in Table 1.

Dallas County

Named after the U. S. Treasury Secretary Alexander J. Dallas of Pennsylvania, Dallas County was created by the Alabama Territorial Legislature in 1818. It is located in the heart of the Black Belt surrounded by Lowndes, Perry, Autauga and Wilcox counties (Figure 1). The US Census Bureau estimated that in 2011 the population of Dallas County was 43,332 with blacks forming a majority (69.4 percent) and whites in the minority (29.4 percent). The median household income was 26,029 dollars between 2006 and 2010. Within the same period, the per capita income was also 16,646 dollars and 31.8 percent of the population lived below the poverty level (US Census Bureau 2012). The county seat is Selma. Major employers include International Paper Company (a global paper and packaging products company), Vaughan Regional Medical Center, the Dallas County Public Schools, and American Apparel, Inc. International Paper sold virtually all its land in Dallas and surrounding counties and continues to operate a large paper mill in Selma.

Wilcox County

Wilcox County was created in 1819 in honor of Lt. Joseph M. Wilcox, just a day before Alabama became a state. According to the US Census Bureau, the population in 2011 was 11,482. Blacks formed 72.2 percent while whites formed 27.0 percent. Between 2006 and 2010, the median household income was 23,491 dollars, with the per capita income being 12,573 dollars; 38.5 percent lived below the poverty line during this period (US Census Bureau 2012). The Alabama River runs uniquely from the northeast end of the county to the southeast end. Weyerhaeuser is the major industry and employer. Camden is the county seat. Weyerhaeuser has transformed itself into a REIT and is reducing its corporate role in manufacturing.

Lee County

Lee County, the youngest of the three counties was created in 1866 out of portions of Tallapoosa, Macon, Chambers and Russell counties (Figure 1). The population was 143,468 in 2011. Out of this, blacks formed 23.0 percent while whites formed a majority with 72.3 percent. The per capita income between 2007 and 2011 was 23,015 dollars with a 42,320 dollar figure recorded for mean household income. 19.8 percent of the population live below the poverty line (US Census Bureau 2012). Auburn University and Wal-Mart Distribution are some of the major industries and employers. The county seat of Lee County is Opelika. MeadWestvaco, a producer of packaging, specialty papers, consumer and office products and specialty chemicals operates a large pulp and paper mill in neighboring Russell County and owns forestland in Lee County.

CHAPTER IV

RESULTS

This chapter presents the findings from participant interviews as they relate to the objectives for this study. The chapter consists of several sections. First, participant characteristics are shown to indicate the people (as well as groups, and organizations) who shared their opinions and perspectives to make this research possible. Pseudonyms (e.g., Austin, Batra) were given to respondents to preserve anonymity. The second section presents common themes derived from participants organized under the research objectives. This is the actual data reduction process, the first phase of qualitative research. It involves retrieval and simplification of information from field notes and other resources used (Miles and Huberman 1994). I made every attempt to control all prejudgments and conclusions that stemmed from my experience in the field and what I know already about the research. Instead I relied mostly on unbiased intuition and prescribed research methods to analyze my data with a view to obtaining the true research experience and information. Additional secondary data collected were also incorporated to supplement research findings. This is followed by a third section which presents all information that was not pivotal to my research, but was interesting to me because most respondents made mention of it.

Sample Characteristics

In all, 30 interviews were conducted. My initial goal was to conduct between fifty and sixty interviews. I interviewed ten respondents (government and non government people, non-industrial private forestland owners, industrial forestland owners, wood dealers, forest managers, loggers) in each of the study counties. The original plan was to have equal numbers of interviewee categories but the response to letters, emails and calls made was not encouraging. Only three private non-industrial owners responded to about ten letters that were sent. All those

who responded were in Lee County. The snowballing method proved to be the best sampling method. Seventeen out of twenty five interviewees contacted this way responded and agreed to participate. Summary of respondent characteristics can be found in Table 2.

General Approach

The first question asked participants to indicate their knowledge on forestland ownership changes in their area as well as who the new owners were and what accounted for any changes they observed. Subsequent questions sought to answer the objectives of the study by asking respondents to identify land use changes, perspectives on land sales and management objectives of new forestland owners in their area. Some differences emerged among the study counties, although most of the themes were consistent across the study areas.

A sequential analysis described by Broom (2005) was done to analyze interview notes as they were collected. This allowed for questions to be refined, to obtain more details as the data collection proceeded. I also followed the principles of axial coding developed by Strauss and Corbin (1998) to break down the information gathered theme-wise for better understanding. This facilitated breakdown of the raw data (interviews) into meaningful categories to enable in-depth analysis as well as develop an appropriate mechanism to communicate the interpretation of the data. Ten categories were developed in all based on the objectives of the study. Narratives of interviews were then done to reduce repetition of points (which was inevitable) with the view to sustaining readers' interest and attention in the results.

General Understanding of the Issues

All respondents interviewed in Dallas County knew that forestlands had changed owners in the area and beyond. All respondents also gave very similar but unique insights into land use

changes, perspectives on forestland sales and management objectives of both new and old forestland owners in their area. Most, however, could not give details on who the new owners were and why the changes took place.

Respondents from Wilcox County also knew about changing land owners and presented quite similar responses to questions. Answers were very much like those obtained from respondents in Dallas County probably due to the common attribute of being rural and most importantly, timber dependent.

Unlike Dallas and Wilcox County, Lee County is a more urban area with many industries. This means that the area is not reliant on forest industries. Respondents here had slightly different answers to questions. Some went further to talk about Dallas and Wilcox counties and used other counties as well to illustrate their thoughts. Some appeared to be well informed regarding the subject of changing forestland owners and gave very useful insights into who new owners are and how they operate in Alabama and the rest of the nation.

Wilcox County

Wilcox County is mostly rural, and is the most rural of the three study counties. Located in the southwestern central portion of Alabama, Wilcox lies on the border of the Black Belt region where poverty has prevailed over the years. The largest communities in the county are Camden, Pine Hill, Snow Hill, Alberta, Lower Peach Tree, Catherine, Millers Ferry, Canton Bend and Coy. Most of the land in the area is forested. Significant areas are also used for agricultural purposes. The forest and lumber industry is the main economic enterprise in Wilcox County. There are existing factories for the production of paper, lumber, veneer and plywood. Tree growing and timber harvesting are also major activities of this industry.

Ownership Change 1995 - 2013

The forest products industry gradually emerged from a cotton and agriculture dominated landscape to be the biggest industry in Wilcox County. This process was greatly supported by state-wide trends (in the 1950s and 1960s) of aggressive company recruiting, development of transportation infrastructure, lower labor costs as well as abundant wood supply and water. Taking full advantage of these resources, a Canadian company, MacMillan Bloedel Inc., purchased and leased forest lands in the Wilcox County area. It became the leading forestland owner in the county as well as the major economic powerhouse of the county. Its core activities included the production of lumber, plywood, linerboards and corrugating medium. MacMillan Bloedel went on to become the largest employer in Wilcox County with a very committed labor force. Company jobs were highly sought after because salaries and benefits were attractive. Perhaps to avert some leveled criticism of the *ad valorem* tax exemption the company was enjoying, MacMillan Bloedel set up community educational and adult literacy support programs in Wilcox County.

Prolonged periods of high production costs, low shareholder returns and debt plagued many forest products industries in the 1990's resulting in a strategic movement from ownership of timberlands to an emphasis on core production businesses. This idea resulted in industrial mergers and acquisitions. MacMillan Bloedel, facing the backlash of its shareholders, went through a rigorous restructuring process in 1997 which saw a 30 percent reduction in workforce and selling of some other company assets. Weyerhaeuser brought forward a bid to buy MacMillan Bloedel assets. Upon reviewing the offer, MacMillan Bloedel reluctantly agreed and sold their mills and land holdings in Wilcox County as well as those in other places in the US to

Weyerhaeuser in 1999. Some employees (especially corporate and building material distribution division staff) lost their jobs as a result of this transition.

Weyerhaeuser, already famous across the world for production of softwood lumber, market pulp and oriented strand board, increased its timber holdings and its market pulp production through the acquisition of MacMillan Bloedel. In Wilcox County, Weyerhaeuser continued producing linerboard and corrugating medium, lumber and veneer, as well as timberland management and growing of tree seedlings. Their mill in Pine Hill alone employed more than 700 people and was the biggest employer in rural Wilcox County. As part of their community support package, they had a Company Foundation which had a goal of improving the quality of life wherever the company was operating. Being the biggest forestland owner, employer and community supporter meant that Weyerhaeuser was the major economic powerhouse in Wilcox County.

As a resource (timber) dependent community, the accompanying lack in diversity of alternative economic activities makes Wilcox County extremely vulnerable to structural and economic changes within the main economic activity (forestry). This translates into more power by forestland owners. Over the years, wealth generation and distribution by forest products industries in the county has been called into question due to their non-residency. Both MacMillan Bloedel and Weyerhaeuser have their headquarters outside Alabama. This means that most of the wealth generated from forestland exploitation and mill operations are siphoned away from the community. Forestland ownership type is therefore central to the economy of Wilcox County. Studies (e.g., Majumdar 2010) have indicated that absentee owners or non-resident land ownership has a negative association with community well-being. A resident owner is more likely to invest locally than an absentee or non-resident land owner.

According to 2012 land ownership data, the total timberland acreage in Wilcox is 470,939. Out of this figure, the top ten owners own about 104,540. This represents 22 percent of all timberlands in the county (Table 3). Further analysis of local addresses and zip codes indicate that only one of the top ten owners is resident in the county with the rest being absentee owners, living either outside the county lines or Alabama entirely. The top owner is a REIT (Weyerhaeuser). There are also two TIMOs. Institutional ownership (REITs and TIMOs) alone accounts for approximately 14 percent of all timberlands in Wilcox County. It is, however, a predominantly REIT area. Weyerhaeuser, Rayonier and Plum Creek are the three REITs in Wilcox owning approximately 10 percent of all timberlands. Soterra, Resource Management Service (RMS) and John Hancock represent the TIMOs, and they hold an additional 4 percent of all timberlands. REITs and TIMOs in particular have an inherent management strategy which mandates a continuous attempt to realize the highest possible return to owners and shareholders at any point in time. This creates a high likelihood for the siphoning of wealth away from communities in Wilcox which could see an unending poverty trend.

Weyerhaeuser, which is the top forestland owner in the community, has since the last quarter of 2010 changed its organizational structure into a REIT. It owns about 41,240 acres, approximately 9 percent of the total timberland acreage, in Wilcox County. Movement into a REIT symbolizes a move away from manufacturing activities mainly into timberland and real estate asset management. As one respondent said “the mill is the economy of Wilcox.” This sums up the vital importance of Weyerhaeuser’s mill in Wilcox County and the need to keep it running. The change in organizational structure could therefore have serious repercussions for an overly timber dependent community and economy.

Management Objectives of the Forest Products Industry

Corporations within the forest products industry historically have owned both their processing facilities (their mills) as well as forestlands. This was considered the best management decision to ensure a stable wood supply base for mills. This meant that both categories of properties were under active management. This was the case with both MacMillan Bloedel and Weyerhaeuser in Wilcox County. According to respondents, these companies, despite being absentee owners, were deeply committed to management of their mills and timberlands with a view to improving economic opportunities and quality of life of company employees and the larger community over the long term.

Apart from jobs at the mills, respondents noted that there were significant numbers of people employed to work on timberlands as bulldozer operators, forest technicians, grader operators, land management foresters and young apprentice foresters. This meant that more attention was given per acre of forest land management. It also meant that there was more interaction and sharing of knowledge between timberland owners, other non-industrial forestland owners and the community in general. This improved the level of social capital available to the community.

Management Objectives of New Owners

Facing a backlash from shareholders to improve returns, forest product industries were compelled to develop strategies to reduce debt and improve returns. At that time, the best alternative was either to sell off forestland holdings to cut down management cost and taxes or change organizational structures entirely into more tax efficient entities. While forest products industry corporations have been the sellers of forestlands, institutional investors, the REITs and TIMOs as well as other wealthy individuals have been the buyers of forestlands. Institutional investors have a legal requirement to produce the highest returns on investments. The probability

for conflicts with long-term forest sustainability is therefore very likely. This means that institutional investor ownership of forestlands present a set of forestlands management motivations and values very different from those of the traditional forest products industries.

There were varieties of comments that showed the difference in management objectives and activities between institutional and industrial forestland owners. According to respondents, REITs and TIMOs are now hiring logistic and business majors to do their business for them. This illustrates a shift that new forestland owners have made in the type of person hired. This is among the phrases used by respondents to describe the management objectives of old and new owners of forestlands in Wilcox County. The explanation given is that new owners are more inclined towards the business side of management. It is perhaps safe to mention based on respondents' views that when a forest owner chooses to hire a business or logistics major rather than a seasoned forester, as REITs and TIMOs do, there is a different set of land values at play. Although industrial owners were mostly absentee and non-resident owners who siphon wealth away from the community, the more rigorous profit making agenda of institutional owners creates an increased likelihood for movement of profit and other benefits of land management away from communities.

Another phrase used by respondents to compare management objectives was that some new owners seem to "cut corners" as one respondent (a private timber consultant) said, when it comes to managing their forestlands. This is to suggest that although new owners manage their lands, it is not at the same intensity as with previous industrial owners. This was in reference to the intensity of silvicultural activities done on the land. Silvicultural activities in entirety refer to the tending of trees with emphasis on ecological considerations for a set of objectives. This involves activities from the initial tree establishment or planting, herbicide application,

experienced forester involvement, thinning, to sustainable harvesting procedures. The enormity of these activities meant that more people had to be hired to work on forestlands. While general management is common to both categories of forestland owners (industrial owners and institutional investors), respondents indicated that new owners employ fewer people to work on their lands. This is tantamount to lesser attention given per acre of forestland in terms of silvicultural activities. It also implies that there are fewer employment opportunities for people, which could affect the local economy negatively.

New owners have also adopted a dual forestland management objective in Wilcox County. Most owners who manage their lands for timber production also lease their lands for recreational activities like hunting and fishing. Owners are able to earn between $9 and $25 for such leases. Respondents noted that land leasing for recreational activities has always been done by forestland owners in Wilcox. New owners in recent times, however, have made it a more attractive and lucrative management objective with good advertising. Forestlands in Wilcox County are more dense and undisturbed and attract wildlife thereby making them very good recreational sites. Respondents indicated that dual management objectives is a very good strategy of owners since “it just doesn’t make economic sense to purchase forestlands” and “just” maintain it for timber, said a private timber consultant.

It was, however, maintained that the HBU of forestlands in Wilcox County is timber production. This is so because Wilcox County is a rural area which has experienced population declines for several decades. There are no people to put any form of pressure on existing forestlands. Apart from lands close to the river, which could see some development in future, the probability of HBU of forestlands being anything other than forestland/timber production is a remote speculation in Wilcox County.

Impacts of Ownership Change on Employment and Community Life

One of the frequently mentioned impacts of forestland ownership transitions is change in the level of support that communities enjoyed during the period when the pulp and paper mills owned forestlands compared to what institutional investor ownership provides communities in recent times. Support was described by a respondent from the Alabama Tombigbee Regional Commission as "some sort of social responsibility."Another respondent with a private timber company had this to say about REITs and TIMOs: "they are not community involved at all…you don't see their adverts during football programs." This illustrates the disconnect between new owners and their communities. Community members mostly do not know who new owners are and still refer to the old industrial people as owners of forestlands. Many of the new owners either chose to discontinue community services entirely or reduce it significantly upon purchasing. Examples were made of James River Company which donated paper products to the Wilcox community until they were bought out by Georgia Pacific.

Comments like "the mill is the economy of Wilcox" and "rural development is the forest products industry," demonstrates the strong linkage between rural Wilcox County and its forest products industry. Most employment in this area involves working at the mill, logging or dealing in some other way with wood/timber. This means that the local economy thrives on forest products not only through actual community support (sponsoring and funding) by mill and land owners but also serving as a means of livelihood for many people. There used to be several people working as bulldozer operators, forest technicians, grader operators and land management foresters working on large acreages of forestlands under the ownership of industrial companies. The management strategy of new owners is that of working with fewer employees to increase their returns during their investment period.

This could be a major issue in Wilcox County because of changes in the corporate structure/culture of Weyerhaeuser, the major employer in the county. Although forestland management attracts significant numbers of employees, the bulk of people are employed by the mill itself. Weyerhaeuser sold its paper mill in Wilcox County to IP in 2008, a move which was perhaps in the direction of the company becoming a REIT in 2010. With the dissociation from the mill resulting from being a REIT, it remains to be seen just how much of an impact this will have on the local community and its economy.

New forestland owners see their land as a "profit center" (a place to make money). Old owners were more concerned with the activities of loggers, employees in their mills and those who worked on their forestlands. This translated into job availability, worker insurance and safety and other fringe benefits. Respondents acknowledged that although those employed by new owners seem to have similar worker benefits, there are fewer jobs now. This is because of the management philosophy of new owners. They seek to make the highest profit possible and will therefore adopt strategies to achieve this mostly by reducing labor costs.

On the issue of loggers/wood dealers and previous industrial forestlands, one respondent remarked that "procurement was all about relationships…everything was based on honor." This was to illustrate the nature of relationships that existed between these two parties. Some went as far back as 30 years. Relationships, or as one respondent put it "good old boy networks," were forged around trust that whether wood prices were low or high, there were logging contracts to fulfill. This kept rural based enterprises in existence and served as a livelihood for many people. One respondent remarked that though paper companies "did not overpay loggers, they always made sure loggers stayed in business." Loggers still enjoy some level of relationship between them and institutional owners. This may be attributable to the retention of some former industry

employees, but certainly falls short in magnitude and importance as compared to that with previous industry owners. All this has culminated into raising the "what ifs" surrounding the logging industry.

An interesting finding was also the connection between fragmentation, logging and old/new owners of forestlands. According to respondents new owners do more "flipping" of their lands. This means they frequently buy and sell lands in small parcels. This results in land fragmentation because of the increased number of owners. One respondent noted this by saying that "the less corporate land you have, the more fractured your land base is." On the other hand, old ownership somehow kept land fragmentation in check and this made the logging industry thrive since logging of large tracts of land is more economical than having to work on smaller and scattered tracts.

It was further revealed that forestland acquisition is relatively an easier process now under the ownership of institutional owners than it was during industrial ownership. Under industrial ownership, forestlands were tightly held by owners who were protecting their source of raw materials. New institutional ownership structures, however, favor flipping of lands (as described above) for HBU. This means that more people (who have the purchasing power or money) can buy forestlands. There are numerous sign posts scattered around advertising forestlands for sale. All it takes is to make one phone call to initiate the transaction. There was an occasion when one member of the project team placed a call to a contact on a sign post posing as a prospective buyer. This provided very useful information and at the same time proved how easy it is to buy forestland in recent times.

Ultimately, respondents indicated that so far as lands remain forested, as has been the case so far, i.e., "if the finished product is still fiber," then changes in forestland owners though accepting that it holds the potential to promote certain undesirable occurrences (like job losses and reduced community support) will not result in a fatal crash of the local economy of Wilcox.

Dallas County

Dallas is a Black Belt county located in the southwestern central portion of Alabama. The county seat was changed from Cahaba to Selma in 1865. It is mostly rural and timber dependent like Wilcox. Other major towns and communities include Selma, Orrville, Valley Grande, Minter and Marion Junction. Forest products is the major industry here. International Paper is one of the major employers.

Ownership Change 1995 – 2013

Just like its sister Black Belt County, Dallas County transitioned from a vibrant cotton and agriculture based local economy into a forest based one. The capital, Selma, lies along the Alabama River and this made it a major economic center during antebellum times.

Hammermill, a paper mill with German origins, opened a plant in Selma in 1965. International Paper (IP), another pulp and paper company headquartered in Memphis, Tennessee, acquired Hammermill and its assets in 1987. IP engages in paper products manufacturing and wholesale, shipping and packaging services.

Similar to what respondents said in Wilcox County, those in Dallas County have noticed a change in ownership of forestlands in the county. The major change in forestland ownership in the area has been IP selling almost all its forestlands to RMS and Grantham Mayo van Otterloo (GMO). One respondent noted that in 2006, IP sold about 2.6 million acres to RMS at around

$1200 an acre. RMS is a TIMO founded in 1950. RMS is a registered TIMO based in Birmingham, Alabama. Its goal is to serve pension funds, endowments, foundations and family offices. GMO is also a TIMO founded in 1977 and headquartered in Boston. The company is a service provider in asset management. Their major clients, similar to RMS, include endowments, pension and public funds.

Many reasons were given for the decision taken by IP and other industrial timberland owners to sell their lands to institutional investors. Firstly, respondents noted that it related to the issue of double taxation. This made the tax burden unbearable for industrial owners. In the midst of this, land management costs increased and unfortunately, the pulp markets were also very bad. In the end, it affected profitability to the extent that drastic measures had to be taken. During this period, one respondent who works with a forest equipment company, remarked that "the financial people (working for industrial owners) looked at the books and saw those assets (forestlands) sitting on the books and thought it was a good opportunity to turn it into cash." To recover some profitability therefore, industrial owners made the decision to sell their forestlands. Respondents noted that some companies decided to try their luck overseas.

The motivation to sell particularly stemmed from a strategy that was adopted by industrial owners to sustain their wood supply base having divested the lands. This was spelt out in the sales contract as a "fiber agreement." According to respondents, this agreement stipulated that new owners supply certain amounts of wood to industrial owners (mills) per year at an index type price (normalized average). So in the end, it seemed a good management strategy to concentrate on their core business (wood processing) while divesting themselves of their forestlands and in effect cutting off having to pay extra tax. It was added that although "the land investment was good" some companies thought they could do better by selling their lands.

During that period also, there was a huge demand for lands and so selling was not that difficult. They (industrial owners) felt they had a good price on forestland sales, by doing "basic economics."

One respondent remarked that IP, having realized increasing timberland management costs and a need to show profit for their investors/stockholders, decided to sell their forestlands. This he claimed was the quickest fix to their problem. After selling their lands, "their books changed immediately." This reveals that industrial companies were compelled to divest their lands as a quick remedy to the problem they were facing. Perhaps in line with the strong tendency of making wrong decisions when one is compelled to, one respondent described the decision taken by industrial owners as "short sighted." He went on to comment that "I bet you, they will like it back." Another respondent described divestiture as "a long and painful process." New owners have been largely favored by the tax system in the southeastern US in general. According to respondents, this makes forestland investment an attractive venture for REITs and TIMOs. Concerning low property taxes in southeastern US, a respondent noted that "its always been that way."

According to 2012 land ownership data, the total timberland acreage in Dallas is 356,074. Out of this figure, the top ten owners own about 76,004. This represents 21 percent of all timberlands in the county (Table 3). Further analysis of zip codes and addresses shows that two of the top ten owners are resident in Dallas County. The remaining owners either live outside the county/Black Belt region or Alabama entirely. The top land owner is Weyerhaeuser, a REIT. Institutional ownership (by REITs and TIMOs) accounts for 10 percent of the total timberland acreage. The area is however a predominant TIMO area. TIMOs (Regions Timberland Group and RMS) own approximately 6 percent of all timberland. The only REIT, Weyerhaeuser owns

the remaining 4 percent. This means that Dallas County is lower (compared to Wilcox County) in terms of institutional forestland investor activity (looking at current forest land holdings). Just as mentioned for the case of Wilcox County, absentee owners are far removed from the problems of the region and may be less likely to invest locally the wealth they generate from their properties. Dallas County, however, has a relatively higher number of resident forestland owners. This means that Dallas County could see more investment in its local economy by owners of forestlands than in Wilcox County.

Management Objectives of the Forest Products Industry

As associated with profit seeking businesses, respondents indicated that IP managed its mill and forest resources efficiently to maximize their profits. Extensive research directed at both short and long term objectives was conducted in specialized IP facilities outside the county. Such research was done to determine superior growing trees and tree propagation methods. There were significant numbers of silviculture savvy employees who were tasked primarily to manage company forestlands with the view to obtaining a sustainable supply of the highest quality raw materials for processing. Mill operations are also done with the most efficient, safe and cost effective processes. This means that IP invested substantially into research and silvicultural techniques as well as hiring qualified personnel to manage both forestland and mills to ensure maximum productivity and profitability within the short and long term.

Though not core to their objectives as a forest industry, respondents noted that, IP, prior to selling its forestlands, sold small blocks of forestlands for real estate purposes. These lands were near or in the Selma area and other gradually developing areas. This explains that there has been some level of land use change even prior to the widely publicized divestiture. IP also did not sell all of its lands. Respondents indicated that some lands close to mills were kept perhaps to

serve as an emergency buffer of wood supply, real estate purposes, selling off at high prices as HBU or for recreational purposes. These lands of IP were described to be of very high recreational value. This perhaps connotes that these lands have been largely untouched and have attracted wildlife and have witnessed good tree growth over the years thereby increasing its recreational value.

Management Objectives of New and Old Owners

According to respondents, new owners still manage their lands intensively and sustainably for timber production and have also continued to be third party certified. One respondent remarked that "yes I believe there has been some change in the way new owners manage their lands. I don't think that the main focus, which is timber production, has changed." It was also revealed that RMS chose to retain many IP employees after the land was sold. These former employees of IP are still at their old job posts. This tells us that, though there could be changes in their job descriptions, the probability that they are performing the same roles as during IP land ownership is very high. One respondent added that new managers do not manage their lands as intensively as IP did but remarked that new owners "do a good job…you can't tell a lot of difference." This indicates that there are some differences in land management strategies.

New owners have also been discovered to sell off portions of their lands (which is characteristic of institutional investors) to other owners/buyers. Most of these owners have been small owners with smaller pieces of lands. Respondents noted that though this causes fragmentation, it was good for ecosystem management. They believe that the different intensities of timber management with regards to an owner's objectives (e.g., to use it for recreation or timber production) helps preserve or restore ecological parameters more naturally compared to scenarios where there are even-aged stands of trees.

In comparing management objectives of new and old forestland owners, respondents indicated that there are almost no differences between the two. In that regard, a respondent noted that RMS for instance "is still cutting timber, the loggers, forest managers, the same people are working in the mills." One difference one respondent noted was that new owners had a characteristic of "doing more with less." This was basically directed at the fact that new owners are more inclined towards making profit without having to invest heavily in forestland management. This connotes that certain management practices that old owners undertook on the lands have been discontinued by new owners or have had their intensities minimized. It was remarked by a respondent working with a forest equipment company that "yes I believe there has been some change in the way new owners manage their lands but I don't think the main focus (timber production) has changed. I think they (referring to new owners) are still managing their resource."

Fire suppression (as a silvicultural practice) is an area that has been overlooked by new owners almost entirely. Respondents noted that most REITs and TIMOs do not have vigorous strategies aimed at suppressing fires like the old industry owners did. Some old owners also had low cost and sometimes free land owner assistance programs. They assisted other forestland owners with site preparation, tree planting as well as growth and monitoring of trees. This is a "by-gone era now." This means that new owners within the thinking of realizing the maximum achievable profit have discontinued all activities they view as potential distractions to their profit making agenda.

Impacts of Ownership Change on Employment and Community Life

Some respondents indicated that the biggest impact they have seen as a result of ownership changes is the nature of wood supply to existing mills. It was revealed that wood

supply delivery schedules were very “flexible” during the times when industrial owners held their own forestlands. Flexibility here meant that wood supply to the mills was dependent on the needs of the mill. It also means that timber was cut to supply mills irrespective of timber or wood market conditions. Once a harvesting schedule was made, loggers or wood dealers had to get the deal done. New owners of forestlands, on the other hand, are more sensitive to wood market trends and tend to skew harvesting with regards to market trends and not towards the needs of the mill. One respondent mentioned that “REITs and TIMOs are managing forestlands for their own cashflows and not that of the mills.” Mills now have to adopt strategic ways to manage their mill timber inventories to stay in operation. What I noticed was that this response came from the wood dealers mostly. The timber business in itself has been depressed in recent times and this has caused the entire forest business to slow down. Wood products sales in general have been down since 2005 and market conditions may be responsible for some changes in timber procurement practices rather than simple changes in ownership. This also translates into fewer jobs and lower wood quotas for loggers and wood dealers.

Another marked impact of timberland sales has been a reduction in the level of support (in cash and in kind) that communities enjoyed under previous industrial forestland ownership. A respondent remarked that new owners of timberlands lack a “community identity.” Old owners had a well recognized community identity which mostly translated into jobs at the mill, involvement with city/town councils, yearly grant funds to the community, sponsoring of community advisory councils and a community leader forum to give people information on mill operations and other related activities. The importance of these services to the local community is enormous as indicated in a response that “in this area (referring to Selma), if IP decides to come and close this mill down, this whole industry will cripple, it will hurt this county.” This

sums up the fact that the local Dallas economy relied heavily on the services provided by IP and other existing mills and timber firms. Respondents indicated that new institutional owners lack a community identity and are for that matter not "politically obligated" to support communities as was done by old owners. "REITs and TIMOs do not have a company brand to protect." Despite this dissociation from community affairs, some new owners, e.g., RMS and Rayonier are involved with some universities and forestry associations. The conclusion here is that new institutional owners of forestland do support communities but not to the level at which old industrial owners did. Respondents also noted (just as in Wilcox County) that the initial consolidation that happened within the pulp and paper mill industry also took a toll on community support. For instance, in Dallas County, there used to be MacMillan Bloedel and Union Camp, which are all IP now (through consolidation). All these companies made several forms of contributions or support to their local area development. Although IP still contributes to local area development, this is "certainly" not at the level as when there were lots of companies.

Another impact revealed was the laying off of significant numbers of employees. Firstly, one respondent noted that IP "from a mill perspective" did not disengage itself from community affairs despite the sale of their forestlands. It is seen here that those who were employed by IP to work on forestlands were the sample of employees that were particularly affected by land divestiture. This included the many people involved with prescribed burning; field equipment handling and tree planting. Although some new land owners (e.g., RMS) kept some old employees of IP for instance, many (especially the old employees) were laid off. Mill workers were largely unaffected.

The last impact mentioned by respondents is a "massive" loss of logging capacity. The first respondent noted that "its easy to sink a million dollars into a logging job fairly quickly."

This indicates that logging has very significant financial commitments. Due to inadequate financial history to obtain loans to purchase more efficient equipments to enhance logging operations, many small loggers have died off. Also other issues such as hikes in fuel prices, insurance, labor and pay rate of loggers have not kept up with the cost involved in keeping a logging business running. Wood quota from mills has also been generally low even for those loggers and wood dealers with enough harvesting capacity. According to one respondent, if there is no remedy found within the next 12 months, there will not be enough loggers to produce the wood that the industry needs. It is important to find solutions to this problem also because the demand for wood in Alabama in general is bouncing back "pretty quickly." Most of the mills in the state have started increasing their production by either adding more shifts or extending hours for workers. For instance, the Louisiana Pacific oriented strand board (OSB) mill in Thomasville, which has a capacity to produce 1 million tonnes of wood products a year, had been shut down for about 5 years. Rumors are that it is coming back online. Westervelt has started a wood pellet facility in Aliceville. A mill in Lannett has also been rumored to want to get back online sometime before the close of the year. Existing mills are also running better, producing more volume.

One interesting observation I noted was that there was hardly any mention of forestland conversion into HBU by new owners in Dallas County. This perhaps illustrates that HBU in this area remains forestland. Respondents recognized that there is still a recognized value in timberlands portfolio and investment schemes as a valuable asset ("doesn't have as much upside but doesn't have as much downside"). This means that there will be "opportunistic sales" of forestlands in the name of HBU, which will facilitate forestland conversion. Many, however,

remain unconvinced of this trend. The time factor was once again mentioned to describe the uncertainty in forestland ownership trends or more so the wood industry and market.

Lee County

Lee County is the most populated among the study counties, a metropolitan area with many industries. Lee is not dependent on any single resource or industry.

2012 land ownership data showed that the total timberland acreage in Lee County is about 220,651. Out of this acreage, the top 10 owners own about 60,852 acres which translates into about 28 percent of all timberlands in the area. The top owner (Dudley Lumber Company, neither a REIT/TIMO nor institutional investor) is a private company which owns about 12.5 percent (27,572 acres) of all timberlands in the area. There are two institutional timberland owners (TIMOs) in the area (Regions Timberland Group and RMS). They, however, own less than one percent of the total timberland acreage in the area.

An interesting observation here is that the top 10 owners are all private/individual companies. Respondents noted that private owners see Lee County as a perfect retirement destination particularly for those who want a rural setting in an urban area. This implies that private owners are mostly not interested in complete conversion of their forestlands for developmental purposes. Timber harvesting is done by a few owners. Most owners, however, do more recreation and also choose to maintain their lands forested for personal gratification and privacy. Such private owners will help Lee County to always maintain a rural flavor.

Another striking observation from the landowner data is that seven out of the top 10 owners of forestlands are resident in Lee County. Though no association can be made, a conclusion that could be made is that since these forestland owners are resident in the county,

they invest a lot in it. Lee County for that matter is neither poor nor rural. It is a rapidly developing area with a diversified economy not dependent on any particular resource.

Wilcox and Dallas counties had much greater involvement of REITs and TIMOs. Lee County, by virtue of it being an urban area, will boast of higher prices per acre of forestland sold for HBU. Certainly some individuals or private companies will engage in selling some portions of their lands as HBU. For instance, MeadWestvaco (MWV), a private global packaging company also involved in community development and land management has been an active seller and buyer of forestland in Lee County. In 2010, MWV was the top forestland owner in Lee. This position was however taken by Dudley Lumber Company in 2012. Dudley Lumber Company is a private company in Salem, Alabama. The point is that selling lands (and buying) for HBU is not only a prerogative of REITs and TIMOs. Details of top ten owners can be found in Table 5.

Ownership Change 1995 – 2013

All respondents in Lee County, just as was seen in Wilcox and Dallas counties, have witnessed or heard about transition of forestland ownership in Alabama and Lee County specifically. According to respondents, 2006 and 2007 were the peak periods of these transitions. Forest products industries sold almost all their lands to institutional investors (REITs and TIMOs specifically) within this period. Individual owners have also participated significantly in land acquisition. Sales have, however, declined drastically within the last 5 years. MeadWestvaco has been the most active in terms of land sales in Lee County.

Respondents commented that unfavorable tax structures compelled many industrial forestland owners to sell their forestland base. Combined with tax drains, industrial owners were

burdened with paying employees to manage their lands, provide trucks, insurance and employee benefits. Many companies realized at this point that it was more economical to sell their lands and rather run their businesses (the mills) and not worry about the land (as described by a respondent from the Natural Resource Conservation Service that "lets run the paper mill and don't we worry about the land"). Companies resorted to fiber agreements which mostly stipulated supply of wood for between 15 to 20 years. This served as an impetus to the initial land divestiture idea. Another respondent noted that forestland "demand level and pure world economics" accounted for forestland divestiture. The implication here is that divestiture was propelled by global economic trends as well.

Management Objectives of the Forest Products Industry

All respondents referred to differences in intensities of silvicultural practices to distinguish between the management objectives of old and new forestland owners. The former is said to practice rigorous silvicultural techniques in the management of forestlands. New owners do adopt good silvicultural techniques in their forestland management, but with less intensity and financial commitment. One respondent used an example of Union Camp to illustrate this. Union Camp (in the 90's) had an intensive culture program where they selected sites for planting trees based on detailed research. Their silvicultural considerations went as far as to a level where you will observe "only dirt and pine" on their forestlands. Another respondent described the greater intensity of silvicultural activity by old forestland owners as one in which they (forest industries) went beyond the point where "you stick the tree in the ground." This greatly improved planted tree growth. Some trees reportedly reached harvestable heights within 10 years.

Management Objectives of New Owners

Several differences in management objectives of old and new forestland owners were noted. One respondent described that new forestland owners are "very environmentally in touch." This means they observe good sustainable forest management practices on their lands. Respondents, however, added that new owners tend to skew more towards the economic side of management (Returns on Investment or ROI). They mostly do not consider the ecological aspects of management as much as the old industrial owners did. For instance, new owners are mostly not concerned with how fast they can grow trees, how much volume per acre they grow. They will only consider this if it affects their returns in the end (when harvesting is done).

The conclusion here is that new forestland managers are more inclined towards profit maximization and therefore adopt less intense silvicultural practices and commitments. Respondents also added that this perhaps could be attributed to the investment period of owners. Institutional owners were noted to be interested in short term investments (e.g., 15 years) while industrial owners managed their lands for up to 40 years or more. This meant that new owners were mostly not interested in any kind of investment that will not be reaped within their investment period.

Impacts of Ownership Change on Employment and Community Life

Numerous land sales taking place in Lee County have led to notable land use changes. According to respondents, this change has been basically from a single management objective (timber production) strategy to more of a "hybrid" strategy. This means that most owners in Lee County are adopting a multiple land use approach where an owner manages lands for timber, recreational purposes, HBU sales, agricultural purposes, homesteads, residential purposes and other developmental considerations. MWV for instance was mentioned to have sold lands that were close to Auburn, Opelika and Phoenix City for around $10,000 an acre. These lands have

mostly gone into development activities. This means that lands close to urban areas or in this case those close to the major towns and cities will see the bulk of forestland conversions into other usage. One respondent described this as a trend of "limited deforestation." This means that although land use changes are occurring as a result of HBU sales, the impact is minimal. It was also noted that prices for leasing land for recreational activities has almost doubled in the area making it attractive for land owners to capitalize on the opportunity to make profit. One respondent associated with the Natural Resources Conservation Service remarked that "the thing is if you manage it (the forestland) well, its going to be worth more." The explanation given to these observations is that land owners in Lee County are more inclined towards identification of HBU for other purposes apart from timber production and recreation.

Population trends in Lee County also indicate sharp rises. This means that there will be more pressure on existing forestlands. More people mean more buildings, more places of convenience, more hospitals, schools and churches and many other development activities. This means that the probability of land use changes in Lee County far outweighs that of Wilcox and Dallas counties, which have seen dwindling population trends. A respondent described Wilcox and Dallas counties as part of the "sawtimber Mecca of the South" in comparing the strength of the forest industry to a feeble one in Lee County. To further back this point, one respondent noted that Lee County is a perfect retirement destination for people. These people crave a rural lifestyle in an urbanized area. This lifestyle has a lot of benefits, including paved roads, proximity to hospitals, good restaurants etc. Apart from these qualities that Lee County possesses, it is close to Atlanta, Montgomery and Birmingham. This all means that the demand for land (which includes forested lands) for other reasons than timber is higher here. Despite the high demand of forestlands for other purposes, one respondent noted that Lee will always

maintain a rural flavor. This means that significant portions of forestlands will remain forested despite the high probability of land use changes. Another way I understand this is that since Lee County has been identified as a retirement destination, a lot more individual owners who want that rural lifestyle will buy large portions of forestlands. These lands will most likely be retained as forestlands and will perhaps see very minimal development as I witnessed when I interviewed some private land owners. The last observation I made was that there was less mention of the use of land for recreational (primarily hunting) activities. This could mean that Lee County is less preferred as a destination for recreational forestland leasing in comparison to Wilcox and Dallas counties, probably due to greater human population densities.

One of the impacts of timberland sales in Lee County has been that on the logging industry. For instance, one respondent noted that before industrial forestland divestiture, timber companies used to deal directly with loggers to supply wood for their mills. When the land went to institutional investors, they also went into the timber/logging business. This meant that instead of them hiring already existing logging companies, they chose to do that themselves ("which was smart on their part"). Some new owners set up subsidiaries to deal exclusively with timber harvesting. John Hancock (which bought out Kimberley Clark) started a subsidiary company called Cahaba Forests. Cahaba Forests then formed its own logging crews and forest managers to manage and harvest timber. These companies got into competition for existing logging contracts from Mead, Union Camp and IP. This stifled smaller companies. Cahaba Forests was heavily financed and therefore had modern equipment and well educated personnel. Many family operated logging businesses (rural family enterprises), by virtue of their limited logging efficiency, went out of business because they lacked financial groundings even to secure loans to buy modern equipments to stay competitive. To worsen matters, hikes in cost of fuel, supplies,

parts, rubber, steel and other commodities needed in logging has made logging very capital intensive. As a result of the reducing attractiveness of logging as a rural based enterprise, many "mom and pop" logging companies are urging their children to take other professions. This could greatly reduce the wood supply base needed by existing mills. Respondents stressed that measures will have to be taken to address this issue.

Another impact of forestland sales has been the issue of forestland fragmentation. Fragmentation becomes a problem when lands get too small to be profitable. The explanation here is as seen in the other study areas is that when lands become too small, it reduces its logging value as well. Loggers are more interested in harvesting larger blocks of land at a time compared to harvesting smaller tracts and having to move personnel and equipment all over the place. Other respondents believe that fragmentation will create a more diverse forest compared to the period when lands were owned by industrial owners and lands were managed mostly for timber. This perhaps refers to the hybrid or multiple land owners objectives described earlier.

CHAPTER V

DISCUSSION and CONCLUSIONS

I begin this chapter with a restatement of the purpose of this study as well as a quick review of the methodology and results sections. The next part of the chapter deals with linking results to the study objectives, theoretical framework and other previous literature on the broader subject of forestland ownership changes.

Purpose of the Study

The purpose of this study was to determine how recent forestland ownership changes will affect Dallas, Lee and Wilcox counties in Alabama. To accomplish this, three tasks were developed. These became the objectives of the study. Firstly, I track actual land use changes associated with timberland ownership changes in the selected counties. The second objective was to identify perspectives on the sale of timberlands with regards to old and new owners' management objectives. Lastly, I compared management objectives of old and new forestland owners, ownership patterns as well as reasons why new owners bought land in the first place.

Objective 1: Document land use changes associated with change in timberland ownership in the selected counties

The aim here was to investigate whether human activities and specifically forestland ownership changes had resulted in shifts from forestland or timber producing lands into other uses. To put the importance of this in proper perspective, it was necessary to know the importance of forestlands to the areas of my study prior to land divestiture by pulp and paper companies.

There were several statements made by respondents which suggest strong linkages and dependency on forests. This was mostly observed by respondents from rural Dallas and Wilcox

counties. Some respondents in Lee County, however, mentioned this linkage with reference to rural counties and areas in Alabama and included Dallas and Wilcox in some cases.

A private wood dealer in his late 30's made a comment to describe the relationship between communities and forest. According to him, the forest products industry is the "bread and butter" of local people in Wilcox County. This suggests the economic link between people and forests as described in Howze et al. (2003), Bliss et al. (1998), and Humphrey (1990). Interview findings also back those of Dyer et al. (2009), Dyer and Bailey (2008), Bliss and Bailey (2005), Gilbert et al. (2002), Joshi et al. (2000), Zabawa (1999), Bliss et al. (1998), Zabawa (1991) and Pennick (1990) in the reasoning that people ascribe more than economic values to forests and the forest industry for that matter. For instance, two wood dealers (one retired and the other in his 40s) in Dallas and Lee counties raised issues on public relations between forestland owners and people, as well as family ties with forests and the logging business.

Land sales were supported with "fiber agreements" to pulp and paper mills after land divestiture. This was described by Hagan et al. (2005), as long-term wood supply contracts. An employee of a timber company descried fiber agreements as multi-year wood supply agreements for over 15 years and a 5 year option afterwards. The option attached to this is that the mills have first refusal following the term of the volume obligation (wood to be supplied).

Although respondents acknowledged that there has been change of forestland owners, the compiled consensus seems to suggest that, at present, there has been no significant change in the use of forestlands for timber production compared to when the pulp and paper companies owned the land. This applies particularly to Dallas and Wilcox counties. A private timber consultant in Lee County acknowledged that despite the change of forestland owners "we are still doing the same thing." Although respondents claim that management objectives of new owners are

company-specific, the main activity remains as timber production. The possibility of land use changes is and will be higher in Dallas County than in Wilcox County. Respondents attributed this to Selma, the capital of Dallas which, although it is losing population (Table 1), happens to have a slower rate of decline than Wilcox County and also boasts of a significant number of industries and resources. According to a private timber company owner in Lee County, land use conversion away from timber is all but a "remote speculation" in Dallas and Wilcox.

Lee County on the other hand has witnessed some significant land use changes as a result of forestland ownership changes. Respondents attributed this to the difference (compared to Dallas and Wilcox counties) in demographics (Table 1) and the reason that it is an urbanized area. This supports the findings of Johnson and Stewart (2007), Alig et al. (2010) and Stein et al. (2005) who all argued that demographics can be used as an indicator of forestland conversion. Forestlands closer to urban areas are most likely to witness conversion into other uses as roads, or development for residential or commercial purposes and for agriculture. Respondents however, were quick to add that although Lee County will experience a comparatively higher rate of forestland conversion, significant lands will remain forested. Whether these lands will stay in timber production or not is still speculative.

Questions regarding land use changes revealed that although the use of forestlands for recreation and hunting is a historical practice in Alabama, many forestland owners in recent times have identified it as a profit making strategy. Some respondents referred to this as the only land use change they have witnessed. A respondent who works with the USDA noted that new owners seem to have multiple objectives for owning forestlands compared to about 50 years ago when land was managed primarily for pine and saw timber, where all the money was. Wilcox County seems to be the best location for recreation and hunting with land owners able to get as

high as $25 per acre in hunting leases. Other locations in Dallas and Lee County are able to receive between $8 to $12 dollars per acre in hunting leases. Some natural hardwoods are maintained to attract wildlife to make lands more attractive for hunting.

I deduced a lot of reasoning behind my findings on land use changes associated with forestland ownership changes from previous research but also from my own observations. Lee County is fast developing and it is not so difficult to tell the difference if you take a drive down to Dallas and Wilcox counties. I made several trips around Lee County and its outskirts and saw several development projects and huge residences. Dallas County and the city of Selma is not as rural as Wilcox County. I could not keep track of the number of fast food stores in Selma but could easily count on my finger tips the number in Camden, Wilcox County. There were hardly any two-storey buildings.

Objective 2: Identify the impact of timberland sales as they relate to existing and previous timberland management objectives

The goal here was to examine the connotations of ownership changes and how this relates to previous management strategies of the pulp and paper mills. Actual management strategies of both old and new owners will be discussed in the next section.

The "community identity" nostalgia

Building up on the previous discussion, almost all respondents stressed the connection that communities had with pulp and paper mills prior to the period of forestland divestiture. The mills back then had a known relationship with local communities and local economies as well. This created room for very good public relations between companies and communities and in some cases created a strong sense of "community identity" between the pulp and paper mills and the community (Lupo and Bailey 2011). This relationship was based on jobs at mills,

involvement with city and town councils, yearly community grants, community advisory council sponsorships and leader forums. Leader forums were done to ensure that community members are abreast of mill operations and other activities. Respondents working in the forest products industry in all the study areas noted that all these activities of previous owners helped the community development process.

The first threat to the relationship between pulp and paper companies and communities according to my findings came during the period of consolidation within the forest products industries. In Dallas County, for instance, IP bought out both forestlands and infrastructure of Macmillan Bloedel and Union Camp. Prior to this acquisition, all these companies had various forms of community support packages for their communities. The accumulation of diverse support packages helped communities significantly. Although IP has chosen to continue community support, this does not measure up to the level that the mix of industries offered. MeadWestvaco also had a very effective and free land owner assistance program which assisted community land owners with site preparation, tree planting, and growth and monitoring of trees on community forestlands. James River Company in Wilcox County as part of their community support package donated paper products to the county. This, however, was discontinued when Georgia Pacific bought them out.

The advent of institutional forestland ownership, especially the REITs and TIMOs, has facilitated a fast eroding trend of the historical relationship between communities and their forests and forestland owners for that matter. Community support has dropped to meager levels and many rural family enterprises have disappeared.

Rural family enterprises, especially in timber dependent Dallas and Wilcox counties are mainly in logging and wood dealing. No respondent attributed the disappearance of local

businesses to the initial consolidation of forest products companies. Most attributed job loses within the traditional logging and wood dealing businesses to recent institutional forestland ownership. Research findings indicate that the management strategy of REITs and TIMOs and other institutional forestland owners navigates away from the previous relational business bond between loggers/wood dealers and forestland owners into one which depends mostly on market trends. This meant that many local businesses and especially the small ones which did not have enough financial history to obtain loans to procure modern logging equipment collapsed as a result of their not being competitive and strong enough to bid on the few wood supply and logging contracts that become available when wood markets were favorable. The transition into more market oriented business transactions of new owners did not do the loggers/wood dealers with good financial standing any good either. As a private timber consultant put it, the "what ifs" in the wood business are just too much in recent times. Even after investing millions of dollars into buying logging equipment, there is no guarantee of contracts from institutional forestland owners. This (according to a wood dealer in his 40s), makes them (referring to loggers and wood dealers) miss the time when the wood/logging business "was all about relationships….everything was based on honor….there was no price related risk."

An interesting and unique finding worthy of mention is that of a wood dealer in Wilcox County. Despite believing that TIMO and REIT-like forestland ownership could have undesirable consequences on traditional wood and logging jobs, he saw a positive side of it. The "good old boy networks" and alliances of previous forestland owners was clearly advantageous to particular groups of families, loggers and wood dealers. Some of these networks have been in place for more than 30 years. This meant that almost all wood supply contracts and related jobs and opportunities were first made known to people with already existing contacts with the paper

mills ("these companies sucked on the sugar tips of companies based on their relationship with them"). New owners and REITs in particular are noted to have opened up unbiased bidding of timber on their lands to the general public. This creates an opportunity for other companies or local wood dealers and loggers to bid to supply wood (on behalf of the land owner) to the timber mills based on wood supply agreements made prior to land divestiture.

There is a strong likelihood that a wood supply deficit in Alabama will occur due to the disappearance of the old "mom and pop" logging and wood dealing business due to the aforementioned reasons. According to respondents these businesses form the core "logging force" which supplies existing pulp and paper mills with wood. An employee working with a pulp and paper mill noted that, roughly, about 30% of the logging force in Alabama has been lost within the last 7 to 8 years. There are positive indications that the demand for wood is slightly increasing. He pointed out further that most of the wood products manufacturing facilities in the state have started adding more working shifts and hours to increase their production. The Louisiana Pacific OSB mill in Thomasville is likely to come back online after being shut down for about 5 years. Westervelt has started a pellet facility in Aliceville. A mill in Lannett has also been rumored to want to get back online sometime this year. Existing mills are also running better, producing more volume and capacity. Unfavorable county ordinances and a lack of interest for young people to go into the logging business could create a wood supply gap, as feared. Parents are urging their children to take other professions…. "get a college degree and do something else (statement made by a wood dealer in Lee County)."

A forest in fragments

Previous research has brought forestland fragmentation into perspective ever since ownership changes became trendy. Gunnoe and Gellert (2010), Rinkus and Markham (2006) and

Barlow et al. 1998 all drew attention to forest fragmentation as a negative consequence of forestland ownership changes. Clutter et al. (2005) argued that not all lands undergoing ownership changes will necessarily have a change of land use. Kelly and Bliss (2008) saw the opportunity through fragmentation to create community forests.

Study findings also revealed this dichotomy surrounding forestland fragmentation. Some respondents claimed that is bad for the forest products industry in Alabama. For instance, a respondent working with NRCS claimed that fragmentation reduces the sizes of forestlands. This makes them unattractive for logging since loggers like to work on large acreages. Fragmentation could also remove production forests from logging activities especially when they are bought as HBU by individuals who are not inclined towards harvesting timber. A private timber company owner, on the other hand, believes that a fragmented landscape will mean different management intensities which will facilitate a more natural ecological land restoration.

Objective 3: Compare management objectives of new versus old owners, changes in patterns of ownership and reasons why the new owners bought the land

Positive Divestiture?

To better understand the reasons why new owners bought forestlands, it is important to understand why previous land owners decided to sell in the first place. Financialization, as well as empirical results of the study confirm that rising financial interests and the need to improve profitability led to both the selling and buying of forestlands.

According to Clutter et al. (2005), the forests products industries were compelled to sell their lands to reduce debt, increase their tax efficiency and for that matter improve shareholder returns. Study findings strongly supported this argument. For instance, a respondent who previously worked with IP mentioned that IP did a cashflow analysis of land management and

selling of lands. They noticed that selling land could yield better returns for their shareholders particularly at a time when demand for land was very high. Although he described the selling of land as a "long painful process," IP had no choice but to sell the land. In the end however "we felt like we got a good price on our lands sale….basic economics." A wood dealer in Dallas also indicated similarly that IP sold their lands to balance their books. Management costs had risen and the pulp market was also very bad. IP, compelled to show profit for their investors/stockholders had to find a quick fix to the problem. They identified selling of their forestlands as this quick fix. After selling their lands, "their books changed immediately."

The other compelling reason for land divestiture was the issue of tax. This was confirmed by Clutter et al. (2005), Siegel (2004) and Block and Sample (2001). These authors discovered that the forest products industries were taxed at the corporate level and then again as shareholders paid tax on dividends. This became financially burdensome to the industries. Divestiture became the only realistic option at that point. Though respondents in this study could not give any details on the issue of tax, they all confirmed that it was core to reasons for land divestiture by the forest industries in Alabama. Respondents stressed that divestiture was a tax advantage move by forest products industries to rid themselves of the issue of double taxing.

In the end, REITs in particular, have an edge to procure forestlands because they have a better designed tax structure compared to the forests products industry. This makes them more efficient land managers in terms of returns from their lands for their investors. Siegel (2004) and Block and Sample (2001) reiterated this by noting that REITs are able to recover as much as 85 percent of their profit compared to the forest industries who could only manage to retrieve 50 percent. Respondents noted that the tax structure on land base in general in the south is attractive

for REITs. On the issue of low taxes on lands in the south, a wood dealer in Wilcox County said that “its always been that way.”

It must be noted that most respondents were quick to slam the decision of forest products industries to divest their forestland base. The strongest remark was made by a wood dealer based in Wilcox County who described this move as a “short sighted” one. A private timber consultant also remarked that the forest industries had a “great asset” in reference to their forestlands. To them, the decision to sell is therefore difficult to understand. There is reason to believe that some forest industries are still interested in acquiring their lands once again. The current tax system seems to be the only hindrance to this move and accordingly, a private timber company owner noted that “all it takes is for congress to vote in favor of tax rate for owning land….and you will see IP turning around and buying forestlands again.”

All about the money

Bits of this discussion emerged under the previous objectives. All respondents indicated that new institutional owners of forestlands are to a large extent motivated by financial interests in the management of their lands as was found by Block and Sample (2001) and Little (2006) as well as the definitions given by Ellenberger (2007), Schwenker (1998), and the IAAO (1996) for HBU. This has created a heightened tendency for forestland conversion into other uses, but this research shows that what constitutes HBU varies considerably. Forestland conversion has affected the kind of relationship that existed between old pulp and paper companies and their communities with the trickledown effect being job losses and disappearance of local wood and logging businesses.

Although new land owners seem to have adopted the same management strategy of previous owners (managing for timber) as has already been discussed, my study findings

indicated that the old owners of forestlands went beyond the point where "you stick the tree in the ground." This sets the tone for a discussion on management objectives of new and old forestland owners.

A private timber consultant used Union Camp as an illustration of management styles. Union Camp had an intensive management program in the 90's that they called "intensive culture." The company made sure to factor in economic, ecological and biological factors in the management of their lands. Weed and pest control were all done judiciously to the extent that "there was only dirt and pine tree." Silvicultural treatments were done based on sponsored research results. The difference in heights of two year trees during this period was reported to be almost twice that planted by new owners on the same pieces of land. A private timber company owner added that Champion also used to invest as much as $100 per acre of forestland for fertilizer application. Another respondent working with a private timber company also pointed out that new owners manage their lands for very short periods (e.g., 10 years) in comparison to IP who managed their lands for over 30 years. This was also noted by Block and Sample (2001), Harris (2007) and Clutter et al. (2005). They asserted that TIMOs in particular, have a relatively short investment period of about 10 to 15 years. Within this period, management is directed at maximum returns after which lands may be sold again within the thinking of HBU to the highest bidder.

According to respondents, REITs and TIMOs see land as a "profit center." This means that all management strategies and practices on their lands that go beyond their investment period are seen as bad strategies. The consensus of respondents therefore is that although TIMOs and REITs are active managers of their forestlands, their profit motives lead them to consider

more of the economic side of the management strategies unlike the old owners who in addition to economics, factored in significant biological and ecological considerations.

It is fairly easy to deduce that financialization and the subsequent rise of financial interests propelled the formation of institutional investors like REITs and TIMOs. The motives of REITs and TIMOs are held at the national and international economic and political level and not at the local community/county or state level. This is what propels income inequality and low wages.

Although companies like IP and Weyerhaeuser (before becoming a REIT) run as businesses, their focus was on the business as a whole and not only the short term financial returns. As this study has revealed, they were more involved in actual community activities and growth. Upon their attachment to financial corporations (REITs and TIMOs), they provided an avenue for more pronounced financial interests to function at the community (and micro) level. The effect though small at this point has been felt in worker layoffs and reduced community support.

Sign of our time?

The importance of the forest products industry to Alabama, the United States and for that matter the entire global forest economy has been clearly shown in this study. It is therefore imperative to look into how the recent global economic recession has contributed to the trends being experienced by the forest products industry in Alabama. Responses obtained from respondents in this study attributed job losses and lowering community support to the global economic recession. Others also maintained that ownership changes and the subsequent loss in jobs and community support was a localized problem (in Alabama and the forest products industry).

The spotlight in the linkage between the recession and the forest products industry perhaps was the crushing of the US housing market. The housing market consumes very significant amounts of processed wood. The implication of the crush was therefore the reduction in the amount of wood consumed by the housing markets. This also meant the lumber mills had to reduce production levels. This obviously translated into curtailment and in some cases closure of mills. Data from the United States Department of Commerce indicates reducing trends in the number of paid employees in the forest products industry in Alabama. For instance, in 2002, the number of paid employees in forest products manufacturing (alone) was about 34,513. In 2010, this figure had shrunk to 26,674. This was noticed prior to and after the economic recession. Although there are no figures to present, responses from respondents indicated that wood dealership, logging and forest management jobs have declined within the same period.

The goal here is to draw attention to the fact that global recession has had very significant impacts on the forest industry in Alabama and may be the leading causal agent of the trends within the forest products industry. There are positive signs of recovery of the industry in Alabama as respondents rightly noted. For instance the period before the recession recorded a lower figure of about 9.4 billion dollars in 2002 in the value of shipments of wood products from Alabama as against a figure of 11.9 billion dollars after the recession in 2010.

The recession seems to have served as the last effort which tipped an already out of balance industry over. Figures on payrolls, number of paid employees and value of shipments indicate a gradual decline prior to the actual recession. This may be attributable to structural changes (ownership changes) within the industry; what most respondents claimed was the cause of the declining employment opportunities and community support in the wood products industry in Alabama. Current trends in the forest products industry could most likely be attributable to the

compounded impact of both inherent structural changes as well as the economic recession. The point here is that this study was conducted in a period where the effects of the global recession are still being felt. There is therefore a high possibility of overlapping effects of both structural changes and the recession.

The hard choice: between a REIT and a TIMO and community development

As previously mentioned, the choice of Dallas and Wilcox counties presented the opportunity for a comparison between the major types of institutional investors (REITs and TIMOs) in the area in terms of how beneficial they are to community development. It is fairly easy to group them both into the broad category of institutional investors (which they are) without identifying the differences between them and how they may impact local communities.

It is important to note that both investors see forestlands as a "profit center" or more precisely, an investment. However, it is important to note that these two categories of owners have different financial strategies which translate into varying forms of community impacts. As with every investment, the main goal is to reap the highest returns possible within the period of investment. Respondents in this research gave a conclusion on institutional investors as generally short term investors of forestlands within periods not exceeding 20 years. This may hold for TIMOs who, according to Browne (2001), are required to create turnover rates within 10 to 15 years. This was verified by another member of the project team in a separate interview with a TIMO. Due to potential conflict of interest, TIMOs cannot hold onto their lands upon closing their portfolios and therefore have to either sell to another TIMO, company or individual. This means that all or most of their investment into land management is done with specific emphasis on their investment period. Investment that goes beyond this is simple unacceptable and is a bad management strategy.

REITs on the other hand, (according to Browne 2001) have a lesser inclination to sell their forestland holdings because their stocks provide them with a wall against liquidity and therefore reduces the need to sell lands to generate cash. This means that REITs have a longer management period similar to the old industrial land owners. Investors as they are, they seek to make the highest returns possible on their properties within the length of their investment and will in the case of forestlands, invest in management activities that will ensure the maximum benefits accruable from the trees/timber on lands. Browne (2001:11) stated categorically that "it is in the best interest of a REIT to fully fund research." I analyze this statement in two ways. The first is that REITs need to fund research to be able to obtain the most reliable forest management strategies and superior tree species to enhance better tree yields. On the other hand, since REITs have their stocks traded publicly, they have more of a company brand to protect like the former industrial owners and therefore see it vital to support research perhaps to ensure that the larger society embraces them.

With regards to the discussion above, the REIT model of timberland management seems to have an edge over TIMOs as it relates to community development. Local communities (particularly Dallas and Wilcox counties) who have their economies interwoven around the forest products industries need forestlands to stay forested to provide people with much needed jobs and community support. The fairly short-term management and high "flipping" of land associated with TIMO land ownership creates a higher tendency for land use changes as well as job insecurity for people. This is because of varying owner investment ideologies in terms of forestland management. REIT land ownership on the other hand has the potential to provide people with more stable employment opportunities due to the long term nature of management.

Also since they (REITs) have a company brand to protect, there is a higher probability for a sustained community support, at least within the period of investment.

To illustrate this, Weyerhaeuser, in Wilcox County, despite converting into a REIT still has very good community support packages which it has taken as a form of social responsibility. Among other support packages, they have a scholarship program to fund pupils and students. People easily associate with the company because they are more visible and relatively easy to associate with. In sharp contrast however, people in Dallas County barely know anything about RMS and GMO (both TIMOs) in their area. They still mention International Paper as owners of forestlands in the area. Perhaps I can say at this point that TIMOs lack that "community identity" as respondents used to describe institutional investors. Although the discussion on REITs and TIMOs may not be exhaustive enough at this point to draw the line between them, the discussion here indicates that the REIT structure of forestland ownership supports community development better than the TIMO structure.

Future implications

There are mixed reactions on the possible future implications of institutional land ownership particularly in Alabama. Many believe that most forestlands are going to stay forested despite ownership transitions. The bottom line, however, is that new managers and their profit oriented motives will result in many layoffs of people employed in the forestry sector (particularly the loggers and wood dealers). There will be forestland conversions particularly in areas that are witnessing population growth. Fragmentation and parcelization will continue to take place as new owners continue to buy and sell their lands. This will be the trend since timberlands are still recognized as valuable investment assets on the market especially for REITs and TIMOs. These issues are of extreme importance to Dallas and Wilcox particularly because

local economies revolve around the forest products. People especially in these locations ascribe more than an economic value to forests and for that matter the forest products industry.

Despite the strong indicators that institutional forestland ownership holds a big potential to changing the existing land uses as has been witnessed in some parts of Alabama, research findings indicated that changes and the rate at which it is happening presently does not pose any threat to the overall land use pattern for people in Dallas, Lee and Wilcox Counties. Time is definitely the underlying factor to tell what will become of institutional forestland ownership.

I believe Jack Westoby's challenge to forestry practice can be applied to conclude this research. He says that "forestry is not about trees, it is about people. And it is about trees only insofar as trees can serve the needs of people" (Westoby 1967 cited in Leslie 1987: ix). The activities of TIMOs and REITs needs to be carefully documented and monitored to detect any alarming trends. Local and regional planning and development activities should be carefully scrutinized to ensure that there are no conflicts between that and sustainable forest management practices. It is also necessary to educate traditional loggers and wood dealers about who new institutional forestland owners are, their management philosophies and how to operate with them. It is hoped that this will help decrease the number of job losses that has characterized institutional forestland ownership.

Study limitations

The major limitation to this study was the study population. The number of respondents envisaged for the study was smaller than planned for. This is because it was extremely difficult to set up interviews especially with institutional land owners in the study areas. It appears institutional owners of forestlands are very sensitive about their properties. I also noticed that the initial approach of phone calls, sending letters and emails usually does not work. Future studies

will need to go to the door steps of these institutional owners as I realized during the latter stages of my data collection. Although the number of interviews I conducted for my research appears small, I believe I captured enough details and information to engage the academic audience on the issue of forestland ownership transitions and its potential impact.

My study was also based on findings from three counties in Alabama. I believe a broader study looking at more counties will give a better insight. I really do not consider this a major limitation because of the bigger project within which mine was designed. This will look at the entire State of Alabama.

I also believe that future research should make efforts at facilitating a focus group discussion on this subject. This could include all stakeholders I used in my research. This will provide an instant information verification mechanism as well as provide a forum for institutional owners to present their views. Although my one-on-one interviews were very informative and I mostly was able to contact respondents to make unclear information clear, I believe it does not compare to the information verification that is inherent to a focus group.

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APPENDICES

Table 1: Population Size in Study Counties Compared to State and National Populations, 1990 - 2010

Location	1990 Census	2000 Census	2010 Census	% Change 1990 - 2010	% Black Persons (2010)	% White Persons (2010)
Wilcox	13,568	13,183	11,670	-13.9	72.5	26.8
Dallas	48,130	46,365	43,820	-8.9	69.4	29.1
Lee	87146	115,092	140,247	60.9	22.7	71.3
Alabama	4,040,587	4,447,100	4,779,736	18.3	26.8	69.8
US	248,709,873	281,421,906	308,745,538	24.1	12.6	72.4

Source: US Census Bureau, State & County QuickFacts 2012

Table 2: Sample Characteristics

No.	County	Pseudonym	Respondent Attributes
1	Dallas	Austin	Private Timber Consultant
2	Dallas	Batra	Private Timber Consultant
3	Dallas	Christian	Forest Products Industry
4	Dallas	Henry	Forest Equipment Supplier
5	Dallas	Andrew	Private Timber Consultant
6	Dallas	Benjamin	Private Timber Consultant
7	Dallas	Brad	Private Timber Consultant
8	Lee	Seth	Private Forestland Owner
9	Lee	Charles	Private Timber Consultant
10	Lee	Jason	USDA NRCS
11	Lee	Emmanuel	Private Timber Consultant
12	Lee	Fred	Private Timber Consultant
13	Lee	Micheal	Private Forestland Owner
14	Lee	William	Private Timber Consultant/Company
15	Lee	Dicks	Private Forestland Owner
16	Lee	David	Private Timber Consultant
17	Lee	Raymond	Private Forestland Owner
18	Wilcox	Tedd	Alabama Cooperative Extension System
19	Wilcox	Jerry	Alabama Forestry Commission
20	Wilcox	Simon	Alabama Tombigbee Regional Commission
21	Wilcox	Franklin	Alabama Department of Commerce
22	Wilcox	Max	Private Timber Consultant
23	Wilcox	Samuel	Private Timber Consultant
24	Wilcox	Bruce	Private Timber Consultant
25	Wilcox	Vincent	Private Timber Consultant

Table 3: Top 10 Timberland Owners in Wilcox County (2012)

No.	Name of Owners	Owner Description	Total Timberland Acreage	% of total
1	Weyerhaeuser	REIT	41,240	8.8
2	Alco Land & Timber Company	Private	12,440	2.6
3	John Hancock Mutual Life Insurance	TIMO	10,767	2.3
4	Soterra LLC	TIMO	10,596	2.3
5	Gulf States Paper Corporation (now called Westervelt)	Private	6,667	1.4
6	Wilkinson Allen, C. & Dorothy, W. *	Individual	5,740	1.2
7	Sadler Land & Timber Company LLC	Private	4,936	1.1
8	Estes John, E. Sr.	Individual	4,218	0.9
9	Luce Packing Company Inc	Private	4,095	0.9
10	Midway Plantation Inc.	Private	3,842	0.8
	Top Ten Timberland Owners	x	104,540	22.2
	All Timberland Owners	x	470,939	100

Source: S & W Mini Computer Inc. 2012

* Resident Owner, Lives in Wilcox County

Table 4: Top 10 Timberland Owners in Dallas County (2012)

No.	Name of Owners	Owner Description	Total Timberland Acreage	% of total
1	Weyerhaeuser	REIT	15,560	4.4
2	Red Mountain Timber Company (managed by RMS)	TIMO	14,523	4.1
3	Miller Lumber Company *	Private	8,791	2.5
4	Hain Land Company *	Private	8,620	2.4
5	Drummond Scott, A.	Individual	5,398	1.5
6	Alabama Power Company	Public	5,197	1.5
7	Amsouth Bank (now Regions Bank)	TIMO	4,921	1.4
8	Edwards Lanier, J.	Individual	4,495	1.3
9	Hinton James, L.	Individual	4,353	1.2
10	P & G Timberlands LLC	Private	4,147	1.2
	Top Ten Timberland Owners	x	76,004	21.3
	All Timberland Owners	x	356,074	100

Source: S & W Mini Computer Inc. 2012

* Resident Owner, Lives in Dallas County

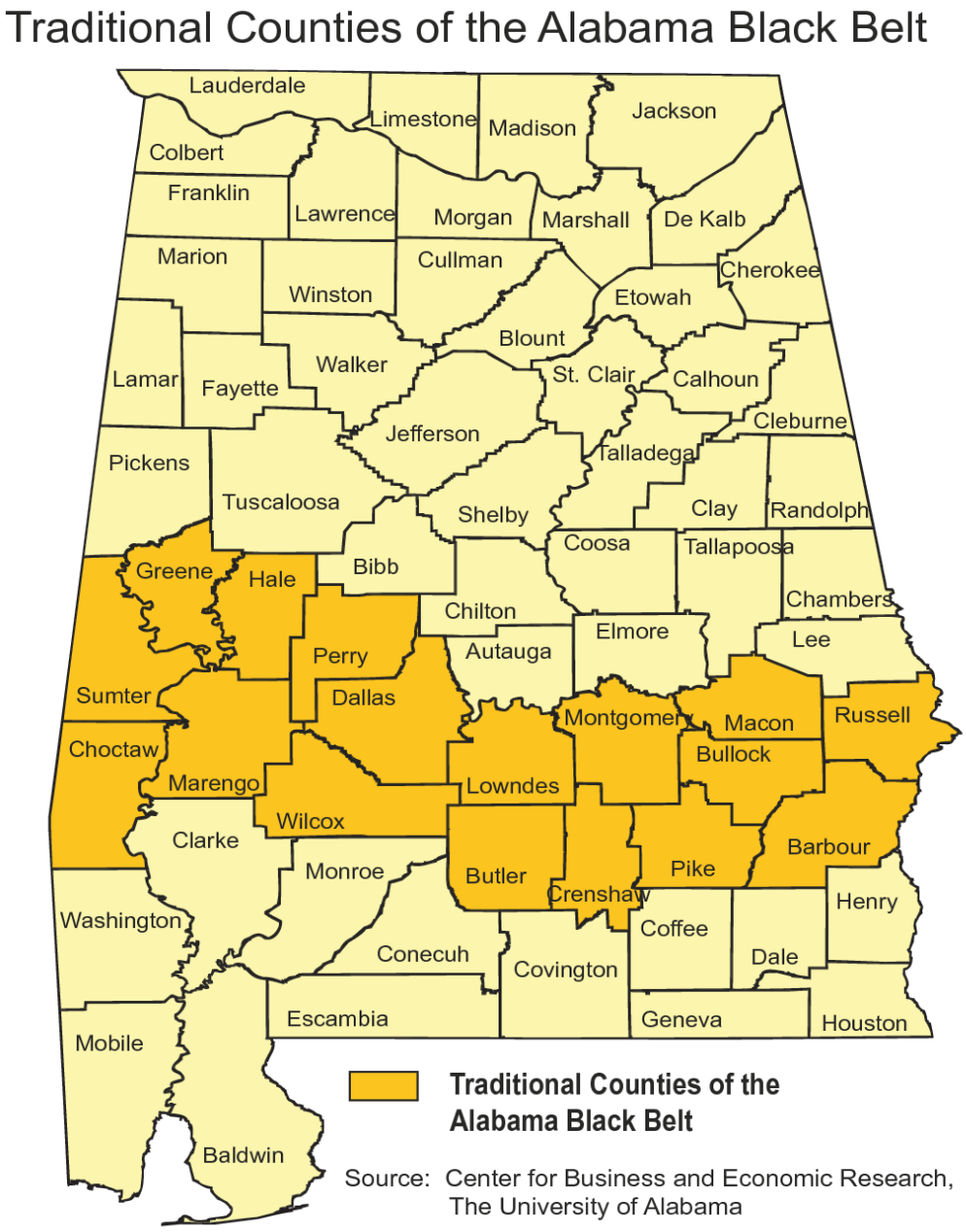
Table 5: Top 10 Timberland Owners in Lee County (2012)

No.	Name of Owners	Owner Description	Total Timberland Acreage	% of total
1	Dudley Lumber Company and related *	Individual/Private	27,572	12.5
2	MeadWestvaco Land Sales INC.	Private	10,731	4.9
3	Circle N Farm LLC *	Individual/Private	4,404	2.0
4	Lawler Charles, W. Jr. and related *	Individual/Private	3,869	1.8
5	Crum Barbara, D. and related *	Individual/Private	3,675	1.7
6	Cannon Timber & Land LLC *	Private	3,615	1.6
7	Torbet Farms Ltd. *	Individual/Private	3,016	1.4
8	Graves Family Partnership *	Individual/Private	1,411	0.6
9	Saunders Grandchildren Timberland LLLP	Individual/Private	1,295	0.6
10	Koon Family Partnership LLLP	Individual/Private	1,263	0.6
	Top Ten Timberland Owners	x	60,852	27.6
	All Timberland Owners	x	220,652	100

Source: S & W Mini Computer Inc. 2012

* Resident Owner, Lives in Lee County

Figure 1: Map of Black Belt Counties in Alabama



Definition of Black Belt counties: counties with a greater percentage of the population who are African American.

Sample Letter to Respondents

Dear

I am writing to ask your assistance on a research project funded by the U.S. Department of Agriculture. I am working with colleagues from the School of Forestry and Wildlife Sciences, Dr. Larry Teeter and Dr. Becky Barlow, and also with Dr. Andrew Gunnoe of this department.

Together with several graduate students, we are conducting research on the implications of recent changes in ownership of forestland on the future of Alabama's forest products industry. The impetus for this research is the sale of forestland by major corporations in the forest products industry like MeadWestvaco and International Paper. Approximately 3.5 million acres of forestland have changed hands in the past decade.

One of our students, Mr. Lord Ameyaw, would like to call you (or contact you by email) next week to set up an appointment for an interview. As an important owner of forestland in Lee County, we feel that your will have significant insights and will be able to shed light on the future of Alabama's forest products industry with particular emphasis on Lee County and surrounding counties. We are not interested in collecting personal information but rather a broad understanding of how the local forest products industry is changing.

We found your name through public tax records and your phone number from the phone book. The number we have for you is xxx-xxx-xxxx. If there is an alternative number you would prefer we use, or a specific day or time when it would be more convenient to call (or time when you would prefer we do not call), please let us know. And of course if you prefer not to be contacted, we will respect your wishes. We hope, however, that you will be willing to spend some of your valuable time helping us on this project, and our student with his thesis research.

Thank you in advance for your assistance. If you have any questions, I can be reached at 334.844.5632 or by email at cbailey@ag.auburn.edu.

Sincerely

Conner Bailey
Professor

Sample of Interview Guide

INVESTIGATING THE OBJECTIVES OF THE NEW OWNERS OF ALABAMA'S TIMBERLANDS

INTERVIEW GUIDE

Introduction

Thank you for agreeing to be interviewed for my thesis research which focuses on the new owners of Alabama's Timberlands and the management objectives they have for their timberland. I will use this information to write my Master's thesis. This research is supported by the Alabama Agricultural Experiment Station. My faculty advisors are Dr. Conner Bailey (College of Agriculture) and Drs. Larry Teeter and Rebecca Barlow in the School of Forestry & Wildlife Sciences.

This interview should take approximately 30-45 minutes but please feel free to stop the interview at any time during this period if you have any comments or if you want to withdraw your participation.

I will not use any quotes or any other information where you are identified in any way, unless I have your expressed approval in writing. If I do request your approval, it will be in writing (for example in an email).

General Questions:

1. Are you aware of the transition of timberlands to new owners in Alabama (and the US in general? Do you know anything about the new owners (REITs and TIMOs and their activities?)

2. What do you think accounts for these change(s)

3. Have you observed any change(s) in how timberland is managed since the new owners took control over the land? What accounts for these changes?

4. What would you say are the most significant impact of land ownership changes? For the industry, small owners, loggers, communities?

5. How would you describe your job and how does it relate to the forest products industry in Alabama? Have you worked with any other forest products industry or company? If so, which ones?

6. What information can you share on the forestland owned by your company? For example, in what states/counties is this land, how many acres does your company own or manage, and what type of forestland do you own (plantation pine, mixed hardwood, etc.).

7. In terms of management of your company, are you a TIMO or REIT? why?

Specific Questions:

1. How much forestland does your company own in Alabama?

   _____ Acre

2. How much of the land did your company buy from a company or companies in the forest products industry and what is the name of the previous owner?

3. How different is your current management of the land from that of previous owners?

4. What accounted for the change in management objective(s) (if there was a change)

5. What other information do you have concerning the forestland owned by your company?

6. When was the land purchased? Was it one sale or multiple sales?

7. How was the value of the forestland calculated?

   a) By acre for whole sale

   b) Varying prices for different parcels

c) Other pricing

8. What was the total value of the sale?

9. For land which your company purchased from companies in the forest products industry, can you tell me the number of acres by county that was purchased?

…….acres in…… (County).....

…….acres in…… (County).....

…….acres in…… (County).....

…….acres in…… (County).....

10. Is it possible to get a listing of parcel numbers for the land that was purchased? This would allow me to trace the history of the land and hopefully get a sense of land use changes over time.

11. Prior to this purchase, did your company own any forestland in Alabama? If yes, how many acres? What was the land used for (management objectives)?

12. How long has your company owned forestland in Alabama (specific county(s))?

___ Years

13. Has the size of your company's holding(s) decreased or increased in the last ten years?

a) Increased

b) Decreased (If sold, to whom? Is the land going into another use? What accounted for the decrease?)

c) Stayed the same

14. Who is in charge of managing the land? (Ask for names and contact information)

15. a. Have you sold any timber within the past 2 years?

b. Which company did you sell to?

c. Was timber sold for pulpwood or saw timber or some other use?

16. Did you replant after harvesting? If no, why? If yes, what was planted and was it the same species and stocking density as the previous timber stand?

17. Apart from timber harvesting and planting, which other activity has your company performed on forestlands?

    a) Silvicultural techniques to improve stand (e.g., thinning, pruning, fire)

    b) Applied herbicides/ pesticides/ fertilizers

    c) Built or improved roads or trails

    d) Wildlife habitat/ fisheries improvement projects

    e) Alternative forest products harvested

    f) Other (please specify)

18. Do you have any problems/issues with regards to management of your forestland?

19. What do you think is the biggest problem facing the forest products industry in Alabama?

20. What would you say are the most significant impact of land ownership changes? For the industry, small owners, loggers, communities?

21. How different do you think management objectives of land owners will be in rural and urban counties? Compare Dallas/Wilcox to Lee County.

22. Do you believe land ownership changes will have different impacts in rural and urban counties/communities? Compare for instance Dallas/Wilcox to Lee County.

23. What would you say is the endgame of this process? What does the future hold for Alabama's timberlands?

24. This is an ongoing research project and I'm looking for additional contacts that might have different perspectives on this subject. Are there any contacts that you might recommend, whether from the FP industry, forest managers, TIMO representatives, or loggers that might be willing to share their perspective with me?