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Millions of Acres, Billions of Trees: Socioecological Impacts of Shifting Timberland Ownership*

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Over the past 30 years, ownership changes in the United States have affected more than 50 million acres of timberland. Corporations in the U.S. forest products industry either sold off most of their timberland or restructured themselves to take advantage of changes in the tax code. These changes were the result of broader economic shifts in the U.S. economy related to the process of financialization. As a result, ownership of timberland has been separated from manufacturing capacity tied to the production from that land. The central questions we address are how have these changes in ownership affected management of timberlands and what impacts have been experienced by people and places dependent upon this resource for their livelihoods. This study focuses on Alabama, one of the nation's leading states in the production of wood-based products. The study is based on 40 formal semistructured interviews with key actors in the industry, and frequent informal interactions with residents in timber-dependent regions throughout the state. Our research suggests that there have been significant changes, but that these are not necessarily catastrophic and are in keeping with longer-term trends associated with absentee ownership.

Introduction

Over the past three decades some 50 million acres of timberland valued at over $40 billion has changed ownership or ownership type, the largest transfer of landownership in the United States to occur over the past century (Bliss et al. 2010; Gunnoe 2014). This transfer came about because most corporations in the forest products industry (defined as corporations that manufacture wood and paper products) either sold their timberland or restructured themselves to take advantage of new features in the federal tax code. Some firms chose to focus primarily on

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manufacturing (e.g., International Paper) and sold most of their lands to timberland investment management organizations (TIMOs), which manage land on behalf of pension funds, insurance companies, and other institutional investors. Firms that considered themselves primarily timberland owners (e.g., Weyerhaeuser and Rayonier) chose to restructure themselves as real estate investment trusts (REITs), holding onto their land and divesting themselves of most of their manufacturing assets. As a result of this divestiture and restructuring, direct connection between ownership of land and manufacture of forest products has been severed for the large publicly traded corporations that historically have dominated the forest products industry (Gunnoe 2014).

The logic of these changes had little to do with the relationship between growing trees or the manufacture of paper, lumber, or other wood products. Rather the logic can be traced to the broader political-economic shifts related to the process of financialization (Arrighi 1994; Lapavitsas 2011). In general, "financialization" refers to the increase in financial forms of accumulation in the U.S. and global economy, and a concomitant increase in the power and control of financial interests in the capitalist world system (Foster and Magdoff 2009). Within large corporations, financialization represents a particular kind of economic rationalization that emphasizes returns to financial capital over all other values (e.g., having control over the flow of fiber into a paper mill). During the decades following the Second World War, managers in the industry operated under the principles of "retain and reinvest" (Lazonick and O'Sullivan 2000), meaning that surplus profits were typically reinvested into expanded production capacity or used to diversify the firm's investment portfolio. Beginning in the 1980s, however, managers in the U.S. forest products industry increasingly came under the sway of shareholder-value ideology that put higher priority on shareholder returns than on long-term investments. As a result, land came to be seen as an asset that could be liquidated in order to increase short-term shareholder returns (Gunnoe 2016). Although financialization of real estate is often viewed primarily as an urban phenomenon, there is now increasing attention being paid to the financialization of rural land markets as well (Fairbairn 2014; Gunnoe 2014).

This transformation of industrial timberland has occurred across the nation; however, the most significantly impacted regions are the traditional centers of the U.S. forest products industry: the mixed hardwoods of the Northeast, the conifers of the Pacific Northwest, and the pine forests of the southeastern United States (or the South). Although each of these regions has its own unique experience with the transformation of timberland ownership, the South has arguably been the most affected by these changes because of the higher proportion of privately owned timberland in the region (Clutter et al. 2005). In addition, changes affecting timber production in the South have national impacts on the forest products industry as a whole because the South accounts for half of all timber growth and 62 percent of all timber removals in the United States (Smith et al. 2009). A considerable body of literature exists that describes the central role that timber production and related manufacturing has in the economy of the rural South (Bliss, Walkingstick, and Bailey 1998; Howze, Robinson, and Norton 2003; Overdevest and Green 1995).

The purpose of our work is to examine how this massive transfer of landownership has played out on the ground in land use, timber management, and the impact on people and communities in places dependent upon timber production and the manufacture of wood products for their livelihoods. We explore these questions through a detailed examination of impacts in Alabama, a state that lies at the heart of the southern forest products industry. The forest products industry in Alabama has been heavily invested in both timberland and manufacturing for much of the past century. Today nearly 70 percent of Alabama is forested and the state's 22.9 million acres represents the third largest area of timberland in the United States (AFC 2015). Equally importantly, all but 6 percent of Alabama's timberland is privately owned and thus free of the kind of restrictions on harvesting that affect public lands, particularly in the Pacific Northwest. The forest products industry owned 26 percent of all Alabama timberland in 1990 (Vissage and Miller 1991) but this declined to 9 percent in 2012 (AFC 2015), and most of this remaining land is in the process of being sold off. Industry-owned timberland was managed more intensively than most other timberland in the state and so the contribution of this land was far higher than the fractional share of the industry's land base. In 2014, the forest products industry accounted for 12 percent of both total employment and total payroll in Alabama (U.S. Census Bureau 2016).

During the twentieth century, corporations in the forest products industry invested in timberland to supply their mills and managed the land not only for timber currently growing but also for the next several rotations. Owning land made it possible to influence timber prices; when prices began to rise, timber procurement officers working for the mill would cut their own trees, keeping down costs of raw materials. Similarly, mill owners wanted to own timber on well-drained land with hard surface roads accessible during the winter, when heavy rains and wet conditions in the South make it difficult to operate heavy equipment in the woods.

Owning both land and manufacturing capacity with an investment in the billions of dollars made these corporations a stabilizing influence in rural economies. Beginning in the 1980s but accelerating at the turn of the twenty-first century, TIMOs and REITs greatly increased their timberland holdings. Nationally, by 2010 TIMOs controlled 25 million acres with an estimated market value of more than $30 billion, and REITs held 17 million acres of timberland valued at more than $28 billion (Fiacco 2010). We describe TIMOs and REITs in more detail below, but the essential point to be made here is that both are essentially financial actors that view land primarily as a financial asset, not as a form of natural capital. Instead of land managed for multiple rotations to "furnish" (supply wood) to a mill—as was the case for most large firms during much of the twentieth century—TIMOs and REITs manage land primarily to increase returns to their investors, particularly in the form of asset price appreciation (Gunnoe 2014). The latter goal can also be achieved by growing timber; however, the concern is that it may also involve converting land to other purposes, or selling the land.

Previous research on industry divestiture suggested a range of possible consequences, but with the exception of Kelly and Bliss (2012), who focused on new opportunities for community forestry in central Oregon, there has been little work examining the social and environmental impacts of this massive transfer of landownership. Bliss et al. (2010) and Clutter et al. (2005), however, did identify important issues requiring further investigation, including changes in the way timberland is managed, the possibility that land would be fragmented into parcels too small to be managed for timber production, the possibility that timberland would be converted to other uses, and the possibility that these and other related changes would affect the economic fortunes of timber-dependent communities. We take up these issues, using secondary data on timberland ownership and primary data derived from field interviews in Alabama.

We begin with a review of the literature that helped frame our research followed by a discussion of research methods and presentation of our findings. Our findings are organized around three central themes that emerged from the literature: (1) how management objectives of TIMOs and REITs differ from those of corporations in the forest products industry; (2) the extent to which fragmentation of land into smaller parcels or the sale of timberland for other uses is occurring and what might be the impact of such changes, both in ecological functioning and the ability of the land to support a large and diverse forest-based manufacturing sector; and (3) the extent to which these changes have affected the relationship between timberland owners and people and places where such land is found.

Literature Review

In this section, we review the literature on financialization as it relates to changes in timberland ownership, and in particular as it relates to the rise in importance of TIMOs and REITs. This material is important because it explains both why the forest products industry sold its land and the fundamental nature of the new owners. We then review the literature that draws attention to changes in timberland management, concerns associated with land fragmentation, and social impacts of changes in timberland ownership.

Financialization and the Transfer of Timberland Ownership

Financialization is now a widely recognized feature of the political-economic transformations that occurred in the U.S. and global economy over the past four decades. Although proximate causes continue to be the subject of debate, most scholars situate financialization within the context of the economic crises of the 1970s and the political-economic project that emerged in its wake (Arrighi 1994; Foster and Magdoff 2009; Lapavitsas 2011). For much of the twentieth century, the manufacturing sector drove mature capitalist economies of the United States and western Europe. A highly regulated financial sector was relegated to a secondary role of providing industry with credit and facilitating the flow of savings and investment aimed at tangible capital formation. This economic arrangement came into disrepute during the economic crisis of the 1970s, when economic stagnation and inflation brought the postwar boom to a halt. Over the course of the next three decades, a series of regulatory changes and institutional innovations unleashed the financial sector from its postwar bonds, leading to a rapid increase in financial forms of accumulation and a concomitant increase in the power and control of the financial community. By the end of the twentieth century, financial profits accounted for over 40 percent of all profits in the United States (Foster and Magdoff 2009).

Financialization of the U.S. economy affected both supply and demand for timberland ownership (Gunnoe 2014). On the supply side is the forest products industry. Over the course of the twentieth century, executives in the U.S. forest products industry increasingly came to view timberland ownership as necessary for long-term stability and success of the firm. This was in keeping with the principle of "retain and reinvest" that encouraged corporate managers to reinvest surplus profits into both forward and backward linkages in their supply chain (Lazonick and O'Sullivan 2000). By the late 1970s, industry ownership peaked at roughly 70 million acres (Clephane 1978). This norm was challenged during the early 1980s by a series of corporate raiders who sought profit by identifying undervalued or underperforming assets and restructuring corporations. In the forest products industry, the case of Pacific Lumber Company in California is a classic example in which corporate raiders purchased a long-standing family-run corporation and proceeded to clear-cut the company's timberlands in order to pay off debt incurred from the acquisition (DeAngelo and DeAngelo 1998). By the late 1980s a series of shifts in the U.S. economy—including financial deregulation, changes in the tax code, and the spread of shareholder-value managerial strategies—compelled many industry executives to sell off their timberland assets. As shown in Figure 1, this process began in the 1980s, but picked up steam throughout the 1990s, before taking off in the first decade of this century in the wake of the dot-com bubble. The exception to this pattern of divestiture has been a small number of privately owned corporations in the industry that did not face the same shareholder pressure to sell timberland.

Demand for timberland was driven by the rapid growth of institutional investors looking for assets with reliable income streams that could be added to their ever-growing portfolios. Timberland became an attractive investment for a number of reasons (Clutter et al. 2005; Hickman 2007). First, early investors in timberland earned exceptionally high rates of returns, prompting other investors to pay increased attention to this asset class. Second, timberland tends to be

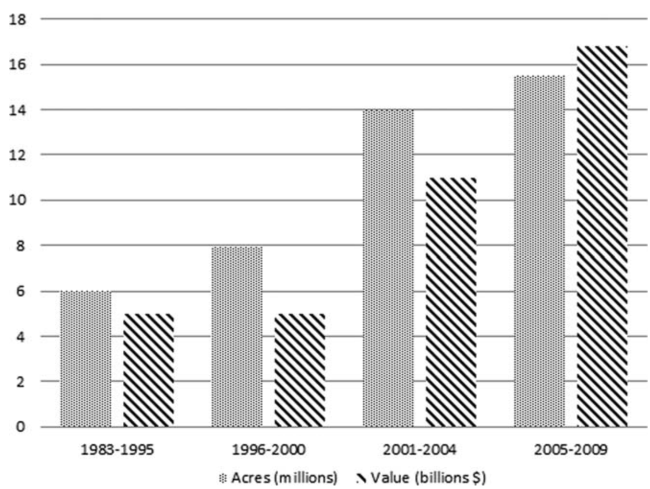

Figure 1. Sale of timberland assets in the United States.
Source: Rinehart (2010).

uncorrelated with other financial assets, such as stocks and bonds, enabling investors to diversify large funds and decrease risk. Third, timberland prices have a tendency to correlate positively with rates of inflation, providing investors with a hedge against inflation. Rising demand for timberland investments, coupled with the spread of shareholder-value ideology, led to a steady increase in timberland divestment during the early 2000s. Weyerhaeuser became the last major firm in the industry to restructure when it announced its decision to convert to a REIT in early 2010, bringing this historic chapter of landownership transformation to a close (Gunnoe 2014).

Financialization within the larger economy moves the locus of power away from those places where human, natural, and built capital join to create products and generate employment, income, and tax revenues (Flora 1990). Instead, those who control financial capital are in a position to make decisions to invest or disinvest and use this power to negotiate better terms from labor, local and state governments, and other key actors including utility companies. Most early social scientific theorizing about financialization adopted a structural approach that viewed financialization as the most recent phase of late modern capitalism (Arrighi 1994; Foster and Magdoff 2009). Other scholars have examined the impact of financialization at a more micro (household) level (Coppock 2013; Martin 2002). We adopt an intermediate approach by focusing on how financialization within the forest products industry has direct and significant impacts for people and places in a large region that historically has been tightly linked to this industry.

TIMOs and REITs

The transfer of timberland ownership has raised a number of concerns among analysts, activists, and communities (Bliss et al. 2010; Clutter et al. 2005; Fernholz, Bowyer, and Howe 2007; Gunnoe and Gellert 2011). Most of these concerns relate directly to the institutional structure of the new owners and their overriding concern with the financial performance of timberland assets. Of course, financial actors have a long history of speculating in land and natural resources (see Robbins 1976); however, the emergence of TIMOs and REITs provides novel institutional means for acquiring and managing land. Furthermore, competitive pressure for high returns under financialization and the availability of alternative investments in other sectors help shape their perspective on land management. The relatively short-term nature of these investments—often in the range of 10–15 years—are of particular concern given the social and ecological systems tied to timber production.

TIMOs and REITs are similar in that they are institutional structures that facilitate large-scale financial investments into landownership. They are also actors that have reshaped the market for timberland ownership through their frequent buying and selling of land, often among each other. However, there are important distinctions between them as well. TIMOs are institutions that buy and manage timberland on behalf of various clients, including insurance companies, pension funds, endowments, foundations, and wealthy individuals. Some TIMOs simply provide management services for investors and do not actually own the land. Others set up investment vehicles that allow investors to invest in a fund with the TIMO listed as the general partner. TIMOs can also be differentiated as “separate accounts” or as “closed-end funds” (Fernholz et al. 2007). The former refers to investments made by an individual investor or institution that purchases timberland for returns over an indefinite term, while the latter typically involves multiple investors that invest for a defined period, usually in the neighborhood of 10 to 15 years. Once these closed-end funds expire, TIMOs will sell their timberland assets to the highest bidder.

REITs own and manage real-estate-related assets (timberland in this case) on behalf of private investors. REITs are corporations with a special tax designation that allows investors to buy into timberland assets while not being subjected to federal income taxes like conventional subchapter C corporations. In return for this preferential tax treatment, REITs are required to return at least 90 percent of their income directly back to investors. The law also requires that REITs earn no more than 20 percent of their total income from manufacturing-related activities, which is why Weyerhaeuser and Rayonier decided to sell off most of their mills in order to restructure as REITs, as opposed to selling their land to TIMOs.

Together, TIMOs and REITs now own and manage over 50 million acres of timberland in the United States. These timberlands are spread across the nation, with the largest stands occurring in the traditional centers of the U.S. forest products industry. The top 10 timberland owners in the United States as of 2015 are listed in Table 1. In early 2015 the two largest timberland owners in the nation—Weyerhaeuser and Plum Creek (both REITs)—merged when Weyerhaeuser bought Plum Creek for $8.4 billion. Weyerhaeuser is now by far the largest private timberland owner in the United States with more than 13 million acres.

We turn now to examining the literature related to impacts of financialization. We identified three central concerns reflected in the literature regarding large-scale changes in timberland ownership (timber management, forest fragmentation, and community impacts).

Table 1. Top 10 Timberland Owners and Managers: 2015.

Rank	Company	Acres (000s)	Type
1	Plum Creek Timber Co.	6,285	REIT
2	Weyerhaeuser	5,700	REIT
3	Hancock Timber Resource Group	4,000	TIMO
4	The Forestland Group	2,787	TIMO
5	Campbell Global	2,466	TIMO
6	Forest Investment Associates	2,390	TIMO
7	Rayonier	2,268	REIT
8	Resource Management Service	2,183	TIMO
9	Molpus Woodlands Group	1,900	TIMO
10	Sierra Pacific Industries	1,895	IND

Source: Timbermart South.

Note: In 2016, Weyerhaeuser bought out Plum Creek Timber Company. IND, industry.

For the most part, this literature reflects expressions of concern rather than research based on field investigation of changes. In the sections below, we review this literature.

Concerns Regarding Timber Management

During the twentieth century, the U.S. forest products industry adopted what some have called "a productivist" approach to forest management (Kelly and Bliss 2012; Wilson 2007). This approach emphasized intensive silviculture techniques aimed at maximizing raw material production for the industry's capital-intensive mills. The transfer of timberland ownership raised a number of concerns related to management of the nation's timber resources. Underlying many of the concerns was the relatively short-term time horizon of institutional investors like TIMOs and REITs and their single-minded concern with financial performance of timberland assets (Bliss et al. 2010; Clutter et al. 2005; Fernholz et al. 2007; Gunnoe and Gellert 2011; Hatcher et al. 2012). This short-term perspective stems from the fact that many institutional landowners invest in closed-end TIMO funds. The shift from long- to short-term investment horizons raised concerns regarding the approach taken to manage timberland. One study found that the new owners in the South were more likely to convert native hardwoods to softwood plantations (Zhang, Butler, and Nagubadi 2012). In Maine, Jin and Sader (2006) found that TIMOs increased harvest rates.

Related to the issue of forest management is the question of whether institutional investors were more or less inclined to adopt third-party certifications for lands that they manage, and, if so, which certification system they were most inclined to adopt. Two forest certification models were developed during the 1990s as a market-based approach to promoting sustainable forest management (Klooster 2005). The Forest Stewardship Council (FSC) was established in 1993 by a consortium of environmental organizations to address global concerns about deforestation and sustainable forest management. The second certification model is the Sustainable Forestry Initiative (SFI), an industry-promoted response to FSC that provided a less stringent framework for timberland management. Correia's (2010) research in Maine found that TIMOs were more inclined to adopt the industry-friendly SFI than the more stringent FSC certification. Both FSC and SFI address conservation issues and best management practices, though those of the FSC are more restrictive and also include social and economic criteria such as worker's rights (safety, pay, conditions of work) that the SFI leaves to the owners.

Concerns Regarding Fragmentation of Timberland

The second major issue identified in the literature was whether REITs and TIMOs were more likely to divide existing timberland tracts into smaller parcels, potentially leading to forest fragmentation and conversion of timberland to other uses (Bliss et al. 2010; Clutter et al. 2005; Gunnoe and Gellert 2011). Since neither REITs nor TIMOs are concerned with supplying timber to a mill, they are free to consider converting their land to alternative "highest-and-best-use" (HBU) in the form of residential, commercial, industrial, or conservation purposes. In the short run, when corporations in the forest products industry sold timberland, they included a purchasing agreement allowing them to buy the standing timber when ready for harvest. In the long term, however, HBU sales could remove land from timber production.

Another concern was that the sale of large timber tracts could result in either parcelization (implying multiple owners where previously there was one) or fragmentation (implying a division of contiguous forest into smaller patches with multiple owners and multiple management goals). Due to the size of timber-harvesting equipment and the cost of moving this equipment from site to site, there is an economic advantage to harvesting on large, contiguous parcels. Parcelization thus could present challenges for forest managers and loggers as well as those who manage land for wildlife, water resources, or ecosystem services (Greene et al. 1997; Hatcher, Straka, and Greene 2013). As Best (2002:16) notes, "fragmentation and parcelization feed on one another and can dramatically diminish the amount of functional forest in an area."

The probability of parcelization, fragmentation, and land-use change increases for timberland located in close proximity to urban areas, where residential and commercial demand is highest (Mehmood and Zhang 2001). From the perspective of a forester concerned with furnishing a mill, such changes are troubling. However, as Kelly and Bliss (2012) point out, change in landownership can create new opportunities for governmental agencies and conservation groups to pursue multifunctional landscapes that include a diversity of land use objectives. Conservation also becomes an option when nonprofit organizations or state conservation agencies step in to purchase ecologically sensitive forests (Stein 2011).

Impacts on People and Places

The third major issue raised in the literature is the potential that REITs and TIMOs might introduce changes that would have adverse impacts on rural communities located in timber-producing regions (Bliss et al. 2010; Gunnoe and Gellert 2011). Without romanticizing the past, it is important to note the central role that the forest products industry came to play in many rural communities. Over the course of the twentieth century, many firms in this industry adopted programs aimed at improving relationships between industry and forest communities including local philanthropic efforts, support of community activities, and educational outreach programs on forest management (Joshi et al. 2000; Oden 1973). Furthermore, firms employed professional foresters, providing relatively high-paying jobs for many rural communities. These foresters were primarily tasked with managing the firm's timberlands; however, they also came to be the public face of the company as they worked with local landowners in various capacities. Finally, many firms also adopted open-access policies on their timberland, giving local residents access for hunting, fishing, and other recreational activities. These efforts were welcomed by communities and often led to fairly harmonious relationships between companies and communities. The shift in timberland ownership raised concerns about how these relationships might change.

Methods

This study is based on over 40 interviews conducted over the course of 2012–13 with various stakeholders in Alabama's forest products industry, including TIMO and REIT executives; employees of privately held corporations in the forest products industry; and foresters in various stages of their careers who have worked with TIMOs, REITs, and forest products firms. These interviews sought to investigate shifts in timberland management as well as more nuanced impressions of how the shift in landownership is affecting rural communities and Alabama's forest products industry more broadly.

We used a purposive sampling method to contact individuals with direct knowledge of issues identified through the literature review. Some interviewees were contacted based on the nature of their occupation and their listing in the Alabama Forest Commission's service provider database. Others were targeted because of their position within a particular company. We also used a snowball sampling technique to gain access to additional individuals based on the recommendation of individuals previously interviewed (Biernacki and Waldorf 1981). We conducted interviews in all parts of the state, with particular emphasis given to the southern and southwestern parts of the state where the forest products industry is particularly dominant.

Semistructured interview guides were built around the concerns identified in the literature review (how timberland is being managed by the new owners, whether fragmentation of timberland into small holdings was an issue, and impacts of changed ownership on people and places). We used different interview guides for individuals working for corporations in the forest products industry that sold the land (12) than for representatives of REITs and TIMOs that purchased the land (18). We also interviewed loggers (5) and professional consulting foresters (6), and extension specialists working for the Alabama Cooperative Extension System (2). For the most part, the interview guide remained the same for all respondents, but with inclusion of questions tailored to their individual responsibilities and expertise. Following standard qualitative research methodology (Orne and Bell 2015), questions were open-ended and interviewees were encouraged to elaborate on their responses. We always started off with a very broad question that allowed respondents to structure responses around what they thought was important (e.g., "What information can you share about land owned by your company and how it is managed?"). Some interviews lasted only 30 minutes but others went over four hours. Interviewers took extensive notes during and transcribed them as soon as possible following the interview. Following standard human subjects protocols, we assured respondents that all interviews were confidential and that data would only be reported in aggregate form, with no quotations attributed directly to particular individuals. Field research also included unstructured observations and interviews with local community members.

These interactions ranged from short conversations while pumping gas to more extended conversations. Nonparticipant observations, interactions, and unscheduled interviews are common in qualitative research studies such as this, helping researchers understand the larger context of their work (Burawoy 1998). In the case of this study, such informal interactions helped gauge local knowledge and community impacts of shifting timberland ownership.

We encountered unanticipated reticence among some respondents to discuss corporate strategies. We are members of a team with long ties to Alabama's forest products industry and over the years the team has enjoyed relatively easy access to corporate decision makers. However, representatives of REITs—Weyerhaeuser in particular—were reluctant to schedule meetings or canceled meetings that had been scheduled on the advice of senior corporate officers. Fortunately, most potential respondents were willing to be interviewed, including respondents representing both TIMOs and REITs.

Findings

In this section, we discuss findings based on formal and informal interviews as well as observations based on multiple years of experience studying forestry in the South. Our findings fall under the three general topics identified in our literature review, focusing on (1) management changes introduced by TIMOs and REITs; (2) land-use changes due to parcelization, fragmentation, or "highest and best use" development; and (3) impacts on people and places brought about by changes in ownership of timberland.

Management Changes

Our central finding is that, while there have been subtle shifts in forest management, the changes we observed are incremental, part of established trends, and not readily obvious to most observers. Some interviewees emphasized a trend toward shorter rotation periods, reflecting both market pressures and the short-term perspective of REITs and especially closed-end fund TIMOs. One manager explained how the company's annual rotations for saw logs had decreased over time: "When I began working with [the company] the rotation was 45 years; by 1998 we dropped it to 34 years and by 2004 we were at a 28-year rotation." He said that the company was currently undergoing a strategic review in order to assess the possibility of moving to a 24-year rotation.

Not all TIMO and REIT timberland is being managed for shorter rotation periods. Trees grown for saw logs and poles bring higher prices because they require longer growth periods. If pulp prices are low (as they have been in recent years), owners may delay harvesting in order to produce higher-value products. At the end of the day, TIMOs and REITs use intensive forest management techniques that are similar to those used by the forest products industry prior to divestment.

There has been, however, a noticeable difference in how foresters describe their current approach to management. Reflecting the views of many respondents, one forester said simply that "we manage TIMO timberlands strictly for return on investment." He continued, "When I was a forester managing timberland for a paper company, I was trying to grow trees to feed a mill. Now we're trying to grow dollars. We're in the moneymaking business, trying to meet the financial desires of our customers." Another TIMO representative described the management as "intensive forestry practices with proven economics." In other words, if a management practice will enhance returns the organization will do it, but if there is no economic justification, it will not.

This emphasis on economic efficiency also translates to a more measured analysis of infrastructure investments, such as roads and culvert maintenance. A forester working for a new owner described the management as more "fiscally responsible" than previous owners. He continued, "Before, if we had a logging job and we needed to build a road, we built the road. Now we check with our road budget and see whether or not it will work within the spending parameters that we've set for ourselves." In general, REITs and TIMOs tend to be more disciplined than their forest products industry predecessors, paying increased attention to all costs and minimizing those that do not produce a clear return on investment.

Questions of economic efficiency need to be understood in the context of changing time horizons applied to timberland management. Industrial owners with mills to furnish with fiber not only managed the current stand of trees, they were managing the land for future stands. Investments in infrastructure, erosion control, and soil fertility were not considered as annual costs or even costs associated only with the current stand of timber. REITs and TIMOs have a shorter time horizon that requires a different form of economic discipline than that of their forest products industry predecessors.

Managers with every REIT and TIMO we contacted reported having some form of management certification. We found these managers, like their industrial predecessors, tended to have a negative view of the Forest Stewardship Council due to its more stringent conservation requirements and because FSC also requires that owners meet social and economic standards associated with working conditions. However, there is significant demand from large retailers for FSC-certified wood and paper products. Paper mills and sawmills have met this demand by paying a premium for wood sourced from FSC-certified land. The price premium has been sufficient for several REITs and TIMOs in Alabama to adopt FSC certification on some (but not all) of their timberland. In one case, a manager explained that, while his company adopted FSC certification at the behest of a paper mill, it decided also to maintain the less stringent SFI certification out of its "distrust" of FSC. Geography also seems to be an important factor. Northern Alabama's forests are dominated by mixed hardwoods and rolling hills, which are not ideal for plantation forestry. Southern Alabama's forests, on the other hand, are spread across the flat coastal plains, which are dominated by pine forests and are more suitable for intensive plantation management. REITs and TIMOs with timberland in southern Alabama were less inclined to adopt FSC certification because of its more restrictive requirements.

In sum, the industrial pine plantations of the South continue to be managed in much the same manner as they were prior to divestment. REITs and TIMOs appear to be more fiscally disciplined than their industrial predecessors, but this difference is a function of very different time horizons for timberland management. REITs and TIMOs have continued many of the silvicultural practices of their predecessors, including intensive production techniques and shorter rotations. To most observers, the differences today are not readily apparent, but they may affect future productivity if problems of erosion and soil fertility emerge but are not addressed.

Fragmentation, Parcelization, and Land-Use Changes

The forest products industry owned timberland in relatively large blocks of land, often involving many continuous parcels located within 50 miles of their mills. Most of these mills were (and continue to be) located in rural areas in southwestern Alabama far from major urban centers. One of the first concerns expressed about industry divestiture was that ownership would be fragmented into parcels too small to be effectively managed for timber. In Alabama, conventional loggers often need a tract of 50 acres to justify the expense of moving heavy equipment to the logging site.

Interviews with representatives of both REITs and TIMOs show that they are actively buying and selling land. Land sales typically are done through section 1031 exchanges, which are special tax exemptions that allow real estate owners to avoid taxes on the sale of land if they purchase other land. More than one interviewee explained that land sales most likely are aimed at consolidating holdings because large contiguous blocks are easier to manage, tend to be more valuable, and are thus more appealing to investors. For example, MeadWestvaco (MWV), a large forest products firm with a paper mill on the Chattahoochee River in southeastern Alabama, decided to sell some 400,000 acres of its timberland to Wells Fargo's timber REIT, while holding on to approximately 110,000 acres that was transferred to the MWV Land Sales Division. Foresters in charge of this division were given the task of "improving, splitting up, and selling off" the remaining timberland over the course of 10 years. Timberland parcels located in close proximity to urban areas in Columbus, Georgia, and Auburn, Alabama, both the centers of metropolitan statistical areas, were improved and slated for residential development. Timberland in more rural areas of those two metropolitan statistical areas was split up and marketed to private hunters or novelty ranches or for conversion to agricultural land. By the middle of 2014, MWV Land Sales was approximately halfway through its 10-year window for selling this land and was still in possession of some 60,000 acres of timberland. When asked what would become of the land that it was not able to sell, the forester responsible for the sales simply replied that "there won't be any left." By the middle of 2017, that goal appeared to have been accomplished as no land in either Alabama or Georgia was listed for sale (MeadWestvaco n.d.).

Other paper companies followed similar patterns of withholding timberland in order to capitalize on HBU potential when such potential existed, as in the case of International Paper with land near the city of Selma, Alabama. For the most part, however, timberland bought by REITs and TIMOs was located in rural areas far from urban or other forms of HBU development so that the HBU was likely to be timber production. Nonmetropolitan timber-dependent counties in Alabama have been losing population for the last several decades (Bliss and Bailey 2005), so there is little prospect that the HBU for timberland in these counties would change in the foreseeable future.

Rural gentrification and exurban growth also have been seen as factors leading to fragmentation, but in many areas of rural Alabama growing of timber represents the "highest and best use" of the land. Recent research in a heavily timber-dependent five-county region of southwest Alabama documented this point (Randle, Barlow, and Gunnoe 2015). Land-use changes affected only 2 percent (1,213 acres) of timberland that changed ownership type, not a serious fragmentation problem. Hunt (2016) studied a set of four counties in west central Alabama, also a region where the forest products industry historically has had a substantial presence. Two of these counties were influenced by urban growth in and around the city of Tuscaloosa and experienced high rates of parcelization between 1990 and 2014, but the other two counties experienced little change even though they were part of the metropolitan statistical area centered on Tuscaloosa County. Based on these two studies, we conclude that fragmentation may be a concern near urban areas, but in all likelihood this would have been the case even if the forest products industry had not divested itself of land. Elsewhere timber production remains the HBU and fragmentation is not a major concern. We recognize, however, that the shift in timberland ownership is a recent phenomenon and fragmentation could emerge as an issue in the future.

Fragmentation of timberland is not the only ecological consequence of changes in timberland ownership, as a case from southwest Alabama illustrates (Kush 2009). The Flomaton Natural Area was among the last stands of old-growth longleaf pine (*Pinus palustris*), a species that once dominated the coastal regions of the South but now exists in a few widely scattered patches. In the 1960s, the Flomaton forest was set aside for conservation by the St. Regis Paper Company. After a series of mergers, the Flomaton forest came under the ownership of International Paper in the late 1990s. In 2006, International Paper sold most of its Alabama timberland, including the Flomaton stand, to Resource Management Services, a TIMO based out of Birmingham, Alabama. RMS was aware of the conservation value of this stand and actively searched for a buyer that would maintain this old-growth forest. Unable to locate a buyer, during the winter of 2007–8 the organization was driven by its bottom line to clear-cut one of the nation's last remaining stands of old-growth longleaf pine.

The story of the Flomaton forest in southwest Alabama provides a cautionary tale of what can happen under rapidly shifting landownership tenure. We should recognize, however, that there also have been conservation successes. In southwestern Alabama there were two recent cases in which government and conservation organizations worked together to purchase ecologically sensitive forests from forest product companies. These efforts led to establishment of the Mobile-Tensaw Delta and Perdido River-Longleaf Hill nature preserves, which are substantial additions to public land in Alabama (Alabama Forever Wild Land Trust 2009).

The shift in timberland ownership that we are concerned with in this article is still unfolding and some of the greatest potential for fragmentation will occur when close-ended TIMO funds expire. Population growth and urban sprawl may exert significant pressure on owners in some areas to convert timberland to other uses. However, in the near term the threat of significant fragmentation in most of the timberlands previously owned by industry is remote.

Impacts on People and Places

Our final research question concerns the impact that change in timberland ownership is having on rural people and places. Our research suggests that this impact is complex and multidimensional. We found most local residents simply were unaware that large timber holdings in their area had changed hands. Most locals (and even some professional foresters) referred to large tracts of timberland previously owned by industry as if no change in ownership had occurred; land once owned by International Paper was still referred to as "IP land." This reflects little local publicity of the ownership change and the limited local presence that REITs and TIMOs have in the communities where they own land.

Changes occurring due to the presence of new owners have less to do with something being new than in old arrangements no longer existing. As explained above, corporations in the forest products industry supported communities near their mills in numerous small ways such as sponsoring community events or supporting local sports teams. Our research found that REITs and TIMOs have made no efforts to foster strong community-landowner relations. In fact, if anything they prefer to remain anonymous. As one community member explained, "They are not involved with the community at all.... You don't see their advertisements at the local football games."

Among the more noticeable differences in landowner-community relations is the shift in public access to land. In the past, industrial timberland owners generally allowed local residents to access their land for hunting and fishing. The new owners have stopped this practice because they can make money leasing the land for hunting at rates of \$9–\$25 per acre. For the most part, people who lease hunting land are not local residents. Those who have had what they consider traditional use rights to the land for hunting and fishing, including many local residents who depend on this for self-provisioning and in some cases for basic subsistence needs, are the ones most likely to know that a change has come to the ownership of timberland. There are anecdotal stories of resistance by local residents taking the form of broken gates, torn-down fences, and even arson in protest of this "enclosure of the commons." From the perspective of the new institutional owners, income derived from hunting leases is an important income stream for institutional owners and locked gates and private property signs have largely replaced the open-access policies of industrial landowners.

Even before industry sold its timberland, relationships with residents living near their land were beginning to change. During the 1990s, corporate executives in the forest products industry were coming under pressure to increase shareholder returns, and cutting community outreach programs was often viewed as an easy way to cut costs. Many foresters who worked for industry during the 1990s noted the shifts taking place. "I saw the writing on the wall," one retired forester said. He spoke nostalgically of days as a corporate forester when 25 percent of what foresters did was community outreach, working to educate owners of small tracts about best management practices and being involved in the community. These practices reinforced strong community relations between company foresters and the local community, but according to him "Everything we did went up in smoke."

This feeling of betrayal was common among foresters working for industrial forest products firms, particularly with regard to the selling of timberland. One forester described the decision to sell land as "a bit of a shock" and said it "left many employees upset because of their attachment to the land and the belief that they could manage it best." Another quipped that "one should never fall in love with a piece of land you don't own." There was a combination of pride and disappointment among professional foresters who had spent their career working large tracts of timberland, only to see them sold off.

Foresters who were not able to retire either found work with the new owners or switched careers. Based on our interviews and available secondary data, it appears that TIMOs and REITs employ far fewer foresters to manage their timberlands. One respondent reported that REITs and TIMOs are hiring university graduates with degrees in logistics and business rather than foresters, reflecting a reorientation toward business and away from the land and timber management skill sets of a forester. One TIMO manager explained that it was now common for a single forester to be in charge of managing land areas in excess of 50,000 acres. Another said that in his county, International Paper used to own about 70,000 acres, with about 50 employees to manage it. Today, under new owners, they only have one person managing this timberland, and he lives outside the county.

Foresters working for the industry were a valuable resource for local family forestland owners, who not only make up the majority of all owners but also own the majority of all timberland in Alabama (AFC 2015).

These foresters provided assistance developing forest management plans based on best management practices. Many mills provided landowner assistance programs for site preparation and tree planting. Moreover, many industrial foresters were community members, and whether it was helping someone pull his or her car out of a ditch or clearing a road after a storm, foresters were—and still are—integral to the social fabric of Alabama's rural communities. There are just not so many of them anymore.

Discussion

The importance of who owns the land cannot be underestimated in determining the social and economic fortunes of rural people. Resource dependency and timber dependency in particular are often associated with a series of social ills associated with vulnerability to market forces beyond local control and external sources of power that determine access to the land. Beginning in the 1980s, but mostly occurring between 2000 and 2008 and ending with the Great Recession, the forest products industry in the United States divested itself of the vast majority of its timberland. Some of this land has been purchased by family forestland owners and conservation organizations, but most of the sales have gone to REITs and TIMOs, corporate entities without long-standing ties to the land they own or the people who live and have relied on that land for employment, recreation, and even subsistence needs.

From the perspective of rural Alabama, the focus of this study, one might think that there is little difference between the major forest products industry corporations and either REITs or TIMOs. Both are absentee landowners with headquarters far from rural Alabama. But as we have seen, corporations that owned both mills and land in Alabama managed the land for long-term productivity and became part of the social fabric of rural communities. We should not assign altruistic motivations to companies like International Paper, but we should acknowledge that corporate self-interest necessitated a level of involvement and investment that is not seen with REITs and TIMOs.

Based on primary data collected through semistructured interviews as well as a review of secondary data, we conclude that the impacts of financialization in the forest products sector of the economy have been significant, but by no means catastrophic. REITs and TIMOs strive to manage costs associated with the production of fiber, but they have maintained an intensive production scheme on most of their land, meaning that in the foreseeable future the forest products industry will not suffer from a shortage of fiber for its mills. However, once current supply contracts expire and current institutional investors sell the land to new owners, there are no guarantees that current management practices will continue. In many parts of rural Alabama, timber production is likely to be the highest and best use in the short term and the forest products industry is likely to continue to play a major economic role in the state. Conversion to residential, commercial, or industrial development is unlikely given that the center of timber production is in rural parts of the state that are persistently poor and declining in population and where the HBU of the land will remain production of timber in the foreseeable future. There are some parts of the state and region where economic growth is occurring, populations are expanding, and conversion of timberland into HBU sprawl is likely to happen. The example of MeadWestvaco converting timberland into sites of residential and urban gentrified activities like hunting in the rapidly growing east Alabama metropolitan statistical area of Opelika-Auburn represents an alternative trajectory, but not one that will affect the heart of the state's timber empire in west central Alabama or many other heavily forested regions in the South.

Conclusion

The growing importance of financial capital as a driver of the U.S. economy is not simply an abstract and bloodless process of interest only to Wall Street investors and political economists. In this article, we have shown how structural changes brought about by the process of financialization have played out in "daily life" (Martin 2002). The experience of the forest products industry in Alabama detailed here shows that macroeconomic changes have real world consequences where people live and work, and not only in urban centers, but in the rural peripheries of the nation as well. The rising power of institutional investors in the U.S. economy and the corresponding drive to maximize shareholder value through divestiture of timberlands has changed the way that land is managed and altered the relationship between landowners and the people who live in proximity to that land. Some of these changes are not dramatic, but neither are they insignificant. Furthermore, the long-term impact of these changes cannot be known at this point, and will require continued attention in the years to come as the financialization process continues to develop.

The transformation of timberland ownership clearly demonstrates how the structural dynamics of financialization are having a direct impact on material processes, both in rural communities and in nature more generally. Highlighting the linkages between macrostructural changes in the economy and their effects at the local level is an important task for rural sociologists. The opacity of financialization makes this task even more imperative, because many local residents are not aware of these changes, let alone their relationship to other changes taking place in the economy, such as declining wages or economic instability. Future research should continue to highlight the complex relationships that exist between financial markets and shifting socioecological relations.

Another key insight to draw from this analysis is the continuing importance of land and landownership. Rural sociologists need to pay greater attention to ownership of land, a topic that seems to have faded from our own institutional memory. Land represents a fundamental reality, a connection to place, a source of security, both source and repository of wealth, and—when ownership is highly concentrated—a source of considerable power. This study has examined changes that have accompanied the rise of financial investments in timberland; however, at the end of the day there is a certain continuity between the forest products industry and these new financial intermediaries: the reality of absentee ownership. Absentee ownership continues to be an enduring feature of the rural South, along with many other regions of the United States, and we believe greater attention should be devoted to this often taken-for-granted feature of rural life in twenty-first-century America.

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