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# WEALTH CREATION THROUGH SUSTAINABLE FORESTRY

generating wealth creation models in the  
appalachian wood-products industry

The purpose of this report is to examine and present wealth creation models adapted to the needs and context of sustainable forestry in Appalachia. These wealth creation models seek to capture both environmental benefits for the entire region and also economic benefits for the players along the supply chain. By integrating the value chain with the supply chain, it is our hope to see how the interaction between them presents opportunities and problems within the industry that can be solved through wealth creation mechanisms. The methodology adopted for this paper was through literature reviews to establish the concepts and terminology of the Appalachian forestry industry and that of wealth creation. This was complemented by primary source interviews with Rural Action, the Mountain Association for Community Economic Development (MACED), Appalachian Sustainable Development, MIT Professor Karl Seidman, and MIT's Department of Urban and Studies Director, Dr. Amy Glasmeier.



# the value chain discussion



# WEALTH CREATION

Geographically isolated rural communities in the United States can frequently become pockets of constant poverty and remain on the fringe of the mainstream economy. However, the emerging trend of the rising value of natural capital in rural communities and the nascent opportunities for wealth creation, invites and enables these communities to better integrate into regional economies and to play a more central role in their own economic growth and sustainability. Moreover, the associated concept and challenge of “keeping wealth local” has emerged as a strategy for the economic wellbeing and development of rural communities, as a way for rural areas to increase their ownership and influence over their own wealth. Local wealth creation concepts assert that these assets need to be owned and controlled differently; the community needs to both retain control and direct ownership of the assets so as to redirect the flow of benefits and to redirect and generate local wealth-generation. Hence resources only become a form of community wealth if controlled, influenced and owned by the communities themselves.

## SUPPLY CHAIN

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# wealth creation opportunities in value chain



# BOTTLENECKS IN THE VALUE CHAIN

As with many supply chains, bottlenecks exist that stall processes in the Appalachian wood products industry. In attempting to integrate the Appalachian community in a manner that would allow them to best utilize their natural resources for local wealth in an environmentally sustainable manner, a reconsideration of these bottlenecks could aid the process of mitigating them and creating better wealth creation models to directly address problems. We refer to the various bottlenecks in forestry as Wealth Creation Opportunities. There are several of these opportunities that overlap on various levels of the supply chain which in turn correlate to the corresponding value each tree receives as it moves up the chain. At the same time, there are opportunities and problems that are specific to the players in the supply chain.

## Landowners

The landowners have the most direct interaction with the natural resources as they are typically in charge of managing the forest, with the exception of absentee owners. However, an incentive to invest in sustainable stewardship is lacking. Managing a forest in a sustainable manner is a considerable financial and time investment. For landowners who may not have the financial means, this extra management that is entailed for sustainability is simply not feasible nor worth it. It is seen as a sunk cost because they do not reap the benefits of sustainably managing the forest.

The problems and opportunities go beyond just the expenses in sustainable stewardship, however. For example, there are few mechanisms in place for generational property transfer. This has further complex implications because it can indicate two things. One, that if the property is transferred within the family to the owner's children, the land becomes fragmented, ultimately making it more difficult to recruit landowners into better forestry management as the number

of property owners and absentee owners increase. Two, if the landowner opts to sell his timber to loggers at any given price as a means of retirement, most often they are not receiving what the harvest is valued at. This exchange can occur without a contract and with whomever the landowner has agreed to save their timber for years before. There is a lack of incentive to sustainably manage the forest and the lack of an actual contract prevents the landowner from receiving what the harvest is valued at. In addition, there are no agreements that would require the loggers to leave the land in the best possible physical condition.

To address many of these issues and potential for opportunities, there must be a sustained level of trust and relationship among Rural Action, the organization we took an in depth look at, and their partners and landowners. Currently, Rural Action maintains some strong relationships with individuals and smaller firms that reach as far down as the level of the landowners.

## Loggers

The types of opportunities and problems that exist on the level of the loggers are very distinct from any other level in the chain. If loggers are not consistently clear cutting, they not only have a lack of steady income, but their equipment is also depreciating in value as it sits in storage. Logging companies can be 1-2 employees displaying the fragmentation of the industry. These companies may not necessarily offer its employees any benefits that contributes to their individual wealth.

## Sawmills

Saw mills are typically family-owned businesses. Sawmills play an interesting and integral role in attempts to reach landowners and loggers as they are essentially the point of contact. Though these mills in Appalachia are typically small, they still vary in composition. As the rounded logs subsequently become board lumber, the value of the product is increased even as the actual physical product decreases. The mills present wealth creation opportunities through their role in the supply and value chain and because they are local.

### **Primary and Secondary Manufacturers**

Methods of wealth creation exist upon both these levels primarily because they are both situated locally so that any captured wealth or incentives to help employees would benefit the communities within Appalachia itself. Thus, in building its brokering enterprise by helping these producers access the green market, Rural Action is establishing solid relationships in parallel. These relationships are invaluable as wealth creation models are easier implemented and explained when mutual trust and understanding has been previously established.

### **Broker**

The broker connects the buyers with the sellers and is witness to shifts in market demand for the industry product. The role that Rural Action and its partners have assumed in the Sustainable Forestry program has been the role of the broker, allowing retailers, architects, and ultimately customers who have an interest in the green market to access the manufacturers that produce a sustainable product. The broker witnesses the value of the product increase as it moves up the chain.

### **Retailer**

As the product moves up the final tiers of the supply chain, it is now drastically increased in value in comparison to where it began at the level of the landowner. At this point in the chain, the product has most typically moved out of Appalachia. For wealth creation mechanisms, it is important to focus on methods that would allow wealth to travel back down the supply chain to those on lower levels located in Appalachia. One way in doing so is through branding methods which are useful in indicating that the product was “Produced/Made in Appalachia” accessing a niche market that demands this type of product. The retailer also has the distinct advantage of having direct contact with the customer who makes this final purchase; there is an opportunity there to persuade.

### **Architect**

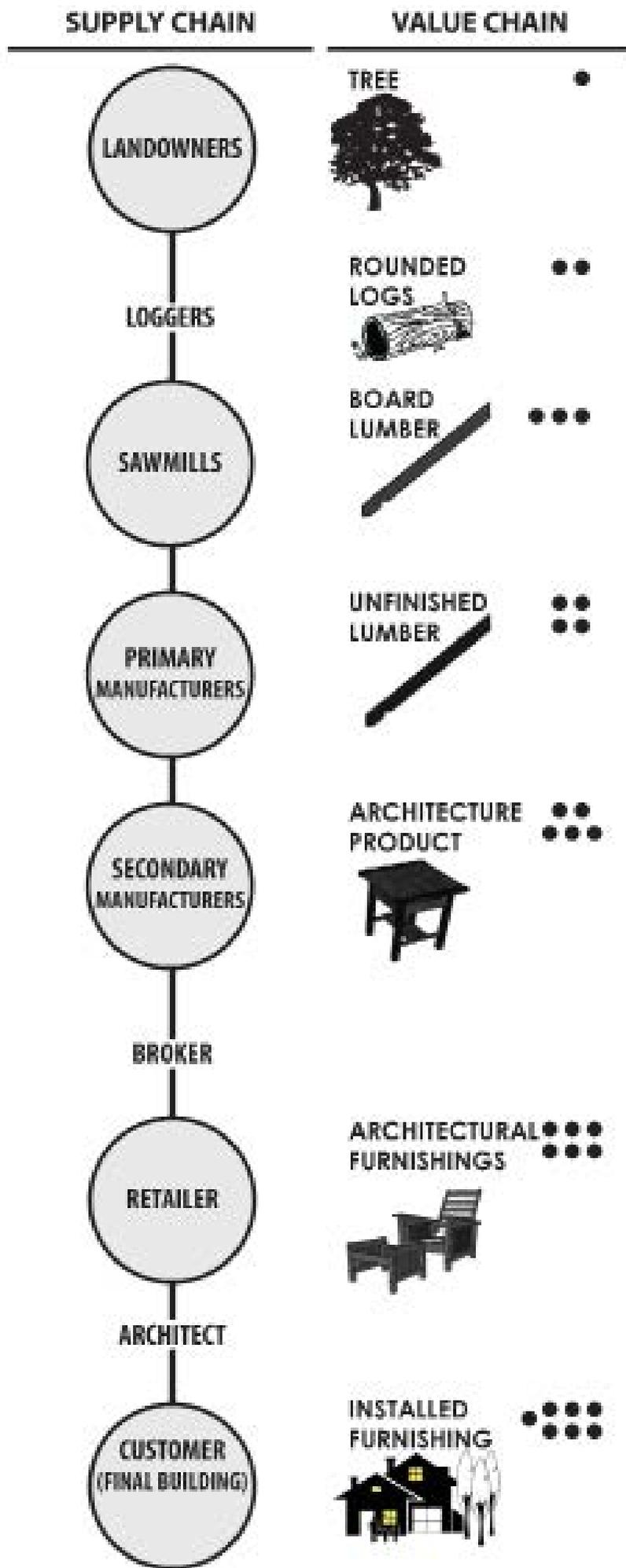
The architect has a great influence over the demand of the product such as when they are aiming for LEED certification for their design and

in desiring so, specifying a sustainable product. The product is considered sustainable if it is certified as such either through FSC or through other certification mechanisms. The architect has the added benefit of being able to request additional and new products from the manufacturer. Rural Action's efforts as a broker is invaluable at this level because the connections between the architect and manufacturer produces the opportunity to specify the certified sustainable material. In doing so, the architect is now directly contributing to not only the local wealth in Appalachia, but also to sustainable forestry.

### **Customer**

The customer will push the demand for green and sustainable wood products. There is a niche market that will value the origins of this product. Mechanisms of branding can appeal to this final level of the chain. At this point, the value of the tree as a product has increased dramatically from the time it was with the landowner. It is difficult to influence this part of the chain, as it is essentially the market that is being influenced. There are various market conditions that would be receptive to sustainable products, namely its popularity spread by word of mouth and constant exposure.

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# wealth creation interventions



This section presents four types of wealth creation models that help redirect the flow of wealth to ‘keep wealth local’ and align with Rural Action’s mission of environmental sustainability. Each wealth creation concept - employee ownership, the land trust model, employee savings and benefits, and logging contracts - will be associated with and placed along Rural Action’s value chain.

## MODEL I: EMPLOYEE STOCK OWNERSHIP PLAN (ESOP)

### Overview

ESOP is one of the most tax-advantaged mechanisms for companies to share ownership, as well as a form for low cost financing. Unlike other pension plans, an ESOP can borrow money to purchase a company and has the ability to borrow money for the company’s expansion or improvement. As illustrated below, the money that buys stock for the ESOP is borrowed or leveraged. Hence ESOPs can borrow money to purchase company stock. According to Kent State University, 10% of Ohio ESOP firms used an ESOP loan as a principal means to finance company expansion. The simplified transaction highlights the four steps of purchasing: first, the bank makes a loan to the company that is secured by the company assets. Second, the company strikes an agreement with the bank to make a ‘mirror loan’ to the ESOP; finally the ESOP trust pays the owners (or employees) and in return is given their stock. (Ohio Employee Ownership Center 2011)

The Ohio Employee Ownership Center (OEOC), based out of Kent State University, is a strong example of a research branch, technical assistance, training

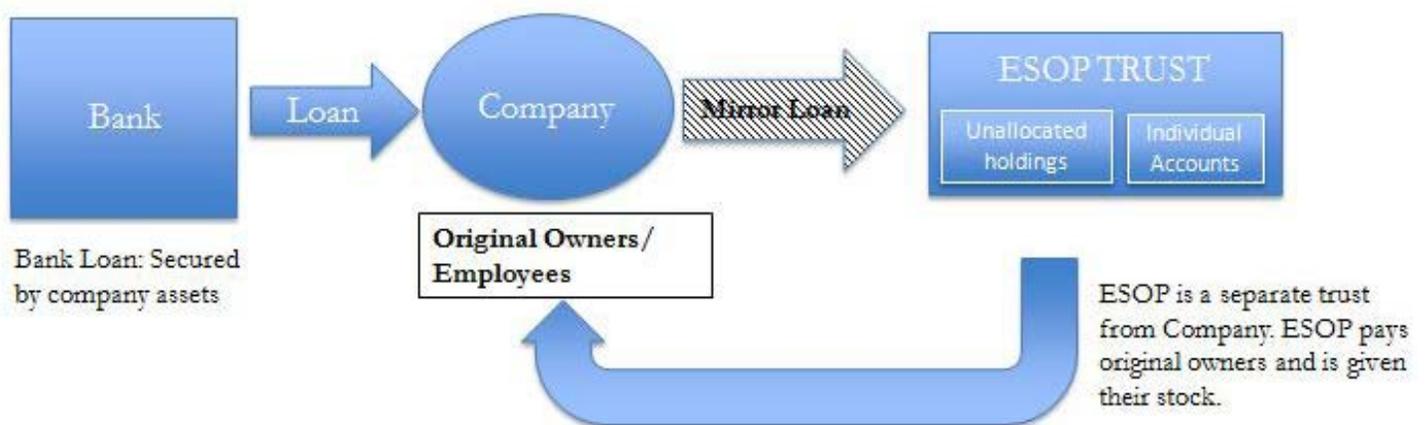
and outreach non-profit that supports organizations interested in establishing, or further strengthening employee ownership. According to research projects conducted by Dr. Logue of Kent State University between 1984 and 1986, the impact of employee ownership on Ohio’s local economy was positive. A 2000 Rutgers University study directed by Douglas Kruse and Joseph Blasi provides impressive findings on the effect that ESOPs make to corporate performance. The Rutgers study showed that firms with an ESOP plan grew 2.3% to 2.4% faster after establishing their ESOP plan than they would have otherwise.

An additional pre-requisite for successful implementation of an ESOP plan is a minimum of \$1 million in revenue or a minimum of \$500,000 in payroll due to the administrative costs associated with the Plan.

### Relationships and Implementation

After Rural Action completes its branding process of its certified wood products and establishes a strong demand for these goods by their end-consumers and customers, that the organization should establish an incentive by which local Appalachian-based firms (from sawmills to secondary manufacturers) are required to establish an ESOP plan in order to be a part of Rural Action’s supply chain. To examine potential eligibility criteria the type of data Rural Action would need to initially would be the size of the partners and businesses involved in their value chain together with an analysis of these businesses pension plans and retirement plans.

We recommend utilizing the local expertise of the



Loan purchase through the ESOP

OEOC to advise the latter section of the supply chain -from the sawmills through the secondary manufacturers- to determine if an ESOP is viable for their company. The next step would be internal workforce education to ensure maximum ESOP participation by addressing employee vesting, eligibility, and allocation among other employee-concerned topics.

Due to significant advantages the ESOP plan provides, the ESOP proves itself to be a compelling model that can help serve employees of local firms. Moreover, due to the unique challenges faced in the forestry industry in Appalachian Ohio – the dearth of retirement packages and security those in the industry face, the ESOP model could allow for this additional security, while retaining wealth locally.

## MODEL II: LAND TRUST

### Overview

A land trust is an agreement where one party holds ownership to a piece of property for the benefit of another. Conservation land trusts in particular work to preserve natural assets. There are a variety of ways land can be placed into a trust. One is through the acquisition of the property. In other cases, the land will remain in private hands and the trust will purchase a conservation easement that will prevent development or damage to the natural asset of the land. Land trusts are generally non-profit organizations that rely on donations to purchase land or offer conservation easements, and are run primarily by volunteers. (Land Trust Alliance n.d.)

It is proposed that landowners be presented with the

option to sell their land to a land trust at a market rate price. In doing so, the land is held in the community land trust, while the landowner receives a life-long lease to the land which may be passed on generationally. The landowner will no longer be responsible for property taxes on the land, but in return must preserve the land. The ownership and lease provides a means for long-term local ownership and control to foster/ensure sustainable forest management practices.

This model directly affects the landowners. Creating this link allows for wealth to be generated on a very basic level through the sale of land, and at the same time ensures that the land is sustainably managed. The importance of creating wealth through the landowners directly must be underscored, because not only are they the group of people most tied to the land and forests, but their economic well-being will have a multiplier effect throughout regions surrounding Appalachia.

### Relationships and Implementation

This model is especially tricky as it can be seen as big government interfering on private property rights; therefore, a clear explanation of the stipulations and intentions of the land by the non-profit organization, and implementers of the model (Rural Action) should be made clear. As a land trust model may be considered as something incredibly foreign to landowners who have owned property in their families for generations, it is advised that an outright acquisition of land is not conducted like in some land trust cases. The strategy is not to strip landowners of their land, but to have them tend to their land in a sustainable manner and in a way that might financially benefit them. This model cannot be carried out on a wide-scale, but landowners should know that this opportunity exists

Repayment Cycle of an ESOP Loan



for them. An education segment is necessary before the actual implementation of the model. Issues such as an initial resistance to this model must be taken into consideration and accounted for in implementation. A small scale approach may be beneficial, and can be built upon as MACED, Rural Action and ASD further establish their partnerships with landowners through their other programs. The leaders in this initiative should maintain a follow up so that landowners have a resource when questions arise.

## **MODEL III: EMPLOYEE SAVINGS AND BENEFITS**

A third way to enable wealth creation in rural or disparate communities is through individual savings. Credit unions are excellent financial institutions which offer both savings account options and development finance programs that focus on extending financial security to low- and moderate-income persons. This model proposes that Rural Action partner with a local credit union to establish an IDA program to their connections in the Appalachian wood products industry.

### **Overview**

The greatest mechanism for creating wealth from savings is to establish a local community development credit union (CDCU). They keep wealth local by building up the communities' assets through investments in a local entity, and they can expand their ability to provide savings and benefits to low-income populations since they can participate in both government programs and private-sector community revitalization partnerships. One such government program that can tailor to the needs of the Central Appalachian wood products industry is the Individual Development Account.

An Individual Development Account (IDA) is a special savings account that matches the deposits of low- and medium- income individuals. For every dollar a person puts into savings, they receive a corresponding match that serves both as a reward and an incentive to continue saving. The CDCU will partner with government agencies, a local nonprofit organization, or private companies to manage and financially support the IDA. These partnering entities provide the donations that serve as the match.

Establishing and employing the services of an IDA through a CDCU could have a great impact hedging financial risk and generating greater self-sufficiency for individual or family owned firms in Appalachia. The culture of rural Appalachia is typically cautious of government entities and big enterprises. As a result, local firms, entrepreneurs, and landowners may not be actively engaged in optimal ways of protecting their savings. However, savings through credit unions and enrollment in an IDA program has a greater potential of being successful in Appalachia since (1) communities are tight knit and are more likely to support local institutions if they are community run, and (2) various incentives such as linking auto loans or home ownership loans to savings accounts can enhance financial security on possessions that are truly needed in this community.

Participation in an IDA or CDCU savings account is applicable to a variety of levels in the supply chain. Individuals who are self-employed, such as the landowners, some loggers, and perhaps some of the sawmills, will most benefit from establishing their savings in a CDCU in order to receive competitive interest rates on a savings account. Family-owned or small firms, such as some logging operations and saw mills, and the primary and secondary manufacturers, will most benefit from enrolling in an IDA program. Employers can match a certain percentage of savings made by employees into the local credit union. For individuals who are self-employed, the IDA can still be an option if a 3rd party organization, such as Rural Action, were to sponsor their contributions by proving the match for savings account.

### **Relationships and Implementation**

Rural Action has strong relationships with small firms and self-employed individuals situated in Appalachia who occupy the first few levels of the supply chain from landowners to secondary manufacturers in Central Appalachia. MACED's carbon credit system puts them in touch most strongly with landowners and the loggers who connect them to the landowners.

Rural Action would partner with the CDCU on the IDA program. While the CDCU would provide all of the training and education in financial literacy, Rural Action would leverage their local connections by helping recruit participants, and serve as a sponsor to match savings. Rural Action could sequester some of

the funding they receive from Wealth From Forests and their other lenders to provide the financial match of the IDA participants that they've recruited to the program.

In order for this model to be implemented, a local CDCU will need to adopt the management of the IDA program and accrue nonprofit, private, and government partners – such as Rural Action. Rural Action will need to strategize who of their existing relationships is suitable to participate in the IDA program. This strategy will likely include a large education and outreach component. Additional to the recruitment, Rural Action will need to redirect some of their program funding towards sponsoring their selected participants by contributing to their match savings account.

and sawmills can have a big societal impact and shift protection to landowner rights. Logging contracts and stipulations will provide landowners the fair value of their harvest while multiple bids results in competition amongst loggers allowing landowners to derive wealth from their natural asset.

### **Relationships and Implementation**

For such a model to be successful, a more widescale outreach effort must be in place. It would be necessary to designate a point of contact that would provide the wealth of information required to run such a program. A sample selling contract must be drafted specific to the region, and professional foresters should be on hand to appraise the land or advise on which trees to be harvested would protect landowners from predatory logging.

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## **MODEL IV: LOGGING CONTRACTS**

A fourth proposed method to enable wealth creation in Appalachia in a sustainable manner is through logging contracts. Naturally, loggers must ensure that there is wood to cut ahead of time. They approach landowners and offer them money for their timber, and if the landowner agrees, there is a “handshake deal.” There are those loggers exist that are not particularly ethical, and may be just offering just half of what the timber is actually valued at. In addition, the land is left in a decrepit condition. Due to the lack of information on the part of the landowner and also because of the lack of a physical and legally binding contract, landowners often times do not derive the deserved value from their harvest and are left with aesthetically displeasing land. This model proposes to mitigate some of those affects while capturing some of the natural asset wealth for the landowners themselves.

### **Overview**

This model attempts to capture wealth locally at the bottom of the value chain by having a contract drafted beforehand that can be distributed to every landowner. In doing so, when the landowner is approached by a logger, they have in possession a document that would uphold the logger to certain stipulations.

Logging contracts between landowners and loggers

**SUPPLY CHAIN**

**VALUE CHAIN**

**WEALTH CREATION OPPORTUNITIES**

**WEALTH CREATION MODELS**



- no incentive to invest in sustainable stewardship
- few mechanisms in place for generational property transfer
- forestry not a main occupation
- not widely informed of larger or collaborative program options
- lack of binding contract that ensures fair value of their land



LOGGERS



- heavy equipment employee
- financial incentive to clear cut
- often 1-2 employees



- a "woodshed" defines the area of business
- point of contact to reach dispersed loggers & landowners
- typically family-owned



- typically small business
- situated in appalachia



- typically small business
- situated in appalachia

BROKER

- connects the buyers with the seller
- frontline to see shifts in the market demands



- can be a wholesaler
- enhanced customer service to aid customers in selecting a product



ARCHITECT

- specifies the brand and supplier of building materials to be used
- can request new products directly from manufacturer



- pushing the demand for green and sustainable wood products
- niche market will care about the origins of product location

# conclusions



While many of our wealth creation models have proven successful in several scenarios, the local culture in Appalachia challenges their applicability to the wood products industry, as the inherent culture lends itself to more caution with regards to institutional, governmental, or censoring interventions. The adoption of mechanisms such as a land trust, logging contracts, or even certification finds this caution difficult when attempts at implementation or general information gathering is being made.

We believe the best means of wealth creation while sustaining Appalachian natural resources, is to turn the interest shown by industry firms into action. Finally, the overlay of the value chain and supply chain with wealth creation models indicates how these models are not necessarily specific to any one level of the supply chain, and can effect the issues of many players in the industry. We believe that though widespread implementation is difficult, if many players in the industry can be provided a financial incentive to sustainably

manage their forest and harvest, goals of sustainable forestry can be reached quicker. The objective is not an imposition of models and policies, but a grander recognition of the value of natural assets, allowing those along the value chain to benefit from them in a sustainable manner.

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