

# **The Limiting Factor in North American Forest Operations: A Skilled Workforce**

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**ABSTRACT:** Forest operations in North America face shortages of skilled loggers and forestry services workers. Forestry work is characterized as dirty, difficult, dangerous and declining. Recruiting new workers is difficult with preferences of the new generation. In some regions, mills are experiencing shutdowns and a re-opening mill has only half the logging workforce needed. Others are desperate for truck drivers to replace drivers in their 60's and applicants have difficulty passing medical exams. Contractors are pressed on pricing and have few resources for training new workers. Responses include specially supported training by mills and forest landowners and recruitment efforts through social media. Forestry services work is dominated by immigrant workers with special concerns. Many of the stakeholders in forestry from landowners, agencies, associations, contractors, unions, forestry professionals, mill procurement, and others depend on a skilled forestry workforce. Their viewpoints and solutions differ and need reconciliation. The author is developing a Forestry Workforce Alliance and Forestry Workforce Network for North America to help address the issues and opportunities.

**Key Words:** labor force, logging workforce, forestry services, recruitment, training

## **INTRODUCTION**

The traditional economic factors of production are land, labor, capital and entrepreneurship in a capitalist society brought together at a point in time to produce goods and services. Newer thinking identifies human capital to emphasize the stock of knowledge in the labor factor. Forest operations are part of a complex supply chain involving many players far from the actual production site. The time element is crucial for all factors: machinery is on a trajectory of development as are the workers themselves. Everything depends on whether production occurs in a recession or expanding economy. The other element is the substitutability of factors, e.g. equipment replacing labor. This does not happen in the short run.

The critical element of a skilled workforce in the operators, the managers, contractors, and others in the supply chain affects all of the factors of production. These relationships are explored for Oregon circumstances with supporting examples across North America.

## **THE EQUIPMENT**

The factor of production involving the equipment is the most stable and progressive. There are strong international equipment manufacturers with effective research and development efforts making a variety of productive equipment available to contractors. The one area of weakness is for cable yarding technologies that left few manufacturers in the North American market. Buying a yarder worth \$1.8 million requires upfront 40% partial purchase and waiting times up to a year for delivery. Ground-based and mechanized equipment are available to contractors in the new and used markets. However, because equipment requires capital, its availability is not the same as being readily accessible to the contractors. The capital that contractors find access to depends on them as human owners of small firms not the capital available to multi-national corporations.

## **THE WORK ITSELF**

Forestry work has been characterized as dirty, difficult, dangerous and declining. The perception of forestry work comes from television shows like *Axemen* and others that portray workers as pathological and violent idiots. CareerCast.com identifies logging or lumberjack as the worst job in America due to safety, pay, and working conditions. Forestry jobs unfilled in Oregon for more than 60 days are characterized as "hard to fill." While timber falling and yarder crews are among the most challenging physical jobs, many forestry jobs use machines requiring the skills of an airplane pilot.

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## **THE WORKERS THEMSELVES**

The forestry sector workforce in North America mirrors in many areas what is found in Oregon. We are aging:

- 50-60% of logging workers are over age 45
- Median age of log truck drivers is in the mid 60's (A review of Idaho log truck drivers found that in a group of 300+ drivers, over half were over age 66)
- Average age of Associated Oregon Loggers (AOL) Contractors is 60
- Forestry Services workers are bimodal with young workers and old supervisors and managers

Wage rates have been stagnant for decades. In the AOL wage survey covering 1985 to present, the choker setter job increased 1% annually while inflation was much more than that. Logging jobs once were at a 15-20% premium in pay over manufacturing jobs but now often pay less than what work in town pays especially with benefits considered.

The Oregon logging labor force itself is about half the level it was 15 years ago and dropped further during the recession (~12,000 to ~6,000). Those supporting the mechanized logging industry as mechanics, computer technicians, and machine shops are not recognized in the logging workforce statistics but are also in short supply. Data from the Oregon Employment Division show the demand for new logging equipment operators is roughly due to growth at 37% while ~63% will be due to replacements of existing operators (2014). This is similar to the British Columbia workforce at 81% due to replacements (LMI et al, 2013).

## **OWNERS AND MANAGERS**

While an increasing proportion of the owners and managers of forestry firms are college graduates, all have spent time at the "school of hard knocks" in recent years of recession. What makes these owners and managers different is that the day-to-day operations are so demanding they take precedence over planning, budgeting and cost analysis. The time left for these important functions is found driving between job sites and during short nights. The ability of owners to replace and update equipment is not dependent on the equipment suppliers but in the owners' entrepreneurship to convince lenders.

## **KNOWLEDGE THROUGHOUT THE SUPPLY CHAIN**

The shift in forest land ownership structures plus the demographics of aging throughout the supply chain bring new professionals to key positions who may not fully understand the contractor business. A root cause is due to a reduction in universities offering forest engineering/forest operations curriculums or even courses on the subject. Typical courses in business economics, accounting, and management offer little insight into what it takes to run a logging company or forestry services firm. There is a real need to educate those in the supply chain (current and future) who strongly affect contractors about cost structures, forest operations, workforce safety and health, and what it takes to have a profitable contractor operation.

## **NEW AND POTENTIAL WORKERS**

The differences in the current generation of managers and workers and the new and potential workers in forestry are profound and substantial. The 18-30 year old generation "Y" and Millennials view work and their lives differently:

- The age distribution of younger workers is skewed in many regional logging workforces to only 10-15% younger workers. The forestry analogy is that of only planting a small proportion of harvested acres and expecting trees to appear magically. Workers will need to be "planted."
- Some of the dissonance between managers and younger workers includes:
  - Work often defines older workers while younger workers view work as means to their lives
  - Younger workers seek a work/life balance different than older workers

- The difficulty of forest work (physical and long hours) is a problem for some unfit younger workers
- For all of the new technology used by young people, many lack the process control logic needed to maintain the computer systems of harvesting machines. Texting while driving does not produce a harvesting machine operator.
- Younger workers seek a fast career track with immediate rewards similar to what they have become accustomed to so far
- Younger workers are used to receiving benefits from parents, education or government subsidies versus benefitting from hard work and success.

Truck drivers for log and product transportation are a special case in North America as Interstate Trucking regulations have changed to require limited hours of service, medical examinations, drug testing, a points system that can strangely penalize drivers, plus other requirements.

### **WHAT CAN BE DONE?**

A first step is to get a picture of the workforce at a scale of interest. In 2008 just before the recession, I conducted a review of the Idaho Timber Workforce and provided a status review and potential options. In 2013 the BC Timber Industry conducted a review and has begun programs of training and recruitment.

The relationship between contractors and purchasers needs rebuilding as the economy improves putting contractors in position to recoup losses from the recession. The contractors still in business think they shared the pain during the recession and now need to share the gains as the economy improves. Contractors would like longer terms for their services so they can make equipment purchases and expand to meet the demand. Purchasers may also need to support contractor efforts in purchases and training of operators as does the firm of JD Irving in Maine and eastern Canada.

There is a need to redesign jobs for logging and forestry services to meet both physical demands and social needs of workers. For example, the use of synthetic rope in logging can reduce workloads. Contractors could expand their crews with workers who are sufficiently cross-trained so workers can attend their children's sports events or conduct business during the working day. Such flexibility might attract new workers and retain existing ones. We need a career ladder for the new workers so they can see potential for their own futures. Ultimately, wages and benefits must also rise to be competitive with other jobs available in the area. Retention and signing bonuses are used now in the industry. What disturbs contractors is the poaching of experienced workers from each other rather than increasing the pool of workers.

Expanding the pool of workers in forestry and logging means attracting women to work in the forest. They are now machine operators, truck drivers, and forestry services workers but their numbers need to increase and their worklife needs should be addressed. Migrants in some areas will become an increasing proportion of the workforce beyond the forestry services work they now dominate. Special populations may be targeted to work in the forest such as native populations. Returning veterans have been identified as desirable applicants for forest work and recruitment efforts are underway.

Finally, I propose a Forestry Workforce Alliance among stakeholders who want to understand the myriad workforce efforts underway across North America. The form of this alliance is yet to be determined and the leadership is evolving but the need is definite. As a means of communication, we have started a Forestry Workforce Network on the social media site. Readers can join LinkedIn© and apply to the Forestry Workforce Network. Join now!

### **REFERENCES AVAILABLE FROM THE AUTHOR**