

# Do Consultants Really Generate Higher Timber Prices?

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## Introduction

There has been very little scientific research on whether private forestry consultants actually generate higher timber prices for their clients. Anecdotal evidence abounds. Almost every consultant has one or more stories of landowners doubling or tripling the price offered by a timber buyer by opting to go with a consultant. Unfortunately, timber buyers have as many contradicting stories of landowners rejecting a good offer from a buyer, hiring a consultant and then actually netting less money after consultant fees are subtracted.

A study of North Carolina timber sales was designed to evaluate financial returns from hiring consultants. Several key issues were examined, including differences in tract size and timber quality between consultant and non-consultant sales, the effect of sealed-bid auctions, net returns to landowners after accounting for consultant fees, the influence of buyers and which types of sales benefited most from consultant participation based on attributes of the offering.

## Related Research

Most research has focused on effects of public agency foresters. Typically, these studies evaluated the benefits of a forester's assistance on the basis of criteria such as adherence to best management practices, condition of the residual stand, provisions for regeneration and financial returns to the landowner. In general, these studies found better results associated with public forester

participation.

With respect to financial returns, studies which examined public foresters shared a number of weaknesses. As a rule, they relied on small samples of matched pairs which were not necessarily representative of the population as a whole. Volume estimates were based on post-harvest stump cruises which are characteristically imprecise. Statistical analyses were weak, usually restricted to comparisons of means. Differences due to species and commodity composition, sales procedure (sealed-bid auction vs. negotiation) and silvicultural prescription were recognized, but not incorporated into the statistical analyses, except in the matching process.

Only two studies specifically examined the effect of private consultants. Although both found higher prices associated with consultant sales, the support was not overwhelming. Hardie and Wieland (1987) surveyed Maryland landowners for information on stumpage sales. They found consultant sales averaged almost \$100 more per acre than non-consultant sales. However, this comparison was made without adjusting for differences in the quality and quantity of timber offered in comparative sales. The authors concluded that they could not provide a definitive answer to the question of the effect of a consultant on stumpage sale prices.

Hubbard and Abt (1989) collected information on 45 timber sales in northern Florida: 15 unassisted sales, 15 sales handled by consulting foresters and 15 sales which had received price and

buyer information from the public forestry agency. Volumes were determined by post harvest stump cruise. They found no significant effect due to public agency participation. Surprisingly, the estimated effect of consultant participation on sales price was negative if the tract consisted primarily of pulpwood. If the tract consisted primarily of pine sawtimber, however, the overall effect of consultant participation was positive.

## Study Design

The purpose of this study was to determine if consultants did, in fact, generate higher prices for their clients. During interviews in the data collection phase, timber buyers frequently expressed opinions on consultants and their effect on timber prices. Several statements were made repeatedly:

- Consultants only handle the bigger and/or better tracts. The higher prices these tracts receive are not due to the action of the consultant, but rather to the differences in timber volume and quality.

- The only action consultants take that increases timber prices is selling the tract by sealed-bid auction. If landowners would conduct the auction personally, they would capture the same price increase without paying the consultant's fee.

- Even if consultants do generate higher prices, it's not enough to offset consultant fees.

These three issues formed the basis of our investigation, but two additional issues also were addressed. It's not enough to know

**Table I. Summary of Key Variables**

Number of sales: 298

**Distribution of sales by categories**

<b>By region</b>	Mountains: 42	Piedmont: 107	Coastal: 149
<b>By sale type</b>	Clearcut: 221	Partial cut: 64	Salvage Cut: 13

**Consultant Sales: 105**

<b>Sealed bid: 87</b>	<b>Negotiated: 18</b>
- lump sum: 87	- lump sum: 10
- per unit: 0	- per unit: 8

**Non-Consultant Sales: 193**

<b>Sealed bid: 24</b>	<b>Negotiated: 169</b>
- lump sum: 21	- lump sum: 112
- per unit: 3	- per unit: 57

**Means of selected variables****Tract means**

acres: 62  
 pine sawtimber: 126 MBF Scribner  
 pine chip-n-saw: 43 cords  
 pine pulpwood: 183 cords  
 hdwd. sawtimber: 95 MBF Doyle  
 hdwd. pulpwood: 213 cords  
 misc. sawtimber: 4 MBF Doyle  
 total bid: \$33,656.37  
 distance to mill: 37 miles

**Per acre means**

pine sawtimber: 2.9 MBF Scribner  
 pine chip-n-saw: 1 cord  
 pine pulpwood: 4 cords  
 hdwd. sawtimber: 1.5 MBF Doyle  
 hdwd. pulpwood: 4 cords  
 misc. sawtimber: 0.1 MBF Doyle  
 bid: \$669.85

contract length: 18 months (24 open contracts)

**Table II. Mean values for consultant and non-consultant sales**

	Consultant sales	Non-consultant sales
<b>Per acre values</b>		
Pine sawtimber (MBF-S)	\$ 3.85	\$ 2.45
Pine chip-n-saw (cords)	0.59	1.02
Pine pulpwood (cords)	3.28	4.18
Hdwd. sawtimber (MBF-D)	2.00	1.16
Hdwd. pulpwood (cords)	4.30	3.73
Misc. sawtimber (MBF-D)	0.05	0.12
Price	\$934.46	\$525.90
<b>Tract values</b>		
Quality (1=poor, 5=excellent)	3.73	3.39
Acres	73.07	56.15
Distance to mill (miles)	42.13	33.57
Contract length (months)	22.28	16.49
<b>Number of Sales</b>		
Total	105	193
Clearcuts	79	142
Partial cuts	25	39
Salvage cuts	1	12
Mountain sales	11	31
Piedmont sales	41	66
Coastal plain sales	53	96

that consultants can increase timber prices on average. Landowners want to know if consultants can increase prices for *their* tract! Price increases due to consultants were broken down by species and commodity class in order to identify which tracts would benefit most. Finally, some timber buyers may pay higher prices for timber than others. If certain buyers do consistently pay higher prices, consultants will want to target these buyers.

**Data**

Timber sale data was collected throughout North Carolina. All timber buyers listed in *Buyers of Forest Products in North Carolina* (1989) were contacted and asked to participate. Information on 475 timber sales was obtained; of this total, 298 were complete and pertinent to this study. For each sale the following information was gathered:

1. Purchaser
2. Acres in the sale
3. Timber volume by species and commodity class
4. Timber quality (poor to excellent)
5. Type of sale (clearcut, partial cut or salvage)
6. Logging conditions (poor to excellent)
7. How the sale price was determined (negotiation or auction)
8. Whether payment was per unit or lump sum
9. Geographic region of the sale (mountains, piedmont or coastal plain)
10. Whether a consultant handled the sale
11. Distance to the buyer's mill
12. Contract length
13. Price paid for the tract

Summary statistics are presented in tables 1 and 2.

These data had several advantages over data used in previous studies. The sample was much larger, thus providing many more degrees of freedom for statistical estimates, and it included detailed information on tract attributes. Estimates of timber

volume, quality, species and commodity composition were made while the timber was still standing, as opposed to post-harvest stump cruises used in the past.

The data set was not without its own potential problems. Buyers who responded might have tried to influence the results by selectively reporting sales or adjusting information on individual sales. If so, it seems reasonable to assume that they did so to portray themselves in the best possible light, i.e., they paid the best prices and consultants were not really necessary. If buyers submitted biased information, the effects of consultants are underestimated by this study.

## Results

Consultant sales contained significantly greater volumes of pine and hardwood sawtimber per acre, but significantly less pine chip-n-saw volume. Differences in pine pulpwood, hardwood pulpwood and miscellaneous sawtimber were not significant. Timber quality on consultant sales was significantly better as ranked by the timber buyers.

The average price per acre (adjusted for inflation) for consultant sales was \$934.46 in contrast to an average price per acre of \$525.90 for non-consultant sales, a difference of \$408.56 per acre. Per acre prices for consultant sales were 78 percent greater than non-consultant sales. Closer analysis, however, revealed that \$257.35 of this difference was due to greater volumes of pine and hardwood sawtimber and other attributes on consultant sales. Nonetheless, \$152.83 per acre could not be accounted for by timber volume, quality or other sale attributes. Claims that greater returns for consultant sales result solely because of better tract characteristics were not supported.

Our study also indicated that consultants increased sale prices above and beyond the price increase generated by sealed-bid

auctions. Sale prices increased by an average of \$89 per acre when a tract was sold by sealed-bid auction, regardless of whether the auction was held by the landowner or consultant. There was an additional increase of \$78, on average, when a consultant handled the sale. This was true even if the consultant negotiated the sale.

This doesn't mean that consultants should not take credit for increases in sale price resulting from the sealed-bid auction. In most cases, once a landowner has hired a consultant, the consultant determines how best to sell the tract. If the consultant chooses to sell the tract by sealed-bid auction and in doing so, captures increased prices, the consultant deserves the credit.

For consultant sales in the sample, returns to hiring a consultant averaged 20 percent. This is substantially larger than the 8.5 percent average fee charged by consultants in North Carolina (Kronrad and Albers, 1983). Based on these results, consultants increase net dollar benefits to landowners as well as gross sales dollars.

We found that attributes of the sale were important in determining the magnitude of the price difference. Price differences were directly related statistically to only one commodity in this study—pine sawtimber. Consultants generated an additional \$20.35 for every thousand board feet of pine sawtimber on the tract. Per unit price increases for other commodities were not significantly different.

It should be noted that hardwood sawtimber prices for consultant sales were \$10 more per 1,000 than non-consultant sales. While this difference was not significant, there were relatively few sales of quality hardwood in our sample. In addition, in a related analysis, we found significant increases in timber sale prices in the mountain region when a consultant handled the sale.

Because the mountain region is predominantly hardwood, we think it likely that consultants generate higher per unit prices for hardwood sawtimber also.

Finally, our study found certain timber buyers did pay higher prices than others and these buyers tended to buy more consultant sales. It is statistically possible to separate the price premiums paid by these high price buyers from price increases generated unambiguously by consultants. This reduces apparent returns to hiring consultants to slightly above the average consultant's fee. From a landowner's perspective, however, the source of the price increase is not important. It makes no difference if the consultant generates higher prices or simply targets higher price buyers; the net result is the landowner receives more money.

A consultant who knows the high price buyers in the sale area and aggressively solicits bids from them will capture additional price increases for his client. It's reasonable to argue that any such consultant should take credit for directly increasing timber revenues and also for capturing the premium paid by high price buyers. Without knowledge of who the high price buyers are, a consultant can achieve the same effect by soliciting bids from all buyers in the sale area.

Even if we argue that consultants should not be credited with any of the premiums high price buyers pay, higher prices are only one of several benefits the timber owner receives when a consultant is hired. Typically, a variety of other services are performed. Most consultants locate property lines, establish the appropriate buffer strips, provide reasonably accurate volume estimates, check the title and sell the timber either by auction or negotiation. Also included is harvest supervision and contract enforcement.

These extra benefits accrue to the landowner at no additional cost, indicating it's worthwhile to hire a

consultant, even if expected price increases do not exceed the consultant's fee. ■

(Ian Munn, an assistant professor, specializes in forest economics with 10 years experience in the forest products industry. E. Carlyle Franklin is a full professor. Prior to 1980, he worked with USFS.)

**Literature Cited**

Budelsky, Carl A., John H. Burde, Fan H. Kung, Dwight R. McCurdy and Paul L. Roth. 1989. *An evaluation of state district forester timber marking assistance on non-industrial private forest land in Illinois.* Dept. of Forestry, Southern Illinois Univ. at Carbondale. 93 p.

Bullard, Steven H. and Robert J. Moulton. 1988. *The economics of public assistance for nonindustrial private timber sales in Mississippi.* Technical Bulletin 147, Mississippi Ag. and For. Exp. Stn., Mississippi State University. 9p.

Buyers of Forest Products in North Carolina. 1989. N.C. Dept. of Natural and Community Development. Division of Forest Resources.

Callahan, John C., John M. Toth, and Joseph T. O'Leary. 1979. *The timber marketing process in Indiana.* U.S.D.A. Forest Service, Research Paper NC-177, U.S.D.A. For. Serv., N.C. For. Exp. Stn., St. Paul, MN. 7p.

Cabbage, Frederick W., Thomas M. Skinner and Christopher D. Risbrudt. 1985. *An economic evaluation of the Georgia rural forestry assistance program.* Ag. Exp. Stns., University of Georgia, Athens, Georgia. 59p.

Hardie, Ian W. and R.C. Wieland. 1987. *Seller practices and sales returns in local stumpage markets. Proceedings of the 1987 Joint Meetings of the Southern Forest Economics Workers and the Mid-West Forest Economists.* Asheville, N.C. pp. 63-78.

Henly, Russell K., P.V. Ellefson and M.J. Baughman. 1990. *Minnesota's private forest management assistance program: an evaluation of aspen timber sale assistance.* Northern Journal of Applied Forestry, 7(1): 31-34.

Hubbard, W.G. and R.C. Abt. 1989. *The effect of timber sale assistance on returns to landowners.* Resource Management and Optimization, 6(3): 225-234.

Jackson, David H. 1985. *An investigation of some physical and economic effects of private forestry assistance in Montana.* Unpublished manuscript. University of Montana, 26p.

Kronrad, Gary D. and Catherine A. Albers. 1983. *Consulting forestry services and fees in North Carolina.* National Woodlands, 7(1): 9-12.

Munn, Ian A. 1993. *Forestry consultants: Their effect on timber sale prices.* Unpublished PhD dissertation. North Carolina State University. 142p.

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