

THE WOOD MARKET IN THE BRAȘOV – COVASNA AREA (I): BEHAVIOR OF FIRMS IN AUCTION

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Abstract

The paper analyses the business behavior of wood felling companies when taking part in wood auctions for timber from protection forests owned by the Romanian state. The research took place between 2012 and 2014 in the Brasov – Covasna area; it took into account all the targeted auctions organized by the local forestry governing bodies. In this first part of the paper we will present the results for Brasov County (4 large autumn and spring auctions). It is the first analysis of this kind in this particular area. Aside from highlighting all the technical aspects of auctions, we have applied (for the first time as well) a special questionnaire for the participating companies. The main conclusions drawn from processing the data and the answers from the survey are presented in the paper. The foremost aspect is that the behavior of the companies differs in these situations from regular behavior in general auctions.

Key words: protected forests; auction; accidental felling; behavior.

INTRODUCTION

The issue of company behavior regarding wood auctions in Romania has only recently been approached in the scientific literature. This aspect was highlighted in several papers (Drăgoi 2000, Milescu 2002, Antonoaie N et al. 2011, Antonoaie V 2014, Antonoaie VL 2014), but little attention has been given to the actual behavior of companies when it comes to wood auctions organized for wood from special protection forests (forests owned publically by the Romanian state or private forests).

In Romania there are two functional forest classifications (ROMSILVA 2014, FAO 2014):

- Group I (53,3% of the total national forests) – protects the environment and serve recreation and conservation needs (“special protection forests”); and
- Group II (46,7% of the total national forests) – for biomass production and environmental protection (“production and protection forests”).

Nevertheless, this is an issue of great importance for Romania when taking into account that, according to the official data provided by The National Forest Department (ROMSILVA 2014), at the 31th of December 2013, 1.808.640 ha of forest fund owned by the Romanian state (58% of the total) is comprised of special protection forests. Consequently, this situation significantly influences the wood market characteristics, especially the primary wood market.

Of great importance for this market is the moment when the actual purchase takes place (through several methods – especially auctions) (Antonoaie VL 2014, Drăgoi 2000). This is caused by the fact there is limited data and interpretation provided of company behavior in such situations, whether we are talking about the official FAO statistics (FAO 2013), Eurostat (European 2013) or UNECE Timber Committee (UNECE 2013). The situation is caused because the data provided by these organizations present mostly quantitative aspects of the primary wood market and less about the quality aspects of the wood in its transition from forest to final storage.

To be able to conduct a proper analysis we have started the research in 2012 in the Brasov–Covasna area by initially following the wood auctions from both general production forests and special protection forests.

Taking into account the existence of differences in the approach and the behavior of the involved companies we continued the research for special protection forests, starting with those in the Brasov County, administered by the Brasov Forestry Department and the Public Forest Department Kronstadt RA.

OBJECTIVES

The main objective of this research paper is to highlight the specific company behavior of businesses in the wood felling area when involved in auctions for wood sourced from special protection forests.

This would allow for a better understanding of the defining aspects of the primary wood market in the research area and the possibility of future regulations regarding this market (for example in the case of the conditions a company must meet to take part in auctions for wood from special protection forests).

METHOD, MATERIALS AND EQUIPMENT

To perform this analysis we followed the auction for wood felled from protection forests due to accidental felling (I and II), group shelter wood system felling, selection and semi-selection felling.

The auctions took place between November 2012 and November 2013. Fifty bidding options were analyzed (for 50 felling sites) in the Brasov area.

The data obtained referred to:

- a. The characteristics of the trees auctioned, which are highlighted in the APVs (documents developed by the Forest Departments to describe the auctioned forest area), which are: surface designated for felling, number of targeted trees, the type of felling, the allowed technique to be employed, species of trees, working conditions in the area, the volume of wood to be felled (gross volume, working wood volume, firewood volume and bark volume), products sorted by size which can be obtained from the wood by species and type.
- b. Type of auction, asking price, auctioning steps for each auction (and individual felling areas), the value of an auctioning step, selling price.
- c. Number of participating companies and their specific behavior for each auction (especially how many auction steps did they take in this particular case).

To be able to reach the proposed objectives for this research we have developed a survey with 12 questions with the theme: "*The behavior of managers of wood felling companies in the Brasov area regarding auction selling wood from special protection forests*".

The survey was initially applied on 37 felling companies. Only 22 of those replied that they took part in operations that take place in special protection forests. Therefore the survey and consequently the research were reduced to this set of companies.

The main aspects targeted by the quantitative research were:

- a. What type of felling system do they usually bid for (Questions 1,2,3,4 and 5) and under what circumstances.
- b. What are the factors that would determine their participation in an auction in connection to every type of felling in the protection area (Questions 6, 7 and 8).
- c. To what price level would they be willing to attain, based on the asking price (Question 9).
- d. What are the determining factors in bidding over a previous price and winning an auction (Questions 10, 11 and 12).

The obtained data were processed using SPSS and MS Office software.

We have to mention the fact that given the complexity of the analysis and the inherent constraints regarding the length of the paper we have divided the results and the conclusions into two sections.

Moreover, we must mention that the analysis will be extended to the Covasna area and further on the research will also include privately owned protection forests.

RESULTS AND DISCUSSION

Regarding the main results obtained from the quantitative research, we can draw the following general conclusions:

1. The researches into the behavior of felling companies which take part in auctions for wood sourced from special protection forests is clearly a difficult activity, mainly due to the multitude of factors which need to be take into consideration and quantified.
2. Unlike the auctions for wood sourced from accidental felling where 21 companies from the Brasov area took part, in the case of group shelter wood system felling and the selection and

semi-selection auctions fewer companies were involved in the auctioning process (14 and 6, respectively).

3. The auctions were standard (increasing auction, using the classic open outcry system and fixed bidding steps).

Out of the several conclusions which emerged from the research we have selected the most important which are presented in the following paragraphs.

Q6. In case of accidental felling, what are the determining factors which drive you to actively take part in auctions?

Company managers could choose (without a hierarchical system) 3 of the 9 possible answers. We can see (Fig. 1) that the most important factors (ordered by response) which can convince a manager to actively take part in an auction are:

- percentage of working wood from the total felled [14 answers; 22,2%];
- average tree volume [13 answers; 20,6%];
- total wood volume felled [11 answers; 17,5%].

The other factors have obtained the following scores:

- species - mainly coniferous (over 80%): 8 answers [12,7%];
- numbers of trees felled/ha: 7 answers [11,1%];
- accessibility (average collecting distance): 5 answers [7,9%];
- species – mainly hardwoods (over 80%): 2 answers [3,2%];
- special working area conditions (average slope, rock formations): 2 answers [3,2%];
- at least 20% be fire wood: 1 answer [1,6%].

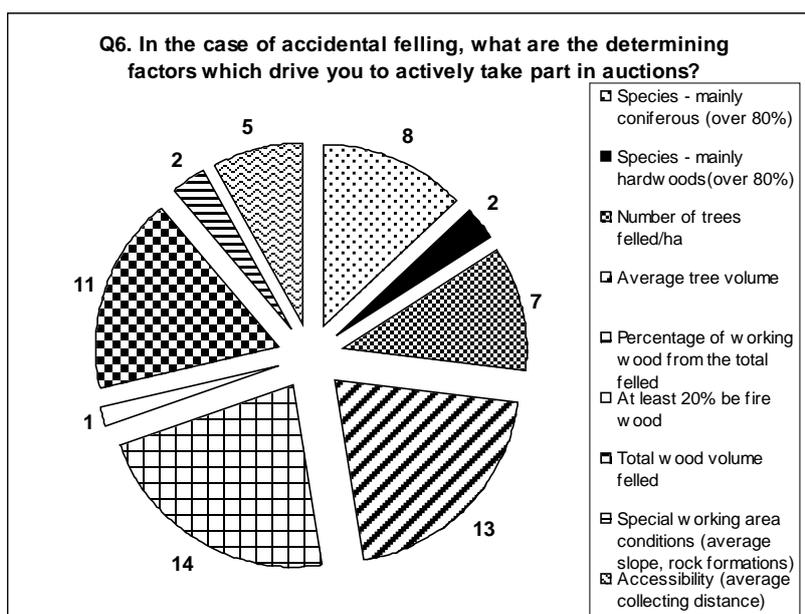


Fig. 1.
Answers to the Q6 (Question 6)

Q7. In case of group sheltered felling, what are the determining factors which drive you to actively take part in auctions?

The situation changes here (Fig. 2): there are other felling conditions and other values for the main wood value indicators.

That is why the main reason for which a company would take part in an auction is “total wood volume felled” [12 answers; 22,2%], while the second two are (a tie, with 10 answers each – 18,5%) “average tree volume” and “species - mainly coniferous (over 80%)”.

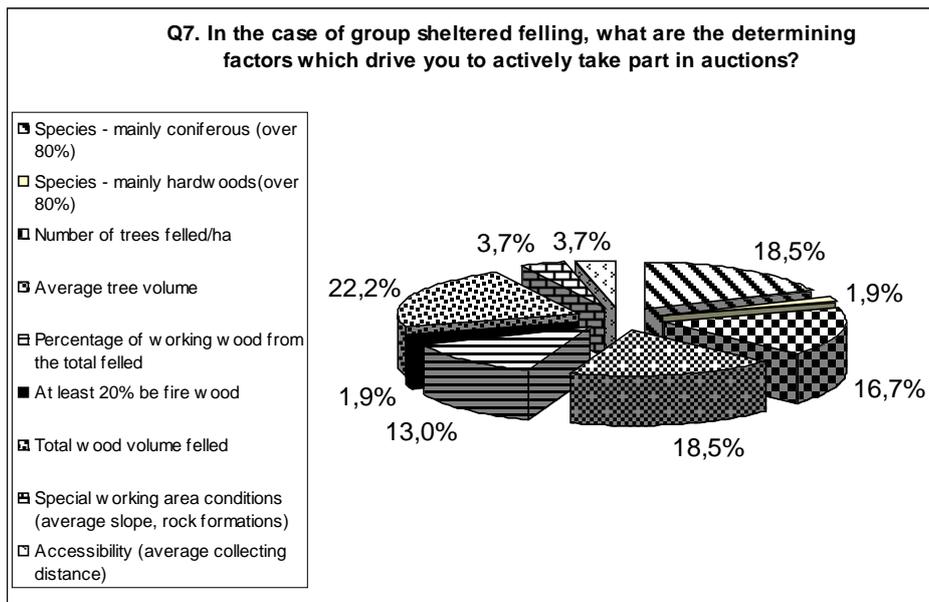


Fig. 2.
Answers to the Q7 (Question 7)

To the same type of question (but in this case for selection and semi-selection felling [Q8]) we have the following results (Fig. 3):

- in the first place we have “*numbers of trees felled/ha*” with 14 answers [33,3%];
- on the second place we have “*average tree volume*” [11 answers; 26,2%];
- on the third place: “*the total wood volume felled*” factor with 9 answers [21,4%];
- factors “*at least 20% be fire wood*” and “*special working area conditions (average slope, rock formations)*” are not considered relevant by any manager (0 answers);
- the factors “*species - mainly coniferous (over 80%)*”, “*species – mainly hardwoods (over 80%)*” and “*accessibility (average collecting distance)*” are barely relevant [1 answer each, 2,4%].

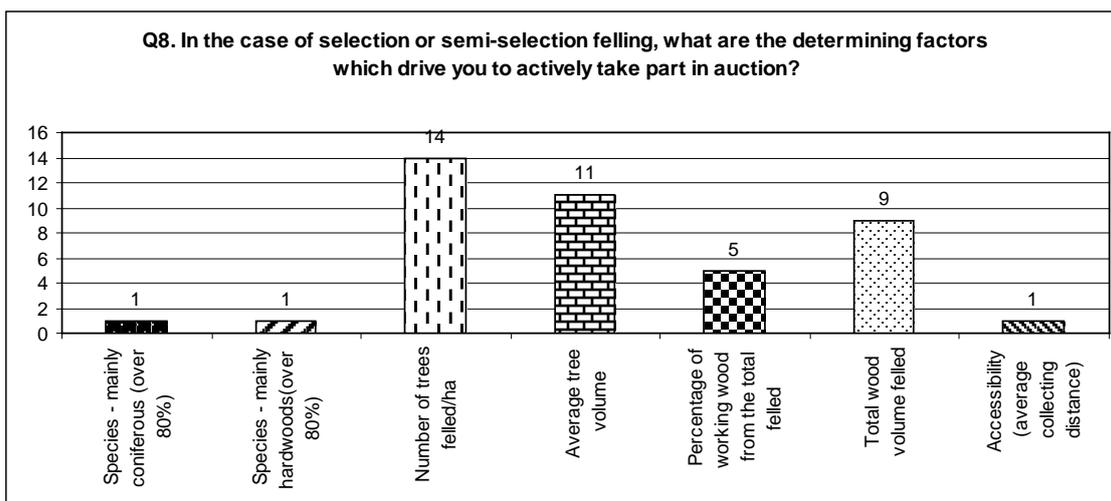


Fig. 3.
Answers to the Q8 (Question 8)

Q8. What do you consider to be a normal increase for the baseline auctions asking price?

- a. 25%
- b. 40%
- c. 50%
- d. Over 50%

- Managers mainly consider that 40% (15 out of 22 managers, 68%) is a normal maximum increase (Fig. 4) of the auction selling price in regard to the asking price (Q9).

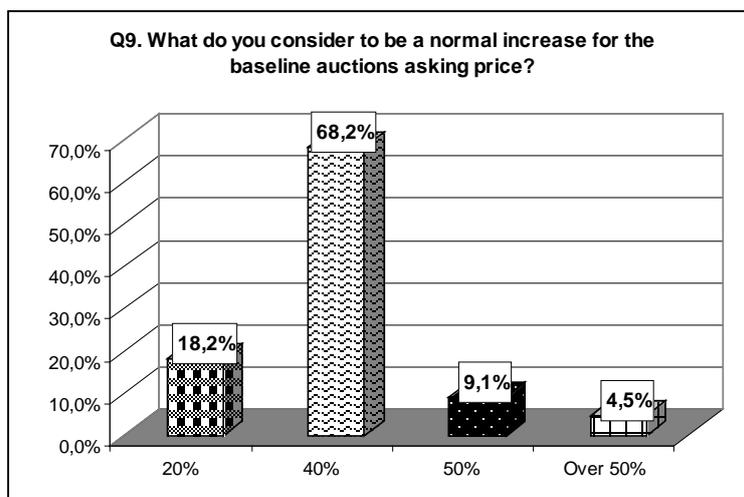


Fig. 4.
Answers to the Q9 (Question 9)

Table 1

The factors would persuade manager to bid to a selling price 40% higher then the asking price in auction

The factors	The answers [%]		
	Accidental felling [ACCF]	Group shelter-wood system felling [GSWF]	Selection or semi-selection felling [SSSF]
a. Average tree volume	50,0	38,9	46,4
b. The proportion of GI (Thick I) work wood to surpass 50% of the total	28,6	41,7	28,6
c. Species – Coniferous	7,1	5,6	7,1
d. Species – Hardwood	2,4	2,8	3,6
e. At least 5% sycamore in the total wood volume	11,9	11,1	14,3

Amongst the most important factor that would persuade managers to enter an auction and go above this 40% threshold and continue the bidding in order to secure a particular felling area, according to Questions 10, 11 and 12 are (Table 1 and Fig. 5):

- „Average tree volume” in the case of accidental felling [50% of answers];
- „The proportion of GI (Thick I) work wood to surpass 50% of the total” [41,7%] and „Average tree volume” [38,9%], in this order, for shelter wood system felling;
- „Average tree volume” [46,4%] in the case on semi-selection felling.

We can see that the average tree volume is a very important factor in the decision whether to continue an auction or not (up to the final bid and the acquiring of the felling area).

This is a normal reaction, especially in the case of large coniferous species, where a large average tree volume is in most cases synonymous with large amounts of GI and GII wood (thickness standards) which is in high demand for superior industrial uses.

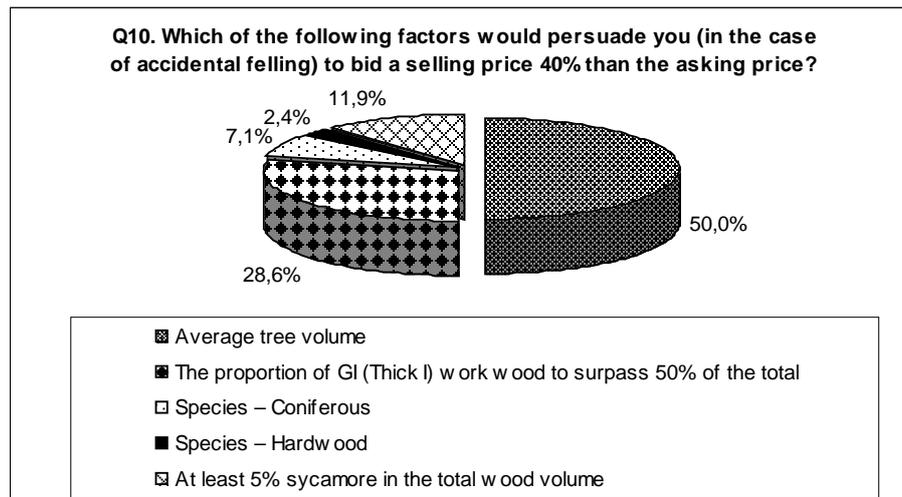


Fig. 5.
Answers to the Q10 (Question 10)

CONCLUSIONS

The felling of trees in special protection forests has specific particularities which influence the behavior of the businesses involved. First it concerns the decision on whether to take part in auctions, where the main issues are: the difficulties in skidding and hauling the trees in such areas, the high dispersion rate of the targeted trees in the felling area, the restrictions regarding the possibility of creating new roadways used to collect the wood by using forest tractors/trucks, the imposed use of horses or oxen as the basic wood extraction, skidding and hauling device, the small volume of the average tree (and consequently the reduced volume of the total harvested wood mass).

We can draw several conclusions which can demonstrate the differences and similarities with the situation of the main production forests. Nevertheless, it is clear that we are dealing with a distinctively different market behavior from companies involved in this activity. The particularities of this behavior will be highlighted in the second part of this research paper, with the title: "The Wood Market in the Brasov-Covasna Area (II): The Attractiveness of the Offer".

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