



Determinants of choice of selected timber species traded in timber markets in Southwest, Nigeria

A.E. Oguntade, I.O. Ogunwande, O.O. Akinrinola and O. Idowu

Department of Agriculture and Resource Economics, Federal University of Technology, P.M.B. 704, Akure, Nigeria

ABSTRACT

This study was designed to investigate the determinants of the choice of selected timber species being traded in timber markets in Southwest, Nigeria. The study focused on three States in Southwest Nigeria which are Ondo, Ogun and Oyo States. The study relies mostly on primary sources of data sourced from the timber merchants in an open market. The primary data were collected using copies of well-structured and pre-tested questionnaires. A multistage sampling procedure was used to select 180 timber marketers as respondents for the study. Multinomial logit regression model was used to analyze the data obtained. Results revealed that timber price, durability, workability, variety of uses and availability among others significantly influence the determinants of the choice of selected timber species being traded in timber markets in the study area in different directions and probability levels. It was revealed that same factors may influence the choice of different timbers being traded in different directions and at different probability levels. While a particular variable may have positive influence on certain species, it may have negative influence on other species and/or of no effect on another species. Based on the findings from this study, perfect understanding of these factors by timber marketers would go a very long way in determining species to stock for sale which will ensure their steady progress in the business, hence association of timber marketers and government in terms of policies and regulations should be geared towards educating timber marketers on all factors that drive increased decision making on choice of species to stock for sale in the market.

Keywords: Timber; species; multinomial logit; southwest Nigeria

INTRODUCTION

Despite the strategic importance of the oil sector, agriculture still plays an important role in the Nigerian economy. It contributes 23.92% to nominal Gross Domestic Product (GDP) in Q2 of 2020 (National Bureau of Statistics, 2020 Quarterly Report). Inadequate rural infrastructure, limited access to credit, the widening technology gap in agriculture itself, rural-urban migration, and the use of cheap agricultural inputs are all factors contributing to agriculture's declining contribution to the nation's GDP over time. Commercial petroleum exploration is another factor (Ogbalubi and Wokocha, 2013). As an integral part of agriculture, forestry subsector, contributed an average of only 3.0% to the GDP (between

1960 and 2011). It however plays a major role in providing industrial raw materials (timber and non-timber forest products), providing incomes, as well as preserving biodiversity (Odetola and Etumnu, 2013).

Forest products comprise of timber and non-timber products with timber as the major one. Despite timber being the most abundant biodegradable and renewable material available, there are so many good reasons to ensure maximisation of its utilization in a sustainable manner (Nielsen, 2002). Timbers are known for varying degree of uses ranging from farming tools, building materials, furniture items, construction of bridges, musical instruments to barns. It is also a valuable industrial material of great use in making pulp and paperboard. Timber production in Nigeria comes mostly from the natural high forest zone of the country, in particular from the Southern states. Apart from government owned forest reserves, individuals invest in timber production for economic and social purposes. Timber and other wood products in local markets are obtained from sawn mills. These sawn mills account for the majority of the wood-based industries in Nigeria and these mills are majorly concentrated in southwest of southern part of Nigeria (Fuwape, 2001). Local sawn timber processing and marketing are sustainable sources of livelihood in the study area through employment opportunities and cash incomes. Arowosoge *et al.* (2010) reported that the furniture industry was growing steadily in Nigeria, and it depends largely on local sawn mills for raw materials. However, inadequate market information poses a great problem to would be investors in timber processing and marketing. The objective of this study is to identify factors determining the choice of timber species being traded in timber markets in southwest, Nigeria with a view to exposing timber marketers to first-hand information on stocking of species that would afford them sustainability in the enterprise.

MATERIALS AND METHODS

The Study Area

The study was carried out in southwest, Nigeria because of the major concentration of sawn mills in the region. Southwest Nigeria is located between latitudes $6^{\circ} 21'$ and $8^{\circ} 37'$ N and longitudes $2^{\circ} 31'$ and $6^{\circ} 00'$ E. It encompasses an area of territory that is roughly 114,271 km², or about 12% of the nation's total land area. There are six states that make up this region: Ekiti, Oyo, Ogun, Ondo, Lagos, and Osun (<https://cirddoc.org>). A predicted 38,257,260 people live there, with an overwhelmingly rural perspective (National Bureau of Statistics, 2017). The region is bordered on the north by the states of Kogi and Kwara states, the south by the Atlantic Ocean, the west by the republic of Benin, and the east by the states of Edo and Delta (Agboola, 1979; Faleyimuet *et al.* 2013).

Sampling Procedure, Sample Size and Data Collection Methods

Timber marketers were the respondents used for the study; they were selected using a multi-stage sampling procedure. The first stage was a purposive selection of three states from the Southwest, Nigeria. The states were Ogun, Ondo and Oyo States because of heavy lumbering activities in those states. The second stage was also purposive selection of two Local Government Areas (LGAs) due to the high concentration of timber markets in those LGAs. The LGAs chosen in the second stage were: Ondo state (Akure South and Odigbo LGAs), Ogun state (Abeokuta North and Ijebu-Ode LGAs) and finally Oyo State (Ibarapa

Determinants of choice of selected timber species traded in timber markets

East and Ido LGAs). The third stage also involved purposive selection of two major timber markets that were spatially located and characterized by active plank merchants, resulting in four markets in each state and 12 markets across the entire study areas. In Ondo state, Aje-Igbooro and Olukayode sawmills were selected in Akure South LGA, and Agbaara and Showboy sawmills were selected in Odigbo LGA. In Ogun State, Lanfewa and Olorunda 1 sawmills were selected in Abeokuta North LGA while ArowosegbeAgba and Oshin sawmills were selected in Ijebu-Ode LGA. In Oyo state, Sango-Eruwa and Otanyanrin-Eruwa were selected in Ibarapa East LGA while Omi and Command sawmills were selected in Ido LGA. The fourth stage involved a random sampling of fifteen plank marketers in each market to make a total of 60 plank marketers in each state and a total of 180 respondents for the entire study area. The timber species used for the study were pre-selected based on the study of Famuyide *et al.* (2012) and IITO (2005).

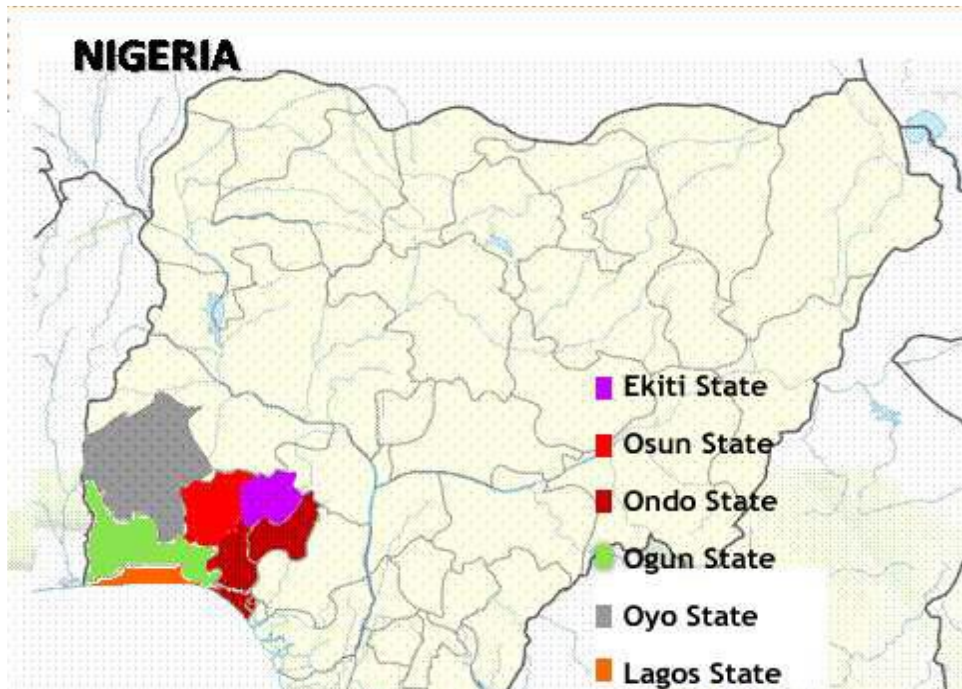


Figure 1: Map of Nigeria showing the south-western states

Analytical Techniques

Multinomial Logit (MNL) regression model was used in analysis of the determinants of choice of timber species being traded in the markets in the study area. The advantage of the Multinomial logit is that it permits the analysis of decisions across more than two categories and allowing the determination of choice probabilities for different timber species. MNL was employed to examine the factors that influence the main timber species being traded in timber markets in the area. The MNL is a generalization of the logistic regression model to the case where we have more than two outcomes, and where the outcomes are not

ordered. The Multinomial logit model is a popular econometric model for explaining the selection of an alternative from a set of exclusive alternatives. The standard Multinomial Model was used in this study, as was expressed by Maddala's probability function (1983). For the purpose of this study, the under listed timber species were pre-selected based on the study of Famuyide *et al.* (2012) that identified major timber species that have been in the market for trading in the past forty years and those timbers for export purposes, ITTO (2005).

Let Y_i be a random variable representing the timber categories or options which are: Araba (*Ceiba pentandra*), Omo (*Cordia milleni*), Mahogany (*Swietenia mahogoni*), Iroko (*Milicia excelsa*), Ayunre (*Albizia zygia*).

They were posed to the marketers to choose as appropriate and the values $\{1, 2, \dots, j\}$ for j take a positive integer, and Let X_i represents a set of conditioning explanatory variables as shown in the equation for the model is written in terms of the logit of the outcome. This is a comparison of a particular category to the reference category both denoted by π_j .

$$\ln \left[\frac{\pi_j}{\pi_1} \right] = \alpha_j + \beta_i X_i \dots\dots\dots 1$$

The multinomial logit model, which has more than two values for the dependent variable, is basically an expansion of the binary logit model. The probabilities of the $m+1$ alternative choices are (p_0, p_1, \dots, p_m) . An individual's likelihood of selecting option j is given by

$$P_{ij} = \text{prob} (Y=1) = \frac{e^{x_i \beta}}{1 + \sum_{j=1}^J e^{x_i \beta}}, \quad j = 1 \dots\dots\dots 2$$

Where β is a vector of parameters that satisfy $\log (P_{ij}/P_{ik}) = X' (\beta_j - \beta_k)$ (Greene, 2003).

In this case, the dependent variable, P (1 for the timber species chosen by the plank seller, 0 for the other species) and X_i , the vectors of explanatory variables (factors affecting the choice of timber species being traded in the market).

In general form, empirical multinomial logit model for this study will be specified as follows:

$$P_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \dots + \beta_{13} X_{13} + \epsilon_i \dots\dots\dots 3$$

Where:

P_i = choice of timber species ($j = 1, 2 \dots k$),

$\beta_1 - \beta_{13}$ = parameters to be estimated,

X_i = represents a set of conditioning explanatory variables and ϵ_i = error term

The explanatory variables are defined as follows:

X_1 = Price of the specie (Measured in naira)

X_2 = Amount of credit received (Measured in naira)

X_3 = Price of substitutes (Measured in naira)

X_4 = Workability (1 if easy, 0 otherwise).

X_5 = Variety of uses (1 if yes, 0 otherwise)

X_6 = Technology change (1 if yes, 0 otherwise)

X_7 = Years in timber business training (Number of years)

X_8 = Hardness (1 if hard, 0 otherwise)

X_9 = Species availability (1 if yes, 0 otherwise)

X_{10} = Durability of species (1 if durable, 0 otherwise)

X_{11} = Income from other sources (Measured in naira)

X_{12} = Profit margin from sale of species (Measured in naira)

X_{13} = Customers demand for species (Very strong = 3, Strong = 2, Low = 1)

RESULTS AND DISCUSSION

Factors Determining the Choice of Timber Species Traded

In determining factors influencing the major timber species being traded in the market, the timber species were pre-selected as timber species that have been in the market for the past forty years and serve as timbers for export purposes based on the previous study by Famuyide *et al.* (2012) and IITO (2005). Results of the multinomial logit model were presented in Table 1. The log likelihood value between the dependent and independent variables was -199.74163 and the likelihood ratio was 80.97. The model was significantly different from zero at 1% and shows the goodness of the fitness of the model. Of all the thirteen variables modelled, ten were found to be statistically significant in influencing decisions to choose timber species for sale in the market at different percentages for one or more timber species. However, all the statistically significant variables had signs of interest either in line with or contrary to the *a priori* expectation.

Price of the Species

Price of the timber species was statistically significant at ($p < 0.01$) and had positive relationship for both *Ceiba pentandra* (Araba) and *Albizia zygia* (Ayunre) while it was positively significant for *Cordia millenii*, *Swietenia mahogoni* and *Milicia excelsa* at ($p < 0.1$). The positive relationship was an indication that the variable increases the likelihood of the species being traded in the market. This implies that the higher the price of the specie, the higher the probability of the species being traded in the market. This is contrary to the *a priori* expectation. It might be that such species has varieties of uses and there was no substitute for their uses in the study area. This outcome is also possible because the more mature a timber is the more is its quality which could make it more expensive and with varieties of uses and no available substitutes, the higher will be its choice for trading in the market despite high price. However, this is contrary to the findings of Awe *et al.* (2019), who stated that low price is one of the factors for the choice of timber species being traded in the market.

Amount of Credit Received

The amount of credit received had a negative influence on the selection of *Swietenia mahogoni* (Mahogany) at $p < 0.05$ and *Cordia millenii* at $p < 0.1$ for sale in the market while it was not statistically significant for other species in the study area. The negative sign denotes a decreased possibility of selecting *Swietenia mahogoni* and *Cordia millenii* from among the available market options. The likelihood of selecting a specific species for sale in the market in the study area decreases with the quantity of credit received by timber merchants. This is feasible for species whose sales have not been impressive and for which credit has been given to other species. This result is contrary to the 'a priori' expectation and dissociates itself from the work of Cheteni and Mokhele (2019) who established positive relationship between access to credit and investments to overcome bankruptcy constraints.

Price of Substitutes

Price of substitutes, that is, the cost of alternatives to a specie was negatively significant as a variable at ($p < 0.05$) for *C. pentandra* (Araba). This is contrary to the *a priori* expectations. This outcome demonstrates that even at a low price of substitute, the possibility of *C. pentandra* (Araba) being traded in the market may not diminish. This has the implication that even when substitutes are less expensive, *C. pentandra* patronage may not decrease despite the fact that the substitute was used when *C. pentandra* was unavailable or too costly. Equally, Araba in question have variety of uses that not many planks can fit in to replace. This is supported by the study of Adegbenjo *et al.* (2021), who established that *Ceiba sp* (Araba) was the most lucrative of all timber species in the study area. This may be due to high demand for Araba which may be influenced by consumers' taste and preference.

Workability

Workability was found to be significant statistically at ($p < 0.01$) for *Cordia millenii* (Omo) and at ($p < 0.05$) for *Swietenia mahogany* (Mahogany) but had a positive relationship which means that workability of species increases the likelihood of choosing *C. millenii* for sale in the market. This implies that the easier the species was able to work with, the higher the chance of it being traded in the market. This conforms to the study conducted by Awe *et al.* (2019) which confirms colour and workability as some of the factors few sellers based their preference on in choosing traded timber species.

Variety of Uses

Variety of uses was statistically significant positively in influencing the choice of trading *C. pentandra* (Araba) and *Albizia zygia* (Ayunre) at ($p < 0.01$) and ($p < 0.05$) significant levels respectively. The variable had positive sign which implies that an increase in the variety of uses increases the likelihood of choice of *C. pentandra* and *A. zygia* being traded in the market in the study area. The more the number of uses of timber species, the higher the likelihood of its choice of being traded in the market. The finding agreed with "a priori" expectation and was in line with the findings of Adegbenjo *et al.* (2021), who opined that the lucrative and high demand nature of Araba may be influenced by preference and varieties of its application in term of uses.

Years in Training

The number of years used by a timber merchant in mastering the art of timber business was significant and had a positive relationship in influencing the choice of timber species being traded in the market in the study area. It was statistically significant ($p < 0.01$) for *C. pentandra* (Araba), ($p < 0.05$) for *S. mahogoni* (Mahogany), ($p < 0.05$) for *M. excelsa* (Iroko) and ($p < 0.05$) for *A. zygia* (Ayunre) at different probability levels. While it was significant ($p < 0.01$) for Araba, it was significant at ($p < 0.05$) level for others. The more the number of years of training, the more it influences the choice of timber species traded in the market. This is possible because the merchant would have gained much about the past market trends to predict his/her present situation. This agrees with *a priori* expectation and findings of Onya *et al.* (2016) where they observed that knowledge acquisition whether formal or

informal; grant the beneficiary of such knowledge better access to understanding the know-how of the enterprise and better processing of information regarding it. To corroborate the findings, again, Famuyide *et al.* (2012) asserted that the number of years the respondents have been in business implies that the majority of the respondents would have adequate knowledge and information about various timber species within the period of coverage of study.

Species Availability

Species availability was statistically significant ($p < 0.01$) for *C. millenii* (Omo), Mahogany and *A. zygia* (Ayunre) and *S. mahogoni* respectively. It has a negative relationship for *C. millenii* but had positive relationship for *S. mahogoni* and *A. zygia*. The negative relationship for Omo implies that the more readily available the species is the lower the likelihood of its choice being traded in the market while the positive relationship implies the more readily available the species is, the higher the probability of the choice of it being traded in the market. The negative relationship could be due to the fact that the uses of the species is limited or seasonal despite the fact that it was readily available while positive relationship could be that readily availability of the species go along with variety of uses it could be put to. This agrees with *a priori* expectation. This is in agreement with the finding of Awe *et al.* (2019), who asserted that low cost of species and availability of the species are important factors for choice of timber species to be traded.

Durability of Species

Durability of species was statistically significant for *C. millenii* (Omo) and *A. zygia* (Ayunre) at 5% confidence level. The variable had positive relationship with the choice of timber species being traded in the market. The positive relationship implies that the more durable a species is, the higher the likelihood of such species being chosen for sale in the market in the study area. This agrees with *a priori* expectation and conforms to the study conducted by Idumah and Awe (2011) who observed the choice of wood species by furniture makers within Ibadan metropolis was based on hardness (strength) and durability.

Profit Margin

Profit margin was also statistically significant ($p < 0.05$) for *C. pentandra* (Araba), Mahogany and *A. zygia* (Ayunre) while *Milicia excelsa* was statistically significant at 10% confidence level. The variable had positive relationship which was an indication that it increases the likelihood of the choice of timber species being traded in the study area. The more the profit accrued to a particular species, the higher the probability of such species being traded in the market in the study area. This agrees with the *a priori* expectation. This study agrees with the findings by Larinde and Olasupo (2011), who confirmed that *C. pentandra* (Araba) had the highest return on investment and confirming that it is most lucrative and highly demanded. Adegbenjo *et al.* (2021), confirm that Araba is most profitable and thus mostly traded.

Customers Demand

Customers demand was positively signed and statistically significant at ($p < 0.05$) for *C. millenii* (Omo) and *M. excelsa* (Iroko) species. The positive relationship indicates that the

variable increases the likelihood of those timber species being traded in the market. This implies that the higher the demand for a particular species by customers, the higher the probability of choosing such species for sale in the market. This is in line with “a priori” expectation and agrees with the findings of Awe *et al.* (2019), which asserted that the choice of timber species being traded in the market depends largely on customers’ demand.

However, with respect to technology change, hardness of the species and income from other sources, they were not statistically significant in determining the choice of timber species being traded in the market.

CONCLUSION

The study employed multinomial logit regression model to achieve its objectives. The findings from the study revealed that the choice of timber species (pre-selected) being traded in the market is being driven by a host of statistically significant factors. It was observed that those significant factors influence the selected timber species differently either positively or negatively.

The study unequivocally demonstrated that the degree of ease of work on any timber species and varieties of uses coupled with the years spent in training by prospective timber marketers played a great role in the decision making with respect to timber species being traded in the study area. In this wise, association of timber marketers should come up with policies and regulations at ensuring availability of timber species with ease of workability and varieties of uses and also ensure that marketers have wide experience through their years of training. The government should also come up with policies through Forestry and Agricultural Services Departments that will drive investors towards investing in cultivation of these timber species at plantation level ranging from trainings in silvicultural practises. Of these species and making of their seedlings available among others.

REFERENCES

- Adegbenjo, A.E., Odeyale, O.C., Adebari, T.O., Adedokun, M.O. and Kareem, I.A. (2021). Economic analysis of major wood species sold in plank markets in Alimosho Local Government area, Lagos State, Nigeria. *Journal of Research in Forestry, Wildlife and Environment*, 13(3): 82-90.
- Agboola, S. A. (1979). *An agricultural Atlas of Nigeria*. Oxford University Press, Nigeria. Pg248.
- Arowosoge, O.G.E., Adeyoju, S.K., and Bada, S.O. (2010). Lesser used wood species and their relevance to sustainability of tropical forests. *Readings in Sustainable Tropical Forest Management*, 305-322.
- Awe, F., Kolade, R. I. and Ogunsola, A.J. (2019). Assessment of timber species availability in selected sawmills and timber markets in Kogi State, Nigeria. *Journal of Research in Forestry, Wildlife & Environment*, 11(3): 239-245.
- Cheteni, P., and Mokhele, X. (2019). Small scale livestock farmers’ participation in markets: Evidence from the land reform beneficiaries in the Central Karoo, Western Cape, South Africa. *South African Journal of Agricultural Extension*, 47(1):118 – 136.
- Faleyimu, O.I., Agbeja, B.O. and Akinyemi, O. (2013). State of forest regeneration in Southwest Nigeria. *African Journal of Agricultural Research*, 8(26): 3381-3

Determinants of choice of selected timber species traded in timber markets

- Famuyide, O. O., Adebayo, O., Odebode, A. V., Awe, F., Ojo, O. B., and Ojo, D. (2012). Timber species availability and variation in Ibadan and Oyo timber markets over the last forty years. *Elixir Biodiversity*, 49(2012): 10131-10136.
- Fuwape J.A. (2001). The impact of forest industry and wood utilization on the environment. *Journal of Tropical Forest Resource*, 17(2) 6-10.
- Idumah, F. O., and Awe, F. (2011). Assessment of the types of wood used in the furniture making industry in Ibadan metropolis. *Journal of Sustainable Environmental Management*, 3:117-121.
- ITTO (2005). Status of tropical forest management 2005. *ITTO Technical Series, No 24*, 2006 Pp 32. International Tropical Timber Organisation
- Maddala, G.S. (1983). *Limited Dependent and Qualitative Variables in Econometrics*. New York: Cambridge University Press.
- National Bureau of Statistics (2017). Nigeria gross domestic report Q3, 2017. Abuja National Population Commission (NPC), 2006 *Census Figure 2006*, Abuja.
- Odetola, T. and Etumnu, C. (2013). Contribution of agriculture to economic growth in Nigeria. Paper presented at the 18th Annual Conference of the African Econometric Society (AES) Accra, Ghana at the session organized by the Association for the Advancement of African Women Economists (AAWE), 22nd and 23rd July, 2013.
- Ogbalubi, L.N. and Wokocha. C. (2013). Agricultural development and employment generation: The Nigeria Experience. *Journal of Agriculture and Veterinary Science*, 2: (2): 60-69.
- Onya, S.C., Oriala, S.E., Ejiba, I.V. and Okoronkwo, F.C. (2015). Market participation and value chain of cassava farmers in Abia State. *Journal of Scientific Research and Reports*, 12(1): 1-11

Table 1: Factors influencing timber species (pre-selected) traded in timber markets (multinomial logit)

Variables	<i>C. pentandra</i>		<i>C. millenii</i>		<i>S. mahogoni</i>	
	Coeff	P-value	Coeff	P-value	Coeff	P-value
Timber Price	9.79e-04*** (0.0002073)	0.000	2.87e-04* (0.000169)	0.085	2.84e-04* (0.000153)	0.062
Credit Amount	-3.97e-07 (2.08e-07)	0.56	-1.3e-07* (7.54e-08)	0.081	-1.41e-07** (6.35e-08)	0.027
Substitute Price	1.99e-04** (0.0000829)	0.016	-7.64e-05 (0.000599)	0.202	-5.88e-05 (0.000527)	0.265
Workability	0.118 (0.1675573)	0.480	0.032*** (0.0057889)	0.000	0.050** (0.025280)	0.050
Technology Change	0.095 (0.1499484)	0.528	-0.048 (0.0509042)	0.346	0.014 (0.0061881)	0.021
Variety of Uses	0.093*** (0.0185342)	0.000	0.033 (0.0322365)	0.303	0.030 (0.0304398)	0.324
Years of Training	0.012*** (0.0029478)	0.000	0.005 (0.0038783)	0.161	0.003** (0.0015716)	0.046
Hardness	-0.051 (0.0824335)	0.539	0.013 (0.0308682)	0.665	-0.022 (0.0246865)	0.382
Availability	-0.001 (0.0801114)	0.994	-0.008** (0.003404)	0.024	0.006*** (0.0013618)	0.000
Durability	0.456 (12.99628)	0.972	0.116** (0.0563838)	0.041	0.219 (7.576133)	0.977
Income from other source	0.005 (0.0636213)	0.934	0.003 (0.0013354)	0.040	0.004 (0.0016963)	0.016
Profit Margin	9.89e-07** (5.05e-07)	0.050	3.10e-07 (1.91e-07)	0.104	3.76e-07** (1.63e-07)	0.021
Customers' Demand	0.353 (23.24149)	0.988	0.072** (.0357474)	0.044	0.191 (13.54829)	0.989

Note: ***, ** and * represent 1%, 5% and 10% significant levels respectively, Coeff = Coefficient, Standard error in parenthesis. Source: Computed from field data, 2021

Determinants of choice of selected timber species traded in timber markets

Table 1 *Continued*

Variables	<i>M. Excelsa</i>		<i>A. zygia</i>	
	Coefficient	P-value	Coefficient	P-value
Timber Price	2.63e-04* (0.0000443)	0.081	2.06e-04*** (0.0000448)	0.000
Credit Amount	-1.53e-07 (8.92e-08)	0.86	-1.24e-07 (6.43e-08)	0.54
Substitute Price	-8.28e-05 (0.000681)	0.224	-6.34e-05 (0.000527)	0.229
Workability	-0.044 (0.0659764)	0.508	-0.037 (0.0513784)	0.468
Technology Change	0.050 (0.0013024)	0.007	0.036 (0.0192684)	0.342
Variety of Uses	0.036 (0.0383331)	0.342	0.029** (0.0144140)	0.044
Years of Training	0.005** (0.0023295)	0.024	0.004** (0.0018448)	0.036
Hardness	-0.018 (0.032807)	0.591	-0.155 (0.0256553)	0.546
Availability	-0.002 (0.0313089)	0.938	0.001** (0.0004448)	0.043
Durability	0.120 (2.319287)	0.959	0.112** (0.0550996)	0.042
Income from other source	-0.003 (0.0259173)	0.916	0.003 (0.0013042)	0.054
Profit Margin	3.64e-07* (2.00e-07)	0.070	3.00e-07** (1.48e-07)	0.042
Customers' Demand	0.078** (0.037289)	0.036	0.083 (4.851173)	0.986