



To Study the Role of Forest –Based Industries in Promoting Trade

Ramanand Mishra¹, Dr. Basanti Mathew Merlin²

¹*Asst. professor, Commerce & Management, St. Mary's P.G. College Vidisha, Madhya Pradesh, India.*

²*Head, Department of Commerce, Ravindranath Tagore University Bhopal, India.*

OPEN ACCESS

Article Citation:

Ramanand Mishra¹, Dr. Basanti Mathew Merlin² “, To Study the Role of Forest –Based Industries in Promoting Trade”, International Journal of Recent Trends In Multidisciplinary Research, January-February 2024, Vol 4(01), 26-31.

©2024The Author(s). This is an open access article distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Published by 5th Dimension Research Publication

Abstract: Since the prevailing business model is based on capturing comparative advantages at the right cost, the forest products industry has made strong efforts to open up to global trade. In many emerging countries, forests are valued, processing industries seek more employment, and raw materials seek additional value (Lash, J., & Wellington, F. (2007)). In the forest products industry, international investors are willing allies; however, they wish to ensure the macroeconomic climate is predictable, transparent fiscal incentives are in place, and there is an abundance of labor - and preferably a sustainable wood supply from the beginning. The domestic market should be dynamic in order to attract foreign investments since many emerging economies have bustling urban markets that lack high-quality forest products.

1. Introduction

A number of emerging countries have experienced economic growth and poverty eradication due to increases in forest product trade. It has proven difficult for some countries to trade their way out of poverty, leading to further marginalization and misconduct. In order to ensure that trade is legal, sustainable and based on fair labor conditions and a fair distribution of benefits, adequate safeguards must be put in place (Pearce, J. M. et. al. (2014)). The establishment of sustainable policies and regulations requires effective governance.

Increasingly, environmental issues are influencing trade, both directly and indirectly. As a result, environmental policies and international agendas on trade have been recognized as a common international concern partially because the regulations impact the competitiveness of the environment. Consequently, imports and exports are influenced. Environmental concerns are underlying concerns. Trade can also affect quality and deplete resources. However, natural resource management cycles occur. Trade policies, environmental concerns, and political reforms of macroeconomic policies will likely continue to dominate public debate (International Resource Panel, United Nations Environment Programme. Sustainable Consumption, & Production Branch. (2011)). Developed countries have increased exports, which have led to environmental groups focusing on commodities. Multilateral agreements on the impacts of such policies on natural resources do not constitute a trade policy under environmental standards.

There is evidence that these impacts are negative, but they have not been thoroughly assessed. Consequently, the World Trade Organization (WTO) has established a working program on trade and policy, probably the most complex sector from the perspective of land use, since the General Agreement on Tariffs and Trade (GATT) has become more important in recent years. The environment contains a significant amount of forest resources. A large part of NAFTA's land area is the environment, and their survival is vital if the agreement is to succeed. (Segura, O. et. al. (1994)).

A number of factors contribute to improper harvesting practices. Forests are increasing in importance regionally and are essential in maintaining biological systems. Multilaterally, this can be attributed to recent reductions in forest cover, but this role is only fully appreciated once traditional barriers to imports have been removed. Once these forest exports are gone, this effect is no longer apparent. In part because the deforestation problems that arise outside the sector itself are the origins of the exposure of national economies to competition, attention has shifted more sharply to inter-sectoral coordination in policies. The forest provides habitat for the majority of world's environmental standards that influence biodiversity,

To Study the Role of Forest –Based Industries in Promoting Trade

including cost-raising domestic policies. The forest contributes significantly to international competition among businesses.

As a result, they are one of the largest sources of foreign exchange. This is especially true when a new player enters the scene with lower exchange earnings than many developing countries (Anderson 1995). Environmental trade debates focus on revenues generated by the environmental trade sector for the purpose of financing investment in resource management and utilization. However, mixed effects of policy instruments have resulted in policy failures on a national and international scale. For instance, developing countries have a low rent capture rate. A classical problem further complicates this. Economic development should take precedence over the conservation of the world's forests, leading to environmental conservation, and this is largely a matter of time preference, which is a topic of debate in many planning horizons (Agarwal, B. (2010)). As part of the standard-setting process, environmental issues were raised, and they are relevant to the management of forests as well.



To study the role of forest-based industries in promoting trade.

To achieve objective 1 of the study, the following two alternate hypotheses are formulated:

H_a: Respondents' perceptions on the role of forest-based industries in promoting trade significantly differ across different experience groups.

H_b: Respondents' perceptions on the role of forest-based industries in promoting trade significantly differ across designations.

The present study incorporated a set of five questions/items, utilising a five-point Likert scale, in order to ascertain the perceptions of respondents on the role of forest-based sectors infacilitating trade. Therefore, the gathered responses reflect the beliefs of survey participants regarding the ability of forest-based companies to promote trade in Madhya Pradesh.

Experience		The product of a forest-based industrial institute given a boost to business.	Are there more forest-based industries (business) in Madhya Pradesh than other states?	Do you agree that due to the high forest area in Madhya Pradesh, the trend of people in wood business has increased?	Due to the high price of teak wood, more profit can be made, hence the trade of teak has increased.	Due to various types of materials obtained from forests, people benefit from forest-based industries.
0-3 years	Mean	2.39	2.28	2.52	2.67	3.26
	N	54	54	54	54	54
	Std. Deviation	1.265	1.393	1.270	1.374	1.417
4- 7years	Mean	3.36	3.83	2.37	3.38	3.62
	N	115	115	115	115	115
	Std. Deviation	1.346	1.415	1.518	1.478	1.399
8- 11 years	Mean	3.36	3.40	3.33	3.26	3.30
	N	144	144	144	144	144
	Std. Deviation	1.221	1.454	1.409	1.499	1.374
more than 11 years	Mean	4.20	3.94	3.88	3.99	3.82
	N	85	85	85	85	85
	Std. Deviation	1.307	1.373	1.460	1.471	1.384

Average scores of the responses*Experience

Table - presents the average scores for each of the five items, which were utilized to examine the participants' perspectives regarding the contribution of forest-based sectors in facilitating trade. It is evident that respondents with greater levels of experience, specifically those with 8-11 years and more than 11 years, exhibited a higher degree of agreement compared to respondents with experience ranging from 0 - 3 years and 4 -7 years. This is supported by the observation that the average score for these two experience groups hovers around 4, indicating their agreement regarding the ability of forest-based industries to facilitate trade.

Table - below shows results of one-way ANOVA for the average scores of the five questions on the role of forest-based in promoting trade across four experience groups. Results are found to be statistically significant (Sig < 0.05) for all the five questions. Hence, H_{11a}: Respondents' perceptions on the role of forest-based industries in promoting trade significantly differ across different experience groups is NOT rejected. It can be concluded that a significant difference exists across four experience groups regarding their perception on the role of forest-based industries in promoting trade and the respondents with greater levels of experience, specifically those with 8-11 years and more than 11 years, exhibited a higher degree of agreement that forest-based industries facilitate trade.

Table - One-way ANOVA: the Role of Forest-Based Industries in Promoting Trade*Experience

		Sum of Squares	df	Mean Square	F	Sig.
The product of a forest-based industrial institute given a boost to business.	Between Groups	10.844	3	3.615	2.19**	.039
	Within Groups	648.038	394	1.645		
	Total	658.882	397			
Are there more forest-based industries (business) in Madhya Pradesh than other states?	Between Groups	12.857	3	4.286	2.13**	.041
	Within Groups	791.698	394	2.009		
	Total	804.555	397			
Do you agree that due to the high forest area in Madhya Pradesh, the trend of people in wood business has increased?	Between Groups	14.289	3	4.763	2.31**	.034
	Within Groups	811.131	394	2.059		
	Total	825.42	397			
Due to the high price of teak wood, more profit can be made, hence the trade of teak has increased.	Between Groups	15.031	3	5.010	2.31**	.035
	Within Groups	852.305	394	2.163		
	Total	867.336	397			
Due to various types of materials obtained from forests, people benefit from forest-based industries.	Between Groups	15.375	3	5.125	2.65**	.026
	Within Groups	760.449	394	1.930		
	Total	775.824	397			

Note: Signif. Codes: 1% '***' 5% '**' 10% '*'

Given that the data did not exhibit a normal distribution, Hypothesis 1 was additionally assessed using the Kruskal Wallis test. The findings indicate that there is no significant disparity observed between the outcomes obtained from conducting a one-way ANOVA and a Kruskal Wallis test.

Table - Robustness check: Kruskal Wallis Test *Experience

The product of a forest-based industrial institute given a boost to business.	Chi-Square	7.08**
	Df	3
	Asymp. Sig.	.028
Are there more forest-based industries (business) in Madhya Pradesh than other states?	Chi-Square	8.59**
	Df	3
	Asymp. Sig.	.040
Do you agree that due to the high forest area in Madhya Pradesh, the trend of people in wood business has increased?	Chi-Square	9.95**
	Df	3
	Asymp. Sig.	.045
Due to the high price of teak wood, more profit can be	Chi-Square	9.97**

To Study the Role of Forest –Based Industries in Promoting Trade

made, hence the trade of teak has increased.	Df	3
	Asymp. Sig.	.039
Due to various types of materials obtained from forests, people benefit from forest-based industries.	Chi-Square	8.33**
	Df	3
	Asymp. Sig.	.041

Note: Signif. Codes: 1% '***' 5% '**' 10% '*'

The five questions regarding the contribution of forest-based sectors to trade promotion were further examined using designation as a grouping variable. The average scores for these questions are presented in Table 9. It is evident that supervisors and managers had a greater frequency of positive responses compared to laborers, as indicated by their higher average scores of 3 or above. Therefore, it may be inferred that both of these classification levels concur that forest-based companies have the capacity to facilitate trade. However, it is possible to determine the statistical significance of this observed difference by conducting a test utilizing the results of a one-way analysis of variance (ANOVA), as presented in Table 10.

Table - Average scores of the responses * Designation

Designation		The product of a forest-based industrial institute given a boost to business.	Are there more forest-based industries (business) in Madhya Pradesh than other states?	Do you agree that due to the high forest area in Madhya Pradesh, the trend of people in wood business has increased?	Due to the high price of teak wood, more profit can be made, hence the trade of teak has increased.	Due to various types of materials obtained from forests, people benefit from forest-based industries.
Labour	Mean	2.47	2.39	2.24	2.41	2.28
	N	164	164	164	164	164
	Std. Deviation	1.275	1.434	1.449	1.477	1.408
Supervisor	Mean	3.31	3.36	3.49	3.37	3.23
	N	111	111	111	111	111
	Std. Deviation	1.256	1.426	1.413	1.519	1.353
Manager	Mean	4.16	4.24	4.20	4.27	4.27
	N	123	123	123	123	123
	Std. Deviation	1.295	1.391	1.443	1.426	1.397

Results of one-way ANOVA reveal that there exists a statistically significant difference in the responses of the three designation levels because Sig. or p-value <0.05 in each of the five questions. Hence H_{1b} : Respondents' perceptions on the role of forest-based industries in promoting trade significantly differ across designations is NOT rejected and it can be concluded that the respondents believe that forest-based industries can facilitate trade.

Table - One-way ANOVA: the Role of Forest-Based Industries in Promoting Trade* Designation

		Sum of Squares	df	Mean Square	F	Sig.
The product of a forest-based industrial institute given a boost to business.	Between Groups	16.701	2	8.351	5.12**	0.00
	Within Groups	643.181	395	1.628		
	Total	659.882	397			
Are there more forest-based industries (business) in Madhya Pradesh than other states?	Between Groups	11.783	2	5.892	2.92**	.02
	Within Groups	794.773	395	2.012		
	Total	806.555	397			
Do you agree that due to the high forest area in Madhya Pradesh, the	Between Groups	15.527	2	7.764	3.75**	.002
	Within Groups	815.892	395	2.066	*	

To Study the Role of Forest –Based Industries in Promoting Trade

trend of people in wood business has increased?	Total	831.42	397			
Due to the high price of teak wood, more profit can be made, hence the trade of teak has increased.	Between Groups	11.53	2	5.765	2.65**	.031
	Within Groups	857.807	395	2.172		
	Total	869.337	397			
Due to various types of materials obtained from forests, people benefit from forest-based industries.	Between Groups	10.211	2	5.106	2.64**	.032
	Within Groups	762.613	395	1.931		
	Total	772.824	397			

Note: Signif. Codes: 1% '***' 5% '**' 10% '*'

Given that the data did not exhibit a normal distribution, Hypothesis 1b was additionally assessed using the Kruskal Wallis test. The findings indicate that there is no significant disparity observed between the outcomes obtained from conducting a one-way ANOVA and a Kruskal Wallis test.

Table - Robustness check: Kruskal Wallis Test * Designation

The product of a forest-based industrial institute given a boost to business.	Chi-Square	12.15***
	Df	2
	Asymp. Sig.	.005
Are there more forest-based industries (business) in Madhya Pradesh than other states?	Chi-Square	10.15**
	Df	2
	Asymp. Sig.	.034
Do you agree that due to the high forest area in Madhya Pradesh, the trend of people in wood business has increased?	Chi-Square	12.57***
	Df	2
	Asymp. Sig.	.006
Due to the high price of teak wood, more profit can be made, hence the trade of teak has increased.	Chi-Square	9.82**
	Df	2
	Asymp. Sig.	.061
Due to various types of materials obtained from forests, people benefit from forest-based industries.	Chi-Square	9.06*
	Df	2
	Asymp. Sig.	.052

Note: Signif. Codes: 1% '***' 5% '**' 10% '*'

2. Finding Related To Objective

The objective of the study was “to study the role of forest-based industries in promoting trade”. In order to attain the first objective, the following two alternate hypotheses were formulated. Therefore, the outcomes derived from testing each of the two sub-hypotheses are sequentially examined and discussed below.

H_{11a}: Respondents’ perceptions on the role of forest-based industries in promoting trade significantly differ across different experience groups.

This study included five questions in the questionnaire, utilizing a Likert scale with five response options, to assess the perspectives of participants regarding the extent to which forest-based sectors contribute to the facilitation of commerce. The findings of the study indicate that respondents with extensive experience, particularly those with 8-11 years and more than 11 years, demonstrated a stronger level of agreement compared to respondents with less experience ranging from 0-3 years and 4-7 years. This suggests that experienced individuals hold a similar viewpoint regarding the capacity of forest-based industries to facilitate trade. The statistical analysis of the average scores of the five questions about the role of forest-based in fostering commerce across four experience groups yielded significant results ($p < 0.05$) in a one-way ANOVA. Therefore, the alternate hypothesis H_{11a}, which states that there are significant differences in respondents' perspectives on the importance of forest-based sectors in fostering trade across different experience groups, was not rejected.

H_{11b}: Respondents’ perceptions on the role of forest-based industries in promoting trade significantly differ across designations.

This study also formulated another alternate hypothesis to assess the perspectives of participants regarding the extent to which forest-based sectors contribute to the facilitation of commerce across designations. Results reveal that supervisors and managers had a greater frequency of positive responses compared to laborers, as indicated by their higher average scores of 3 or above. Therefore, it may be inferred that both of these classification levels concur that forest-based companies have the capacity to facilitate trade. Results of one-way ANOVA reveal that there exists a statistically significant difference in the responses of the three designation levels because Sig. or p-value < 0.05 in each of the five questions. Hence

To Study the Role of Forest –Based Industries in Promoting Trade

H_{1b}: Respondents' perceptions on the role of forest-based industries in promoting trade significantly differ across designations was not rejected.-

3. Conclusion

The objective investigated the role of forest-based enterprises in boosting trade. It can be concluded that there is a significant difference in perceptions of the role of forest-based industries in promoting trade across four experience groups, with respondents with greater levels of experience, specifically those with 8-11 years and more than 11 years, exhibiting a higher degree of agreement that forest-based industries facilitate trade. Supervisors and managers also had a larger frequency of positive replies than laborers, as evidenced by their higher average ratings. Because this study discovered a significant difference between the three levels of designation, it is possible to conclude that both of these designation levels recognize that forest-based firms have the capacity to support trade.