

A Study on Trend of Logs Production and Export in the State of Sarawak, Malaysia

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Abstract

This study was conducted to determine the trend of logs production and export in the state of Sarawak, Malaysia. The trend of logs production in this study referred only to hill and peat swamp forest logs production with their species detailed production. The trend of logs export was divided into selected species and destinations. The study covers the analysis of logs production and export for a period of ten years from 1997 to 2006. Data on logs production and export were collected from statistics published by the Sarawak Timber Industry Development Corporation (Statistic of Sarawak Timber and Timber Product), Sarawak Timber Association (Sarawak Timber Association Review), Hardwood Timber Sdn. Bhd (Warta) and Malaysia Timber Industry Board (MTIB). The trend of logs production and export were analyzed using regression model and times series. In addition, the relation between hill and peat swamp forest logs production with their species and trend of logs export by selected species and destinations were conducted using simple regression model and descriptive statistical analysis. The results depicted that volume of logs production and export by four major logs producer (Sibu division, Bintulu division, Miri division and Kuching division) for hill and peat swamp forest showed a declining trend. Result showed that Sibu division is the major logs producer for hill forest while Bintulu division is the major producer of logs produced for the peat swamp forest. The main species produced by both hill and peat swamp forest is Meranti (*Shorea* spp.). Eight selected species for the exported logs were Meranti, Kapur, Keruing, Selangan Batu, Sepetir, Nyatoh, Mersawa and Bindang. Among the eight selected species, Meranti is the main logs volume exported by Sarawak. The eight major logs export destinations by Sarawak were Japan, South Korea, Taiwan, Hong Kong, China, India, Thailand and Singapore. The entire eight destinations showed decreasing trend except India. As a conclusion, the trend of logs production and export in the state of Sarawak for 1997 to 2006 showed a declining trend.

Keywords: Log production, Hill and peat swamp forest, Trend, Export, Sarawak, Malaysia

1. Introduction

Malaysia is a tropical country with total land area approximately 32.9 million hectares. Malaysia is a federation of 13 states, made up of 11 states in Peninsular Malaysia (13.2 million hectares), Sabah (7.4 million hectares) and Sarawak (12.3 million hectares). Sarawak is the largest state in Malaysia with an area of 124,449.51 square kilometres, or 37.5% of the country's total area. It is located between latitude 0° 50' N and 5° N and longitude 109° 36' E and 115° 40' E. About three-quarters or 70 per cent of the state is forested land. The forests are very extensive and are comprised of many species of trees. Most of the forest consists of small to medium sized trees often festooned with various kinds of creeper and climbing palms or rattans. The trees mostly belong to the great tropical family of hardwood Dipterocarps (Fadzilah, 1999). Sarawak's forestry and the forest industry play a significant part in its socio-economic development. Forest harvesting has been a major contributor to Sarawak's economy. As a naturally renewable resource, the state's forests will, in the years to come, continue to rake in revenue and foreign exchange earnings for the state and to provide employment opportunities for the people. The forest-based industries in Sarawak generate economic activities by providing added income and employment opportunities through downstream processing and the development of value-added products for the domestic and export markets. The contribution of the timber industries is fluctuated in trend due to forest policies in development of timber trade and wood based industries, and the licensing system applying in the states (Pakhriazad *et al.*, 2006; Pakhriazad and Mohd Hasmadi, 2009).

The capacity of log production and input into the mills is actually not much different, however the export were effect by several reasons. This can be explained by the trend of logs production and export in the Sarawak state especially from the hill and peat swamp forest which is uncertain since ten years ago (Low, 2006). The understanding of the trend is merely important to the state for revenue and formulates a policy on the forest resources. Therefore, this study was undertaken to determine the trend of logs production and export in the state

of Sarawak, Malaysia. The study covers the analysis of logs production and export for a period of ten years from 1997 to 2006.

2. Methodology

2.1 Study site and data collection

The study was undertaken in the state of Sarawak specifically in the division of Sibul, Bintulu Miri and Kuching. Two approaches were used in collecting the data which were direct interview and the review of the official documents. The study covers the analysis of logs production and export for a period of ten years from 1997 to 2006. Interviews were carried out with representatives from Malaysia Timber Industry Board (MTIB), Sarawak Forestry Corporation in Kuching, Sibul, Bintulu and Miri Branch offices, Sarawak Timber Industry Development Corporation (STIDC), Sarawak Timber Association (STA), Samling Company Sdn. Bhd., Rimbunan Hijau Sdn. Bhd, Tai Ann Sdn. Bhd and other timber industries private sectors. The interviews focus on investigated the trend and current situation of logs production and export in the state of Sarawak. The review of documents included the government and private sector economic reports especially from Sarawak Forestry Corporation in Kuching, Sibul, Bintulu and Miri Branch offices, Sarawak Timber Association, Harwood Timber Sdn. Bhd., Forestry Department Peninsular Malaysia and Malaysia Timber Industry Board. The trend of logs production and export were analyzed using regression model and times series. The relation between hill and peat swamp forest logs production with their species and trend of logs export by selected species and destinations were conducted using simple regression model and descriptive statistical analysis. Information from this review and the trend and current situation of logs production and export obtained in the state of Sarawak were analysed.

3. Results and discussion

Analysis of this studies are carried out by using the data log production and export (in m³) in the state of Sarawak. The analysis includes the trend of log production and export using regression analysis and times series. Besides that, descriptive statistical was used to compute the average of logs production species by hill and swamps forest and logs export of volume by selected species. The analyses trends of logs production in Sarawak were divided into log production by hill and swamp forest with their species. Overall, the logs production shows a declining trend over ten year period.

The serious plummet of logs production occurred in year 1998 where the logs production was only 11.30 million m³ with a reduction of 30.7% compared to the previous year, 16.32 million m³. This was due to the financial crisis in 1997 and 1998 impact which slowed down the logging industry activities and cause the logs production to decrease as well. The overall decrease in volume of logs production was also due to the sustainable forest management which was more sought by the Sarawak government after the financial crisis. The Sarawak's log productions were divided into two major sections which are logs production by hill and swamp. The four main divisions of log producers are Kuching, Sibul, Bintulu and Miri. Total forested area for the four major logs production division in Sarawak is 4,435,067 hectares where Sibul division is the major logs production in Sarawak with it total forested area, 2,129,242 hectares and followed by Miri, 1,234,794 hectares and Bintulu, 1,071,031 hectares. Kuching has less logging area (Salvage logging) and most of the area has become a protected area. Overall, both sections of log productions showed a declining trend from 1997 to 2006 (Fig.1). The main species produced for both hill and swamp species were Meranti (*Shorea spp.*).

The trend of logs export by the state of Sarawak over the year 1997 to 2006 is presented in Fig. 2. Largely, the trend of logs export is stable and slightly decreasing. The trends of logs export were divided into export of logs by selected species and by destinations. Fig. 2 shows that in the year 1998, the volume of exporting logs decreased from 6.361 million m³ to 5.108 million m³ compared to the previous year, 1997. Exportation of logs show decreased as the volume of logs decreased due to financial crisis in 1997. In 1999 and 2000, the export of logs increased to 5.968 million m³ and 6.141 million m³ respectively. By the year 2001 and 2002, the logs export decreased 21.9% and 5.4% respectively compared to the previous year. There was a slight increase in 2003 with the total volume of logs export, 4.769 million m³ but it show a decreased of 9.5% in the following year. In year 2005 and 2006, the total export volumes were 4.338 million m³ and 3.794 million m³ respectively. The decrease in log production volume will indirectly cause the export of logs to decrease and vice versa.

Fig. 3 showed the eight selected species for export were Meranti (*Shorea spp.*), Kapur (*Dryobalanops spp.*), Keruing (*Dipterocarpus spp.*), Selangan Batu (*Shorea spp.*), Sepetir (*Sindora spp.*), Nyatoh (*Palaquium spp.*), Mersawa (*Anisoptera spp.*) and Bindang (*Agathis spp.*). Based on the results, all the species showed an unstable trend. The decreasing volume of logs export by species was due to the decreasing volume of logs production by the state of Sarawak. Meranti was the major species selected for logs export in Sarawak. Fig. 4 showed the trend of logs export by destinations over period 1997 to 2006 in Sarawak. The eight major destinations of logs export

by Sarawak are Japan, South Korea, Taiwan, Hong Kong, China, India, Thailand and Singapore. From the results, all countries of logs export except India showed a declining trend. Japan is the major logs export destination by Sarawak since 1980s shows the decreasing trends after the financial crisis in 1997. The cut down volume of logs import from Japan affects the state revenue in timber industry. Countries like China, Taiwan, South Korea, Hong Kong, Thailand and Singapore also reduced in its import of logs from Sarawak, directly influencing the import of logs from Sarawak. However, the demand of logs export to India was increased due to the insufficient tropical logs supply from its supplier such as Myanmar (STIDC, 2008). India imports tropical logs for the purpose of housing construction and building work. The main cause of logs export decrease in Sarawak was due to the major buyers such as Japan and China have reduced their import of logs from Sarawak. The stiff competition from Russia, the U.S.A, Canada and other western countries in the market of softwood logs also contributed to reduce in log export by Sarawak (STIDC, 2007). China reduced its import of logs from Sarawak mainly because of their ply mill demand to softwood is higher where softwood is cheaper than the tropical logs. The other major importer of logs such as Japan, China, Taiwan and others countries are also reduced imported logs from Sarawak

4. Conclusion

The logs production and export trends in the state of Sarawak for the period of 1997 to 2006 showed declining trends. Productions of logs in Sarawak were divided into hill and swamp forest. Sibuluan division is the main logs production by hill forest with the total average 5.7 million m³ and follow by Bintulu division, Miri division and Kuching division while for logs production by swamp forest, Bintulu division is the main logs producer with the total average 4.7 million m³. Logs production species by hill and swamp forest showed a declining trend. Meranti is the main timber species produced by both hill and swamp forest in Sarawak because Meranti is mostly found in lowland and hill mixed dipterocarp forest. Production of timbers species for hill forest is mainly from the Dipterocarp family such as Meranti, Kapur and Keruing while for swamp forest, species are such as Ramin, Alan and Jongkong. The trend of logs export in Sarawak declined as the volume of log export were directly proportional with the volume of log production and also the importer countries reduced the demand of logs volume. The trends of logs export are divided into species and destination. Meranti (*Shorea spp.*) was the major species of logs exported, follow by Bindang and Selangan Batu. As for trend of log export by destinations, Japan is the major importer of logs from Sarawak, followed by China and India. Japan and China had reduced their volume of logs import from Sarawak due to their ply mills which have shifted their major consumption to softwood which is cheaper than the tropical logs. India, a developing country, import a huge amount of tropical logs since lack of local tropical logs supply for the demand of construction such as housing, building and for other purposes. The study on trend of logs production and export in Sarawak can be utilized by other researchers as references in their study. In addition, to better understand the total logs consummated in Sarawak, secondary and tertiary production trend such as plywood, sawn timber, furniture and others timber products should also be carried out.

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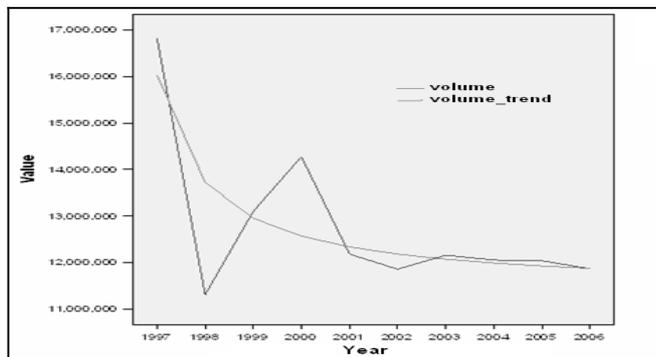


Figure 1. Trends of logs production in Sarawak from 1997-2006 ('000 m³)

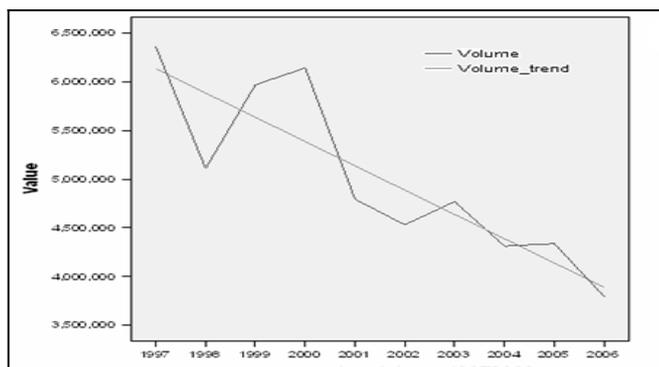


Figure 2. Trend of logs export by Sarawak from 1997-2006 ('000 m³)

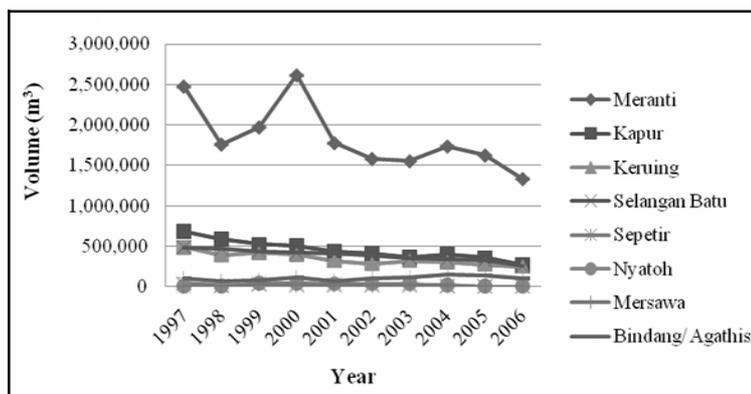


Figure 3. Trend of export volume of logs by selected species from 1997-2006 (m³)

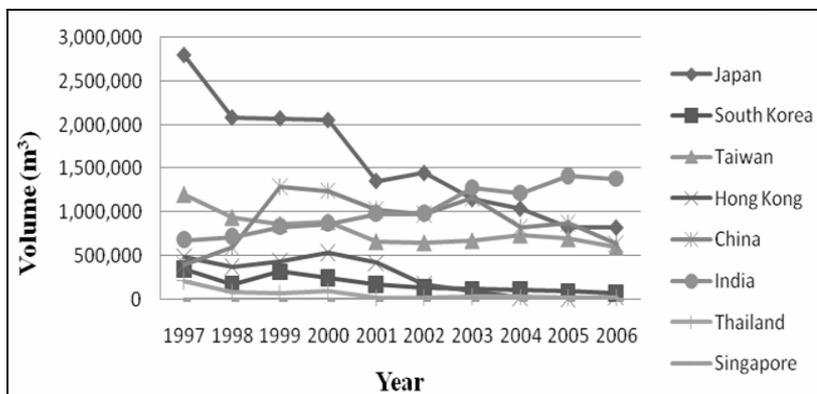


Figure 4. Trends of Sarawak's logs export by destinations countries (1997-2006)