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Challenges and opportunities for the Chinese value-added wood products companies

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Abstract

The past decades have witnessed a dramatic increase in the demand for China's wood products. However, a fast-growing demand for wood products and limited domestic timber resources has increased China's dependence on imported wood. As a result, China has grown to be the most important player in the global trade of wood products both as an exporter of value-added wood products and as an importer of wood resources. The objective of this study is to examine managers' perceptions of the challenges and opportunities facing the Chinese wood products companies by applying the modified Porter's five force model. In the empirical part, qualitative semi-structured interviews with 28 managers of 7 wood products companies in China were conducted. The results suggest that low labour costs were no longer perceived as a source of competitive advantage for the Chinese companies. To develop and maintain competitive advantage in global markets, the Chinese firms should adjust their business strategies by changing production focus from low-end to high-end products, by changing sales direction from overseas to domestic markets, and focusing on development of independent brands. To compensate for the deficiency in raw materials, the Chinese companies should improve the utilization of raw materials, acquire forest lands or invest in sawmills in lower-cost and forest-rich countries. With the encouragement of the Chinese government, the Chinese farmers are showing higher enthusiasm for afforestation. Furthermore, the volatile government policies bring not only challenges but also opportunities for future development of China's wood products industry.

Keywords: Challenges, opportunities, China, value-added wood products companies.

1 Introduction

The last few decades have witnessed a rapid growth of China's economy, which has greatly increased the disposable incomes of the Chinese consumers. Thus, there has been a pent-up demand for improved housing conditions that have stimulated a sharp increase in the domestic demand for wood products in housing components and interior applications, in addition to furniture and other furnishings (Ganguly and Eastin, 2011). In the meantime, the growing demand for low-cost value-added wood products in developed countries has provided the Chinese companies to export large quantities of price-competitive value-added wood products, mainly wooden furniture, plywood, and wood flooring (Wan et al., 2011).

Driven by both domestic and international demand, China's wood products industry has developed very quickly with tremendous expansion of production capacity, which has led to a dramatic increase in the proportion of China's wood products in both domestic and international markets. However, a fast-growing demand for wood products combined with limited domestic timber resources has increased China's dependence on imported wood. As a result, China has grown to be the most important player in the global trade of wood products both as the largest exporter of value-added wood products and the largest importer of logs and lumber (Ganguly and Eastin, 2011).

Abundant labour supply and low production costs have widely been acknowledged as the main sources of competitive advantage (CA) of the Chinese wood products companies in global competition. However, this assumption is changing with the rapidly rising costs of labour, raw materials and energy combined with the rapid technology transfer and the increasing corporate environmentalism (Chan, 2010). In addition, the recent global economic crisis has caused profound impacts on the Chinese export-orientated wood products companies (Cao et al., 2010), which are facing multiple burdens of a reduction in tax benefits, the tightening of China's monetary policy, the appreciation of the Chinese Renminbi (RMB), and the anti-dumping actions taken by importing nations. The combination of these factors has wiped out the healthy profit margins experienced by the Chinese manufacturers. China's wood products industry is now facing tougher times. Nevertheless, despite the current challenges and obstacles, China's dynamic economic growth and huge market potential present a good opportunity for the continuous development of China's wood products industry. It is expected that China's wood products market will continue to grow in the long term and China has possibilities to expand its wood products industry globally.

There are few academic studies addressed China's wood products market in an international context, except one recent study by Han et al. (2009) that explored that the global competitiveness of the Chinese wooden furniture industry. The purpose of this study is to examine managers' perceptions of the challenges and opportunities for the Chinese value-added wood products companies as well as the countermeasures that should be taken to improve the competitiveness of the Chinese companies. In this study, we focus on the branches of plywood, wooden furniture and wood flooring as they are China's most important value-added wood products, which have remarkably increased their coverage in the international markets and the trend is expected to also continue in the future.

2 Theoretical background

As a strategic analytical tool, Porter's five forces model (Porter, 1979) served as the theoretical background for our study and it was used to analyze the business environment in China's wood products industry. Porter's model is based on the insight that a company strategy should meet

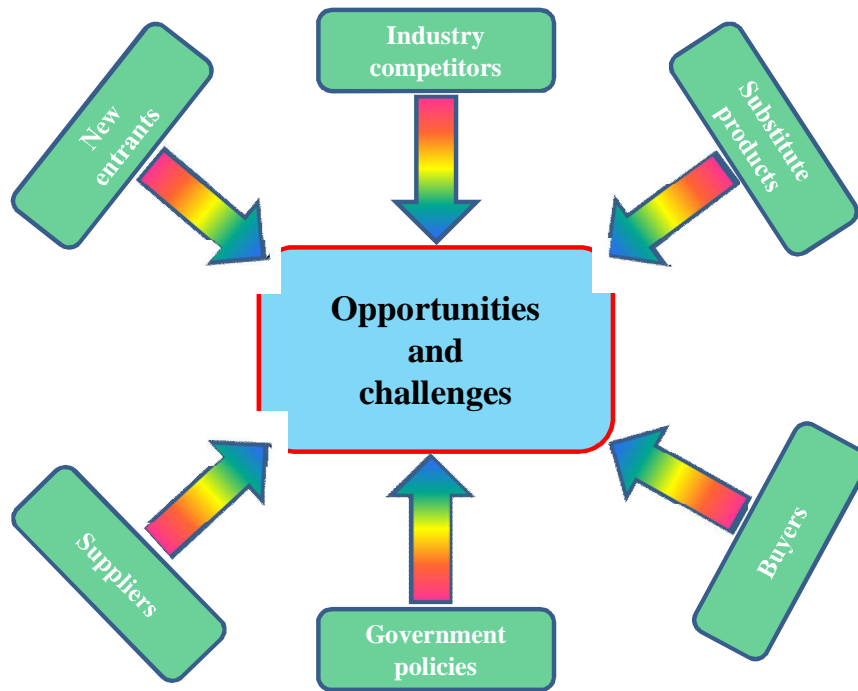


Fig. 1. Theoretical framework of the study (Modified from Porter, 1979)

the opportunities and challenges in the organization’s external environment. According to Porter (1979), five forces are comprised of rivalry among existing firms, threat of new entrants, threat of substitute products, bargaining power of suppliers, and bargaining power of buyers. For most industries, rivalry among existing firms is the major determinant of the competitiveness of the industry. It usually involves a mixture of price competition, improvement of product quality and customer service, introduction of new products, brand identity, and advertising campaigns (Porter, 1979; 1980; 1985). Threat of new entrants refers to the threat of new or potential players pose to existing players in an industry. New entrants may enter a market with lower costs or new technology and resources (Porter, 1979; 1980; 1985). A threat of substitute products exists when a product produced from another industry performs the same function or satisfies the same need as the existing product produced by the firms within the industry (MaRS). In Porter’s model, the threat of substitutes usually impacts an industry through price competition. Bargaining power of suppliers is described as the power that suppliers exert over firms by raising prices, lowering quality, or reducing availability of their products, whereas bargaining power of buyers refers to the pressure that customers exert on firms to make them provide higher quality products, better customer service, and lower prices (Porter, 1979; 1980; 1985).

The theoretical framework of our study is shown in Figure 1. It is modified from Porter’s five-force model (Porter, 1979). In addition to the five forces, a sixth force – government policies is added to our framework because government is a major stakeholder in any industry and government policies and regulations can dictate the level of competition within the industry. By analyzing these six forces, an industry can develop a better understanding of its key strengths, weaknesses and the trends which present the most relevant opportunities and challenges (Hansen and Juslin, 2011). The objective of this study is to explore the challenges and opportunities and challenges facing the Chinese wood products companies.

3 Materials and Methods

The data of this study were gathered from the medium and large-sized wood products companies in China. Such purposive sampling was based on the assumption that the medium to large-sized companies are most likely to actively conduct strategic activities that are of interest in our studies (Stiles, 2001). The categorization of China's wood products companies into small, medium, and large enterprises was based on their fixed capital detailed by Sun and Chen (2003). The fixed capital of a small, medium, and large wood processing company is less than 20 million RMB, 20-50 million RMB, and over 50 million RMB, respectively. Our data gathering was targeted at some typical companies that produced value-added wood products with a certain scale and level of competitiveness in two provinces of China: Guangdong Province in South China, which is one of the most advanced regions in the field of wood processing (Luo et al., 2009), and Heilongjiang Province in Northeast China, which is an important timber production base and one of the traditional bases of wood-processing industry.

We selected 30 companies for our data gathering with the help of forest industry associations and forestry bureaus, but only got permission to interview 28 managers of seven of them. These companies focused on producing either low-value-added or high-value-added wood products in either the Chinese domestic or the international markets. Among seven case companies, two of them focused on producing low-value-added products and operated in the domestic low-end market, two companies were export-oriented and mainly produced low-value-added products for the international low-end markets, and the rest three companies principally produced high-value-added products in the domestic high-end markets.

In September 2011, a total of 28 semi-structured interviews with the managers of the seven case companies were conducted to study the managers' views on the challenges and opportunities for the Chinese wood products companies. The interviewed managers were members in the companies' top management teams and were responsible for the firm-level strategic decision-making related to general management, raw material procurement, production, and marketing. The questionnaire comprised a variety of closed and open/open-ended questions arranged in five thematic sections: (1) general information about the company, (2) sourcing and procurement of wood raw materials, (3) product manufacturing, (4) marketing and sales, (5) managerial opinions on the challenges and opportunities facing the Chinese wood products companies and the countermeasures that should be taken to improve the competitiveness of China's wood products industry. To encourage respondents to be open and honest, before starting the interviews, it was already agreed that the identity of any interviewed managers/companies would be kept completely anonymous and confidential.

The data gathering was commenced by contacting target companies by phone to inquire about their willingness to participate in the study. This was followed by sending a letter of introduction along with the questionnaire to each willing company to ask them to first familiarize themselves with the study's semi-structured questionnaire. And then, the participants were contacted by telephone to set a date for an interview. The whole interview survey was conducted in Chinese, which is the native language of the interviewer and all the interviewees. Each interview lasted between one and two hours.

Due to sample selection constraints, the investigation must be regarded as a case study series and the possibility of generalizing the results of the study is therefore limited. However, since all the respondents were experienced and knowledgeable about the topic and the obtained results of our study were also able to meet the aims of the study, the validity of the applied method and data can be considered to be good. Moreover, the reliability of the information is

most likely to be quite high because of the clear theoretical structure in addition to the exact execution of the study.

4 Results

The seven case companies had been established between five and 17 years. Instead of specializing on a single product category, most companies manufactured a diverse range of products. Even manufacturers of wooden flooring produced a wide range of floors, such as laminate flooring, engineered flooring, and solid wood flooring. Based on our data, we analyzed the six forces and their effects on China's wood products industry.

4.1 Rivalry among existing firms

As is well known, the booming growth of China's wood products industry is primarily attributed to abundant labour force and low production costs (Han et al., 2009). As the world's largest producer and exporter of value-added wood products, China has maintained a strong position in the global wood products market. However, there are some constraints to achieving the sustainable development of China's wood product industry. In terms of quality and unit price, China still falls behind traditional strong competitors such as Italy and Germany. Most of China's products are low-end without their own brands or with designs that are simply imitated and lack originality. For the Chinese export-oriented wood products companies, they have entered the international markets mainly by the original equipment manufacturing (OEM) route. There are very few well-known Chinese brands in global markets. Although some top Chinese brands hold strong market positions and brand value among the Chinese customers, they have experienced difficulties in entering the international high-end market. The international high-end markets are still dominated by foreign brands. This is due to the gaps in productivity, management and technical levels still found between the Chinese branded and international branded companies.

Take wooden furniture as an example, some big global furniture countries, such as Italy, Germany and Sweden, possess world class of design, high level of manufacture technique and advanced equipment. Their products attract customers, especially high-end customers, all over the world because of high quality of products and good image of brands (Lindman et al., 2008). Apart from the overseas markets, foreign furniture manufacturers and distributors have actively been seeking market share in China. The most active and successful one is IKEA from Sweden (DRCNet, 2006). Furniture manufacturers from Italy and Spain are also fighting for market share, primarily in the high-end market niche.

4.2 Threat of new entrants

China's wood products branch is a fragmented industry with relatively low investment levels and simple technologies. The majority of the Chinese wood product companies are small- and medium-sized enterprises (SMEs) (Sun and Canby, 2011). It indicates that the entrant barrier into China's wood products industry is relatively low, which allows new competitors easily enter the market and join the competition. Therefore, in addition to the current competition from high-income countries, China's wood products industry also faces upcoming competition from a number of low-to-medium and low-income countries (Han *et al.*, 2009), such as Vietnam, Malaysia, and Indonesia, Mexico, Brazil, Poland, and countries of the Middle East (Roger, 2009). Lately, some foreign multinational companies (MNCs) have begun to shift their manufacturing bases from China to these countries. The main reasons include the rising costs of labor and raw materials in China, low average income and/or abundant forest resources in those

countries. Moreover, some large MNCs want to reduce their exposure to production disruptions by implementing a strategy of diversifying across several countries.

In terms of wooden furniture, Vietnam and Malaysia are currently strong competitors to China for exporting wooden furniture to the United States (Ganguly and Eastin, 2011). Apart from the Asian countries, Poland took the advantage of proximity to the West European market, and has become an export-oriented furniture producer. Almost 90% of its production has been exported, 78 per cent of which has been transported to EU countries. Mexico has the same pattern, shipping 90 per cent of its furniture to the United States (Ratnasingam, 2002).

4.3 Threat of substitute products

Products made from other materials, such as bamboo, agricultural residues, plastic, steel, aluminum or plastics, for the same end uses as wood products can be a potential substitute for wood products. The interviewed managers indicated that the value-added wood products would not be replaced by some other substitute products in the foreseeable future. It is mainly due to the excellent properties of wood, such as natural, sustainable, renewable and recyclable. Moreover, wood is customarily a more traditional product that particularly attracts high-income consumers. For instance, the higher-end wooden furniture sought by higher-income consumers may be less likely to be substituted by plastic or metal furniture.

4.4 Bargaining power of suppliers

As the most important production factor, wood resources are critical to the development of the wood products industry. However, China is a country with low forest cover per capita and there is uncertainty in wood supply for the wood products manufacturing. China's wood products industry is heavily dependent on imported logs and lumber as the raw material inputs for wood products production. Russia and New Zealand are the two main log-supply countries for China, and Russia and Canada are the two major lumber-supply countries to China (Taylor, 2010).

Thus, the dramatic growth in production of China's wood products has precipitated a huge demand for wood resources, and has therefore increased wood prices. The rise of raw material prices is also due to inflation, pollution and deforestation (Roger, 2009). In particular, Russia's accelerated log export tariffs have had a great impact on China's wood products industry – they have considerably increased the cost of logs. Moreover, some other countries have also set laws to restrict the export of wood because of the protection of environment and economic considerations. So, the procurement of raw materials is a big challenge for the Chinese domestic wood processing industry. In order to meet the Chinese domestic and export-oriented demand for wood products, huge amount of raw materials must be either produced/substituted domestically or imported from other countries (Wan et al., 2011).

Another asset firms are competing over is worker force. With skilled workers, companies can produce good products. With higher cost of labour force, the Chinese companies will have move to more rural areas to find workers because in urban and heavily industrialized areas of China, the labour rates are higher, whereas in rural areas the labour rates are lower (Hunter and L, 2007).

4.5 Bargaining power of buyers

The fast expansion of China's wood products industry is driven by the rapidly growing domestic and international markets. In the domestic market, the increasing consumer disposable incomes make China a large and potential marketplace. In the international markets, the United

States and the European Union are the two biggest export markets of China's value-added wood products (Taylor, 2010). However, a number of anti-dumping complaints and anti-subsidy investigation from these importing countries have caused China's wood products industry to experience a decline in profitability and sales volume. Moreover, non-tariff trade barriers, such as the recently established EU regulations for wood and wood products, which require all the commercial companies in the production chain to submit documents certifying the legality of the raw material, entails additional costs to the Chinese producers. Apart from the tariff barriers, more and more technical barriers and international certification standards call for cleaner production and greener products, which restrict the expansion of the Chinese manufacturing sector and China's export (Qiu and Yang, 2007). All these have helped China's new competitors, such as Vietnam, Mexico and Indonesia, to compete in China's major export markets.

4.6 Government policies

Governments plays a key role in public policy formulation and implementation in addition to defining the legal framework to guide and regulate the conduct of business. They usually use policy instruments, including fiscal policy, monetary policies, tax incentives, subsidies, and regulations, to help achieve their objectives through the impact they have on the actions of producers and customers. Government policies have influences on all other five forces.

According to the results of data collection, we summarized the major challenges and promising opportunities facing China's wood products companies. As listed in Table 1, these challenges and opportunities were examined from the perspective of market demand, raw materials, labour force, technology and innovations, and government policies.

5 Discussion and conclusions

By using the modified Porter's five forces model, this article explored the challenges and opportunities for China's wood products industry from the external environment perspective. To meet the increasing demand of wood products at home and abroad, China's wood products industry has undergone fast growth in the past two decades. Abundant low-cost labour has traditionally been regarded as the main source of CA of the Chinese wood products companies and the Chinese manufacturers have understandably adopted a low-cost strategy. Since the Chinese wood products companies have been production- and cost-driven, most of the Chinese companies have focused on producing low-value-added products for the low-end market. With the rising production costs, tightening of China's monetary policy and the appreciation of RMB, the decreasing international demand for wood products resulted from the global financial crisis, and the counter actions of trade protectionism in developed countries, the price competitiveness of China's wood products industry has gradually weakened. And meanwhile, China is experiencing an increasing challenge from lower-cost countries. So, low-cost labour is no longer perceived as a source of CA of the Chinese firms, and implementing purely traditional low-cost strategies has become a less viable option for the Chinese companies to sustain CA. To maintain and enhance its international competitiveness, the Chinese wood products companies need to adjust their business strategies. With the rapid growth of China's middle class, there has been an increasing demand for high-end differentiated products in the Chinese market. This has provided potentially fruitful opportunities for the continuous development of China's wood products industry. It indicates that the development of China's wood products industry will not solely rely on overseas markets. Many export-oriented companies have started to switch their focus from the international low-end market to the domestic high-end market to produce high-value-added products. The Chinese government has also been promoting structural transition of

its economy from export-driven to domestic demand driven economic development (Sun and Kerstin, 2010).

Furthermore, most of China's wood products do not own independent brands or do not hold strong brand value in global market. To make Chinese brands world-renowned, the Chinese branded companies should further develop their differentiation strategy, strengthen R & D capabilities and produce more sophisticated and high-value-added products, enhance international experience and adjust management structures, build independent famous brands that have international influence, and get access to global distribution networks.

Wood raw material is a critical resource for wood products production. To cope with the shortage and rising costs of wood resources, some Chinese companies have improved the utilization of raw materials and mill by-products, develop forest lands in the lower-cost and forest-rich countries to supply the growing domestic demand. Additionally, with the encouragement of the Chinese government, the Chinese farmers are also showing higher enthusiasm for afforestation.

As a consequence of global financial crisis and trade protectionism from importing nations, both the western governments have carried out a series of policies and regulations to limit China's exports of low-priced wood products. However, the Chinese government has also taken measures to support the continuous development of China's wood products industry. Some government policies, e.g., the appreciation of RMB, bring not only challenges but also opportunities for future development of China's wood products industry.

Owing to the explorative nature and small sample size, our results cannot be generalized beyond those companies that participated in the interviews and may thus not represent the opinions of managers for the whole China's wood products industry. Consequently, the present study can be considered to be a preliminary step in understanding the business dynamic in China's wood products industry and its possible development trends in the global wood products markets. To achieve more representative results, future studies should be targeted at obtaining more comprehensive data from a larger set of Chinese companies.

Table 1. Challenges and opportunities for the Chinese value-added wood products companies

Industry Factors	Challenges	Opportunities
Market Demand	Weaker demand in international markets: The global financial crisis has resulted in a decline in the purchasing demand of wood products from the United States and Europe, which has led to a substantial decline in the exports of China's wood products.	Domestic demand is the engine driving the continuous growth in China's wood products industry: 1) China's booming economy, huge population and acceleration of urbanization have driven a dramatic increase in its domestic demand for wood products. 2) Along with the Chinese consumers' rising income, there has been an increase in demand for high-end differentiated wood products among the fast-growing Chinese middle class.
Raw materials	Shortage and rising costs of wood raw materials	1) Efficient wood procurement and utilization: To deal with deficiency in timber resources, pollution control and environmental management, the Chinese companies can improve the utilization of raw materials and forest products, e.g., by using forestry residues and mill by-products to produce wood products. 2) To reduce China's dependence on imported wood and meet future timber demand, the Chinese government has encouraged plantation development and is now operating the world's largest plantation development program. The Chinese farmers are showing higher enthusiasm for afforestation, especially, the fast-growing and high-yielding forests have been largely planted in China. Moreover, some companies have shifted low value-added production chains to the country of origin of the raw materials and develop forest lands there, e.g., Laos and Myanmar.

		3) Besides, wood substitute products, including non-wood material (bamboo and straw) and recycling urban waste wood, would become a passive choice for the China market (Wan et al., 2011).
Labour force	<p>1) Shortage of labor force and rising costs of labor force in China may hamper the future growth of China's wood products industry.</p> <p>2) Growing competition from the wood products industry of lower-cost countries, such as Vietnam, Thailand and Malaysia, in China's key export markets.</p>	<p>1) Large salary increases in China may attract more workforce and talents to work for the company.</p> <p>2) In responses to the growing competition from the newly industrialized countries, some Chinese manufacturers have turned their focus to the domestic market, in which there is a prosperous prospect, and some Chinese companies have shifted or outsourced the labor-intensive business operations to those lower-cost countries and built factories.</p>
Technology and innovation	<p>1) China lacks competitive wood products in global markets. Most of China's wood products are low-value-added, with low technological content and weak competitiveness.</p> <p>2) With contract manufacturing base, numerous Chinese OEM companies have not developed their own designs and innovative capabilities. The lack of independent brands and updated technologies has hampered their efforts to move upward along the value chain and sustain competitiveness in the long run.</p>	<p>To improve sustainable competitiveness, some major Chinese wood products companies should strengthen the capabilities of research and development (R & D) and independent innovation, develop up-to-date production technology and new products, enhance internal management and brand management, and shift the production focus from low-value-added products to the high-value-added products.</p>
Government policies	<p>1) High export tariffs on log exports from Russia make China's wood products industry face log scarcity while bearing higher costs of logs.</p> <p>2) The US and European anti-dumping duties, non-tariff trade barriers, technical barriers international certification standards on exports of China's wood products have not only restricted the exports of China's wood products, but also helped China's new competitors, such as Vietnam, Mexico and Indonesia, to compete China in overseas markets.</p>	<p>1) In response to the Russian log export tax and higher delivered log prices, some Chinese companies have built sawmills in Russia and then shipped sawn wood to China.</p> <p>2) To boost its exports, China is expected to increase export tax rebates on a series of products, including high-tech and high value-added goods and labor-intensive goods (Ding, 2012).</p> <p>3) Rising environmentalism has driven consumers and wood products manufacturers to consider using certified wood products.</p>

- 3) A decrease in China's tax incentives for foreign enterprises may discourage foreign direct investments into China and accelerate the exodus of foreign enterprises to lower-cost countries.
- 4) Exchange rate fluctuations (the depreciation of the USD and the Euro and the appreciation of RMB) pose a challenge to the Chinese export-oriented enterprise. They will raise the export price of China's wood products, resulting in the loss of China's price advantage and the reduction in China's exports. For employees in the manufacturing sector may face the risks of reduced income or even unemployment.
- 4) Responding to the economic slowdown and to stimulate the domestic consumption of wood product, the Chinese government has carried out a series of policies to encourage housing and infrastructure developments, e.g., loosening regulations for tax policy, and loan policy for small and medium-sized enterprises. The State Forestry Administration has also taken a number of measures to increase investment, stimulate domestic demand, and provide a more favourable environment for forest companies (Ma et al., 2009).
- 5) The RMB appreciation not only brings advantages to the industries that need to import raw materials but also promotes the Chinese companies to make overseas investments. It significantly reduces their overseas investment costs, and enhances the firm's international purchasing power and capacity of foreign investment, paving the way for the Chinese enterprises to implement "going out" strategy. The Chinese companies could also take better advantage of exchange reserves to develop forest lands and invest in lower-cost and forest-rich countries.

References

- Barnat, R. 2005. Business and Its Environment. Available at: www.strategy-formulation.24xls.com/en113 (accessed 21 September 2012).
- Cao, J., Seol, M. and Eastin, I. 2010. Chinese wood products industry targets domestic market for growth. Center for International Trade in Forest Products (CINTRAFOR) News. Available at: www.cintrafor.org/publications/newsletter/C4news2010spring.pdf (accessed 3 September 2012).
- Ding Q. 2012. China to raise exports tax rebates. Available at: www.chinadaily.com.cn/business/2012-02/20/content_14647547.htm (accessed 3 September 2012).
- DRCNet. 2006. DRCNet database.
- Ganguly, I. & Eastin, I. 2011. Economic and environmental aspects of China's wood products industry. Center for International Trade in Forest Products (CINTRAFOR) News. Available at: www.cintrafor.org/publications/newsletter/C4news2011winter.pdf (accessed 3 September 2012).

- Han, X., Wen, Y. and Kant S. 2009. The global competitiveness of the Chinese wooden furniture industry. *Forest Policy and Economics* 11(8): 561-569.
- Hansen, E. & Juslin, H. 2011. *Strategic marketing in the global forest industries* (2nd ed.). The United States: Shelton Turnbull.
- Hunter, S. L. & Li, G. 2007. Market competition forces: A study of the Chinese case goods furniture industry. *Forest Products Journal* 57(11): 21-26.
- Lindman, M., Scozzi, B. and Otero-Neira, C. 2008. Low-tech, small- and medium-sized enterprises and the practice of new product development: An international comparison. *European Business Review* 20(1): 51-72.
- Luo, X., Li, R., Lin, L., Gao, X., Pan, G., Xia, E., and Li, J. 2009. Challenges and opportunities for China's small and medium forest enterprises. Forest Connect, Food and Agriculture Organization of the United Nations, Rome.
- Ma, Q., Liu, J. and Du, W. 2009. How Chinese forestry is coping with the challenges of global economic downturn. *Unasylva* 233(60): 43-48.
- MaRS. Threat of substitutes. Available at: www.marsdd.com/articles/threat-of-substitutes/ (accessed 21 September 2012).
- Porter, M. E. 1979. How competitive forces shape strategy. *Harvard Business Review*, March/April.
- Porter, M. E. 1980. *Competitive strategy: Techniques for Analyzing Industries and Competitors*. New York: Free press.
- Porter, M. E. 1985. *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Free Press.
- Qiu, Y.W. & Yang, G. 2007. The impact of green trade barrier on Chinese forestry products export and countermeasures. *International Trade Issues* 5:24-28 (in Chinese).
- Ratnasingam, J. 2002. Export dynamics of the South East Asian furniture industry. *Furniture Design Manufacturing Asia* 14(7): 52-55.
- Roger. 2009. China furniture industry outlook and predictions for 2009. The ACF China Co- Millstone Trading. Available at: www.acf-china.com/blog/2008/11/12/china-furniture-industry-outlook-and-predictions-for-2009 (accessed 3 September 2012).
- Stiles, P. 2001. The impact of the board on strategy: An empirical examination. *Journal of Management Studies* 38(5): 627-50.
- Sun, X. & Canby, K. 2010. China: Overview of forest governance, markets and trade. *Forest Trends*, for FLEGT Asia Regional Programme.
- Sun, X. & Canby, K. 2011. China: Overview of forest governance, markets and trade. *Forest Trends*, for FLEGT Asia Regional Programme.
- Sun, C. and Chen, X. 2003. *Small and medium forest enterprises in China*. Research Centre of Ecological and Environmental Economics, Beijing, China and International Institute for Environment and Development, London, UK.
- Taylor, R. E. 2010. Increasing demand from China. China's soaring demand to create huge opportunities for Canadian lumber – highlights from: *The China Book – Outlook to 2015*. International Wood Markets Group Inc. Canadian Wood Products July/August 2010.
- Wan, M., Toppinen, A. and Hänninen, R. 2011. Econometric analysis of China's plywood market. *Forest Products Journal* 60(7/8):679-687.