



# **Furniture, timber and forest ecosystem service value chains**

Proceedings of the symposium

IPB Convention Center  
Bogor, 14 February 2013

Editors:  
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Cover photo by Sulthon Moh Amin. Two year old teak, planted by Sutrisno, member of Jepara Small-scale Furniture Producers Association (APKJ)  
Photos by Aulia Erlangga

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# Table of contents

<b>1</b>	<b>Preface</b>	<b>1</b>
<b>2</b>	<b>Recommendations from the symposium</b>	<b>2</b>
<b>3</b>	<b>Opening ceremony</b>	<b>4</b>
<b>4</b>	<b>Keynote addresses</b>	<b>6</b>
<b>5</b>	<b>Plenary session</b>	<b>8</b>
<b>6</b>	<b>Symposium proceedings</b>	<b>10</b>
	Session A1. Distribution of value added in forest product and service chains	10
	Session A2. Markets, institutions and governance of value chains	26
	Session B1. Design, quality and other technical aspects of wooden furniture manufacturing	58
	Session B2. Certification and verification of timber and other forest products	70
<b>7</b>	<b>Annexes</b>	<b>89</b>
	7.1. Symposium program	89
	7.2. Symposium presentations	91
	7.3. List of Participants	163



# 1. Preface

The use of forest resources for national development offers considerable ecological, economic and cultural benefits for lives and livelihoods in Indonesia. However, the challenges associated with forest management are complex, with forest managers seeking not only to preserve the remaining forest resources and optimize existing functions to meet diverse needs, but also to address the problem of climate change.

Timber from Indonesia's forests is used as a raw material by the furniture-making and pulp and paper industries. Efforts to develop these industries are hampered by various factors, including the limitations of traditional forms of plantation management, lack of product innovation and unfair profit-sharing among actors along the product value chain.

Forests also provide valuable ecosystem services, and interest is growing in exploring new opportunities, such as those offered by REDD+ (reducing emissions from deforestation and forest degradation) programs, which provide incentives to modify production systems for these commodities so that they meet the demands of the global market.

A one-day symposium on furniture, timber and forest ecosystem service value chains was held at the Bogor Agricultural University (IPB) International Convention Center in Bogor, Indonesia, on 14 February 2013, with the aim of sharing information, research results and studies on forest products and services and their value chains. The target audience included policy makers from the Indonesian Ministry of Forestry and other government agencies, researchers, research users and practitioners, NGOs/civil societies, environmentalists, and community and forestry observers.

## 2. Recommendations from the symposium

Recommendations derived from the information presented during the symposium are offered for the consideration and action of policy makers, practitioners, civil society activists, NGOs and academia. The recommendations focus on ways to improve the sustainability of forests and industry, enhance people's welfare and boost Indonesia's competitiveness in the global market. The following are the main recommendations:

1. There is a need for value chain governance that balances the power wielded and benefits received by the actors and parties involved in the creation of value-added forest products and services. More equitable arrangements are expected to boost the value of Indonesia's furniture exports, which has been stagnating.
2. The gap between actors, in terms of their profits earned and benefits received, must be narrowed. Small and medium enterprises (SMEs) and large companies alike must be able to comply with Indonesia's timber legality assurance system (known as the SVLK) and to work together. SMEs need to become more independent, especially as they are the backbone of the furniture industry. They also need to improve inter-business networks, a goal that local government bodies can facilitate. Where groups seek certification under the SVLK, information systems need to be improved to ensure that the responsibilities of the group and of individuals within the group are balanced.
3. Forest products and services businesses, both upstream and downstream, need to strengthen their creativity and innovation, both to create designs that appeal to the global market and to find alternative materials to cheap, low-quality timber.
4. The development of community forests, village forests, community forestry and community forest plantations in combination with the development of industries that use forest products would improve the welfare of forest farmers and the sustainability of wood supplies.
5. Organizations and institutions in the forest products and services industries, both upstream and downstream, need to be strengthened and supported, in terms of capital (e.g., securing bank loans, forming cooperatives), human resources (training) and marketing (Internet and exhibitions), so they can develop greater bargaining power and access to markets.
6. Furniture manufacturers would be able to offer maximum value added and demand a premium price for forest products and services with: improved market dynamics and access to different market segments; efficient use of raw materials; and application of appropriate and environmentally friendly technology, especially for wood drying and preservation. Forest farmers and small businesses should have ready access to information on markets and financial services.
7. The SVLK is both a reality and a necessity, and can support the growth of Indonesia's furniture industry. Enterprises should view the SVLK as a privilege that assists them in gaining access to markets that require proof of timber legality. Small-scale furniture manufacturers should be given full help or exemption from fees in seeking certification of products made from forest resources, whether under mandatory (e.g., SVLK) or voluntary schemes, including for monitoring and marketing.
8. Efforts should be made to expand the domestic market for furniture products. National, provincial and local governments must take the lead in purchasing furniture products certified as being made from legal and sustainable sources, by developing policies on procuring furniture from such sources.
9. Efforts should be made to build the capacity of community forests to supply timber and environmental services in large quantities and of high quality, and to improve the welfare



of forest farmers. Appropriate silvicultural techniques need to be developed and applied. Activities aimed at developing small businesses should work to encourage the participation of women in the value chain.

10. Each industry cluster in Indonesia should develop and follow a roadmap for its products and services to ensure the sustainability of the industry. Central and local governments, NGOs and research centers could lead these efforts.

### 3. Opening ceremony

The symposium opened with the presentation of two videos: one on the life of a furniture artisan from Jepara named Kasmono and the other on recent developments in Indonesia's timber legality assurance system (SVLK). Dr. Herry Purnomo of the Center for International Forestry Research (CIFOR) delivered the welcome address. The Vice Regent of Jepara, Dr. Subroto, SE, MM, offered opening remarks. Closing the opening session was Dr. Pablo Pacheco, leader of CIFOR's research portfolio on trade and investment. The 130 attendees came from a variety of organizations, including the Ministry of Forestry and other government agencies, research institutions, the private sector, civil society and community forestry observers.

In his welcome address, Dr. Herry Purnomo thanked the participants for attending and for

their potential contribution to the development of the furniture industry in Indonesia. He noted the usefulness of analyzing value chains for understanding the production of goods in full: from the sources of raw materials including forest management, harvesting, processing, finishing of products, trade and marketing, and use by end customers. He also noted the relevance of power structures: which players in the value chain derive the greatest benefits, who covers the operating costs and how gender relations affect the participation of women.

Dr. Subroto discussed the inequalities inherent in the global capitalist system, especially in forest management. He noted that the system positioned developing countries as suppliers of raw materials for furniture industries in the developed world,



**Photo 1. Dr. Herry Purnomo of CIFOR opens the symposium on value chains of furniture, other forest products and ecosystem services**



**Photo 2. Vice Regent of Jepara, Dr. Subroto, SE, MM delivers opening speech on Jepara furniture industry**

and called for a system for realizing the full value of natural resources in developing countries and for preserving those resources. He observed that among the challenges faced by the Jepara furniture industry are the lack of a reliable supply of raw materials, low returns to labor, poor access to capital, and the complexity of marketing chains. He stated that the government's mandatory policy on timber legality assurance (i.e., the SVLK) would improve the competitiveness of Indonesia's timber-products industry over the long term and the government should support businesses in complying with the system. He also noted that creativity and innovation are critical for sustaining the development of the furniture industry.

Dr. Pacheco elaborated on CIFOR's research on the marketing and trade of forest products, describing how the dynamics of international timber flows in domestic and international timber markets have influenced emerging economies. He pointed out that SMEs in the forestry sector are important for livelihoods and local economic development, but, given the barriers to competing in global markets, they tend to restrict themselves to the more flexible domestic markets.

Dr. Pacheco also described the Furniture Value Chain project, a collaborative research effort funded by the Australian Centre for International Agricultural Research (ACIAR) and conducted by CIFOR, Bogor Agricultural University (IPB), FORDA (Forestry Research and Development Agency in the Ministry of Forestry), FRK (Forum Rembuk Klaster), Government of Jepara and the Jepara Small-scale Furniture Producers Association (APKJ). The research project focused on five dimensions of the Jepara furniture industry with the aim of improving the performance of SMEs: (1) "moving up", or changing SMEs' position and hence power in the chain; (2) "collaborating down", or helping furniture makers obtain a secure timber supply; (3) "small-scale associations", or increasing



**Photo 3. Dr. Pablo Pacheco of CIFOR gives remark on the role of CIFOR supporting forest, timber research, market and trade**

the bargaining power of SMEs; (4) "green products", or complying with "green" (environmentally friendly) standards for marketing products; and (5) Roadmap for the Furniture Industry, to provide direction for the furniture industry in Jepara over the next 10 years.

In closing his remarks, Dr. Pacheco called for future research that aimed to apply the outcomes from the Jepara work to other places in Indonesia and the region (e.g., ASEAN countries), in order to gain deeper understanding of the benefits and costs of certification and timber legality, particularly for small-scale furniture makers, and of "green buyer behavior". He also noted a need to stimulate policy and institutional innovations at different levels to unlock the opportunities in the SME sector.

## 4. Keynote addresses



**Photo 4. Dr. Ir. Iman Santoso, MSc. delivers keynote address on distribution of value added in forest product and service chains**

The first keynote address was given by Dr. Ir. Iman Santoso, the Director of FORDA. Dr. Santoso discussed the distribution of value added in forest product and service chains, and addressed five issues related to the development of forest products: access to markets, community welfare, links among producers and businesses, institutions and sustainability of forest resources.

He argued that access to markets determines, among other things, the type of product a manufacturer produces, its originality and its price, whereas market barriers distort forest-product marketing chains. A fair marketing chain is needed to support community welfare, whereas unfair distribution engenders unsustainable production. He called on governments and development agencies to facilitate the development of business links among

producers and businesses. With regard to the fourth factor, he noted that having strong institutions is a precondition for improved value chains, and so efforts are needed to strengthen the capacity of actors. Finally, he noted that the ultimate goal of improved value chains could be achieved through fair distribution of benefits along the value chain, which would also encourage sustainable forest management.

The next keynote address was by Agus P. Djailani, a representative of the UK Department for International Development's Multistakeholder Forestry Programme (MFP DfID), who discussed value added and the SVLK. He described the marked evolution of timber trade policies in Indonesia since 1986, and noted that timber



**Photo 5. Agus P Djailani MBA, represented MFP DfID gives keynote address on the value added and distribution of SVLK (timber legality assurance system)**

policies had had the unintended effect of widespread deforestation rather than sustainable forest management. In discussing certification, he discussed the implementation of both mandatory (e.g., SVLK) and voluntary (e.g. Forest Stewardship Council and Programme for the Endorsement of Forest Certification) schemes. As of 2012, certified woodwork, paneling, and pulp and paper accounted for 49%, 81% and 73%, respectively, of all exports to the EU. He noted that the SVLK is a government-to-government agreement that came into force in March 2013. In describing some future challenges, he referred to issues with certification for community forestry and small-scale furniture makers, and called for long-term investments to develop Indonesian legal wood, as certified under the SVLK, as a national brand.

The final keynote address was given by Dr. Didik Suharjito, head of the Forest Management Department at IPB, who discussed the importance of integrating community forestry and industry, particularly forest product-based rural industrialization. He pointed out that the number of households that own small private forests, or *hutan rakyat*, in Java has been steadily increasing, with the total area of *hutan rakyat* reaching 3.5 million hectares in 2011. He also noted that timber-based industries have a long history in Java and, with the variety of businesses involved (including sawmills, transportation and furniture manufacturers), the industry is not only a major source of employment for rural people, but also increases the value added of forest products and contributes to the development of rural economies.



**Photo 6. Dr. Didik Suharjito, the head of Forest Management Department at IPB, delivers keynote address on integrating community forestry and industry**

He concluded by arguing that integrating community forest programs and efforts to develop rural forest-product businesses is essential for the development of rural economies, as this will increase the carrying capacity of local natural (forest) resources, reduce population pressures, maintain the quality of ecological services and support the ultimate goal of improving well-being. He added that cases where villagers themselves develop businesses and trade in agriculture and forestry are examples of “genuine” rural industrialization.

## 5. Plenary session

Following the keynote speeches, participants broke into four parallel sessions, before reconvening for the plenary session. During this session, participants examined recent developments in the furniture industry and its institutions from a range of perspectives. The three presenters were Mr. Edy Sudjarmiko of the Government of Jepara, Mr. Ambar Tjahyono from an industry association and Ms. Melati of CIFOR. Dr. Herry Purnomo served as moderator.

*Development of the furniture industry in Jepara: Roles and direction (Peran dan arah pengembangan industri mebel di Jepara) by Edy Sudjarmiko, Assistant II to the Regent of Jepara*

Mr. Sudjarmiko noted that timber-product industries in Jepara had a combined revenue of about US\$103 million in 2012: the furniture-

making industry made about US\$102 million and the wooden handicrafts industry about US\$1 million. Challenges for the furniture industry include inadequate supply of raw materials, the need to improve product quality, new competitors, certification and compliance, inadequate human resources, poor access to capital and weak marketing capability.

He reported that the Government of Jepara endeavors to support local furniture businesses in several ways, including by encouraging the planting of fast-growing teak, introducing reforestation and forest rehabilitation programs, facilitating access to capital and supporting marketing through participation in several national and international furniture exhibitions. The government has also improved the quality of infrastructure, for example by constructing or enlarging roads, and established



**Photo 7. Speakers in the Plenary Session (from left to right): Dr. Herry Purnomo (CIFOR); Mr. Edy Sudjarmiko (Assistant II to the Regent of Jepara); Ms. Melati (CIFOR); and Mr. Ambar Tjahyono (chair of ASMINDO)**

the Jepara Furniture and Craft Design Center (JFDC) to help strengthen the industry. Mr. Sudjatmiko concluded by noting the expectation that the city could create a brand for Jepara as a world-class carving center as a way of reinforcing consumers' trust in Jepara products.

*Institutional challenges for Indonesian furniture and global competition (Tantangan kelembagaan mebel Indonesia dan persaingan mebel dunia): Ambar Tjahyono, Head of the Association of Furniture and Craft Industries in Indonesia (ASMINDO)*

Mr. Tjahyono's presentation gave an overview of furniture industries across ASEAN countries in 2012: furniture from ASEAN countries had contributed around US\$9 billion to the world market in the previous three years and China had been an important player in both the ASEAN and global markets, as also seen in the penetration of China-made furniture into the Indonesian market.

He observed that between September and December 2012, timber-product exports increased about 7%, but to the benefit primarily of medium- to large-scale businesses rather than to SMEs, largely because buyers preferred products from manufacturers that can meet a certain predetermined standard of quality.

He noted that Indonesia needed to be ready to trade in the ASEAN market, adding that the SVLK would improve the value added of Indonesia's wood products and that all stakeholders should work to minimize customer complaints. In sharing

his experiences of building his own business from scratch, he pointed out that a challenge for small businesses is to change their mind-set and believe that they can always strive to meet higher production standards.

*Action research to improve the furniture industry in Jepara 2008–2013 (Riset aksi pengembangan industri mebel Jepara 2008–2013) by Melati, of CIFOR's Furniture Value Chain project*

Melati presented the methodology and results of action research conducted by CIFOR and its partners in 2008–2013. The aim of the study, she explained, was to improve the function and structure of furniture businesses and their marketing systems, while monitoring and actively responding to changes throughout the research period.

The study generated four scenarios for the development of the Jepara furniture industry: (1) "Moving up", to change SMEs' position and hence power within the chain; (2) "Collaborating down", to help furniture makers obtain a secure timber supply; (3) "Small-scale associations", to increase the bargaining power of SMEs; and (4) "Green products", to help small-scale furniture manufacturers comply with "green" (environmentally friendly) standards for marketing products. To move forward, the study recommended the introduction of integrated programs to address problems such as raw material supply, access to capital, marketing, human resources, infrastructure and institutions. It also called for the active participation of all stakeholders in the program.

# 6. Symposium proceedings

## Session A1. Distribution of value added in forest product and service chains

### Impact assessment of action research on furniture value chains to selective micro- and small-scale furniture industry in Jepara

Ramadhani Achdiawan, Herry Purnomo and Bayuni Shantiko

The Jepara furniture industry has been experiencing boom and bust in the last decade since the monetary crisis in 1998. More than 20% of local furniture industries were not able to survive between 2005 and 2010. Since 2008, CIFOR and partners funded by ACIAR have been conducting action research to learn and develop strategies to improve local furniture industries, focusing on micro- and small-scale enterprises. In order to have direct impact and immediate adoption, CIFOR and partners work with selected Champions of small and micro furniture industries and entrepreneurs who later the role of agents of change. They are immediate beneficiaries of the action research project. Different levels of involvement imply different rates of adoption. Champions have proven that they are able to improve through institutional strengthening, management training, use of information technology and better access to market.

**Keywords:** *furniture industry, action research, impact, rate of adoption*

#### Introduction

The Jepara Furniture Value Chain (FVC) project was started in 2008. The project is led by the Center for International Forestry Research (CIFOR) in partnership with the Jepara Furniture Multi-stakeholder Forum (Forum Rembug Klaster or FRK), the Jepara local government, the Forestry Research and Development Agency (FORDA) of the Ministry of Forestry and the Bogor Agricultural University (IPB) Faculty of Forestry, funded by the Australian Centre for International Agricultural Research (ACIAR).

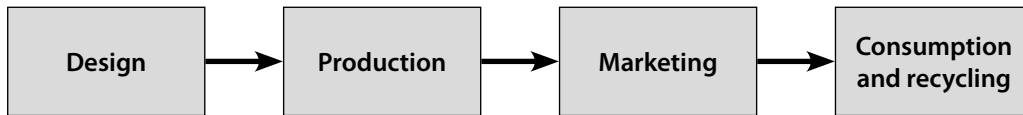
Value chain analysis (VCA) describes activities that are required to bring a product or service from conception or design, through different phases of production, to delivery to final consumers and disposal after use (Figure 1). A value chain provides a systemic view of a particular product. With the growing division of labor and the global dispersion of the production of components, systemic competitiveness has become increasingly important (Kaplinsky and Morris, 2001; Schmitz, 2005). Ratnasingam (2006) mentioned that product development and marketing activities add the most value in furniture industries, while manufacturing adds little value to the final product. Therefore the main targeted beneficiaries of the project are small-scale furniture producers.

The aim of this project is to improve mahogany and teak small-scale furniture enterprises in Jepara. Roda et al. (2007) identified constraints to achieve this. These constraints relate to low efficiencies in supply and value chains, lack of direct marketing and low levels of organization of producers, and limited access to financing mechanism. While the objectives below break up the body of work, the research team approached the problems in an integrated and participatory manner.

The objectives of the research are:

- To enhance the structure and function of the furniture industry for the benefit of small-scale producers
- To improve marketing by small-scale producers and their organizations





**Figure 1. A simple value chain (Kaplinsky and Morris, 2001)**

- To monitor changes regarding the effects and early acceptance of innovations from first two objectives and revise and/or reinforce project strategies

The purpose of the impact assessment study was to meet objective 3, to monitor changes regarding the effects and early acceptance of innovations from objectives 1 and 2 and revise and/or reinforce project strategies. Nooryasyini (2011) reported that overall the FVC Project made a significant difference through its intervention/implementation in Jepara. The score of assessment indicators of empowerment, economy, social, environment and policy before the intervention and project implementation was poor, but after the FVC project intervention and implementation, the average score was fair. Nooryasyini (2011), indicated the expectation for the rest of the period of project implementation, that APKJ members would perceive an increase in all indicators.

Prestvik (2008), conducted a workshop survey focused on small-scale workshops and studied details of the cost—benefit analysis of furniture workshops in Jepara. A sample of 403 workshops was taken as a subset of 1000 workshop surveyed by Roda et al. (2007). Perstvik (2008), managed to visit 320 workshops, and found 243 workshops were still active and 77 workshops (24% from surveyed sample) had closed; the remaining 83 workshops from the sample list were not found.

Based on a census by Achdiawan and Puntodewo (2011), enterprises involved in the furniture industry decreased 20% from 15,000 units to 12,000 units in 5 years, from 2005 to 2010. The study aims to learn the factors affecting the furniture industry's downturn.

## Method

The FVC project is an action research study, it was designed to have measurable impact based on evidence. An impact assessment survey was

conducted from February to March 2012.

Respondents interviewed were direct and indirect beneficiaries of the project, drawn from a sample subset of Prestvik (2008) and representative of the Jepara Small-scale Furniture Producers Association (APKJ) as well as champions from the association. Champions are selected small-scale furniture producers who received immediate impact of the project. They were later observed in order to compare with other furniture producers and indirect beneficiaries of the FVC project.

Impact Assessment study was implemented through three approaches:

- Comparing livelihood changes of furniture producers from 2008, 2010 and 2012 based on panel data analysis
- Learning the rate of adoption
- Perception and access to credit, market and raw material

## Panel data analysis

Panel household data have considerable advantages over more widely available cross-sectional data for social science analysis (Gujarati, 2003).

The advantage of using panel data are;

- Tracing the dynamics of behaviors,
- Identifying the influence of past behaviors on current behaviors, and
- Controlling for unobserved fixed characteristics in the investigation of the effect of time-varying exogenous variables on endogenous behaviors.

The advantages above are important to learn the processes that occur over time including the impact of programs or projects on subsequent behavior that often use time-varying exogenous variables.

Identical questionnaires were applied in the 2008 and 2012 surveys to measure consistent variables across 4 years. They are mainly variables of livelihoods and cost—benefit analysis related to furniture enterprises.

## Rate of adoption

Rate of adoption is the number of members of a society who start using a new technology or innovation during a specific period of time. The rate of adoption is a relative measure, meaning that the rate of one group is compared to the adoption of another, often of the entire society (Rogers, 1983).

## Perception of beneficiaries

In the same questionnaires for livelihood and cost-benefit analysis of the industry, we also included questions on the perception of respondents to the projects. These questions aimed to capture the respond of the project beneficiaries to programs of FVC project in the last 4 years and whether they have taken benefit from the programs. This also aimed to get inputs to improve the scheme of the action research project design.

The questionnaire focused on the cost-benefit analysis, market and supply of raw material and market of the finished and unfinished product. The data collected were to be compared with workshops' performance in 2008. Households in general were surveyed in 2009 and were also surveyed in 2012, as a control, in order to learn relative changes of furniture producers, member of association and champions in comparison to most households in general in Jepara District.

A total of 43 workshops that were not members of the association were sampled, 41 units from members of the of association APKJ, 11 from the 41 respondents are champions from APKJ. The champions are mostly core members or has significant roles in APKJ.

## Results

### Furniture producers in Jepara

It was recorded that 10% of workshops visited in 2008 were closed in 2010, due to lack of capital and buyers. They were shifted into other livelihoods activities, such as trading and agriculture. Median gross revenue of active workshops in 2012 was 222 million rupiahs (US\$24,000), or relatively increasing from 210 million rupiah (US\$22,500), gross revenue per workshop in 2008.

The amount of furniture industry labor involved in the workshop in 2008 is not significantly different from workers in 2012, it just slightly increases from

8.2 labors per workshop in 2008 to 8.4 labor per workshop in 2012.

Market orientation has been shifted to be more domestic. Three-quarters of workshops supplying the export market in 2008 now have shifted into the domestic market. This indicates furniture producers which supplied the export market have changed their strategy into local market potential. This is possibly related to the global crisis where the global market slightly decreased in the last couple of years.

### Member of Jepara Small-Scale Furniture Producers Association (APKJ)

All members of the association explicitly mentioned that the association has given positive benefit to them and agreed that the Association has to continue and keep working. Compared to non-APKJ members or workshops in general, they testified that since becoming members of APKJ, they have gained bigger opportunity through either better market access or new innovation. In the former impact assessment of APKJ, Nooryasyini (2011) found that APKJ members had better access to the market by participating in exhibitions but at the same time affordability of raw material has decreased.

APKJ members mentioned new innovation offered by APKJ. The new innovation is the application of an Internet portal, to market and promote their furniture products. However, they suggested APKJ improve the mechanism and procedure for using the portal as well as cohesion among members. A few APKJ members even managed to create new business group from a joint venture among members.

APKJ members tended to earn more in 2012 after they joined APKJ in 2009. The income of a subset (7 respondents) of APKJ members that were surveyed in 2008 had increased significantly from 297 million rupiahs in 2008 to 317 million rupiahs in 2010.

Most APKJ members are processing semi-finished furniture, and about 30% of them produce semi-finished and finished products. Workshops that produce finished products also take semi-finished furniture from other workshops. They are acting as trade or brokers as well, but this does not necessarily mean that they earn more than other APKJ members who are purely producing semi-finished products.

Compared to other furniture producers, 78% of APKJ members have gained increasing sale of products within the recent year, while only 44% of non-APKJ members producers gained an increase of sales. While in terms of total production, 78% of APKJ members experienced an increase in the recent year and non-APKJ members earnings increased 40%.

**Champions of APKJ**

Champions of APKJ are not different from other APKJ members as they indicated positive benefit they gained from APKJ. About 67% of the Champions indicated that they their sales and profit have increased compared to one year before, three years before, 5 years before as well as 10 years before.

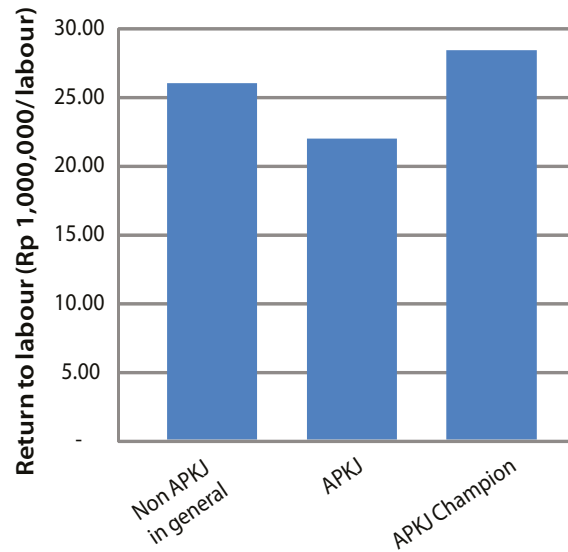
Median of Champions’ gross revenue in 2011 was 150 million rupiahs. It is just the same with other APKJ members. They earn significantly less than median gross revenue of furniture producers in Jepara.

APKJ Champions earn higher return to labor compared to non-APKJ and other APKJ members. Each labor work for a Champion workshop earns 28 million rupiahs per year (Figure 2)

Due to the impact of the support from CIFOR, marketing is not anymore the main problem for most furniture producers as found at the beginning of the project. According to 80% of Champions, wood/furniture processing machines i.e. kiln and drier are the main problem now. While non-APKJ members think the main problems are shared among market access, machinery, wood quality and wood quantity supply.

**Dynamics of industry, comparison of APKJ, Champions and non-APKJ**

In comparison to non-APKJ members, APKJ members and Champions are experiencing improvement in several aspects of furniture industry. APKJ members and APKJ Champions have



**Figure 2. Bar chart of Return to labor of furniture producers in general, APKJ members and APKJ Champion**

improved in total sales, profit, production quantity, number of buyers (market expansion), wood/raw material purchasing quantity and number or kind of item produced. This indicates that APKJ members and Champions are better improved in most aspects of furniture production (Table 2).

Among different aspects, the increment in the number of item/kind produced is relatively smaller, in general only 40%, while other aspects mainly increased above 50%. Percentage improvement within 1 year and 5 years ago for APKJ members and Champions are relatively high. This shows that they are rapidly improving at the moment.

**Discussion**

In terms of overall volume, the furniture industry in Jepara has not experienced drastic change in the last 4 years. However, this does not necessarily mean the global market is stable, as a matter of fact export products from furniture workshops has decreased. Furniture producers have shifted into the domestic

**Table 1. Gross revenue and labor for Non-APKJ, APKJ and Champion workshop**

	Return to labor (Rp/labor)	Labour	Gross revenue (Rp/year)
Non-APKJ	25,900,000	7	222,500,000
APKJ	21,875,000	8	150,000,000
Champiion	28,312,500	6	150,000,000

**Table 2. Dynamic of Furniture Industry within last 1 year and last 5 years**

Aspect		Dynamic 1 year			Dynamic 5 year		
		Stable	Decreasing	Increasing	Stable	Decreasing	Increasing
Sale	Non-APKJ	35%	21%	44%	26%	14%	60%
	APKJ	15%	4%	81%	7%	4%	89%
	APKJ Champion	14%	14%	71%	14%	7%	79%
Total		25%	14%	61%	18%	10%	73%
Profit	Non-APKJ	28%	12%	60%	21%	5%	74%
	APKJ	19%	4%	78%	7%	4%	89%
	APKJ Champion	7%	14%	79%	7%	7%	86%
Total		21%	10%	69%	14%	5%	81%
Production Quantity	Non-APKJ	40%	21%	40%	26%	9%	65%
	APKJ	11%	7%	81%	4%	7%	89%
	APKJ Champion	14%	14%	71%	7%	14%	79%
Total		26%	15%	58%	15%	10%	75%
Buyer	Non-APKJ	37%	23%	40%	23%	12%	65%
	APKJ	15%	4%	81%	7%	4%	89%
	APKJ Champion	14%	14%	71%	14%	14%	71%
Total		26%	15%	58%	17%	10%	74%
Wood purchasing	Non-APKJ	37%	19%	44%	23%	9%	67%
	APKJ	7%	4%	89%	4%	7%	89%
	APKJ Champion	14%	7%	79%	7%	7%	86%
Total		24%	12%	64%	14%	8%	77%
Number of item/ kind	Non-APKJ	49%	28%	23%	37%	21%	42%
	APKJ	30%	0%	70%	7%	4%	89%
	APKJ Champion	43%	7%	50%	7%	7%	86%
Total		42%	15%	43%	23%	13%	64%

market. Note about 10% furniture workshops have closed their business and shifted into other activity in order to cope.

Being a member of a furniture association such as APKJ has given benefit to members. They have better access to training, capacity building, as well as market. This has been improved their revenue. Half of Champions obtained an access loan from BRI (*Bank Rakyat Indonesia*) right away after participating at the financial training. Loans granted were in range between 10–50 million rupiahs. They were used as additional capital to develop and support their furniture business.

However, some rules and consensus have to be set to maintain cohesion among members. The use and access to certain resources has to be equal for all members. Some innovations introduced by

the association are not immediately adopted by members. This indicates low rate of adoption. Some outside intervention has to be improved in order to accelerate the adoption.

## Conclusion and recommendations

The FVC project has been running for 4 years, a number of output and activities have been achieved. Most of the impacted beneficiaries are members of association and Champions. Furniture producers in a wider scope have not been accessed directly. Facilities and support from the project and project partners mainly reach members of the association especially Champions.

Now the FVC Project is stepping into the last year of the project. It has to start to access a bigger community rather than only members of the

association. FVC also has to assist the association to give their impact to non-APKJ members. Champions and members of the association are expected to act as agents of change to diffuse innovation and improvement of the furniture business. The window of opportunity has to be opened to a broader audience. Therefore FVC will affect Jepara furniture industry as a whole.

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# The impacts of domestic timber trading regulations on small-scale wooden furniture industries in Jepara, Indonesia

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## Abstract

Indonesia is known as one of the major wooden furniture producers in the world. Wooden furniture does not only generate foreign exchange, but also creates job and income for millions of people. The wooden furniture industries have a long value chain and strong linkages with many other economic activities. It means that they create huge multiplier impacts from the economic activities of craftsmen, intermediate traders and owners of furniture industry, as well as suppliers of raw materials, foods, transportation and accommodation related to the operation of industries. This study aims to identify some important regulations related to domestic timber trading and their implications for the small-scale wooden furniture industries,

especially in the major wooden furniture producing region of Jepara, Central Java. The study concluded that the regulation of restricting inter-region log trading will threaten small-scale wooden furniture industries in Jepara seriously because of reducing wood raw materials over 75%. The wooden furniture industries that will survive in the future are those of high efficiency production using small diameter logs, waste from logging or recycled products. Therefore, formulation of better regulations for domestic log allocation is needed to ensure the business sustainability of small-scale wooden furniture industries.

**Keywords:** *small-scale industry, timber trading regulations, wooden furniture*

# The imbalanced distribution of added value in the value chain of rattan trade

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## Abstract

The foreign exchange gain of rattan exports in 2010 was about US\$137.95 million or approximately 6.8% of the export earnings of furniture and handicraft. The export earnings were lower than in the previous year due to the low absorption of the domestic rattan industry and finally caused a reduction in the income of rattan farmers and collectors. Rattan farmers just gain a little benefit from activities of the value added done. This paper aims to analyze the distribution of the added value in the process of the value chain in rattan trading and proposes policy recommendations that may be useful to encourage the sustainability of the rattan industry. The data were collected from the interviews in Cirebon and Banjarmasin. The results showed that the role of the stakeholders in the process of the value chain of rattan furniture can influence the added value of the rattan business. Unfortunately, the added value created was not distributed evenly among the stakeholders involved, the closer the rattan business actors to downstream, the higher the value added of rattan furniture they get. Farmers as collectors and suppliers of raw materials received only 7% of the added value, and small-scale rattan processing industries received 8.9% of the added value. The little added value is demotivating for rattan farmers and collectors. In order to increase the added value received by farmers and rattan collectors and to motivate and encourage the interest of rattan farmers and collectors, it is necessary that there are some incentive policies for them: (1) the removal of license for rattan collection and *PSDH*, (2) the removal of the prohibition exports on rattan that is not absorbed by the processing industry, and (3) the benchmark price refers to the domestic and international prices.

**Keywords:** *value chain, rattan furniture, added value*

## Introduction

The demand for rattan is continually increasing and there is also a demand for new types so that a variety of new rattan species were planted. The high price and also high demand for rattan finally encouraged farmers to cultivate rattan on large scales until the 1980s (KPSHK, 2010). From 1987, rattan price was no longer competitive due to the closing of the rattan exports faucet, and also the government policy on rattan export often changed and tended to benefit certain parties, whereas farmers were the party that was most disadvantaged in the trade regulation (KPSHK, 2010). This condition resulted in the decline in farmers' interest to cultivate and to collect rattan. In addition, the market line or *track* of raw rattan materials from farmers and collectors to the factory is considered so long so that the distribution of added value that occurs in the value chain is not balanced with labor costs spent by farmers and rattan collectors. Actually, rattan from Indonesia has a dominant position in the global market, so it is important that Indonesia develops rattan processing industries complete with conducive policy.

In order to develop the rattan furniture industry, the government through the Ministry of Industry in cooperation with local governments in some areas which produce rattan raw materials has built the Integrated Rattan Industrial Development Centre in Central Sulawesi, in Katingan (Central Kalimantan) and in Pidie Districts (Aceh), while in the center of finished goods industry in collaboration with local governments, it has built the Rattan Furniture Design Center in Cirebon.

Generally, the rattan industry still has considerable potential, considering overseas markets of furniture products including goods from rattan is now getting better. Besides that, Indonesia has the potential to increase the spread of finished goods in some

areas because about 80% of rattan raw material in the world is from Indonesia. The data of the study of ITTO and Ministry of Forestry, the potential sustainable production of rattan raw materials, both from natural forest and from the cultivation is about 140,000 ton.

The rattan furniture and handicraft industry from Indonesia has been a famous product in foreign countries for about 25 years. Rattan is strong, flexible and exotic and can be made into various forms, either functional or decorative. But since the line exports of rattan raw materials was opened, the Indonesian rattan industry has gradually been forgotten by world market, about 40% of companies that rely on rattan raw material have become bankrupt (Kompas, 7 April 2012).

The policy of the government prohibiting the export of rattan raw material has begun to create positive response. The orders of rattan handicraft products from Europe have started to come, hundreds of local businesses intend to improve production with high quality to meet market demand. The government, through Regulation of the Ministry of Home Affairs No.35 prohibits exports of rattan raw materials. Shortly after the policy was implemented, the rattan industry in Cirebon District, West Java, is mushrooming again. Currently, because the export of rattan raw materials was stopped, the furniture and rattan handicraft players in Cirebon have become optimistic and believe that the glory of the rattan furniture industry can be achieved again. The purpose of the implementation of trade and industrial rattan policy currently aims to strengthen the Indonesian rattan industry in global competition. The development of the rattan industry includes competitive and comparative advantages, mainly based on the benefits of natural and human resources and eliminat all forms of discrimination and barriers.

The value chain refers to a set of activities that should be done to deliver a product from the concept stage to the end user. In general, the chain of rattan sales and trading is from rattan farmers to local collectors, then to big collectors, and finally to the rattan industry in and outside of a region. Value chain analysis allows us to understand the global challenges of a competitive market and identify linkages and coordination mechanisms, and to understand how chain players are associated with power.

Since many stakeholders get involved in the process of the rattan trade, many laborers depend on the sustainability of the rattan raw material supply and potential rattan market opportunities. Thus, it is important to conduct studies on the rattan value chain to understand how the rattan value chain is formed. This study aims to analyze the distribution of added value in the value chain of the rattan trade, and proposes policy recommendations to encourage the continuity of rattan processing industry. The study was conducted in the District of South Kalimantan Banjarmasin, and Cirebon, West Java, in early 2012.

## **The development of rattan trade**

### **Rattan furniture and craft trade in Cirebon**

Cirebonarea has been recognized as having great potential in the furniture industry and handicrafts made from rattan materials for a long time. Actually, this area does not really have a rattan plantation, but the number of rattan industry and hereditary artisans in this region working in the rattan industry makes Cirebon the main area of artisans and biggest manufacturers of rattan in Indonesia. When there was a decree of the Minister of Trade No.12, 2005, which allowed the export of rattan raw materials, many manufacturers preferred to export raw rattan materials. This condition finally caused an increase in the the price of raw materials for rattan furniture and handicrafts because the price of the raw rattan material for local producers used a benchmark export price. The decree of the Minister of Trade on one side was favorable for exporters, but on the other side was unfavorable for the rattan processing industry.

Cirebon districts' rattan businesses had increased quite rapidly before 2005, but after the government opened raw materials exports, craftsmen had trouble fulfilling the orders from various countries such as Germany, the Netherlands, Italy and Japan. This happened because they have to compete with cheap furniture from China. So, the prohibition of exporting rattan raw material by the government was welcomed by hundreds of rattan furniture entrepreneurs who empower hundreds of thousands of laborers, and expect that the orders from various European countries will increase again.

The rattan handicraft and furniture industry in Cirebon district fluctuates. The development of the



**Table 1. Data on the development of the rattan industry Cirebon district, 2006–2011**

No	Year	Business unit	Labors	Value of investments (Rp 1.000,-)	Production capacity (Ton)	Production value (Rp. 1.000,-)
1	2011	1,260	54,291	209,003,612	66,123	1,514,244,781
2	2010	1,224	54,184	192,996,711	59,348	1,392,112,174
3	2009	1,172	52,414	189,342,500	57,464	1,361,028,874
4	2008	1,160	65,519	189,162,569	78,718	1,701,285,874
5	2007	1,149	64,898	187,368,787	77,972	1,685,152,991
6	2006	1,123	54,180	183,128,937	76,207	1,647,020,721

Source: Dinas Perindustrian dan Perdagangan Kab. Cirebon (2012).

**Table 2. Centers of rattan industry and rattan furniture in Cirebon (2011)**

No	Name of Centers	Business Unit
1	Cangkring	60
2	Karangsari	55
3	Tegalsari	250
4	Tegal wangi	524
5	Bodesari	89
6	Bode Lor	67
7	Gombang	50
8	Lurah	30
9	Pamijahan	45
10	Marikangen	37
11	Non Sentra	53
<b>Total</b>		<b>1,260</b>

Sources : Dinas Perindustrian dan Perdagangan Kab. Cirebon (2012).

rattan industry in Cirebon District over the last 6 years is presented in Table 1.

The government policy on export prohibition of raw rattan is expected to increase the export of rattan and rattan furniture in the future. By closing the exports of rattan raw materials, the Indonesian rattan industry will not experience lack of rattan raw materials. The rattan handicraft and furniture industry in Cirebon district has spread across several

centers of furniture industries and rattan handicrafts, presented in Table 2.

The potency of core competence of the rattan industry areas in Cirebon districts from 2010 to 2011 are presented in Table 3.

The growth of the rattan industry in Cirebon from 2010 and 2011 increased. It is expected that the following year, after the implementation of the exports ban policy of raw materials, the production and exports of the rattan center industry will begin to recover and increase

#### **Export value from the center of the rattan industry in Cirebon**

The export values of the rattan industry center in Cirebon during the last 7 years were unstable and fluctuated. The data of export value in last 7 years is presented in Table 4.

Table 4 shows that the value of rattan export is unstable and tends to fluctuate; the highest export value was in 2008. After the economic recovery of the United States and Europe, and after the close of rattan exports, the value of export increased. Therefore, it is necessary to take proactive actions to expand export markets to Asia and the Middle East.

**Table 3. Potency of core competence of rattan industry areas in Cirebon districts from 2010 to 2011**

No	Commodity	Business Unit		Growth	
		2010	2011	Total	%
1	Business unit	1,224	1,260	36	2.85
2	Labors	54,184	54,291	107	0.19
3	Value of investments (Rp 1.000)	192,996,711	209,003,612	16,006,901	7.65
4	Production capacity (Ton)	59,348	66,348	7,000	10.55
5	Production value (Rp 1.000)	1,392,112,174	1,514,244,781	112,133,607	8.07

Sources : Dinas Perindustrian dan Perdagangan Kab. Cirebon (2012, the data analyzed)

**Table 4. Data of export value from the center of the rattan industry from 2005 to 2011**

No	Year	Value of export (Rp 1.000)
1	2005	120,331,844
2	2006	116,800,093
3	2007	115,202,547
4	2008	130,726,860
5	2009	96,851,366
6	2010	112,182,360
7	2011	97,249,949

Source: Dinas Perindustrian dan Perdagangan Kab. Cirebon (2012).

### Source and requirement of rattan raw material

The sources of raw materials and local rattan species produced are Seel (*Daemonorops melanochaetes*) species taken from Perum Perhutani, Garut Districts, Tasikmalaya Districts, Cilacap Districts, Sukabumi Districts and Sumedang Districts. Most of the raw materials for the rattan industry and rattan furniture are supplied from outside of Java. Rattan species taken from outside of Java and brought to the center of the furniture and rattan handicraft industry in Cirebon district based on its utility. However, the supply of raw materials from outside Java is now rather difficult to be obtain, because the rattan supply taken from rattan forests has decreased. This happens because many forests were converted to oil palm, rubber and mining. Besides that, many rattan collectors changed their job to plantation workers and rubber tappers.

**Table 5. Rattan species, utility and source of raw materials in the center of the furniture and rattan handicraft industry in Cirebon**

No	Species	Utility	Origin of Raw Materials
1	Manau	Truss	Sulawesi
2	Semambu	Truss	Sulawesi
3	Tohiti	Truss	Sulawesi
4	Kubu	Webbing	Kalimantan, Sumatera
5	Jawit	Webbing	Kalimantan
6	Lacak	Webbing	Kalimantan, Sumatera
7	Slimit	Webbing	Aceh
8	Sarang buaya	Webbing	Kalimantan, Sulawesi
9	CL	Webbing	Kalimantan, Sumatera, Jawa

Source: Dinas Perindustrian dan Perdagangan Kab. Cirebon (2012).

Currently, Central Kalimantan is a main supplier of rattan raw materials to the rattan industry in Cirebon. To strengthen the partnership between the producers and users of raw materials, the rattan industry businessmen once visited Central Kalimantan in order to find solutions of the problem of rattan raw material stock that often occurred. The problem is that the rattan industry often lacked stock. Until now, the raw materials sent to Cirebon are generally still in the form of raw materials, not yet processed into ready-to-use rattan materials. The rattan species, utility and source of raw materials are presented in the Table 5.

The regulation of the Minister of Trade No. 35/2011 and the postal rates number 1401.20 on January 1, 2012, prohibits the export of raw rattan and half-finished rattan materials. The regulation also states the export of rattan furniture which is included in the post of tariff number 4601–4602, and postal rates number 9401–9403 can only be done by registered exporters of Industrial Products Of Forestry (ETPIK) after undergoing the verification process. The policy which was taken by the government is the government response to overcome the problem of the scarcity of raw materials for the production of rattan furniture and handicrafts in this country. In addition, the Minister of Trade added that the government would assist to improve the quality of design by bringing in world-class furniture designers.

The scarcity of the rattan raw materials for the rattan industry occurred in February–March 2012 caused the stagnancy of the production in center of rattan industry in Cirebon. Based on an interview with the Chairman of the Board Commissioner of Asmindo Cirebon, to meet the export demand, the rattan industry in early (January) 2012 produced rattan products about 1,718 containers, or US\$ 23.4 million, this had dramatically increased compared with the production of last year in the same month, US\$ 13.8 million.

The scarcity of raw materials became a question why local producers of rattan do not want to supply the raw rattan. This may be the impact of the regulation of rattan export ban. A few months ago, the rattan industry center had trouble finding the raw materials. The rattan businessman expect that in the future the supply of ready-to-use rattan is always available because the processed rattan products are in great demand in overseas markets.

### Rattan raw material prices

The price of rattan raw material from year to year always increases due to some factors. Some of the causes are the decrease in the supply of rattan from natural forests, the increase of operational costs and the increase of the fee of *PSDH*. The results of interviews with several distributors in Cirebon on the rattan prices are presented in Table 6.

Currently, since the price of the rattan raw material tends to be high, the rattan industry entrepreneurs feel de-motivated. The presence of Regulation of the Minister of Trade No.22/M-DAG/PER/4/2012 about Benchmark Pricing of Forest Products related to the calculation of *PSDH* makes the situation of rattan industry more complicated. Fees payment for forest resources (*PSDH*) increased. The rattan industry must pay *PSDH* about ten times more than the previous tariffs. The tariff changes of previous *PSDH* to new *PSDH* are presented in Table 7.

The tariff increase of rattan *PSDH* based a benchmark price determined by Minister of Trade through the Minister of Trade Decree No. 22 has increased ten times higher that the previous one. The raw material needed to meet the production capacity of the rattan industry in Cirebon reached 42 million tons/year.

### Value chain

#### Value chain of rattan trade

The flow of the raw materials, the furniture products and rattan handicraft in the value chain of the rattan

trade in Banjarmasin and Cirebon District, ranging from the rattan farmers as the suppliers of raw materials, the traders, the rattan processing industry and the end users, can generally be described as follows:

The chain of rattan marketing is long and varies from region to region. In general, most of the raw rattan from outside of Java (Sumatera, Kalimantan, Sulawesi and NTB) are processed by rattan industry located on the Java island particularly in Cirebon. The processing of rattan outside of Java is generally limited to the process of cleaning and fumigation with sulfur (washed and sulfurized (W&S). In Kalimantan, there are also some factories that process half-finished products, such as leather rattan (rattan bark), liver or fitrit rattan (rattan pith), rattan round polished (polished round rattan) and plaiting materials (plaiting materials). In the '80s in South Kalimantan, there were also many industries processing rattan to be rattan mats, which are considered *half-finished items*, and finished rattan goods exported to Asia and Europe.

The farmers and rattan collectors sell their rattan to the intermediate traders at the village level and this is then forwarded to the inter-island intermediate traders. Some of the intermediate traders at village level process raw rattan into rattan W&S or split rattan before selling it to intermediate traders between islands/provinces. Small numbers of raw rattan were sold to the rattan industry or artisans in South Kalimantan. The inter-island intermediate

**Table 6. Prices of rattan raw materials in the center of the rattan industry, Cirebon**

No	Species	Prices (Rp/Kg)	Origin of Raw Materials
1	Manau	16,000	Sulawesi
2	Semambu	8,000	Sulawesi
3	Tohiti	15,000	Sulawesi
4	Kubu	12,500	Kalimantan, Sumatera
5	Jawit	11,000	Kalimantan
6	Lacak	15,000	Kalimantan, Sumatera
7	Slimit	32,000	Aceh
8	Sarang buaya	16,000	Kalimantan, Sulawesi
9	CL	7,000	Kalimantan, Sumatera, Jawa

**Table 7. The tariff changes of *PSDH* of rotan based on Permendag No 13/2012**

No	Rattan Species	Previous <i>PSDH</i> (Rp/Ton)	New <i>PSDH</i> (Rp/Ton)
1	Rotan Batang	30,000	385,000
2	Rotan Lambang	42,900	427,500
3	Rotan Tohiti	54,000	397,500

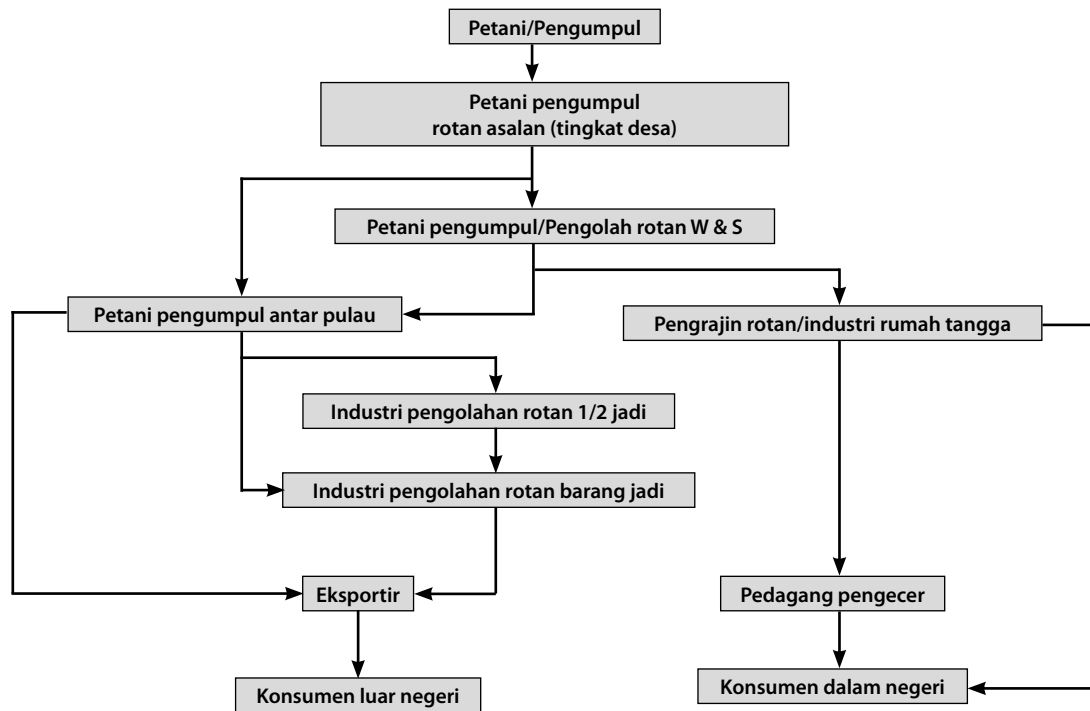


Figure 1. Rattan marketing chain in the South Kalimantan and Cirebon

traders send most rattan to the processing industry located on the island of Java, particularly in Cirebon and Surabaya in the form of rattan W&S, and the rattan in the form of W&S and split rattan is also sold to the rattan processing industry in South Kalimantan.

#### Distribution of added value

The distribution of added value obtained by each business actor involved in the rattan value chain is related to a series of activities commonly performed by each approved agency or value chain are:

1. The collectors and farmers of rattan harvest, collect and transport rattan (wet, water content of 90–100%) to the village
2. Intermediate traders (at the village level) and transportation services conduct processing I (washing, drying and curing), and transport to the traders in Banjarmasin, and produce raw rattan (W&S), moisture content 25–40%
3. Intermediate traders, processing factory (small scale) and transportation services conduct processing II (fumigation, drying, cleavage), and transport to Cirebon, producing *semi-finished rattan* (rattan skin and liver).

4. Processing factories (large scale) produce furniture and wicker, transport to Cirebon or directly export to overseas buyers in the form of finished products such as leather woven rattan, wicker rattan heart and rattan furniture.

The more treatment done by approved agencies, the higher the added value will be. For example, when a farmer or collector adds activities of laundering, drying and curing to the rattan collected, his income will also be greater.

The price of rattan at the farm level (farm gate price) varies; it depends on the species and location. The prices at the farm level do not change much from year to year. The price is about Rp 300,000 to Rp 400,000 per quintal, and the selling price at the collector level ranges between Rp 4,000 to Rp 6,000 per kg. Because of the high demand, and limited stock, the rattan collectors must order 1 month before.

The complaints that often made by traders are that they often get small rattan, whereas the large rattan was exported because of the high profit of doing so.

Therefore, the government banned the export of raw and semi-finished rattan on January 1, 2012. The problem also happened in Java. The traders of South Kalimantan and Java competed in getting rattan as quickly as they could. The species of rattan traded were mostly (70%) of large diameter and the rest (30%) of small diameter. The species of large-diameter rattan consist of lambang (*Calamus ornatus* var. *celebica*), umbul (*C. sympsysypus*), noko (*Daemonorops* sp.), tohiti (*C. inops*), uban, tarumpu, mandola, manau (*C. manan*), semambu (*C. scipionum*), seuti (*C. ornatus*) and sampang (*Korthalsia junghubnii* Miq.), while the small-diameter rattan species consist of sega (*C. caesius*), jahab, pulut (*Daemonorops* spp. and *Calamus* spp.), locek, datuk, jarmasin (*C. leiocaulis*) and cacing (*C. javanicus*).

The distribution of value added is calculated based on the final value of rattan furniture products in the form of guest chairs consisting of one piece couch, three single chairs and one coffee table. Based on the results of the interviews from the fields, 1 quintal of rattan can be used to produced three sets of guest chairs, so that one set of chairs needs about 35 kg rattan rod. The distribution of added value created from rattan trade chains are presented in the Table 8.

From Table 8, it can be seen that the more downstream and the higher the value added rattan-furniture trading realizes. In this case, the farmers as cultivators or collectors of rattan and raw material suppliers of furniture and rattan wicker (rattan) just gain 4.89% value added of the total added value created. Similar to the added value earned by traders at village level and traders of processed rattan in the form of W&S were 2.39% and 2.73%, respectively.

This also happens to rattan craftsmen located in Cirebon area and partnering with the large rattan processing industry. The craftsmen just gain the added value 13.97% of the total value added created. Meanwhile, large industries and exporters, respectively, enjoy added value 21.95% and 28.97%. The imbalanced distribution of value added in the value chain of this rattan furniture trade can affect the sustainability of business furniture and rattan cultivation of plants or natural forests, due to low gain of value added. These are disincentives for those involved in this business, especially those agencies who directly involved in the upstream sector.

The low value added earned by farmers is due to the lack of information about the rattan market, the closure of raw rattan semi-finished exports faucets, and the quality of rattan at the level of farmers. Those factors make the price of rattan lower, and farmers finally change their jobs to workers at plantations and rubber tappers.

While the craftsmen or small-scale of rattan processing industry generally produce half-finished rattan with quality based on the specifications required by the large industry, they sell their products with the price driven by major industry as buyers. This happens due to asymmetric information about market so that the business actors who get more information will get more profit.

### Conclusion

The furniture and webbing rattan industry in Cirebon District have considerable potential to be developed. The series of activities that are performed by each agency or rattan value chain is a reference of added-value gain of each agency of commerce.

**Table 8. Distribution of Value Added of Actors in The Value Chain (Rp/1 set seat guests)**

No	Actor	Income (Rp/1 set chair guest)	Spending (Rp/5 liter)	Added value (Rp/5 liter)	Percent (%)
1	Farmers of cultivation/Collectors	140,000	70,000	70,000	4.77
2	Collector Traders/Mediators	185,000	150,000	35,000	2.39
3	Trader Processing Rattan WS	210,000	170,000	40,000	2.73
4	Inter-Islands Trader	450,000	350,000	100,000	6.82
5	Small processing industry/Craffmen	845,000	640,000	205,000	13.97
6	Intermediate Processing Industry/Large	1,330,000	1,008,000	322,000	21.95
7	Local trader/Regional	1,800,000	1,530,000	270,000	18.40
8	Eksportir	2,400,000	1,975,000	425,000	28.97
<b>Total added value</b>				<b>1,467,000</b>	<b>100</b>

After finding out the value chain of the matting and furniture industry, it is quite clear that the furniture and woven industry in Cirebon District currently requires a lot of support from all related institutions: forestry, trade, industry, banking/investor and local government in order to increase the benefits of added value for people, the local government and foreign exchange gain. The continuity of the furniture industry and woven rattan was strongly influenced by the market certainty and the continuity of the rattan raw materials. Some policy recommendations in order to balance the value added in the process of value chain are:

1. The removal of an obligation that requires rattan collectors, farmers and rattan traders to have a license in collecting and trading rattan.
2. The removal of PSDH of all kinds of rattan both natural and cultivated to cut high costs and stimulate local communities to preserve and cultivate rattan
3. The rattan absorption policy produced by rattan farmers, rattan collectors and also the rattan processing industry should be done by the government by determining a rattan price benchmark based on the combination of domestic price and export price.
4. The removal of the export restrictions for species of rattan that are not absorbed by the processing industries.

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# Peran kelembagaan pengrajin kecil dalam meningkatkan distribusi nilai tambah industri mebel: Pengalaman di Jepara

Margono

Asosiasi Pengrajin Kayu Jepara

## Abstrak

APKJ sebagai lembaga yang terlahir dari keinginan berbagai kelompok pengrajin kayu yang di akomodir oleh CIFOR bekerjasama dengan pemerintah Jepara dalam proyek penelitian Furniture Value Chain dalam meningkatkan nilai tambah dan efisiensi bahan baku serta proses produksi mebel ukir Jepara. Visi APKJ Pemberdayaan Potensi Pengrajin kecil untuk mandiri yang berdaya saing di pasar global;

Terwujudnya kemitraan antar pengrajin kecil untuk kesejahteraan bersama; Membangun citra Jepara sebagai industri mebel dan seni ukir yang unik dan berkualitas. Paper ini menceritakan permasalahan yang dihadapi pengrajin mebel dan beberapa upaya yang dilakukan oleh APKJ untuk mengatasi permasalahan seperti SDM, pemodal, bahan baku dan akses pasar.

# Pemasaran kayu rakyat di Gunung Kidul

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## Abstrak

Kayu jati dari hutan rakyat di Kabupaten Gunung Kidul menjadi salah satu alternatif penyedia bahan baku industri kehutanan di Jawa khususnya. Penelitian ini bertujuan untuk mengidentifikasi saluran distribusi pemasaran kayu jati dengan pendekatan komoditi, lembaga pemasaran dan fungsinya. Metode penelitian yang digunakan adalah survey dengan wawancara mendalam pada responden terpilih. Hasil penelitian menunjukkan terdapat 5 pola pemasaran kayu jati. Terbentuknya pola-pola tersebut antara lain dipengaruhi oleh pengelolaan hutan rakyat yang sudah bersertifikat dan yang masih tradisional.

**Kata kunci:** pemasaran, kayu rakyat, hutan rakyat, sertifikasi hutan, Gunung Kidul

## Pendahuluan

Hutan alam di Indonesia telah mengalami degradasi yang cukup tinggi. Data kementerian Kehutanan luas hutan alam produksi pada tahun 2003 mengalami penurunan dari 59,6 juta ha menjadi 27,8 juta ha, demikian pula produksinya menurun dari 28 juta m<sup>3</sup> menjadi 11 juta m<sup>3</sup>. Hal ini didukung oleh data dari Forest Watch Indonesia (2001) yang menyebutkan bahwa laju deforestasi di Indonesia rata-rata sekitar 1 juta ha per tahun. Penurunan luas dan potensi tersebut tentunya berpengaruh pada kemampuan hutan menyediakan bahan baku industri. Berdasarkan data MPI (2009) kebutuhan bahan baku kayu industri mencapai 60 juta m<sup>3</sup> per tahun. Sementara itu pasokan dari hutan alam dan hutan tanaman mencapai 40-50 juta m<sup>3</sup>

per tahun. Sehingga terjadi kekurangan sebesar 10-20 juta m<sup>3</sup> per tahun. Kekurangan tersebut akan semakin meningkat karena trend kebutuhan bahan baku kayu industry yang cenderung naik sementara itu kemampuan hutan alam untuk mensuplay semakin menurun. Pembangunan hutan tanaman yang diprogramkan pemerintah maupun swasta yang diharapkan mampu menggantikan hutan alam sebagai pensuply bahan baku industry ternyata belum cukup berhasil

Ditengah ketimbangan supply dan demand bahan baku industry tersebut, perkembangan hutan rakyat terutama di Pulau Jawa dari luas dan potensi yang semakin tinggi menjadi alternatif penyedia bahan baku industry menghadirkan fenomena baru dalam pengelolaan hutan di Indonesia. Pembangunan hutan rakyat yang telah dimulai secara swadaya oleh masyarakat dilanjutkan dengan program karang kriti, program reboisasi, hutan rakyat kemitraan, program gerhan/GNRHL dan hutan tanaman rakyat menunjukkan perkembangan yang pesat. Data dari Ditjen RLPS, Kementerian Kehutanan (2009) luas total hutan rakyat di Indonesia mencapai 3.589.434 ha. Dari total luas hutan rakyat tersebut ternyata 2.799.81 ha atau 77,98% berada di Pulau Jawa. Dari sumber data yang sama menunjukkan bahwa potensi hutan rakyat dalam bentuk standing stok sebanyak 125.627.018 m<sup>3</sup>. Sementara potensi siap panen mencapai 20.937.836 m<sup>3</sup>. Angka tersebut tentunya sangat signifikan karena produksi kayu nasional saat itu mencapai 43.655.101 m<sup>3</sup>. Potensi panen hutan rakyat terbesar berada di Jawa, yaitu mencapai 16,3 juta m<sup>3</sup>.



Hutan rakyat mempunyai peran yang sangat strategi karena mampu meningkatkan pendapatan petani, memperluas lapangan kerja dan kesempatan berusaha, menunjang kebutuhan hidup sehari-hari dengan tanaman pertanian maupun hijauan makanan ternak. Disamping itu hutan rakyat juga mempunyai fungsi ekologi, hidrologis maupun untuk konservasi lahan. Manfaat hutan rakyat menurut Simon (1998) dideskripsikan sebagai 1) sarana peningkatan pendapatan masyarakat di pedesaan, 2) meningkatkan investasi di pedesaan dan memperluas kesempatan kerja di daerah pedesaan sehingga mengurangi pengangguran dan urbanisasi, 3) meningkatkan ketahanan ekonomi dan keamanan desa, 4) menambah bahan baku bagi industri kehutanan, 5) meningkatkan kualitas lingkungan yang akan berpengaruh pada iklim global, 6) meningkatkan daya dukung keberadaan satwa dan berbagai jenis tumbuhan sehingga terbuka lebih luas peluang kepariwisataan.

Perkembangan hutan rakyat di Gunung Kidul merupakan bagian yang tidak terpisahkan dari sejarah perkembangan hutan rakyat di Pulau Jawa. Data dari Dinas Kehutanan dan Perkebunan Gunung Kidul (2010), luas hutan rakyat di Kabupaten Gunung Kidul mencapai 30.576 ha dengan produksi kayu log jati sebesar 85.403,815 m<sup>3</sup>, mahoni 6.696,310 m<sup>3</sup>, sono 3.360,773 m<sup>3</sup>. Adapun jumlah penggergajian dalam skala menengah-besar di Gunung Kidul sebanyak 24 unit, industri kerajinan sebanyak 18 unit serta industri meubel dan pertukangan sebanyak 206 unit. Pada tahun 2009 dari hasil transaksi kayu rakyat telah mampu menyumbang PAD sebesar Rp. 569.651.906. Awang (2001) membagi perkembangan hutan rakyat Gunung Kidul menjadi 4 periode, yaitu 1) periode pertama, merupakan masa kritis yang berlangsung sebelum tahun 1960, yaitu periode pada waktu lahan milik dan hutan Negara berupa hamparan batu bertanah kritis; 2) periode kedua, yaitu periode penanaman mandiri berlangsung antara tahun 1960-1970, masyarakat melakukan penanaman tanaman kayu pada lahan kritis secara swadaya; 3) periode ketiga, periode intensifikasi yang berlangsung antara tahun 1970- 1985, yaitu periode penanaman secara intensif dengan pembinaan dari pemerintah melalui penyelenggaraan program penghijauan; 4) periode keempat, periode permudaan alam yang berlangsung sejak 1985 sampai sekarang. Setelah keempat periode tersebut pada saat ini perkembangan hutan rakyat juga didukung oleh prograt GNRHL dan program-

program lain yang semakin mendukung keberadaan hutan rakyat.

Namun dalam perkembangan selanjutnya terdapat beberapa kendala dalam perkembangan hutan rakyat. Hardjanto (1990) menjelaskan beberapa faktor yang menjadi penghambat perkembangan hutan rakyat, yaitu belum adanya persatuan antar pemilik hutan rakyat, teknik silvikultur belum diterapkan secara baik dan sempurna, masih kurangnya pengetahuan petani tentang pemasaran hasil hutan, belum adanya lembaga khusus yang menangani perusahaan hutan rakyat.

Pada awal perkembangannya hasil hutan dari hutan rakyat baik yang berupa kayu maupun hasil hutan lainnya dipungut untuk memenuhi kebutuhan subsistennya. Namun pada perkembangan selanjutnya hasil hutan tersebut dijual ke pedagang meskipun perdagangan hasil hutan rakyat masih belum optimal. Hal ini disebabkan karena petani hutan rakyat cenderung pada posisi sebagai *price taker* atau penerima harga. Kondisi ini karena petani menjual kayu dalam jumlah kecil, insidental dan kemampuan menaksir nilai kayu yang masih rendah, sementara itu kemampuan lembaga pemasaran jauh lebih tinggi. Berdasarkan hal tersebut dapat dikatakan bahwa sistem distribusi kayu rakyat yang ada tidak efisien. Sistem distribusi dikatakan efisien jika mampu memberikan tingkat kepuasan bagi semua pelaku ekonomi yang terlibat (Andayani, 2003)

Dalam kegiatan pemasaran kayu rakyat terdapat banyak lembaga pemasaran yang terlibat. Hal ini menyebabkan pemasaran menjadi tidak efisien karena setiap lembaga pemasaran mempunyai aturan sendiri dalam menentukan harga, kualitas, kuantitas dan ukuran yang diperdagangkan. Dasar pemikiran di ataslah yang menjadi latarbelakang perlunya telaah masalah yang berkaitan dengan pemasaran kayu hutan rakyat dan strategi pemecahannya. Penelitian ini selanjutnya akan menelaah sistem pemasaran kayu rakyat di Gunung Kidul dengan membatasi ruang lingkupnya pada analisa lembaga yang terlibat dalam kegiatan pemasaran kayu rakyat dan fungsinya.

## Metode penelitian

Penelitian yang dilakukan merupakan penelitian studi kasus dengan obyek sistem distribusi kayu rakyat di Kabupaten Gunung Kidul. Pendekatan

yang digunakan dalam penelitian ini adalah pendekatan komoditi (*commodity approach*), pendekatan lembaga (*institutional approach*), dan pendekatan fungsi (*function approach*). Pendekatan komoditi dilakukan dengan menetapkan komoditi yang diteliti dan mengikuti aliran komoditi tersebut dari produsen sampai konsumen akhir dengan menekankan proses yang terjadi pada komoditi tersebut dan bagaimana komoditi tersebut dipasarkan. Komoditi yang ditetapkan adalah jati karena merupakan komoditi dominan dari hutan rakyat di Kabupaten Gunung Kidul. Pendekatan lembaga dilakukan dengan menganalisis lembaga-lembaga pemasaran yang terlibat dalam sistem pemasaran kayu rakyat di Kabupaten Gunung Kidul. Pendekatan fungsi membahas fungsi-fungsi yang dilakukan oleh lembaga pemasaran atas komoditi yang dipasarkan.

Lokasi yang produsen dipilih dalam penelitian ini adalah 3 desa yang mewakili 3 zona wilayah Kabupaten Gunung Kidul, yaitu Desa Girisekar mewakili zona selatan (pengunungan sewu), Desa Pacarejo mewakili zona tengah (ledok wonosari) dan Desa Katongan mewakili zona utara (pegunungan batur agung). Sistem distribusi dalam tataniaga kayu tidak dibatasi oleh wilayah administrasi. Sehingga wilayah lembaga pemasaran adalah wilayah pedagang perantara yang berada di Kabupaten Gunung Kidul. Pemilihan lokasi juga mempertimbangkan pola pengelolaan hutan rakyat. Di Kabupaten Gunung Kidul secara garis besar terdapat 2 model pengelolaan hutan rakyat, yaitu hutan rakyat yang telah mendapat sertifikat pengelolaan hutan berbasis masyarakat lestari (PHBML) dan hutan rakyat yang masih dikelola secara tradisional.

Pengolahan data dilakukan dengan mengelompokkan data menurut klasifikasi dan kebutuhannya, kompilasi data dan tabulasi data. Pengolahan ini dilakukan untuk mempermudah analisis data. Analisis data dilakukan secara deskriptif eksploratif terkait dengan sistem pemasaran kayu rakyat.

## Hasil dan pembahasan

Berdasarkan kondisi geomorfologis Kabupaten Gunung Kidul dibedakan menjadi 3 zona, yaitu pegunungan baturagung (bagian utara), ledok wonosari (bagian tengah) dan pegunungan sewu (bagian selatan). Perbedaan kondisi morfologi ini

membawa konsekuensi pola penggunaan lahan yang berbeda di setiap zonanya. Zona utara dan selatan karena kondisinya lebih batu bertanah dan sistem pengairan bergantung pada air hujan maka masyarakat memanfaatkan lahannya untuk tanaman berkayu sehingga pada dua zona ini perkembangan hutan rakyat lebih pesat dibandingkan dengan zona tengah yang lebih subur dan datar.

Kayu utama yang diproduksi hutan rakyat di Gunung Kidul didominasi oleh kayu jati. Atas dasar hal tersebut maka dalam analisis selanjutnya yang dimaksud dengan kayu rakyat adalah kayu jati yang diproduksi hutan rakyat. Pengelolaan hutan rakyat di Gunung Kidul secara garis besar dibagi menjadi pengelolaan hutan yang telah mendapatkan sertifikasi (PHBML) dan pengelolaan hutan rakyat yang masih tradisional atau belum mendapatkan sertifikasi. Skema sertifikasi pengelolaan hutan rakyat yang ada di Gunung Kidul ada 2, yaitu mandatory dari pemerintah, yaitu Verifikasi Legalitas Kayu dan voluntary dengan skema dari Lembaga Ekolabel Indonesia (LEI) serta FSC. Implementasi sistem sertifikasi telah berpengaruh pada sistem pemasaran kayu rakyat di Kabupaten Gunung Kidul. Perubahan ini tidak hanya terjadi pada pola distribusi kayunya tetapi juga aktor yang terlibat dalam kegiatan pemasaran. Aktor atau lembaga pemasaran kayu rakyat di Gunung Kidul yaitu aktor yang terlibat langsung dan aktor yang terlibat tidak langsung dalam kegiatan pemasaran. Aktor atau lembaga pemasaran yang terlibat langsung adalah perantara atau pedagang pedagang kecil, pedagang besar, kelompok tani, koperasi, industri hasil hutan dan pengusaha hutan. Sedangkan aktor yang tidak langsung terdiri dari institusi pemerintah, akademisi, lembaga swadaya masyarakat.

Petani sebagai produsen menjual kayu jati dalam kondisi masih diri (*stumpage*). Harga jual kayu jati dipengaruhi oleh kualitas dan ukurannya. Ditingkat petani harga jual seringkali juga dipengaruhi oleh kemudahan akses untuk mencapai lokasi tebang. Sementara itu lembaga pemasaran dalam menyampaikan barang dagangannya saling berhubungan dan membentuk jaringan pemasaran yang dikenal dengan saluran distribusi. Saluran distribusi yang terbentuk dalam distribusi tata niaga kayu rakyat di daerah penelitian terdiri dari pelaku-pelaku distribusi yang disebut lembaga distribusi.

Saluran distribusi kayu rakyat di Gunung Kidul ada 2 macam, yaitu:

1. Secara langsung, petani sebagai produsen menjual produknya secara langsung kepada konsumen akhir. Konsumen yang dimaksud disini biasanya tetangga yang memerlukan kayu untuk membangun atau memperbaiki rumahnya sendiri atau industri rumah tangga dalam skala kecil. Alasan petani melakukan penjualan ini adalah karena volume penjualan sedikit dan tidak kontinu, serta untuk membantu tetangga yang sedang membutuhkan
2. Secara tidak langsung, yaitu dengan melibatkan perantara dan pedagang dengan berbagai level usahanya. Petani yang menjual kayunya dengan cara ini biasanya volumenya lebih besar dibandingkan dengan sistem penjualan secara langsung

Dalam penelitian ini diidentifikasi terdapat 5 pola tata niaga kayu rakyat yang ada di Gunung Kidul. Pola-pola tata niaga kayu rakyat tersebut, antara lain:

**Pola 1: Produsen → Konsumen**

Pola 1 ini merupakan saluran distribusi secara langsung. Petani selaku produsen menjual pohon langsung kepada konsumen terakhir. Penjualan dilakukan sesuai dengan kebutuhan yang biasa dikenal dengan tebang butuh. Konsumen akhir dapat berupa individu rumah tangga maupun industri rumah tangga yang biasanya berada satu desa dengan produsen. Industri rumah tangga ini selanjutnya mengolah kayu tersebut menjadi produk-produk olahan seperti kusen, jendela maupun pintu. Sedangkan konsumen individu rumah tangga biasanya membeli kayu untuk keperluan pribadi misalnya untuk memperbaiki rumah. Petani menjual pohonnya biasanya dalam bentuk masih berdiri dan selanjutnya konsumenlah yang melakukan penebangan dan mengangkut kayu tersebut keluar dari lokasi penebangan. Pola pemasaran ini ditemui pada hutan rakyat yang belum tersertifikasi.

**Pola 2: Produsen → Pedagang besar → konsumen**

Pola 2 dalam saluran distribusi ini melibatkan pedagang. Pedagang membeli pohon dari petani dan selanjutnya dijual kembali ke konsumen akhir. Dalam pola ini petani menjual pohon dalam bentuk masih berdiri dan selanjutnya pedaganglah yang melakukan penebangan dan mengangkut kayu tersebut keluar dari lokasi penebangan. Seringkali pedagang melakukan pembagian batang dengan ukuran tertentu sesuai dengan pesanan dari

konsumen. Pola ini biasanya dilakukan petani yang menjual pohon dalam jumlah yang relatif banyak, sehingga sistem penjualan ini memungkinkan hanya dilakukan oleh pedagang besar karena mempunyai modal yang cukup kuat dan tenaga terampil serta peralatan yang memadai. Pola pemasaran ini ditemukan pada hutan rakyat yang belum tersertifikasi.

**Pola 3: Produsen → Pedagang kecil → Pedagang besar → Konsumen**

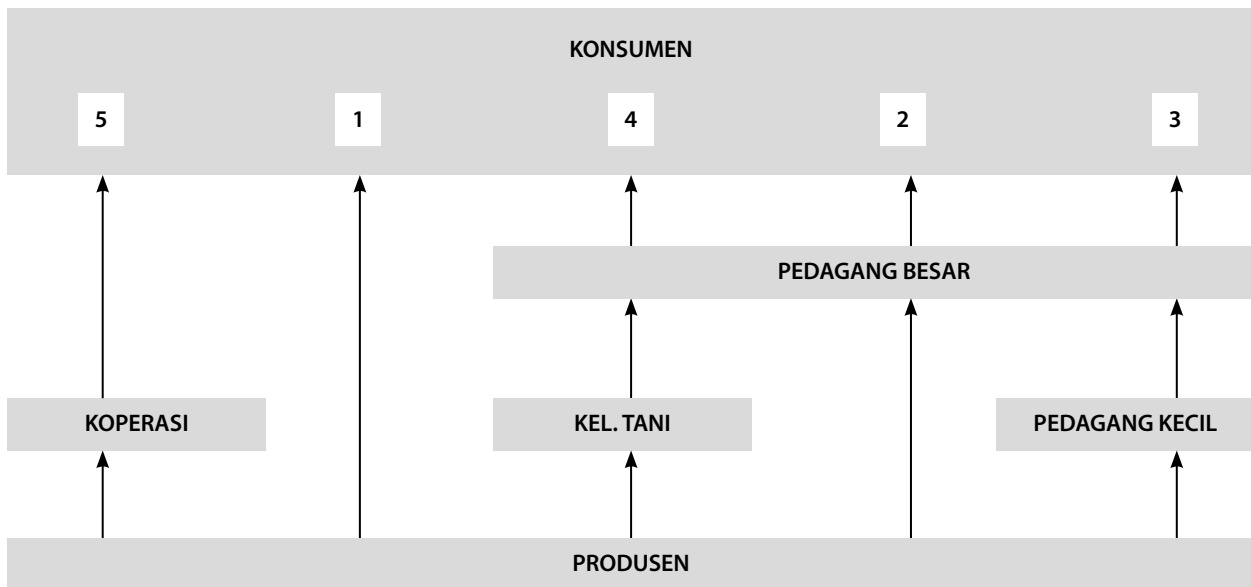
Pola 3 sebenarnya hampir sama dengan pola 2, hanya pada pola ini melibatkan satu lagi rantai pemasaran yang disebut pedagang kecil. Pedagang kecil disini adalah penduduk desa yang menjadikan pedagang sebagai pekerjaan sampingan dan tidak secara terus menerus tergantung pada ketersediaan modal. Volume pembelian juga sangat kecil dan lokasinya hanya di sekitar tempat tinggalnya, biasanya hanya dalam satu desa atau satu kecamatan saja. Setelah volume kayu terkumpul cukup banyak baru dijual kembali kepada pedagang yang lebih besar. Pola pemasaran ini juga ditemukan pada hutan rakyat yang belum tersertifikasi.

**Pola 4: Produsen → Kelompok tani → Pedagang besar → Konsumen**

Pola 4 dominan dilakukan di Gunung Kidul bagian utara yang telah mendapatkan sertifikasi dengan skema FSC. Pola ini muncul karena pedagang tersebut adalah pemegang sertifikat pengelolaan hutan rakyat dengan skema FSC. Sehingga untuk pasar yang menghendaki produk bersertifikat akan melakukan transaksi melalui pedagang tersebut. Pedagang mengorganisasi kelompok-kelompok pengelola hutan rakyat pada areal yang telah disertifikasi selanjutnya saluran distribusi dari produsen dimulai dari kelompok tani yang telah dibentuk. Petani apabila akan menjual kayunya biasanya akan menyampaikan hal tersebut pada kelompok tani dan selanjutnya kelompok tanilah yang akan membeli kayu dari petani. Kelompok tani tersebut telah bekerjasama dengan pedagang (CV Dipantara), sehingga pada periode dan volume tertentu kelompok tani akan menjual kayunya pada CV Dipantara. CV Dipantara yang selanjutnya akan menjual kayu rakyat tersebut ke industri pengolah kayu yang menjadi jaringannya.

**Pola 5: Produsen → Koperasi → Konsumen**

Pola ini ditemui pada areal hutan rakyat yang telah disertifikasi dengan skema LEI, yaitu di 3 desa (Girisekar, Dengok dan Kedungkeris).



Gambar 1. Lima pola saluran distribusi kayu rakyat di Gunung Kidul

Anggota kelompok tani yang telah mendapatkan sertifikat dengan skema LEI tersebut menjual kayunya kepada Koperasi Wana Manunggal Lestari (KWML) yang dibentuk oleh perwakilan dari ketiga desa tersebut. Selanjutnya KWML yang menjual kayu rakyat tersebut pada konsumen yang telah menjadi jaringannya.

Kelima pola saluran distribusi kayu rakyat di Gunung Kidul tersebut secara keseluruhan dapat diringkas dalam Gambar 1.

Panjang pendeknya saluran distribusi tersebut antara lain dipengaruhi oleh beberapa hal, antara lain:

1. Jarak antara produsen dan konsumen, apabila jarak konsumen dan produsen maka pola distribusi yang akan terjadi cenderung menggunakan pola 1, yaitu produsen akan langsung menjual produknya pada konsumen.
2. Jumlah konsumen potensial. Jumlah konsumen potensial yang sedikit cenderung menghasilkan saluran yang pendek, karena pertimbangan biaya efisiensi.
3. Konsentrasi geografis konsumen. Apabila konsumen mengelompok pada suatu wilayah tertentu maka saluran distribusi akan cenderung dipilih pola 1.
4. Kemampuan pedagang dalam mengakses modal dan pasar. Pedagang dengan akses pasar dan modal yang kuat akan cenderung langsung menjual produknya pada konsumen

daripada menjualnya pada pedagang lain karena keuntungan yang diterimanya akan lebih besar.

5. Pola pengelolaan hutan rakyat, apakah sudah bersertifikat atau belum. Sertifikasi pengelolaan hutan rakyat ternyata membawa implikasi pada pola pemasaran kayu rakyat karena munculnya lembaga-lembaga pemasaran baru akibat dari kegiatan sertifikasi pengelolaan hutan tersebut.

Saluran distribusi produk bukan hanya berperan dalam menyerahkan barang dari produsen kepada konsumen, namun dalam setiap saluran ini terdapat individu-individu yang mempunyai perilaku yang berbeda-beda yang juga akan ikut mempengaruhi perilaku dan kinerja saluran pemasaran secara umum.

### Kesimpulan

Pola distribusi yang terbentuk dalam pemasaran kayu jati rakyat di Gunung Kidul adalah:

Pola 1: Petani → Konsumen

Pola 2: Petani → Pedagang besar → Konsumen

Pola 3: Petani → Pedagang kecil → Pedagang besar → Konsumen

Pola 4: Petani → Kelompok tani → Pedagang besar → Konsumen

Pola 5: Petani → Koperasi → Konsumen

Faktor-faktor yang mempengaruhi pola distribusi kayu rakyat di Gunung Kidul antara lain pengelolaan hutan rakyat bersertifikat atau masih

tradisional, Jarak antara produsen dan konsumen, jumlah konsumen potensial, konsentrasi geografis konsumen, kemampuan pedagang dalam mengakses modal dan pasar.

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# Meningkatkan pemasaran mebel kayu secara *online* melalui strategi *e-business* bagi Asosiasi Pengrajin Kecil Jepara (APKJ), Jawa Tengah: Studi Kasus di APKJ dan CIFOR

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## Abstrak

Mebel kayu merupakan salah satu komoditi ekspor utama di luar minyak dan gas bumi dan memberikan lapangan pekerjaan yang sangat besar bagi Indonesia. Para pengrajin mebel dan kerajinan kayu Jepara memiliki kemampuan yang sangat baik dalam memproduksi mebel dan kerajinan dalam berbagai model dan gaya. Namun demikian, kemampuan produksi mereka tidak diimbangi dengan kemampuan pemasaran yang baik, sehingga pemasaran lebih dikuasai oleh para buyer dari lokal Jepara, luar Jepara dan luar negeri. Penelitian ini bertujuan untuk memberikan kontribusi dalam perbaikan struktur pasar, melalui pengembangan strategi *e-business* untuk membangun sistem perantara yang menguntungkan para pengrajin kecil. Model proses strategi mengikuti Chaffey (2009) dengan empat langkah: (1) *strategic analysis*, (2) *strategic objectives*, (3) *strategy definition* dan (4) *strategy implementation*. Keluaran dari strategi ini adalah (a) sasaran dan inisiatif strategis yang terukur dalam bentuk scorecard, (b) delapan keputusan strategis untuk mengarahkan proses implementasi strategi. Proses strategi *e-business* Chaffey (2009) membutuhkan strategi korporat sebagai dasar acuan untuk menilai keselarasan strategi. Untuk memenuhi kebutuhan ini, kegiatan rekonstruksi strategi dilakukan sebelum proses strategi *e-business* dijalankan. Hasil dari rekonstruksi strategi korporat dan strategi *e-business* dibahas bersama para pengurus APKJ dan disetujui bahwa strategi-strategi itu telah mewakili aspirasi mereka dalam memperbaiki strategi pemasaran.

**Keywords:** *e-business, e-commerce, teknologi internet, pemasaran, mebel kayu, kerajinan kayu, Jepara*

## Pendahuluan

Produk-produk mebel kayu, bagi Indonesia merupakan salah satu dari empat komoditi ekspor utama selain minyak dan gas bumi, tiga komoditi lainnya adalah kelapa sawit, garmen dan karet. Indonesia sangat berkepentingan dengan keberlanjutan industri mebel ini, karena penyerapan tenaga kerja yang besar, teknologi yang relatif dikuasai, dan berpotensi mempunyai nilai tambah yang tinggi serta berbahan baku dari sumber yang bisa terbarukan, yaitu hutan. (Purnomo, Harini Irawati, & Melati, 2010).

Berdasarkan data ITTO (2002 & 2011), kontribusi ekspor mebel kayu Indonesia untuk dunia pada tahun 2001 mencapai 3% dengan nilai ekspor sebesar 738 juta Dollar AS. Indonesia menduduki peringkat kedua tertinggi setelah Malaysia, sebagai pengekspor mebel kayu dalam kelompok negara-negara tropis. Kontribusi ekspor Indonesia pada tingkat dunia, sebenarnya secara perlahan menurun dari 3% pada tahun 2001 menjadi 2% pada tahun 2008. Krisis finansial global pada tahun 2008, telah mengakibatkan menurunnya nilai impor mebel kayu Amerika Serikat sebesar 10%, yaitu dari 16 milyar dollar AS pada tahun 2007 turun menjadi 14 milyar dollar AS pada tahun 2008. Padahal, Amerika Serikat merupakan salah satu pasar ekspor utama bagi Jepara dan umumnya bagi Indonesia. Kondisi ini mempersulit perkembangan industri mebel kayu Jepara, yang sejak pasca booming menurun tajam

hingga lebih dari 50% dibandingkan nilai ekspor mebel kayu Jepara pada tahun 2000.

Center for International Forestry Research (CIFOR) bekerjasama dengan Australian Centre for International Agricultural Research (ACIAR) pada tahun 2008 merespon fenomena ini dengan melakukan penelitian kaji tindak (*action research*) untuk mengupayakan terciptanya perbaikan struktur dan fungsi industri mebel Jepara mulai dari perolehan bahan baku kayu hingga proses pemasaran. Salah satu aksi dari penelitian itu adalah membantu meningkatkan pemasaran secara *online* dengan membangun situs *e-commerce* javamebel.com yang pengelolaan isinya diserahkan kepada Asosiasi Pengrajin Kecil Jepara (APKJ). Situs ini berfungsi mempertemukan pembeli (*buyer*) dan penjual mebel/kerajinan (*seller*) melalui saluran internet, dengan tujuan mengurangi dominasi makelar dan eksportir (*intermediary*) yang selama ini cenderung menekan harga jual mebel dari pengrajin. Melalui situs ini, para pengrajin APKJ diharapkan mendapatkan jangkauan (*reach*) pasar yang lebih luas pada pasar domestik dan internasional. Namun demikian, penulis menemukan adanya permasalahan dalam pengelolaan pemasaran melalui javamebel, yaitu (a) masih rendahnya nilai penjualan berdasarkan pantauan sekretariat asosiasi, (b) lemahnya koordinasi antara sekretariat sebagai pengelola dengan para pengrajin yang memasarkan produk-produknya pada situs javamebel, serta (c) rendahnya penggunaan situs oleh pengrajin untuk memanfaatkan javamebel sebagai media pemasaran.

Sistem pemasaran *online* javamebel dapat dipandang sebagai sebuah sistem *e-business* karena sejalan dengan pemikiran IBM (1997) dalam Chaffey (2009) yang menyatakan bahwa *e-business* merupakan transformasi dari proses-proses bisnis utama melalui penggunaan teknologi internet. Menurut Chaffey (2009), *e-business* telah memperkenalkan peluang-peluang baru bagi organisasi kecil dan besar untuk bersaing di dalam pasar global; Menurutnya, telah banyak pengamat [*e-business*] yang mencatat bahwa satu dari perubahan terbesar yang diperkenalkan oleh komunikasi elektronik adalah pendekatan-pendekatan untuk mengirimkan dan merubah informasi yang dapat digunakan sebagai keunggulan kompetitif.

Sistem pemasaran *online* javamebel dikembangkan pada tahun 2010 oleh CIFOR untuk melihat apakah ICT dapat berperan dalam membangun hubungan terdesentralisasi antara pengrajin dan pembeli akhir. Proses pengembangan pada saat itu lebih didasarkan pada kebutuhan-kebutuhan sistem yang bersifat umum dan tidak terlalu melibatkan *stakeholder* asosiasi sejak awal pengembangan karena diasumsikan perhatian para *stakeholder* asosiasi akan cenderung lemah, sebagaimana dinyatakan dalam (Suyamto & Harini Irawati, 2010):

*“The development of the collective marketing portal (<http://www.javamebel.com>) discussed in this paper was part of the action research [...]. In order to test this hypothesis in a framework of adaptive action research, decentralising the interconnectedness between SMEs and the end buyers can be done using ICT, we had to initiate development of a portal based on general requirements without immediately involving SMEs, on the assumption that their attention would initially be rather weak.”*

Berdasarkan kenyataan bahwa proses pengembangan situs ini kurang melibatkan *stakeholder* asosiasi, maka dapat diasumsikan bahwa aspirasi dan kebutuhan-kebutuhan bisnis *stakeholder* belum menjadi bagian yang terintegrasi dengan perencanaan pengembangan sistem. Dengan demikian, permasalahan ini dapat dipandang sebagai sebuah penerapan *e-business* yang kurang dilandasi strategi-strategi yang memperhatikan keterkaitan sistem *e-business* dengan berbagai proses bisnis organisasi dan pengrajin, serta kesiapan orang-orangnya dalam menjalankan pemasaran secara *online*. Chaffey (2009) berargumentasi bahwa ketidakjelasan pendefinisian strategi *e-business* dapat berimplikasi pada strategi yang salah arah, serta mengakibatkan hilangnya peluang-peluang yang disebabkan oleh lemahnya evaluasi dan tidak memadainya sumber daya yang dikerahkan untuk menjalankan inisiatif *e-business* itu. Agar permasalahan javamebel ini dapat terselesaikan dengan baik, maka perlu dibangun sebuah strategi *e-business* yang dapat memberikan arahan yang jelas mengenai pengembangan sistem, bisnis dan organisasi, sehingga inisiatif-inisiatif *e-business* yang dikembangkan dapat memberikan nilai yang tinggi bagi asosiasi dan pengrajinnya. Berdasarkan pemikiran bahwa strategi *e-business* dapat digunakan untuk menyelesaikan permasalahan penelitian ini, maka terdapat pertanyaan penelitian

Tabel 1. *Trendwatching*

<i>Trendwatching: Lingkungan Makro</i>	
Faktor	Metode Pengumpulan Data
1. Ekonomi	
a. Pendapatan Domestik Bruto	Data sekunder, studi literatur
b. Tingkat inflasi	Data sekunder, studi literatur
c. Tingkat bunga	Data sekunder, studi literatur
d. Nilai kurs	Data sekunder, studi literatur
2. Sosial	
a. Tren sosial	Data sekunder, studi literatur
3. Politik dan Peraturan Perundangan	
a. Peraturan Tenaga Kerja	Studi literatur
b. Peraturan Lingkungan Hidup	Studi literatur
4. Teknologi	
a. Perbaikan ilmu pengetahuan	Studi literatur
b. Inovasi	Studi literatur
<i>Trendwatching: Lingkungan Industri</i>	
1. Jaringan rantai nilai industri mebel	
a. Jejaring organisasi	Data sekunder, studi literatur
b. Pemasok	Data sekunder, studi literatur
c. Distributor	Data sekunder, studi literatur
d. Mitra Bisnis	Data sekunder, studi literatur
2. Ukuran dan Potensi Pasar	Data primer, sekunder, studi literatur
3. Segmentasi	Data sekunder, studi literatur
4. Perilaku Konsumen	Data sekunder, studi literatur
5. Tren laba industri	Data sekunder, studi literatur
6. Potential <i>entrants</i>	Data primer, sekunder, studi literatur
<i>Trendwatching: Pesaing Langsung</i>	
1. Kapabilitas	Data primer, sekunder, studi literatur
2. Kinerja	Data primer, sekunder, studi literatur
3. Minat	Data primer, sekunder, studi literatur
4. Strategi	Data primer, sekunder, studi literatur

Sumber: mengadopsi metode Mulyadi (2009).

yang perlu dijawab melalui penelitian ini, yaitu: (a) bagaimanakah membangun strategi *e-business* yang dapat meningkatkan pemasaran unit bisnis dan anggota APKJ? (b) bagaimanakah membangun strategi *e-business* yang mendukung pengembangan struktur organisasi yang efektif untuk menjalankan pemasaran secara *online*? (c) bagaimanakah membangun strategi *e-business* untuk memengaruhi struktur pasar, sehingga meningkatkan posisi tawar pengrajin?

## Metode

Metode penelitian terdiri dari 5 langkah utama (Gambar 1) yang meliputi: studi literatur, pendefinisian masalah, proses strategi korporat dan proses strategi *e-business*. Langkah-langkah proses strategi korporat dan *e-business* dijabarkan dengan lebih terperinci dalam tabel-tabel yang memuat

faktor-faktor yang dibutuhkan untuk menentukan arah dan keputusan-keputusan strategis. Proses pengumpulan data, analisis data dan pengambilan kesimpulan dilakukan dengan mengikuti metode kualitatif yang dikembangkan oleh Miles dan Hubberman (1994), yang terdiri tiga tahapan, yaitu reduksi data (*data reduction*), menampilkan data (*data display*) dan mengambil kesimpulan (*drawing of conclusions*) (Berkowitz, 1997), (Sekaran & Bougie, 2010).

Proses strategi korporat perlu dibangun terlebih dahulu untuk memberikan acuan-acuan strategis kepada strategi *e-business* yang akan dibangun. Proses membangun strategi korporat ini disebut sebagai “rekonstruksi” strategi korporat, sebagaimana pada tahapan ini tidak membangun sebuah strategi korporat baru, melainkan mengidentifikasi dan



Tabel 2. Analisis- analisis strategis.

<i>Strategic analysis: external environment</i>	
Faktor	Metode pengumpulan data
1. Sosial	
a. Tren Cara Pengguna Mengakses Internet	Data numerik sekunder, studi literatur
2. Hukum dan etika	
a. Undang-undang	Studi literatur
b. Privasi	Studi literatur
3. Ekonomi	
a. Tinjauan e-economy	Data numerik sekunder, studi literatur
4. Politik	
a. Tata kelola internet	Studi literatur
5. Teknologi	
a. Inovasi teknologi	Studi literatur
<i>Strategic analysis: internal resources</i>	
1. Analisis sumber daya	
Tangible assets	Observasi, Wawancara, Studi literatur
Intangible assets	
<i>Strategic analysis: external environment</i>	
1. Analisis portofolio	
a. Portofolio aplikasi	Observasi, Wawancara
2. Analisis kebutuhan	Data sekunder, Studi literatur
3. Analisis pesaing	
a. Kapabilitas situs kompetitor	Data sekunder
4. Analisis ancaman persaingan	
a. Model bisnis	Data sekunder, Studi literatur
b. Ancaman pada sisi <i>buy side</i>	Studi literatur
c. Ancaman pada sisi <i>sell-side</i>	Studi literatur
d. Ancaman persaingan	Studi literatur

Sumber: mengacu pada Chaffey (2009).

mendokumentasikan secara terstruktur atas keputusan-keputusan strategis yang telah dan akan diambil oleh asosiasi.

Proses rekonstruksi strategi korporat dilakukan menggunakan model proses strategi (Mulyadi, 2009) (Gambar 2). Teori-teori *five forces analysis*, *value chain analysis* dan *balanced scorecard*<sup>1</sup> sangat memengaruhi model proses strategi Mulyadi (2009). Teori *five forces analysis* dan *value chain analysis* dalam Mulyadi (2009) secara berturut-turut dapat dijumpai relevansinya pada tahap “*trendwacthing* lingkungan persaingan” dan “*trendwatching* lingkungan industri”. Pendekatan *Total Business Planning* yang digunakan Mulyadi (2009) cenderung dipengaruhi oleh pemikiran Burton J. E. (1999). Pendekatan *Total Business Planning* menjadi

landasan untuk menjalankan proses pengembangan strategi yang menuntun langkah perencanaan bisnis mulai dari perumusan strategi, perencanaan strategis, penyusunan program hingga penyusunan anggaran.

Mulyadi (2009) menempatkan kerangka *balanced scorecard* sebagai alat bantu untuk memetakan hasil rumusan strategi ke dalam perencanaan strategis di dalam proses *Total Business Planning*. Penyesuaian proses dilakukan pada bagian perencanaan strategis dengan hanya mengidentifikasi sasaran strategis tanpa mengidentifikasi inisiatif strategisnya. Penyederhanaan ini dilakukan dengan mengasumsikan strategi dan sasaran strategis korporat sudah memberikan kecukupan komponen untuk dijadikan acuan pada proses pembangunan strategi *e-business*.

Tahap awal yang dilakukan dalam proses pembangunan strategi korporat adalah *trendwatching* untuk mendapatkan gambaran mengenai kondisi

1 Teori-teori yang berkaitan dengan *balanced scorecard* yang dirujuk pada penelitian ini meliputi Kaplan, R. S., & Norton, D. P. (1996b), Kaplan, R. S., Norton, D. P., & Barrows Jr, E. A. (2008, January-February), Kaplan, R. S., Norton, D. P., & Barrows, E. A. (2008b, March-April).

**Tabel 3. Elemen-elemen scorecard untuk memetakan strategi ke dalam sasaran strategis.**

Strategi e-business					
Memasukkan strategi e-business yang akan dibuat perencanaannya					
	Sasaran Strategis	Lag Indicator (ukuran hasil)	Lead Indicator (ukuran pemacu kinerja)	Target	Inisiatif Strategis
Finansial	Menentukan sasaran	Menentukan	Menentukan ukuran	Menentukan	Menentukan
Customer	strategis untuk	ukuran	yang menjadi penyebab	target	inisiatif yang
Proses	masing-masing	keberhasilan	ketercapaian ukuran	pencapaian	akan diambil
Pertumbuhan dan Pembelajaran	perspektif		hasil	dari ukuran hasil ( <i>lag indicator</i> )	

lingkungan makro, lingkungan industri dan pesaing langsung. Faktor-faktor yang perlu dianalisis pada masing-masing *trendwatching* dan metode pengumpulan data disajikan secara berturut-turut pada Tabel 1. Proses analisis SWOT korporat memadukan hasil-hasil analisis pada *trendwatching* dan analisis internal organisasi yang dikelompokkan berdasarkan aspek finansial, *customer*, proses serta pertumbuhan dan pembelajaran. Analisis internal organisasi dilakukan dengan mewawancarai sejumlah pengrajin, melakukan *Focus Group Discussion* (FGD) dan observasi (Gambar 3). Untuk setiap strategi yang telah didefinisikan, kemudian dilanjutkan dengan mengidentifikasi sasaran-sasaran strategisnya berdasarkan perspektif *balanced scorecard* (Gambar 4). Setelah semua strategi dan sasaran strategis ditentukan, langkah selanjutnya adalah merangkum strategi dan sasaran strategis ke dalam daftar tersendiri agar memudahkan proses peninjauan (*review*) oleh asosiasi dan mempermudah proses pemeriksaan keselarasan (*alignment*).

Model proses strategi Chaffey (2009) (Gambar 5) yang digunakan untuk membangun strategi *e-business*, secara garis besar terdiri dari empat tahapan, yaitu *strategic analysis*, *strategic objectives*, *strategy definition*, *strategy implementation*. Pada penelitian ini, tahapan implementasi tidak dilakukan. Tahapan *strategic analysis* terdiri dari dua bagian, yaitu analisis lingkungan eksternal (*external environment*) dan sumber daya internal (*internal resources*). Faktor-faktor yang dianalisis pada kedua bagian tersebut disajikan pada Tabel 2. Tahapan *strategic objectives* bertujuan untuk menentukan strategi, sasaran dan inisiatif strategis *e-business*. Visi dan misi dari strategi *e-business* ditentukan berdasarkan tinjauan terhadap hasil analisis yang berkaitan dengan kemampuan organisasi untuk

mencapai visi dan misi korporat melalui strategi *e-business*.

Tahapan *strategic definition* bertujuan mendefinisikan strategi-strategi *e-business* pada delapan perspektif khusus yang menghasilkan delapan keputusan strategis, yaitu (a) **keputusan 1**: prioritas saluran bisnis, (b) **keputusan 2**: pengembangan produk dan pasar (c) **keputusan 3**: strategi *positioning* dan *differentiation*, (d) **keputusan 4**: model bisnis, layanan dan pendapatan, (e) **keputusan 5**: restrukturisasi pasar (*marketplace restructuring*), (f) **keputusan 6**: kemampuan pengelolaan rantai pasokan, (g) **keputusan 7**: kemampuan manajemen pengetahuan internal, dan (h) **keputusan 8**: kemampuan dan *resourcing* organisasi.

### Hasil dan pembahasan

Poses formulasi strategi korporat dan *e-business* melibatkan banyak faktor seperti dijabarkan pada bagian metode. Demikian pula dengan proses perencanaan strategis yang menghasilkan tabel-tabel pemetaan strategi ke dalam sasaran strategis, sehingga bagian ini hanya menyajikan sejumlah hasil-hasil analisis yang menarik dan ringkasan singkat mengenai formulasi strategi dan perencanaan strategis.

### Hasil-hasil analisis yang menarik

Konsumen mebel kayu Jepara meliputi pasar domestik dan internasional. Amerika Serikat, Eropa dan Jepang merupakan negara-negara utama pengimpor mebel kayu Jepara. Nilai ekspor Indonesia sempat mengalami penurunan pada tahun 2009 yang berhubungan dengan resesi keuangan global.

Kondisi ekonomi global pada sejumlah negara cenderung membaik pada tahun 2012 bahkan diprediksi terus membaik hingga 2013. Namun demikian, Indonesia harus tetap waspada dengan risiko semakin memburuknya resesi pada beberapa negara. Prediksi kondisi ekonomi Indonesia pada tahun 2012 hingga 2013 cenderung membaik, sehingga daya beli masyarakat diharapkan mengalami peningkatan. Bank Indonesia (Bank-Indonesia, 2012) mencatat bahwa perekonomian dunia tahun 2011 mengalami perlambatan, terutama disebabkan oleh ketidakpastian pemulihan ekonomi dan keuangan di Eropa dan Amerika Serikat. Melemahnya permintaan global menyebabkan volume perdagangan dunia dan harga komoditas global mulai menurun. Hal ini juga mengakibatkan meningkatnya tekanan inflasi di negara maju, sementara tekanan inflasi pada *emerging markets* relatif moderat, meski masih berada pada tingkat yang tinggi. International Monetary Fund (IMF, 2012) menyatakan bahwa setelah perekonomian global menderita kemunduran besar selama 2011, prospek global secara bertahap menguat kembali, meskipun risiko penurunan masih tetap tinggi. IMF memproyeksikan PDB riil dan daya beli negara-negara dengan ekonomi maju (*advanced economy*) akan mengalami peningkatan pada tahun 2012 dan 2013. Daya beli sejumlah negara di wilayah Eropa cenderung mengalami penurunan pada tahun 2012 yang dipengaruhi oleh turunnya daya beli Italia dan Spanyol, tapi secara keseluruhan diperkirakan mengalami peningkatan di tahun 2013. Jepang dan Inggris diperkirakan mengalami kenaikan daya beli pada tahun 2012, sementara Kanada cenderung mengalami penurunan mulai 2012 sampai dengan 2013. Pada ekonomi negara-negara berkembang, Asia diproyeksikan mengalami kenaikan PDB pada tahun 2012 hingga 2013, yang diantaranya meliputi China, India dan negara-negara ASEAN.

Perekonomian Indonesia pada tahun 2012 diperkirakan akan tetap kuat dengan stabilitas makroekonomi yang tetap terjaga. Meskipun perekonomian global tumbuh melambat, perekonomian Indonesia diperkirakan masih akan tumbuh relatif tinggi, yaitu sekitar 6,3% sampai 6,7%. Data Biro Pusat Statistik Indonesia tahun 2012 memperlihatkan tren Pendapatan Domestik Bruto (PDB) per kapita per tahun rakyat Indonesia selalu meningkat dari tahun ke tahun. Pada tahun 2011, pertumbuhan PDB per kapita per tahun Indonesia mencapai 15% terhadap tahun

2010. Daya dukung ekonomi terutama berasal dari kuatnya permintaan domestik dengan peran investasi dan konsumsi yang meningkat. Investasi diperkirakan akan tumbuh lebih tinggi, didukung oleh stabilitas ekonomi yang tetap terjaga, iklim investasi dan peringkat investasi yang membaik, potensi pasar yang masih besar, dan suku bunga yang relatif rendah (Bank-Indonesia, 2012b). Menurut Bank Indonesia (Bank-Indonesia, 2012b), laju pertumbuhan investasi yang meningkat akan mampu menjaga kekuatan daya beli masyarakat. Dalam hal pergerakan nilai tukar rupiah 2012, Bank-Indonesia (2012b) memperkirakan akan tetap stabil dan cenderung menguat. Hal ini terkait dengan besarnya kecukupan cadangan devisa, kinerja Neraca Pembayaran Indonesia (NPI) yang tetap kuat, serta didukung dengan penerapan kebijakan makroekonomi yang pruden dan konsisten. Laporan statistik Bank Indonesia (Bank-Indonesia, 2011b) mengenai hubungan pola konsumsi dengan PDB dan inflasi, menemukan bahwa konsumsi rumah tangga memberikan sumbangan yang dominan dalam pembentukan PDB Indonesia. Pada rentang waktu 10 tahun mulai 2001 hingga 2010, pertumbuhan konsumsi rumah tangga sebesar 2,56% memberikan kontribusi kepada rata-rata pertumbuhan PDB sebesar 5,22%. Sensitivitas konsumsi rumah tangga bukan-makanan (*non-food*) lebih tinggi dari pada konsumsi makanan (*food*) terhadap pembentukan PDB. Prospek pertumbuhan konsumsi 2012 menurut perkiraan Bank Indonesia akan tumbuh sebesar 4,93% dan konsumsi rumah tangga akan tumbuh sebesar 4,77%. Bank Indonesia (Bank-Indonesia, 2012b) juga memperkirakan konsumsi rumah tangga akan tetap kuat dengan angka pertumbuhan mencapai sekitar 4,8% sampai 5,6% pada tahun 2016. Komoditas kayu dan industri kayu, bambu dan rotan memiliki sensitivitas yang lebih tinggi dari komoditas industri tertentu yang diantaranya adalah kopi, unggas, perikanan, industri barang karet dan plastik, industri tekstil, industri rokok, dan industri minuman.

Menurut Mulyadi (2009), pada proses perumusan strategi, manajemen perlu menganalisis tren perubahan yang terjadi dalam industri, yang mungkin dapat dipengaruhi namun tidak dapat dikendalikan oleh perusahaan. Aspek-aspek yang dianalisis dalam *trendwatching* pada dasarnya merujuk kepada teori "*five competitive forces*" dari Michael E. Porter<sup>2</sup>, yang meliputi kekuatan

2 Acuan teori "*five competitive forces*" mengacu pada (Porter, 2008)

pemasok, kekuatan pembeli, ancaman perusahaan baru yang memasuki industri (*new entrants*), dampak produk substitusi dan persaingan dalam industri. Dalam *trendwatching* ini, aspek-aspek yang disarankan untuk dianalisis diantaranya adalah ukuran dan potensi pasar, perilaku konsumen, segmentasi, jejaring organisasi dan tren laba industri.

Rantai nilai industri mebel Jepara melibatkan banyak aktor yang menjalankan kegiatan mulai dari industri bahan baku, produksi hingga pemasaran. Pada kegiatan pemasaran, *broker* berperan penting dalam mengantarkan produk-produk pengrajin hingga mencapai konsumen akhir. Namun pada saat yang sama, keberadaan *broker* dapat menimbulkan permasalahan dalam hal posisi tawar mereka yang lebih tinggi terhadap pengrajin dalam menentukan harga jual.

Ukuran dan potensi pasar dapat dilihat dari pangsa pasar ekspor dan domestik. Nilai ekspor mebel kayu Indonesia pada tahun 2009 mencapai 2% dari pangsa pasar internasional yang bernilai 48,6 milyar Dollar AS. Negara-negara yang menjadi tujuan utama ekspor meliputi Amerika Serikat, Jepang, Kanada, Swiss dan Uni Eropa yang meliputi Jerman, Perancis, Belgia, Belanda dan Italia. Krisis ekonomi global pada tahun 2008 yang melanda Uni Eropa dan Amerika Serikat berdampak pada menurunnya permintaan mebel dunia. Pada tahun 2009, nilai ekspor Indonesia secara keseluruhan mengalami penurunan sebesar 15% terhadap tahun 2007. Akan tetapi, kondisinya berangsur membaik pada tahun 2010 yang mengalami kenaikan nilai ekspor sebesar 35% terhadap tahun 2009. (ITTO, 2011) memperkirakan akan terjadi kenaikan penjualan mebel di Amerika Serikat untuk keperluan perumahan yang dimulai pada semester kedua 2012 dan meramalkan akan terjadi kenaikan permintaan sebesar 6% pada tahun 2013.

Hasil sensus spasial yang dilakukan CIFOR (Achdiawan & Puntodewo, 2012) kepada 11.981 perusahaan mebel, menemukan 8.289 bengkel mebel, 1.974 showroom dan 528 gudang, sedangkan sisanya merupakan unit-unit penjualan kayu, pengergajian kayu, pengeringan kayu, serta unit penjualan perlengkapan mebel. Berdasarkan hasil survei intensif CIFOR kepada 2000 perusahaan mebel dalam (Achdiawan, 2012), ditemukan 82% dari 1.339 bengkel dalam berbagai skala bisnis mengkhususkan dirinya untuk memenuhi permintaan pasar domestik, sedangkan 9%

memenuhi pasar ekspor saja, sementara sisanya memenuhi permintaan pasar ekspor dan domestik.

Segmentasi pasar dapat dilihat berdasarkan kategori berikut ini:

1. Berdasarkan kualitas. Merujuk pada penelitian Parlinah et al. (2011b), kualitas mebel Jepara dinyatakan dengan tingkatan yang terdiri dari *grade A, B & C*.
2. Berdasarkan jenis konsumen. Kasmaliasari et al. (2009) membagi segmen pasar domestik berdasarkan jenis konsumen terdiri konsumen rumah tangga (57%), industri (7%), *showroom* (35%) dan lainnya (1%).
3. Berdasarkan lokasi tujuan pengiriman. Segmen pasar mebel berdasarkan lokasi tujuannya, secara garis besar terdiri dari domestik dan ekspor (Roda, Cadene, Guizol, & Santoso, 2007). Tempat-tempat tujuan domestik diantaranya adalah Jakarta, Bogor, Yogyakarta, Semarang, Solo, Surabaya, Banyuwangi, pulau Bali dan pulau Sumatera ((Purnomo, Harini Irawati, & Melati, 2010), (Sari, 2010)). Negara-negara tujuan ekspor meliputi Amerika Serikat, Jepang, Perancis, Inggris, Korea Selatan, Belgia, Belanda, Australia, Spanyol, Uni Emirat Arab, Denmark, Singapura, Malaysia, Mexico, Jerman, Kanada, Italia dan Australia (Ministry-of-Trade-Republic-of-Indonesia, 2008).
4. Berdasarkan jenis mebel dan fungsinya. Menurut laporan Kementerian Perdagangan (Ministry-of-Trade-Republic-of-Indonesia, 2008), diketahui bahwa segmen pasar berdasarkan jenis produk meliputi mebel dalam ruangan (*indoor*) dan mebel luar ruangan (*outdoor*), sedangkan berdasarkan fungsinya secara umum meliputi mebel perkantoran, mebel rumah tangga yang terbagi berdasarkan jenis ruangan, yakni ruang tamu dan keluarga (*living room*), ruang makan (*dining room*) dapur, ruang tidur, serta mebel taman. Sari et al. (2009) mengidentifikasi segmen pasar domestik berdasarkan model yang meliputi model *elegant* (49%), model minimalis (34%), model oriental (15%) dan model klasik (5%).

Banyaknya industri mebel di Jepara telah mengakibatkan terjadinya persaingan antar pelaku dalam bisnis mebel termasuk dalam memperoleh bahan baku (Parlinah, Purnomo, & Nugroho, 2011). Industri mebel merupakan industri yang sangat dinamis mengingat industri ini sangat rentan terhadap aksi-aksi peniruan desain,

masuknya pemain baru, produk substitusi, hingga kecenderungan konsumen dalam memilih jenis produk yang diinginkan (CIFOR, et al., 2012).

Studi CIFOR tahun 2012 mengenai dampak penelitian CIFOR terhadap sejumlah pengusaha mebel memberikan informasi yang berhubungan dengan minat, kinerja, kapabilitas dan strategi usaha dari 36 pengusaha mebel bukan anggota APKJ. Kelompok pengusaha tersebut di dalam konteks ini ditempatkan sebagai kompetitor lokal yang berdomisili di Jepara. Meskipun kelompok ini ditempatkan sebagai kompetitor, namun pada prakteknya di antara mereka dan APKJ bisa saja terjadi hubungan kerjasama, misalnya hubungan yang terjadi di dalam sebuah sentra industri. Hal ini sejalan dengan pemikiran (Marshall 1980; Piore et al., 1984; Humphrey, 1995; Cadène et al., 1998; Humphrey et al., 2001) dalam (Roda, Cadene, Guizol, & Santoso, 2007) yang berpendapat bahwa sentra industri dapat diartikan sebagai jaringan perusahaan yang umumnya berskala kecil dan terspesialisasi yang terletak berdekatan dan melekat pada struktur sosial setempat di mana terdapat perpaduan antara kerjasama dan persaingan.

Kemampuan kompetitor lokal (untuk skala usaha kecil) dapat dilihat dari sumber permodalan dan bagaimana menjaga kualitas produk. Jika dilihat dari sumber dana, terdapat 36% yang menggunakan modal sendiri dan 64% mendapatkan pinjaman dari berbagai sumber, yang beberapa diantaranya meliputi bank, koperasi, pemasok dan *buyer*. Jika dilihat dari proses manufaktur, sebagian besar pengusaha menyatakan bahwa kayu yang digunakan adalah yang berkualitas baik (80%) dan mampu mengerjakan konstruksi dengan baik (70%). Pada proses manufaktur lainnya, terdapat 30% yang mengeringkan kayu sebelum dirakit dan hanya 20% saja yang mengeringkan kembali kayu setelah dirakit. Kontrol terhadap kualitas 56% dilakukan sendiri oleh pengusaha dan 42% dilakukan juga oleh *buyer*. Terkait dengan kualitas sumber daya manusia, tidak lebih dari 50% pengusaha menyatakan bahwa para pekerjanya dapat mengerjakan proses manufaktur dengan baik.

Indonesia merupakan negara keempat terbesar di Asia sebagai pengguna internet (Internet-World-Stats, 2012), yaitu mencapai 55 juta orang pada bulan Juni 2012. Sedangkan, mengenai peralatan yang paling sering digunakan warga Asia Pasifik untuk mengakses internet adalah PC daripada tablet

dan telepon, di mana dominasi PC mencapai 80% sampai 98%. Tren jumlah pemakai internet di Indonesia memberikan peluang yang besar dalam hal potensi konsumen *online*. Sedangkan tren penggunaan alat akan memberikan cukup waktu kepada pemilik situs *e-commerce* untuk membangun antar-muka (*interface*) situs menjadi lebih responsif terhadap ukuran layar, sehingga tampilan situs dapat menyesuaikan diri dengan ukuran layar dari berbagai alat (*device*).

Pada Mei 2012, pemerintah Indonesia meluncurkan *master plan* baru bertajuk percepatan dan perluasan pembangunan ekonomi Indonesia (MP3EI) (Gov-Indonesia, 2011). *Master plan* ini mengklaim bahwa infrastruktur merupakan tantangan terbesar bagi Indonesia dalam mendukung kegiatan-kegiatan ekonomi. Konektivitas menjadi faktor yang sangat penting dalam mempercepat pertumbuhan ekonomi di negara dengan banyak pulau ini. Infrastruktur konektivitas meliputi pembangunan rute-rute transportasi, teknologi informasi dan komunikasi (TIK) dan semua regulasi yang berhubungan dengannya. Pemerintah menempatkan TIK sebagai 1 diantara 22 kegiatan utama ekonomi. Percepatan pertumbuhan ekonomi Indonesia sangat tergantung pada kekuatan konektivitas ekonomi nasional dan internasional. Konektivitas nasional terdiri dari 4 elemen kebijakan, yaitu Sistem Logistik Nasional (Sislognas), Sistem Transportasi Nasional (Sistranas), Pengembangan Regional dan Teknologi Informasi dan Komunikasi (TIK). Sislognas dan Sistranas diharapkan dapat mengurangi biaya logistik dan transportasi, sehingga meningkatkan daya saing produk. Pada pengembangan infrastruktur TIK, pemerintah merencanakan untuk meningkatkan kapasitas jaringan komunikasi *broadband* melalui program *Telkom Super Highway* network, di mana tahun 2015 diharapkan sudah dapat menjangkau 30% dari jumlah rumah tangga Indonesia.

Tren pencarian informasi melalui internet yang berhubungan dengan *furniture* oleh pengunjung dari Indonesia (berdasarkan analisis *keyword* menggunakan Google Adwords: KeywordTool) menunjukkan rata-rata yang sangat tinggi setiap bulannya (Gambar 7). Sebagai contoh, pencarian menggunakan kata kunci "*furniture*" terjadi rata-rata 246 ribu kali setiap bulannya dan demikian halnya dengan "mebel" yang mencapai 60 ribu kali setiap bulannya. Fenomena ini menunjukkan tingginya kebutuhan pengunjung terhadap informasi mebel.

Peluang ini dapat dimanfaatkan dengan mendekati pengunjung melalui saluran *online*.

Terkait Indeks Kepercayaan Diri Konsumen Online secara global (berdasarkan hasil survei Nielsen dalam (Nielsen, 2012)), Indonesia berada pada posisi ketiga teratas setelah India dan Saudi Arabia, yang berarti bahwa konsumen Indonesia merupakan konsumen yang konsumtif. Konsumsi untuk memenuhi kebutuhan perbaikan rumah dan dekorasi mencapai 22% dari kebutuhan lainnya. Berdasarkan tren kebutuhan ini, maka peluang APKJ untuk menjual produknya melalui saluran *online* sangat besar.

### Formulasi strategi dan perencanaan strategis korporat

Proses formulasi strategi korporat mengikuti kerangka yang diusulkan Mulyadi (2009), seperti diilustrasikan pada Gambar 2. Setiap strategi yang telah diformulasikan kemudian dipetakan kepada sasaran strategis yang hendak dicapai. Informasi yang dihasilkan berupa tabel-tabel seperti ditunjukkan pada Gambar 8. Tujuan dari proses ini adalah mengidentifikasi sasaran-sasaran strategis yang nantinya akan dihubungkan dengan strategi *e-business*. Proses formulasi strategi korporat menghasilkan 12 strategi korporat yang dipetakan ke dalam puluhan sasaran strategis.

### Formulasi strategi dan perencanaan strategis *e-business*

Proses formulasi strategi *e-business* mengikuti kerangka yang diusulkan Chaffey (2009) seperti disajikan pada Gambar 5. Proses ini menghasilkan tujuh strategi *e-business* yang masing-masing strategi dipetakan ke dalam sasaran strategis dengan menggunakan *scorecard* sebagai alat bantu pemetaan (Gambar 9). Keterkaitan antar proses formulasi dan perencanaan strategis disajikan pada Gambar 10.

### Delapan keputusan strategis *e-business*

**Keputusan 1: prioritas saluran bisnis.** Proses pengambilan keputusan dilakukan dengan memunculkan tiga pilihan saluran yang diusulkan oleh Chaffey (2009) serta Gulati dan Gurino (2000) untuk kemudian dievaluasi dengan mempertimbangkan faktor-faktor yang berkaitan dengan analisis SWOT korporat dan *e-business* yang dilakukan pada tahapan-tahapan sebelumnya. Pendekatan ini sesuai dengan pendapat Kenneth R Andrews dalam (Foss, 2003) dalam menentukan

strategi melalui pendekatan-pendekatan logis seperti melakukan pertimbangan terhadap situasi lingkungan bisnis, melakukan estimasi-estimasi dan analisis risiko yang diperlukan untuk merancang strategi-strategi alternatif dan melakukan pengambilan keputusan-keputusan yang sejalan dengan aspirasi masyarakat.

Pilihan prioritas saluran bisnis yang dapat diadopsi oleh suatu organisasi, menurut dan Chaffey (2009) serta Gulati dan Gurino (2000) meliputi (a) *bricks-and-mortar*: berupa saluran tradisional pemasaran dan penjualan yang bertumpu pada fasilitas fisik berupa bangunan untuk menempatkan produk-produk yang dijual, serta melayani langsung konsumen di tempat itu. Saluran internet sedikit dimanfaatkan dalam menyebarluaskan informasi perusahaan dan produknya kepada publik untuk mengarahkan konsumen mendatangi tempat penjualan, (b) *bricks-and-clicks*: berupa perpaduan antara saluran tradisional dan digital dengan memanfaatkan saluran internet secara optimal untuk menjual produk-produk dan melayani konsumen, namun tetap didukung oleh kekuatan fisik pada satu atau lebih lokasi yang dapat berupa kantor, *showroom*, gudang atau tempat produksi, di mana konsumen dapat berinteraksi langsung secara fisik dengan penjual. Gulati dan Gurino (2000) menyebut saluran ini sebagai *clicks-and-mortar*, dan (c) *clicks*: berupa cara pemasaran dan penjualan yang murni dilakukan dengan menggunakan saluran internet.

Pendekatan *clicks* sulit diterima karena adanya permintaan-permintaan dari perusahaan (gudang, eksportir, pedagang) yang cenderung berinteraksi melalui saluran tradisional, sehingga tidak semua permintaan dapat dilayani melalui saluran *online*. Pendekatan *bricks-and-mortar* akan membutuhkan modal yang besar untuk menyediakan tempat yang berfungsi sebagai *showroom*. Hal ini dapat dijelaskan oleh Yovi et al. (2012) yang menyimpulkan bahwa pengrajin dapat menghemat biaya pemasaran, dengan tidak perlu menyewa *showroom*, jika proses pemasaran melalui *buyer* atau perantara. Konsumen yang datang ke Jepara pada umumnya adalah konsumen bisnis (*buyer*) yang memesan dalam jumlah besar daripada konsumen akhir. Hal ini sesuai dengan pendapat Hadiyati (2010) dalam (Yovi, Nurrochmat, & Sidiq, 2012) yang menilai pasar di Jepara adalah *buyer-market* berdasarkan temuan bahwa lebih dari 90% industri skala kecil tidak mengetahui di mana dan siapa yang

membeli mebel mereka dari perantara. Penelitian Kasmaliasari et al. (2009) mengenai pasar domestik, mengidentifikasi adanya 5 saluran pemasaran yang umum terjadi di Jepara. Menurut Kasmaliasari et al. (2009), Saluran 1 (pengrajin – eksportir + gudang - eskpor) dan saluran 4 (pengrajin – pengepul/makelar – showroom di luar Jepara - konsumen) merupakan saluran yang paling banyak ditemui di Jepara. Hal ini mengindikasikan bahwa pengrajin seringkali tidak menjual produknya kepada konsumen akhir. Dengan demikian, pendekatan *bricks-and-mortar* tidak akan efektif untuk menjangkau konsumen akhir, terlebih lagi harus berada di dalam lingkungan persaingan yang tinggi dengan sejumlah pengrajin di pasar fisik Jepara, sebagaimana dijelaskan dalam (Nurrochmat, 2012), bahwa para pengrajin secara umum memproduksi model mebel yang sama, sehingga menimbulkan kompetisi di antara mereka.

Pendekatan *bricks-and-clicks* dianggap lebih efektif dalam menjangkau dua kelompok konsumen, yaitu perusahaan (B2B) dan pemakai akhir (B2C). Persaingan di tingkat pasar fisik Jepara dapat diimbangi dengan menjangkau pasar dari luar Jepara melalui saluran *online* yang berfungsi memasarkan produk kepada konsumen akhir (B2C), sedangkan permintaan perusahaan dari dalam dan luar Jepara tetap ditangani saluran tradisional melalui kerjasama B2B. Berdasarkan pemikiran para pengurus APKJ untuk menjangkau pasar eceran melalui saluran *online* dan tetap menggunakan saluran tradisional sebagai cara untuk menjadi pemasok kepada perusahaan-perusahaan, maka keputusan ini merekomendasikan APKJ untuk mengadopsi gabungan antara saluran tradisional dan *online* atau “*bricks-and-clicks*”.

### **Keputusan 2: pengembangan produk dan pasar.**

Tujuan dari keputusan ini adalah mendefinisikan strategi-strategi untuk mendapatkan nilai (*value*) dari saluran digital, dengan cara memberikan nilai tambah (*value added*) ke dalam produk dan layanan, serta menargetkan pasar yang sesuai dengan nilai-nilai yang diberikan oleh produk dan layanan itu, sehingga keduanya dapat diterima dengan baik oleh konsumen. Chaffey (2009) mengajukan sebuah model yang merupakan pengembangan dari model Ansoff (1957) untuk memandu pendefinisian strategi ke dalam empat kelompok yaitu:

1. Strategi penetrasi pasar: bagaimana agar produk-produk saat ini semakin diterima oleh konsumen pada pasar yang sama. Chaffey (2009) mengusulkan tiga aspek utama yang

dapat digunakan untuk memandu pendefinisian strategi penetrasi pasar, yaitu bagaimana saluran digital dapat digunakan untuk meningkatkan pangsa pasar, memperbaiki loyalitas konsumen serta memberikan nilai atau keuntungan bagi konsumen;

2. Strategi pengembangan pasar: bagaimana agar produk-produk saat ini dapat diterima oleh konsumen pada pasar yang baru. Chaffey (2009) mengusulkan dua aspek utama yang dapat digunakan untuk memandu pendefinisian strategi pengembangan pasar melalui saluran digital, yaitu melihat peluang pasar baru secara geografis dan berdasarkan segmen-segmen baru.
3. Strategi pengembangan produk: bagaimana untuk menghasilkan produk-produk baru yang dapat diterima oleh konsumen pada pasar yang sama. Chaffey (2009) mengusulkan empat aspek utama yang dapat digunakan untuk memandu pendefinisian strategi pengembangan produk dan layanan melalui saluran digital, yaitu menambahkan nilai (secara digital), mengembangkan produk-produk digital, merubah model-model pembayaran dan meningkatkan keragaman produk;
4. Strategi diversifikasi: bagaimana mendapatkan manfaat dari pasar-pasar yang baru dengan memberikan konsumen produk-produk dan layanan-layanan dari suatu bisnis yang baru. Chaffey (2009) mengusulkan empat aspek untuk memandu pendefinisian strategi diversifikasi dengan memanfaatkan saluran digital, yaitu diversifikasi ke dalam bisnis-bisnis yang masih berkaitan (*related*) dan/atau tidak berkaitan (*unrelated*) dengan bisnis saat ini serta melakukan integrasi ke dalam saluran atas (*upstream integration*) untuk berperan sebagai pemasok dan saluran bawah (*downstream integration*) untuk berperan sebagai perantara (*intermediary*);

Keputusan-keputusan yang dipilih berdasarkan pertimbangan-pertimbangan yang diuraikan pada proses evaluasi<sup>3</sup> di atas dapat disajikan ke dalam bentuk matriks portofolio pengembangan pasar dan produk seperti disajikan pada Gambar 11.

### **Keputusan 3: strategi *positioning* dan *differentiation*.**

Keputusan ini bertujuan mendefinisikan posisi terbaik dalam hal layanan

<sup>3</sup> Proses evaluasi tidak dipaparkan pada paper ini. Uraian lengkap bisa didapatkan dari Karya Akhir penulis di Magister Teknologi Informasi, Universitas Indonesia.

*online* relatif terhadap para kompetitornya berdasarkan empat variabel, yaitu kualitas produk, kualitas layanan, harga dan waktu pemenuhan pesanan. Menurut Deise et al. (2000) dalam Chaffey (2009), keempat variabel itu memengaruhi nilai yang diberikan kepada konsumen berdasarkan hubungan:  $Customer\ value = (Product\ quality \times Service\ quality) / (Price \times Fulfilment\ time)$ .

Berdasarkan pertimbangan-pertimbangan pada tahapan evaluasi, maka strategi *positioning* dan *differentiation* yang dapat diterapkan oleh asosiasi adalah sebagai berikut:

#### 1. *Positioning*

- a. Memasukkan banyak unsur proses produksi secara manual (hand-made) terutama dalam ukiran untuk menonjolkan sisi tradisional. Hal ini berkaitan dengan (Yovi, Nurrochmat, & Sidiq, 2012) yang mengidentifikasi bahwa disain dengan tipe “elegant” dan berukir adalah yang paling diminati oleh konsumen;
- b. Melayani 3 segmen utama yaitu mebel dan kerajinan sebagai perabot rumah tangga fungsional harian, gaya hidup rumah tangga atau sektor pariwisata/hiburan/perhotelan, serta perabotan kantor;
- c. Melayani konsumen akhir dan perusahaan;
  - Harga di bawah rata-rata eceran nasional dan di atas harga eceran pasar Jepara;

#### 2. *Differentiation*

- a. Mengizinkan konsumen turut serta dalam menentukan rancangan;
- b. Memberikan informasi/laporan kemajuan pesanan secara berkala kepada konsumen melalui saluran online;
- c. Memberikan keringanan harga mulai dari potongan harga sampai membebaskan biaya pengiriman berdasarkan jumlah nilai pembelian.

**Keputusan 4: model bisnis, layanan dan pendapatan** bertujuan untuk mendefinisikan sebuah model bisnis yang menggambarkan bagaimana perusahaan akan menghasilkan nilai melalui produk-produk dan layanan-layanan yang ditawarkan kepada konsumen yang ditargetkan, serta mengidentifikasi sumber-sumber pendapatan yang bisa dimanfaatkan oleh perusahaan. Pendekatan yang digunakan untuk menentukan keputusan ini adalah dengan melakukan penilaian terhadap

model bisnis yang dijalankan asosiasi saat ini dan memberikan pilihan-pilihan model bisnis yang baru. Berdasarkan kapabilitas organisasi dan pengrajin, permintaan pasar, serta hasil-hasil analisis seperti analisis sumber daya, kebutuhan, tren-tren eksternal, analisis SWOT dan strategi-strategi yang dihasilkan pada tahapan sebelumnya, model bisnis yang dapat dipilih oleh asosiasi adalah sebagai berikut:

1. Model 1 (pemasaran semi-desentralisasi); Model ini pada dasarnya telah dijalankan oleh asosiasi hingga saat ini, di mana sekretariat asosiasi berperan langsung sebagai penghubung antara pembeli dan pengrajin. Pada kasus tertentu, konsumen diperkenankan berhubungan dengan pengrajin tanpa melibatkan sekretariat.
2. Model 2 (pemasaran terdesentralisasi); Pada model ini, semua produk pengrajin dipasarkan secara bersama-sama melalui saluran *online*, sedangkan pemenuhan pesanan langsung dilakukan oleh pengrajin pemilik produk tanpa campur tangan/bantuan asosiasi (desentralisasi pemenuhan pesanan). Asosiasi tidak berhubungan dengan konsumen untuk melayani pesanan, melainkan hanya menyediakan sistem yang dapat mengarahkan konsumen kepada pengrajin-pengrajin yang sesuai.
3. Model 3 (pemasaran tersentralisasi); Pada model ini, kegiatan pemasaran *online* dan pemenuhan pesanan dikelola oleh asosiasi. Asosiasi berperan langsung dalam memasarkan dan menjual produk-produk pengrajinnya baik melalui saluran *online* dan tradisional.

Model 3 sebagian besar berjalan pada saluran digital, namun tetap mempertahankan saluran tradisional untuk menangani proses-proses bisnis tertentu. Asosiasi berperan sebagai pengelola unit usaha untuk menjalankan proses-proses bisnis secara *online* dalam upaya menjangkau konsumen akhir pada pasar domestik dan internasional. Model bisnis ini lebih dipandang sebagai bisnis kolaboratif yang merupakan sebuah aliansi dari sejumlah pengrajin asosiasi, di mana mereka menjadi bagian dari pemilik usaha, sehingga model ini, tidak dapat dipandang sebagai sebuah bisnis *broker* semata, karena para pengrajin memiliki hak untuk menentukan secara bersama-sama spesifikasi produk, mekanisme kontrol kualitas, prosedur pelayanan, penentuan harga dan pembagian keuntungan. Para pengrajin berperan sebagai pemasok kepada unit usaha asosiasi dengan mengikuti aturan dan kebijakan yang sebelumnya telah dirumuskan bersama. Saluran tradisional tetap dibutuhkan untuk



menjaring permintaan dari kalangan pebisnis dan sekaligus memfasilitasi permintaan eceran yang masuk melalui saluran ini.

Berdasarkan pertimbangan-pertimbangan pada tahapan evaluasi dan pendapat-pendapat yang berkembang dari para pengurus (teridentifikasi pada sesi wawancara dan FGD), dapat disimpulkan bahwa model bisnis yang sesuai dengan kondisi internal dan eksternal organisasi adalah model bisnis 3 yang memasarkan dan menjual produk-produk mebel dan kerajinan secara *online* dengan prioritas saluran *bricks-and-clicks*. Pada beberapa diskusi bersama pengurus asosiasi mengenai unit usaha, diketahui terdapat dua pemikiran dalam hal penempatan unit usaha di dalam struktur organisasi, yaitu (a) sebagai unit usaha koperasi<sup>4</sup> yang merupakan perusahaan milik koperasi, atau (b) sebagai unit usaha asosiasi yang merupakan perusahaan milik asosiasi.

**Keputusan 5: restrukturisasi pasar (*marketplace restructuring*)** bertujuan mendefinisikan bagaimana teknologi informasi dan komunikasi secara elektronik dapat memberikan peluang untuk menciptakan pasar baru melalui *disintermediation*, *reintermediation* dan *countermediation*. Menurut Chaffey (2009) restrukturisasi pasar dapat dilakukan dengan cara: (a) *disintermediation*, yaitu dengan menghilangkan penghubung, seperti distributor atau *broker*, sehingga perusahaan dapat menjangkau konsumen secara langsung, (b) *reintermediation*, yaitu dengan menciptakan penghubung baru antara konsumen dengan pemasok, dan (c) *countermediation*, yaitu menciptakan penghubung baru yang dikelola sendiri oleh perusahaan.

Hal-hal yang perlu dipertimbangkan terkait *disintermediation* adalah sebagai berikut:

1. Pada kenyataannya, para pengrajin mebel dan kerajinan kayu Jepara, termasuk para pengrajin anggota APKJ memiliki ketergantungan kepada *broker* dalam memperoleh pesanan daripada menerima pesanan langsung dari konsumen akhir;
2. Bagi pengrajin, yang lebih berperan sebagai produsen, bertransaksi langsung dengan konsumen akhir memerlukan keahlian tersendiri dan waktu yang lebih banyak dalam melayani, sehingga menjadi produsen sekaligus penjual akan membebani mereka dalam pengaturan sumber daya;

3. Para *broker* (misalnya gudang), pada umumnya memberikan pesanan dalam jumlah besar dan cenderung berulang-ulang, sehingga jika hubungan kerjasama dengan *broker* ditiadakan, maka dapat mengancam kelangsungan usaha pengrajin.

Berdasarkan pertimbangan di atas, maka peran broker sebaiknya tidak dihilangkan sepenuhnya, akan tetapi diperlukan suatu saluran khusus untuk bekerjasama dan meningkatkan posisi tawar pengrajin terhadap *broker*.

Pada pilihan *reintermediation*, perusahaan dapat berpartisipasi pada sistem-sistem *intermediary* pada sektor industri atau pasar yang relevan. Menurut Chaffey (2009) pendekatan *reintermediation* ini dapat berimplikasi pada perlunya suatu cara bagi produsen untuk memperbaharui data (misalnya harga dan informasi produk) pada sisi *intermediary* dan bahkan perlunya pengembangan *intermediary* yang dilakukan dan dikelola sendiri, sehingga pendekatannya berubah menjadi *countermediation*. *Countermediation* pada dasarnya telah dilakukan APKJ dengan mendirikan portal pemasaran *javamebel.com* yang berfungsi sebagai perhubung antara pembeli dan pengrajin. Pendekatan ini diharapkan dapat menggiring konsumen akhir dan perusahaan kepada satu atau lebih pengrajin sesuai dengan produk-produk yang dicarinya.

Berdasarkan pertimbangan-pertimbangan yang berkaitan dengan keputusan 4 (“Model bisnis, layanan dan pendapatan”), sistem *countermediation* saat ini (*javamebel*) perlu merubah peran asosiasi dari menyediakan pilihan-pilihan pengrajin yang dapat dihubungi oleh konsumen, menjadi menjual produk-produk secara langsung kepada konsumen. Strategi yang diterapkan untuk melakukan perubahan *countermediation* ini adalah membentuk unit usaha penjualan mebel dan kerajinan kayu eceran secara *online* di bawah naungan koperasi APKJ. Para pengrajin APKJ menjadi pemasok kepada unit usaha ini dengan mengikuti standar-standar proses dan produk yang ditetapkan oleh unit usaha ini.

**Keputusan 6: kemampuan pengelolaan rantai pasokan** bertujuan mendefinisikan strategi-strategi bagaimana organisasi dapat terintegrasi lebih dekat dengan para pemasoknya melalui saluran digital. Pada dasarnya, pengelolaan rantai pasokan belum menjadi topik utama pembicaraan di dalam diskusi-

<sup>4</sup> Latar belakang berdirinya Koperasi Serba Usaha APKJ teridentifikasi dalam (Effendi, Parlinah, & Gultom, 2012)

diskusi dengan pengurus dan anggota APKJ. Fokus utama dalam pengembangan *e-business* lebih kepada pengembangan sistem penjualan *online* seperti yang sudah dibahas pada pengambilan keputusan 4.

Diskusi-diskusi yang relevan dengan pengelolaan rantai pasokan, sejauh ini mengenai (a) pengelolaan pasokan mebel dan kerajinan yang dipesan konsumen melalui situs *e-commerce* APKJ, (b) perbaikan pasokan kayu agar bahan baku kayu lebih mudah diperoleh oleh para pengrajin dengan harga yang lebih murah, dan (c) perbaikan proses *finishing* agar pengerjaan *finishing* dapat dilakukan dengan cepat dan dengan biaya yang lebih murah;

Cakupan pembahasan terkait keputusan 6 ini dibatasi oleh dua fokus utama di dalam *inbound logistics*, yaitu pasokan mebel/kerajinan dan pasokan kayu. Sedangkan, persoalan yang menyangkut *outbound logistics* tidak dicakup di dalam pembahasan ini (kecuali jasa pengiriman barang). Menurut Chaffey (2009), pilihan pengelolaan rantai pasokan dilihat dari model integrasinya terdiri dari 3 pilihan, yaitu:

1. *Vertical integration*, di mana seluruh kegiatan rantai pasokan diambil alih dan dikontrol oleh organisasi;
2. *Vertical disintegration (disaggregation)*, di mana sejumlah kegiatan rantai pasokan dilakukan oleh pihak ketiga secara terkontrol (kerjasama berbentuk *outsourced*), sehingga organisasi dapat lebih fokus kepada kemampuan intinya (*core capabilities*);
3. *Virtual integration*, di mana sebagian besar dari kegiatan rantai pasokan dilakukan dan dikontrol di luar organisasi oleh pihak ketiga.

Berdasarkan hasil evaluasi, bentuk integrasi rantai pasokan pada *inbound logistics* yang dipilih adalah perpaduan antara *vertical integration* dan *vertical disintegration*. *Vertical integration* dilakukan pada rantai pasokan kayu, jasa pengeringan dan *finishing*. Pada kasus integrasi ke dalam rantai pasokan kayu, asosiasi berperan sebagai penyedia kayu bagi para pengrajinnya melalui unit usaha “warung kayu”. Inisiatif ini akan mendorong asosiasi untuk bekerjasama dengan pihak-pihak penyedia kayu seperti Perum Perhutani, para petani kayu dan perusahaan penggergajian kayu. Pengelolaan bisnis “warung kayu” secara internal oleh unit usaha koperasi memungkinkan integrasi secara elektronik melalui jaringan *Local Area Network* (LAN). Pada kasus integrasi ke dalam rantai jasa *finishing*, asosiasi berperan sebagai penyedia jasa pengeringan dan

*finishing*. Kegiatan pengeringan dan *finishing* ini didukung oleh peralatan-peralatan manufaktur bantuan pemerintah.

*Vertical disintegration* dilakukan pada rantai pasokan produk inti, yaitu mebel kayu dan kerajinan. Para pengrajin APKJ berperan sebagai penerima pekerjaan *outsource* dari unit usaha koperasi. Pada hubungan ini, unit usaha koperasi menyerahkan pekerjaan produksi kepada pengrajin, akan tetapi masih memiliki kontrol terhadap proses produksi melalui penerapan standar-standar kualitas proses produksi dan produk secara tertulis dan pengontrolan lapangan. Interaksi elektronik yang mungkin dibangun adalah sistem penyampaian informasi kepada pengrajin melalui telpon seluler mengenai informasi pesanan, serta menyediakan akses kepada pengrajin agar dapat memperbaharui status dari proses produksi suatu pesanan yang diserahkan kepadanya. *Virtual integration* pada *outbound logistics* dapat dilakukan kepada penyedia jasa pengiriman barang untuk mendapatkan informasi yang akurat dalam hal ketersediaan layanan, jadwal dan biaya pengiriman secara elektronik ke dalam sistem *e-commerce* asosiasi.

Gambar 12 memperlihatkan model hubungan antara industri pendukung dengan para pengrajin APKJ dan Koperasi APKJ. Kotak dan garis penghubung yang terputus-putus menunjukkan kondisi masa depan yang merupakan wujud dari (a) *vertical integration* pada rantai pasokan kayu, jasa pengeringan dan jasa *finishing*, (b) *vertical disintegration* pada rantai pasokan produk inti, yaitu mebel dan kerajinan yang diproduksi oleh pengrajin, dan (c) *virtual integration* pada penyedia jasa pengiriman barang.

**Keputusan 7: kemampuan manajemen pengetahuan Internal** bertujuan mendefinisikan strategi-strategi untuk membangun kemampuan *e-business* internal, khususnya mengenai bagaimana organisasi membagi pengetahuan dan membangun proses-proses bisnisnya. Chaffey (2009) menentukan dua sasaran utama terkait pendefinisian strategi-strategi ini, yaitu meningkatkan peran intranet untuk mendukung proses-proses bisnis organisasi, serta menyebarluaskan dan mempromosikan *knowledge sharing* diantara para anggota organisasi dalam meningkatkan daya saing organisasi.

Pilihan-pilihan untuk pengembangan intranet dan manajemen pengetahuan internal masih bersifat

umum. Pengembangan intranet harus dimulai dari nol sebagaimana APKJ belum memilikinya, sehingga pilihan-pilihan pengembangan intranet lebih difokuskan pada prioritas yang dibutuhkan disaat sistem penjualan *online* sudah mulai berjalan (dalam 1 sampai 2 tahun pertama). Pengembangan kemampuan manajemen pengetahuan perlu dilakukan melalui pendekatan yang sesuai dengan kemampuan pengrajin dalam hal kemampuan menggunakan teknologi informasi, sehingga pilihan yang diberikan lebih merupakan pertanyaan apakah fokus pengembangan berjalan ke arah sistem *online*, tradisional atau kombinasi keduanya?

Berdasarkan hasil evaluasi, pendekatan pengembangan intranet dan pengelolaan pengetahuan internal merupakan perpaduan antara sistem *online* dan tradisional. Strategi-strategi yang dapat diterapkan pada pengembangan intranet adalah sebagai berikut (a) memungkinkan para pengrajin mengakses informasi menggunakan telepon seluler atau peralatan *mobile* lainnya disamping menggunakan komputer. Hal ini berkaitan dengan (Irawati & Suyamto, 2010) mengenai penggunaan telpon seluler sebagai alat komunikasi dalam pemasaran, (b) menyediakan antar-muka yang sederhana agar pengrajin dapat menggunakan fitur-fitur dengan semudah mungkin dan dengan ukuran data yang seringnya mungkin, (c) menyajikan informasi (isi) dalam bentuk yang sederhana, misalnya dalam bentuk lembar kerja, halaman-halaman pendek dan memungkinkan untuk diunduh secara cepat, dan (d) memanfaatkan layanan-layanan murah namun efektif untuk dipadukan dengan intranet, misalnya *google drive*, *dropbox* dan *yahoo group*. Strategi-strategi pengelolaan pengetahuan internal disajikan mengikuti kerangka proses manajemen pengetahuan yang dikembangkan oleh (Bercerra-Fernandez, Gonzalez, & Sabherwal, 2004).

**Keputusan 8: kemampuan dan *resourcing* organisasi** bertujuan mendefinisikan strategi-strategi yang berhubungan dengan perubahan organisasi yang dibutuhkan untuk mencapai prioritas-prioritas *e-business*. Chaffey (2009) menyarankan untuk meninjau dua aspek utama yang berkaitan dengan perubahan organisasi, yaitu: (a) melakukan tinjauan terhadap pendekatan-pendekatan yang sesuai dalam menempatkan unit organisasi yang akan bertanggung jawab dalam menjalankan bisnis melalui internet, dan (b) melakukan tinjauan terhadap kapabilitas dari organisasi untuk

mencapai strategi-strategi *e-business*. Pada konteks ini, Chaffey mengusulkan penggunaan model kematangan kapabilitas (*capability maturity model*) untuk pengadopsian *e-commerce* dalam mengukur kapabilitas. Tinjauan terhadap pendekatan penempatan unit organisasi pelaksana *e-business* dilakukan dengan mengikuti *roadmap* pengambilan keputusan (terdiri dari 13 pertanyaan) yang dikembangkan oleh Gulati dan Garino (2000), sedangkan tinjauan terhadap kapabilitas organisasi tidak dilakukan pada penelitian ini.

Dari 13 pertanyaan *roadmap*<sup>5</sup> ini, terdapat 1 pertanyaan yang tidak relevan dan dari 12 pertanyaan yang tersisa, seluruh jawaban menunjukkan unit usaha harus dipisahkan dari asosiasi. Hanya satu jawaban dari 12 pertanyaan itu yang memperlihatkan unit usaha dapat terintegrasi atau terpisah (*mixed*). Keputusan untuk terpisah dari organisasi induk ini tentunya sangat relevan dengan kehendak pengurus untuk menyerahkan pengelolaan bisnis penjualan *online* kepada unit usaha baru dibawah naungan koperasi APKJ.

## Kesimpulan

Berkaitan dengan pertanyaan penelitian pertama, yaitu bagaimana membangun strategi *e-business* untuk meningkatkan pemasaran unit bisnis dan anggota APKJ? Menurut Kotler & Keller (2009), keberhasilan pemasaran menuntut organisasi untuk memiliki kemampuan memahami nilai *customer*, menciptakan nilai *customer*, menyampaikan nilai *customer*, menangkap nilai *customer* dan melestarikan nilai *customer*. Nilai *customer* dalam konteks strategi *e-business* yang diusulkan Chaffey (2009) merupakan hubungan antara empat variabel: kualitas produk, kualitas layanan, harga dan waktu pemenuhan pesanan.

Keputusan 3 dalam strategi *e-business* ini memberikan jawaban atas perlunya organisasi memahami nilai *customer*. Hal ini diwujudkan melalui strategi *positioning* dan *differentiation* sebagai upaya mendapatkan posisi terbaik dalam hal layanan *online*, relatif terhadap kompetitor, berdasarkan empat variabel nilai *customer* yang disebutkan di atas. Nilai *customer* yang diwujudkan dalam strategi *e-business* pada Keputusan 3 selanjutnya disampaikan kepada *customer* melalui saluran pemasaran yang tepat. Keputusan 1 dalam strategi *e-business* ini

<sup>5</sup> Penilaian lengkap menggunakan *roadmap* Gulati dan Garino (2000) tersedia pada Karya Akhir penulis di Universitas Indonesia.

menyarankan untuk mendekati pasar melalui saluran *online* dan tradisional, atau disebut sebagai *bricks-and-clicks*. Melalui pendekatan ini, asosiasi dapat menjangkau konsumen akhir melalui pemasaran produk eceran dan menggiring konsumen bisnis dari saluran *online* ke saluran tradisional untuk melayani pesanan dalam jumlah besar.

Menangkap nilai *customer* menurut Kotler & Armstrong dalam (Kotler & Armstrong, 2011) merupakan proses menangkap imbalan dalam bentuk penjualan saat ini dan masa depan, pangsa pasar, dan keuntungan. Dengan menciptakan nilai *customer* yang unggul, perusahaan menciptakan pelanggan yang sangat puas, yang tetap setia (*loyal*) dan membeli lebih banyak. Keputusan 2 dalam strategi *e-business* ini, merekomendasikan strategi-strategi pengembangan produk dan pasar yang berguna dalam menangkap nilai *customer* melalui (a) strategi penetrasi pasar untuk meningkatkan pangsa pasar, kesetiaan konsumen dan perbaikan nilai *customer*, (b) strategi pengembangan produk dengan melakukan inovasi-inovasi untuk memberikan nilai-nilai baru dalam mempertahankan konsumen-konsumen lama dan menarik konsumen-konsumen baru, (c) strategi pengembangan pasar untuk memperluas pangsa pasar secara geografis dengan menggunakan saluran *online* untuk menjangkau konsumen domestik dan luar negeri, dan (d) strategi diversifikasi yang berguna untuk mempertahankan konsumen bisnis (B2B) dengan menawarkan produk-produk selain mebel, yaitu kayu, penyewaan peralatan dan jasa manufaktur, serta ruang iklan pada situs *e-commerce* asosiasi. Kepedulian strategi *e-business* terhadap perlunya menangkap nilai *customer* dapat juga dilihat pada inisiatif strategis dari strategi *e-business* keempat<sup>6</sup> (meningkatkan peran teknologi informasi dalam mendukung proses-proses bisnis APKJ baik yang bersifat sosial maupun komersial) untuk memfasilitasi pengelolaan data pelanggan dalam upaya memahami kebutuhan dan mempertahankan pelanggan.

Menurut Cross & Dixit (2005) dalam (Sandekela, 2008), membangun dan melestarikan nilai *customer* yang menghasilkan sumber pendapatan berkelanjutan membutuhkan hubungan dengan konsumen dalam jangka panjang. Hal ini sejalan dengan Keputusan 2 dari strategi *e-business*, khususnya dalam menjaga kesetiaan konsumen, melakukan inovasi produk dan melakukan

diversifikasi usaha. Inisiatif strategis dari strategi *e-business* keempat dalam hal memfasilitasi pengelolaan data pelanggan juga sangat relevan dalam melestarikan nilai *customer*, di mana organisasi dapat mempelajari dan memprediksi kebutuhan konsumen di masa depan dengan mengenal pola interaksi dan pembelian dari sejarah yang tercatat di dalam *database*. Lebih jauh lagi, Keputusan 7 dari strategi *e-business* dalam hal manajemen pengetahuan, memiliki relevansi yang kuat terhadap strategi *e-business* keempat. Hal ini dapat dipahami karena informasi dan pengetahuan yang dihasilkan selama bisnis berjalan, termasuk di dalamnya mengenai pola-pola perilaku dan kebutuhan konsumen, perlu dibagikan secara sistematis kepada pihak-pihak terkait (pengurus maupun pengrajin) di dalam asosiasi. Strategi-strategi dari Keputusan 7 dapat digunakan untuk meningkatkan efektivitas pembagian informasi dan pengetahuan dalam konteks menangkap nilai *customer*.

Berkaitan dengan pertanyaan penelitian kedua: bagaimana membangun strategi *e-business* yang mendukung pengembangan struktur organisasi yang efektif untuk menjalankan pemasaran secara *online*? Menurut (Daft, Murphy, & Willmott, 2010) yang mengutip Child (1984), satu dari tiga komponen utama dalam definisi struktur organisasi adalah struktur organisasi meliputi rancangan dari sistem-sistem, untuk memastikan komunikasi, koordinasi dan usaha-usaha integrasi yang efektif antar departemen. Terkait dengan pengembangan struktur organisasi dan hubungan antar departemen yang efektif dan sesuai dengan kondisi APKJ, sehingga asosiasi dapat menjalankan pemasaran *online*, maka strategi-strategi *e-business* dari Keputusan 4 dan Keputusan 8 dapat dijadikan landasan perubahan struktur organisasi. Keputusan 4 menyarankan dua alternatif penempatan unit usaha di dalam struktur organisasi. Alternatif pertama menyarankan unit usaha pemasaran *online* merupakan badan usaha di bawah Koperasi APKJ. Alternatif kedua menyarankan unit usaha dijadikan sebagai badan usaha yang berada langsung di dalam struktur APKJ. Terlepas dari dualisme pendapat di kalangan pengurus mengenai kedua alternatif itu, penelitian ini menyarankan untuk mengadopsi alternatif pertama, yang lebih peduli dengan pengakuan peran dan pemberian nilai yang lebih tinggi kepada pengrajin dalam keikutsertaannya mendukung model bisnis baru APKJ. Keputusan 8 memberikan pertimbangan yang sangat mendasar mengenai penempatan dan pengelolaan unit usaha pemasaran

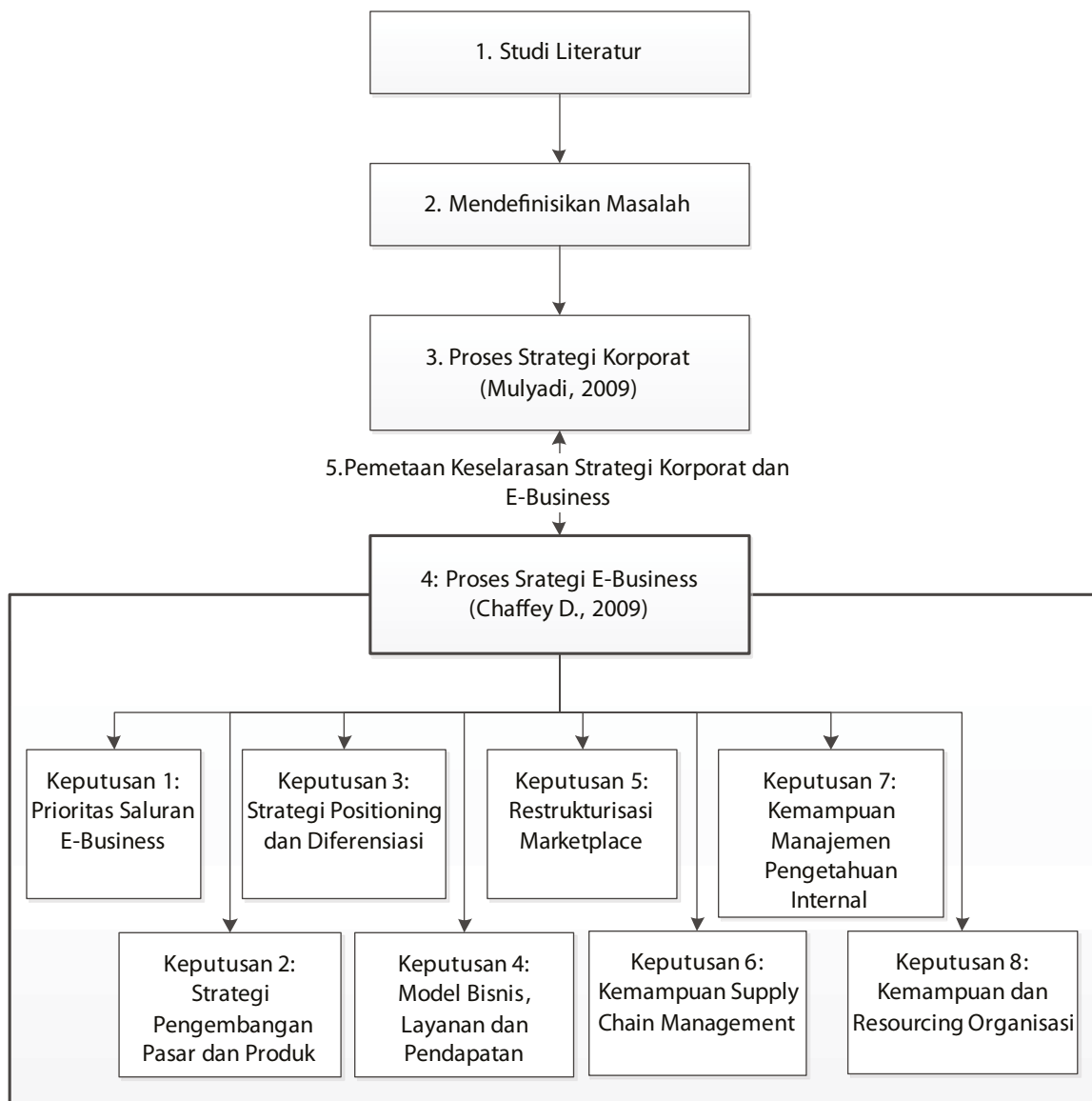
<sup>6</sup> Uraian lengkap tersedia pada Karya Akhir penulis di Universitas Indonesia.

online melalui sebuah penilaian menggunakan kerangka penilaian Gulati dan Garino (2000). Hasil penilaian ini menyarankan agar unit usaha dipisahkan dari asosiasi. Saran ini tentunya konsisten dengan Keputusan 4 yang dapat dilihat sebagai implementasi dari pemisahan itu.

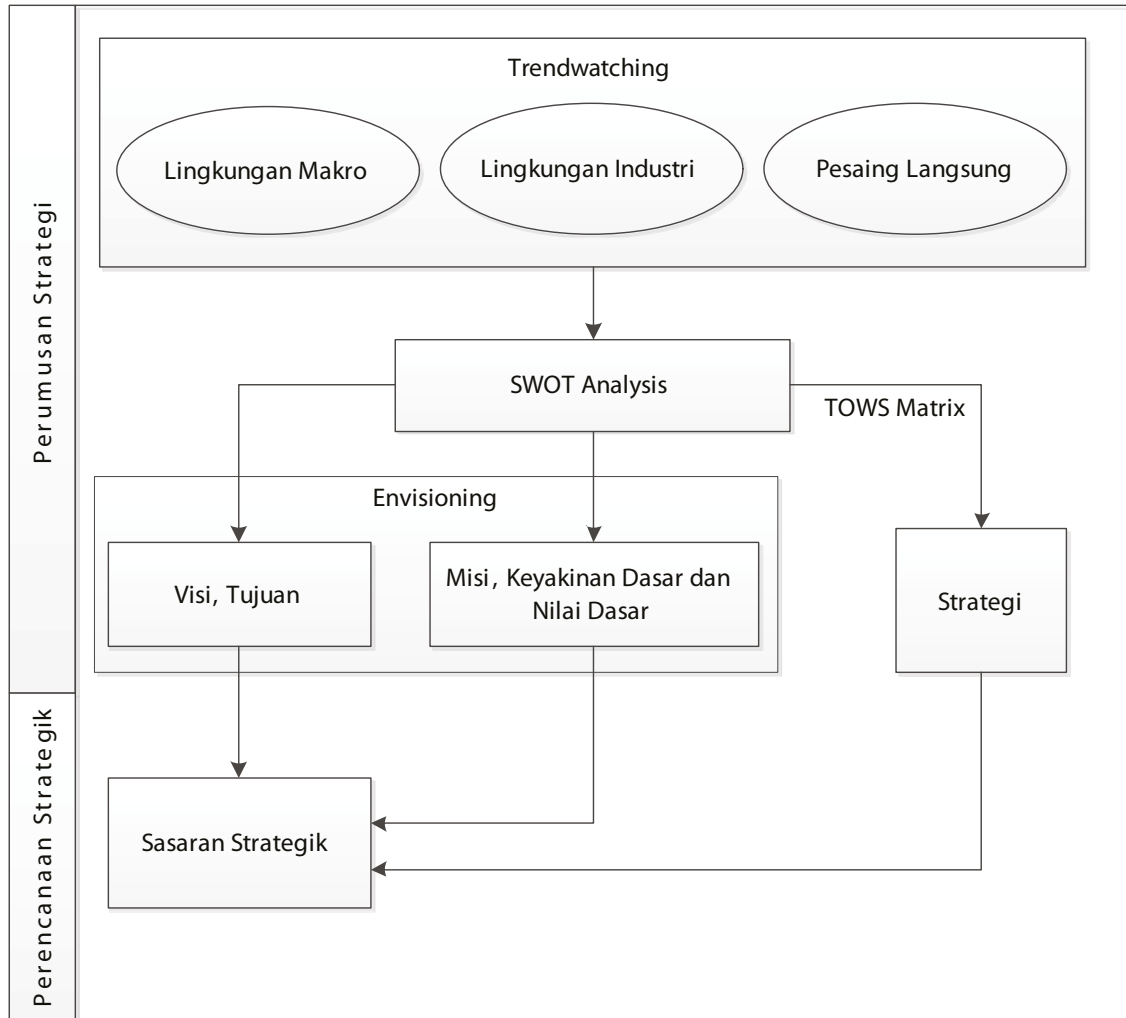
Berkaitan dengan pertanyaan penelitian penelitian ketiga: bagaimana membangun strategi *e-business*

untuk memengaruhi struktur pasar, sehingga meningkatkan posisi tawar pengrajin? Menurut Umar et al. (2010) dalam (Zainuri, Waridin, Santoso, & Susilowati, 2012), struktur pasar adalah tingkat konsentrasi pembeli dan penjual komoditas. Ini berkaitan dengan hubungan organisasi antara pembeli dan penjual, serta derajat diferensiasi produk dan aksesibilitas atau penghalang (*barrier*) untuk pasar.

### Ilustrasi



Gambar 1. Metode penelitian



**Gambar 2. Proses strategi korporat**

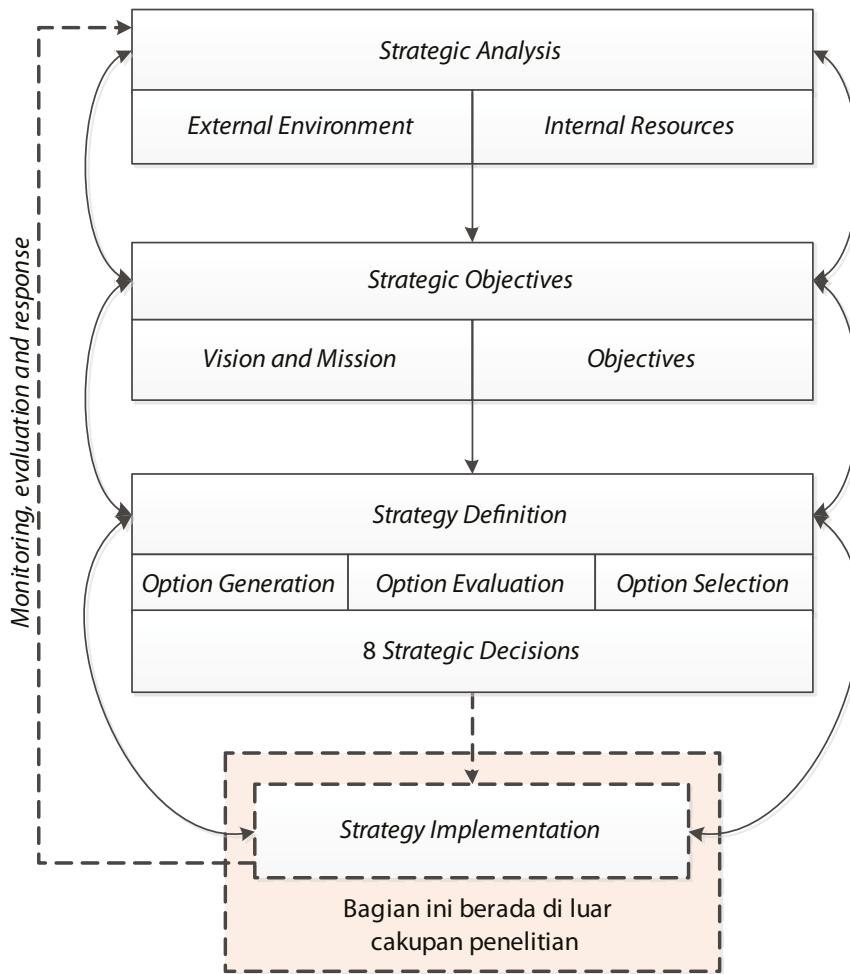
Sumber: model proses strategi Mulyadi (2009) yang disederhanakan

	Strengths	Weaknesses	Oppor - tunities	Threats
Finansial	Faktor -faktor 1. Trendwatching pesaing langsung, yang berhubungan dengan permasalahan internal; 2. Kemampuan keuangan; 3. Kemampuan disain produk; 4. Kemampuan mencari sumber dan memproduksi; 5. Kemampuan memasarkan dan melayani; 6. Kemampuan untuk mengelola; 7. Analisis strategi saat ini.	Metode pengumpulan data  <u>Data primer</u> : Wawancara, Focus Group Discussion (FGD), Observasi	Hasil -hasil trendwatching pada tahapan sebelumnya.	
Customer				
Proses				
Pertumbuhan dan Pembelajaran				

Gambar 3. Proses analisis SWOT berbasis perspektif balanced scorecard

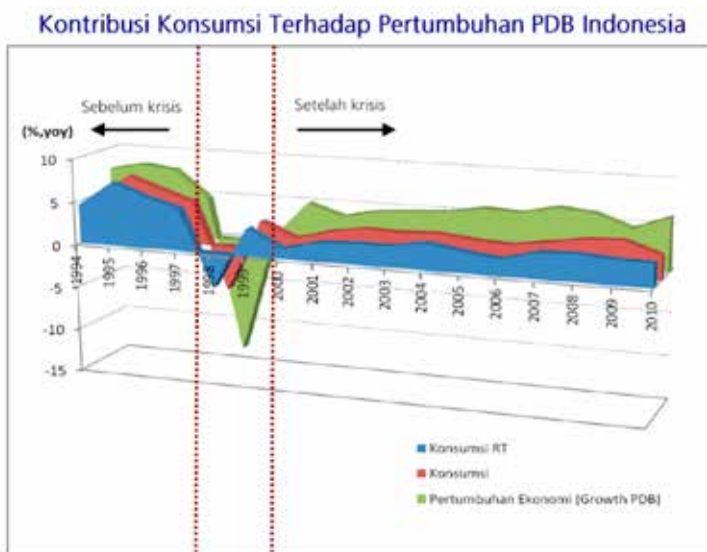
Strengths (S) atau Weaknesses (W)	Opportunities (O) atau Threats (T)	Strategi SO, ST, WO atau WT	Sasaran strategis
Merujuk ke butir dari analisis SWOT	Merujuk ke butir dari analisis SWOT	Menentukan strategi korporat	Perspektif Finansial
			8. Tentukan sasaran strategis
			Perspektif Customer
			9. Tentukan sasaran strategis
			Perspektif Proses
			10. Tentukan sasaran strategis
Perspektif Pertumbuhan dan Pembelajaran			
11. Tentukan sasaran strategis			

Gambar 4. Proses formulasi strategi dan pemetaan strategi ke dalam sasaran strategis



**Gambar 5. Model proses strategi Chaffey**

Sumber: Chaffey (2009)



Sumber: BPS diolah

**Gambar 6. Kontribusi konsumsi terhadap PDB Indonesia**

Sumber: Laporan statistik Bank Indonesia (Bank-Indonesia, 2011b)



Keyword	Competition	Search Volume	Cost Per Click
furniture	Medium	37,200,000	246,000
sofa	Medium	11,100,000	110,000
sofa minimalis	High	14,800	12,100
spring bed	Medium	135,000	60,500
depo bangunan	Low	9,900	9,900
kursi	Low	1,000,000	246,000
kursi kantor	Medium	14,800	14,800
mebel jepara	Medium	9,900	9,900
kursi tamu	Medium	22,200	18,100
furniture minimalis	Medium	9,900	9,900
bed cover	Low	301,000	27,100
harga bahan bangunan	Low	22,200	22,200

Gambar 7. Pola pencarian menggunakan kata kunci yang berhubungan dengan “furniture”

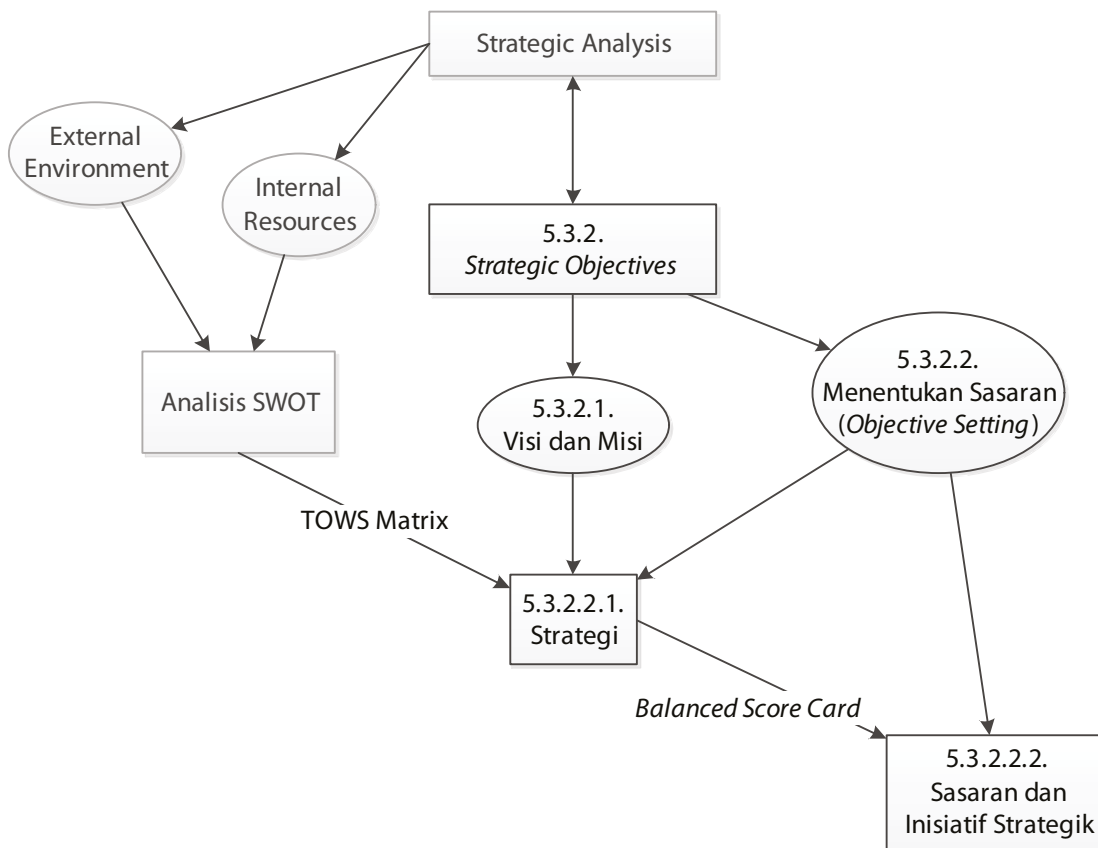
Sumber: Google Adwords: KeywordTool. Diperbaharui pada Oktober 2012

Kode	Strength (S)	Opportunity (O)	Strategi	Sasaran Strategis
SO-01	<ul style="list-style-type: none"> <li>- Produk mebel dan kerajinan APKJ mampu bersaing pada pasar domestik dan internasional dengan model yang beragam dan bernilai khas Jepara: [SC-01], [SC-02], [SC-03];</li> <li>- Asosiasi berfungsi forum komunikasi dan berbagi pengetahuan dan pengalaman pengrajin: [SPP-05].</li> </ul>	<ul style="list-style-type: none"> <li>- Peluang pasar untuk segmen “green consumers”: [OC-10]</li> <li>- Kemampuan industri pendukung pada sektor bahan baku dan penggergajian masih men-cukupi untuk saat ini: [OP-01], [OP-02]</li> <li>- Adanya dukungan kebijakan pemerintah terhadap industri mebel: [OPP-01], [OPP-02].</li> </ul>	<p><b>Strategi korporat #1</b> Meningkatkan fokus pemasaran pada pasar domestik dengan menyediakan produk berkualitas tinggi untuk grade yang dapat diserap oleh pasar domestik;</p> <p><b>Strategi korporat #2</b> Meningkatkan pemasaran pada pasar ekspor dan atau domestik dengan strategi <i>focused differentiation</i> melalui produk ramah lingkungan yang bersertifikat SVLK.</p>	<p><b>A: Perspektif Finansial</b></p> <ul style="list-style-type: none"> <li>- Nilai ekspor meningkat;</li> <li>- Nilai penjualan di pasar domestik meningkat;</li> <li>- Margin keuntungan meningkat.</li> </ul> <p><b>B: Perspektif Customer</b></p> <ul style="list-style-type: none"> <li>- Produk berkualitas tinggi pada grade yang diharapkan;</li> <li>- Meningkatnya kepercayaan dari konsumen luar dan dalam negeri yang peduli dengan kelestarian lingkungan melalui kepemilikan sertifikat SVLK.</li> </ul> <p><b>C: Perspektif Proses</b></p> <ul style="list-style-type: none"> <li>- Penggunaan bahan baku kayu dan proses produksi lebih efisien melalui teknologi dan desain yang efisien;</li> <li>- Proses pengurusan sertifikat SVLK yang cepat;</li> </ul> <p><b>D: Perspektif Pembelajaran dan Pertumbuhan</b></p> <ul style="list-style-type: none"> <li>- Melalui sertifikasi SVLK yang dimiliki, perputahan pengrajin menjadi lebih dikenal di kalangan eksporitur dan buyer luar negeri;</li> </ul>

Gambar 8. Contoh pemetaan strategi ke dalam sasaran strategis korporat

Strategi e-business #5					
Menggunakan saluran online untuk memfasilitasi strategi diversifikasi bisnis.					
	Sasaran strategis	Lag indicator	Lead Indicator	Target	Inisiatif strategis
FINANSIAL	Peningkatan pendapatan dari bisnis-bisnis yang menggunakan fasilitas layanan <i>online</i> selain penjualan mebel dan kerajinan.	Jumlah bisnis <i>online</i> baru.	- Kebutuhan biaya operasional sistem dan orang; - Biaya-biaya inovasi layanan dan produk; - Biaya pengembangan SDM.	Minimal bertambah 2 bisnis baru <sup>52</sup> dalam 3 tahun.	Menginvestasikan modal ke dalam bisnis baru dan mempromosikan atau mengintegrasikannya ke dalam sistem <i>e-commerce</i> yang ada (jika memungkinkan).
	Meningkatnya reputasi situs <i>e-commerce</i> APKJ yang dapat membuka peluang kerjasama kemitraan;	- Pertumbuhan <i>referral</i> baru dari situs lain; - % konversi kunjungan kepada pembelian; - Pertumbuhan mitra kerjasama.	- Tingkat komitmen partisipasi anggota APKJ dalam bisnis online; - Frekuensi promosi situs; - Tingkat kualitas layanan.	- 5 sampai 10 <i>referral</i> per bulan; - 5% konversi kunjungan kepada pembelian; - 3 sampai 5 mitra baru per tahun.	- Mempromosikan bisnis pada saluran-saluran online berbayar dan gratis - Menerapkan konsep-konsep <i>Search Engine Optimization</i> untuk meningkatkan <i>web presence</i> pada situs google.
CUSTOMER	Terakomodasinya kebutuhan mitra untuk berkolaborasi dengan APKJ dalam bisnis selain penjualan mebel;	Bertambahnya fitur-fitur B2B pada situs <i>e-commerce</i> yang dapat dimanfaatkan mitra dan customer;	- Pertumbuhan jaringan kemitraan APKJ; - Pertumbuhan konsumen.	Diharapkan bertambah 2 sampai 3 fitur dalam 2 sampai 4 tahun bisnis berjalan <sup>53</sup> .	Mengembangkan fitur untuk mengintegrasikan sistem asosiasi dengan sistem mitra bisnis

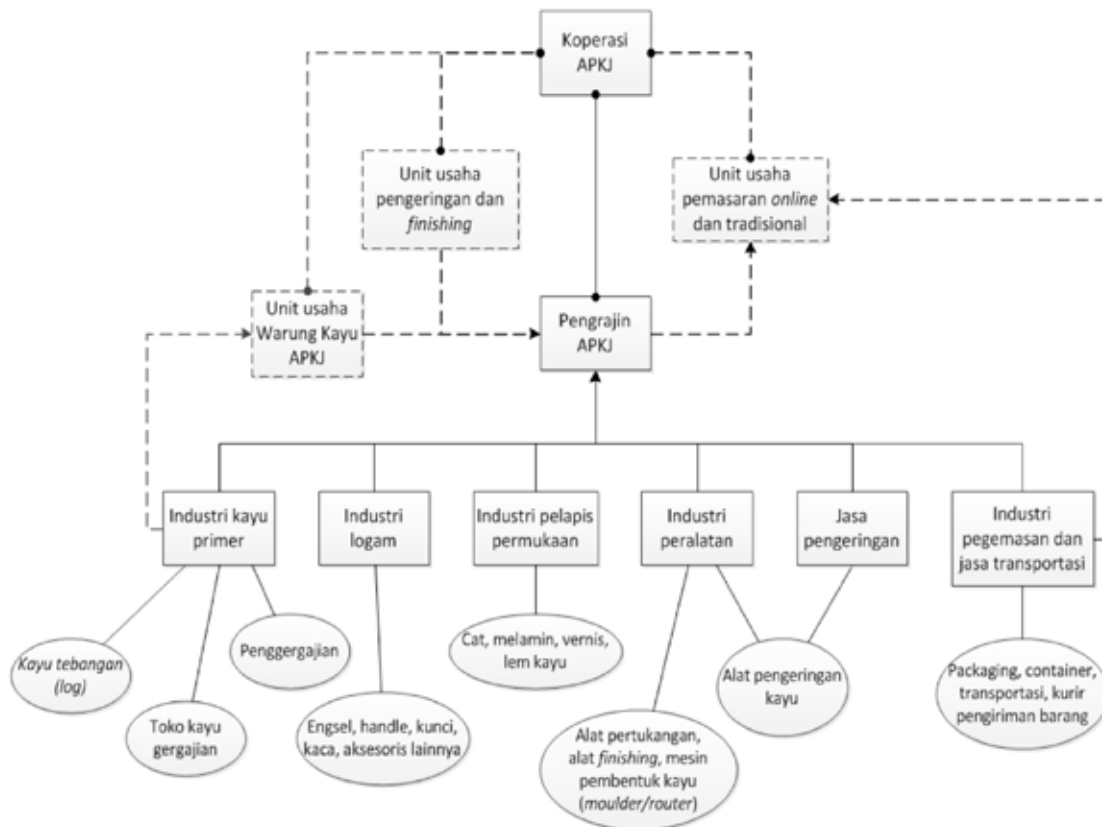
Gambar 9. Contoh pemetaan strategi ke dalam perencanaan strategis berbasis scorecard



Gambar 10. Alur proses formulasi strategi hingga perencanaan strategis

		Pertumbuhan produk	
		Produk saat ini	Produk baru
Pertumbuhan pasar	Pasar baru	<p><b>Strategi pengembangan pasar</b></p> <p>Menggunakan saluran <i>online</i> untuk menargetkan:</p> <ol style="list-style-type: none"> <li>1. jangkauan kepada konsumen eceran pada pasar domestik dengan memberikan kemudahan pengiriman barang,</li> <li>2. jangkauan kepada konsumen B2B dari dalam dan luar negeri dengan memfasilitasi proses penawaran dan komunikasi secara <i>online</i>,</li> <li>3. meningkatkan promosi untuk produk-produk pada segmen gaya hidup (<i>life style</i>).</li> </ol>	<p><b>Strategi diversifikasi</b></p> <p>Menggunakan saluran <i>online</i> untuk:</p> <ol style="list-style-type: none"> <li>4. promosi dan komunikasi kegiatan bisnis “warung kayu”,</li> <li>5. promosi dan komunikasi penyewaan peralatan dan fasilitas manufaktur,</li> <li>6. menjalankan bisnis layanan iklan online pada situs e-commerce APKJ.</li> </ol>
	Pasar saat ini	<p><b>Strategi penetrasi pasar</b></p> <p><u>Peningkatan pangsa pasar:</u></p> <ol style="list-style-type: none"> <li>7. merubah model layanan online dari <i>brochureware</i> menjadi <i>interactivee-commerce</i> yang mampu menerima pesanan secara <i>online</i>; <p><u>Perbaikan loyalitas konsumen:</u></p> <ol style="list-style-type: none"> <li>8. memberikan kesempatan untuk tawar-menawar (negosiasi) yang dilihat berdasarkan kasus per kasus,</li> <li>9. membuka berbagai saluran komunikasi baik <i>online</i> dan <i>offline</i> untuk berkomunikasi dengan pelanggan.</li> </ol> <p><u>Perbaikan nilai bagi konsumen:</u></p> <ol style="list-style-type: none"> <li>10. harga yang relatif murah melalui pengurangan biaya mediasi,</li> <li>11. <i>Rebranding</i>: merubah branding dari banyak <i>brand</i> menjadi <i>brand</i> asosiasi sebagai upaya meningkatkan kualitas produk,</li> <li>12. komunikasi yang lebih baik dengan menyediakan kemudahan untuk memantau laporan kemajuan pesanan secara <i>online</i>.</li> </ol> </li></ol>	<p><b>Strategi pengembangan produk</b></p> <p>Menggunakan saluran <i>online</i> untuk:</p> <ol style="list-style-type: none"> <li>13. memfasilitasi personalisasi produk di mana konsumen dapat menyam-paikan ide-idenya terkait bentuk dan fungsi mebel dengan cara: memberikan pilihan-pilihan untuk merubah spesifikasi produk dan mengizinkan konsumen untuk mengunggah gambar rancangannya sendiri,</li> <li>14. memfasilitasi personalisasi furniture-set di mana konsumen dapat membangun furniture-set dari produk-produk yang tersedia dan melakukan perbandingan harga dari set yang dibangunnya,</li> <li>15. memasukkan informasi proses produksi menjadi properti dari produk, sehingga konsumen dapat memantau perkembangan proses produksi dari produk yang dipesannya.</li> </ol>

Gambar 11. Matriks pengembangan produk dan pasar



Gambar 12. Struktur rantai pasokan industri kepada pengrajin dan unit usaha koperasi

Purnomo et al. (2011) menyatakan:

“*broker* merupakan konsumen utama bagi produsen [mebel] berskala kecil dan mengambil lebih dari 50% produk [pengrajin] [...] [dan] para *broker* itu dapat dengan mudahnya beralih dari satu produsen ke produsen lain.”

Hubungan *broker*-pengrajin seperti ini seringkali merugikan pengrajin karena *broker* memiliki posisi tawar yang lebih tinggi dalam menentukan harga produsen. Rekomendasi untuk mendekati konsumen akhir melalui saluran *online* dapat meningkatkan posisi tawar pengrajin karena secara tidak langsung dapat mengakses konsumen akhir melalui situs *e-commerce* asosiasi. Keputusan 5 strategi *e-business* mengenai restrukturisasi pasar menjawab pertanyaan penelitian ini melalui pendekatan *countermediation*. Pendekatan *countermediation* dilakukan dengan membangun dan mengelola sendiri sistem *intermediary* (penghubung) oleh asosiasi. Dampak positif dari pendekatan ini adalah asosiasi dapat menggali kekuatan bersama pengrajinnya untuk

melayani konsumen akhir secara langsung, tanpa melalui *broker*, sehingga asosiasi dan pengrajin memiliki keleluasan dalam menentukan harga jual. Melalui pendekatan ini, strategi *e-business* telah menunjukkan keselarasannya dengan misi APKJ, yaitu “pemberdayaan pengrajin kecil agar memiliki posisi tawar”.

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# Domestic market of Jepara's small scale wooden furniture industries

Efi Yulianti Yovi, Dodik Ridho Nurrochmat and Mohammad Sidiq

## Abstract

Jepara is recognized as a major teak furniture producing region in Indonesia. The furniture is mostly produced by small-scale industries destined mainly to fill the domestic market. This study indicates that market structure of raw material is mostly a monopoly or in some cases oligopoly, meaning that the market was getting less competitive. However, the market structure of furniture at showrooms is close to monopolistic competition or sometimes also pure competition. The monopolistic competition is formed if there are several tight market segmentations due to selling

prices, qualities or locations, otherwise the structure is pure competition. The bargaining position of small-scale furniture industries is usually low because of having less competence, limited capital and lack of market information. Supporting policies to develop market information system, strengthen human resources capacity and improve access for capital are primarily important to empower small-scale wooden furniture industries in Jepara.

**Keywords:** *domestic market, Jepara, market structure, small-scale industry*

## Session B1. Design, quality and other technical aspects of wooden furniture manufacturing

### Drying schedules for four wood plantation species for furniture

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Wood drying is a very important process in wood utilization to reduce moisture content and to produce final products with better dimensional stability. Poor drying procedures significantly reduce wood quality and increase production cost due to a high number of rejected products which need to be repaired or replaced.

Currently, wood plantation species that have inferior wood properties are becoming the main timber supply for furniture. This paper discusses a study which aimed to develop the optimum drying schedules of four wood plantation species for furniture: mindi (*Melia azedarach*), mahogany (*Swietenia mahagoni*), teak (*Tectona grandis*) and

trembesi (*Samanea saman*). The results showed that the optimal kiln drying schedule for mindi was 50–80°C in temperature and 22–80% humidity; mahoni at 50–75°C and 28–84%; teak wood at 45–70°C and 23–83%; and trembesi wood was at 40–70°C and 20–83%. The temperature and humidity ranges need to be adjusted for different sizes of timber. These drying schedules can be used as a guidance for drying these timbers and further trials are required prior to their implementation in industry-scale operations.

**Keywords:** *Drying schedule, mindi, mahogany, teak, trembesi, furniture*



# Development of simple and affordable drying chamber for small and medium enterprises' (SMEs) furniture in Jepara

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## Abstract

The furniture industry is one of the “big four” Indonesian exports. Wooden furniture dominates the furniture sector accounting for two-thirds of the total furniture export. The wooden furniture industry is mainly concentrated in Central Java. Jepara is particularly known for its crafted wooden furniture producers that comprise about 15,271 companies dominated by small and medium enterprises (SMEs). As drying chambers to dry wood for furniture production are very expensive, they are mainly owned by larger enterprises and consequently SMEs need to rent the chambers or pay for drying their timber at a very high cost. The Forestry Engineering and Forest Products Processing Center (PUSTEKOLAH) in collaboration with ACIAR Project FST/2006/117 developed an affordable drying chamber as a pilot project that suits SMEs needs. This paper presents the principles of the chamber's design and construction and its suitability for the use of SMEs in Jepara. The results showed that a chamber with a capacity of 8–10 m<sup>3</sup> is affordable and viable to use by SMEs in Jepara. The heat produced from burning wood waste is effectively distributed in a chamber which results in a good quality of dried timber.

**Keywords:** *Drying chamber, small and medium enterprises, affordable*

## Introduction

Jepara is known as the center for teak and mahogany furniture in Indonesia. Wooden furniture products from this area are not only for the domestic market, but also for international markets. Not only fulfilling the furniture standard product in each country but also the special characteristics of handmade carving led Jepara to be one of the most famous wooden furniture producers in Indonesia. There is a long

process from log to furniture component that needs care attention to fulfill product standards.

During furniture manufacturing, wood drying is one critical process affecting furniture quality. As an hygroscopic material, wood is able to absorb and desorb moisture until it is in equilibrium with its surroundings. Drying, which is principally a process of reducing moisture content, causes unequal shrinkage in the wood and can cause damage to the wood if drying occurs too rapidly. Consequently, drying must be controlled to prevent damage to the wood (Glass and Zelinka, 2010).

Wood retains its hygroscopic characteristics after it is put into use. It is then subjected to fluctuating humidity, the dominant factor in determining its equilibrium moisture content (EMC). To minimize the changes in wood moisture content and the wood movement, wood is usually dried to a moisture content that is close to the average EMC conditions to which it will be exposed. These conditions vary for interior uses compared with exterior uses in a given geographic location. The primary reason for drying wood to a moisture content equivalent to its mean EMC under use conditions is to minimize the dimensional changes or movement in the final product (Glass and Zelinka, 2010).

Shrinkage and swelling may occur in wood when the moisture content is changed (Stamm, 1964). Shrinkage occurs as moisture content decreases, while swelling takes place when it increases. Volume change is not equal in all directions, the greatest dimensional change occurs in a direction tangential to the growth rings. Shrinkage from the pith outwards is usually considered less than tangential shrinkage, while longitudinal shrinkage is so slight as to be usually neglected. The longitudinal shrinkage is 0.1–0.3%, in contrast to transverse shrinkage, which

is 2–10%. The shrinkage is often about 5–10% in the tangential direction and about 2–6% in the radial direction (Walker et al., 1993).

In order to improve value added of wooden furniture made by SMEs, wood drying becomes one critical point. With mostly low capital, wood drying is applied traditionally outdoor or using a traditional chamber heated by sawdust. However, almost all traditional drying application results in low quality drying. It not only takes a long time, but the timber is also easily burned as the heat from sawdust is uncontrollable. Some of the enterprises formed groups and merged into the higher industries that will help them with drying facilities. This system works well when the bigger enterprises are kind enough to share the drying facilities. During peak time, the SMEs need to wait to dry their wood. Optionally, the SMEs can use a wood-drying service company that dries wood as requested. Basically, this method is technically viable and affordable for SMEs, however, limited drying service companies and transporting timber from the warehouse to the drying facility add more cost.

A cheap and affordable wood-drying unit is needed to improve wood furniture processing. A drying chamber should be simple and accessible for SMEs. In collaborative research between the Forestry Engineering and Forest Products Processing Center (PUSTEKOLAH, FORDA) and ACIAR Project 2006/117, small, cheap and affordable wood-drying chambers were built as a pilot project for SMEs. This paper observes the applicability of a drying chamber pilot project to improve the wooden furniture quality in Jepara.

### Wood-drying theory

As mentioned before, wood is an hygroscopic material, which will attract and absorb moisture from air depending on the relative humidity (Rh) and temperature of the surroundings. For a stable end product, wood must be dried until the EMC where wood will be installed is reached (Simpson, 1998; Perré, 2001). In fully air-conditioned rooms, for example, the EMC is about 10%, then the wooden product should be dried to about 9% (Basri and Saefudin, 2008). The capability of absorbing and desorbing moisture leads to a moisture content gradient between the inner and outer surfaces. Consequently, uneven moisture content creates

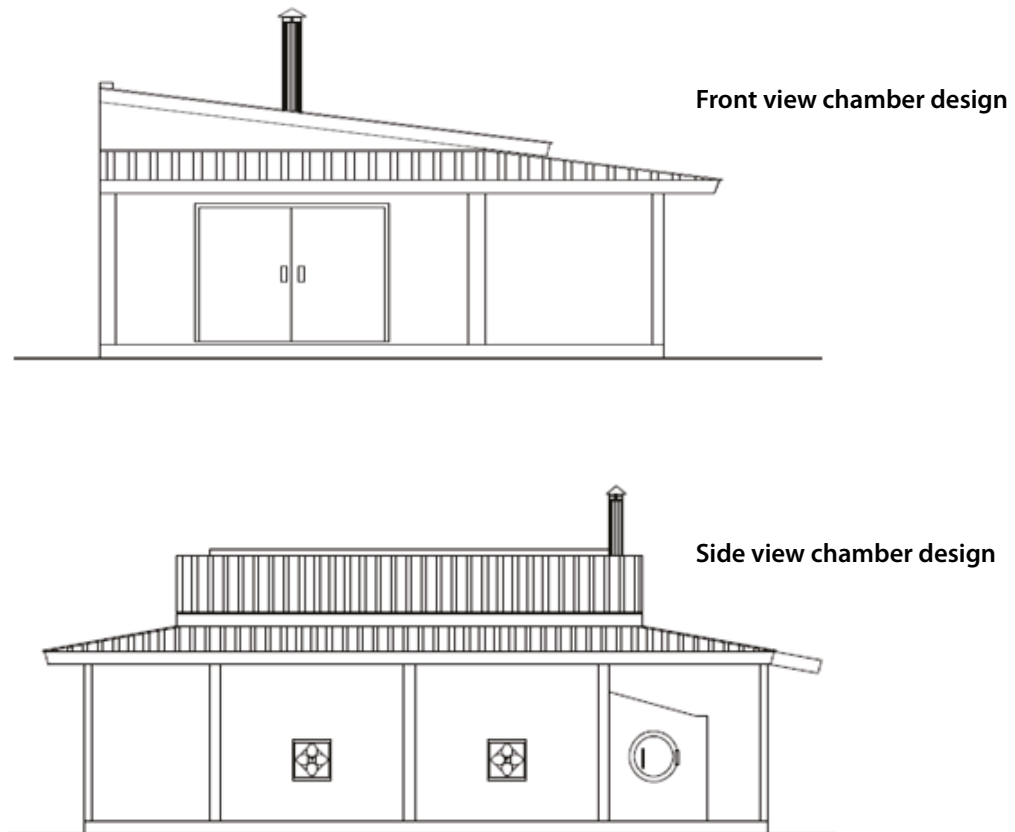
**Table 1. Moisture content for its use**

Moisture Content	Timber Usage
10%	Furniture used indoors, with heating or air conditioning
10 – 9%	Furniture used indoors in continuous heating or air conditioning
9 – 8%	Furniture or wooden craft placed near heat source or air conditioned

cracking of wood. EMC values in an air-conditioned room (Table 1) are lower than EMC in a room without an air conditioner (Budianto, 1996). Drying wood to a very low MC causes partial changes of amorphous regions into crystallites, resulting in a reduction in OH ligands which bind to water molecules (Coto, 2005), so that the wood is very dry and unlikely to absorb water from its surrounding. The research results of Basri et al. (2000) showed the process of water exudation (desorption) in dry wood with high water content would occur above room temperature, while the difference between the EMCs of each wood species mainly occurred in the adsorption process.

EMCs of wood vary most in outdoor conditions. EMCs in United States, for example, range from 3.6% to 20%, while in South Korean, EMC is about 10.1 to 15.1%. As a tropical country with high humidity, Indonesia's EMC is about 13–17.6%, while semi-tropical countries such as Australia range between 8.8 to 15.6% (Simpson, 1998). Hence wooden furniture that is to be exported to specific countries should be adapted to the targeted EMC in the countries, to minimize shrinkage or swelling.

Theoretically, drying is a process of water evaporation from wet ingredients with drying media through the introduction of heat or water movement from a solid material into the free air (Widjanarko et al., 2012). Two important phenomena in the drying process are: heat that is transferred into the media, in this case, wood, and the movement of water mass from drying material into the drying media simultaneously. The rate of evaporation of water from the drying material depends on air velocity, relative humidity and temperature of the drying chamber (Djaeni, 2008). Normal air circulation for drying wood was reported to be 2 m/sec.



**Figure 1. Drying chamber design**

Wood drying can be applied in various methods, using natural or artificial drying methods. Wood dries naturally in outdoor conditions protected from rain. This simple air drying takes a long time and wood is easily attacked by organisms such as fungus and post powder beetle. A simple artificial drying system is the development of a natural drying system that is sealed from outdoor conditions. The heat source is generated from solar heat captured by a collector as well as from the stove/burner in the chamber that can be distributed evenly into the chamber. In the chamber, air circulation is controlled by a fan, both exhaust and blower.

Two parameters in the chamber: temperature and humidity are important to control according to the drying schedule reported. A drying chamber with a stove for wood waste burner is the one developed for SMEs.

#### **Heating stoves system to dry wood**

For a drying chamber pilot project, a size of 6 m (l) x 4 m (w) x 3 m (h) was applied. This drying system was designed for SMEs. Chamber equipment includes a stove for the heat source, smoke exhaust chimney, inhaust fans for the distribution of

the heat, and exhaust fans to draw wet air from the drying chamber. The heat regulator in the drying chamber was a thermostat equipped with a thermocouple. The stove fuel was from wood waste. The heat from the stove was distributed to the chamber by blowers. The heat is then distributed to the entire surface of the wood by the fans. Schematically, the chamber was built as shown in Figure 1. The built drying chamber is shown in Figure 2

### **Chamber specification**

#### **Burner and chimney**

The burner as a heat source is located outside the chamber. To provide the heat, wood waste/branches/roots that are combustible are burned in the burner/heating stove. The burner comprises steel pipes with a diameter of 60 cm, 200 cm in length and 1 cm thick, to distribute the heat that will be blown by the blower fan to all of the chamber area. The steel pipe stove stands on the foot/holder with the angle iron of 70/70 x 7 cm. Smoke from the burner is carried away through a chimney.



Notes: B=burner, D=door to chamber, P=power panel, F=fan

Figure 2. Drying chamber

### Chamber and supporting equipment

A drying chamber with the dimensions 6 x 4 x 3 m, was built in brick and concrete. The floor was cement plastered with a thin roofing. The chamber was equipped with 2 units of 400 watts 24” blower (1 phase), 2 units 400 watts 24” inhaust fan (1 phase) and 2 units of 380 watts 18” exhaust fan (1 phase). The main fan blows hot air from the heated pipe into all the chamber area, while inhaust fans distribute hot air through the well-stacked timber. The exhaust fan balances the chamber by sucking out the wet air from chamber.

In order to see the chamber performance, mahogany and teak wood were tested. During the performance test, cost was calculated on a real time basis. The performance test and cost calculation are presented in Tables 2 and 3.

Table 2 shows that technically the drying chamber worked well. With the capacity of about 2.5 m<sup>3</sup> the teak wood can be dried to about 10% within 3 to 5 days. Basically it is faster than conventional drying for SMEs in Jepara. However, the additional timber to be dried shows a longer drying time. Eight

cubic meters of mahogany planks, for example, take about 13 day to reach 9% mositure content. This shows that the more wood to dry, the longer drying time. In general, the drying time in the pilot project chamber is shorter than conventional drying.

Similarly, the cost calculation in Table 3 shows that drying wood in this chamber is cheaper than in a conventional chamber. The cost ranges between 216,000 IDR to 241,000 IDR per cubic meter, compared with those of 300,000 IDR with a conventional chamber. Traditionally, the unfinished furniture products were kept in the drying chamber with slight heat while waiting for transport to the finished product. This process is not actually drying the furniture product but conditioning to keep the products in dry condition.

### Concluding remarks

The affordable and cheap operation drying chamber was built by PUSTEKOLAH in collaboration with ACIAR Project FST/2006/117in Jepara. The chamber with the capacity of 8–10 m<sup>3</sup> uses wood waste to heat the burner. The heat from the burner was circulated to the chamber evenly by

**Table 2. The performance test results**

Batch No.	Type and Size of Specimen	Volume	Initial Water Level (%)	Final Water Level (%)	Duration (Days)	Temperature (°C)	Quality	Remarks
1.	Perhutani Teak 200 cm x 30 cm x 3 cm 200 cm x 30 cm x 5 cm	2.5 m <sup>3</sup>	30 - 35	10	3	55-60	Good	-
2.	Perhutani Teak 200 cm x 30 cm x 3 cm 200 cm x 30 cm x 5 cm	2.5 m <sup>3</sup>	35	10	5	50-60	Good	Rainy Season
3.	Mahogany 200 cm x 40/30 cm x 3 cm 200 cm x 40 /30 cm x 8 cm 200 cm x 40/30 cm x 4 cm 200 cm x 40/30 cm x 2 cm	8 m <sup>3</sup>	35-40	9	13	55-60	Medium, 5% of 2 cm thick board change shape	Improper stacking. Human error, exhaust fans are rarely turned on. The chamber is damp.
4.	Folding chair MJJ	462 pcs	20 - 25	8	4	40-45	Good	-
5.	Oval ext table and folding chair MJJ	141 pcs	20 - 25	10	4	40-45	Good	-

**Table 3. Estimation of wood drying costs**

No.	Type and Size	Volume	Duration (Days)	Drying Operational Cost (IDR)				
				Firewood	Electricity	Stacking Labor	Cost	
1.	Perhutani Teak 200 cm x 30 cm x 3 cm 200 cm x 30 cm x 5 cm	2.5 m <sup>3</sup>	3	200,000	180,000	80,000	120,000	232,000/m <sup>3</sup>
2.	Perhutani Teak 200 cm x 30 cm x 3 cm 200 cm x 30 cm x 5 cm	2.5 m <sup>3</sup>	4	250,000	113,000	80,000	160,000	241,000/m <sup>3</sup>
3.	Mahogany 200 cm x 40/30 cm x 3 cm 200 cm x 40 /30 cm x 8 cm 200 cm x 40/30 cm x 4 cm 200 cm x 40/30 cm x 2 cm	8 m <sup>3</sup>	12	1,000,000	450,000	80,000	200,000	216,000/m <sup>3</sup>
4.	Folding Chair MJJ	462 pcs	4	900,000	300,000	80,000	160,000	3,117/pcs
5.	Oval table and folding chair MJJ	58 pcs 83 pcs	4	750,000	300,000	80,000	160,000	17,900/table 3,117/chair

blower and inhaust fan. Performance tests show the chamber successfully dries timber in shorter time. Consequently, the drying cost is cheaper than for conventional drying.

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# Durability test of treated mahogany wood against drywood termite

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## Abstract

The knowledge on wood preservation within Small and Medium Enterprises (SMEs) furniture in Jepara is still low. Current wood preservation methods include brushing/spraying organic solvent to protect wooden furniture and smoking. Brushing covers wooden furniture surfaces with organic solvent, while smoking is implemented by stacking wood on the top of a stove fired by sawdust. Polyurethane plastic covers the planks to avoid heat loss and keep the heat inside. This paper presents a study which investigated the effectiveness of the current wood preservation methods applied in Jepara in comparison with the boron treatment method. Boron treatment includes cold soaking of timber and 2 hours steaming prior to soaking. Preservative-treated mahogany (*Swietenia* sp.) wood was tested against drywood termite according to the Indonesian Standard for material testing (SNI 01-7207-2006). The results revealed that the current preservative treatments applied were not effective against drywood termite. Weight-lost percentage of brushed and smoked wood samples were 5.14% and 7.26%, respectively, and were classified as durability class III, while the samples soaked in boron lost only 1.67% from initial weight and were classified as durability class I. The final conclusion was that brushing and smoking are not effective against drywood termite, while soaking in boron solution can significantly enhance mahogany's durability.

**Keywords:** *Preservation, brushing, smoking, boron treatment, drywood termite*

## Introduction

Wood is an organic material yielded by trees, structured by cellulose fibers embedded in a matrix of lignin. As a lignocellulosic material, wood can be degraded by non-living or living agents and sometimes by both at the same time (Eaton and

Hale, 1992). Non-living agents include physical and chemical agents that affect one or more properties of wood. There are variety living agents that degrade wood, including: bacteria, fungi, insects, marine borers and some vertebrates. Nearly all of these organisms have four basic requirements: adequate moisture, oxygen, adequate temperature and a food source (Morrell, 2011).

Preventing biological degradation of wood usually involves limiting one or more of the above factors, such as kept wood dry and off the ground to limit moisture uptake in the wood. Where it is not possible to keep wood dry, the wood must either be made unrecognizable to decay organisms or impregnated with chemicals that are toxic or repellent to wood-destroying organisms to limit the food source for organisms. The process of impregnating toxic chemicals into the wood is known as wood preservation or protection.

The principal of timber treatment is to get toxic chemicals sufficiently deep into the wood to afford long-term protection. The selection of treatment is determined by both technical and economical aspects. Preservation process can be grouped into two: pressure and non-pressure processes. Pressure processes are those in which the treatments is carried out in closed cylinders with applied pressure and/or vacuum. The pressure process results in deeper and more uniform penetration and a higher absorption of preservative can be achieved. However, the equipment and energy costs for pressure process are relatively high (Walker, 1993). Non-pressure processes include brushing or spraying, dipping, soaking, steeping or by means of hot and cold bath. Non-pressure processes are relatively cheap and affordable for SMEs, however, the toxic chemicals protect only on the wood surfaces and do not penetrate into the timber.

Traditionally, various methods have been applied to protect timber, such as mud and river water, heat and smoking treatments. These methods are relatively cheap and easy to operate, however the level of protection cannot be controlled. The mud or river treatments include soaking wood in the mud or flowing river. The principal idea is to reduce starch content in lignocellulose material (Kumar et al., 1994). Heat and smoking treatments applied by allowing heat to the wood that changing sugar content in wood and smoking to cover up wood surfaces with phenolic contents that available in the burning wood smoke. As there is no cost to set the preservation system, this traditional way of protecting timber has been widely applied in SMEs for furniture. The effectiveness of the traditional method to protect wood has not been studied. This paper studies the effectiveness of preservative treatments applied in wooden furniture SMEs

in Jepara. The wood species studied is mahogany wood (*Swietenia* sp.) that has been preserved by two methods available in Jepara region: brushing and smoking (Figure 1). The specimens were tested against drywood termite (*Cryptotermes cynocephalus*Light.).

### Materials and methods

Thirty samples of mahogany wood (*Swietenia* sp.) were collected from two preservation methods available: brushing and smoking. All samples were of the dimension of 5 x 2.5 x 2.5 cm according to Indonesian Standard (SNI) 01-7207-2006 for wood and wooden products test against organism. Open-end glasses were set up on the top of the wood surface to allow 50 drywood termites to be spread on the wood surfaces. After 12 weeks, wood samples were weighed and compared before and after the



Figure 1. Brushing method on furniture component (A) and smoking method on sawn timber (B)



**Table 1. Wood durability class against drywood termite based on the weight loss**

Class	Durability	Weight loss (%)
I	Very durable	< 2.0
II	Durable	2.0 – 4.4
III	Moderately durable	4.4 – 8.2
IV	Non-durable	8.2 – 28.1
V	Susceptible	> 28.1

Source: SNI 01-7207-2006

termite test. Percentage weight loss and termite mortality were counted and analysed according to the Indonesian Standard (SNI) 01-7207-2006 and classified as shown in Table 1. Termite attack levels were observed according to the percentage of termite attack based on the visual observation (Table 2).

Boron-treated samples were prepared for comparison with those method available in SMEs. Mahogany wood was grouped into two, cold-soak and steamed-soak, treatments. For the first group, mahogany woods were soaked in cold 7% boron solution for 2 days, while for the second group mahogany batches were steamed for 2 hours prior to soaking. Treated samples were similarly sized as for the drywood termite test mentioned before.

### Results and discussion

The drywood termite test after 12 weeks result is shown in Table 3.

Table 3 shows that untreated (control) mahogany wood is easily attacked by drywood termite, followed by smoked and brushing timber. Weight-loss percentage of untreated mahogany is almost 10% and classified as non-durable, while smoked and brushed mahagonys' weight losses are about 7.26% and 5.14%, and classified as moderately durable. The boron treated mahogany wood shows less weight loss (3.22% and 1.67%) than smoking and brushing treatments, and classified as class durability I and II against drywood termite.

**Table 3. Wood durability against drywood termite**

No.	Treatments	Retention (kg/m <sup>3</sup> )	Weight loss (%)	Durability class	Mortality (%)	Level of termite attack	
						N	T
1.	Control	-	9.99	IV	49.6	70	C
2.	Smoking	-	7.26	III	80.8	70	C
3.	Brushing	-	5.14	III	83.2	70	C
4.	Cold soaking	6.6	3.22	II	100	40	B
5.	Steam and soaking	8.8	1.67	I	100	40	B

**Table 2. Levels of termite attack**

Level	Durability	Point
A	Sound, no attack (0%)	0
B	Bite trace (1 – 15%)	40
C	Mild attack (15 – 35%)	70
D	Serious attack (35 – 50%)	90
E	Severe (>50%)	100

Source: SNI 01-7207-2006

Boron-treated mahogany performs differently according to the boron retention. Steam-and cold-soaked mahogany gained average retention of 8.8 kg/m<sup>3</sup> and weight loss of 1.67%. The cold soaked mahogany's wood had an average retention of 6.6 kg/m<sup>3</sup> and weight loss of 3.22%. It indicates greater boron retention in the wood and better durability of wood against drywood termite.

The level of termite attack shows that the smoking and brushing method were classified as C, with the mortality of 70. Boron-treated wood reached a lower termite attack level to B with a termite mortality of 40. This indicates that smoking and brushing treatments are not effective against drywood termite. Boron-treated samples were more durable than smoked and brushed samples (Figure 2).

The boron compounds found in boric acid solution are effective against drywood termite. Borates (borax, boric acid, disodium octaborate tetrahydrate (DOT) and sodium borate (SBX) are inorganic boron-based biocides, generally formulated as a mixture of borax and boric acid into a waterborne system. Borates have extremely low mammalian toxicity and a long history of good efficacy against wood-destroying fungi and insects (Schultz and Nicholas, 2011). Borates are not corrosive to metal fasteners and colorless so that wood surfaces can be directly painted or stained once dried. However, borates are easily leached in outdoor exposure, consequently the use for outdoor furniture is not recommended.



Figure 2. Drywood termite attacked samples

## Conclusion

1. Current preservative treatments applied by wooden furniture SMEs are not effective against drywood termite.
2. Boron treatment by cold-soaking method is recommended for preservative treatment of furniture components for SMEs in Jepara.

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## Increased value remnant-pruned teak wood products

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Teak wood has been used since the Dutch era, wood-use was widespread from India, Myanmar, Laos, Cambodia, Thailand, Indonesia to Java. Teak wood has a bole height (TBBC) that is quite large and functional for wood furniture. A silvicultural activity used to enhance the value of teak is pruning.

Pruning is the activity of pruning branches—branches, especially of young trees, grow on the main stem. The goal is to improve bole height and reduce the knots of the main stem. Pruning waste

wood is usually only used as firewood or to produce low-value products. Used as firewood increases carbon emissions contributing to climate change. On the other hand, pruned waste wood can be used to produce wood products that have a high value, such as decorated picture frames or other products that are capable of storing carbon.

**Keywords:** *teak wood, pruning, wood pruning remnant, value-added products*

## Session B2. Certification and verification of timber and other forest products

# Opportunity of rattan certification to tap new markets and give additional value to rattan finished product

Achdiawan, Caroko, Tarigan

Indonesia is the biggest raw rattan producer globally. Raw rattan in Indonesia mainly comes from Sulawesi for big diameters and Kalimantan for small diameters. The biggest raw rattan supplier does not necessarily mean the most important raw rattan furniture and handicraft exporter. China, Thailand and Vietnam are strong competitors of Indonesian rattan furniture and handicrafts in the global market. In order to explore new markets, the rattan industry is applying a strategy of collaborating up along the value chain by tapping the green market. The Forest Stewardship Council (FSC) certification scheme has been developed and applied in Laos. In Indonesia,

the Certification Scheme of *Lembaga Ekolabel Indonesia* (LEI) and Participatory Guarantee Systems (PGS) are developing their standard to be introduced to rattan furniture and handicraft markets and industry. Rattan handicraft products have a greater potential market than rattan furniture, domestically. Simple and genuine traditional design is preferred by the consumer compared to sophisticated and modern design.

**Keywords:** *green market, rattan, certification, participatory guarantee systems*

# Establishing opportunity for REDD plus application on Mount Gede Pangrango National Park as the core zone of the Cibodas Biosphere Reserve, Indonesia

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One of the natural forests that have become the core zone of Cibodas Biosphere Reserve is Mount Gede Pangrango National Park (MGPNP) with its relatively good ecosystem condition. It has been a world-admitted (UNESCO) reserve site since 1977. This site has an important role for conserving biodiversity and ecosystem services (i.e., carbon stock). Therefore, REDD plus application regarding its function is a new opportunity to utilize them sustainably. It is known that there are approximately 844 plant species spread across the subalpine, montane and submontane zone. This research shows that MGPNP could stock millions of tons of carbon by using four allometric equations on the montane zone with a maximum value of 6.46 (Brown/Br), 5.55 (Ketterings/Kt), 7.07 (Chave/Cv) and 5.05

(Basuki/Bs), while the minimum value on the subalpine zone is 0.51 (Br), 0.48 (Kt), 0.65 (Cv) and 0.49 (Bs). Some permanent plots are highly recommended for initiating demonstration activities which can be used for monitoring biodiversity and carbon stock periodically. In addition, the management of an *in-situ* conservation area that provides a space for optimum regeneration of native species, together with the strengthening of its local people and stakeholder's capacity, will keep the mitigation function through carbon stock of forest stand.

**Keywords:** *carbon stock, REDD plus, Mount Gede Pangrango National Park, Cibodas Biosphere Reserve*

# Cibodas Botanic Garden's timber tree collection and their use as furniture material

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## Abstract

A few timber tree species, especially species from montane forest, were less known when they were compared with the other famous timber species used as furniture material such teak, mahogany, sengon, etc. Cibodas Botanic Garden (CBG), as an *ex-situ* conservation institution, forms a living collection of montane forest such climbers, herbs, shrubs and trees. CBG consist at least 30 families and 53 species of tree life forms which are native to Indonesia and they have a specific purpose as timber products. The aim of this study was to determine the timber tree species in montane forest that can produce furniture material based on the level of timber natural durability rating class, timber strength class, the level of ease of propagating the species and their function for ecosystem services. Literature studies were used to this study and seven timber tree species can be recommended as furniture material.

**Keywords:** *timber tree species, montane forest, furniture material*

## Introduction

Wood demands as furniture material increases from time to time. A balance between wood demands and wood supply is needed. Some very popular species as furniture material such as teak, mahogany and sengon are reported to be decreasing. The reasons for decreasing wood supply from the popular species were due to degraded areas converted from forest into housing, transportation areas or farming systems. We should find other species to fulfill the wood demand. Montane forest was used for more investigation of forest areas of find alternative species as furniture material. Prosea reported and classified the native Indonesia timber tree species to 51 genera to major-commercial timbers, 62 genera to minor-commercial timbers and lesser-known timbers for

309 genera (Soerianegara and Lemmens, 1994; Lemmens et al., 1995; Sosef et al., 1998). Some timber tree species in montane forest were predicted have future prospects as furniture material.

CBG as an *ex-situ* conservation area for montane forest species has a living collection of Indonesian native species and exotic species. Lately, the development of Indonesian native species was more encouraged than that of exotic species. The main reason was to conserve the genetic resources of Indonesian native species from endangered condition and to control the development of exotic species into invasive species. The requirement for furniture material were level of timber natural durability rating, level of timber strength class, decorative texture ([www.binaukm.com](http://www.binaukm.com)), the ease of species propagation and resistance to pest and disease. The aim of this study was to determine the timber tree species in montane forest that have a prospect as furniture material based on the timber natural durability rating class, timber strength class, the ease of propagating the species and their function for ecosystem services.

## Methods

Literature studies were used to determine the timber natural durability rating class and timber strength class of timber species of montane forest and to recommend some timber tree species in montane forest to cultivate based on their level of ease of propagation. This study was used catalog literature to find the origin of each species in the garden (Widyatmoko et al., 2010) and field study to cross-check the plants in the garden. Information was taken from Plant Resources of South East Asia (Soerianegara and Lemmens, 1994; Lemmens et al., 1995; Sosef et al., 1998) on timber classification (major commercial timbers, minor commercial timbers and lesser-known timbers), the ease level of

plant propagation, ecosystem services and prospect for development the species in the future.

The parameters of this study were level of timber natural durability rating, level of timber strength class, the ease of species propagation, value for ecosystem services and high prospect to develop in the future. This study was conducted in CBG's library for 2 months, from December 2012 to February 2013. Data analysis was used the description method to gain recommendations for some timber tree species of montane forest. This recommendations could give suggestions for farmers to plant montane forest species as furniture material in the future.

## Result and Discussion

CBG was established by J. E. Teijsmann in 1852. It is located on the slope of Mount Gede Pangrango, West Java, Indonesia, covering an area of 85 ha, at an altitude of 1,300–1,425 m above sea level. The data was compiled based on the garden collections and it comprised 163 families, 623 genera, 1,198 species and 6,622 specimens (Widyatmoko et al. 2010). The specimens included some life forms such as climbers, herbs, shrubs and trees. The majority of timber trees species that grow in CBG are lesser known species (Sosef et al., 1998), but we needed more literature study on the future prospects of the species based on their ease of propagation and other uses.

This literature study found the timber natural durability rating and timber strength class of timber tree species in CBG. The furniture market required the level of timber durability rating to determine its resistance of termite or insect attacks. Besides the level of timber strength class could be a good reference for the furniture market to analyze the method of wood maintenance. Table 1 shows the timber tree species that grow in CBG and their opportunities as furniture material according to timber natural durability rating and timber strength class.

Table 1 shows that from 30 families and 53 species of timber tree in CBG only 15 species are recommended as furniture material. The 15 species were recommended because their level of timber natural durability rating was I–III ([www.forda-mof.org](http://www.forda-mof.org)). They were *Casuarina junghuhniana*, *Garcinia picrorhiza*, *Vatica rassak*, *Diospyros celebica*, *Quercus*

*acuminatissima*, *Altingia excelsa*, *Neolitsea cassia*, *Magnolia blumei*, *Magnolia champaca*, *Pterocarpus indicus*, *Artocarpus altilis*, *Artocarpus elasticus*, *Eucalyptus deglupta*, *Eucalyptus urophylla* and *Mimusops elengi*. According to Prosea Timber Trees, *V. rassak*, *A. excelsa*, *P. indicus*, *E. deglupta*, and *E. urophylla* are included in major commercial timbers. *D. celebica*, *Q. acuminatissima*, *A. altilis* and *A. elasticus* are included in minor commercial timbers. The lesser-known timbers were *C. junghuhniana*, *G. picrorhiza*, *N. cassia*, *M. blumei*, *M. champaca* and *M. elengi*. The 15 species will be discussed in more detail about the ease of propagation and ecosystem services. Table 2 shows the ease of plant propagation and the opportunities of ecosystem services of the selected 15 species.

Table 2 shows that there were 2 species (*G. picrorhiza* and *P. indicus*) that are easier to propagate than the other species. *G. picrorhiza* and *P. indicus* are very easy to propagate using seed so vegetative propagation is not needed. It means that no more cost will be incurred in developing this species. For ecosystem services, seven species were recommended. They were *C. junghuhniana*, *G. picrorhiza*, *A. excelsa*, *N. cassia*, *P. indicus*, *A. altilis* and *A. elasticus*. They were fast-growing species and can be planted in degraded areas. The other species that were slow-growing species also have ecosystem services but they must be planted into an intercropping system with fast-growing species.

*E. deglupta* and *E. urophylla* were very sensitive to fire, which means these species are not recommended as ecosystem services species. *M. elengi*, needs fertile soil to grow. Many sites, such as degraded areas, have poor quality soil, so this species was not recommended as ecosystem services species. The selected species for future prospects for furniture material and ecosystem services are *C. junghuhniana*, *G. picrorhiza*, *A. excelsa*, *N. cassia*, *P. indicus*, *A. altilis* and *A. elasticus*. Some reasons to select the seven species are because they have a good level of timber natural durability rating, are fast-growing species and are easy to propagate.

## Conclusion

CBG collection comprises 163 families, 623 genera, 1,198 species and 6,622 specimens, but only 30 families and 53 species of timber tree can be furniture material. The 53 species were assessed for the timber natural durability rating and timber strength

class to fulfill the requirement as furniture material. There were only 15 species recommended as furniture material. The 15 selected species were also assessed for the ease of propagation, the ecosystem services and the future prospect of the species to be a good furniture material. From the selected 15 species, seven species (*Casuarina junghuhniana*, *Garcinia picrorhiza*, *Altingia excelsa*, *Neolitsea cassia*, *Pterocarpus indicus*, *Artocarpus altilis* and *Artocarpus elasticus*) are recommended as furniture material.

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**Table 1. Timber Tree Collection in Cibodas Botanical Garden and their opportunities to be furniture material**

No.	Family Name	Species Name	Origin	Timber Natural Durability Rating	Timber Strength Class		
1.	Araucariaceae	<i>Agathis beccarii</i>	Borneo	IV	III		
		<i>Agathis borneensis</i>	Moluccas Island				
2.	Casuarinaceae	<i>Casuarina junghuhniana</i>	West Java	II	I-II		
3.	Pinaceae	<i>Pinus merkusii</i>	Sumatra	IV	II		
4.	Podocarpaceae	<i>Dacrycarpus imbricatus</i>	West Java, North Sumatra and Jambi	IV	II-IV		
		<i>Nageia wallichiana</i>	Bengkulu and Jambi	V	IV-V		
		<i>Podocarpus neriifolius</i>	Sumatra Utara, Riau dan Jawa Barat	IV	II-III		
5.	Sapindaceae	<i>Acer laurinum</i>	Central Java, West Java, Jambi, Aceh.	IV-V	III		
6.	Flacourtiaceae	<i>Ryparosa javanica</i>	Jambi	III	I-III		
7.	Alangiaceae	<i>Alangium rotundifolium</i>	West Java	V	V		
8.	Anacardiaceae	<i>Mangifera odorata</i>	Java	IV	II-III		
		<i>Spondias novoguineensis</i>	Papua	V	IV-V		
9.	Apocynaceae	<i>Alstonia scholaris</i>	Central Aceh	III-IV	IV-V		
10.	Araliaceae	<i>Macropanax dispernum</i>	Cibodas	IV	III-IV		
11.	Bignoniaceae	<i>Radermachera gigantea</i>	Java	III	II-III		
12.	Bombacaceae	<i>Durio kutejensis</i>	Borneo	IV-V	II-III		
		<i>Durio zibethinus</i>	Bengkulu				
13.	Burseraceae	<i>Canarium hirsutum</i>	Central Celebes	III	II-III		
14.	Clusiaceae	<i>Garcinia picrorhiza</i>	Jambi	II	I-II		
15.	Combretaceae	<i>Terminalia calamansanay</i>	South Celebes	IV-V	IV-V		
16.	Dipterocarpaceae	<i>Vatica rassak</i>	South East Aceh	I	I		
17.	Ebenaceae	<i>Diospyros celebica</i>	Celebes	I	I		
18.	Elaeocarpaceae	<i>Elaeocarpus angustifolius</i>	Cibodas	V	V		
		<i>Elaeocarpus submonoceras</i>					
		<i>Sloanea sigun</i>				Java	V
19.	Euphorbiaceae	<i>Baccaurea reticulata</i>	Borneo	-	II-III		
20.	Fagaceae	<i>Castanopsis argentea</i>	Cibodas Java and Sumatra	III	II		
		<i>Castanopsis javanica</i>	Java, Sumatra				
		<i>Castanopsis tungurrut</i>	Cibodas				
		<i>Lithocarpus indutus</i>	Cibodas			-	V
		<i>Quercus acuminatissima</i>	West Java			II-III	I-II
21.	Hamamelidiaceae	<i>Altingia excelsa</i>	South East Asia	II-III	II		

No.	Family Name	Species Name	Origin	Timber Natural Durability Rating	Timber Strength Class
22.	Lauraceae	<i>Cinnamomum burmanii</i>	Java	III	II–III
		<i>Cinnamomum sintok</i>	Central Java		
		<i>Litsea cubeba</i>	West Java	III–V	II–IV
		<i>Neolitsea cassia</i>	Jambi, West Java	II	III
		<i>Persea rimosa</i>	Bengkulu, West Java	-	II
23.	Magnoliaceae	<i>Magnolia blumei</i>	Jambi, West Java	II	III–IV
		<i>Magnolia champaca</i>	Java, Lampung		
24.	Meliaceae	<i>Toona sureni</i>	Jambi, West Java	III–IV	III–IV
25.	Fabaceae	<i>Parkia sumatrana</i>	West Borneo	V	III–IV
		<i>Pithecellobium montanum</i>	West Java	V	V
		<i>Ormosia penangensis</i>	West Java	II–IV	II–III
		<i>Pterocarpus indicus</i>	Mollucas	II	II
26.	Moraceae	<i>Artocarpus altilis</i>	Papua, Manokwari	II–III	II–III
		<i>Artocarpus elasticus</i>	West Borneo		
		<i>Ficus benjamina</i>	Tropical Asia	V	V
		<i>Ficus variegata</i>	Java		
27.	Myrtaceae	<i>Eucalyptus deglupta</i>	North Celebes	II–III	I–II
		<i>Eucalyptus urophylla</i>	Central Celebes		
28.	Sapotaceae	<i>Mimusops elengi</i>	Jambi	I–II	I
29.	Sterculiaceae	<i>Pterospermum javanicum</i>	Java, Aceh, Jambi	IV	II–III
30.	Theaceae	<i>Schima walichii</i>	Bangka Belitung	III	II

Sources: Lemmens et al. 1995; Pitopang et al 2008; Soerianegara and Lemmens 1994; Sosef et al. 1998; Widyatmoko et al. 2010; Wijayantrie 2008; www.dephut.go.id; www.forda-mof.org

**Table 2. The plant propagation level and ecosystem services of 15 selected timber tree species and the future prospect to develop as furniture material.**

No.	Species Name	Plant Propagation and Ecosystem Services	Future Prospect for Furniture Material
1.	<i>Casuarina junghuhniana</i>	It is usually propagated by seed although cuttings are increasingly used. It still needs study to gain higher seed germination than 20-60%. It is often found growing gregariously or even in pure stand, commonly along river or on rocky locations.	This species seems to have economic potential as a fast-growing timber. The wood is used for house building under cover.
2.	<i>Garcinia picrorhiza</i>	It can be propagated by seed and vegetatively. Many germination trials were successful in many sites. It generally occurs in well-drained habitats to swamp forest.	The timber of this species is very hard and durable with potential for specialty use as furniture material.
3.	<i>Vatica rassak</i>	Propagation is from fresh seed with high germination. Seeds lose their viability within a few weeks. Resak is too small and growth rates are too low to justify silvicultural investment.	This timber a medium weight to heavy and hard. Resak is usually classified as moderately durable to very durable. Less heavy resak timber is also used for furniture, packaging and pallets.
4.	<i>Diospyros celebica</i>	Propagation is from seed and vegetative propagation (air layering, budding, and root sucker). Need more specific treatment to gain high seed germination. The trees grow slowly and it takes a long time to produce sufficient amount of heartwood.	The timber, called fancy wood, is reported to be the most valuable timber species in Indonesia. It can be used for furniture, cabinet work, interior fittings, fans, decorative articles, etc. It can be developed as fruit tree as it has an edible fruit.
5.	<i>Quercus acuminatissima</i>	Seed propagation only. It is difficult to regenerate in natural habitat. The trees are comparatively slow growing, and the timber is often refractory in drying and working. However, it is considered as promising in sustainably managed in montane forests.	The tree is comparatively slow growing but it is considered as promising in sustainably managed montane forest. The timber is often refractory in drying and working.
6.	<i>Altingia excels</i>	Only using seed propagation is recommended for Rasamala. The growth of seedlings is very slow for the first years, but is rapid later. Rasamala occurs on rich, well-drained volcanic soils or overlying sedimentary rocks.	Rasamala is a medium-weight hardwood. It is classified as moderately durable to very durable wood. It can be recommended for furniture material.
7.	<i>Neolitsea cassia</i>	It can be propagated by seed. The seed will germinate in 30-170 days. It occurs along sandy and rocky coasts. So this species can be planted as conservation species as well.	The wood is medium strength, hard and easy to saw. The wood is moderately durable to durable under cover and non-durable in contact with the ground. Utilization of this species is very limited while high prospect to develop as furniture material.

No.	Species Name	Plant Propagation and Ecosystem Services	Future Prospect for Furniture Material
8.	<i>Magnolia blumei</i>	It can be propagated by seed. No vegetative propagation reported yet. The habitat of magnolia is usually well-drained but occasionally waterlogged and swampy. The risk of magnolia genetic erosion is determined by the extent of deforestation.	The wood of magnolia is used for general construction under cover, interior finish, furniture, mouldings, sporting goods, etc. The wood air seasons to moderately soft to moderately hard. Unlikely the wood will increase in the future.
9.	<i>Magnolia champaca</i>		
10.	<i>Pterocarpus indicus</i>	It is easily propagated by seed. This species is a nitrogen-fixing tree and demands light. <i>P. indicus</i> thrives best on moist sandy loam and it is able to grow in a wide range of habitats and soil conditions.	The wood being generally reddish and figured is ranked among the finest for furniture, paneling, musical instrument, high-grade cabinet work. It is good resistance to marine borer attacks.
11.	<i>Artocarpus altilis</i>	Seed propagation only. No vegetative propagation report yet. About 85% of fresh seed germinates. Artocarpus species are potentially economically important for use in timber plantations because they are fast growing and the wood can be used for various purposes.	It is potentially economically important for use in timber plantation. The wood is potentially used for light construction but it still needs research. In the future, the timber could be used for light construction like furniture.
12.	<i>Artocarpus elasticus</i>		
13.	<i>Eucalyptus deglupta</i>	Eucalypts can be propagated easily from seed and sometimes from cuttings. These species do not withstand prolonged flooding and are highly sensitive to fires. They require full overhead light for development.	The wood is moderate durability and moderate resistance to insect attacks. It is suitable for light and heavy construction (doors, window frames, interior finish and light or heavy duty flooring). It is recommended for furniture material.
14.	<i>Eucalyptus urophylla</i>		
15.	<i>Mimusops elengi</i>	It can be propagated by seed and cuttings. Seed can be stored up to 9 months. It thrives in areas with prehumid or slightly seasonal rainfall type. It needs a fertile soil.	It has superior wood quality and it has good potential for increased utilization in suitable silviculture schemes.

Sources: Lemmens et al., 1995; Soerianegara and Lemmens, 1994; Sosef et al., 1998.

## Facing the competition: smallholder teak producers in Java, Indonesia

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### Abstract

Smallholder farmers managing their own teak production system typically lack established marketing strategies and are unaware of the underlying competition. The study investigates the market characteristics, value chains and factors that force small-scale teak producers to compete in the lesser-explored local teak market in Indonesia. This situation is representative of the teak producers in Java, Indonesia, who are becoming more important due to the decline of teak production from state-owned plantations. At the macro level, smallholder teak producers irrefutably compete with those well-established, state-owned forest enterprises. However, farmers face barriers in competing in the smallholder teak market, which includes financial resources, tree production and market knowledge; all of which bear on product quantity and quality. Furthermore, farmers must deal with the overwhelming bargaining and profit-eroding power of buyers. These impediments contribute to the absence of an effective smallholder marketing strategy. The study identified opportunities, such as building strategies to face the furniture industry, and approaches for improving the efficiency, competitiveness and the income of farmers linked to smallholder teak value chain.

*Keywords: teak, smallholder, strategy, competition, marketing*

### Introduction

The area of planted teak forests is estimated to be 4,346 million ha, of which 83% is in Asia (Kollert and Cherubini, 2012). In Indonesia, most teak plantations are on Java, where the largest grower, Perum Perhutani, a state-owned forest enterprise, manages 2,442,101 ha of teak plantation (Perhutani, 2010).

In addition, there are approximately 444,000 ha of smallholder plantation in Java that primarily produce teak and 800,000 ha of smallholder plantation in other parts of Indonesia where teak is one component (Nawir et al., 2007). Smallholding plantations rarely use improved germplasm or benefit from silvicultural management such as fertilizer application, weeding, thinning and pruning. Smallholders' teak is different from long-rotation industrial plantations that benefit from professional management. Smallholders' logs are shorter, have smaller diameter, less clear wood, more knots and obtain lower prices (Roshetko and Manurung, 2009). Despite these shortcomings, smallholding teak plantations are an important source of wood for many teak manufacturers and retailers in Indonesia.

What happens to the teak between producer, processor and consumer is frequently unclear. Producers may have difficulties in addressing who are the users of their teak, who are their competitors, and what strategy should be pursued to obtain the highest price. Other issues also exist, such as who are the end-consumers and what form of the product creates high demand. These questions are important indicators relevant to smallholders when initiating a marketing strategy.

To fully engage in market opportunities it is imperative for smallholders to understand their target market and develop active marketing strategies. Key factors for consideration are negligence in smallholders' teak management that limits the teak's potential value, the barriers faced by new market participants, the bargaining power of buyers (i.e., traders or collectors), and competition among smallholding teak producers.

## Methods

### Sampling and data collection

The research methodology integrated both secondary and primary data. Secondary information regarding timber harvesting, permits and smallholder teak log inventory and distribution was gathered from the local forest and estate crop agency. Primary data was collected using semi-structured questionnaires, validated with in-depth interviews and focus group discussions to identify smallholder teak market actors, their marketing practices and market access. Surveys were carried out in 37 hamlets in Gunung Kidul representing the seven sub-districts of Semin, Nglipar, Karangmojo, Paliyan, Semanu, Purwosari and Tepus (Figure 1).

Rapid market appraisal (RMA), which is an iterative process and interactive research methodology used to better understand complex market systems in a short time (ILO, 2000; Ostertag et al., 2007; Budidarsono et al., 2009), was used to identify and assess the problems and opportunities related to the smallholding teak market system, how the teak flows from production to consumption, and to understand how the teak commodity system is organized, operates and performs. To identify existing actors

involved in the smallholding teak trade, a snowball sampling method was used, which relies on referrals from initial subjects to generate additional subjects. The direction of the snowballing approach was from producers to mills. Farmers and intermediaries provided information on marketing cost and role in transactions, including method, price negotiations and payment. In order to analyze marketing margin and income distribution, the intermediaries were asked about buying and selling prices, and marketing costs during the survey. Because information on marketing was collected from different participants at different points of time, marketing margins analyzed in this study are lagged margins, which were determined by analyzing the difference between the price received by a seller at a particular stage of marketing and the price paid at the preceding stage of marketing.

The households and teak producer surveys were carried out in 37 hamlets in Gunung Kidul, a district within Yogyakarta province, Indonesia, representing seven sub-districts, namely Semin, Nglipar, Karangmojo, Paliyan, Semanu, Purwosari and Tepus. The survey of 275 households used a stratified purposive sampling method to ensure



Figure 1. Map of Gunung Kidul district and subdistricts.

that smallholders were included from various regions. Determinant factors used were: (1) type of topography, (2) geographically representative, (3) land fertility, (4) human population density, (5) community forest area, (6) existing similar research projects and (7) inputs from the district government.

Descriptive statistics were employed to summarize the data on smallholder characteristics and teak harvesting. Triangulation was conducted to verify information on teak value chains and marketing practices for trustworthiness and dependability (Seale, 1999; Mishler, 2000; Stenbacka, 2001; Davis and Dodd, 2002) among the samples (Bashir et al., 2008; Simon, 2011).

## Results and discussions

### Characteristics of the households and smallholding teak producers

Smallholder teak plantation is the dominant forest cover in Gunung Kidul. Total forest cover in the area is over 42,000 hectares or about 28.5 % of the total district land area (Rohadi et al. 2012). More than 29,000 hectares, 69% of these forest areas, is smallholder teak farms (BPS Gunung Kidul, 2008). Teak is planted in most of smallholders land use systems, most commonly: (1) kitren, a rainfed smallholder woodlot system where the main objective is teak production; (2) tegalan, a rainfed farming system that produces both teak and agriculture crops; (3) pekarangan or home gardens; and (4) as border planting of paddy fields.

Ten percent (10%) of farmers' land is allocated kitren where teak is the main species. Teak

is prominent in other land use systems and accounts for 56% of on-farm trees. The economic contribution of teak sales to total household income averaged 11.6% (between 2007 and 2008). Teak farmers in Gunung Kidul considered teak plantations as their financial reserve of last resort, maintained until all other disposable assets (motorcycles, electronic devices, jewelry and livestock) had been sold. For some of Indonesian ethnic groups, especially the Javanese people, teak has become an important part of their culture and is considered more desirable than other wood species or agricultural crops (Muhtaman et al., 2006). Roughly 80% of the respondents harvested their teak when faced with significant financial needs, such as weddings, school fees, medical expenses or social/cultural commitments. Only 14% of respondents harvested trees based on economic maturity.

### Marketing channel and role of market functionaries

Farmers, intermediaries such as farmer-collectors and large-scale traders, and processors are the major functionaries in the smallholder teak marketing system in the study area. Intermediaries sell teak supplied by farmers to large-scale wood processors and furniture manufacturers in cities where advanced wood processing facilities are located, such as Yogyakarta and Jepara, in Central Java. Some enterprising farmers, with relatively high income and some knowledge about trading buy teak from farmers and supply it to the large-scale traders based in cities. This study calls such individuals farmer-collectors.

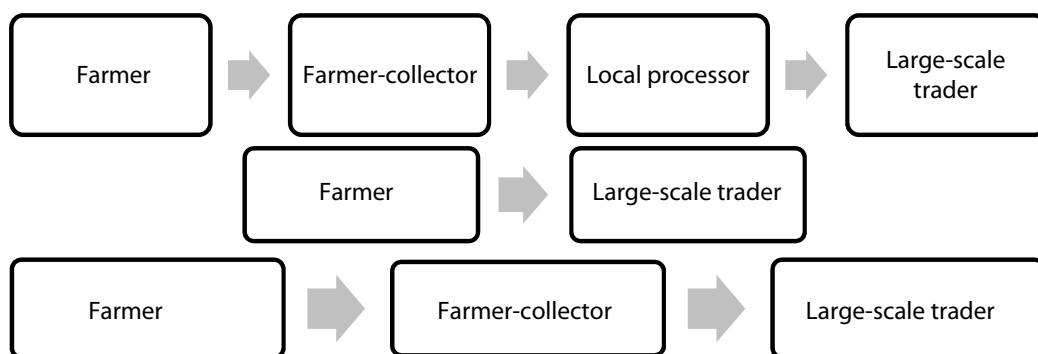


Figure 2. Smallholder teak chain actors in three product flows

### Farmers’ marketing practices

The farmers’ role is limited to producer. They basically sell what is produced instead of producing what sells. Generally, they do not engage in timber processing or conversion activities. Their engagement in the marketing chain is only through collectors or large-scale traders. They have limited access to market information and were not in a position to negotiate higher rates (Holding and Roshetko, 2003; Carsan and Holding, 2006; Tukan et al., 2006). Standing trees are the standard unit of sale for farm-grown teak. Negotiation with collectors was done without clear quality or value standards. To obtain a better price, farmers collect information from other farmers who have recently sold trees. To improve their bargaining position, farmers would also offer the same trees to two or more collectors. Regardless of the negotiation approach taken, farmers usually obtain prices that are well below market rates because of their limited access to market information and weak bargaining position.

Perdana et al., (2012) observed that smallholding teak producers compete with a well-established, state-owned forest enterprise. Access to markets, market knowledge, financial resources, and tree production and management, were identified as barriers to smallholders entrance into the teak market. With bargaining power at the supply level, farmers deal with the overwhelming profit-eroding power of the farmer-collectors. Improving market information for smallholders, simplifying timber trade regulations to minimize transaction costs and developing links between teak producers and teak industries are among the recommendations to initiate effective marketing strategies for smallholders growing teak.

### Farmer-collectors’ marketing practices

As intermediary, farmer-collectors played an important role. First, they search the marketplace.

Guided by their information network, they visit teak growers and explore upstream for product supply. They repeat this search process frequently because supply, quality and prices changed quickly. Second, farmer-collectors accumulate the harvests from multiple teak producers and sort it into homogenous lots for sale to the manufacturers. Third, traders served to minimize and facilitate the number of contacts in the channel system.

Farmer-collectors visit farms to measure, assess and negotiate the price for individual trees or blocks. All collectors measure tree diameter at an over-the-head level, and not at the normal diameter at breast height. This underestimates the volume of timber in the log. Collectors justify this practice because of the high transaction costs they shoulder. Collectors have to deal with numerous farmers producing teak of variable quality and quantity and take the responsibilities of harvesting, cutting, sorting, transporting, storing, promoting, and selling. Table 1 shows the costs of post-harvest responsibilities.

### Role of local processors and large-scale traders

Sawmills provide wood processing services for collectors. Sawmills in the study area process more than 60% of the total logs produced. Sawmills have an average daily capacity of 6 cubic meters with a maximum daily capacity of 15 cubic meters and charge US\$13 per cubic meter produced. All sawmills need permit from the forest and estate crops agency to operate and process logs.

Large-scale traders have well-established personal contacts with farmer-collectors, retailers and other distribution agents as they have been engaged in business relationships with them for several years. They usually are based in cities and buy logs and sawn timber from farmer-collectors and local sawmills. Similar to the relationship between farmers

**Table 1. Activities and costs in the teak market chain**

Activities Involved	Cost Represented
Physical possession	Storage and delivery costs
Ownership	Inventory carrying costs
Promotion	Personal selling
Negotiation	Survey time and legal costs
Financing	Terms and conditions of purchase and sale
Risking	Price guarantees, repairs and possible loss, and illegal charging
Payment	Collections, bad debt costs



and farmer-collectors, relationship with larger traders is a matter of mutual trust built upon a gradually established business relationship. Large-scale traders act as buyers from farmer-collectors and conduct negotiations with large manufacturers mostly in the furniture industry.

**Farmers’ strategies**

Researchers found no significant disincentives related to farmers’ input costs because most initial inputs were supplied through a forest rehabilitation and greening program initiated by the Government of Indonesia in the early 1980s. Germplasm costs are very low as most farmers (72%) use wildings

from existing teak stands to establish teak systems, 30% use locally produced seedlings, and 20% use coppice growth. Only 12% of farmers have ever used improved quality seedlings, mainly accessed through government reforestation programs. Meanwhile, there are management costs for fertilizers and weeding, conducted in association with annual crop production and improvement. Other management is conducted when opportunity costs are low for off-farm work (Perdana et al., 2012).

To obtain bargaining power at the supply level, a value-added approach should be taken. Prior to this research, teak-stand management practices were

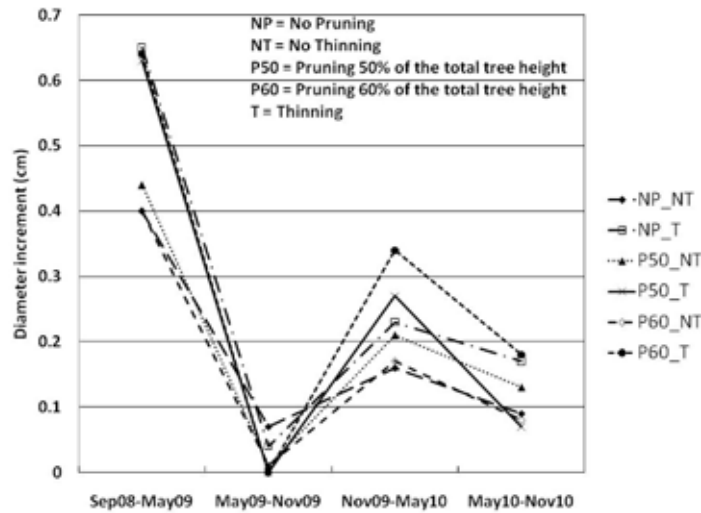


Figure 4. The effect of thinning and pruning on tree growth

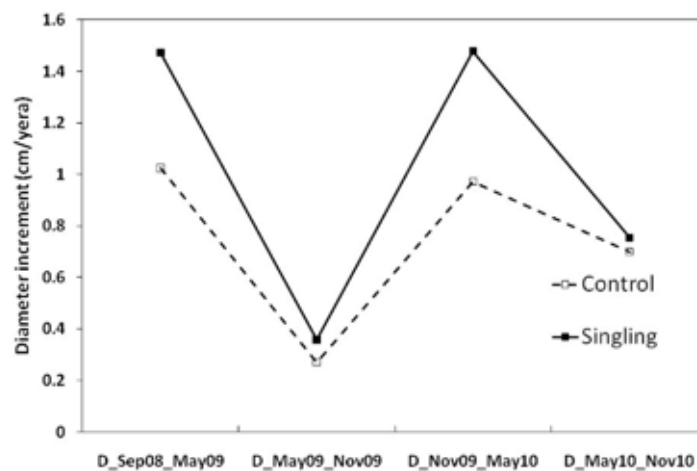


Figure 5. The effect of singling treatment on tree growth

non-existent. Most farmers (73%) practiced weed control in their teak systems, primarily to benefit agricultural crop production and often associated with fertilizer application. Three-quarters of farmers believed branch pruning improved tree growth, form and quality and 55% of smallholders' teak trees had been pruned. However, pruning was primarily conducted to harvest fuelwood and branch stubs (10–15 cm) commonly remain on pruned trees. The presence of branch stubs reduces timber quality. Similarly, while 43% of farmers reported thinning their teak systems, the practice was performed to harvest timber, poles or fuelwood. Thinning was not conducted to improve the growth or quality of the remaining trees but most commonly took the form of harvesting the largest tree for cash generation.

Results from farmer demonstration trials (FDT) conducted during the project indicated that proper thinning and pruning treatments improved diameter growth (Rohadi et al., 2010). Figure 5 shows that the effect of silvicultural treatments reached their highest points during September and November to May, when rainfall was high. Average annual increment over the 2-year period showed that branch pruning of 60% of the total height increased diameter at breast height (DBH) by 60% and tree height by 124% compared to the control (no pruning, no thinning). The effects were also noticed during 'singling' treatment, which demonstrated the benefits of managing teak coppices by thinning to a single, healthiest stem. The 2-year FDT trials demonstrated the positive impact of thinning and pruning on DBH and height growth. After seeing and experiencing the FDTs, farmers were able to adopt appropriate silvicultural techniques to improve land productivity and timber quality.

Another value-added approach to increase smallholders' net profit from their teak-growing enterprise was collective marketing. Smallholders are, by definition, scattered and generally there is a need to bulk their harvest in order to access targeted markets or the processing industry. Bulking can be done through different modalities and with different actors: traders, processing companies, or collective marketing arrangements. Bulking has a strong logistical component and requires a cost-efficient organization and control of transactions. Teak smallholders could market their timber collectively to improve their economies of scale, which also implies a division of labor to make the whole process

efficient, lower their transaction costs, increase quality control and provide an incentive to increase production, improve access to credit and obtain communal equipment and services.

### Intermediaries' strategies

Most market participants are both buyers and sellers in a market. Therefore, it is important to understand how to minimize pressure on profits that can be exerted through bargaining power. Suppliers with bargaining power can extract excess profit by charging higher prices, limiting quality or services, or shifting costs to industry participants and hence obtain more of the value for themselves (Porter, 2008).

Similarly, buyers with bargaining power can extract excess profit by putting downward pressure on prices, demanding better quality products or services, and play industry participants off against one another, all at the expense of industry profitability (Porter, 2008). To be able to obtain bargaining power at the supply level, intermediaries should focus on the uniqueness and relative scarcity of the product and consider value-added approaches. By taking these steps, intermediaries can retain more profit through value-added manufacture, and control more of the value chain.

Cost leadership strategy, i.e., having the lowest prices in the target market segment, can also be applied to intermediaries of smallholding teak, although it needs to be structured down to fit with smallholder conditions. This strategy involves a business entity winning market share by appealing to cost-conscious or price-sensitive customers. This is achieved by having, at least, the lowest price compared to what customers receive. To succeed at offering the lowest price while still achieving profitability and a high return on investment, the entity must be able to operate at a lower cost than its rivals (Porter, 1980).

The first approach is achieving a high asset turnover. This approach means fixed costs are spread over a larger number of units of the product or service, resulting in a lower unit cost, i.e., the intermediaries hope to take advantage of economies of scale and experience curve effects. Higher levels of output both require and result in high market share, and create an entry barrier to potential competitors, who may be unable to achieve the scale necessary to match the low costs and prices.

The second approach is achieving low direct and indirect operating costs. This is achieved by offering high volumes of standardized products, offering basic no-frills products and limiting customization and personalization of service. Production costs are kept low by using fewer components, using standard components, and limiting the number of models produced to ensure larger production runs. Overheads are kept low by paying minimal wages and locating premises in low-rent areas. Maintaining this strategy requires a continuous search for cost reductions in all aspects of the business. This will include outsourcing, controlling production costs, increasing asset capacity utilization and minimizing other costs including distribution.

The third approach is to exert control over the supply chain to ensure low costs. This could be achieved by bulk buying to enjoy quantity discounts, squeezing suppliers on price, instituting competitive bidding for contracts, working with vendors to keep inventories low using methods such as just-in-time purchasing. Other procurement advantages could come from preferential access to raw materials, or backward integration. This strategy may have the disadvantage of lower customer loyalty, as price-sensitive customers will switch once a lower-priced substitute is available. Nevertheless, ideas on the profit impact of marketing strategy that indicate

entities with a high market share are often quite profitable, but so are many others with low market share and lower profitability.

### Marketing margin

With regards to the flow of teak timber in market channels, intermediaries managed various interactions – physical possession, ownership, promotion, negotiation, financing, risking and payment – each carry costs of its own. From the intermediaries’ point of view, each interaction represented sunken costs, costs that may not be recovered because the price was negotiated and agreed prior to the harvest. A significant amount of risk is embedded from the beginning of the negotiation process. The profit and marketing margin of farmers and collectors are shown in Table 2.

As mentioned earlier, farmer-collectors visited the farm to measure, assess and negotiate the price for individual trees or blocks. For reasons of efficiency, collectors would prefer to buy a block of trees to press costs. As an illustration, collectors would spend the amount shown in Table 3, for a block of 20 to 30 15-year-old trees. As farmers are usually in need of cash when they contact collectors, they sell their trees.

**Table 2. Price changes for smallholders’ teak in Gunung Kidul**

Age (year)	DBH (cm)	Price accepted by farmers (USD/standing tree)	Log volume after processing by collectors (m <sup>3</sup> )	Log price collected by collectors (USD)	Profit margin received by collectors (USD)	Marketing margin (%)
10	12–18	3–6	0.045–0.189	3–25	0-19	0-76
15	13–31	5–30	0.060–0.515	6–123	1-93	16.7-75.6
20	21–45	10–265	0.307–1.061	57–284	19-47	6.7-82.5
25	29–49	20–296	0.320–1.321	54–329	33-34	10-62.9

**Table 3. Harvesting cost components by block of trees**

Harvesting cost component	Unit	Cost/unit (USD)	Cost (USD)
Village permit	1	2.22	2.22
Labour for tree felling	1	3.33	3.33
Labour for carrying logs from farm to the nearest road	3	3.33	10
Chainsaw rental	1	22.22	22.22
Gasoline for chainsaw	5	0.72	3.61
Carpenter	1	3.33	3.33
Meals	5	1.67	8.33
Transport from village to logyard	1	11.11	11.11

This aspect of the buying and selling process incurred risks for both teak farmer and intermediaries. With harvesting costs averaging US\$27.26 per tree (US\$81.93 per m<sup>3</sup>) but varying greatly, farmer-collectors sometimes make a net loss owing to unforeseen or arbitrary costs: a distance of 1 km from the nearest road could increase harvesting costs up to 20%, undetected tree defects reduced the quality of teak wood, decreasing profit by up to half, transaction costs for obtaining timber transport documents from the village and local government authorities could equal 10% of the total cost. An efficient channel is critical to any current or potential industry participant concerned about the availability and cost of current and future supply of smallholders' teak.

### Role of government

Generally, smallholders' teak plantations were only marginally profitable, which was partially due to restrictive regulatory requirements. As a result, farmers limited their investment (time and funds) in these systems. The timber transport policies applied by the government created a disincentive for farmers to engage in better teak marketing practices. Improvements in timber marketing strategy could be made through dissemination of better market information to farmers, in particular the wood grading and quality standards used by industry, the development of business cooperation between farmers' groups and timber industries, for example, to meet the demand for certified furniture products, and by revising or simplifying timber trade regulations applied to smallholders' timber, in order to minimize transaction costs in the marketing process. Our research identified government policies (timber trade regulations) that increased transaction costs for smallholders and traders and served as a disincentive for smallholders' investment in teak plantations. At the time of writing, a certificate of origin is required of smallholders' teak traded in the region and must be obtained by traders at the district forestry office. Further, government policies restricted smallholders' involvement in timber production because regulations designed for large-scale timber production (e.g. cutting and transportation permits, registration procedures) were applied to smallholders.

Government needs to provide more suitable timber trade regulations, specifically for timber

coming from smallholders' plantations. The current regulations tend to generate high transaction costs that may hinder farmers' access to better markets. Providing farmers with more access to state land would be a good intervention, in particular, in regions where farmers' land is very limited, such as in Gunung Kidul and possibly other parts of Java. More access for farmers to state land would increase the economies of scale of smallholding plantations and at the same time potentially reduces unproductive land areas (Rohadi et al., 2010).

### Conclusion and recommendations

By looking at the smallholders' teak market, key issues that affected the market were identified. Weaknesses such as low bargaining power, high transaction costs, lack of accessible market information, low tree quality standards, and unfavourable policies were identified. Strategies, including collective marketing, may have the potential to overcome these problems.

Several recommendations to initiate efficient strategy for farmers and farmer-collectors were identified. The first is to improve market information system that can be accessed by farmers and collectors. Regular market information on teak prices and qualities could be provided through local mass media, such as radio and local newspaper.

Second, with government involvement, simplify timber trade regulations to minimize transaction costs, making the smallholding teak market more efficient. For example, by including smallholder teak into the certificate of origin scheme or to promote the exclusion of smallholder teak from the obligations of the certificate of legal logs and certificate of legal forest product to the government. Simpler procedures for timber distribution would provide incentives to smallholders to invest in teak plantations and in turn will benefit farmer-collectors by providing them better quality logs.

Third is the application of the cost leadership strategy for intermediaries to gain sustainable competitive advantage. By achieving high asset turnover, low direct and indirect operating costs, and control over the supply chain to ensure low cost, intermediaries would have a chance to win the competition and at the same time promote 'fairplay' to their suppliers, the smallholder farmers.

Develop links between teak producers and teak industries, for example, certified furniture exporters could provide new market opportunities for producers. Smallholders could be trained to apply the wood tracking system that is required for certified products. In return, producers might obtain a premium price for the timber. Collaboration with teak processing industries could further be developed by involving teak producers in furniture processing, such as by supplying semi-processed furniture components to companies. Teak producers could be involved in the wood-processing sector, especially furniture industries. Engaging farmers in furniture industries would reduce transaction costs and might provide opportunities for producers to receive benefits from the value added to their teak wood.

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# 7. Annexes

## 7.1. Symposium program



Australian Government  
Australian Centre for  
International Agricultural Research



### National Symposium

## “Value Chains of Furniture, other Forest products and Ecosystem services”

IPB Convention Center, 14 February 2013  
(dalam Bahasa Indonesia dan Bahasa Inggris)

08.30 – 09.00 Registrasi dan pemutaran film pendek “Green Furniture”

09.00 – 09.30 **Pembukaan; Ballroom 1, 1<sup>st</sup> floor**

1. Furniture value chain (FVC) Project leader
2. Australian Centre for International Agricultural Research (ACIAR) Representative
3. Research Program Manager Forestry, Australian Centre for International Agricultural Research (ACIAR)
4. Forest and Governance Programme, CIFOR

#### **Keynote Address; Ballroom 1, 1<sup>st</sup> floor**

Moderator: Nurcahyo Adi

09.30 – 09.45 Tema: *Distribution of value added in forest product and service chains*  
Oleh Dr. Ir. Iman Santoso, MSc. – Kepala Badan Penelitian dan Pengembangan Kehutanan, Kementerian Kehutanan

09.45 – 10.00 Tema: *SVLK: its value added and distribution*  
Oleh Diah Raharjo – Direktur Multistakeholder Forestry Programme – Department for International Defelopment (MFP-DFID)

10.00 – 10.15 Tema: *Integrating community forestry and industry*  
Oleh Dr. Didik Suharjito, Ketua Departemen Manajemen Hutan Fakultas Kehutanan Institut Pertanian Bogor

10.15 – 10.30 Diskusi dan tanya jawab

10.30 – 10.45 Rehat Kopi (*ballroom foyer 1st floor*) dan press conference (*meeting room B, 2<sup>nd</sup> Floor*)

**Break out session:**

#### **Sesi paralel A1: *Distribution of value added in forest product and service chains***

Moderator: Dr. Agus Djoko Ismanto; *Ballroom 1, 1<sup>st</sup> floor*

- 10.45 – 11.45
- Impact of Action Research on Furniture Value Chain to Selective Micro and Small Scale Furniture Industri in Jepara (*Ramadhani Achdiawan, Herry Purnomo and Bayuni Shantiko*)
  - The Impacts of Domestic Timber Trading Regulations to Small-Scale Wooden Furniture Industries in Jepara, Indonesia (*Dodik Ridho Nurrohmat, Efi Yulianti Yovi, Oki Hadiyati; Institut Pertanian Bogor*)
  - Imbalance distribution of Value added in value chain of rattan trading (*Rachman Effendi, Sukanda, Tati Rostiwati; Badan Penelitian dan Pengembangan Kehutanan, Kementerian Kehutanan*)
  - Peran kelembagaan pengrajin kecil dalam meningkatkan distribusi nilai tambah industri mebel: Pengalaman di Jepara (*Margono, Asosiasi Pengrajin Kayu Jepara*)

11.45 – 12.15 Diskusi dan tanya jawab

### Sesi paralel A2: Market, institution and governance of value chains

Moderator: Levania Santoso; Meeting Room A, 2nd fl

- 10.45 – 11.45
- The value chain of smallholder plantation timber: How much room do we have for improving the farm gate price? (*Dede Rohadi and Tuti Herawati*)
  - Marketing System of Community Wood in Gunungkidul (*Silvi Nur Oktalina*)
  - Increasing the Marketing of Wooden Furniture Online Through Development of E-Business Strategy for The Jepara Small-Scale Furniture Producers Association (APKJ), Central Java: Case Study in APKJ and CIFOR (*Yahya Sampurna*)
  - Domestic market of Jepara's small scale wooden furniture industries (*Dr. Efi Yuliati Yovi, Dodik Ridho Nurrochmat and Mohammad Sidiq*)
- 11.45 – 12.15 Diskusi dan tanya jawab
- 12.15 – 13.15 Ishoma

### Pleno: Pengembangan industri mebel dan kelembagaan dari berbagai perspektif

Moderator: Dr. Herry Purnomo; Ballroom 1, 1<sup>st</sup> floor

- 13.15 – 14.15
- Peran dan arah pengembangan industri mebel di Jepara (*KH Ahmad Marzuki, SE., Bupati Jepara*)
  - Kebijakan dan regulasi untuk mendorong industri mebel Jepara di masa depan (*H. Yuli Nugroho, SE., Ketua DPRD Jepara*)
  - Tantangan kelembagaan mebel Indonesia dan persaingan mebel dunia (*Ambar Tjahyono, Ketua Asosiasi industri permebelan dan kerajinan Indonesia, ASMINDO*)
  - Riset aksi pengembangan industri mebel Jepara 2008–2013 (*Melati, Furniture value chain project*)
- 14.15 – 14.45 Diskusi dan tanya jawab

Break out session:

### Sesi paralel B1: Technical aspect of forest products such as furniture design and quality

Moderator: Dr. Efi Yuliati Yovi; Ballroom 1, 1<sup>st</sup> floor

- 14.45 – 15.45
- Drying Schedules for Four Wood Plantation Species for Furniture (*Efrida Basri, Gerry Harris, Abdurachman and Barbara Ozarska*)
  - Development of simple and affordable drying chamber for small and medium enterprises (SMEs) furniture in Jepara (*Efrida Basri, Krisdianto and Barbara Ozarska*)
  - Durability test of treated mahogany wood against drywood termite (*Jasni, Krisdianto and Barbara Ozarska*)
  - Increased Value Remnant pruning Teak Wood Products (*Novia Fadhilla Sari and Fahrudin Darmawan*)
- 15.45 – 16.15 Diskusi dan tanya jawab

### Sesi paralel B2: Certification and verification of forest and forest product/service

Moderator: Dr Dodik Ridho Nurrochmat; Meeting Room A, 2nd fl

- 14.45 – 15.30
- Opportunity of rattan certification to tap new market and giving additional value of rattan finished product (*Achdiawan, Caroko, Tarigan*)
  - Establishing opportunity for REDD plus application on Mount Gede Pangrango National Park as the core zone of Cibodas Biosphere Reserve, Indonesia (*Sri Astutik*)
  - Cibodas Botanic Garden's Timber Tree Collection and Their Use as Furniture Material (*Indriani Ekasari*)
- 15.30 – 16.00 Diskusi dan tanya jawab
- 16.15 – 16.30 Rehat kopi
- 16.30 – 17.00 **Symposium Recommendation and the way forward** (*Dr. Herry Purnomo*) Ballroom 1, 1<sup>st</sup> floor
- 17.00 – 17.05 Penutupan

[cifor.org](http://cifor.org)

[cifor.org/furniture](http://cifor.org/furniture)



Center for International Forestry Research

CIFOR advances human wellbeing, environmental conservation and equity by conducting research to inform policies and practices that affect forests in developing countries. CIFOR is a CGIAR Consortium Research Center. CIFOR's headquarters are in Bogor, Indonesia. It also has offices in Asia, Africa and South America.





## 7.2. Symposium presentations

### 7.2.1. Opening:

#### The role of action research for supporting SMEs in Jepara



**The role of action research for supporting SMEs in Jepara**


**Pablo Pacheco**  
IPB Convention Centre, 14 February 2013



Thinking beyond the canopy | Center for International Forestry Research

**CIFOR: who we are?**


- Established in 1993, headquarters in Bogor
- Work conducted in both tropical and dry forest areas
- We are currently focusing in 5 major lines of research:
  - Smallholder production systems and markets
  - Management and conservation of forest and tree resources
  - Landscape management of forested areas
  - Climate change adaptation and mitigation
  - Impacts of trade and investment on forests and people
- Leads the CGIAR Research Program on "Forests, Trees and Agroforestry" with ICRAF, CIAT, Bioversity and CIRAD



Thinking beyond the canopy | Center for International Forestry Research

**Timber markets and trade**

- The changing dynamics of international timber flows – the influence of emerging economies
- The economic contribution of the domestic timber markets vis-à-vis international timber markets
- The importance of SMEs in the forestry sector for livelihoods and local economic development
- The socio-economic and environmental implications of different configurations of value chains and business models



Thinking beyond the canopy | Center for International Forestry Research

**The importance of SMEs in the domestic and global markets**

- Global markets are relatively dynamic and affected by broader factors that influence on the demand – economic slowdown
- Consumers increasingly tend to favor those products that do not cause impacts on the environment, but there is not willingness to pay for sustainably produced goods
- SMEs have difficulties to compete in the global markets so tend to link strongly to the domestic markets that are more flexible
- Value added products as furniture provide opportunities but challenges for achieving economies of scale and steady supply



Thinking beyond the canopy | Center for International Forestry Research

**Global furniture trade**

- The global furniture exports were US\$ 74 billion in 2011
- It represents 1% of total world trade in manufactured goods
- Indonesia's share is about 2% of the total wooden furniture trade





Thinking beyond the canopy | Center for International Forestry Research

**SMEs in Indonesia's timber sector**

- Indonesia a major sources of tropical timber for the global market
- Plywood, sawn timber, and veneer have declined sharply
- Furniture, part of wood-working, increasingly important
- Export value increased from USD 5.8 to 7.1 billion from 1994 to 2010

A vast small-scale sector exists in Indonesia:

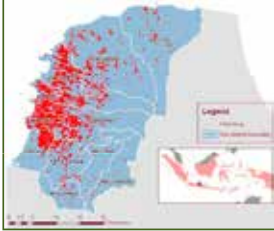
- 12,000 small-scale timber businesses and 175,000 workers in Jepara alone, Central Java
- In Java and Bali there are estimated 150,000 small industries employing ~750,000 people
- Nation-wide there are about 686,000 small-scale units employing 2.7M people which consume ~ 10M m3 of timber annually

Source: Melati et al. 2010, Klassen 2010




Thinking beyond the canopy | Center for International Forestry Research

## Furniture industry in Jepara



- About 12,000 businesses
- Estimated 0.8 million m<sup>3</sup> wood processed yearly
- Wood sourced from forests in Java and Eastern Indonesia
- Furniture industry represents 26% of Jepara's economy



- SMEs account for 95% of production
- Livelihoods of approximately 5 million people depend on furniture industry and its chains (Ewaschko 2005)

Thinking beyond the canopy | Center for International Forestry Research

## Challenges faced by SMEs

- In the production side:
  - Reduce costs and increase competitiveness
  - Lack of economic incentives / finance
  - Need to adapt the way to produce furniture
- In the market side:
  - Fierce competition with production mainly from China, Vietnam and Italy
  - Long chains from producers to buyers
  - No access to premium prices for "green furniture" [whether they exist]
- In the institutional side:
  - Need to comply with legality verification
  - Importance to access sustainable supply



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## Five dimensions of our work [1]



- 1. Moving Up** scenario to change positions within the chain
  - Encourage small-scale producers to move up to the higher stages in the value chain, to also function as furniture brokers, finishing companies or exporters
- 2. Collaborating Down** scenario to address wood supply security
  - Small-scale producers collaborate with wood traders and tree growers

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## Five dimensions of our work [2]




- 3. Small-scale Association** scenario to increase bargaining power of SMEs in the market
  - Organize enterprises locally and assist them with access to financial institutions and markets
- 4. Green Product** scenario to define niche and change position
  - Encourage use of ecolabeled furniture from certified timber which requires up and down coordination between various companies in the value chain
- 5. Roadmap Furniture Industry**
  - Provide direction the 10 years of furniture industry in Jepara

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## Main achievements

- The members of the small-scale furniture producer association (APKJ) have improved their incomes
  - Enhanced access to markets
  - Better access to credit / capital management
  - Improved bargaining power
- The members of APKJ are gradually moving towards the legality verification process (SVLK)
- The roadmap devised locally has been well accepted by head of district as well as district parliament

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## The ways forward

- Scale up and scale out the Jepara work to other places in Indonesia and beyond the country (ASEAN)
- Widen the scope of the small-scale furniture producer association (APKJ) to include other places beside Jepara
- Understanding the benefit and cost of certification and timber legality particularly for small-scale producers
- Understanding more the opportunities in the domestic and international markets – "green buyer behaviors"
- Stimulate policy and institutional innovations at different levels to unlock the opportunities of the SMEs sector

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## 7.2.2 Keynote:



### a. Distribution of value added in forest product and service chains

**DISTRIBUTION OF VALUE ADDED IN FOREST PRODUCT AND SERVICE CHAINS**

By. *Iman Santoso*

Symposium "Value Chains of Furniture, other Forest products and Ecosystem services"

Bogor, 14 February 2013



**Context of value chains with forest product development:**

1. Market
2. Community welfare
3. Linking producers and industry
4. Institution
5. Sustained Forest Resource

**Market:**

- Access to market is the core of value chain
- Thin market
- Market barrier on forest product marketing chain



**Community welfare:**

- Fair marketing chain system is important to support community welfare.
- Inefficiency in the marketing chain will trigger unfair benefit distribution among actors and lead to unsustainable production.



**Linking producers to industry:**


Effective marketing is created by suitability of products characteristics (quantity, quality, dimensions) that required by the industries and those provided by producers.



Governments and developing agencies need to facilitate this business links among the producers and industries.

**Institution:**

- Effective marketing chain need improved institutional capacity of actors.
- Government and development agencies need to prioritize this capacity building, in particular at farmer level, as they usually are the weakest point along the marketing chains.



### Sustained Forest Resources:

Fair benefit distribution will support all actors that involved in the marketing chain and lead to sustainable of forest resources.



**Thank You**

## b. SVLK: Its value added and distribution

**SVLK:  
Its value added and  
distribution**

*Agus P Djailani, MBA  
Technical Assistant for SME, MFP  
Simposium CIFOR - Bogor, 14 Februari 2013*

**Kebijakan Pemerintah dlm Perdagangan Kayu**

- **1986 s/d 1997: Larangan ekspor kayu bulat & gergajian.**
  - Pengembangan industri kayu nasional - plywood
  - Peningkatan ekspor produk kayu jadi & setengah jadi
- **1998 s/d 2001: Ekspor kayu bulat & gergajian dibuka kembali**
  - Krisis ekonomi, tekanan IMF
  - Peningkatan pembalakan & perdagangan liar
  - Industri hilir kesulitan bahan baku kayu
- **2001 s/d sekarang: Larangan ekspor kayu bulat, gergajian, bantalan rel kereta api, BBS**
  - Peningkatan pengawasan: ETPIK, BRIK Endorsement, verifikasi Surveyor
  - Penegakkan hukum: operasi terhadap pembalakan liar

Sumber: Kemendag -Agung T.

**Dampak 'Rekomendasi' IMF 1998-2001**

- **DEPHUT:**
  - 1997-2001: Deforestasi seluas 2,1 juta Ha
  - 2001-2005: Deforestasi seluas 2,8 juta Ha
  - 34% penyusutan hutan Indonesia
- 50 juta M3/thn kekurangan pasok (gap) utk industri kayu dalam negeri
- Rp 30 Triliun/thn kerugian langsung dan tidak langsung dari potensi ekspor produk kayu

Sumber: FISIP UI, 2007

**Perbedaan Laporan data ekspor kayu bulat & impor oleh beberapa negara**

Table 2. Industrial round-wood exported by Indonesia in 2000 (1000m3)

Partner Countries	Reported volume exported	Partner report	Discrepancy ratio*
Australia	4.5	32.0	0.86
China	6.1	617.7	0.99
China, Hong Kong S.A.R	0.3	38.3	0.99
Japan	0.3	46.3	0.99
Malaysia	0.0	623.0	1.00
Philippines	-	41.7	-
Thailand	-	46.4	-
<b>TOTAL</b>	<b>10.7</b>	<b>1,445.4</b>	

\* Calculated in the same way with 2000 data in Table 1  
Source: Dr. John Perez-Garcia of the Center for International Trade in Forest Products-University of Washington.

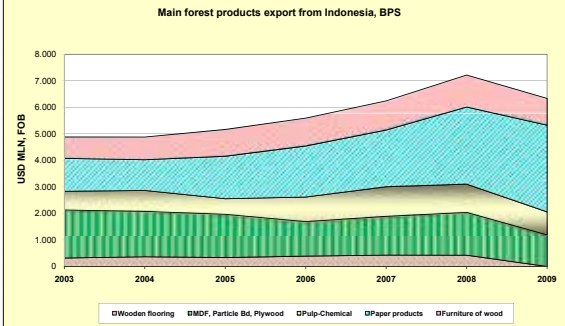
Sumber: Booklet Kehutanan 2003

**Kayu Asal Papua/PNG? - Vietnam**

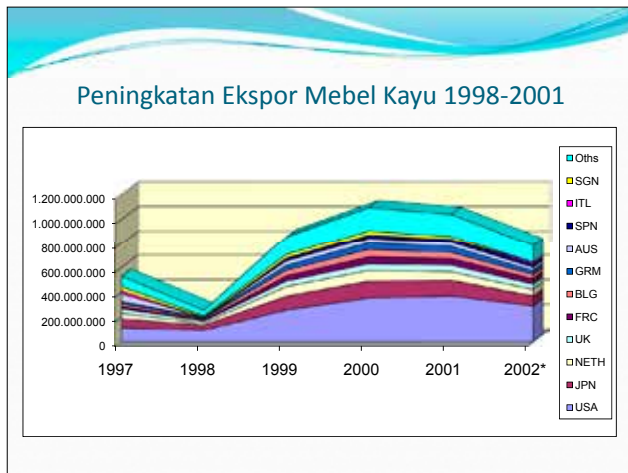


**Perkembangan Ekspor 2003-2009**

Main forest products export from Indonesia, BPS



Legend: Wooden flooring, BMOF, Particle Bd, Plywood, Pulp-Chemical, Paper products, Furniture of wood



### Skema Sertifikasi Wajib vs Sukarela

**Wajib**

- Bali Declaration 2001
- Proses Multi Pihak (Multi-Stakeholder)
- SVLK; Permenhut 38/2009; P-68/2011; P-45/2012
- Permendag 20/2008 & Kep-405 (BRIK) dicabut; P-64/2012
- 1 Jan 2013 - 26 HS; 1 Jan 2014 - 14 HS - ekspor dgn/V-Legal

**Sukarela ?**

- FSC (Forest Stewardship Council)
- PEFC (Programme for the Endorsement of Forest Certification)
- TFT (The Forest Trust)
- LEI (Lembaga Ekolabel Indonesia)
- WWF -Nusa Hijau/GFTN
- Certificate of Plantation (PERHUTANI)

Brand Warfare !

### SVLK vs ILW (Indonesian Legal Wood?)

### Certified forest, plantation, industry (LIU-Oct 2012)

Description	Certification type	Unit certified	Total	Hectare
Natural forest & plantation	PHPL (Sustainable Production Forest Management)	78		8,277,193
Natural forest & plantation	VLK (Wood Legality Certification)	27		3,436,181
	TOTAL=	105		11,713,374
Private forest		12		7,445
Industry	VLK	365		
<b>Exporter to EU</b>				Percentage
Woodworking	VLK	141	289	49%
Panel	VLK	30	37	81%
Pulp & Paper	VLK	11	15	73%

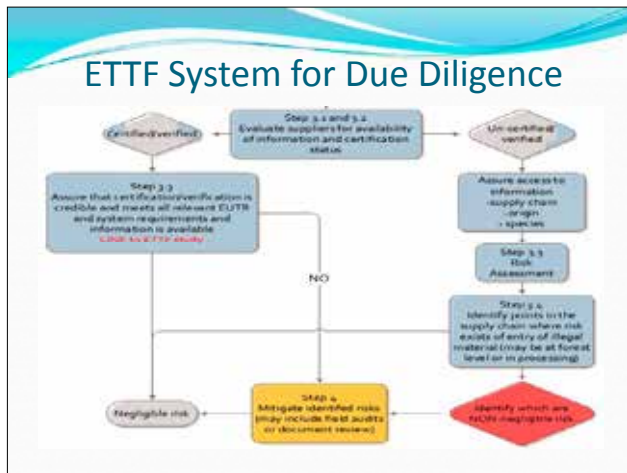
### Nilai Tambah SVLK

- G to G (government sponsored) >>> Penandatanganan VPA - April 2013; ratifikasi September 2013
- 26 HS sudah jalan per 1 Januari 2013 (Permendag 64); industri kayu besar & kertas lebih siap
- Tantangan untuk sertifikasi hutan rakyat dan IKM mebel & kerajinan
- European Union Timber Regulation (EUTR) per 3 Maret 2013
- Perlu 'investasi' yang besar dan jangka panjang untuk "SVLK / ILW" (Indonesian Legal Wood) National Brand
- Public Procurement Policy (PPP)- Lembaga Kebijakan Pengadaan Barang dan Jasa Pemerintah (LKPP)

### Interactive Market Dialogue

London - 4 Februari 2013

Brussels - 6 Februari 2013



**Pernyataan HE Julian Wilson, Ambassador Uni Eropa - 22 Jan 2013 (translasi)**

*“Uni Eropa mengakui bahwa SVLK merupakan contoh yg baik utk memastikan legalitas kayu Indonesia. Kita akan menyelesaikan persetujuan dgn Pemerintah Indonesia oleh karena baiknya rancangan SVLK. Sudah ada perkembangan yg baik dlm implementasi SVLK; dan sebenarnya, dgn keyakinan yg tinggi a/n Pemerintah Uni Eropa kami menyatakan bahwa SVLK merupakan tipe yg terkemuka sebagai sistem legalitas kayu di Asia! “*

### Global FSC Certificates (Apr 2011)

Forest Management			Chain of Custody		
Asia	Total area (ha)	No.	Asia		No.
CHINA	1,728,144	33	INDONESIA		1,065
INDIA	629	1	INDONESIA		395
INDONESIA	850,509	3	INDONESIA		123
JAPAN	334,972	33	INDONESIA		162
KOREA, REPUBLIC OF	233,635	12	ISRAEL		5
LAOS	83,638	1	JAPAN		1107
MALAYSIA	233,342	5	LAOS		135
NEPAL	14,145	1	KOREA, REPUBLIC OF		1
SR LANKA	27,581	0	SR LANKA		1
THAILAND	7,252	3	THAILAND		121
Vietnam	1,954	2	VIETNAM		1
<b>Grand total</b>	<b>3,550,194</b>	<b>105</b>	YEMEN		1

### Survei National Wildlife Federation-2007

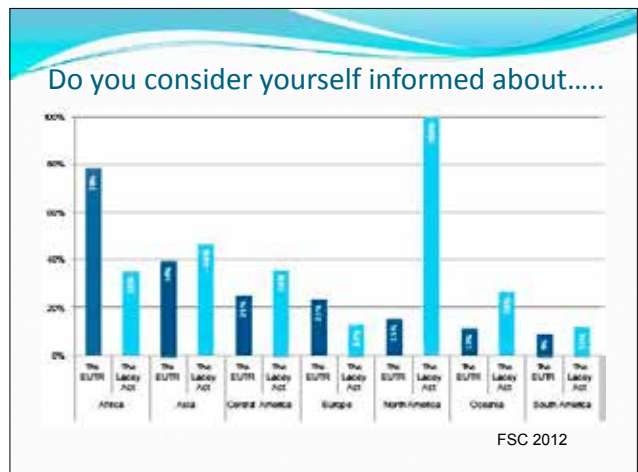
**Major Retailers That Carry A Wide Selection of FSC-certified Garden Furniture:**

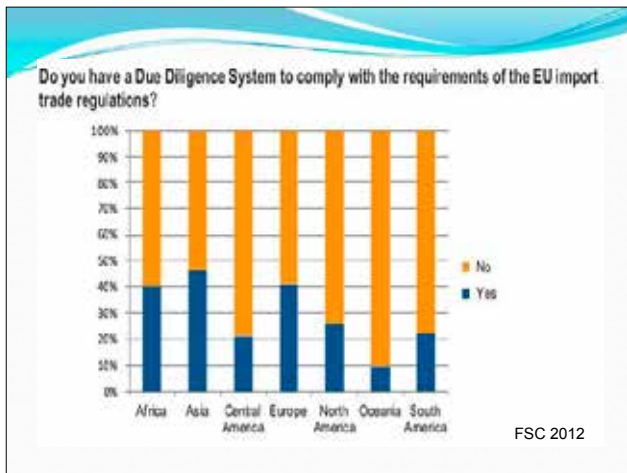
Crate & Barrel - ★★★★★	Pottery Barn - ★★	Look for the Forest Stewardship Council (FSC) logo when you buy garden furniture and other wooden products. When you buy an FSC-certified item you are helping to support forest management that protects water, soil, and wildlife habitat in addition to providing wood products.
Pier 1 - ★★★★★	Sears - ★	
The Home Depot - ★★★★★	Target - ★★	
Ikea - ★★★★★	Wal-Mart - ★	
Lowes - ★★★★★	Restoration Hardware - No Response	
Frontgate - ★★	Smith & Hawken - No Response	
Kmart - ★		

**Key:**

- ★★★★★ Company responded to NWFF survey
- ★★★★ Company has limited offerings (up to 75%) of FSC-certified wooden outdoor furniture or products sourced from forests working toward FSC certification.
- ★★★ Company has a moderate range of offerings (25% to 75%) of FSC-certified wooden outdoor furniture or products sourced from forests working toward FSC certification.
- ★★ Company has substantial offerings (75% to 99%) of FSC-certified wooden outdoor furniture or products sourced from forests working toward FSC certification.
- ★ Company carries 100% FSC-certified wooden outdoor furniture or products sourced from forests working toward FSC certification.

*\*Forests working toward FSC certification are also included in a third-party verifiable program such as Tropical Forest Trust, World Wildlife Fund's Global Forest to Trade Network and Rainforest Alliance's Sustainable program.*





## Kebutuhan Jati di Jawa Utk mebel

Perhutani & Hutan Rakyat –besar! Sulawesi, Lampung, NTT/NTB

## Mebel Taman- mencari alternatif

Kayu Jati menjadi langka & mahal; perlu mencari kayu/jenis alternatif untuk produksi masa.

- Nyatoh: kurang awet, densiti rendah, variasi warna
- Meranti campur/mixed reds: variasi warna
- Bangkirai: keras, sulit dikeringkan, banyak pinholes
- Merbau: eksotis, keras, noda merah, sensitif (WWF); flooring
- Keruing: keras, berminyak/oily
- Acacia mangium: kompetisi dgn P&P, tidak tahan air



## c. Integrating community forestry and rural industrialization

### Integrating Community Forestry and Rural Industrialization

Didik Suharjito



Department of Forest Management  
Bogor Agricultural University  
February 2013

#### Community based forest management (CF) programs

- The ministry of forestry has stipulated HKm (license or permit, IUPHHK), HD (IUPHHD) and HTR in some villages in Java as well as outside Java
- 5.6 million hectares of HKm, HD, and HTR, will be developed until 2030: 2.5 million hectares HKm, 500 hectares HD, and 2.6 million hectares HTR (National Forestry Plan/ RKTN, 2011).
- The objectives of HKm, HD, and HTR programs:
  - To support village infrastructure development, reduce unemployment, alleviate poverty, and facilitate socio-cultural function of forest, coincide with ecological forest function.

- How should program strategy of CF on state forestland be taken to achieve more adequate rural community development ?
- Lessons from family forests in Java could be learned;
- This presentation is to explain why integration of CF and forest product based-rural industrialization (FPBRI) is necessary to be developed ?
- This presentation does not pay attention to the large and medium scale forestry industry; but on small scale / households scale industries in the villages/ rural areas.

- At national level, data of small scale forest product based industry is not available yet
- Statistics Indonesia (2012):
  - Number of small and micro manufacturing industry in 2004: 2.67 million units (15.6 % of total small and micro works)
  - Its employee: 6.55 million (21.4 % of total employee in small and micro works).
- In 2010, the SMIs contributed less than 20 % to the country's manufacturing exports (MOI, 2012).
- "In 1997, SMIs in Indonesia weathered the economic crisis far better than large enterprises ..... A push to develop SMIs could help ease the impact of a global downturn on Indonesia." (MOI, 2012):

#### Lessons learned from HR-FPI relationship in Java

- Household owned forests (*hutan rakyat*, HR) in Java have grown and continuously extend. The area of HR in Java reached 3.5 million hectares (2011).
- Wood based industries in Java have been established and developed since long time ago;
- Log were obtained from forests or mixed garden:
  - in the vicinity of the industry or
  - from more distant areas within the district;
  - more distant areas outside the district, and
  - from outside the province
- In addition, logs were also bought from state forestry enterprise (Perum Perhutani).

- Several large and medium scale forest industry companies have established partnerships with forest farmers. Supply of timber from HR in Java, has also helped the large scale wood based industries who are facing shortages of raw materials in recent years.
- Harga kayu (log) dari industri lebih rendah dari harga pasar (petani kurang kuat posisi tawarnya); beberapa kasus, petani TIDAK menjual pohon ke industri mitranya karena harganya rendah, dan petani menjual ke pasar dengan harga lebih tinggi.

- ◉ Type of product: Unfinished and finished products (sawn timber, board, chest, pallet, rafter, pole, furniture);
- ◉ The consumer of pallet: Merak (PT Risat Brasali), Cimanggis (PT Yanmar); Karawang (PT Indodeli, Ceramic Euro), Anyer (PT Polibed), Cikarang (Vidio Glas, Cermic Mulia, Mulia Ceramic), Tangerang (Eszenza), Cicirug (Aqua), Beranta-export; Cibinong (Indocement), Serang (Indah Kiat), etc

- ### Employment opportunity for rural people
- ◉ Activities generated from forest to industry provide employment and business opportunity for rural people including forest farmers, loggers, transportation service, traders, middleman, labor of industry, and so forth.
  - ◉ Labors of industries come from villages around the forest industry location.



Transporting log from forest management unit to processing unit: job opportunities for driver and the transportation service business;

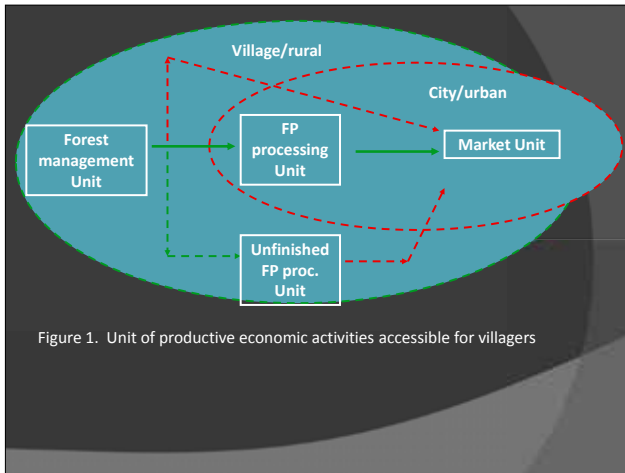


Sawmill industry in the village have long been developing, opening employment opportunities for rural people, increasing the value-added forest products, contributing to the development of rural economy;



- ◉ Wood based industries (parquet, pallets, etc.) have grown in rural areas and oriented for export to Japan, Korea, etc..

- ### Networking and (backward-forward) linkage
- ◉ The wood based industries build an interdependent relationship with timber collectors (middleman) and forest farmers; and forward linkage with industries producing finished product.
  - ◉ The wood based industries in the village build an intimate collaboration with forest farmers (forest management unit) and support sustainable forest.

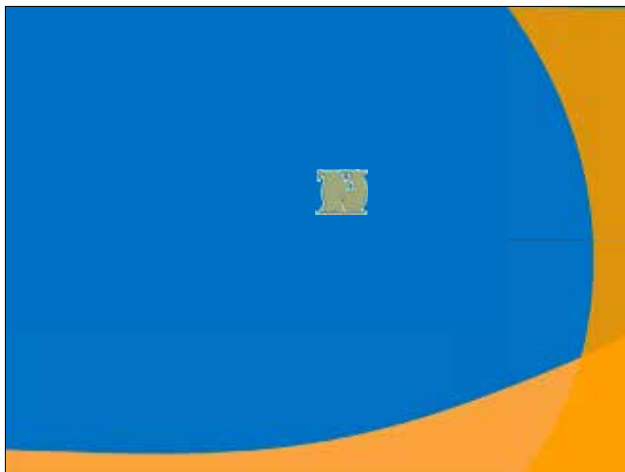


### Policy Recommendation

- ▶ Integrating the development of CF programs (HKm, HD, HTR) and the development of forest product industry in rural communities is essential for rural economy development.
- ▶ Efforts to integrate the development CF and forest products industry in the village will increase the carrying capacity of local natural (forest) resources, reduce population pressure, and maintain the ecological quality, and will achieve the ultimate goal of improving the quality of life of the community.
- ▶ The development of industrial activities and agricultural (forestry) products trade in the villages performed by the villagers themselves can be regarded as phenomenon of the "genuine" rural industrialization

- The objectives of integrating CF and industry:
  - to strengthen the existing social relationship in rural areas through managing their forest resources;
  - to enhance the productivity of rural economic resources (forests and labor).
  - to increase family incomes, money supply (or circulation), and families and communities welfare,
  - to restrain labor urbanization,
  - to support forest sustainability

- Dengan informasi yang terbuka (petani dapat memperoleh informasi tentang harga melalui berbagai media (sms/ telpon teman atau tetangga, radio, majalah, dll) dan kompetisi pembeli (industri) yang meningkat, maka petani HR (HTR/HD) dapat memperoleh harga dengan tingkat keuntungan yang lebih besar.
- Peran signifikan dari lembaga di luar petani (penyuluh, dinas kehutanan, kemenhut, atau BUMN/BUMS) adalah membangun sistem informasi: letak pohon, ukuran pohon, letak petak, peta jalan, harga, dll) dan bantuan pendanaan.



### 7.2.3. Plenary:

#### a. Peran dan arah pengembangan industri mebel di Jepara

**PERAN DAN ARAH PENGEMBANGAN  
INDUSTRI MEBEL DI JEPARA**

PEMERINTAH KABUPATEN JEPARA

Disampaikan pada Simposium Nasional "Value Chain of Furniture, other Forest Products and Ecosystem Services"  
Bogor, 14 Februari 2013

- Sejak ratusan tahun yang lalu, industri barang kayu dan mebel telah menjadi tulang punggung perekonomian masyarakat Jepara.
- Awalnya merupakan kerajinan tradisional untuk memenuhi kebutuhan pasar lokal dan mulai 1989 sampai dengan sekarang selain untuk pasar lokal juga diekspor ke luar negeri dan tumbuh menjadi sub sektor utama pada sektor industri pengolahan di Kabupaten Jepara.

**KONDISI SAAT INI**

Sektor Industri Pengolahan memberi kontribusi 28% dari total PDRB Kabupaten Jepara.

Sektor Perdagangan Hotel Dan Restoran : 21 %

Sektor Pertanian Menyumbang PDRB : 20%

Sektor	Persentase
Industri Pengolahan	28%
Perdagangan, Hotel dan Restoran	21%
Pertanian	20%
Pertambangan dan Penggalian	1%
Keuangan, Persewaan dan Jasa	0%
Pengangkutan, Informasi dan Komunikasi	6%
Bangunan	6%
Listrik, Gas dan Air Bersih	1%

**LETAK KABUPATEN JEPARA**

Kabupaten Jepara berada di Pantura Timur Provinsi Jawa Tengah, berbatasan dengan :  
Laut Jawa sebelah Barat dan Utara,  
Kabupaten Kudus & Kabupaten Pati di sebelah Timur,  
dan Kabupaten Demak di sebelah Selatan

**PETA ADMINISTRASI KABUPATEN JEPARA**

Luas Wilayah : 1.004,132 km<sup>2</sup>  
Administratif : 16 kecamatan, 184 desa, 11 kelurahan  
Jumlah penduduk tahun 2011: 1.124.203 jiwa

**PERKEMBANGAN EKSPOR HASIL INDUSTRI KAYU DAN MEBEL KABUPATEN JEPARA**

No	Keterangan	Tahun 2010	Tahun 2011	Tahun 2012
1	Jumlah Ekportir	290	276	248
2	Negara Tujuan	105	105	106
3	Volume ekspor			
	Furniture	37.209.331,82	34.000.761,46	29.822.158,78
	Kerajinan Kayu dan Handicraft	233.258,49	1.019.143,62	195.987,12
	TOTAL	37,442,590.31	35,019,905.08	30,018,145.90
4	Nilai ekspor (US \$)			
	Furniture	111,498,084.22	111,653,351.51	102,777,259.42
	Kerajinan Kayu dan Handicraft	653,066.35	1,618,779.31	1,011,159.76
	TOTAL	112,151,150.57	113,272,130.82	103,788,419.18

Sumber: Disindag Kabupaten Jepara

### PERMASALAHAN DAN ISU UTAMA

1. Ketersediaan bahan baku: tingkat ketergantungan bahan baku dari luar daerah cukup tinggi, sehingga dalam kondisi tertentu proses produksi terganggu dan kendali harga bahan baku lemah sehingga dapat menurunkan daya saing produk;
2. Kualitas produk: permintaan pasar global untuk produk yang lebih berkualitas dan desain yang menarik.
3. Munculnya kompetitor baru: bermunculan kompetitor baik di pasar lokal maupun global (China, Vietnam, Filipina dll)
4. Sertifikasi dan HaKI: ketentuan sertifikasi terkait dengan bahan baku yang ramah lingkungan dari lembaga sertifikasi internasional dan kurangnya perlindungan HaKI dipasar global mengakibatkan beberapa item produk furnitur ditolak di beberapa negara.

*Permasalahan dan isu utama :.....lanjutan*

5. Sumber Daya Manusia (SDM): regenerasi Sumber Daya Manusia, Peningkatan Kualitas Sumber Daya manusia terampil masih sangat kurang.
6. Permodalan: terbatasnya akses permodalan dari perbankan untuk IKM.
7. Pemasaran: akses pemasaran baik melalui pameran produk maupun melalui media online masih sangat kurang .

### PERAN PEMKAB JEPARA DALAM MENUMBUHKEMBANGKAN INDUSTRI MEBEL

I. PENYEDIAAN BAHAN BAKU, antara lain melalui:

- Pembudidayaan jenis kayu cepat tumbuh contoh JUN (jati unggul nusantara)
- Implementasi SVLK sebagai upaya penyediaan bahan baku yang memenuhi syarat ekspor dan meminimalisir illegal logging. Program ini telah diawali dengan sosialisasi dan pembentukan Tim Fasilitasi SVLK.
- Gerakan penanaman pohon seperti Program Pengelolaan Hutan Bersama Masyarakat (PHBM), Gerakan Rehabilitasi Hutan (GERHAN), Gerakan Penanaman Satu Milyar Pohon, one man one tree, dsb;
- Suplementasi penggunaan bahan baku kayu jati dengan kayu jenis lain/diversifikasi bahan baku dengan kayu mindi, mahoni, dsb.
- Mendorong pengolahan limbah kayu secara efisien melalui pelatihan pemanfaatan limbah kayu

2. FASILITASI PERMODALAN, melalui bantuan modal Koperasi, KUBE, hibah, maupun bantuan sarana produksi/peralatan kerja.
3. FASILITASI PEMASARAN, antara lain melalui:
  - Branding product, didukung adanya sertifikat Indikasi Geografis (IG) mebel ukir Jepara dari Menkumham RI pada tahun 2010, fasilitasi hak patent katalog desain mebel.
  - Fasilitasi pameran baik tingkat regional, nasional maupun internasional serta pameran produk unggulan Jepara di kota-kota besar di Indonesia
  - Fasilitasi hotspot area di setiap kecamatan dan di tempat-tempat keramaian untuk memudahkan masyarakat/pelaku usaha mengakses internet.

### FASILITASI PAMERAN TAHUN 2012



JEPARA EXPO, SEMARANG

PAMERAN INACRAFT, JAKARTA

OTONOMI EXPO, JAKARTA



PAMERAN IFFINA, JAKARTA

BATAM EXPO, BATAM

PAMERAN PRODUK UKM EX INDUSTRI ROKOK, BANJARMASIN



#### 4. PENINGKATAN KUALITAS SUMBERDAYA MANUSIA

Melalui kegiatan-kegiatan pelatihan pada Dinas/Instansi terkait, seperti: pelatihan pengembangan desain furniture, pelatihan kewirausahaan, pelatihan keselamatan dan kesehatan kerja, pelatihan manajemen, pelatihan ekspor, dsb.

14

#### 5. PENGUATAN INFRASTRUKTUR

Melalui:

- Penguatan dan pelebaran jaringan jalan dan jembatan untuk akses kontainer
- **Pendirian Jepara Furniture and Craft Design Center (JFDC)** tahun 2007 Fasilitasi pengembangan desain furnitur, perlindungan HaKI, kekayaan seni ukir/folklore dan advokasi HaKI, Kegiatan yang telah dilaksanakan :
  - Lomba desain furnitur skala nasional yang dilaksanakan setiap tahun.
  - Perlindungan Haki indikatif untuk 99 motif ukir Jepara.
  - Lomba ukir tahunan sbg upaya untuk melestarikan budaya lokal.

15

- Pembangunan JTTC ( selesai tahun 2008) sebagai pusat promosi, pusat desain, klinik HaKI, dan pusat informasi potensi daerah dan pariwisata
- Pembentukan dan penguatan sentra industri
- Pembentukan dan penguatan Desa Wisata Industri Kreatif Mulyoharjo
- Merintis Kawasan Industri di Desa Mulyoharjo seluas ± 27 Ha.

16

- Menciptakan city branding :  
 “*JEPARA The World Carving Center*”  
 untuk membentuk brand image Jepara sebagai sentra ukir, dalam upaya mengembalikan kepercayaan dunia terhadap produk furnitur Jepara



## IKM Furniture dari kayu

NAMA DAN LOKASI SENTRA	Indikator Perkembangan	TAHUN		
		2010	2011	2012
Sentra IKM Furniture dari Kayu Lokasi : Tersebar di Jemberaja Kec. di Kab. Jepara	a. T.Kerja (org)	51.934	52.443	53.334
	b. Jml Unit Usaha (Unit)	3.916	3.955	4.022
	c. Vol. Produksi (Bh/Set)	2.734.256	2.761.460	2.808.404
	d. Nilai Investasi (Rp.000)	164.506.965	166.145.279	168.819.748
	e. Nilai Produksi (Rp.000)	1.230.416.000	1.242.689.859	1.263.702.241




## IKM KERAJINAN DARI KAYU

NAMA DAN LOKASI SENTRA	INDIKATOR PERKEMBANGAN	TAHUN		
		2010	2011	2012
Sentra IKM KERAJINAN dari KAYU	a. T.Kerja (Orang)	1.122	2.279	2.374
	b. Jumlah Unit Usaha	160	325	330
Lokasi : Ds. Bandengan Ds. Mulyoharjo	c. Volume Produksi (Bh /set)	429.905	873.244	888.080
Ds. Lebak Ds. Senenan	d. Nilai Investasi (Rp. 000)	246.215	500.124	508.626
	e. Nilai Produksi (Rp. 000)	3.433.648	6.974.597	7.093.165





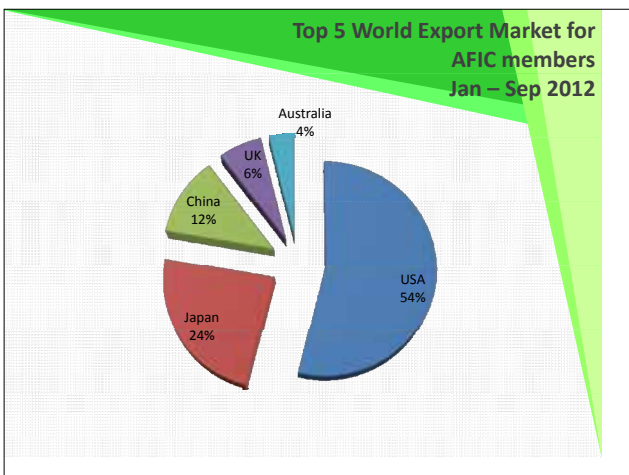
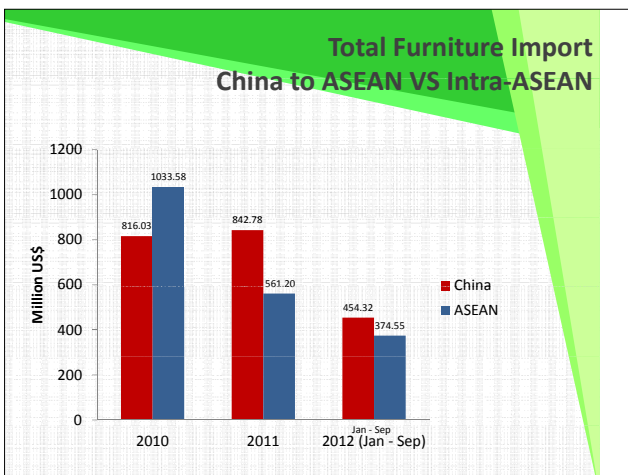
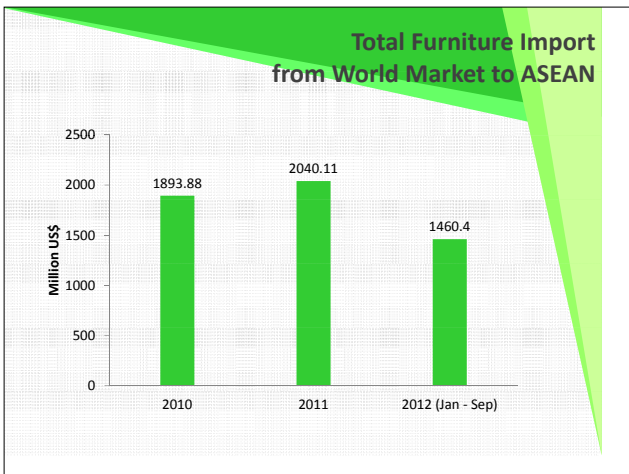
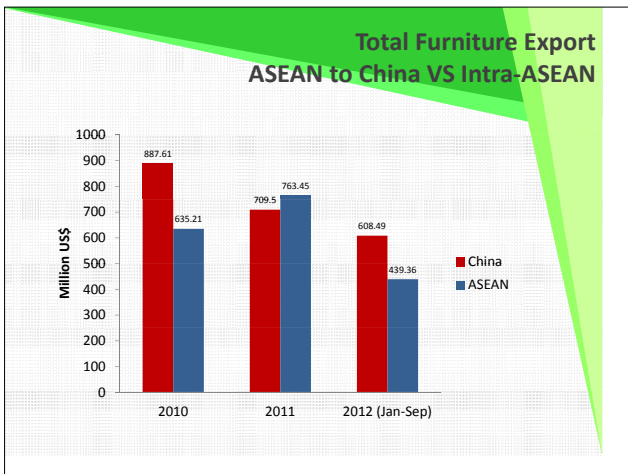
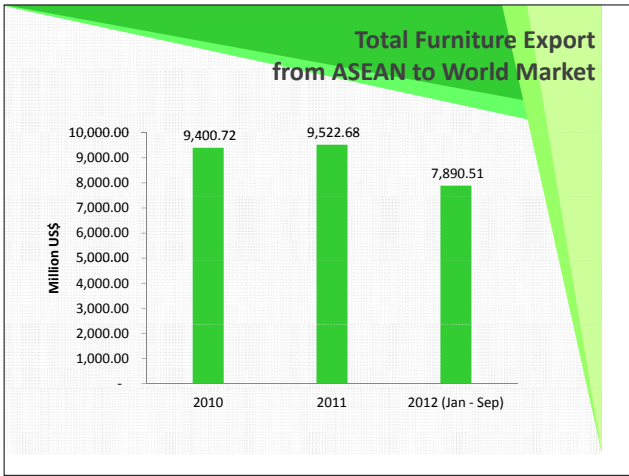



# Terima Kasih

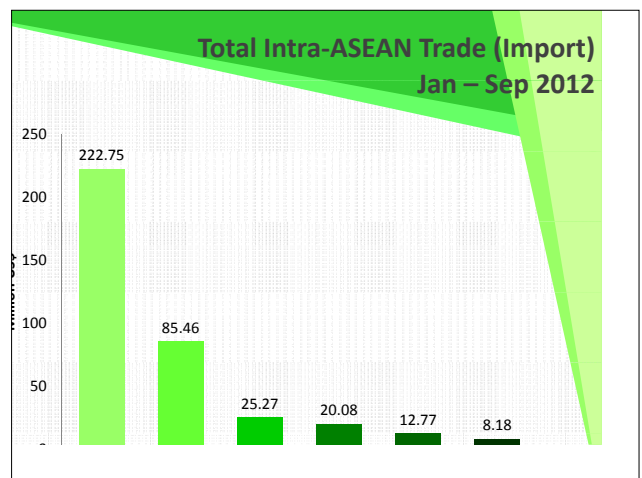
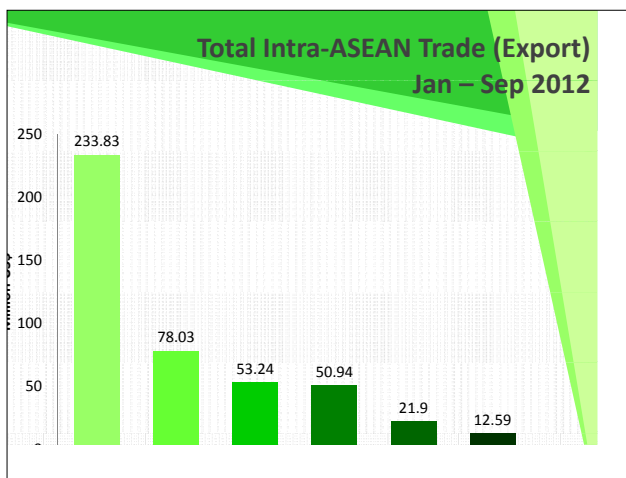
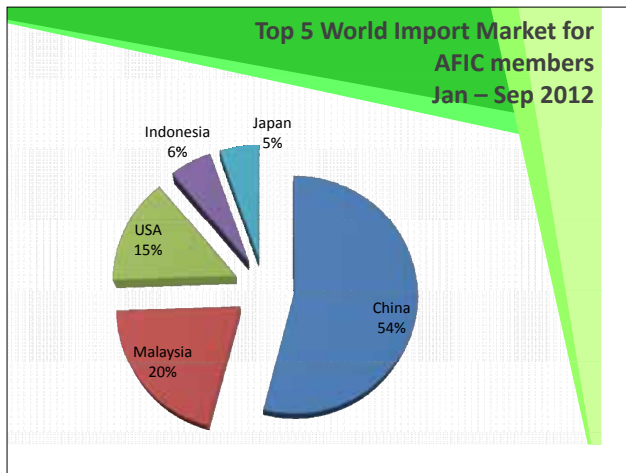


**b. Institutional challenges for Indonesian furniture and global competition**

**ASEAN Furniture Industries  
Macro Overview  
2012  
(Jan - Sep)**







### Total Intra-ASEAN Trade (Export) - Jan – Sep 2012 (US\$)

	Brunei	Cambodia	Indonesia	Laos	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
	216,662	233		84,022	27,690,845	5,000	1,409,139	18,357,993	2,024,397	1,156,374
	9,500,000	900,000	21,700,000	30,000		1,300,000	23,500,000	146,800,000	20,700,000	9,400,000
	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A
	19,904	-	8,006,523	-	547,212	-		1,386,500	2,574,976	56,205
	3,841,000	-	32,620,000	6,000	26,011,000	2,499,000	4,113,000		6,298,000	2,638,000
	120,298	1,906,500	3,705,228	3,810,050	1,822,391	3,261,473	1,513,710	3,808,043		1,953,571
	24,997	1,531,376	2,862,523	1,264,927	22,321,312	61,989	2,402,094	17,429,667	5,344,098	

### Total Intra-ASEAN Trade (Import) - Jan – Sep 2012 (US\$)

	Brunei	Cambodia	Indonesia	Laos	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
	-	-		-	9,224,519	6,183	1,140,426	3,771,657	10,462,568	662,099
	-	-	31,900,000	30,000		30,000	1,600,000	7,300,000	29,800,000	14,800,000
	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A
	-	-	2,683,898	-	10,507,425	-		2,216,091	4,497,629	174,052
	45,000	5,000	26,320,000	-	176,170,000	1,028,000	3,250,000		8,870,000	7,060,000
	489	297	1,074,943	62,108	9,323,602	140,998	91,177	814,143		1,263,751
	-	6,850	1,335,262	500	2,273,530	-	6,933	1,628,200	2,925,066	

## c. Riset aksi pengembangan industri mebel Jepara, 2008-2013

### Riset Aksi Pengembangan Industri Mebel Jepara 2008 - 2013

Melati

IPB Convention Centre  
Bogor, 14 Februari 2013

#### Alur Presentasi

- Latar belakang riset
- Riset aksi rantai nilai mebel
- Skenario 1: merambah ke atas
- Skenario 2: kolaborasi ke bawah
- Skenario 3: pendirian asosiasi UKM mebel
- Skenario 4: sertifikasi hijau
- Proyeksi ke depan
- Langkah selanjutnya

#### Latar belakang riset

- Industri permebelan di tingkat global
- Peran Jepara dalam industri mebel Indonesia
- Distribusi nilai tambah yang tidak seimbang
- Pengaruh relasi kekuasaan dalam rantai nilai mebel



#### Riset Aksi Rantai Nilai Mebel

- Riset aksi dan analisis nilai tambah
- Tujuan riset:
  - a) Meningkatkan fungsi & struktur industri mebel
  - b) Memperbaiki jalur pemasaran UKM mebel
  - c) Memonitor perubahan & memperbaiki strategi riset
- Empat skenario pengembangan industri mebel

#### Skenario 1: Merambah ke Atas



- Meningkatkan akses pasar bagi UKM mebel
- Permasalahan: keterbatasan UKM
- Solusi: peningkatan kompetensi dan kapasitas UKM

#### Skenario 2: Kolaborasi ke Bawah

- Memperbaiki sumber bahan baku bagi UKM mebel
- Permasalahan: keterbatasan bahan baku
- Solusi: pengembangan kebijakan untuk meningkatkan akses bahan baku, peningkatan kapasitas dan kerjasama UKM dengan pedagang kayu, penanaman bibit JUN

### Skenario 3: Pendirian asosiasi UKM

- Menguatkan aksi kolektif UKM mebel
- Pengembangan di Jepara: APKJ
- Pengembangan di level nasional: KPKN
- Menghadapi permasalahan jender



### Skenario 4: Sertifikasi hijau

- Membuka akses UKM terhadap pasar mebel bersertifikasi
- Permasalahan: manajemen bahan baku mebel yang tidak berkelanjutan, terbatasnya pengetahuan dan kapasitas UKM mengenai skema sertifikasi
- Solusi: Pelatihan UKM mengenai skema sertifikasi

### Proyeksi ke Depan

- Capaian riset
- Dampak lainnya
- Industri mebel ke depannya



### Langkah Selanjutnya

- Program yang terintegrasi:
  - a. Bahan baku
  - b. Pemodalán
  - c. Pemasaran
  - d. Sumber daya manusia
  - e. Infrastruktur
  - f. Kelembagaan
- Peran para pihak dalam pelaksanaan program

Terimakasih

## 7.2.4. Session A1.


### Distribution of value-added in forest product and service chains

#### a. Studi dampak dari proyek rantai nilai mebel di Jepara



**Studi Dampak dari Proyek Rantai Nilai Mebel di Jepara**  
Ramadhani Achdiawan, Herry Purnomo and Bayu Shantiko

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**Tujuan**

1. Meningkatkan struktur dan fungsi dari industri mebel untuk keuntungan produsen UMKM
2. Meningkatkan pemasaran oleh produsen UMKM dan pengorganisasiannya
3. Memonitor perubahan sebagai dampak dan penerimaan dini dari inovasi sesuai tujuan 1 dan 2
  - Survey penghidupan produsen UMKM
  - Membuat kriteria dan indikator serta metode untuk memonitor dan menguji perubahan
  - Melakukan monitoring selama proyek berlangsung dan memberikan masukan terhadap masing-masing tujuan sehingga dapat tercapai

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**Meningkatkan struktur dan fungsi dari industri mebel untuk keuntungan produsen UMKM**

Fasilitasi proses pembentukan Asosiasi Pengrajin; Asosiasi Pengrajin Kayu Jepara (APKJ)

Pelatihan untuk memperkuat fungsi dan peran organisasi pengrajin

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**Meningkatkan pemasaran oleh produsen UMKM dan pengorganisasiannya**

Fasilitasi asosiasi pengrajin dan pengrajin kecil untuk mengikuti pameran di berbagai kesempatan baik tingkat nasional maupun internasional

Pengenalan akan pemasaran berbasis internet

Pelatihan yang berkenaan dengan aspek pemasaran serta pelatihan untuk meningkatkan kualitas produk

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**Monitoring; Impact Assessment**

- Pengumpulan data Panel Pelaku Industri Mebel 2008 – 2012
- Survey 2012: Februari - Maret
- Responden
  - Non – APKJ: 43
  - APKJ: 41
    - 11 Champion (Pengurus) APKJ

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**Hasil – Produsen Mebel Jepara**

- Sebanyak 10% Brak yang disurvei tahun 2008 telah tutup di tahun 2012 karena ketiadaan modal dan pasar.
- Median Gross Revenue dari Brak yang masih aktif di tahun 2012 sebesar 222 juta rupiah atau relatif meningkat dari 210 juta rupiah, di tahun 2008.
- Tenaga kerja di tahun 2008 sebanyak 8.2 orang per brak tidak meningkat signifikan menjadi 8.4 orang per brak di tahun 2012
- Orientasi pasar cenderung bergeser ke pasar domestik, ¾ dari Brak yang sebelumnya (2008) suplai pasar ekspor sekarang (2012) mensuplai pasar domestik
- Masalah utama: akses pasar, kualitas dan kuantitas suplai kayu

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## Hasil – APKJ

- Inovasi baru antara lain internet portal, akses pasar
- Anggota APKJ dapat memanfaatkan jaringan usaha APKJ
- Beberapa Anggota APKJ mengalami peningkatan Gross Revenue setelah bergabung dengan APKJ. Sebanyak 17% anggota mengalami peningkatan yang sangat signifikan
- Sebagian besar anggota APKJ memproduksi *semi-finished*, dan 30% memproduksi *semi-finished* and *finished*.
- 78% dari anggota APKJ mengalami peningkatan penjualan dalam 1 tahun terakhir, sementara 44% non APKJ yang mengalami peningkatan penjualan

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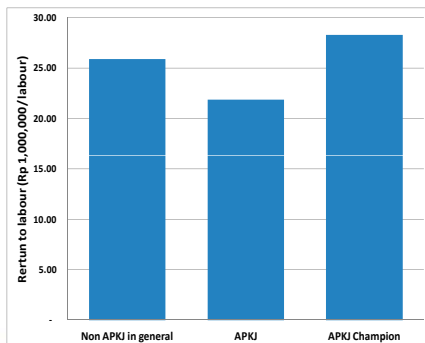
## Hasil – Champion APKJ

- Sebagaimana anggota APKJ lain *Champion* juga menikmati manfaat positif dari APKJ
- Sekitar 67% dari *Champion* menunjukkan bahwa baik penjualan dan keuntungan mereka sekarang lebih baik dari 1, 5 atau 10 tahun yang lalu
- Masalah pemasaran yang merupakan masalah utama sebelum dimulainya kegiatan proyek FVC, sekarang sudah mulai teratasi
- Namun prosesing peningkatan kualitas kayu masih menjadi masalah utama

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## Pengembalian Tenaga Kerja



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## Dinamika Industri Mebel APKJ, *Champion*, Umum

- Anggota APKJ dan *Champion* mengalami peningkatan yang lebih baik dalam industri mebel dibandingkan pelaku industri pada umumnya, at: total penjualan, keuntungan, kuantitas produksi, jumlah pembeli (ekspansi pasar), kuantitas pembelian bahan bak dan jenis item yang diproduksi.
- Persentasi peningkatan yang paling kecil ada pada peningkatan jenis produk yang diproduksi (40%)

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## Dinamika Industri Mebel

Aspect		Dynamic 1 year			Dynamic 5 year		
		stable	Decreasing	Increasing	stable	Decreasing	Increasing
Sale	Non APKJ	35%	21%	44%	26%	14%	60%
	APKJ	15%	4%	81%	7%	4%	89%
	APKJ Champion	14%	14%	71%	14%	7%	79%
Total		26%	14%	61%	16%	10%	73%
Profit	Non APKJ	28%	12%	60%	21%	5%	74%
	APKJ	19%	4%	78%	7%	4%	89%
	APKJ Champion	7%	14%	79%	7%	7%	86%
Total		21%	10%	69%	14%	5%	81%
Production Quantity	Non APKJ	40%	21%	40%	26%	9%	65%
	APKJ	11%	7%	81%	4%	7%	89%
	APKJ Champion	14%	14%	71%	7%	14%	79%
Total		26%	15%	58%	15%	10%	75%
Buyer	Non APKJ	37%	23%	40%	23%	12%	65%
	APKJ	15%	4%	81%	7%	4%	89%
	APKJ Champion	14%	14%	71%	14%	14%	71%
Total		26%	15%	58%	17%	10%	74%
Wood purchasing	Non APKJ	37%	19%	44%	23%	9%	67%
	APKJ	7%	4%	89%	4%	7%	89%
	APKJ Champion	14%	7%	79%	7%	7%	86%
Total		24%	12%	64%	14%	8%	77%
Number of item/ kind	Non APKJ	49%	28%	23%	37%	21%	42%
	APKJ	30%	0%	70%	7%	4%	89%
	APKJ Champion	43%	7%	50%	7%	7%	86%
Total		42%	15%	43%	23%	13%	64%

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## Pembahasan - Umum

- Secara umum Industri mebel Jepara tidak mengalami perubahan drastis dalam 5 tahun terakhir. Namun ini bukan berarti pasar global stabil karena kecenderungan ekspor menurun. Produsen mebel lebih cenderung ke pasar domestik. Sebagaimana 10% industri sudah tutup dan berganti bidang usaha

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## Pembahasan - Manfaat

- Menjadi anggota APKJ telah mendatangkan manfaat, di antaranya; Akses yang lebih baik ke pelatihan, peningkatan kapasitas serta akses pasar yang lebih baik. Berimplikasi positif terhadap *revenue* usaha. Setidaknya 50% dari *Champion* telah berhasil mengakses pinjaman dari BRI setelah mengikuti pelatihan pengelolaan keuangan dari Bank yang sama. Pinjaman yang diajukan berkisar dari 10 hingga 50 juta rupiah dan digunakan sebagai tambahan modal usaha mebel

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## Pembahasan - Aturan

- Aturan dan konsensus harus diberlakukan untuk menjaga keeratan hubungan antara anggota APKJ. Akses ke semua fasilitas yang dimiliki oleh APKJ harus setara antara sesama anggota. Beberapa inovasi baru yang diperkenalkan tidak serta merta diadopsi oleh anggota, ini menunjukkan tingkat pengadopsian masih rendah.

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## Kesimpulan dan Rekomendasi

- Sebagai *Beneficiaries* dari Proyek FVC; APKJ serta *Champion* telah memperoleh akses untuk mendapatkan kesempatan yang lebih luas dalam pengembangan industry mebel
- Perlu untuk mengakses *beneficiaries* dengan jangkauan yang lebih luas dengan bekerjasama dengan APKJ dan memperluas jaringan dengan organisasi lain
- Penguatan peran *Champion* and anggota Asosiasi untuk menjadi agen perubahan

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## b. The impacts of domestic timber trading regulations to small-scale wooden furniture industries in Jepara, Indonesia

### The Impacts of Domestic Timber Trading Regulations to Small-Scale Wooden Furniture Industries in Jepara, Indonesia

Dodik R. Nurrochmat<sup>1</sup>, Efi Y. Yovi<sup>2</sup>, Oki Hadiyati<sup>2</sup>

<sup>1</sup>Department of Forest Management, Faculty of Forestry Bogor Agricultural University (IPB), <sup>2</sup>Directorate General of Forest Utilization Ministry of Forestry of the Republic of Indonesia, Author contact: [dnurrochmat@yahoo.com](mailto:dnurrochmat@yahoo.com); [dnurrochmat@ipb.ac.id](mailto:dnurrochmat@ipb.ac.id)

CIFOR INTERNATIONAL SYMPOSIUM. II CC - BOGOR, 14 FEBRUARY 2013

### Jepara furniture: where the timber come from?

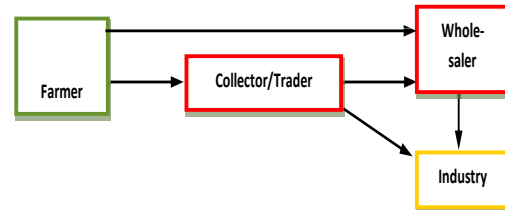
- More than 99% of timber used for furniture originated from outside Jepara's regions (94% of those timbers are log).
- High dependency of Jepara to the timber producer regions.
- Advantages?
- Disadvantages?

### Sources of Timber for Jepara Furniture (selling actors)

Tabel. Sources of wood for furniture industries.

No	Sources of wood	Small scale Industries		Medium scale Industries		Large scale Industries		Total	%
		Number (units)	%	Number (units)	%	Number (units)	%		
		1	Perhutani	23	22,77	14	36,84		
2	Traders	51	50,50	15	39,47	2	25,00	68	46,26
3	Forest smallholders	25	24,75	9	23,68	2	25,00	36	24,49
4	Others	2	1,98	0	0,00	0	0,00	2	1,36
Total		101		38		8		147	100,00

### Marketing channels of Logs



### Sources of timber for Jepara's industry (by provinces)

No.	Sources of timber (Province/Perhutani)	Number of industries (unit)	Percentage (%)
1	Jatim	29	13,30
2	Jateng	66	30,28
3	DIY	15	6,88
4	Jabar	14	6,42
5	Perhutani I	24	11,01
6	Perhutani II	17	7,80
7	Perhutani III	27	12,39
8	Sulawesi	7	3,21
9	Sumatera	18	8,26
10	Banten	1	0,46
Total		218	100,00

### Regulations on Log Production and Allocation

Regulations	Subjects
Forestry Minister Decree No. SK. 382/Menhut-II/2004	Timber Utilization Permit (IPK)
Forestry Minister Regulation No. P.51/Menhut-II/2006	Letter of timber origin (SKAU) for timber transportation from private forests.
Forestry Minister Regulation No. P.55/Menhut-II/2006	Business management of forest products from state forests.
Forestry Minister Regulation No. P.19/Menhut-II/2007	Permit mechanism and extension of working area of timber utilization from industrial timber plantation.
Forestry Minister Regulation No. P.20/Menhut-II/2007	Mechanism for business permit of forest concession (timber utilization in natural forests).
Forestry Minister Regulation No. P.23/Menhut-II/2007	Mechanism for business permit of timber utilization in community plantation forests (HTR).
Forestry Minister Regulation No. P.18/Menhut-II/2007	Technical guidelines for taken & payment of forest resources provision (PSDH) and Reforestation Fund (DR) Community Forest
Forestry Minister Regulation No. P.37/Menhut-II/2007	Working plan of timber utilization permit in industrial forest plantation (HTI) and community forest plantation (HTR)
Forestry Minister Regulation No. P.62/Menhut-II/2008	Guidelines for wood raw material compliance for local needs
Forestry Minister Regulation No. P. 7/Menhut-II/2009	

## Forestry Minister Regulation P. 7/Menhut-II/2009

- First, the provision to allocate all log production for local needs. If the local needs are met, then the rest of logs could be sold to other regions. This provision is binding on logs obtained from Timber Harvesting Permits (IPHHK), Community Forest Utilization Permit (IUPHKm), Timber Utilization Permit (IPK), Private Forest (HR), and Timber Utilization in the Community Forest Plantation Permit (IUPHHK-HTR).
- Second, the provision to allocate a maximum of 5% of log production for local needs. This provision is applied to logs from the large scale forest concessions (HPH), industrial forest plantation (HTI) – included Perum Perhutani, processed timber (KO), timber from auctions (KHL), and timber from forest rehabilitation (HTHR).

## 3 scenarios following P 7/menhut-II/2009

- 1<sup>st</sup> scenario:
  - Perhutani and other large-scale timber producers reduced their timber supply by 5%
- 2<sup>nd</sup> scenario:
  - Timbers from smallholder (private) forests (*Hutan Rakyat*) are allocated totally (100%) for local needs.
- 3<sup>rd</sup> scenario:
  - Accumulation of the scenario 1 and 2.

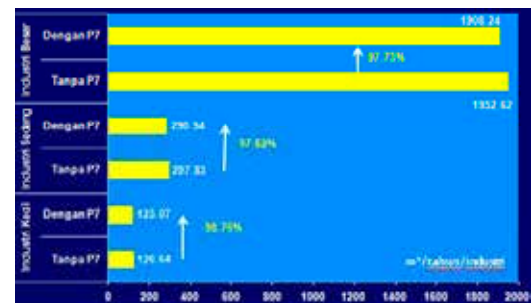
## Consequences of P. 7/Menhut-II/2009

Table 3. Implications of the three policy scenarios on wood allocation compliance for local needs to the Jepara furniture industry

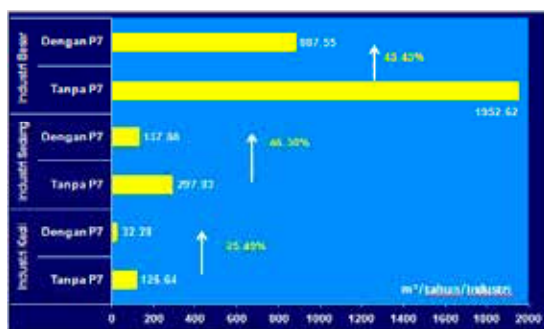
Availability of logs for each unit of Jepara furniture industry	Log allocation policies								
	Scenario-1			Scenario-2			Scenario-3		
	Large scale	Med. scale	Small scale	Large scale	Med. scale	Small scale	Large scale	Med. scale	Small scale
Initial log supply (m <sup>3</sup> /unit)	1.953	298	127	1.953	298	127	1.953	298	127
Percentage of declining log supply	2.27%	2.31%	1.24%	54.65%	54.70%	74.51%	56.82%	56.02%	75.75%
Estimated remaining log supply (m <sup>3</sup> /unit)	1.908	291	125	888	138	32	843	131	31

Source: Hadiyati (2011)

## Impacts of the 1<sup>st</sup> scenario



## Impacts of the 2<sup>nd</sup> scenario



## Concluding remarks

- The raw material of the furniture industries in Jepara, especially small scale industries, are mostly coming from "Hutan Rakyat" (smallholder forests).
- Implementation of P7/Menhut-II/2009 on timber allocation for local purposes will threat seriously Jepara's furniture industries.
- It is estimated that by accumulation of the 5% reduction of log's supply and "timber ban policy" for timber trading inter regions, the large and medium scale wooden furniture in Jepara will decrease their production by ca. 50%.
- Small scale furniture industries will bear the biggest disadvantages due to local timber trade policy (P 7/menhut-II/2013). Timber supply to the small scale furniture industries will decrease by more than 75%.



## c. Ketidakseimbangan distribusi nilai tambah dalam rantai nilai perdagangan rotan



**KETIDAKSEIMBANGAN DISTRIBUSI NILAI TAMBAH DALAM RANTAI NILAI PERDAGANGAN ROTAN**

Oleh :  
Rachman Effendi<sup>1)</sup>,  
Sukanda<sup>2)</sup> dan Tati Rostiwati<sup>3)</sup>

Symposium  
"Value Chains of Furniture, other Forest products and Ecosystem services"  
IPB Convention Centre, 14 February 2013

### LATAR BELAKANG

- maka penting untuk melakukan kajian terhadap rantai nilai perdagangan rotan
- Banyaknya pelaku yang terlibat di sepanjang perdagangan rotan, mulai dari petani, pengumpul, pedagang antar pulau dan pelaku industri.
- Dampak kebijakan tersebut, industri kerajinan rotan mulai bangkit, permintaan rotan terus meningkat karena Karakter rotan yang kuat, lentur dan eksotik dapat tampil dengan berbagai bentuk baik fungsional maupun dekoratif.
- Pemerintah, melalui Permendagri nomor 35 tahun 2011 melakukan larangan ekspor terhadap bahan baku rotan.
- Komoditi rotan sangat potensial di Indonesia. Industri mebel dan kerajinan rotan menjadi terkenal dimanca nagara. Sejak dibukanya kran ekspor bahan baku rotan, industri rotan Indonesia mulai dilupakan sehingga banyak industri rotan yang bangkrut

### PERATURAN TATANIAGA ROTAN

- Tahun 1979 melarang ekspor rotan bulat dalam bentuk asalan. Tahun 1986 (juga) larangan ekspor segala bentuk rotan bulat dan setengah jadi.
- Tahun 1998 membebaskan ekspor segala bentuk rotan bulat dan setengah jadi.
- Tahun 2004 pelarangan ekspor rotan bulat dari hutan alam.
- Tahun 2005 membolehkan ekspor rotan asalan dan rotan setengah jadi.
- Tahun 2009, memperketat ekspor rotan asalan dan setengah jadi. Dan Tahun 2011 melarang Ekspor rotan mentah

### TUJUAN DAN LOKASI PENELITIAN

- ❖ Penelitian ini bertujuan untuk menganalisis distribusi nilai tambah dalam rantai nilai perdagangan rotan
- ❖ Mekomendasi kebijakan yang dapat mendorong kelangsungan industri pengolahan rotan.
- ❖ Lokasi penelitian dilaksanakan di Banjarmasin Propinsi Kalimantan Selatan dan Kab. Cirebon, Propinsi Jawa Barat pada awal tahun 2012.

### METODE PENELITIAN

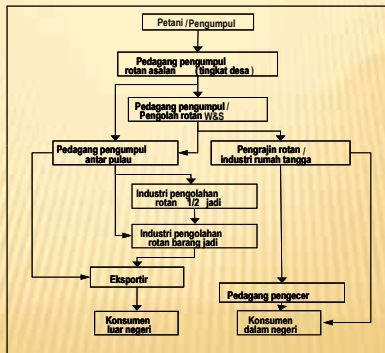
**Pengumpulan data sekunder :**  
Di lakukan dengan cara pencatatan data dan wawancara di Dinas Perindustrian dan Perdagangan Kab. Cirebon

**Pengumpulan data Primer :**  
Dilakukan cara wawancara kepada pelaku rantai pemasaran rotan baik pada kegiatan industri hulu maupun industri hilir

### HASIL PENELITIAN

Hasil penelitian disajikan pada slaid berikut

RANTAI PEMASARAN ROTAN DI KALIMANTAN SELATAN DAN CIREBON



PETANI ROTAN (INDUSTRI HULU)



PENGOLAHAN ROTAN TINGKAT PENGUMPUL (INDUSTRI HULU)



PENANGANAN ROTAN TINGKAT PEDAGANG ANTAR PULAU (INDUSTRI HULU)



PENGOLAHAN ROTAN DI INDUSTRI HILIR (PENGOLAHAN ROTAN KUBU)



PENGOLAHAN ROTAN DI INDUSTRI HILIR (PENGOLAHAN ROTAN CL)



PACKING DAN MUAT DI KONTAINER



PERKEMBANGAN INDUSTRI ROTAN KABUPATEN CIREBON TAHUN 2006 - 2011

NO	TAHUN	UNIT USAHA	TENAGA KERJA	NILAI INVESTASI (Rp.000,-)	KAPASITAS PRODUKSI (Ton)	NILAI PRODUKSI (Rp. 000.-)
1	2011	1.260	54.291	209.003.612	66.123	1.514.244.781
2	2010	1.224	54.184	192.996.711	59.348	1.392.112.174
3	2009	1.172	52.414	189.342.500	57.464	1.361.028.874
4	2008	1.160	65.519	189.162.569	78.718	1.701.285.874
5	2007	1.149	64.898	187.368.787	77.972	1.685.152.991
6	2006	1.123	54.180	183.128.937	76.207	1.647.020.721

Sumber : Dinas Perindustrian dan Perdagangan Kab. Cirebon (2012).

SENTRA INDUSTRI MEBEL DAN KERAJINAN ROTAN DI CIREBON TAHUN 2011

No	Nama Sentra	Unit Usaha
1	Cangkring	60
2	Karangsari	55
3	Tegalsari	250
4	Tegal wangi	524
5	Bodesari	89
6	Bode Lor	67
7	Gombang	50
8	Lurah	30
9	Pamijahan	45
10	Marikangen	37
11	Non Sentra	53
Jumlah		1.260

Sumber : Dinas Perindustrian dan Perdagangan Kab. Cirebon (2012).

PERTUMBUHAN INDUSTRI DAERAH KERAJINAN ROTAN KAB. CIREBON TAHUN 2010 SAMPAI DENGAN TAHUN 2011.

No	Jenis komoditi	Unit usaha		Pertumbuhan	
		2010	2011	Jumlah	%
1	Unit Usaha	1.224	1.260	36	2,85
2	Tenaga kerja	54.184	54.291	107	0,19
3	Nilai investasi (Rp 1.000)	192.996.711	209.003.612	16.006.901	7,65
4	Kapasitas produksi (Ton)	59.348	66.348	7.000	10,55
5	Nilai produksi (Rp 1.000)	1.392.112.174	1.514.244.781	112.133.607	8,07

Sumber : Dinas Perindustrian dan Perdagangan Kab. Cirebon (2012, diolah).

NILAI EKSPOR SENTRA INDUSTRI ROTAN KAB. CIREBON DARI TAHUN 2005 - 2011

No	Tahun	Nilai Ekspor (Rp 1.000)
1	2005	120.331.844
2	2006	116.800.093
3	2007	115.202.547
4	2008	130.726.860
5	2009	96.851.366
6	2010	112.182.360
7	2011	97.249.949

Sumber : Dinas Perindustrian dan Perdagangan Kab. Cirebon (2012).

SUMBER BAHAN BAKU DI SENTRA INDUSTRI MEBEL DAN KERAJINAN ROTAN DI CIREBON

No	Jenis	Peruntukan	Asal bahan baku
1	Manau	Rangka	Sulawesi
2	Semambu	Rangka	Sulawesi
3	Tohiti	Rangka	Sulawesi
4	Kubu	Anyaman	Kalimantan, Sumatera
5	Jawit	Anyaman	Kalimantan
6	Lacak	Anyaman	Kalimantan, Sumatera
7	Slimit	Anyaman	Aceh
8	Sarang buaya	Anyaman	Kalimantan, Sulawesi
9	CL	Anyaman	Kalimantan, Sumatera, Jawa

Sumber : Dinas Perindustrian dan Perdagangan Kab. Cirebon (2012) dan hasil wawancara dengan pengrajin.

HARGA BAHAN BAKU ROTAN DI SENTRA IDUSTRI CIREBON

No	Jenis	Harga (Rp/Kg)	Asal bahan baku
1	Manau	16.000	Sulawesi
2	Semambu	8.000	Sulawesi
3	Tohiti	15.000	Sulawesi
4	Kubu	12.500	Kalimantan,Sumatera
5	Jawit	11.000	Kalimantan
6	Lacak	15.000	Kalimantan,Sumatera
7	Slimit	32.000	Aceh
8	Sarang buaya	16.000	Kalimantan, Sulawesi
9	CL	7.000	Kalimantan, Sumatera, Jawa

DISTRIBUSI NILAI TAMBAH PARA AKTOR DALAM RANTAI NILAI PERDAGANGAN ROTAN (RP/1 SET KURSI TAMU)

No	Aktor	Pendapatan (Rp/1 set kursi tamu)	Pengeluaran (Rp)	Nilai Tambah (Rp)	Persentasi (%)
1	Petani Pembudidaya/Pemungut	140.000	70.000	70.000	4,77
2	Pedagang Pengumpul/Perantara	185.000	150.000	35.000	2,39
3	Pedagang Pengolah Rotan WS	210.000	170.000	40.000	2,73
4	Pedagang Antar Pulau	450.000	350.000	100.000	6,82
5	Industri Pengolah Kecil/ Pengrajin	845.000	640.000	205.000	13,97
6	Industri Pengolah Menengah/Besar	1.330.000	1.008.000	322.000	21,95
7	Pedagang Lokal/Regional	1800.000	1.530.000	270.000	18,40
8	Eksportir	2.400.000	1.975.000	425.000	28,97
<b>Jumlah Nilai Tambah Total</b>				<b>1.467.000</b>	<b>100</b>

PENUTUP

Kesimpulan

1. Industri mebel dan anyaman rotan di Kabupaten Cirebon memiliki potensi yang cukup besar untuk dikembangkan
2. Dengan mengetahui rantai nilai dari industri mebel dan anyaman tersebut, telah cukup jelas, bahwa industri mebel dan anyaman di Kabupaten Cirebon saat ini memerlukan berbagai dukungan dari berbagai pihak terkait (Kehutanan, Perdagangan, Perindustrian, Perbankan/Penanam Modal dan Pemda), agar potensi industri yang ada dapat memberikan nilai tambah yang besar bagi pendapatan masyarakat, daerah dan devisa negara.
3. Kelangsungan industri mebel dan anyaman rotan sangat dipengaruhi oleh jaminan kepastian pasar dan kelangsungan bahan baku

REKOMENDASI

1. Penghapusan kewajiban terhadap para pemungut, petani dan pedagang pengumpul rotan untuk memiliki surat izin pemungutan rotan.
2. Penghapusan PSDH Untuk Jenis rotan Tanaman, untuk merangsang masyarakat lokal untuk melestarikan dan membudidayakan rotan.
3. Kebijakan penyerapan rotan yang dihasilkan oleh petani/pemungut rotan oleh industri pengolahan berdasarkan patokan harga yang ditetapkan pemerintah yang mengacu hasil perpaduan antara harga domestik dan harga eksplor

## TERIMA KASIH



### CONTOH KEUNTUNGAN YANG DIPEROLEH PELAKU EKSPORTIR



Biaya produksi :	
Rangka kayu/Rotan	: Rp 52.500
Anyaman rotan	: Rp 145.000
Asesoris	: Rp 62.500
( Cuci Rp 1000, kucion Rp 50.000, cuplik Rp 3.000, Label Rp 3500, bok Rp 5.000)	
Fhishing	: Rp 45.000
Paking	: Rp 15.000
Biaya produksi	: Rp 320.000
Pengangkutan ke pelabuhan Jkt	: Rp 30.000
Oper head	: Rp 35.000
Total harga pokok	: Rp 385.000
Harga Jual \$48.15 (\$ =Rp 9600)	: Rp 462.240
Keuntungan	: Rp 77.240 ( 17 %)

### CONTOH KEUNTUNGAN YANG DIPEROLEH PELAKU EKSPORTIR



Biaya produksi :	
Rangka kayu/Rotan	: Rp 64.000
Anyaman rotan	: Rp 110.000
Asesoris	: Rp 78.200 ( Cuci Rp 1000, kucion Rp 45.000, cuplik Rp 1.500, Label Rp 3.200, kulit Rp 6.500, lining plastic Rp 5.500 dan box Rp 15.500)
Fhishing	: Rp 20.000
Paking	: Rp 5.000
Biaya produksi	: Rp 277.200
Pengangkutan ke pelabuhan Jkt	: Rp 21.000
Oper head	: Rp 29.820
Total harga pokok	: Rp 328.020
Harga Jual \$42.05	: Rp 403.680
Keuntungan	: Rp 75.480 ( 19 %)

## d. Peran kelembagaan pengrajin kecil dalam meningkatkan distribusi nilai tambah industri mebel


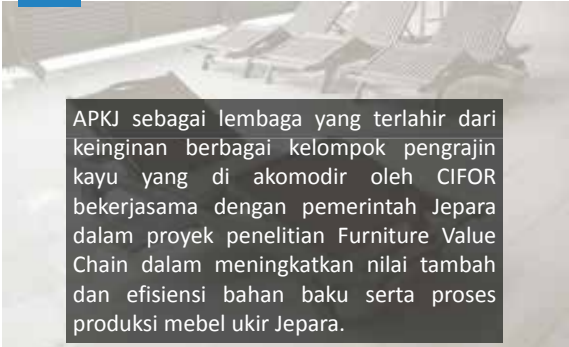
PERAN KELEMBAGAAN PENGRAJIN KECIL DALAM MENINGKATKAN DISTRIBUSI NILAI TAMBAH INDUSTRI MEBEL




Oleh :  
**MARGONO**  
KETUA APKJ

Team penyusun : Legiman Arya

Pendahuluan


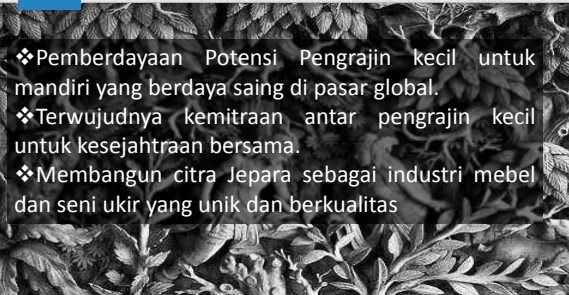
APKJ sebagai lembaga yang terlahir dari keinginan berbagai kelompok pengrajin kayu yang di akomodir oleh CIFOR bekerjasama dengan pemerintah Jepara dalam proyek penelitian Furniture Value Chain dalam meningkatkan nilai tambah dan efisiensi bahan baku serta proses produksi mebel ukir Jepara.

Profil APKJ





- ❖ APKJ lembaga sosial yang independen serta memiliki sistim kemitraan terbuka.
- ❖ APKJ sebagai lembaga yang menyerap dan menyuarakan aspirasi pengrajin kecil jepara.
- ❖ APKJ sebagai asosiasi yang mewakili seluruh pengrajin kayu dari berbagai kelompok produk kerajinan yang tersebar diseluruh wilayah Jepara.
- ❖ APKJ lembaga yang membangun sinergi dalam berbagai program antar pihak untuk mendorong terciptanya kemandirian usaha kecil.
- ❖ Menjaga serta melestarikan budaya ukir dan mebel jepara untuk ditumbuh kembangkan dalam nilai kreatif dan inovatif serta kompetitif yang memiliki dampak ekonomi.


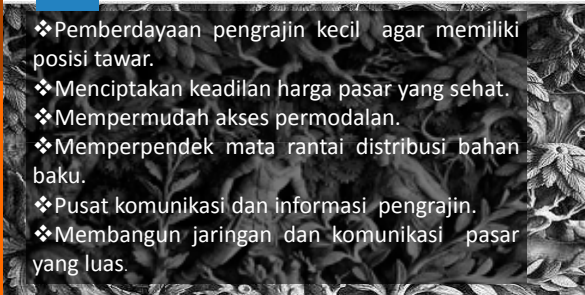
Visi APKJ


- ❖ Pemberdayaan Potensi Pengrajin kecil untuk mandiri yang berdaya saing di pasar global.
- ❖ Terwujudnya kemitraan antar pengrajin kecil untuk kesejahteraan bersama.
- ❖ Membangun citra Jepara sebagai industri mebel dan seni ukir yang unik dan berkualitas



Misi APKJ

- ❖ Pemberdayaan pengrajin kecil agar memiliki posisi tawar.
- ❖ Menciptakan keadilan harga pasar yang sehat.
- ❖ Mempermudah akses permodalan.
- ❖ Memperpendek mata rantai distribusi bahan baku.
- ❖ Pusat komunikasi dan informasi pengrajin.
- ❖ Membangun jaringan dan komunikasi pasar yang luas.



Permasalahan Umum yang dihadapi Pelaku Industri Kecil




Masih rendahnya SDM pelaku industri kecil yang bisa mempengaruhi produktifitas yang berdampak terhadap rendahnya kualitas serta nilai tawar yang tidak sehat.

Bahan baku kayu serta bahan -bahan pendukung yang terus melonjak harganya membuat pelaku industri kecil utamanya di jepara menjadi terpuruk bahkan semakin merosot jumlahnya , karena banyak yang koleb.

Kebijakan pemerintah yang tidak berpihak sepenuhnya terhadap pelaku usaha kecil / UMKM mendorong kedalam persoalan-persoalan yang rumit dan tidak tepat sasaran sehingga mempengaruhi berkurangnya pertumbuhan pelaku usaha kecil.

Akses permodalan dengan bunga ringan masih sulit dijangkau oleh pelaku industri kecil/umkm sehingga banyak pelaku usaha yang terjebak di permainan rentenir hingga menimbulkan kebangkrutan serta hilangnya lapangan pekerjaan.

Tidak memiliki akses pasar secara luas dan langsung karena terbatasnya SDM dan permodalan menjadikan pelaku usaha kecil khususnya pengrajin di jepara pasarnya dikuasai para tengkulak dan broker yang selalu menekan harga dan mempersulit pembayaran serta mengakibatkan berkurangnya pendapatan.

Lemahnya sinergitas pihak-pihak terkait yang bisa memberikan pendampingan kepada para pelaku usaha kecil secara kongkrit dan riil dari hulu sampai hilir.

### Upaya APKJ dalam Meningkatkan SDM




- Melibatkan para anggota dalam pelatihan-pelatihan yang difasilitasi pihak pemerintah melalui dinas-dinas terkait dalam hal desain, IT, manajemen, komunikasi, marketing, kewirausahaan dll.
- Membangun kerjasama dengan lembaga nasional dan internasional yang terkait dengan tekhnologi kehutanan seperti CIFOR, ACIAR, IPB, LITBANG, FORDA, UGM, PIKA dalam bidang pengeringan, pengawetan, Konstruksi dan finishing, dll.
- Mendorong implementasi berbagai pelatihan dalam kehidupan tata laksana industri menuju kehidupan usaha yang lebih berkualitas
- Meningkatkan produk-produk berkualitas yang memiliki standar ekspor dengan mengacu pada green product untuk memperoleh kepercayaan pasar

### Upaya APKJ dalam Memenuhi Tuntutan Permodalan






- Terbentuknya koperasi / KSU APKJ sebagai lembaga yang mampu mengakses lembaga permodalan baik dari pemerintah maupun non pemerintah untuk dapat disalurkan kepada para anggota dalam menunjang produktifitas usahanya.
- Menjalin hubungan baik dengan pemerintah lewat Disperindag sebagai mediator dalam mendekati akses modal dari pihak perbankan atau pihak terkait.
- Membangun kerjasama dengan beberapa lembaga terkait yang memiliki program pinjaman lunak dengan suku bunga yang ringan sebagai kemitraan yang saling menguntungkan.
- Menjabatani terserapnya pinjaman dengan suku bunga ringan seperti KUR dan sejenisnya untuk menunjang para pengrajin kecil yang kurang sehat.

### Upaya APKJ dalam Memenuhi Kebutuhan Bahan Baku Produksi



Membangun komunikasi dengan para petani hutan untuk memperoleh informasi kayu secara langsung dan bisa dilanjutkan dengan adanya kerjasama yang saling menguntungkan antara kelompok tani dan para pelaku industri.

Melakukan penanaman dan memperkenalkan tanaman kayu cepat tumbuh, utamanya pohon jati hasil penemuan penelitian kehutanan untuk memenuhi kebutuhan kayu industri dalam jangka pendek dan menengah.

Proaktif dalam menyuarakan perlunya pelaku usaha di bidang per kayu agar bisa memiliki produk-produk ramah lingkungan dan melengkapi dokumen kayu legal sebagai bentuk dukungan adanya program SVLK.



### Upaya APKJ Meningkatkan Jaringan Pasar





- Mengikutsertakan produk-produk anggota APKJ dalam event-event pameran berskala nasional dan internasional.
- Pemanfaatan website sebagai media online dalam melakukan promosi secara lebih luas, serta penyediaan katalogue dan media-media pendukung yang lain.
- Menginformasikan jenis-jenis produk mebel dan ukir Jepara melalui Peta Wisata Belanja Mebel Jepara utamanya di sentral patung dan Sentra Relief yang menjadi Icon ukir Jepara
- Menyentralkan produk-produk berkualitas milik anggota APKJ yang dikemas dalam KUB (Kelompok Usaha Bersama) berbentuk workshop dan showroom sebagai bentuk pelayanan langsung terhadap para customer yang menampilkan produk berkualitas serta memiliki legalitas dokumen.




**TERIMAKASIH**

## 7.2.5. Session A2.


### Markets, institutions and governance of value chains

#### a. The value chain of smallholder plantation timber

**THE VALUE CHAIN OF SMALLHOLDER  
PLANTATION TIMBER**

*How much room do we have for improving  
the farm gate price?*

**Dede Rohadi and Tuti Herawati**




Symposium "Value Chains of Furniture, other Forest products  
and Ecosystem services"  
IPB Convention Centre, 14 February 2013

**Presentation Outline**

- 1. Introduction**
- 2. Methods**
- 3. Results and Discussion**
- 4. Conclusions**

**Introduction**

- 1. Smallholder timber plantations play important roles on rural development and support timber based industries.**
- 2. Its development is challenged by various factors, including inefficient and or unfair value chain in the marketing system.**
- 3. The weakest point along the value chain, i.e. growers (farmers) needs more attention.**
- 4. Some lessons learnt from completed and ongoing research project are available for improving the economic benefits to smallholders.**



**Methods**

**Methods**

- 1. Study approach**
  - The concept of 'value chain' :
    - a sequence of activities, such as production, processing and marketing, that create and build value in a product or service; and
    - a network of functional relationships that work together to reach an objective
  - Scope of value chain in this study :  
Producer (grower) → consumers (sawntimber users)

Source: Cromme, N., et al. (2010). Strengthening potato value chains: Technical and policy options for developing countries. Rome: FAO.

**Methods**

- 1. Study approach**
  - The findings in this paper were based on completed research project (not designed for VC analyses) and on going research project (designed for VC analyses)




## Methods

### 1. Study approach

- The completed projects:

Case study	Location	Timber species	Year of data collection	Remarks
1	Gunungkidul District (8 villages, 275 respondents)	Teak ( <i>Tectona grandis</i> )	2008-2010	ACIAR Project
2	Tanah Laut District (Asem Jaya village. ± 50 respondents)	Jabon ( <i>Anthocephalus cadamba</i> )	2008-2010	BMZ Project



## Methods

### 1. Study approach

- The ongoing projects:

Case study	Location	Timber species	Year of data collection	Remarks
1	Sumbawa District (Semamung village, preliminary observation)	Teak	2012	ACIAR Project
2	Pati District (2 villages, preliminary observation)	Sengon ( <i>Paraserianthes falcataria</i> )	2012	ACIAR Project
3	Krui, West Lampung (Preliminary observation)	Shorea and mix species	2013	ITTO Project


## Methods

### 2. Data collection:

- Snowball method (entry with different starting points)
- Interviews

### 3. Data analyses:

- Descriptive
- Financial analyses (margin, NPV, BCR)



## Results and Discussions

## Marketing chains of smallholder timber products

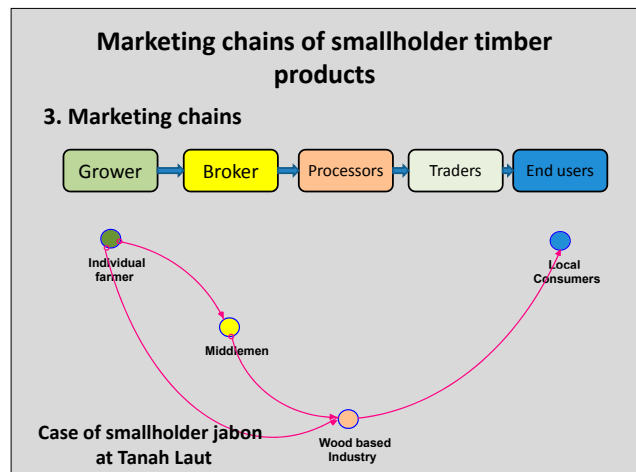
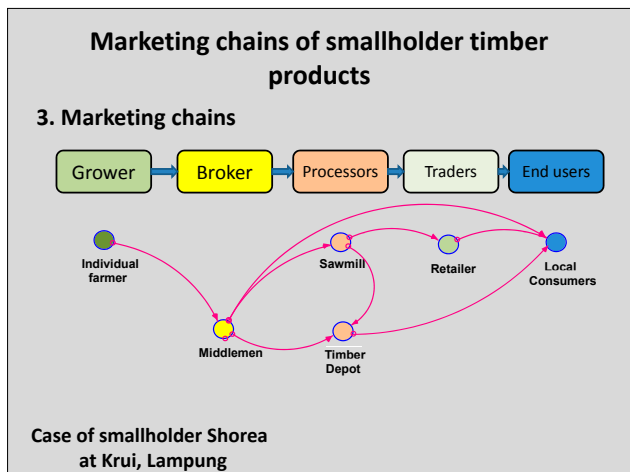
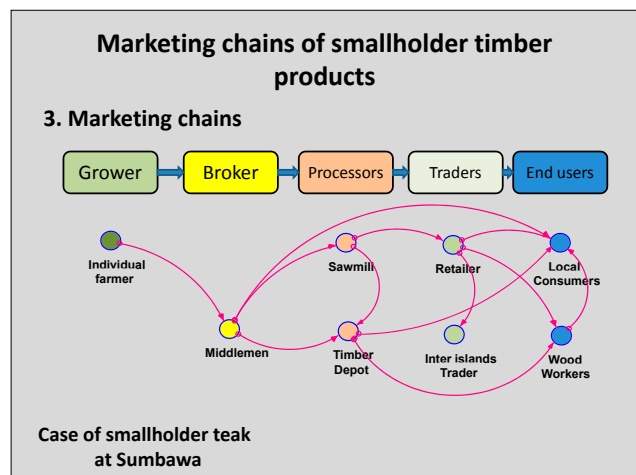
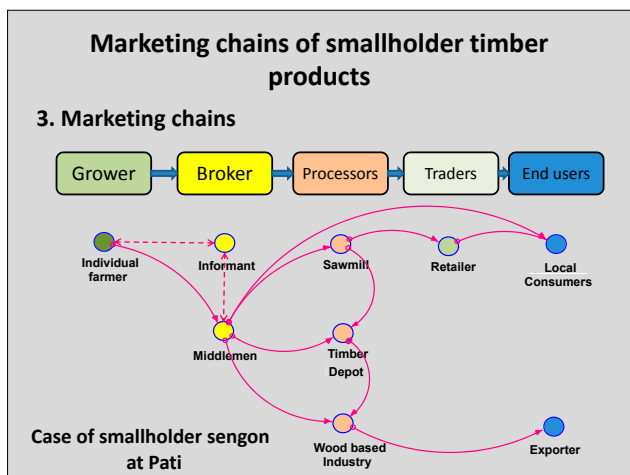
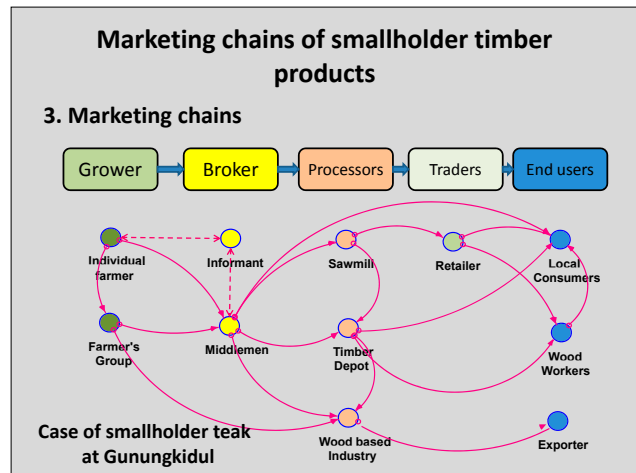
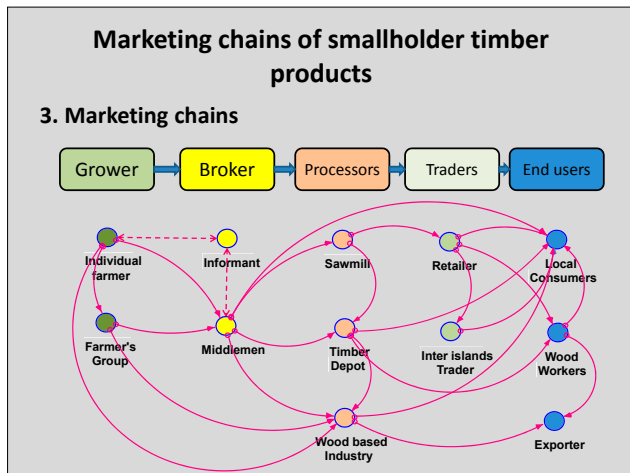
### 1. Actors involved in the marketing chain

Growers	Brokers	Processors	Traders	Consumers
<ul style="list-style-type: none"> <li>• Individual farmer</li> </ul>	<ul style="list-style-type: none"> <li>• Informant (e.g. <i>Blantik</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Sawmill</li> </ul>	<ul style="list-style-type: none"> <li>• Retailer</li> </ul>	<ul style="list-style-type: none"> <li>• Local consumer (HH)</li> </ul>
<ul style="list-style-type: none"> <li>• Farmer's Group</li> </ul>	<ul style="list-style-type: none"> <li>• Middlemen (e.g. <i>Pengepul, Penebas, Chainsaw owner</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Timber Depot</li> </ul>	<ul style="list-style-type: none"> <li>• Timber Depot</li> </ul>	<ul style="list-style-type: none"> <li>• Wood worker (e.g. wood carver, house frame maker, furniture maker)</li> </ul>
		<ul style="list-style-type: none"> <li>• Wood based industry</li> </ul>	<ul style="list-style-type: none"> <li>• Inter island trader</li> </ul>	<ul style="list-style-type: none"> <li>• Exporter</li> </ul>

## Marketing chains of smallholder timber products

### 2. Roles of actors

Growers	Brokers	Processors	Traders	Consumers
<ul style="list-style-type: none"> <li>• Individual farmer:                             <ul style="list-style-type: none"> <li>- Exchange Information</li> <li>- Growing trees</li> <li>- Selling trees individually</li> </ul> </li> <li>• Farmer's Group:                             <ul style="list-style-type: none"> <li>- Growing trees</li> <li>- Selling trees collectively</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Informant:                             <ul style="list-style-type: none"> <li>- Exchange Information</li> </ul> </li> <li>• Middlemen:                             <ul style="list-style-type: none"> <li>- Harvesting trees and produce logs or planks</li> <li>- Transporting timber</li> <li>- Manage timber transport documents (SKAU, IPKTM)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Sawmill:                             <ul style="list-style-type: none"> <li>- Processing logs/planks into sawntimber</li> <li>- Manage timber transport documents (SAKO)</li> <li>- Selling sawntimber</li> </ul> </li> <li>• Timber Depot:                             <ul style="list-style-type: none"> <li>- Processing and selling logs/planks or sawntimber</li> </ul> </li> <li>• Wood based industry:                             <ul style="list-style-type: none"> <li>- Processing timber into finished products</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Retailer:                             <ul style="list-style-type: none"> <li>- Selling sawntimber to end consumers</li> </ul> </li> <li>• Timber Depot:                             <ul style="list-style-type: none"> <li>- Processing and selling logs/planks or sawntimber</li> </ul> </li> <li>• Inter island trader:                             <ul style="list-style-type: none"> <li>- Transporting timber inter islands</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Local consumer (HH)</li> <li>• Wood workers:                             <ul style="list-style-type: none"> <li>- Processing timber into specific wooden products</li> </ul> </li> <li>• Exporter:                             <ul style="list-style-type: none"> <li>- Export finish products</li> </ul> </li> </ul>



### 3. Marketing chains

#### Marketing chains possibilities of the studied cases

No.	Cases	Marketing chain possibilities
1	Smallholder teak - Gunungkidul	192
2	Smallholder sengon - Pati	8
3	Smallholder teak - Sumbawa	36
4	Smallholder shorea - Lampung	6
5	Smallholder jabon – Tanah Laut	2

### Marketing chains of smallholder timber products

#### 4. Lessons learnt on profit margin

Farm gate price of smallholder teak at Gunungkidul

Tree age (yr)	DBH (cm)			Farm gate price (USD/tree)			Volume (m3)			Estimated farm gate price (USD/m3)
	Min	Max	Median	Min	Max	Median	Min	Max	Median	
10	12	18	14	3	6	4	0.045	0.189	0.142	28.169
15	13	31	17	5	30	7	0.060	0.515	0.217	32.258
20	21	45	27	10	265	60	0.307	1.061	0.487	123.203
25	23	49	34	20	296	110	0.320	1.321	0.664	165.663

Note: USD 1 = Rp 10,000. Harvesting cost USD 73.73 /m3.

Data was based on inventory of 227 parcels of teak farms and Rapid Market Appraisal on 20 local wood traders

Source: Kurniawan and Roshetko (2009)

### Marketing chains of smallholder timber products

#### 4. Lessons learnt on profit margin

An illustration of marketing margin of teak middlemen (Gunungkidul)

- Cost of purchasing teak trees (8 trees, various sizes) = Rp 975,000
- Operational costs:
  - Rental cost of chainsaw = Rp 180,000
  - Chainsaw operator = Rp 40,000
  - Cost for log hauling = Rp 210,000
  - Transport and landing = Rp 100,000
  - Timber documents:
    - SIT (harvest permit) = Rp 20,000
    - SKSKB (transport) = Rp 230,000
- Selling revenue:
 

Diameter class	Volume (m3)	Local price (Rp/m3)	Total revenue (Rp)
UGD	0.134	2,600,000	348,400
UD	0.713	1,600,000	1,140,800
UP	0.333	1,000,000	333,000
DL	0.355	500,000	177,500
Piton	0.06	350,000	21,000
Total	1.595		2,020,700

- Profit margin = Rp (2,020,700 – 975,000 – 780,000) = Rp 265,700 (15% of the investment)
- Transaction cost (timber document) = Rp 250,000 (14% of the investment or 32% of the operational costs)

### Marketing chains of smallholder timber products

#### 4. Lessons learnt on profit margin

An illustration of marketing margin of teak middlemen (Sumbawa)

- Cost of purchasing teak trees (1 ha, 20 trees, various sizes) = Rp 4,500,000
- Operational costs = Rp 2,000,000
- Selling revenue = 80 squared planks valued at Rp 12,000,000
- Profit margin = Rp (12,000,000 – 4,500,000 – 2,000,000) = Rp 5,500,000 (85% of the investment)
- Period of selling transaction : 1 month

### Marketing chains of smallholder timber products

#### 4. Lessons learnt on profit margin

The case of smallholder jabon plantation (Tanah Laut)

- Cost of plantation establishment (1 ha, 500 trees) = Rp 3,500,000
- Cost of plantation maintenance (3 yrs) = Rp 3,000,000
- Harvesting rotation:
  - Thinning (15 yrs) ~ 115 m3
  - Final harvest (25 yrs) ~ 225 m3
- Selling prices:
  - Lowest estimation = Rp 125,000/m3
  - Highest estimation = Rp 225,000/m3
- NPV:
  - Low price = (-) (BCR = 0.99)
  - High price = Rp 6 million (BCR = 2.17)

### Challenges for improving grower's economic benefits

1. Thin market
  - No real demand at micro scale depress the farm gate price.
  - The existed timber stock has not yet reach economic scale of potential buyers (wood based industries) to operate (e.g. smallholder jabon case at Tanah Laut).
2. Premature harvest
  - Farmers often forced to prematurely harvest their timber due to urgent need for cash (slash for cash/tebang butuh), eliminating the potential to get higher price for their timber.
  - Limited access of farmers to microcredit.

### Challenges for improving grower's economic benefits

3. Weak farmer's bargaining position
  - Limited access to market information.
  - High transaction cost to get timber transport documents.
  - Lack of knowledge and skill on marketing variables (timber volume estimation, timber grading and price, harvesting skill).
4. Limited capital (land ownership in Java; production capital in Lampung)
5. Low competitive of timber plantations compare to other commercial crops (e.g. rubber and oil palm)

### Challenges for improving grower's economic benefits

6. Poor timber management
  - Market do not respond positively to farmer's investment on best silviculture practices.
  - Lack of knowledge and skill on best silviculture practices.
7. Low added value
  - Bulky characteristic of timber causing high transportation cost.
  - Limited business link between farmer's group and wood based industries, reducing the potential for improving value added of smallholder timber.
  - Lack of farmer's skill to add value on their timber.

### Options for improving grower's economic benefits

1. Facilitate business link between farmer's group and timber base industries
  - Product requirements (quantity, quality and price).
  - Business contract.
2. Develop appropriate micro credit schemes
  - Understand credit needs and smallholder financial behavior.
  - Facilitate farmer's group access to micro credit vendors.
  - Upgrade institutional capacity of farmer's group organization.
3. Improve farmer access to capital ;
  - Simplify farmer's access to state forest lands (Java)
  - Develop appropriate credit facilities (Lampung).

### Options for improving grower's economic benefits

4. Improve farmer's capacity through trainings:
  - Timber volume estimation and grading.
  - Best silviculture practices.
  - Timber processing (House frame and furniture making).

### Conclusions and Recommendations

1. Smallholder timber plantations have significant potential to provide economic benefits to farmers, but they are facing significant challenges to achieve sustain business.
2. Major challenges that hindrance better economic return to timber growers are:
  - Limited market access
  - Premature harvest
  - Weak farmer's bargaining position
  - Limited land ownership and production capital
  - Poor timber plantation management
  - Low added value of timber products

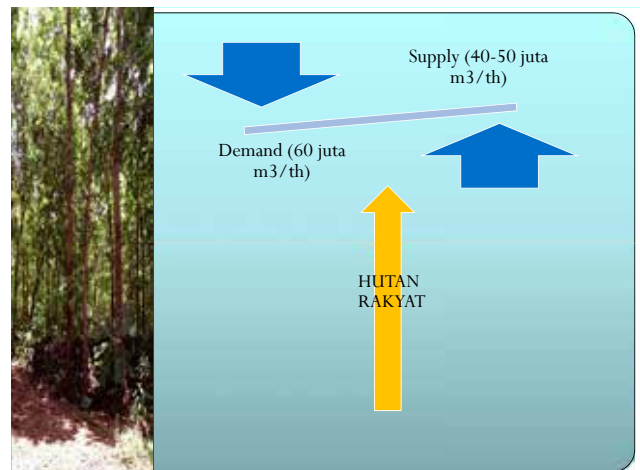
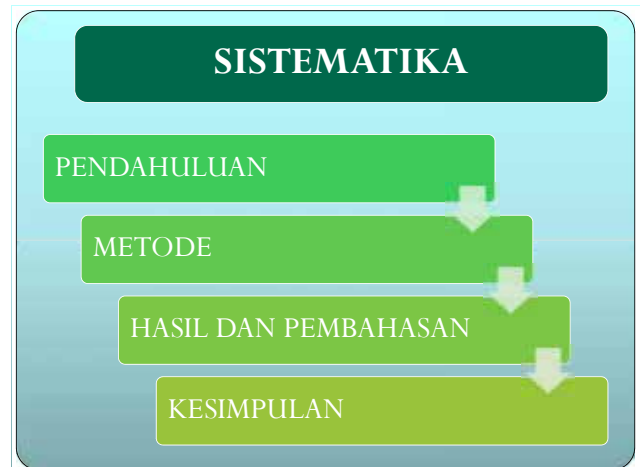
### Conclusions and Recommendations

3. Intervention options for improving economic benefits to growers are:
  - Facilitate farmer's collective marketing and business link with timber based industries.
  - Develop appropriate micro credit schemes
  - Improve farmer's access to state forest land and credit facilities
  - Improve farmer's knowledge and skill in timber marketing and value added processing.

## b. Sistem pemasaran kayu rakyat

SISTEM PEMASARAN KAYU RAKYAT  
(Studi Kasus di Hutan Rakyat Gunungkidul)

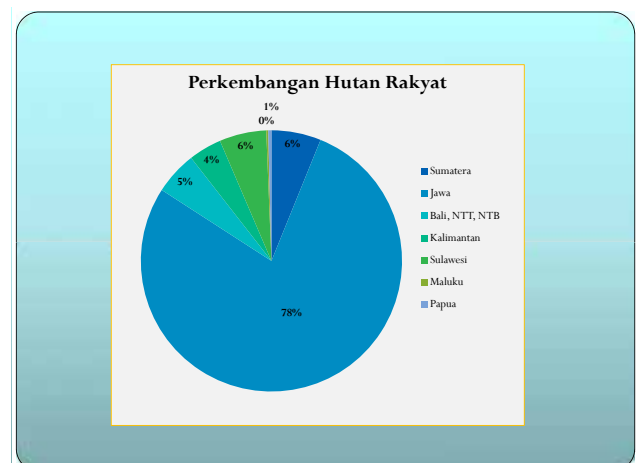
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**Silvi Nur Oktalina**



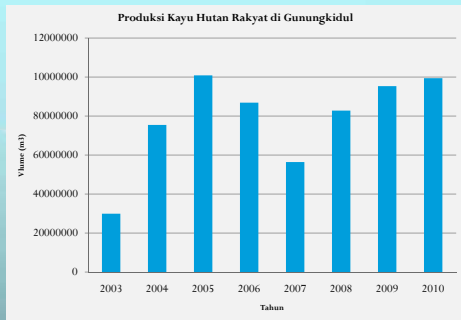
### Perkembangan Hutan Rakyat di Indonesia

No	Wilayah	Luas (ha)	Potensi Siap Panen (m <sup>3</sup> )	Potensi Standing stock (m <sup>3</sup> )
1	Sumatera	220.404	1.285.690	7.714.143
2	Jawa	2.799.181	16.328.556	97.971.335
3	Bali, NTB, NTT	191.189	1.115.269	6.691.612
4	Kalimantan	147.344	859.504	5.157.023
5	Sulawesi	208.511	1.216.315	7.297.892
6	Maluku	8.550	49.875	229.250
7	Papua	14.165	82.627	495.765
		3.589.343	20.937.836	125.627.018

Sumber: Direktorat RHL, Ditjen RPLPS Kementerian Kehutanan (2009)

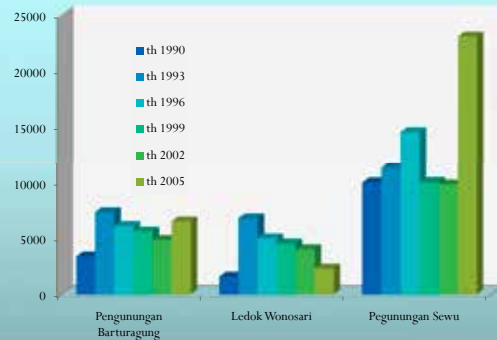


## Hutan Rakyat Gunungkidul



Sumber: Dinas Kehutanan dan Perkebunan Gunungkidul, 2011

## Luas Hutan Rakyat di Gunung Kidul



Sumber: Dinas Kehutanan dan Perkebunan Gunungkidul, 2006

## Hutan Rakyat Gunungkidul Tahun 2010

- Luas : 30.576 ha
- Produksi:
  - Jati : 85.403, 815 m<sup>3</sup>
  - Mahoni : 6.696,310 m<sup>3</sup>
  - Sono : 3.360,773 m<sup>3</sup>
- Kontribusi terhadap PAD Rp. 570 juta (2% dari total PAD)

## Permasalahan Pengelolaan Hutan Rakyat

- 1 • Kurangnya pengetahuan pasar terkait dengan informasi harga dan kualitas kayu
- 2 • Pasar lokal yang belum kompetitif
- 3 • Keterbatasan kemampuan untuk meningkatkan skala ekonomi
- 4 • Pengetahuan dan ketrampilan teknik silvikultur yang rendah
- 5 • Penggunaan bibit dengan genetik yang rendah

Sumber: Proyek ACIAR FST/2004/058 dan FST/2005/177

## Tujuan Penelitian

- **Menganalisis sistem pemasaran kayu rakyat di Gunungkidul**
  - analisa komoditi
  - analisa lembaga
  - analisa fungsi

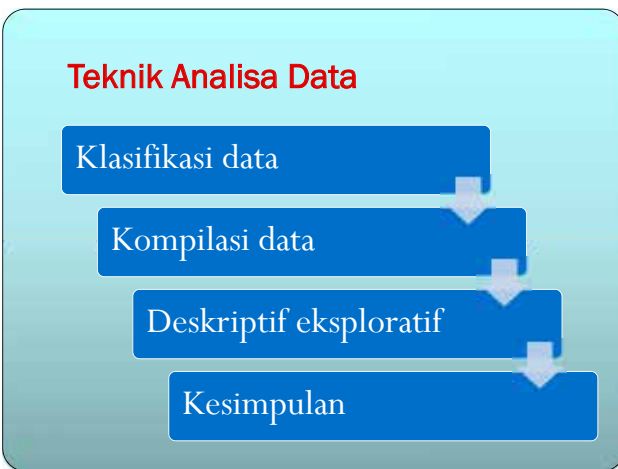
## Metode Penelitian

Pendekatan komoditi

Pendekatan institusi

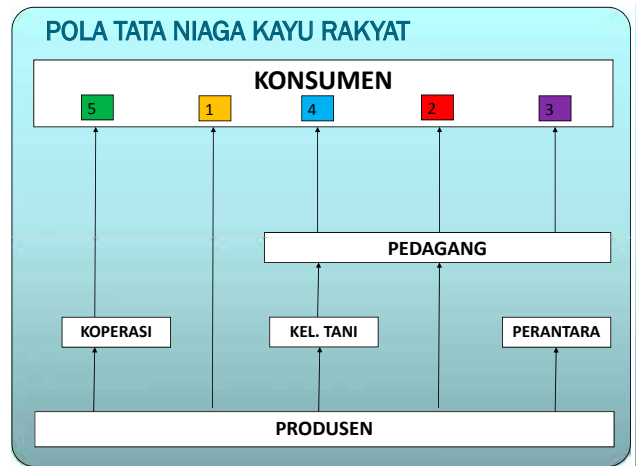
Pendekatan fungsi

Obyek	Lokasi produsen	Pengelolaan hutan rakyat
<ul style="list-style-type: none"> <li>Sistem distribusi kayu rakyat Gunungkidul</li> </ul>	<ul style="list-style-type: none"> <li>Desa Girisekar</li> <li>Desa Pacarejo</li> <li>Desa Katongan</li> </ul>	<ul style="list-style-type: none"> <li>sertifikasi</li> <li>tradisional</li> </ul>



### HASIL DAN PEMBAHASAN

<b>KOMODITI</b>	<ul style="list-style-type: none"> <li>JATI (89% dari total produksi)</li> </ul>
<b>Pengelolaan</b>	<ul style="list-style-type: none"> <li>Sertifikasi (VLK, LEI, FSC)</li> <li>Tradisional</li> </ul>
<b>Saluran distribusi</b>	<ul style="list-style-type: none"> <li>Langsung (petani → konsumen)</li> <li>Tidak langsung (melibatkan perantara dan pedagang)</li> </ul>



### Faktor yang mempengaruhi pola distribusi kayu rakyat

- Pola pengelolaan (tersertifikasi; tradisional)
- Jarak antara produsen dan konsumen
- Jumlah konsumen potensial.
- Konsentrasi geografis konsumen.
- Kemampuan pedagang dalam mengakses modal dan pasar.

### KESIMPULAN

#### 1. Pola tata niaga kayu di Gunungkidul secara garis besar terdapat 5 pola, yaitu:

- Pola 1 : Produsen → Konsumen
- Pola 2 : Produsen → Pedagang → Konsumen
- Pola 3 : Produsen → Perantara → Pedagang → Konsumen
- Pola 4 : Produsen → Kelompok tani → Pedagang → Konsumen
- Pola 5 : Produsen → Koperasi → Konsumen

#### 2. Faktor-faktor yang mempengaruhi pola distribusi kayu rakyat di Gunungkidul antara lain pengelolaan hutan rakyat bersertifikat atau masih tradisional, Jarak antara produsen dan konsumen, jumlah konsumen potensial, konsentrasi geografis konsumen, kemampuan pedagang dalam mengakses modal dan pasar.







**c. Meningkatkan pemasaran mebel kayu secara *online* melalui strategi *e-business* bagi Asosiasi Pengrajin Kecil Jepara (APKJ), Jawa Tengah: Studi kasus di APKJ dan CIFOR**



**PAPER PRESENTATION**

Meningkatkan Pemasaran Mebel Kayu Secara *Online* Melalui Strategi *e-Business* Bagi Asosiasi Pengrajin Kecil Jepara (APKJ), Jawa Tengah: Studi Kasus di APKJ dan CIFOR

Yahya Sampurna dan Rifki Shihab

**1.1. Latar Belakang Permasalahan**

- Berhubungan dengan kegiatan penelitian CIFOR (Center for International Forestry Research) dalam merespon kelesuan industri mebel Jepara (tahun 2008)
- Berhubungan dengan salah satu kegiatan *action research* CIFOR dalam membantu meningkatkan pemasaran pengrajin kecil Jepara
- Berhubungan dengan permasalahan sistem pemasaran *online* "Javamebel" yang dikembangkan CIFOR dan diterapkan kepada Asosiasi Pengrajin Kecil Jepara (APKJ)




**1.1. Latar Belakang Permasalahan**

- Produk-produk mebel kayu merupakan komoditi ekspor utama non-migas disamping kelapa sawit, garmen dan karet


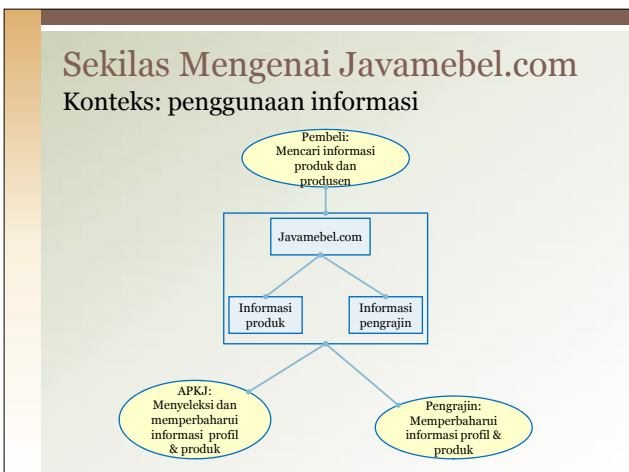


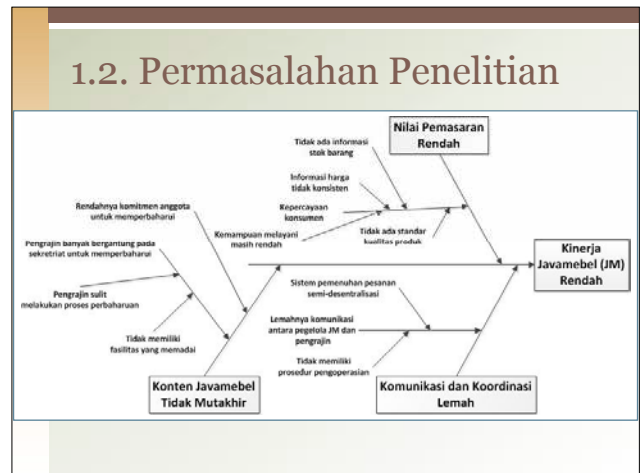
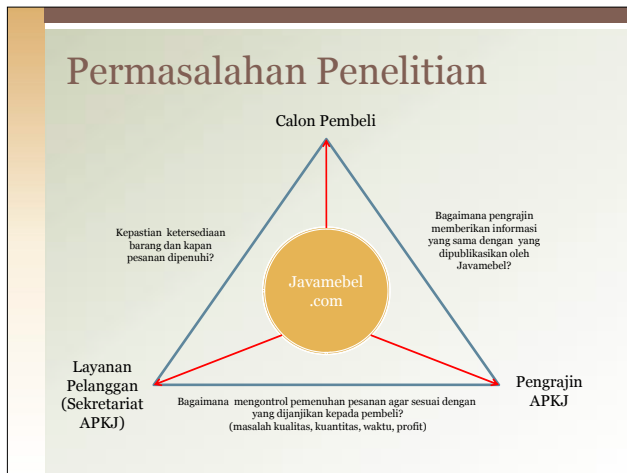
**1.1. Latar Belakang Permasalahan**

- Indonesia sangat berkepentingan dengan keberlanjutan industri mebel ini
  - penyerapan tenaga kerja yang besar (170rb pekerja pada 15rb industri, 92% produsen kecil (1-19 pekerja) (Roda *et al.*, 2007)),
  - teknologi yang relatif dikuasai,
  - memberikan nilai tambah yang tinggi,
  - berbahan baku dari sumber yang terbaharui, yaitu hutan.

**1.1. Latar Belakang Permasalahan**

- CIFOR didukung ACIAR melakukan *action research* di Jepara, pada masa krisis global tahun 2008
- Proyek penelitian: Furniture Value Chain (FVC)
- Tujuan: memperbaiki rantai nilai industri mebel jati dan mahoni di Jepara melalui peningkatan struktur dan fungsi industri, termasuk peningkatan pemasaran
- Contoh tindakan:
  - Terbentuknya APKJ sebagai forum komunikasi dan kerjasama antar pengrajin kecil
  - Sistem pemasaran *online* "Javamebel" dibangun untuk membantu meningkatkan pemasaran para pengrajin APKJ



### 1.3. Pertanyaan Penelitian

- Sistem Javamebel.com adalah sebuah inisiatif *e-business*
- Sistem Javamebel.com dibangun tanpa melibatkan *stakeholder* APKJ (dan pengrajin) sejak awal pengembangan, sehingga
- Belum begitu mempertimbangkan keterkaitan proses-proses bisnis APKJ/pengrajin dengan proses pemasaran *online*
- Belum begitu mempertimbangkan kesiapan pengurus dan anggota untuk menjalankan pemasaran *online*

“... we had to initiate development of a portal based on general requirements without immediately involving SMEs, on the assumption that their attention would initially be rather weak.”

### 1.3. Pertanyaan Penelitian

Javamebel.com sebagai sistem pemasaran *online* merupakan sebuah inisiatif strategis yang perlu didefinisikan melalui proses strategi dengan melibatkan para *stakeholder* yang relevan.

Strategi *e-business* dapat digunakan sebagai landasan pengembangan pemasaran *online*.

**Pertanyaan:**

- Bagaimana membangun strategi *e-business* untuk meningkatkan pemasaran unit bisnis dan anggota APKJ?
- Bagaimana membangun strategi *e-business* yang mendukung pengembangan struktur organisasi yang efektif untuk menjalankan pemasaran secara *online*?
- Bagaimana membangun strategi *e-business* untuk mempengaruhi struktur pasar, sehingga meningkatkan posisi tawar pengrajin?

### 1.4. Tujuan Penelitian

- Membangun strategi *e-business* APKJ
  - Menjadi sebuah acuan strategik dalam memanfaatkan media elektronik, khususnya jaringan internet, dalam membantu:
    - menjalankan proses-proses bisnis yang berkaitan dengan pemasaran mebel



### 2. Landasan Teori

Referensi utama:

- Proses strategi korporat
  - Mulyadi. (2009). Sistem Terpadu Pengelolaan Kinerja Personel Berbasis *Balanced Scorecard*
- Proses strategi *e-business*
  - Chaffey D. (2009). *E-Business and E-Commerce Management*
- Proses analisis kualitatif
  - Miles, M. B. & Huberman, A. M. (1994). *Qualitative Data Analysis*, dalam:
    - Sekaran U. & Roger Bougie (2009). *Research Methods for Business: A Skill Building Approach*
    - Berkowitz, S. (1997). *Analyzing Qualitative Data*

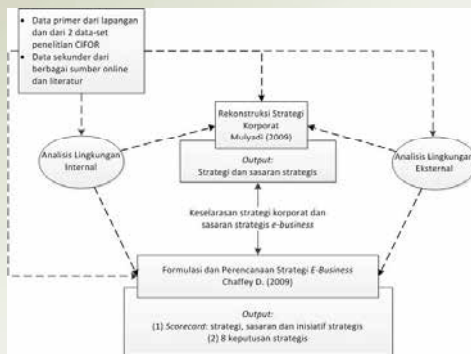
## 2. Landasan Teori

- Model proses strategi Mulyadi (2009) menyediakan teknik untuk membangun keselarasan antar strategi yang berbeda melalui pendekatan “cascading process” yang menghubungkan proses strategi satu dengan lainnya melalui sasaran dan inisiatif strategik



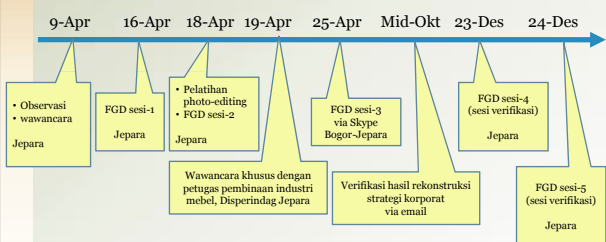
## 2. Landasan Teori

### 2.4. Kerangka teoritis



## Kegiatan Penelitian

2012



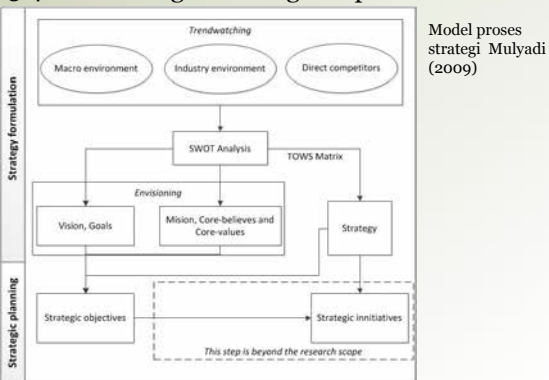
## 3. Metode Penelitian

### 3.1. Langkah-Langkah Penelitian



## 3. Metode Penelitian

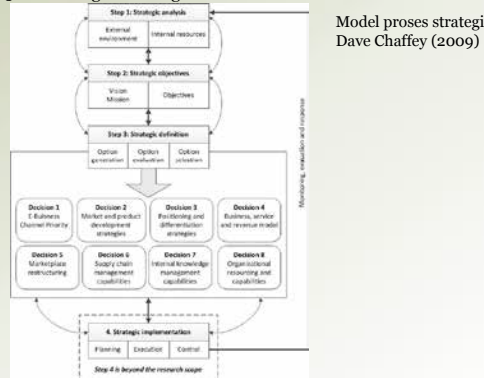
### 3.4. Membangun Strategi Korporat



Model proses strategi Mulyadi (2009)

## 3. Metode Penelitian

### 3.5. Membangun Strategi E-Business

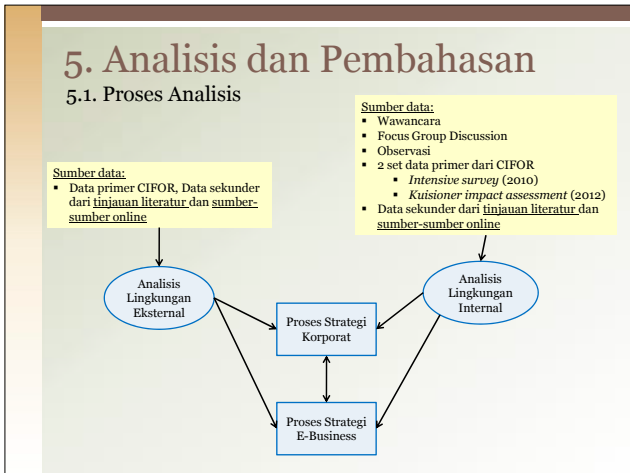


Model proses strategi Dave Chaffey (2009)

## 2. Landasan Teori

Chaffey D. (2009). *E-Business and E-Commerce Management*

Proses Strategi	Chaffey D., (2009)	Combe C., (2006)	Cassidy A., (2001)
Strategi acuan	▪ Korporat	▪ Korporat (berdasarkan misi dan visinya, tidak spesifik menyebutkan korporat)	▪ Business plan
Penentuan model bisnis	▪ Model bisnis dipengaruhi strategi e-business	▪ Tidak ada perhatian khusus pada model bisnis	▪ Model bisnis dihasilkan oleh Business Plan, lalu dijadikan acuan oleh strategi e-business
Langkah proses	▪ Prescriptive -emergent, saling mempengaruhi antar langkah (dapat bergerak mundur)	▪ Prescriptive, iterative-sequential	▪ Prescriptive, iterative-sequential
Penentuan added value/value proposition	▪ Ditentukan setelah peluang & analisis persaingan dilakukan	▪ Ditentukan setelah peluang & analisis persaingan dilakukan	▪ Value proposition didefinisikan sebelum peluang, dan analisis persaingan dinilai
Saluran bisnis	▪ Mempertimbangkan prioritas saluran bisnis (tradisional & digital)	▪ Fokus pada saluran online	▪ Fokus pada saluran online
Target market strategy	▪ Menjadi bagian dalam proses "keputusan strategik"	▪ Tidak ada perhatian khusus mengenai "Target market Strategy"	▪ Menjadi bagian dari analisis eksternal: "Customer Process"

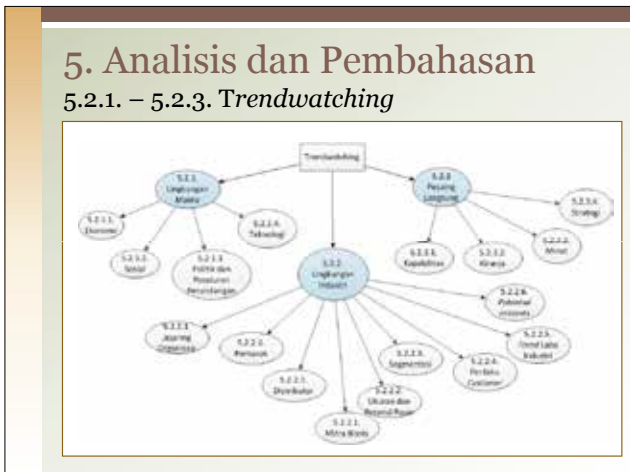


- ## 5. Analisis dan Pembahasan
- Metode analisis kualitatif (Miles & Hubberman (1994))
    - Reduksi
    - Data Display
    - Penarikan kesimpulan

## 5. Analisis dan Pembahasan

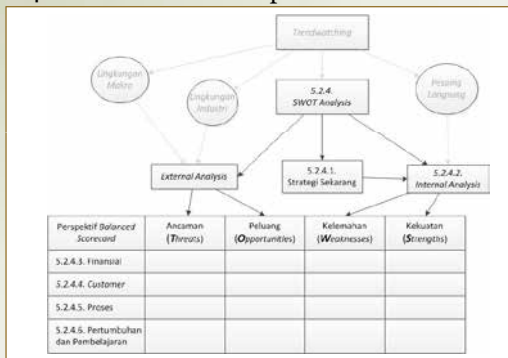
### Reduksi dan Data display

1-1	Topik	Bagaimana strategi mengelola jayamebel di masa depan?		
No	Informan	Gagasan, pandangan dan pengalaman informan	Apa yang paling menjadi perhatian?	Kenapa?
1	Zn	<ul style="list-style-type: none"> <li>kontrol terpusat</li> <li>kontrol terdesentralisasi</li> <li>standar kontrol</li> </ul>	<ul style="list-style-type: none"> <li>kontrol terpusat</li> <li>standar kontrol</li> </ul>	<ul style="list-style-type: none"> <li>memberikan nilai (keuntungan) kepada asosiasi</li> <li>menjaga kredibilitas asosiasi</li> <li>membantu pengrajin dalam pengelolaan pemasaran</li> </ul>
		<p><b>Transkrip</b></p> <ul style="list-style-type: none"> <li>tidak tahu kontrol apa yang harus diberikan</li> <li>bagaimana menstandarkan kontrol</li> <li>[konsumen] langsung berhubungan?</li> <li>[...] konsep ini sejak awal memang saya ajukan [adalah seperti yang dikemukakan yang lain, berbentuk kontrol terpusat [...]]</li> </ul>	<p><b>Kesimpulan awal:</b></p> <p>apa yang menjadi konsen utama, sekaligus mengelompokkan data berdasarkan konsen</p>	<p><b>Transkrip</b></p> <ul style="list-style-type: none"> <li>jika tidak [berjalan baik], maka rusaklah [kredibilitas] APKJ.</li> <li>kalah berhubungan sendiri-sendiri, APKJ tidak akan mendapatkan apa-apa.</li> <li>jika lewat sentral, [...] para pengrajin tidak perlu mengetahui urusan-urusan di belakang [...]</li> </ul>



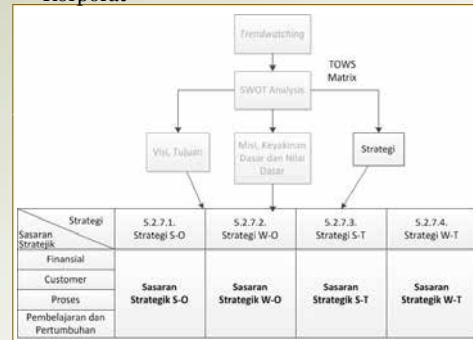
## 5. Analisis dan Pembahasan

### 5.2.4. Analisis SWOT Korporat



## 5. Analisis dan Pembahasan

### 5.2.7. Perumusan dan Perencanaan Strategi Strategik Korporat



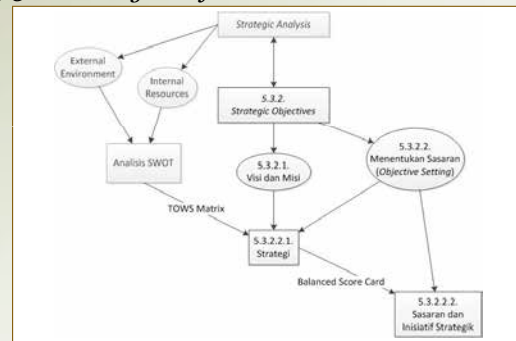
## 5. Analisis dan Pembahasan

### 5.3.1. Strategic Analysis



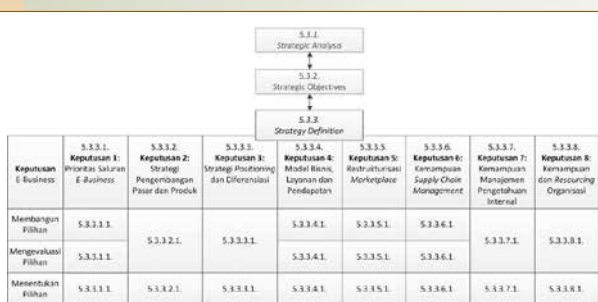
## 5. Analisis dan Pembahasan

### 5.3.2. Strategic Objectives



## 5. Analisis dan Pembahasan

### 5.3.3. Strategic Definition



## 5. Analisis dan Pembahasan

### 5.2.7.5. Ringkasan Strategi dan Sasaran Stetegik Korporat:

- Meningkatkan fokus pemasaran pada pasar domestik dengan menyediakan produk berkualitas tinggi untuk grade yang dapat diserap oleh pasar domestik;
- Meningkatkan pemasaran pada pasar ekspor dan/atau domestik dengan strategi *focused differentiation* melalui produk ramah lingkungan yang bersertifikat SVLK;
- Meningkatkan kapasitas produksi dan kualitas produk dengan didukung modal usaha yang kuat, melalui:
  - Pengalangan dan pengelolaan modal usaha secara kolaboratif melalui koperasi;
  - Membangun kredibilitas asosiasi untuk meningkatkan kemudahan mendapatkan kredit dan bantuan lainnya dari sektor swasta dan pemerintah.
- Meningkatkan peran pemasaran pada saluran tradisional dan online;
- Diferensiasi produk yang melibatkan ide konsumen ke dalam rancangan (*personalisasi*);
- Meningkatkan jumlah pilihan mebel dan kerajinan melalui variasi-variasi dari model sebelumnya;
- Meningkatkan kemampuan anggota dan pengurus asosiasi dalam mengelola dan mengembangkan usaha;
- Meningkatkan efisiensi dan kapasitas produksi melalui proses produksi secara terdistribusi;
- Meningkatkan efisiensi proses produksi untuk meningkatkan margin keuntungan pada grade yang dibutuhkan pasar;
- Meningkatkan efisiensi proses produksi untuk meningkatkan margin keuntungan pada grade yang dibutuhkan pasar;
- Mempertahankan ciri khas disain melalui perlindungan hak cipta untuk disain-disain orisinal;
- Meningkatkan kontrol kualitas terhadap proses produksi.

## 5. Analisis dan Pembahasan

### Strategi *e-business* yang dihasilkan:

- Meningkatkan kontribusi pendapatan pengrajin APKJ melalui pemasaran *online* dengan fokus B2C (*retailer*) untuk pasar domestik serta B2B (*wholeseller*) untuk pasar domestik dan ekspor.
- Pemasaran *online* melalui situs *e-commerce* dengan menerapkan sistem pelayanan pesanan secara terpusat;
- Rebranding* produk anggota menjadi produk APKJ;
- Meningkatkan peran teknologi informasi dalam mendukung proses-proses bisnis APKJ baik yang bersifat sosial maupun komersial
- Menggunakan saluran *online* untuk memfasilitasi strategi diversifikasi bisnis.
- Penerapan teknologi informasi untuk mengumpulkan sumber-sumber informasi yang berkaitan dengan peluang pasar dan sumber-sumber bahan baku dengan kualitas dan harga yang kompetitif
- Memaksimalkan pemanfaatan platform *e-business* berteknologi tinggi, berlisensi *open source*, mudah dikembangkan dan berbiaya relatif rendah.

## 5. Analisis dan Pembahasan

### 5.3.2.2.2. Menentukan Sasaran Strategik

Strategi <i>e-business</i> #5 Menggunakan saluran <i>online</i> untuk memfasilitasi strategi diversifikasi bisnis					
	Sasaran strategis	Lag indicator	Lead indicator	Target	Indikator strategis
FINANSIAL	Meningkatkan pendapatan dan bisnis-bisnis yang menggunakan fasilitas layanan <i>online</i> selain penjualan mebel dan kerajinan.	Jumlah bisnis <i>online</i> baru.	- Ketepatan biaya operasional sistem dan energi. - Biaya-biaya investasi layanan dan produk. - Biaya pengembangan SDM.	Minimal bertambah 2 bisnis baru <sup>2</sup> dalam 3 tahun.	Mengembangkan modal ke dalam bisnis baru dan mengoperasikan atau mengintegrasikannya ke dalam sistem <i>e-commerce</i> yang ada (jika memungkinkan).
	Meningkatnya reputasi situs <i>e-commerce</i> APKJ yang dapat membuat orang berkunjung ke situs.	- Pertumbuhan <i>referral</i> baru dari situs lain - % konversi kunjungan kepada pembelian; - Pertumbuhan mitra kerajinan.	- Tingkat komentar/pengalaman anggota APKJ dalam bisnis <i>online</i> ; - Efisiensi promosi situs. - Tingkat kualitas layanan.	- 5 sampai 10 <i>referral</i> per bulan; - % konversi kunjungan kepada pembelian - 3 sampai 5 mitra baru per tahun.	- Mempromosikan bisnis pada saluran-saluran <i>online</i> berbayar dan gratis - Menerapkan konsep-konsep Search Engine Optimization untuk meningkatkan web presence pada situs google.
CUSTOMER	Terkoordinasinya kebutuhan mitra untuk berkolaborasi dengan APKJ dalam bisnis selain penjualan mebel.	Bertambahnya firm-firm B2B pada situs <i>e-commerce</i> yang dapat dimanfaatkan mitra dan customer.	- Pertumbuhan jaringan komitran APKJ; - Pertumbuhan konsumen.	Diharapkan bertambah 2 sampai 3 firm dalam 2 sampai 4 tahun bisnis berjalan <sup>3</sup> .	Mengembangkan firm untuk mengintegrasikan sumber-sumber dengan sistem mitra bisnis

## 5. Analisis dan Pembahasan

### 5.3.3.1. Keputusan 1: Prioritas Saluran Bisnis

Tujuan: menentukan bentuk saluran bisnis yang dapat diadopsi oleh perusahaan dalam memasarkan produk-produknya.

Pilihan	Evaluasi	Keputusan
Bricks-and-Mortar	Kendala tempat & persaingan yang tinggi di tingkat lokal	
Bricks-and-Clicks	Tempat terdistribusi, menjangkau konsumen akhir	✓
Clicks	Interaksi secara fisik masih diperlukan	

## 5. Analisis dan Pembahasan

### 5.3.3.2. Keputusan 2: Pengembangan Produk dan Pasar

Tujuan: mendefinisikan strategi-strategi untuk mendapatkan *value* dari saluran digital, dengan cara memberikan *value added* ke dalam produk dan layanan, serta menargetkan pasar yang sesuai, sehingga keduanya dapat diterima dengan baik oleh konsumen.

	Produk saat ini	Produk baru
Pasar baru	<p><b>Strategi pengembangan pasar</b></p> <p>Menggunakan saluran <i>online</i> untuk menargetkan:</p> <ul style="list-style-type: none"> <li>jangkauan kepada konsumen eceran pada pasar domestik, dengan memberikan kemudahan pengiriman barang.</li> <li>jangkauan kepada konsumen B2B dari dalam dan luar negeri dengan memfasilitasi proses penawaran dan komunikasi secara <i>online</i>,</li> <li>meningkatkan promosi untuk produk-produk pada segmen gaya hidup (<i>lifestyle</i>).</li> </ul>	<p><b>Strategi diversifikasi</b></p> <p>Menggunakan saluran <i>online</i> untuk:</p> <ul style="list-style-type: none"> <li>promosi dan komunikasi kegiatan bisnis "warung kayu".</li> <li>promosi dan komunikasi penyewaan peralatan dan fasilitas manufaktur,</li> <li>menjalankan bisnis layanan iklan <i>online</i> pada situs <i>e-commerce</i> APKJ.</li> </ul>

## 5. Analisis dan Pembahasan

### 5.3.3.2. Keputusan 2: Pengembangan Produk dan Pasar

	Produk saat ini	Produk baru
Pasar saat ini	<p><b>Strategi penetrasi pasar</b></p> <p><u>Peningkatan pangsa pasar:</u></p> <ul style="list-style-type: none"> <li>memodifikasi model layanan <i>online</i> dari <i>brochureware</i> menjadi <i>interactive e-commerce</i> yang mampu menerima pesanan secara <i>online</i>;</li> </ul> <p><u>Perbaikan loyalitas konsumen:</u></p> <ul style="list-style-type: none"> <li>memberikan kesempatan untuk tawar-menawar (<i>negotiasi</i>) yang dilihat berdasarkan kasus per kasus,</li> <li>membuka berbagai saluran komunikasi baik <i>online</i> dan <i>offline</i> untuk berkomunikasi dengan pelanggan.</li> </ul> <p><u>Perbaikan nilai bagi konsumen:</u></p> <ul style="list-style-type: none"> <li>harga yang relatif murah melalui penggunaan biaya media.</li> <li><i>Rebranding</i> membuat branding dari banyak <i>brand</i> menjadi <i>brand</i> sendiri sebagai upaya meningkatkan kualitas produk.</li> <li>komunikasi yang lebih baik dengan menyediakan kemudahan untuk memantau laporan kerajinan pesanan secara <i>online</i>.</li> </ul>	<p><b>Strategi pengembangan produk:</b></p> <p>Menggunakan saluran <i>online</i> untuk:</p> <ul style="list-style-type: none"> <li>memfasilitasi personalisasi produk di mana konsumen dapat menyempitkan <i>size</i>-nya berdasarkan pilihan mebel dengan cara: memberikan pilihan-pilihan untuk merubah spesifikasi produk dan mengizinkan konsumen untuk menggunakan gambar rancangannya sendiri.</li> <li>memfasilitasi personalisasi <i>firmware set</i> di mana konsumen dapat membangun <i>firmware set</i> dari produk-produk yang tersedia dan melakukan perbandingan harga dari <i>set</i> yang dibagunannya.</li> <li>memasukkan informasi proses produksi menjadi properti dari produk, sehingga konsumen dapat memantau perkembangan proses produksi dari produk yang dipesannya.</li> </ul>

## 5. Analisis dan Pembahasan

### 5.3.3.3. Keputusan 3: Strategi Positioning dan Differentiation

Strategi ini bertujuan untuk mendefinisikan posisi terbaik dalam hal layanan *online* relatif terhadap para kompetitornya berdasarkan empat variabel, yaitu kualitas produk, kualitas layanan, harga dan waktu pemenuhan pesanan.

- Positioning**
  - Memasukkan banyak unsur proses produksi secara manual (*hand-made*) terutama dalam ukiran untuk menonjolkan sisi tradisional;
  - Melayani 3 segmen utama yaitu mebel dan kerajinan sebagai perabot rumah tangga fungsional harian, gaya hidup rumah tangga atau sektor pariwisata/hiburan/perhotelan, serta perabotan kantor;
  - Melayani konsumen akhir dan perusahaan
  - Konsumen pemakai akhir yang dilayani berdasarkan kegiatan konsumen adalah anak-anak untuk kegiatan sekolah, keluarga/rumah tangga untuk keperluan rumah tangga, pengelola kantor dan perhotelan;
  - Konsumen perusahaan meliputi agen/penghubung, pedagang dan eksportir;
  - Harga di bawah rata-rata eceran nasional dan selalu di atas harga eceran pasar Jepara;

## 5. Analisis dan Pembahasan

### 5.3.3.3. Keputusan 3: Strategi Positioning dan Differentiation

□ **Differentiation**

- Memperbolehkan konsumen turut serta dalam menentukan rancangan;
- Memberikan informasi/laporan kemajuan pesanan secara berkalan melalui saluran *online*;
- Memberikan keringan harga mulai dari potongan harga sampai membebaskan biaya pengiriman berdasarkan jumlah nilai pembelian.

## 5. Analisis dan Pembahasan

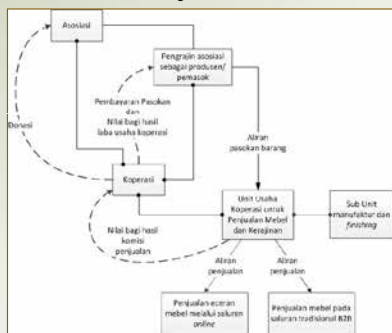
### 5.3.3.4. Keputusan 4: Model Bisnis, Layanan dan Pendapatan

- Tujuan: mendefinisikan sebuah model bisnis yang menggambarkan bagaimana perusahaan akan menghasilkan nilai melalui produk-produk dan layanan-layanan yang ditawarkan kepada konsumen yang ditargetkan, serta mengidentifikasi sumber-sumber pendapatan yang bisa dimanfaatkan oleh perusahaan.

## 5. Analisis dan Pembahasan

### 5.3.3.4. Keputusan 4: Model Bisnis, Layanan dan Pendapatan

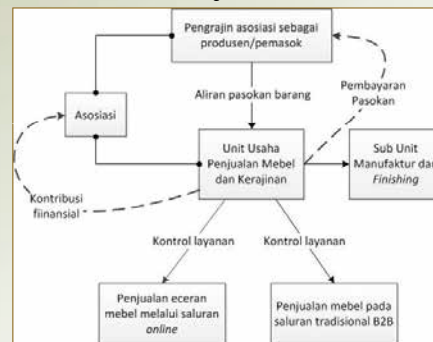
- Alternatif 1: unit bisnis pemasaran *online* di dalam struktur koperasi



## 5. Analisis dan Pembahasan

### 5.3.3.4. Keputusan 4: Model Bisnis, Layanan dan Pendapatan

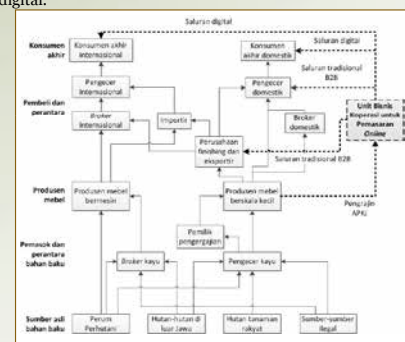
- Alternatif 2: unit bisnis pemasaran online di dalam struktur asosiasi



## 5. Analisis dan Pembahasan

### 5.3.3.5. Keputusan 5: Restrukturisasi Pasar (*Marketplace Restructuring*)

Tujuan dari keputusan ini adalah mendefinisikan strategi-strategi bagaimana organisasi terintegrasi lebih dekat dengan para pemasoknya dengan memanfaatkan saluran digital.



## 5. Analisis dan Pembahasan

### 5.3.3.6. Keputusan 6: Kemampuan Pengelolaan Rantai Pasokan (*Supply Chain Management Capabilities*)

- Tujuan: mendefinisikan strategi-strategi bagaimana organisasi terintegrasi lebih dekat dengan para pemasoknya dengan memanfaatkan saluran digital.



### 5. Analisis dan Pembahasan

5.3.3.6. Keputusan 6: Kemampuan Pengelolaan Rantai Pasokan (*Supply Chain Management Capabilities*)

### 5. Analisis dan Pembahasan

5.3.3.7. Keputusan 7: Kemampuan Manajemen Pengetahuan Internal (*Internal Knowledge Management (KM)*)

- Tujuan: mendefinisikan strategi-strategi untuk membangun kemampuan *e-business* internal, khususnya mengenai bagaimana organisasi membagi pengetahuan dan membangun proses-proses bisnisnya.

### 5. Analisis dan Pembahasan

5.3.3.7. Keputusan 7: Kemampuan Manajemen Pengetahuan Internal (*Internal Knowledge Management (KM) Capabilities*)

Pengembangan Intranet (1 sampai 2 tahun pertama):

- Memungkinkan para pengrajin mengakses informasi menggunakan telepon seluler atau peralatan mobile lainnya disamping menggunakan komputer;
- Menyediakan antar-muka yang sederhana agar pengrajin dapat menggunakan fitur-fitur dengan semudah mungkin dan ukuran data yang seringan mungkin;
- Menyajikan informasi (isi) dalam bentuk yang sederhana, misalnya dalam bentuk lembar kerja, halaman-halaman pendek dan memungkinkan untuk diunduh;
- Memanfaatkan layanan-layanan murah namun efektif untuk dipadukan dengan intranet, misalnya google drive, dropbox dan yahoo group;

□ Pengembangan KM

- Pendekatan knowledge sharing berbasis pertemuan secara fisik (offline) dan online. Strategi disusun berdasarkan model KM Bercera-Fernandez (2004)

### 5. Analisis dan Pembahasan

5.3.3.8. Keputusan 8: Kapabilitas dan *Resourcing* Organisasi

- Tujuan: mendefinisikan strategi-strategi yang berhubungan dengan perubahan organisasi yang dibutuhkan untuk mencapai prioritas-prioritas *e-business*.
- Batasan: aspek kapabilitas tidak diassess
- Keputusan *resourcing*: pemisahan unit usaha pemasaran online menjadi “perusahaan” tersendiri, dengan manajemen yang berbeda dari asosiasi ataupun koperasi

### 6. Kesimpulan

6.1.3.1. Pertanyaan Penelitian 1: Bagaimana Membangun Strategi *E-Business* Untuk Meningkatkan Pemasaran Unit Bisnis dan Anggota APKJ?

**Rujukan: Kotler & Keller (2009), Kotler & Armstrong (2011), Cross & Dixit (2005), (Sandekela, 2008)**

“Keberhasilan pemasaran menuntut organisasi untuk memiliki kemampuan memahami nilai konsumen, menciptakan nilai konsumen, menyampaikan nilai konsumen, menangkap nilai konsumen dan melestarikan nilai konsumen”

1. Nilai konsumen	Keputusan 3, terkait 4 variabel nilai konsumen
2. Menciptakan nilai konsumen	Keputusan 3, terkait penjabaran positioning & differentiation pada masing-masing variabel konsumen
3. Menyampaikan nilai konsumen	Keputusan 1, terkait menyampaikan nilai konsumen melalui 2 saluran: bricks and clicks
4. Menangkap nilai konsumen	Keputusan 2, terkait strategi penetrasi pasar, pengembangan produk, pengembangan pasar dan diversifikasi; Strategi e-business #4 terkait pengelolaan data pelanggan
5. Melestarikan nilai konsumen	Keputusan 2, terkait customer loyalty dan inovasi produk; Strategi e-business #4 terkait pengelolaan data pelanggan; Keputusan 7, terkait kapabilitas KM.

### 6. Kesimpulan

6.1.3.2. Pertanyaan Penelitian 2: Bagaimana Membangun Strategi *E-Business* yang Mendukung Pengembangan Struktur Organisasi yang Efektif Untuk Menjalankan Pemasaran Secara *Online*?

**Rujukan: Child (1984), (Gulati & Garino, 2000)**

1. Struktur organisasi meliputi rancangan dari sistem-sistem, untuk memastikan komunikasi, koordinasi dan usaha-usaha integrasi yang efektif antar departemen	<ul style="list-style-type: none"> <li>Keputusan 4, terkait pengelolaan pemasaran online dilakukan oleh “badan usaha”;</li> <li>Keputusan 8, terkait memisahkan unit pemasaran dari dalam asosiasi menjadi sebuah “unit usaha” atau “badan usaha” di luar asosiasi</li> </ul>
---	---

## 6. Kesimpulan

### 6.1.3.3. Pertanyaan Penelitian 3: Bagaimana Membangun Strategi E-Business Untuk Mempengaruhi Struktur Pasar, Sehingga Meningkatkan Posisi Tawar Pengrajin?

**Rujukan: Umar et al. (2010) dalam (Zainuri, Waridin, Santoso, & Susilowati, 2012), Purnomo, Irawati, Fauzan, & Melati (2011)**

1. Struktur pasar adalah tingkat konsentrasi pembeli dan penjual komoditas. Ini berkaitan dengan hubungan organisasi antara pembeli dan penjual, serta derajat diferensiasi produk dan aksesibilitas atau penghalang untuk pasar.
  - Keputusan 5, mengenai restrukturisasi pasar melalui countermediation.
  - Keputusan 5 sejalan dengan misi APKJ: "pemberdayaan pengrajin kecil agar memiliki posisi tawar"
2. Hubungan broker-pengrajin seperti ini seringkali merugikan pengrajin karena broker memiliki posisi tawar yang lebih tinggi dalam menentukan harga produsen

Terima kasih

## d. Domestic market of Jepara's small scale wooden furniture industries

### DOMESTIC MARKET OF JEPARA'S SMALL SCALE WOODEN FURNITURE INDUSTRIES

Efi Yulianti Yovi, Dodik Ridho Nurrochmat and Mohammad Sidiq  
BOGOR AGRICULTURAL UNIVERSITY



Foto courtesy Kasmalia Sari

1

### Background: Jepara, Wooden Furniture & Market

Wooden furniture: 35% of the Jepara economy

Jepara furniture: 60% export

Domestic market growth rate: 5-7%

Increasing domestic market

2

### Aims

Market structure

Marketing distribution channel

Consumer preference

Production dynamic

Furniture information sources

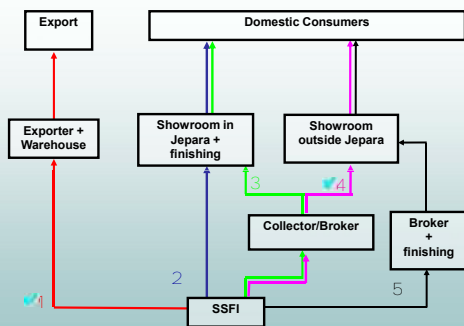
3

### Respondents

- The number of respondents observed in this study was 30 industry players, 3 brokers or half finished collectors, 22 shops or showrooms, 1 exporter and 30 households
- 10 households with houses of permanent types, 10 households with houses of semi-permanent types, and 10 households with houses of non-permanent types.

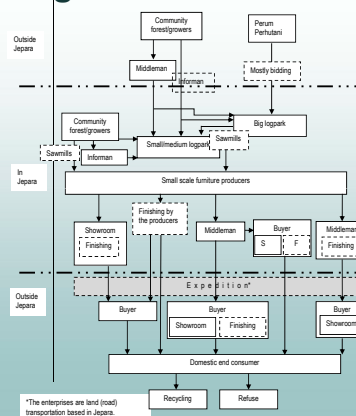
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### Marketing channel



5

### Marketing channel

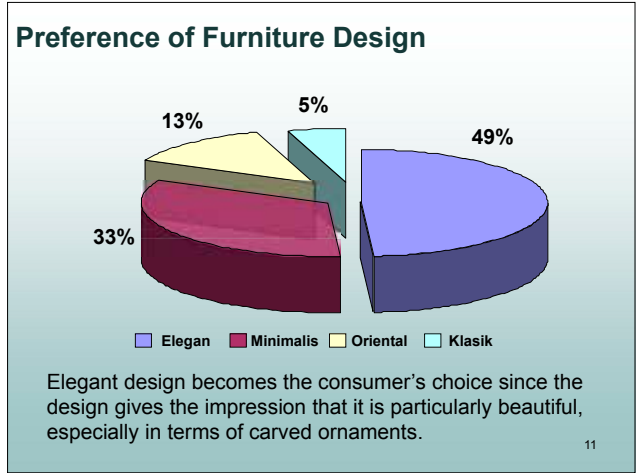
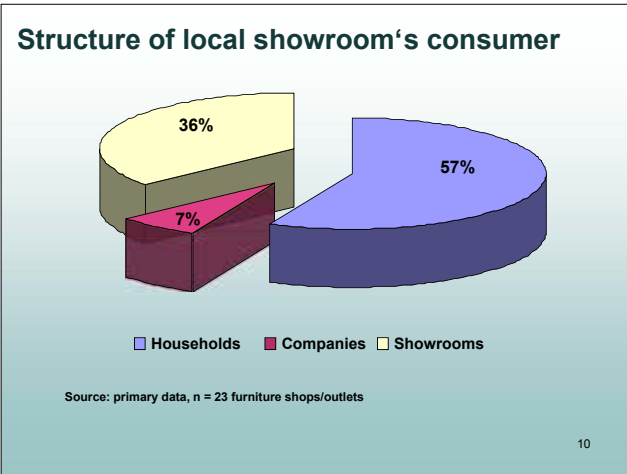
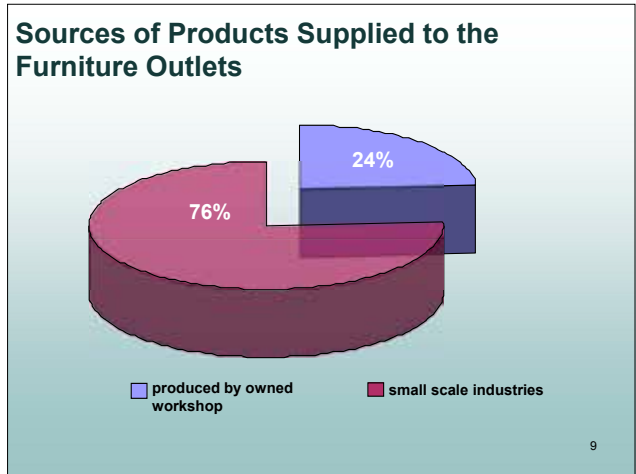
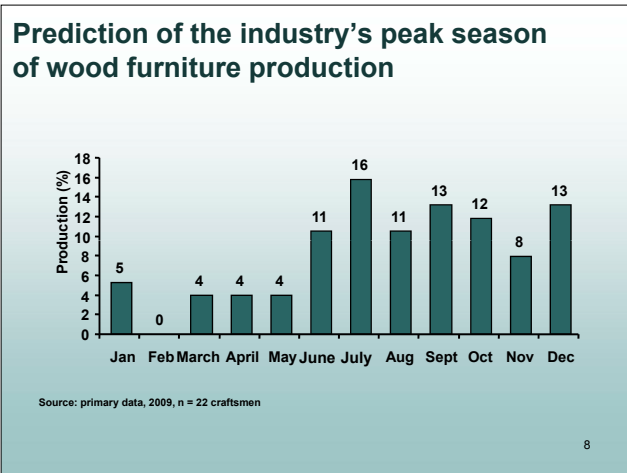


6

### Market structure

- SSFI → **monopolistic competition?**  
 segmented according to kind of products, price, and quality  
 chair: Tahunan Tendok Village
- Shop/outlets → **monopolistic competition?**  
 segmented according to kind of quality  
 good quality: Sukodono Village

7



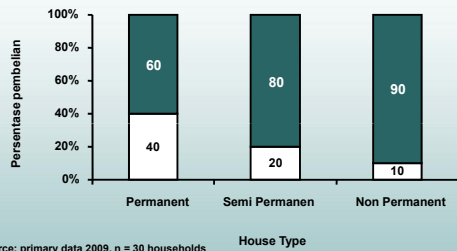
### Distribution Channels of Wooden Furniture to Households

The households with semi-permanent and non-permanent houses preferred to buy furniture directly from small scale industry because the prices were relatively lower than the prices of furniture in the shop.

The furniture they bought from the industry was usually still half finished or unfinished furniture in the hope that they could do the finishing process step by step depending on their financial condition.

12

### Distribution Channels of Wooden Furniture to Households

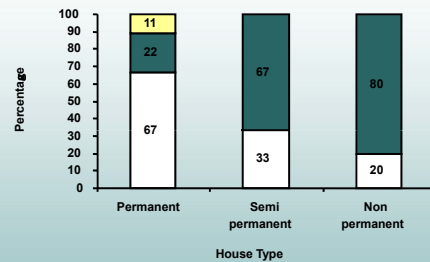


Source: primary data 2009, n = 30 households

Legend: Craftmen (dark green), Furniture shops (white)

13

### Source of furniture purchasing information



Source: primary data, n = 30 households

Legend: looking at a model on the internet (yellow), looking at a model from relatives or colleagues (dark green), looking at a model in a showroom (white)

14

### Summary

There are 5 common marketing channels in Jepara; 4 of them deal with domestic market.

The market structure is mostly monopolistic competition, both on furniture producer and showroom.

Furniture material for showroom in Jepara is dominated by half finished furniture produced by SSFI.

Furniture information sources of local consumers is identified as: internet, relatives, and directly go to showrooms. Each consumers has different patterns in getting furniture information.

Most preferred furniture design in domestic market is elegant design.

15

THANK YOU

16

### Prediction of the industry's peak season of wood furniture production

- The increasing rate of furniture production is occurred in July, September and December. In July, furniture production was 16%, while in September and December it was 13%. According to the respondents, increasing production rate in July and September was related to the consumer preparation in celebrating Idul Fitri. Similarly, when welcoming Christmas, consumers tried to complete their furniture.
- In February, the furniture production was relatively stable since most parents are focusing their expenditure for their children's education and preparation for going to the pilgrimage to Mecca.

17

## 7.2.6. Session B1.

### Design, quality and other technical aspects of wooden furniture manufacturing

#### a. Drying schedules of four wood plantation species for furniture

**DRYING SCHEDULES OF FOUR WOOD PLANTATION SPECIES FOR FURNITURE**

BY  
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### BACKGROUND

- ◉ Most of furniture materials: small log Ø, young tree
- ◉ The wood : shrinkage & swelling ↗  
spiral grain, more knots and drying defects.
- ◉ A proper drying schedule: very important

This paper discusses : optimum drying schedules of 4 wood plantation species from West Java.

### MATERIALS AND METHODS

- ◉ Wood spec: Mindi (*Melia azedarach*), Mahogany (*Swietenia mahogany*), Teak (*Tectona grandis*), Trembesi (*Samanea saman*).
- ◉ Physical properties testing: T/R shrinkage ratio, green Mc., spec. gravity), with ASTM D 143-94 (modification) [ASTM, 2006].
- ◉ Drying properties testing: Terazawa method with modification (Basri, 2011).
- ◉ All of the datas above: basis in determining the optimum drying schedule of each wood.

### RESULTS AND DISCUSSION



### RESULTS AND DISCUSSION



**TABLE 2. Summarized Results Of Quick Drying Test And Optimal Drying Schedule Of Each Wood**

Species	Aver. initial Mc(%)	Type of defects			Initial Temp. (°C)	WBD (°C)	Final Temp (°C)	Patterned schedule <sup>1</sup>
		I	II	III				
Mindi	65	2	4	1	50	4.0	80	T6-C4
Mahogany	75	4	5-6	1	40	3.0	65	T2-D3
Teak	124	6	5-6	1	40	3.0	65	T2-F3
Trembesi	136	4	5	1	50	3.0	70	T5-F3

**Remark:** <sup>1</sup>Source: Torgeson (1951) in Basri *et al.* (2011)  
I = end & surface check; II = deformation; III = honeycomb defect;  
1 = very good; 2 = good; 3 = rather good; 4 = fair; 5 = rather poor;  
6 = poor; 7 = very poor

## MAIN PROBLEMS

Main problems of drying in small furniture enterprises are:

- kiln drying construction does not meet the required standards,
- lack of kiln operator skills, and
- lack of appropriate storage for dried wood.



FIGURE 2. Stacking technique of wood in the drying chamber

## CONCLUSION

### 1. Kiln drying schedule

Mindi : 50°C - 80°C (T); 22% - 80% (Rh)

Mahogany : 40°C - 65°C (T); 21% - 83% (Rh)

Teak: 40°C - 65°C (T); 21% - 83% (Rh)

Trembesi : 50 °C - 70°C (T); 23% - 84% (Rh).

2. **Trembesi wood:** the initial and final temperatures were low to be implemented in the patternized drying schedule which considers their boards seem to bow.

3. Those woods can be increased their added value for high quality products by implementing the reasonable drying schedule.

## b. Development of simple and affordable drying chamber for small and medium enterprises (SMEs) furniture in Jepara

**DEVELOPMENT OF SIMPLE AND AFFORDABLE DRYING CHAMBER FOR SMALL AND MEDIUM ENTERPRISES (SMEs) FURNITURE IN JEPARA**

By:  
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<sup>2</sup>) Melbourne University, Australia

### 1. Background

- **Furniture industries** in Jepara: 98% is Small-Scale
- **Drying** → directly influences :  
woodworking, gluing, joining, and finishing
- **Drying problem** in small furniture enterprises :  
Kiln drying construction does not meet the required standards,

Table 1. Equilibrium moisture content in outdoor condition (Source: Simpson, 1998)

Country	Emc (%)
USA	4 – 20
South Korean	10 – 15
Japan	9 – 16
Netherland	13 – 21
Sweden	11 – 23
Australia	9 – 16
Indonesia (Jakarta)	13 – 18

Recommended moisture content (%) values for various wood item at time of installation

Use of wood	Most area of US <sup>1</sup>	Dry South Western <sup>1</sup>	Damp, warm Coastal area <sup>1</sup>	Europe <sup>2</sup>	Austr/NZ <sup>3</sup>
<b>Interior</b> Wood working, flooring, wood laminat. timber	6-10 (8)	4-9 (6)	8-15 (11)	6-12	6 – 7 <sup>4</sup>
<b>Exterior</b> Wood trim framing, sheathing laminat. timber	9-14 (12)	7-12 (9)	9-14 (12)	13-16	-

<sup>1</sup>) FPL (1973); <sup>2</sup>) Budianto (2000), <sup>3</sup>) AS/NZS 4787 (2001); <sup>4</sup>) in dry centrally heated houses and offices or in permanently air-conditioned buildings

### Drying chamber construction of Small industries

- Building, drying equipment and the lay out are below standard and not complete.
- Thermal efficiency of drying chambers is low, in the order of 50-60% and the temperature and the humidity are not controlled.
- Wet air outlet is not available.



Figure 1. Drying chamber at a small furniture enterprise





Figure 2. Timber stacked in the drying kiln of a small company



Figure 3. Timber stacking after drying in a small industry



Figure 4. End checking of timber and warping of furniture

- This paper discusses the applicability of a drying chamber pilot project (at capacity 8-10 m<sup>3</sup>) to improve the wooden furniture quality in Jepara.

## 2. Proper drying kilns

Three factors that should be considered in wood drying, as follows:

- Temperature. The quantity of the required energy depends on the initial MC and duration of drying.
- Relative humidity depends on the initial MC.
- Airflow: 1.5 m/sec.

## 3. Methods suitable for drying timbers in Jepara region

### AFFORDABLE DRYING CHAMBER

Heat from simple stove: use wood waste from sawing, etc.

Modifying the existing kilns and improving the drying techniques.

### Drying Wood with Heating Stoves System

- Size of chamber : 6 m (l) x 4 m (w) x 3 m (h)  
Capacity : 8 – 10 m<sup>3</sup>
- Tool consists of: a stove, chimney, 2 inhaust fans, 2 exhaust fans.
- Heat regulator : thermostat which equipped with thermocouple.
- Stove fuel : wood waste/branches/roots.

### Machine Specification

- 1) Heating Stove and Chimney**  
Stove put outside the drying chamber.  
Specifications of stoves, as follows:
- Steel pipes Ø 60 cm x 1.0 cm x 200 cm
  - Chimney Ø 8 "x 0.5 cm x 400 cm
  - Foot/holder of the stove, angle iron: 70/70x7

### Drying Chamber and Supporting Equipment

- 2 blowers to pull heat from stove, 2 inhaust fans for distributing heat to the drying chamber, 2 exhaust fans for removing wet air from inside to outside the chamber.

**Spesification :**

- Walled building, tin roof, and cement plastered floor.
- Blower: Ø 24 " , 1 phase, 400 watts
- *Inhaust fan*: Ø 24" , 1 phase, 400 watt.
- *Exhaust fan*: Ø 18" , 1 Phase, 380 watt.



Figure 2. The completed drying chamber (A pilot project of Center for R&D FEFP2- FORDA)

Remarks: B=burner, D=door to chamber, P=power panel, F=fan

Table 2. The performance test results

Batch No.	Type and Size of Specimen	Volume	Initial Moisture Content (%)	Final Moisture Content (%)	Drying Duration (Days)	Temperature (°C)	Quality of Timber	Remarks
1	Pepuluhen Teak 200 cm x 30 cm x 3 cm 200 cm x 30 cm x 5 cm	2.5 m <sup>3</sup>	39-30	12	3	50-60	Good	-
2	Pepuluhen Teak 200 cm x 30 cm x 3 cm 200 cm x 30 cm x 5 cm	2.5 m <sup>3</sup>	35	10	5	50-60	Good	Rainy Season
3	Mahogany 200 cm x 40/30 cm x 5 cm 200 cm x 40-30 cm x 8 cm 200 cm x 40/30 cm x 4 cm 200 cm x 40/30 cm x 2 cm	8 m <sup>3</sup>	35-40	8	13	50-60	Medium (1% of 2 cm thick board changed shape (deformed))	Insipien stacking Human near: exhaust fans pipe aply turned on. The chamber was damp.
4	Foldingchair MJU	402 pcs	39-35	8	4	40-45	Good	-
5	Chair set table and foldingchair MJU	141 pcs	39-25	10	4	40-45	Good	-

Table 3. Estimation of wood drying costs using the pilot chamber

No.	Type and Size	Volume	Duration (Days)	Drying Operational Cost (IDR)			Total Cost
				Firwood	Electricity	Stacking and Labor	
1.	Pepuluhen Teak 200 cm x 30 cm x 3 cm 200 cm x 30 cm x 5 cm	2.5 m <sup>3</sup>	3	200.000	180.000	200.000	202.000/m <sup>3</sup>
2.	Pepuluhen Teak 200 cm x 30 cm x 3 cm 200 cm x 30 cm x 5 cm	2.5 m <sup>3</sup>	4	280.000	113.000	240.000	241.000/m <sup>3</sup>
3.	Mahogany 200 cm x 40/30 cm x 3 cm 200 cm x 40-30 cm x 8 cm 200 cm x 40/30 cm x 4 cm 200 cm x 40/30 cm x 2 cm	8 m <sup>3</sup>	12	1.000.000	450.000	280.000	216.000/m <sup>3</sup>
4.	FoldingChair MJU	402 pcs	4	800.000	300.000	240.000	3.117/pcs
5.	Oval table and folding chair MJU	58 pcs table 83 pcs chair	4	750.000	300.000	240.000	17.900/table 3.117/chair

### Pustekolah's kiln > < SMEs's kiln

- Drying cost of SMEs's kiln from wet wood to 25% Mc is 175,000-200,000 IDR/m<sup>3</sup>.
- The next stage, product is dried again until the Mc. is 10-12%. It added cost, depends on the type of product.
- Drying cost of Pustekolah's drying chamber is 3,120 IDR/seat; 17,900 IDR/table product.
- Drying cost of SMEs's drying chamber is 10,000-15,000 IDR/seat; 25,000 35,000 IDR/table product.

### CONCLUDING REMARKS

- Affordable and cheap operation drying chamber was built by Forestry Engineering and Forest Products Processing Center (PUSTEKOLAH) in collaboration with ACIAR Project FST/2006/117in Jepara. The chamber with the capacity of 8 – 10 m<sup>3</sup> uses wood waste to heat the burner.
- The heat from the burner is circulated to the chamber evenly by blower and inhaust fan. Performance test shows the chamber can dry timber in a shorter time and is most cost effective than drying in a conventional chamber.

### c. Durability test of treated mahogany wood against drywood termite

Paper presented on National Symposium, Value Chains of Furniture, other Forest Products and Ecosystem Services, Bogor, 14 February 2013

## DURABILITY TEST OF TREATED MAHAGONY WOOD AGAINST DRYWOOD TERMITE

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## INTRODUCTION

- \* 15,271 unit enterprises in Jepara
- \* 1,5 – 2,2 million m<sup>3</sup> per year (Roda et al., 2007)
- \* Wood processed:
  - \* Teak
    - \* Community based forest
    - \* State forest plantation
  - \* Mahogany
    - \* Community based forest
    - \* State forest plantation
  - \* Natural forest species
  - \* Other species including Acacia

Source: Roda et al., 2007




## INTRODUCTION

Current log supply

- \* Community based forest
- \* State forest plantation (PERHUTANI)
- \* Natural forest

Wood quality

- \* Less durable
- \* Less strength
- \* Small diameter
- \* Low sawing yield
- \* Juvenile wood



## INTRODUCTION

### Wood Preservation

- \* To prevent organism attack
- \* Requirements:
  - \* Oxygen
  - \* Moisture
  - \* Room temperature
  - \* Adequate food resource
- \* Preservation
  - \* Traditional way – river/mud soaking, smoking, heat treatment
  - \* Modern way - using chemical: brushing, hot & cold soaking, vacuum pressure




## INTRODUCTION

Current wood preservation in Jepara

- \* Cold soaking
- \* Hot soaking
- \* Brushing
- \* Smoking

Are they effective?



## MATERIAL and METHOD

### Mahogany wood (*Swietenia* sp.)

- \* Preservation methods:
  - \* Currently use in Jepara: smoking and brushing
  - \* Boron treatment: cold soaking and steaming prior to soaking
- \* Dimension: 5 x 2.5 x 2.5 cm
- \* Durability test: drywood termite test (SNI) 01-7207-2006
  - \* 50 active and healthy dry wood termites
  - \* Test for 12 weeks




## MATERIAL and METHOD

Assessments method:

- \* Visual observation

Class	Durability	Weight loss (%)
I	Very durable	< 2.0
II	Durable	2.1 - 4.4
III	Moderately durable	4.5 - 8.2
IV	Non-durable	8.3 - 26.1
V	Not suitable	> 26.1

Source: SNI CL 7267-2009




Level	Durability	Point
A	Sound, no attack (0%)	8
B	Bite trace (1 - 12%)	40
C	Mild attack (13 - 33%)	70
D	Serious attack (34 - 54%)	90
E	Severe (>55%)	100

Source: SNI 83-7287-2009

## RESULTS

- \* After 12 weeks, mahogany's treated wood were attacked by drywood termite
- \* Boron treated mahogany's sample were sound/no termite attack



No.	Treatments	Retention (kg/m <sup>3</sup> )	Weight loss (%)	Durability class	Mortality (%)	Level of termite attack	
						N	T
1.	Control	-	9.99	IV	49.6	70	C
2.	Smoking	-	7.26	III	80.8	70	C
3.	Brushing	-	5.14	III	83.2	70	C
4.	Cold soaking	5.6	3.22	III	100	40	B
5.	Steam and soaking	8.8	1.07	I	100	40	B


## CONCLUSION

- \* Current preservative treatment applied by SMEs in Jepara's wooden furniture are not effective against dry wood termite.
- \* Boron treatment by cold soaking as well as steaming prior to soaking methods are recommended for preservative treatment of furniture component in SMEs in Jepara.

## ACKNOWLEDGEMENT

This research was funded by ACIAR Project collaboration research FST 2006/117:

**Improving added value and SME capacity in the utilisation of plantation timber for furniture production in Jepara region**

## THANK YOU

## d. Increased value remnant pruning teak wood products

### Increased Value Remnant pruning Teak Wood Products

By:  
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Faculty of Forestry,  
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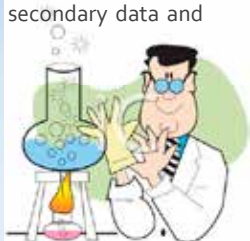
### Objective

Doing analysis introduction about utilization probability of "Rencek" for raw material of merchandise, etc.



### Method

Descriptive research with secondary data and literature review





- Characteristic :
  - High quality wood
  - Intolerant
- Spread
  - South Sulawesi, Southeast Sulawesi, Java, West Nusa Tenggara, Maluku, Lampung, etc (Martawijaya, et al, 2005).

*Teak wood (Tectona grandis)*


Tabel 2.1. Perkembangan Luas dan Produksi Hutan Rakyat di Jawa Barat Tahun 2000 s.d 2008

Kategori	Tahun 2000		Tahun 2005		Tahun 2008	
	Luas (ha)	Produksi (m <sup>3</sup> )	Luas (ha)	Produksi (m <sup>3</sup> )	Luas (ha)	Produksi (m <sup>3</sup> )
1. Bagan	12.891,4	112.728,2	14.085,3	1.000.000,0	18.113,1	48.873,21
2. Sukadiri	14.891,2	15.742,3	20.112,3	1.000.001,2	20.001,2	20.001,2
3. Gunung	20.202,2	201.000,2	20.000,2	1.1.111,1	1.1.111,1	10.201,00
4. Karang	4.201,1	7.000,2	4.201,1	2.112,3	201,2	9.201,00
5. Bagan	70,2	25.123,1	80,2	60.000,0	91,2	25.123,10
6. Perumahan	10.112,2	5.000,0	10,0	100,0	10.001,2	200,00
7. Bagan	6.700,0	10.001,2	6.000,0	40.000,0	10.000,0	1.000,00
8. Bandung	20.100,0	5.001,2	21,0	2.000,0	1.0.000,0	5.000,00
9. Garut	6.001,2	2.101,2	6.001,2	7.001,2	6.001,2	7.001,10
10. Karawang	4.001,2	20.000,0	10.000,0	1.0.000,0	1.0.000,0	40.000,00
11. Sukaraja	6.001,2	5.001,2	2.000,0	2.000,0	6.001,2	12.000,00
12. Tasikmalaya	20.001,2	20.001,2	20.001,2	20.001,2	20.001,2	20.001,10
13. Cirebon	20.001,2	20.001,2	20.001,2	20.001,2	20.001,2	20.001,00
14. Cirebon	6.001,2	700,0	6.001,2	700,0	6.001,2	35.000,00
15. Karawang	10.001,2	14.100,0	10.001,2	10.001,2	10.001,2	10.001,10
16. Sukaraja	1.001,2	1.001,2	10.001,2	10.001,2	10.001,2	10.001,10
17. Kota Karawang	2.001,2	10.001,2	2.001,2	10.001,2	2.001,2	10.001,10
18. Kota Karawang	2.001,2	1.001,2	1.001,2	1.001,2	1.001,2	1.001,10
Jumlah	200.000,0	1.000.000,0	210.000,0	2.000.000,0	220.000,0	200.000,00

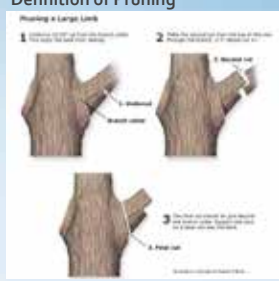
Sumber: Dinas Kehutanan Jawa Barat, Ditjen Kehutanan

wood forests contributed to 30% of national demand, particularly in Java 70% of wood consumption met from private forests (RJR, ypy (2001; Suhardono, 2003).





### Definition of Pruning



Trimming or pruning is one effort to resolve problems of the people of forest production.

The remains of pruning wood waste is usually used as firewood (low value products)

If the community is able to take advantage of products and turning them into higher-value products, such as craft items, will increase their income.



**Conclusion**

the potential for pruning done on various types of forests, especially forests in an effort to enhancing the potential of forest products such as timber.

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## 7.2.7. Session B2.

### Certification and verification of timber and other forest products

#### a. Opportunity of rattan certification to tap new market and giving additional value of rattan finished product

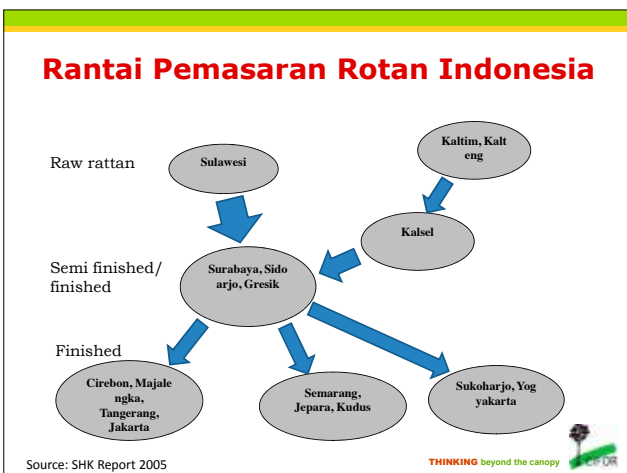


### Rotan di Indonesia

- Rotan tumbuh di Sumatera, Kalimantan, Sulawesi, Papua, Nusa Tenggara, Maluku dan Jawa Timur
- Indonesia mensuplai 80% dari permintaan rotan dunia
- Setidaknya 350 species ditemukan di Indonesia (secara global 600 species), 6-7 spesies diperdagangkan secara komersil di Indonesia
- Lima juta orang di Indonesia bergantung kepada rotan, 50% di industry prosesi dan setengahnya lagi di pemanenan

### Jenis Rotan yang Utama

- Sulawesi: Rotan liar (diameter besar); *Calamus inops*, *Calamus zollingeri*, *Calamus ahliduri*, *Daemonorops sarasinorum*, *Calamus omatus*, *Calamus* sp.
  - Produktifitas 1 - 2 ton/ hektar/ tahun
  - Tumbuh di hutan produksi, hutan konversi dan hutan lindung
- Kalimantan Timur dan Tengah: rotan dibudidaya (diameter kecil) *Calamus caesius*, *Calamus trachyoleus*
  - Produktifitas 2 - 3 ton/ hektar/ tahun
  - Ditanam di bekas ladang



### Value Chain of Rattan Price Case Study East Kalimantan





## Latar Belakang Sertifikasi Rotan

- Lingkungan: untuk meminimalisir resiko over eksploitasi rotan (khususnya rotan liar)
- Bisnis: *Tapping new market* i.e. Pasar Eropa barat
- Laos sudah memulai sertifikasi rotan di tahun 2011



## Skema Sertifikasi

- **Sertifikasi Pihak ketiga:**
  - FSC: Internasional, Prinsip sentralistik
  - LEI: Nasional, Prinsip Lokal
- **Sertifikasi Pihak Pertama:**
  - PGS (Participatory Guarantee System): Lokal, Prinsip Lokal



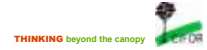
## Perbandingan Posisi Rotan

- **FSC:** Rotan adalah hasil hutan ikutan, sehingga rotan tersertifikasi FSC harus berasal dari hutan yang sebelumnya tersertifikasi FSC. Proses sertifikasi 2 tahap (Hutan lalu rotan)
- **LEI dan PGS:** Rotan (HHBK lainnya) adalah indikator keragaman hayati. Sehingga persepektif sertifikasi fokus pada pengelolaan rotan yang notabene juga bagian dari pengelolaan hutan. Sehingga tidak diperlukan sertifikasi hutannya terlebih dahulu (1 tahapan sertifikasi).



## Persamaan Prinsip Pengelolaan Hutan

- Aspek tenurial harus jelas didefinisikan dan jelas alas hukumnya
- Kepatuhan terhadap peraturan nasional dan internasional yang relevant
- Pentingnya penjagaan terhadap tutupan hutan
- Pengelolaan hutan seharusnya dilakukan dengan perencanaan yang baik
- Monitoring yang regular dan evaluasi terhadap praktek pengelolaan hutan untuk memastikan semua tujuan tercapai



## Persamaan Prinsip Pengelolaan Hutan (lanjt)

- Pekerja yang terlibat harus mendapatkan pelatihan agar dapat meningkatkan kinerja pengelolaan hutan.
- Menghormati hak-hak masyarakat adat
- Pemanenan hasil hutan tidak boleh melebihi level panen lestari
- Memperhatikan kelestarian keanekaragaman hayati serta spesies langka
- Memperhatikan perlindungan lokasi yang bernilai budaya, spiritual ataupun sejarah
- Memperhatikan pentingnya pengelolaan limbah dan melarang menggunakan bahan kimia terlarang



## Persamaan lain

- **Prosedur:** Monitoring harus dilakukan secara berkala dan terbuka
- **Standard COC dan Klaim Label:** Keterlacakan, dokumentasi COC dan SOP dalam rangka menjamin bahwa produk tersertifikasi tidak tercampur dengan produk non-sertifikasi



## Market Product Positioning

Penempatan posisi produk di pasar lebih cenderung kepada “symbolic positioning” (*self-image enhancement, ego identification, belongingness and social meaningfulness, affective fulfillment*) antara lain:

- Produk ramah lingkungan
- Sehat bagi keluarga dimana produk ditempatkan
- Bergengsi
- Merupakan bagian dari gerakan global
- Bukan *mass product*, sehingga memiliki nilai eksklusifitas

THINKING beyond the canopy 

## Potensi pasar rotan sertifikasi

- **Tidak potensial pada Pasar Bawah:** Sensitif terhadap harga. Mass product – harga relative murah. Sangat mudah dipengaruhi oleh produk substitusi rotan plastik. Pertimbangan utama bukan kepada kualitas, durabilitas maupun artistik, tetapi lebih kepada fungsionalitas dan harga.
- **Pasar Menengah,** Kualitas, durabilitas dan artistik sudah menjadi pertimbangan. Bila harganya masuk akal (tidak terlalu mahal) maka besar kemungkinan produk rotan sertifikasi masih bisa mendapatkan pasar di sini. Kenaikan harga akibat proses sertifikasi masih bisa diterima.
- **Pasar Atas:** Pertimbangan utamanya bukan berdasar harga tetapi berdasar kepada kualitas, durabilitas maupun artistik. Apakah produk “ramah lingkungan” ini cocok dengan interior ruangan saya? Apakah model atau desain produk yang saya beli ini merupakan model yang sedang “in”, atau cocok dengan tema ruangan?

THINKING beyond the canopy 

## Preferensi Pasar atas Produk Rotan Tersertifikasi

- Kualitasnya bagus: bahan baku yang bagus, barang atau produknya dikerjakan dengan baik, penuh perhatian terhadap detail
- *Durable:* menggunakan bahan terbaik: dari sisi umur/cukup tua / sesuai, tidak mudah dimakan rayap - bubuk / mendapat perlakuan pengawetan yang sesuai, relative tahan terhadap perubahan cuaca/ musim
- Artistik: modelnya sesuai dengan interior, *fine art* serta ada kecenderungan kepada produk asli yang memiliki nilai budaya, seperti anjat

THINKING beyond the canopy 

## Kesimpulan dan Rekomendasi


- Sertifikasi Rotan potensial untuk dikembangkan di Indonesia, apalagi Indonesia adalah supplier Rotan terbesar di dunia
- Pasar untuk produk sertifikasi saat ini *exist*
- Skema yang dipilih akan bergantung dengan pasar yang dibidik
- Baru skema FSC yang terbukti memiliki pasar sertifikasi rotan, contoh kasus dari Laos.
- Skema FSC lebih dikenal namun memiliki biaya yang lebih tinggi. PGS cenderung *low cost* namun membutuhkan effort untuk mencari pasar.

THINKING beyond the canopy 

## b. Establishing opportunity for REDD+ application on Mount Gede Pangrango National Park as the core zone of Cibodas Biosphere Reserve

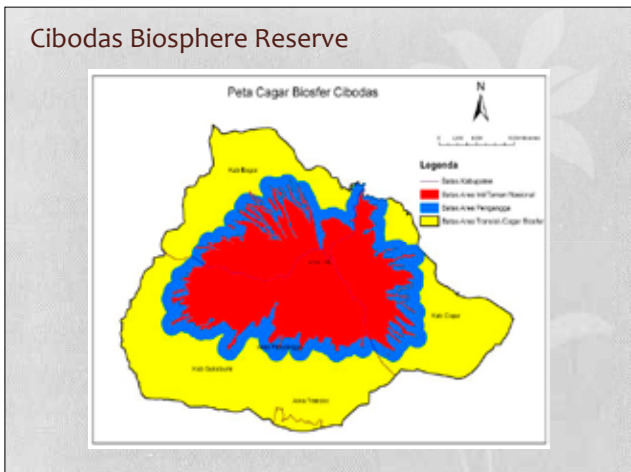
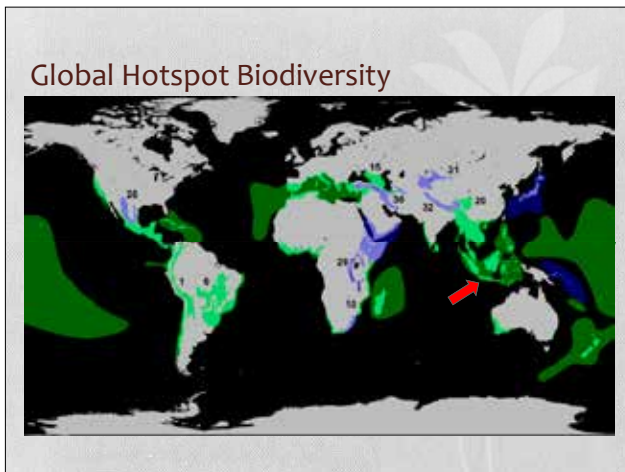
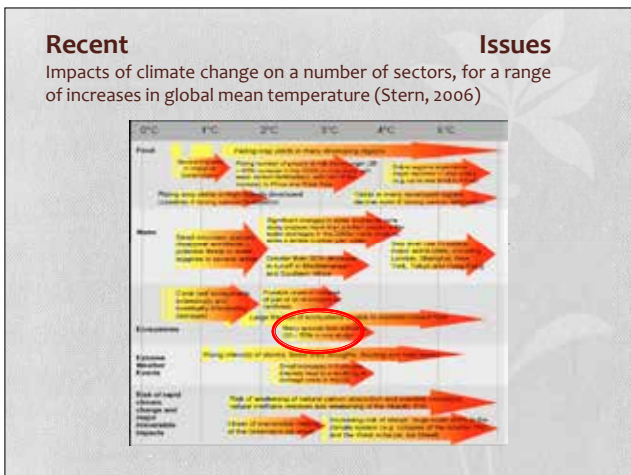
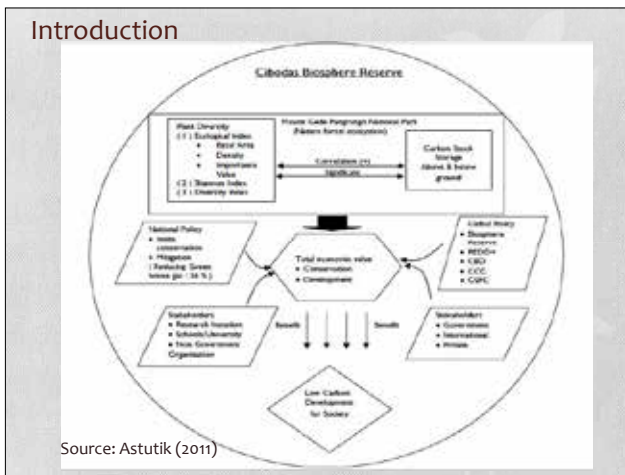
ESTABLISHING OPPORTUNITY FOR REDD PLUS APPLICATION ON MOUNT GEDE PANGRANGO NATIONAL PARK AS THE CORE ZONE OF CIBODAS BIOSPHERE RESERVE

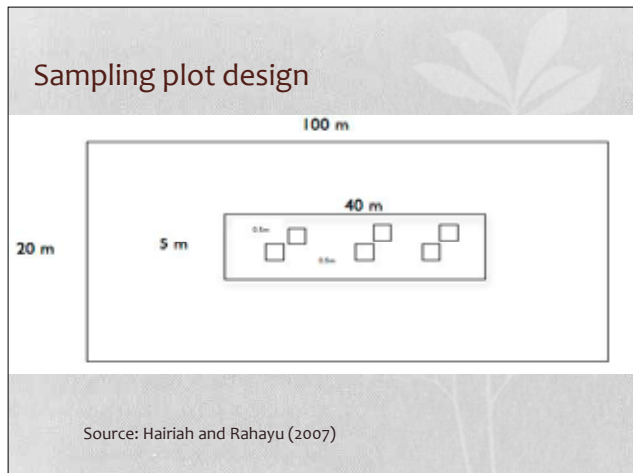
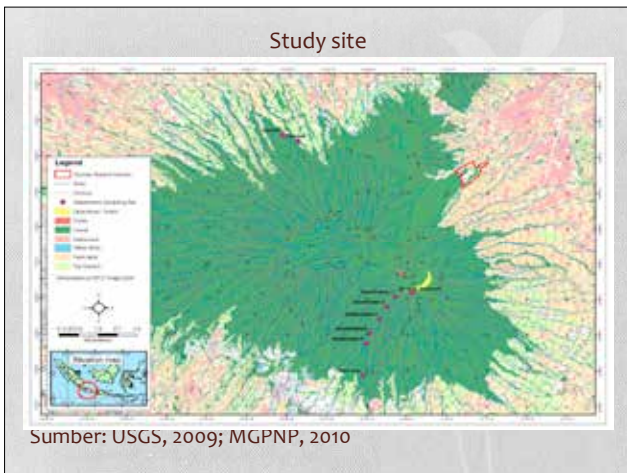
Sri Astutik  
Andi Samyanugraha



### Outline

- 1. Introduction
- 2. Framework thinking: REDD+ on conservation forests
- 3. Carbon value in relation with the other component of ecosystem services
- 4. Designing cost/benefit sharing
- 5. Enabling participation of multistakeholders





### Allometric models used to convert measures of vegetation to AGB

Aboveground component	Model	Source
Tree > 5 cm DBH	$DW = 0.118 D^{2.11}$ $DW = 0.11 \rho D^{2.42}$ $AGB_{tree} = \rho \times \exp(-1.499 + 2.148 \ln(D) + 0.207(\ln(D))^2 - 0.0281(\ln(D))^3)$ $L_n(TACB) = c + \alpha \ln(DBH)$	Brown et al. (1997) Ketterings et al. (2001) Chave et al. (2005)
Palms > 5 cm DBH	$DW = 4.5 + 7.7H$	Basuki et al. (2009)
Ferns > 5 cm DBH	$DW = \rho H D^{1.40}$	Frangi and Lugo (1985) Hairiah et al. (1999)

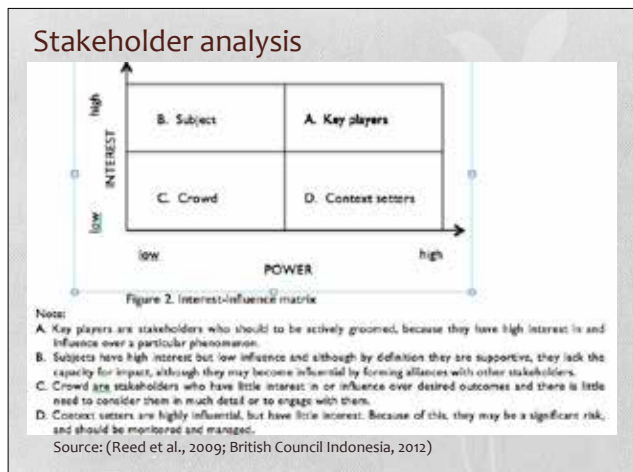
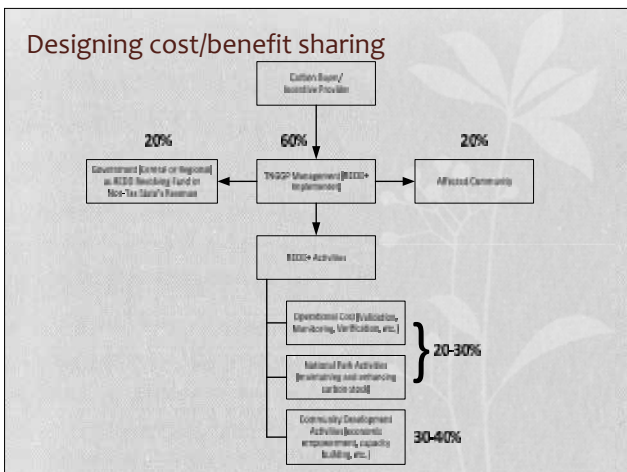
Note: AGB = aboveground biomass (kg), TAGB = total aboveground biomass (kg), DW = dry weight (kg), D = diameter (cm), DBH = diameter at breast height (cm), H = tree height (cm), c = intercept,  $\alpha$  = slope coefficient of regression equation,  $\rho$  = wood mass ( $cm^3$ ).

Carbon concentration (C) in organic ingredients is usually 46%, thus carbon stock can be calculated by multiplying the total of its mass weight with 0.46

### Estimating carbon value on Mount Gede Pangrango National Park

Ecological zone	Width (hectare)	Carbon stock average (tons C)			
		Brown	Ketterings	Chave	Basuki
Subalpine	1177.81	507284.3225	482609.2118	652339.1745	484859.0294
Montane	13945.43	6463232.89	5549999.466	7066081.41	5051883.214
Submontane	7727.787	2272602.02	2010438.88	2351197.947	1698067.834
<b>Total</b>	<b>22851.03</b>	<b>9243119.23</b>	<b>8043047.558</b>	<b>10069618.53</b>	<b>7234810.078</b>

Total average: 10.07 (Cv) ; 9.24 (Br); 8.04 (Kt); 7.23 (Bs)

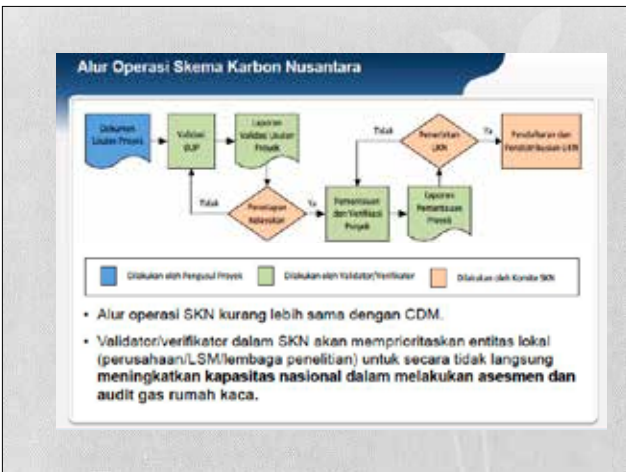


The important steps ahead

- MGPNP or the UPT Head, shall take the role as the forest carbon manager
- In case of certified emissions reduction from forest carbon project is to be exported, i.e. the buyer is foreign entity(ies), then the total carbon allowed to be sold is 49% (P.20, article 8, clause 5). This is in line with Indonesian voluntary commitment to reduce its greenhouse gas emission by 26% in 2020 (National Action Plan), in which most of emission reduction is targeted from forestry and peat land management;

The important steps ahead (Contd..)

- In case of carbon project in conservation forest, there is no clear regulation nor guidance on how the benefit should be distributed yet. For other forest types where private entities would likely be the manager/developer with a Ecosystem Restoration Permit (IUPHHK-RE), the benefit should be distributed by 20% for the Government, 20% for the community, and 60% for the developer (P. 36, Appendix III);
- Forest carbon project shall prioritized to support the development of community(ies) inside or outside the project boundary/forest area (P.20, article 3, clause 5). This means that REDD+ activities shall contribute to sustainable development of all impacted stakeholders.



- Nilai-Nilai Dasar
1. Berbahasa Indonesia.
  2. Penurunan emisi harus nyata, bersifat tetap (permanen), dapat diukur, dimonitor dan dilaporkan.
  3. Proyek harus bersifat additional terhadap praktek business as usual.
  4. Tidak menyebabkan perhitungan berganda.
  5. Harus berkontribusi terhadap pembangunan berkelanjutan Indonesia.
  6. Disusun berdasarkan prinsip-prinsip yang diakui secara internasional.
  7. Dokumen SKN bersifat dinamis.

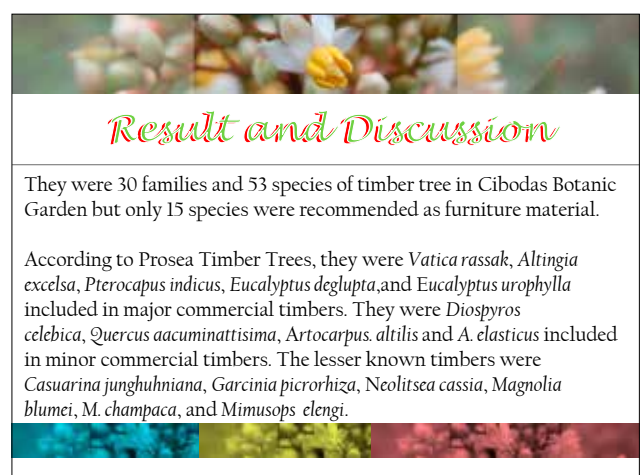
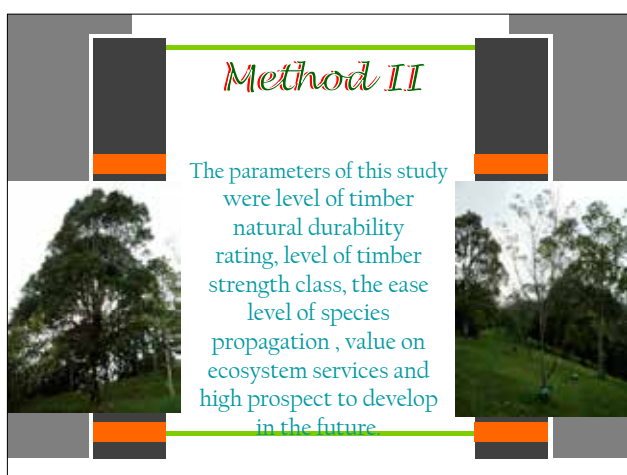
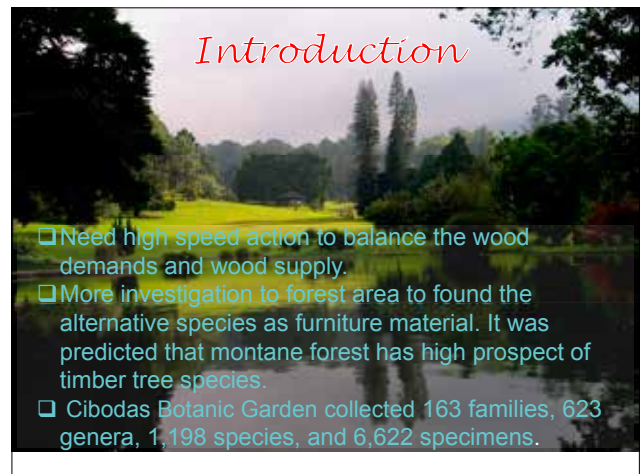
## Conclusion

The management of *in situ* conservation area that provides a space for optimum regeneration of native species, together with the strengthening of its local people and stakeholder's capacity, will keep the mitigation function through carbon stock of forest stand.



Thank you


## c. Cibodas Botanic Garden's timber tree collection and their use as furniture material



## Result and Discussion

- 2 species (*G. picrorhiza* and *P. indicus*) have the easier to propagate than the other species.
- For ecosystem services, they were 7 species reported a good recommended. They were *C. junghuhniana*, *G. picrorhiza*, *A. excelsa*, *N. cassia*, *P. indicus*, *A. altilis*, and *A. elasticus*.
- The selected species for future prospect for furniture material and provide ecosystem services can recommend the species of *C. junghuhniana*, *G. picrorhiza*, *A. excelsa*, *N. cassia*, *P. indicus*, *A. altilis*, and *A. elasticus*.

## Conclusion





From 30 families and 53 species of timber tree, there were only 7 species (*Casuarina junghuhniana*, *Garcinia picrorhiza*, *Altingia excelsa*, *Neolitsea cassia*, *Pterocarpus indicus*, *Artocarpus altilis*, and *Artocarpus elasticus*) have a good recommendation to be furniture materials.

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THANK YOU





## 7.3. List of Participants

### Symposium on Value Chains of Furniture, other Forest products and Ecosystem Services

Bogor, 14 February 2013

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13	Anto Girsang	Ministry of Industry
14	Asep Rusdiana	PT AJA Sertifikasi Indonesia
15	Audrey Tangkudung	Bhinneka TV
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47	Ibrahim	Bisnis Jakarta
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55	Krisdianto	Forestry Engineering and Forest Products Processing Center, FORDA
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57	Levania Santoso	Center for International Forestry Research, CIFOR
58	Lida	Republika newspaper
59	Lillian Kallman	PT AJA Sertifikasi Indonesia
60	Lily Ismaini	Cibodas Botanic Garden, LIPI
61	Lina Juairiah	Cibodas Botanic Garden, LIPI
62	Lina Juswara	LIPI - Botany
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66	Magdalena Gultom	Forestry Research and Development Agency, Ministry of Forestry
67	Margono	Jepara Small Scale Furniture Association, APKJ
68	Mas'ud	Cooperation Agency of Jepara Regency
69	Maya Rachmawaty	TV One / Master of ceremony
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71	Melati Kaye	Center for International Forestry Research, CIFOR
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133	Yuliani M.	Radar Bogor
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A forest value chain describes the role of different actors in forest businesses from forest to market. Each actor contributes to, and obtains benefits from the chain. A one-day symposium on furniture, timber and forest ecosystem service value chains was held at the Bogor Agricultural University (IPB) International Convention Center, in Bogor, Indonesia, on 14 February 2013, with the aim of sharing information, research results and studies on forest products and services and their value chains. Policy makers in the Indonesian Ministry of Forestry and other government agencies, researchers, research users and practitioners, NGOs/civil societies, environmentalists, and community and forestry observers participated in the event.

Fifteen papers were presented at the symposium comprising various topics: forest product value chains, e.g. teak, furniture and rattan; market, institution and governance; design and quality; and environmental certification. The symposium resulted in ten recommendations focusing on ways to improve the sustainability of forests and industry, enhance people's welfare and boost Indonesia's competitiveness in the global market.



RESEARCH  
PROGRAM ON  
Forests, Trees and  
Agroforestry

This research was carried out by CIFOR as part of the CGIAR Research Program on Forests, Trees and Agroforestry (CRP-FTA). This collaborative program aims to enhance the management and use of forests, agroforestry and tree genetic resources across the landscape from forests to farms. CIFOR leads CRP-FTA in partnership with Bioversity International, CATIE, CIRAD, the International Center for Tropical Agriculture and the World Agroforestry Centre.

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