



Making research work for small-scale furniture makers

Action research in the Jepara furniture industry, Indonesia

Melati, Herry Purnomo and Bayuni Shantiko

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Center for International Forestry Research

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ISBN 978-602-1504-18-5

Melati, Purnomo H and Shantiko B. 2013. *Making research work for small-scale furniture makers: Action research in the Jepara furniture industry, Indonesia*. Bogor, Indonesia: CIFOR.

Cover photo by Murdani. Women sand unfinished furniture.

CIFOR
Jl. CIFOR, Situ Gede
Bogor Barat 16115
Indonesia

T +62 (251) 8622-622

F +62 (251) 8622-100

E cifor@cgiar.org

cifor.org

We would like to thank all donors who supported this research through their contributions to the CGIAR Fund. For a list of Fund donors please see: <https://www.cgiarfund.org/FundDonors>

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Acknowledgements

We would like to thank the Australian Centre for International Agricultural Research (ACIAR) for funding the project ‘Mahogany and teak furniture: action research to improve value chain efficiency and enhance livelihoods (FST/2007/119)’. Special thanks are due to Dr Andrew Wardell, Gideon Suharyanto, Dina Hubudin, Gun gun Rakayana, Rika Harini Irawati, Ramadhani Achdiawan and Bayuni Shantiko from CIFOR; Rachman Effendi and Nunung Parlinah from the Forestry Research and Development Agency of the Indonesian Ministry of Forestry; Dodik Ridho Nurrohmat, Bahruni and Efi Yuliati Yovi from the Faculty of Forestry, Bogor Agricultural University (IPB); and our other project partners from Jepara, the Jepara Furniture Cluster Forum (FRK), the Jepara Development Planning Agency (Bappeda), the Jepara Forestry Units and the Jepara District Government for their support in making this book.

Additional thanks go to our colleagues and research partners who gave up their time to review and provide feedback on the manuscript. We welcome comments and suggestions to further improve our future research and publications.

Summary

This book summarises the impacts of our furniture value chain project on the furniture industry in Jepara, Central Java. The project, entitled ‘Mahogany and teak furniture: action research to improve value chain efficiency and enhance livelihoods (FST/2007/119)’, was conducted between 2008 and 2013, with the support of the Australian Centre for International Agricultural Research (ACIAR). The project was a collaboration between CIFOR, the Faculty of Forestry of Bogor Agricultural University, the Forestry Research and Development Agency of the Indonesian Ministry of Forestry, Jepara Furniture Cluster Forum and the Jepara District Government.

The aim of the project was to improve the performance of small-scale furniture enterprises in Jepara that rely on mahogany and teak by enhancing the structure and function of the furniture industry. With improved governance and efficiency, small-scale furniture makers can assume a greater role in the value chain, help their businesses and boost their incomes. The project goals are aligned with the ‘Green Economy’, as described in the United Nations’ ‘The future we want’, in order to help mainstream sustainable development and poverty eradication, by promoting sustainable patterns of consumption and production, and protecting and managing natural resource development.

The book describes the use of value chain analysis and participatory action research (PAR) to understand and strengthen the role and position of small-scale furniture makers in Jepara’s furniture value chain. The analysis was used to construct four scenarios for improving the role of small-scale furniture producers: moving up the value chain to be closer to buyers, institutionalising a small-scale furniture producers association, collaborating

down the value chain with timber suppliers, and developing ‘green furniture’ products. These scenarios, within the frame of PAR, were developed into action plans that were then implemented and monitored. The book also describes the policy roadmap completed to support the future survival and growth of small-scale furniture makers in Jepara.

Our hope is that readers will be able to take valuable lessons from this book and be inspired to learn more.



The wooden furniture value chain

Action research to improve
governance and livelihoods
for small-scale furniture
manufacturers in Jepara,
Indonesia

1. Introduction to the furniture value chain project

1.1. Background

1.1.1. Global furniture trade and consumption

The global furniture market connects people and organisations from countries across the world (Purnomo 2006). In 2011, the world's biggest furniture exporters were China (export value US\$44.8 billion), Germany (US\$13 billion), Italy (US\$11.5 billion), Poland (US\$9.3 billion) and the USA (US\$6.4 billion) (UNcomtrade, 2013). Among Asian countries, China has the biggest share of the global furniture export market, with 16.07%, followed by Malaysia (2.91%), Indonesia (2.55%), Taiwan (1.69%) and Thailand (1.47%) (USAID-SENADA 2007). In 2011, the world's biggest furniture consumer was the USA (US\$35.2 billion), followed by Germany (US\$14.3 billion), France (US\$8.9 billion), the UK (US\$7.4 billion) and Japan (US\$6.3 billion) (UnComtrade 2013).

1.1.2. The role of Jepara in the Indonesian furniture industry

Furniture is one of Indonesia's four biggest non-oil and gas exports, along with palm oil, footwear and rubber. Furniture making is also the most labour-intensive industry in the forestry sector, and its growth would increase the number of jobs available. Further developing the industry would then lead to better-quality jobs and give furniture workers more voice and participation (Ewasechko 2005).



A gigantic wooden chair stands in front of a furniture showroom in downtown Jepara.

Indonesia is one of the main furniture producers in Asia. The industry is dominated by small and medium enterprises (SMEs), which make a substantial contribution to national income (Effendi and Parlinah 2009a). Indonesia's furniture export volume increased by 17% from 2000 to 2005, when it was valued at US\$1.78 billion. Most products exported were items of

wooden furniture (75%), with rattan (20%) and metal/plastic (5%) products accounting for the rest (USAID-SENADA 2007). The export value fell by 15% between 2007 and 2011, and has since stabilised at US\$1.18 billion in 2011. The decline is primarily attributable to the industry's tendency to make products with little value added and to the weak bargaining position of SMEs compared with bigger players (Purnomo *et al.* 2009).

The Indonesian furniture industry is characterised by a long chain from production to consumption: from raw material producers (tree growers), to semi-finished product manufacturers, to finished product manufacturers, and to retailers and exporters. The value chain connects manufacturers in Jepara district, at the centre of the Indonesian furniture industry with annual exports of US\$150 million, with furniture retailers in Europe, the USA, Australia and Japan (Purnomo *et al.* 2009).

In 2006, a total of 55 765 736 kg of furniture that originated in Jepara was traded, contributing US\$111 842 200 to the national income (BPS Kabupaten Jepara 2007). Cash flows generated by the furniture industry in Jepara have been estimated at around IDR 11.971–12.255 billion per year (Roda *et al.* 2007).

Indeed, for the past few hundred years, Jepara's furniture and carving industry has been the main economic activity in the region. The industry contributes 26% of the local economy's income and 10% of the country's furniture exports. Furniture enterprises are currently concentrated in the district of Jepara, comprising the subdistricts of Tahunan, Jepara, Mlonggo, Batealit, Bangsri and Pakisaji (Figure 1).

In an initial study, Effendi and Parlinah (2009b) examined grouping patterns or clusters within the Jepara furniture industry. In general, clusters within the industry are made up of three sub-clusters: the core (furniture makers, small, medium and large); the supporting cluster (providers of products and services such as log traders, sawmills and drykilns); and other supporting infrastructure and institutions (road transport, financial institutions, local governments and design schools).

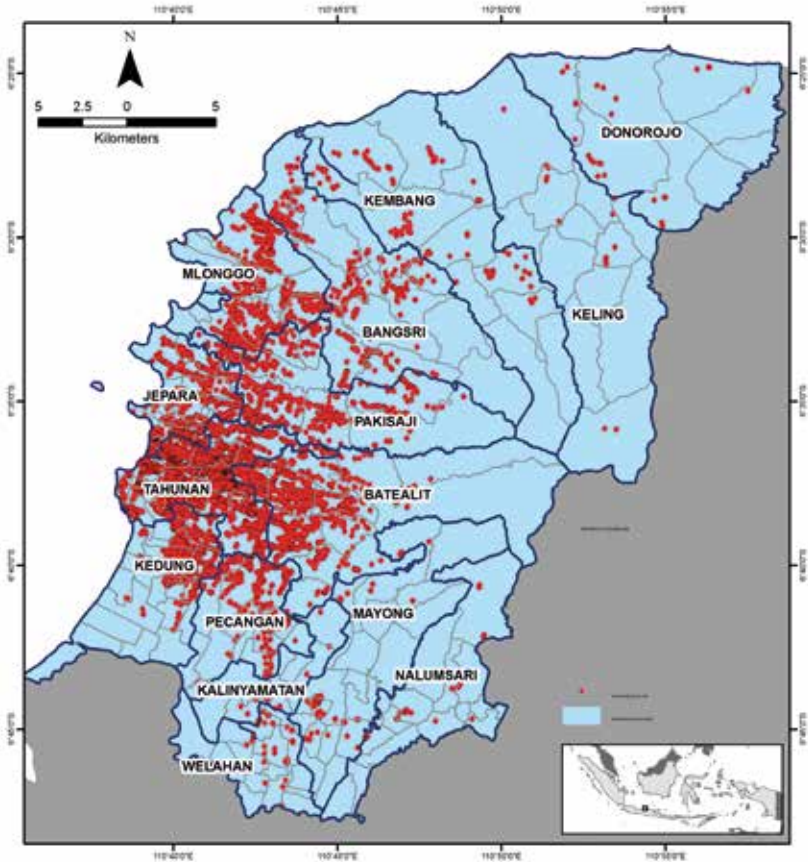


Figure 1. Distribution of furniture enterprises throughout Jepara district

Prestvik’s (2009) study of the Jepara furniture industry identified seven categories of business units: workshops, log parks, sawmills, showrooms, warehouses, drykilns and ironmongeries (Table 1). Furniture workshops are then further categorised according to their types of products: those that produce unfinished items from unprocessed roundwood; those that purchase components, pieces and sets and then assemble them into a finished product; those that combine both these stages of furniture making; and those that produce only parts of furniture (Prestvik 2009).

A spatial survey put the number of business units in the Jepara furniture industry in 2005 at 15 271, 92% of which were classified as small scale (Roda *et al.* 2007). A similar survey in 2010 (Achdiawan and Puntodewo 2010) put the number of business units in Jepara at 11 357 – a 25% decrease from five years earlier.

In a more in-depth examination of the reasons for such changes in the industry, Prestvik (2009) observed that small-scale furniture manufacturers encounter an array of problems. Their problems include a weak bargaining

Table 1. Furniture business types in Jepara

Category	Number	Predominant gender of workers
Single enterprise		
Log parks	726	Male
Sawmills	101	Male
Kiln and drying	20	Male
Workshops (<i>brak</i>)	8 080	Balanced
Ironmongeries	168	Balanced
Warehouses	528	Female
Showrooms	1 974	Female
Total single enterprises	11 597	
Combined enterprises		
Log parks and sawmills	137	Male
Workshops and showrooms	78	Female
Workshops and dry kiln	71	Male
Workshops and log parks	37	Male
Workshops and warehouses	15	Female
Integrated business	46	Balanced
Total multiple enterprises	2 384	
Total	11 981	

Source: Achdiawan and Puntodewo (2011)

position with buyers, discrepancy between the high costs of raw materials and low prices for finished products, and heavy reliance on middlemen who dictate unfair product prices. Faced with these factors, many businesses choose to exit. Furthermore, almost 50% of small-scale furniture manufacturers perceived market access to be their main problem – a constraint that had been less of an issue five years earlier (Prestvik 2009).

When the furniture industry is under pressure, less efficient enterprises may be forced to exit, thus leaving the market to more skilled producers (Prestvik 2009). Although in the short run this cuts jobs and diminishes incomes, the industry becomes more efficient and competitive in the long run. However, it remains unclear whether the furniture industry in Jepara is indeed becoming more efficient.

1.1.3. Value addition

The division of labour between firms is determined by key actors along the furniture value chain; these actors also shape participants' capacity to upgrade their activities (Gereffi 2001). Gereffi (2001) identified two types of value chains based on the form of governance. The first type is the 'producer-driven commodity chain', in which producers coordinate the value chain's production system; examples of this type of chain are technology-intensive industries such as automobiles and electronics.

The second type of chain is the 'buyer-driven commodity chain', in which large dealers and retailers dominate the essential roles in the production system. This type of chain often characterises labour-intensive, consumer goods industries, where buyers dictate the design, quality and other specifications. Examples include industries such as apparel, garments, footwear and toys (Gereffi *et al.* 2001). The furniture industry also fits into this category, as shown by the dominance of buyers in determining the final product price and their ability to capture a larger share of the value added.

In Jepara's furniture value chain also, manufacturing is generally 'buyer-driven' or controlled by buyers (Effendi and Parlinah 2009c). Buyers determine the product specifications, design and quality. In other words,

Box 1. About Jepara

Jepara district sprawls over an area of 100 413.189 ha, which comprises 16 subdistricts, 183 villages and 11 *kelurahan*. The Java Sea lies to the north and west of the district, and it borders Demak in the south and the districts of Pati and Kudus in the east. More than 95% of Jepara's administrative area is on the island of Java, with the rest scattered over the offshore islands of Karimunjawa (Figure 2).

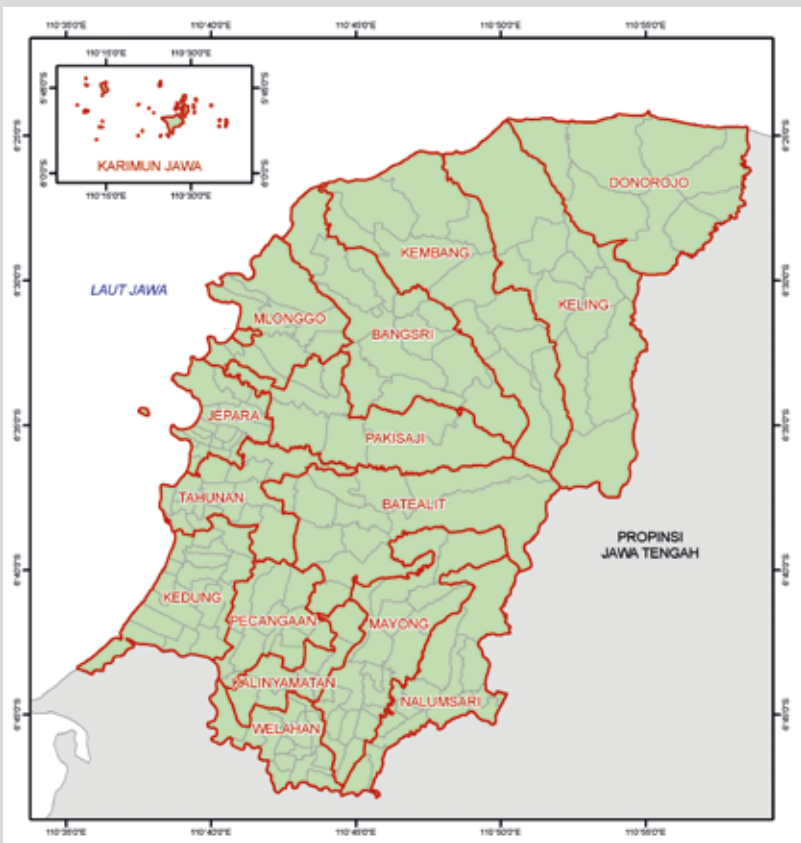


Figure 2. Administrative divisions of Jepara district

Jejara has a population of slightly over one million, with the numbers of men and women relatively balanced. The population density is highest in the western and southern parts of the district (Central Bureau of Statistics 2008) (Figure 3).

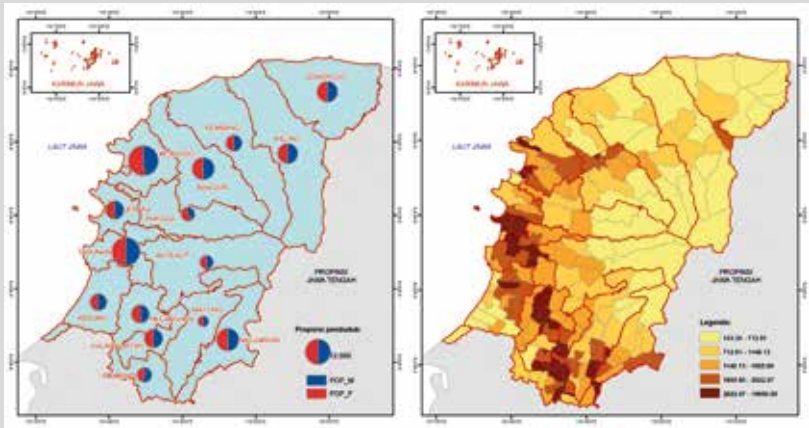


Figure 3. Jeppara’s demographics and population density

small-scale manufacturers’ outputs mostly depend on buyers’ orders, whether domestic retailers or exporters. With sales, small-scale manufacturers are price takers because the buyers had set the product specifications. Exacerbating this problem is the fact that buyers were found to be paying only small deposits, leaving the manufacturers short of cash.

Retailers were found to be capturing the value added from wooden furniture for the domestic market (52.44%), with exporters taking 35.88% for the international market (Effendi and Parlinah 2009c). As the Jeppara wooden furniture industry is buyer-driven in nature, the leading firms are retailers and exporters. Retailers and exporters earn large profits mainly thanks to the asymmetric distribution of market information, where those with more information receive greater profits.

Similar results were found in other studies. Although each player in the furniture value chain contributes to the value added, the distribution of benefits is often inequitable, largely because of the unbalanced power relations along the value chain (Purnomo 2006; USAID-SENADA 2007; Effendi and Parlinah 2010). Purnomo (2006) found that workers who do kiln drying receive the smallest share of benefits in the value chain (0.2%), with international retailers taking the largest share (46.7%). Teak growers take 5.6%, log traders 0.9%, sawmills 0.6%, furniture producers 3.6%, furniture finishers 3.2%, exporters 11.4%, overseas exporters 6.1% and international wholesalers 21.9%. Effendi and Parlinah (2010) showed that teak growers capture 6.5% of the value added, mainly because farmers have limited knowledge of the wood market, use subsistence farming techniques and take a low selling price for standing trees instead for logs.

1.1.4. Power relations

In a study of the relationships and forms of governance among furniture industry actors in Jepara, Irawati *et al.* (2010) observed that the imbalance in power and information throughout the value chain is behind the uneven distribution of gains among actors in the industry.

Drawing on Schmitz's (2005) governance typologies, Irawati *et al.* (2010) identified three types of value chain governance within the Jepara furniture industry: market-based, balanced network and directed network. *Market-based* governance is characterised by large numbers of customers and furniture manufacturers, repeat transactions with limited information flows and no technical assistance given by buyers to small-scale producers. In the *balanced network*, both buyers and sellers have enough information about the market and have equal power for negotiating a price for the product. In a *directed network*, one main customer takes at least 50% of the outputs, chooses the product design and provides technical assistance, with an unequal flow of information between customer and producer.

A fourth type is a *hierarchical* form of governance, characterised by vertical integration of furniture production, with the establishment owned by the

customer and small-scale manufacturers having limited decision-making autonomy at the local level (Irawati *et al.* 2010).

The types of value chain governance identified in Jepara’s furniture industry are depicted in Figure 4.

1.2. Action research and the value chain analysis

The increasing globalisation of the production of manufactured components is opening up opportunities for developing countries to increase their rate of industrial growth and economic prosperity. However, globalisation may also increase the imbalances within and between countries in terms of absolute poverty levels (Kaplinsky and Morris 2000).

To manage and ensure stable incomes, it is important to develop appropriate strategies and insert them into the global economy, according to Kaplinsky



Photo by PIC Team

Jepara furniture stakeholders gather at a workshop to find solutions in facing regional economic competition.

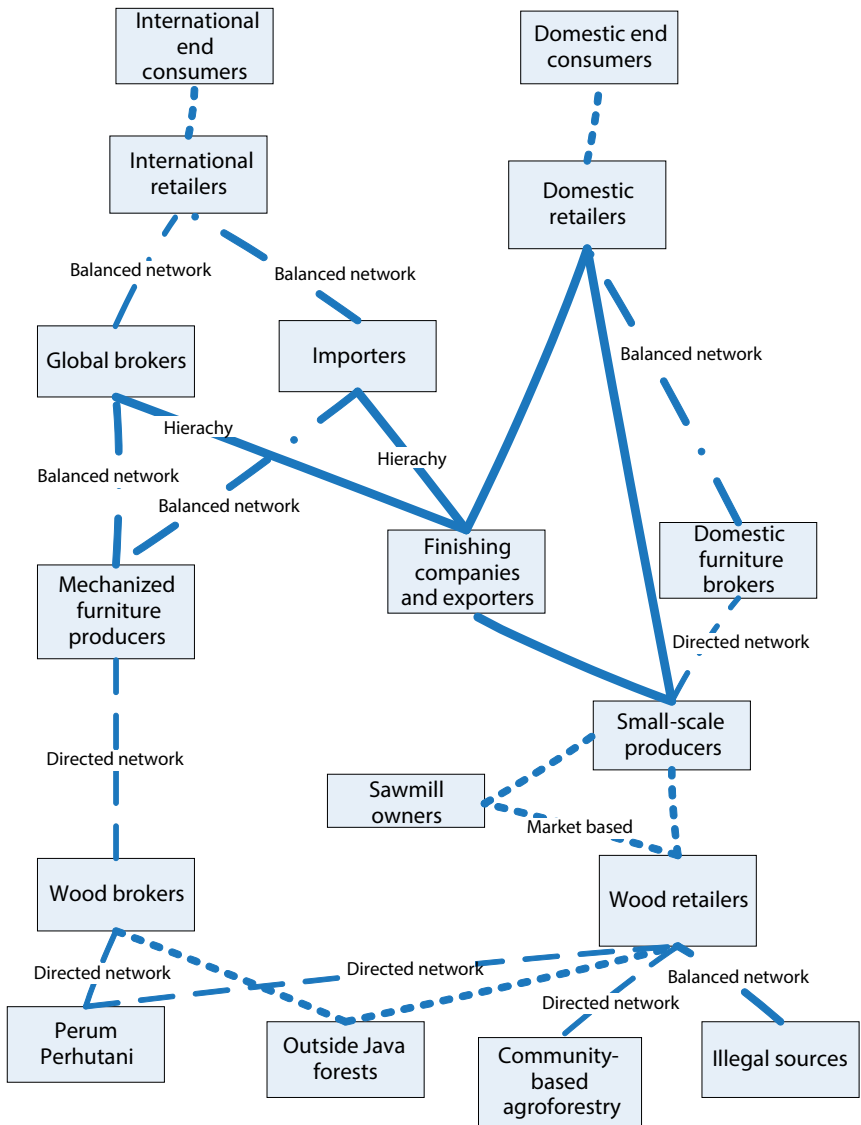


Figure 4. Four types of value chain governance in Jepara's furniture industry

Source: Purnomo *et al.* (2011a)

Box 2. Business patterns among Jepara's furniture actors

Effendi and Parlinah (2009c) examined Jepara's furniture production flows and power relations. They identified the following actors in the furniture value chain: wood growers (farmers and Perhutani [timber-supplying company]), wood traders in and outside Jepara, sawmill owners, small-scale manufacturers, finishing services, domestic retailers, exporters and global buyers.

They traced the production flow as follows. Farmers and Perhutani plant the trees. After the trees are felled, the wood, in the form of logs, is sold and bought by wood traders. The logs are put through the sawing process, and are then transformed into half-finished furniture by small-scale manufacturers. The next step is the finishing. Finally, the finished furniture is ready to be released into the market. In addition to furniture from small-scale manufacturers, they observed that furniture is also produced by bigger companies, where the whole production process is integrated within the company.

Following is an excerpt from Effendi and Parlinah (2009c).

Farmers and wood sellers

Wood is usually sold by farmers to wood sellers (agents) when the trees are still standing, so that the agents cover all costs of felling and permits. Payments are made in cash. When the number of trees sold is high, the seller will make an initial deposit, with the final payment made when the trees have been cut down. Generally, when a farmer wants to sell wood, he will offer it to the nearest trader. If the price offered is accepted, the transaction will take place; if not, the farmer will approach another trader. One factor influencing this transaction is the extent to which the farmer needs money. Farmers are usually subsistent and their urgent economic needs mean they do not have strong bargaining power.

Prices for mahogany in Jepara in the form of standing trees range between Rp 200 000 and 250 000 per tree with a diameter of 22–28 cm. Although some negotiation takes place during the transaction, prices are usually determined by the agent. Agents have a stronger bargaining position – and hence larger profit margin – because of information asymmetry: buyers hold more information about the wood market and wood quality.

Perhutani and wood traders

Perhutani sells wood through contractual agreements, direct sales, auctions and its timber yard. The sales price includes the base selling price, surcharge and differentiation. Surcharges are set by the director of Perhutani, and differentiation is determined by the general manager. Wood is sold by the *kavling* (area of land).

Jepara wood traders and small-scale manufacturers

To obtain raw materials, small-scale manufacturers (agents) usually go to a trader (principal). A local manufacturer's decision to purchase wood from a particular trader is influenced by factors such as the type, size and price of the wood and the distance from their workshop and the sawmill.

Traders sell wood measured in bar units or in m^3 . Small-scale manufacturers that purchase in m^3 can choose the wood themselves. Alternatively, they can purchase it by the *kavling*. Prices are usually lower under the *kavling* system, but the buyer has no information about the quality of wood. Prices of wood selected by the buyer are much higher, but information about the wood quality is relatively reliable. For example, the price of mahogany with a diameter of 22–28 cm is Rp 700 000/ m^3 under the *kavling* system, but Rp 950 000/ m^3 under the selection system. The buyer usually covers the costs of transport and loading, although some places include the loading cost in the purchase price.

Payments are made in cash or in small instalments over a set period of time. All new customers must use cash, although regular and trusted customers may be allowed to pay by other means.

Small-scale manufacturers and sawmills and finishers

Sawmills and finishers provide services and not products for small-scale manufacturers. The sawmill charges based on the volume of the wood sawn, with the price per m^3 in the range of Rp 65 000–75 000. Sawmills are usually owned by an individual or small-scale manufacturers cooperative. In some places, someone owns both a furniture workshop and a sawmill in the same location, to minimise transport costs.

The cost of finishing is usually calculated based on the units/pieces of goods to be finished or it could be calculated based on the number of sets of goods. The cost of finishing varies depending on the furniture model and size, and

the kind of finish. Kinds of finish include burned finish, natural finish and antique finish. The more complex the process, the higher the cost of finishing. All costs associated with finishing are covered by the finishing service provider. Payments are made in cash or by bank transfer after the finished goods have been delivered.

Small-scale manufacturers and domestic retailers and exporters

Furniture for the domestic market is usually made to order (agent), but the price and product specifications are determined by the buyer (principal). The buyer of unfinished furniture could be a retailer (showroom) or a furniture collector who will resell the furniture to retailers from outside Jepara. Retailers usually make deposits, of varying amounts. The final payment is made by post-dated cheque after the goods have been delivered. Although collectors usually pay in cash, they offer lower prices. Some small-scale manufacturers make furniture without having an order first, using a common design to make it easier to sell.

For the export market, generally only those with access to or a direct relationship with overseas buyers are exporters; small-scale manufacturers only have a direct relationship with exporters. Orders from overseas are usually subcontracted to small-scale manufacturers. This subcontracting system involves a principal-agent relationship with two levels: first, between the buyer and the exporter, and second, between the exporter and the small-scale manufacturer. At the first level, the buyer acts as the principal and orders furniture according to predetermined specifications; the exporter acts as the agent receiving the order. At the second level, the exporter (principal) authorises the small-scale manufacturer (agent) to complete the finishing for a furniture order (agent). New small-scale manufacturers are recruited only when there are a lot of orders.

Exporters place orders with small-scale manufacturers with an order receipt (Surat Perintah Kerja or SPK), setting out the type, size, model and quality of the furniture. Payment may be made in full after the goods have been delivered, or the manufacturer may receive an initial deposit, with the remainder paid one or two weeks after the exporter has received the goods. Before the furniture is shipped, it undergoes a quality control to make sure that everything is satisfactory. Small-scale manufacturers usually pay the quality controller Rp 25 000–Rp 50 000 for every shipment.

If the exporter does not pay on time, small-scale manufacturers continue to make the ordered furniture in the hope of ultimately being paid for it. On the other hand, when small-scale manufacturers fail to meet the deadline or the expected quality, exporters might reduce the size of orders, delay payment or switch to another small-scale manufacturer.

and Morris (2000). Value chain analysis supports this goal by elucidating the dynamics of inter-linkages within the production sector.

The value chain method emerged in the 1990s as a novel approach for understanding how power, benefits and costs are embodied and distributed among actors (Purnomo *et al.* 2009). It describes the activities that are required to bring a product or service from conception or design, through production, and then to delivery to the final consumers and disposal after use (Kaplinsky and Morris 2000).

Kaplinsky and Morris (2000) discuss the importance of value chain analysis in the context of globalisation. As the division of labour continues to advance, global distribution of components and systematic competitiveness are also on the rise. Furthermore, with production efficiency a prerequisite for participating in the global economy, success in the global economy is determined by policies in the final market and the strategic decisions of the lead firm in the value chain. In addition, being able to seize the opportunities offered by globalisation requires an understanding of the dynamics influencing the whole value chain. Thus, value chain analysis helps to explain income distribution.

The value chain approach also has the potential to enhance understanding of the global crisis and possibly to mitigate it, according to Fauzan and Purnomo (2012). In contrast to studies of the global crisis that take a macroeconomic perspective, the value chain approach reveals the more detailed and specific experience of those involved in the value-making processes of the global economy (Fauzan and Purnomo 2012).

Value chain analysis was therefore incorporated into this project for use in envisaging governance and institutional arrangement scenarios for more equitable power and income as a means of making both forest management and the furniture industry sustainable (Purnomo *et al.* 2009). The value chain analysis was performed in conjunction with action research. Researchers and furniture industry stakeholders jointly developed plans to strengthen the industry structure, build value addition and improve livelihoods.

To ensure the project would have an impact at both local and national levels, the project team collaborated with the Jepara Furniture Multi-stakeholder Forum, the Jepara local government, the Forestry Research and Development Agency (FORDA) of the Indonesian Ministry of Forestry, and Bogor Agricultural University (IPB).

During the five years of the action research, the Jepara furniture value chain analysis involved literature reviews on the distribution of value added, as well as research on those in the furniture industry, leading firms, power relations and existing rules.

In particular, the action research and value chain analysis were employed as a means of understanding the role and position of small-scale manufacturers in the Jepara teak value chain. Action research is a process through which members of a community identify a problem, collect and analyse information, and then seek solutions and target social and political transformation (Selener 1997). Action research is an iterative process, employing a cycle of reflection, planning, action and monitoring (Figure 5).

In the reflection phase, researchers established communication channels with stakeholders through field visits, during which they used surveys to identify stakeholders, learn their problems and analyse the furniture value chain. In this study, value chain analysis was framed as part of the reflection phase within the action research. This approach emerged as a novel way for understanding how power, benefits and costs are embodied and distributed among various actors, both men and women.

During the planning phase, stakeholders constructed scenarios in which their problems are resolved. The scenario planning was guided by recommendations from the reflection phase and was conducted using participatory methods. During the action phase, stakeholders prioritised their actions and executed the plan in a participatory way, with the aim of creating a balanced value chain. A set of indicators devised by local stakeholders was used in the monitoring phase, to oversee the implementation of the plans.

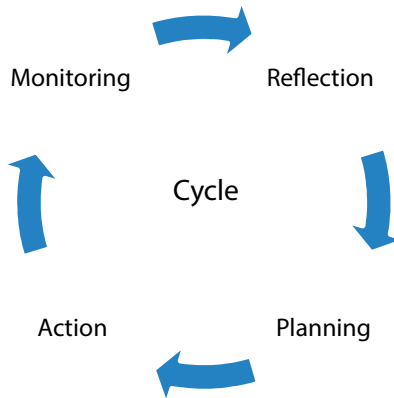


Figure 5. Cycle of reflection–planning–action–monitoring, leading to improvements

1.3. Project aims

In examining the challenges facing the Jepara furniture industry, the furniture value chain project had three main objectives. The first two objectives were to enhance the structure and function of the furniture industry for the benefit of small-scale furniture manufacturers, and to improve marketing by these manufacturers and their organisations. The third objective, important in action research, was to monitor any impacts and early adoption of innovations from Objectives 1 and 2, and to enhance project strategies.

1.3.1. Enhancing the structure and function of the furniture industry for the benefit of small-scale furniture manufacturers

During the first year of the project, several activities were conducted to build understanding of the furniture industry. These included a supply chain and cluster analysis of the teak and mahogany furniture industries to understand and predict wooden furniture flows, as well as the value chain analysis to identify constraints and intervention points.

Livelihoods surveys were conducted and a spatial database of Jepara furniture workshops was built. Researchers examined wood sources and constraints on timber acquisition, patterns in different types of furniture, the efficiency of industry networking, and supply chain dynamics. Findings were analysed to generate future scenarios for improving small-scale furniture manufacturers' livelihoods.

1.3.2. Improving sales and marketing by small-scale furniture manufacturers and their organisations

As previous studies have shown, an underlying problem within the Jepara furniture industry is the weak marketing strategies of small-scale furniture manufacturers and their organisations. The project therefore focused intensively on addressing this weakness.

Analyses of domestic and international furniture markets, potential marketing networks and premium markets for small-scale furniture manufacturers were conducted throughout the study period to support the development scenarios. Workshops were then held to educate the furniture makers about market demand and certification. These workshops covered a range of topics, including financial and organisational management, marketing and business communications, access to capital, quality control, timber legality and eco-certification.

In addition to individual capacity building, institutional strategies were also employed to further strengthen small-scale furniture producer organisations. These included engaging multiple stakeholders in developing a 20-year roadmap for the Jepara furniture industry and building collective action more broadly through the establishment of the Central Java Furniture Producers Association.

1.3.3. Monitoring impacts and early adoption of innovations from Objectives 1 and 2, and revising project strategies

Action research involves continuous monitoring and evaluation throughout the five years of the project. Results are reflected upon throughout, with

the findings used as a basis for future improvements to revise and enhance project strategies.

Livelihood surveys conducted during the fifth and final year were compared with baseline conditions recorded at the beginning of the project. The aim of this comparison was to identify and analyse any positive and negative impacts that had occurred as a result of the project.

In addition, the project plan was regularly updated and the developments communicated to Jepara residents and to CIFOR's research partners through quarterly newsletters written in both Indonesian and English. People within the furniture industry were invited to write chapters of a book sharing their personal experience of being involved throughout the entire project. A photo book depicting the stages of the furniture value chain was published, and two short movies on the conditions in Jepara's furniture industry and the ongoing project were released to raise awareness of issues affecting the industry. All publications are available on CIFOR's website for free public access. Research outcomes were also disseminated each year at national and international conferences, and in papers in academic journals.

All feedback from the public, project partners and the research community on the project's publications and conference presentations were used to further improve project strategies.

Drawing on their early research into the problems affecting the Jepara furniture industry, the project team has proposed several ideas for solutions. Purnomo *et al.* (2009) used the findings of the value chain analysis on relationships and governance to construct scenarios and identify intervention points with the aim of improving sustainability in small-scale furniture manufacturing and the distribution of value added among actors.

Purnomo *et al.* (2009) propose four strategies for addressing problems related to marketing, capital and wood acquisition. The first of these addresses the *horizontal dimension of the value chain*, i.e. those actors at the same stage of the value chain. This *SME association scenario* involves locally organising

SMEs and helping them gain access to financial institutions and markets, with the aim of improving manufacturers' ability to become independent and competitive within the global market, strengthening their bargaining position, creating fairer market prices and facilitating access to credit. Members of the newly formed Jepara Small-scale Furniture Producers Association (APKJ) are expected to become 'local champions' or agents of change for other SMEs in the industry, through collective marketing via web portals, group trademarks and participation in trade exhibitions.

Melati *et al.* (2010) also noted the social networking potential of APKJ members to use collective action to gain access to market information. Efforts to improve team building and leadership skills may lead to fruitful collaboration among members. With solid networking and hard work, APKJ may eventually become independent of its donors.

Purnomo *et al.* (2009) argue that the formation of an SME association makes it easier to achieve scenarios for addressing the vertical dimensions of the furniture value chain – that is, actors at different stages of the chain. The first *vertical dimension scenario* proposed is *collaborating down the value chain*. The aim here is to address systemic weaknesses in the value chain, encouraging small-scale furniture manufacturers to work with log traders and tree growers to address the inconsistencies in product delivery and quality caused by the timber shortages. If such collaboration can secure a sufficient timber stock for APKJ members, they can build a stronger position during price negotiations (Purnomo *et al.* 2009).

The second vertical dimension scenario is *moving up the value chain*, which aims to add value for small-scale furniture manufacturers by encouraging them to assume roles further along the value chain, such as brokering, finishing or exporting. By moving up the value chain, small-scale furniture manufacturers may boost their power in lower stages of production. This scenario will require members of the APKJ to be trained on brokering, financing and overseas trading (Purnomo *et al.* 2009).

The final scenario is *collaborating along the value chain*, with the aim of producing new products or services through jointly owned network companies, and to ensure increases in value added. Through this scenario, APKJ members can manage their furniture products through a single business entity, in collaboration with big furniture companies and assisted by the government, to produce certified, eco-labelled or 'green' furniture. Producing certified furniture requires the coordination of various stages in the value chain. This can only be achieved by integrating all the players in the value chain: Perum Perhutani (timber supplier) and community-based agroforestry farmers for obtaining certified timber, small-scale furniture manufacturers for processing certification documents, and exporters for opening channels to niche markets (Purnomo *et al.* 2009).

1.4. Project funding: About ACIAR

The furniture value chain project was conducted over five years supported by funding from the Australian Centre for International Agricultural Research (ACIAR), an Australian government body that commissions research to improve sustainable agricultural production in developing countries. ACIAR's focus in Indonesia, particularly in the Jepara region, provides flexibility in tackling rural poverty, helps improve market linkages for high-value products sourced from smallholder production systems, and facilitates better linkages between national and province-based research agencies.

2. The 'moving up' scenario: Improving market access for producers

2.1. The furniture market

OECD imports of wooden furniture reached a total value of more than US\$32 billion in the early 2000s, compared with about US\$26 billion in the mid-1990s. The absolute annual growth in the import value is 6%, with the most stable growth segments being wooden bedroom furniture, 'other' wooden furniture (that destined for living/dining rooms, shops, miscellaneous uses) and wooden seats (IFC 2005 in Nurrochmat *et al.* 2009). The USA is the largest market for wooden furniture (purchasing 33% of all OECD imports, to the value of US\$10.7 billion), followed by Germany (US\$3.3 billion), France (US\$2.6 billion), the United Kingdom (US\$2.3 billion) and Japan (US\$1.9 billion) (IFC 2005 in Nurrochmat *et al.* 2009).

With the introduction of mass-produced furniture made for export, Indonesia's wooden furniture industry has developed significantly since 1975. In the mid-1990s, large-scale furniture companies were established, mostly by the owners of sawmills or plywood manufacturers (Nurrochmat *et al.* 2009).

During the 1990s, Indonesia's wooden furniture industry grew on average by about 19%. Plywood is believed to have been the predominant raw material for wooden furniture in the mid-1990s. However, by 2000 its market share



Photo by Moerdant Usman

Wooden chairs line up at a small-scale producers' workshop.

had decreased, and it was replaced by particle board and medium-density fibreboard (MDF). In the mid-2000s, the preference for wood panels began to shift towards solid wood, which remains the preferred material for wooden furniture (Nurrochmat *et al.* 2009).

However, most furniture production was not destined solely for export. In 2005, more than 80% of workshops were producing for the domestic market (Roda *et al.* 2007). By 2008, this had fallen to 63%, whereas the proportion of workshops producing goods for Western markets had increased from 17% to 42% (Prestvik 2009). This shift is attributable to the higher prices offered by Western markets. During the same period, production for the Asian market also decreased, suggesting that manufacturers in Jepara began to lose market share to competitors in other countries such as Vietnam and China (Prestvik 2009).

Nevertheless, furniture production for the domestic market continues to grow. In 2012, approximately 93% of furniture was made to fill domestic

orders (Yovi *et al.* 2012). This is partly because small-scale furniture businesses usually have limited capital, which prevents them from filling large orders; domestic orders are usually quite small, whereas goods for export are usually ordered in bulk, demanding substantial amounts of capital. Combined with the complexity of documentation for exports and the limited capacity of human resources, the Jepara small-scale furniture industry is inclined to serve primarily the domestic market (Yovi *et al.* 2012).

Furthermore, whereas international consumers prefer the best-quality (A-grade) furniture only, domestic consumers mostly buy B- or C-grade furniture – their priority is affordability, not quality. As a result, small-scale furniture manufacturers are likely to continue to serve the domestic market, even with a decrease in the quality of wood (Yovi *et al.* 2012).

Jepara's furniture market structure, at domestic and international levels, is summarised in Box 3.

2.2. Market constraints

In a survey of how domestic and international buyers perceive furniture from Jepara, Bahrani (2010) found that the region has strong advantages in price and order flexibility. However, international buyers were critical of the punctuality of shipping, design and quality – but local manufacturers did not share these perceptions (Figure 6). Special attention should be directed towards these factors so that producers maintain their competitiveness and international buyers continue to buy their furniture (Bahrani 2010).

Similar problems have been observed within the Jepara furniture industry more specifically (Muhtaman 2009). Small-scale furniture manufacturers face many challenges in maintaining product quality and delivering products on time. Both exporting companies and small-scale furniture manufacturers regard as their major constraints expensive certification schemes, complicated legal requirements for business documents, uncertainty of raw material supplies and the high cost of marketing (Muhtaman 2009).

Box 3. Jepara's domestic and international furniture market structure

At the base of the market structure are the **tree growers and furniture producers** (Bahrani 2010). Perum Perhutani, the main timber supplier in Java, dominates in teak and mahogany. Despite strict limits on official teak supplies, in recent years Perum Perhutani's market share has been challenged by timber from private forests and, in particular, from illegal timber sources (Nurrochmat *et al.* 2009).

In practice, communication between tree growers, log parks and furniture producers is limited. **Middlemen** play an important role in controlling information between upstream (tree growers) and downstream (log parks/ furniture makers) actors. Log park owners tend to entrust the management of their wood supply to middlemen because of the complexity of handling legal documents for transporting timber. However, for wood already in Jepara, communication between tree growers and furniture producers is tighter (Yovi *et al.* 2012).

The second layer of the market structure is the wooden furniture market, which is more competitive because of a large number of **furniture manufacturers and exporters**. The market for wooden furniture in Jepara is segmented based on price, quality and location (Nurrochmat *et al.* 2009). At the artisanal level, exporters may seek out specific items of furniture by approaching certain locations or clusters. At the shop or showroom level, however, exporters may seek products based on their quality and price (Bahrani *et al.* 2009).

In practice, direct contact between furniture manufacturers and exporters is very rare. Again, **middlemen** play a huge role in protecting market information to ensure that small-scale manufacturers depend on the middlemen for sales. For example, approximately 90% of small-scale manufacturers were found to have no idea where and who bought their furniture from the middlemen (Hadiyati 2010). Interestingly, small-scale furniture manufacturers see this relationship as beneficial, in that it helps them save on marketing costs. They have no need to rent a showroom because, through this form of indirect distribution, the middleman or buyer approaches the manufacturer to buy furniture (Yovi *et al.* 2012).

In the third layer of the market structure, **exporters and consumers** interact with each other to trade the final furniture products. Generally, furniture outlets are the most effective channels for selling wooden furniture in Indonesia. However, exhibitions for marketing furniture target higher-income consumers, especially in big cities (Nurrochmat *et al.* 2009).

Most Indonesian wooden furniture products gain some competitive advantage because of the low prices of raw materials. However, the lack of solid marketing strategies and the failure to increase production efficiency are undermining this advantage. As a result, competitors have taken over much of the international market share previously held by most Indonesian forest products (Nurrochmat *et al.* 2009).

Because of the cost and difficulty of selling their products, small-scale furniture manufacturers tend to adopt a passive marketing strategy: they locate their workshops in a cluster and wait for buyers to find them (Prestvik 2009). They therefore capitalise on the presence of many other workshops nearby, especially any neighbouring workshop that may have a more active marketing strategy that attracts buyers. Visiting warehouses to seek orders is the second most common marketing strategy among small-scale furniture manufacturers; media advertising, seeking buyers at tourist attractions and Internet marketing are less common (Prestvik 2009). Very few companies implement a complete marketing strategy such as producing marketing kits, allocating a marketing budget, and developing and maintaining a website to reach their target markets (Muhtaman 2009).

By contrast, export-oriented workshops distance themselves from other furniture workshops, which indicates that they are less concerned with the immediate benefits of being in a cluster, i.e. 'free marketing' (Prestvik 2009). Successful export-oriented workshops tend to be operated on a large scale by well-educated owners. That they can produce large quantities regularly and that they have the skills and language ability to negotiate better prices with buyers are the main factors behind their independent success (Prestvik 2009).

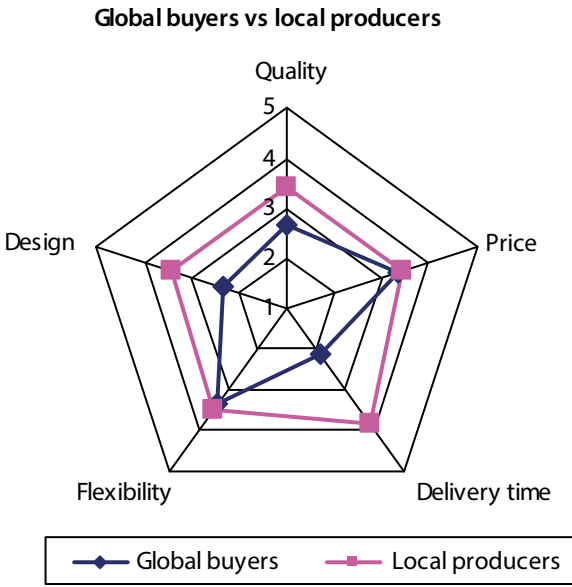


Figure 6. Comparison of perceptions of global buyers and small-scale furniture manufacturers in Jepara

Source: Muhtaman (2009)

2.3. The buyer-driven market

Buyers control the furniture market: they determine most of the production process, including product design. However, many buyers do appreciate it if manufacturers modify the product design – so long as quality is maintained – but very few ever do so. Hence, local companies could invest more to strengthen their design capacity as well as quality. Furthermore, most Jepara furniture that is exported is marked not with the manufacturer’s brand but with the buyer’s brand. This is a strong indicator of manufacturers’ lack of control and product identity in the market (Muhtaman 2009).

Although foreign buyers dominate the higher value-added activities associated with sales and exports, thus engendering resentment among local

people and Indonesian producers and traders, these foreign buyers have made a substantial contribution to the development of this local industry. Foreign traders provide access to lucrative international markets, help upgrade the quality of local furniture production and facilitate access to working capital by extending partial advance payments for export transactions, thus helping manufacturers cover the initial costs of timber and wages. Foreign buyers have also introduced new designs with greater value added, instructed producers on quality-control methods, standardised outputs required for the rapid expansion of order-driven production tailored to the quickly changing preferences of foreign buyers, and opened up new export markets for modern Jepara furniture (Muhtaman 2009).

Nevertheless, the people of Jepara still play a major role in furniture exports. More than 50% of business owners come from Jepara; 30% are Indonesians from outside Jepara and only 19% are from outside Indonesia (Muhtaman 2009).



Photo by APKJ

APKJ chair, Margono, poses with an international buyer after securing a business deal at a furniture expo.

Outdoor furniture products are major exports to Europe and the USA, and so have become the focus of many furniture companies in Jepara (Muhtaman 2009). In the domestic market, the main destinations for furniture are Sumatra and Jakarta, as well as other major cities across Indonesia. Main items of domestic wooden furniture are indoor and outdoor furniture, wooden handicrafts, and wooden furniture combined with other materials such as rattan, steel or aluminium. Domestic furniture is divided into two categories: unfinished (60%) and finished (40%) products (Yovi *et al.* 2012).

2.4. Profit margins

The high price of teak furniture does not necessarily reflect the quality of the raw material. Medium-quality furniture made from low-quality teak can fetch a good price after finishing. Finishing is the final stage of the production process and has a significant impact on sales. According to Parlinah (2010), finishing makes the biggest contribution to the profit margin, accounting for 60% of the profit.

Despite these clear benefits, however, nearly all small-scale furniture manufacturers (97%) continue to sell unfinished furniture (Hadiyati 2011). This tendency is attributable to their lack of means to obtain working tools and finishing materials, artisans' limited knowledge and skills, and the delay in receiving payments because goods take longer to manufacture. Under the *Kamisan* tradition, furniture workers are paid every *Kamis* or Thursday; therefore, small businesses prefer to skip the finishing process and target a faster turn around of funds. Finishing is then mainly conducted by local showrooms or buyers from outside Jepara who have better access to capital (Yovi *et al.* 2012).

The Jepara furniture industry is traditionally a labour-intensive industry dominated by non-permanent workers. Small-scale workshop owners, out of need to pay their workers cash, are driven to sell their furniture to local buyers (predominantly owners of local showrooms in Jepara) or to middlemen, who have stronger purchasing power. This system usually leads

to a very small profit margins for small-scale manufacturers, sometimes barely enough to cover the production cost (Yovi *et al.* 2012).

Indeed, the marketing margin for wooden furniture ranges from 5% to 100%. Margin vary according to the kind of marketing activity. Direct sales contribute to a profit margin of 5–26%; acting as an agent of branded products may generate 10–30%, while actors who conduct further processing and re-selling may derive a marketing margin of about 50–100% (Nurrochmat *et al.* 2009).

2.5. Project activities for moving forward

To help realise the ‘moving up’ scenario, several steps were developed with the aim of improving market access for small-scale furniture manufacturers. Of utmost importance is the issue underlying all problems: the need to build competence and capacity through business management training.



Photo by Taufik Istiqal

Readily assembled furniture pieces stack up inside a large-scale factory warehouse.

Training should primarily cover international market developments, export mechanisms and access to capital and loans. Practical workshops should be used to develop skills in product design and quality control. Collective marketing could be used to overcome the constraints associated with operating at a small scale. In addition, manufacturers should be encouraged to engage in higher-value-added activities and conduct more cost-effective marketing strategies, thus cutting out the middlemen. By selling their furniture higher up in the market chain, small-scale manufacturers should be able to increase their profit margins and thus improve their livelihoods.

According to the small-scale furniture manufacturers themselves, the five areas in which they most need development are quality control, financial management, organisational management, marketing and business communications (Melati 2010).

To contribute to the project objective of enhancing the structure and function of the furniture industry, multi-stakeholder processes were developed to support the needs of small-scale furniture manufacturers and overcome policy constraints. Activities included workshops, research on furniture industry policy pathways and the distribution of value addition among furniture actors, and the development of comprehensive strategies for enhancing the furniture industry.

Understanding the dynamics of the international wooden furniture market may also be very useful in formulating a marketing strategy. Changes in the market, on both demand and supply sides, will influence the mix of marketing strategies, namely in relation to product planning, pricing, placement and promotion. Therefore, a pivotal task is to determine the appropriate marketing mix to ensure effectiveness in selling Indonesian wooden furniture on both international and domestic markets in the future (Nurrochmat *et al.* 2009).

As an initial step as part of the furniture value chain project, Jepara small-scale furniture manufacturers were invited to a workshop to discuss the potential effects of the ASEAN–China Free Trade Area (FTA) on Indonesia’s

furniture industry. The FTA, creating a zero-tariff market of more than 1.7 billion people, was scheduled to come into force in 2010 for the six original ASEAN members (Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand) and in 2015 for the other four (Myanmar, Cambodia, Laos and Vietnam). Politics around the China–ASEAN deal are delicate because ASEAN states want to avoid being dominated by China and yet hope to build their economies by engaging with China, especially given the slowdown in demand from the US and European markets. At the same time, as China moves up the manufacturing value chain, it is ceasing to demand the primary products that ASEAN states produce and has taken its search for raw materials such as minerals, oil and wood global. Concerns about the effects of the full-scale zero-tariff trade agreement with China after 2010 are widespread throughout ASEAN (FVC Team 2010a).

The Indonesian furniture industry will be affected by the FTA. Many of those in the industry are pessimistic about whether the agreement will have any benefits, especially with regard to manufactured products. On the other hand, however, China is a prospective market for furniture. Competition in this sector has intensified since the onset of the global economic crisis in 2008, with a fall in the value of furniture exports from Jepara of approximately 25% from 2008 to 2009 (FVC Team 2010a).

The workshop helped participants understand how the state of the global furniture industry and how it works, and developed solutions for helping local actors overcome challenges associated with the FTA.

Eighteen months after the project began, small-scale furniture manufacturers voiced their concerns about marketing and asked how they could respond to competition from China, Vietnam or even other places in Indonesia. Another workshop was conducted to address these concerns, which involved updating small-scale furniture manufacturers on research results and working together to formulate market penetration plans. Using input from stakeholders, steps for strengthening and improving the capacity of small-scale manufacturers to adapt to changing market demands were agreed on (FVC Team 2010b). This process led to the development of the Roadmap for the Jepara Furniture Industry (see Chapter 6).



Photo by Taufik Istiqjal

A worker at a small-scale workshop applies a dark glaze on a furniture piece.

Given the increasing competitiveness of the global furniture industry, efforts to improve marketing are becoming more important than ever at both national and international levels. One effective marketing strategy is to participate in trade shows. However, this requires a certain level of preparation, in terms of both finances and production – a prerequisite that favours big furniture companies. To enable small-scale companies to participate in international-scale trade shows, the project launched a series of workshops to equip artisans with the necessary knowledge and skills (FVC Team 2011a). The workshops covered background information on exporting schemes, analysis of existing trade shows and common challenges for companies, as well as tips and tricks on how to prepare for participation and what to do before, during and after trade shows.

To further motivate small-scale furniture manufacturers to become innovative in sales and marketing, the project conducted business

management training to support them in participating in the Jakarta International Export Exhibition in 2010. The workshop showed small-scale furniture manufacturers how to improve their product design and quality, develop their networks effectively and enhance their personal business performance (FVC Team 2011b). Throughout the project, several activities were conducted with the aim of assisting small-scale furniture manufacturers to participate in national and international furniture exhibitions in Indonesia and even overseas.

Members of the Jepara Small-scale Furniture Producers Association (APKJ; see Chapter 4) also took part in workshops on accessing capital. As a result, many manufacturers have been able to obtain loans from the local bank, and several members even went on to establish a cooperative to enable business loans and savings. The association also helped members to benefit from government funding programmes and encouraged donors to invest in members' business ventures (Effendi *et al.* 2012).

As the project entered its third year, the facilitation of workshops and participation in numerous tradeshow started to yield some positive results. Small-scale furniture manufacturers had become more active in gaining market information and seeking opportunities to further develop their businesses. Many had also developed ambitious business plans, including adding more products for both domestic and export markets, collaborating with bigger companies to support production in existing markets, and creating new product designs in response to market trends (Nooryasyini *et al.* 2011b).

To involve small-scale manufacturers in cost-effective marketing strategies that minimise or eliminate the role of middlemen, a collective marketing web portal for APKJ members was developed (<http://www.javamebel.com>). As discussed in Chapter 1, most furniture-producing SMEs in the Jepara region are connected with buyers through directed and hierarchical governance networks, which have either domestic brokers or exporters at their centre. The fragility of these centralised networks prevents SMEs from adapting to

new conditions; indeed, the economic collapse in 1998 indicated that, to increase the adaptive capacity of Jepara's furniture industry, it was necessary to remove the interconnectedness by giving SMEs more 'autonomy' to govern value chains. One suggested way of doing so is through the use of information and communications technology (Suyamto and Irawati 2011).

The aim of the collective marketing portal is to assist SMEs in Jepara in marketing their products and link them directly to potential buyers, with the domestic niche market as the main target. However, 85 days after its launch, javamebel.com had attracted relatively few SMEs and potential buyers. Although this is quite normal for a new initiative, the 'usefulness' of the portal relies on cohesiveness among SMEs, social resistance and buyer–seller trust. This suggests that the 'orgware' of the portal should be improved, along with the institutional settings, governing rules and incentive structures for the development and employment of technology, which demand continual investment and appropriate incentives (Suyamto and Irawati 2011). Nevertheless, this collective marketing portal offers massive potential, and its effectiveness should be monitored in the future.

3. The 'collaborating down' scenario: Improving timber supplies for producers

3.1. Timber supply and demand in Jepara's furniture industry

The estimated timber demand for Jepara's entire furniture industry is 862 056 m³ per year (Achdiawan and Puntodewo 2011). Annual growth in demand is expected to follow the growth of the furniture industry, which is at around 7% per year (Achdiawan and Puntodewo 2011). With 82% of furniture workshops specialising in the domestic market, timber demand is expected to further increase, given that small-scale furniture industries are shifting away from compliance with international market demands to concentrate on meeting the needs of the domestic market (Achdiawan and Puntodewo 2011; Yovi *et al.* 2012).

Small businesses in particular are highly dependent for their supplies on regions outside of Jepara, which are the main suppliers of teak wood. Most raw materials for the industry are sourced from outside Jepara, with most teak coming from Central Java, followed by community forests in East Java (Yovi *et al.* 2012) (Figure 7, Table 2). Log parks in Jepara can only meet up to 24% of the district's total demand (Achdiawan and Puntodewo 2011).

The volume of timber demand exceeds the official numbers of log production issued by the Indonesian Ministry of Forestry for the whole of Java:

923 632 m³ in 2004. Perum Perhutani, one of the main timber suppliers for the furniture industry, can supply only 28–38% of the total demand for teak and mahogany in Jepara (Yovi *et al.* 2012).

The timber shortage worsened in 1998 following the illegal logging of 7.2 million teak trees across Java, enabled by national political instability (Yovi *et al.* 2009). Furthermore, many working units of Perum Perhutani across Java have been negatively affected by land-use change, indicating that Perum Perhutani’s ability to supply furniture industries in Jepara is critically low, a state that is likely to continue for at least the next 10 years (Yovi *et al.* 2012).

Alternative sources of timber for Jepara’s furniture industry are the millions of privately owned village plantations scattered across the islands of Java, Sumatra, North Maluku, Kalimantan and Sulawesi (Yovi *et al.* 2009; Achdiawan and Puntodewo 2011). However, rapid population growth has



Photo by Taufik Istiqjal

The Jepara furniture industry source some of their raw materials from Perhutani forests, such as this one from the neighbouring residence of Pati.

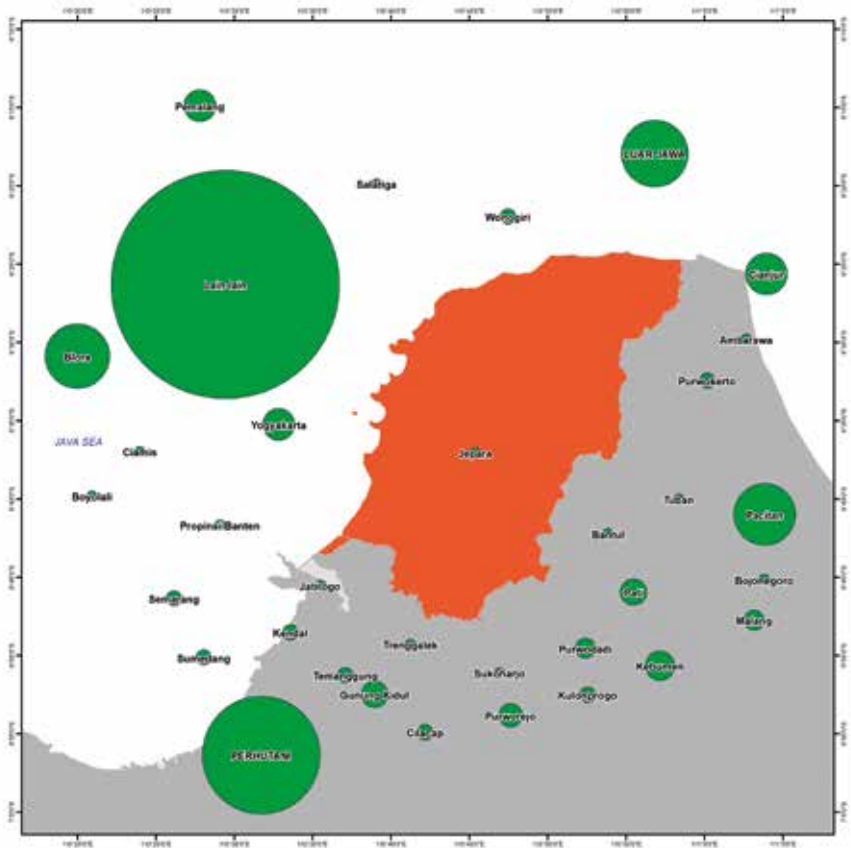


Figure 7. Distribution of areas that supply timber for the Jepara furniture industry

led to large-scale land-use change, with these plantations being converted into farming and housing areas. In addition, in contrast to the practices of Perum Perhutani, traditional growers rarely apply an intensive silvicultural system: they neglect the sustainability of tree stands, thus undermining the sustainability of supplies of raw materials (Yovi *et al.* 2009).

Table 2. Sources of timber for Jepara

Source	Suppliers (units)	Percentage of timber supplied
East Java	29	13.30
Central Java	66	30.28
Special Region of Yogyakarta	15	6.88
West Java	14	6.42
Perhutani I	24	11.01
Perhutani II	17	7.80
Perhutani III	27	12.39
Sulawesi	7	3.21
Sumatra	18	8.26
Banten	1	0.46
Total	218	100.00

Source: Hadiyati (2011)

Combined, Perum Perhutani and community forests can supply only 60% of Jepara’s teak demand. A further 10% can be met through the use of other kinds of wood, such as mahogany, *mind*i (white cedar), *sengon* (*Albizia*) and species from the Dipterocarpaceae family (Yovi *et al.* 2010).

3.2. Constraints on timber acquisition

A study showed that 20% of small-scale furniture manufacturers perceive access to timber as a problem, with 30% regarding wood quality as poor (Prestvik 2009). Yovi *et al.* (2009) found similar results: industry players and log traders said that obtaining larger logs had become more difficult compared with 10 years previously. Log traders in particular have noticed the increasing scarcity of timber, which is one of the main reasons for its higher prices.

The shortage and soaring prices caused an obvious decrease in wood consumption from 2005 to 2008, in both quantity and value

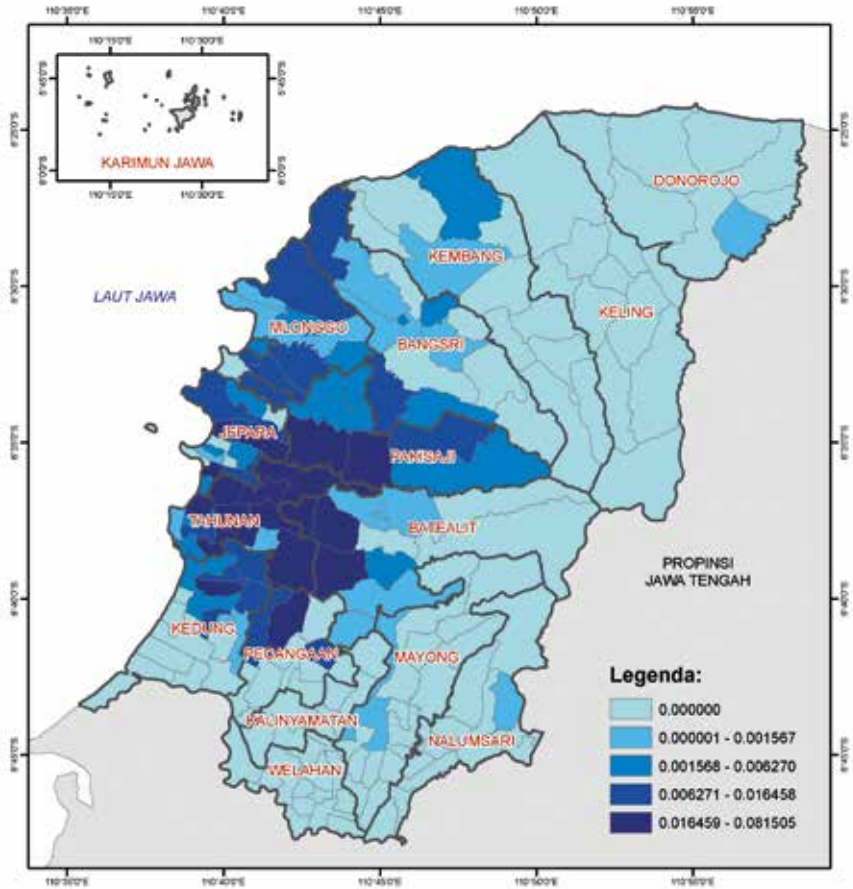


Figure 8. Distribution of wood suppliers in Jepara district

(Prestvik 2009). With small-scale manufacturers receiving lower prices for their products, workshops became more efficient in their use of wood, attempting to use less wood to generate more income. In response to the increasing prices for teak and mahogany, many workshops were also found to be experimenting with alternative species, more so than they had four years before. Although greater efficiency in the Jepara furniture industry

Box 4. Timber distribution in Jepara's furniture industry

Excerpt from Nurrochmat *et al.* (2009)

Timber used in making wooden furniture in Jepara is distributed through both direct and indirect channels. Usually, large-scale furniture companies buy logs directly from Perum Perhutani or from People's Forests, whereas small-scale manufacturers buy logs or sawnwood from agents or middlemen.

In Java, Perum Perhutani is the largest log supplier, especially teak. The company has several channels for selling teak logs, including direct sales or bidding at timber yards, by contract, and sales of sawnwood or other products. Having a long-term contract with Perum Perhutani is one of the main ways that buyers (e.g. wooden furniture manufacturers) can ensure the availability of suitable raw materials. Usually, prices for logs sold under contract are higher than those set in bidding because Perum Perhutani ensures the quality of logs according to buyers' specifications. The log prices actually set in bidding are usually lower than those on the price list released by Perum Perhutani. In 2004, for instance, the average price of teak logs sold through bidding was 75% of the listed price because it was usually sold with mixed logs of varying quality.

Small-scale wooden furniture manufacturers purchase logs to be processed into semi-finished or finished products. Logs normally come through middlemen or brokers because small-scale manufacturers tend to perceive the supply chain of teak logs as too complicated and costly to undertake personally. Transaction costs along the supply chain could reach 15–20% of the log price, forcing them to raise their prices for the final products and thus lose their competitive advantage.

In other circumstances, to avoid complicated procedures and gain more benefits, some wood manufacturers purchase logs from illegal sources. Illegal timber has become available thanks to the large excess demand of timber and lack of law enforcement.

has positive implications for the environment, the root problems within the forestry sector lie elsewhere.

A policy analysis of the wooden furniture industry for Indonesia in general and Jepara in particular revealed several policy constraints, which threaten to undermine the industry (Nurrochmat and Hadiyati 2010a).

Several macro policies have the potential to hinder the development of Indonesia's furniture industry at national and international levels (Nurrochmat and Hadiyati 2010a). These include: (1) weak sectoral support for the furniture industry; (2) complexity of processes for dealing with import samples; (3) complexity of quarantine procedures for imported processed wood; (4) increasing competitiveness between domestic furniture businesses; (5) a policy of minimum industrial fuel purchases, which imposes an additional burden on small-scale furniture businesses; (6) regional policies that inhibit trading of timber and timber products between regions; (7) local regulations and retribution fees; and (8) the disbanding of the Indonesian wooden product Joint Marketing Body, which weakened the bargaining position of Indonesian furniture businesses in the international market.

A local policy that may hamper attempts by the Jepara furniture industry to obtain raw materials is Ministry of Forestry Regulation on Allocation of Wood for Local Needs (P.7/Menhut-II/2009). The regulation obliges each region to reserve a certain amount of timber for its own local needs before selling timber to other regions. The regulation requires that 5% of the total volume of timber produced be set aside for local needs within each region; this applies to logs derived from forest concessions, timber estates, wood auctions and rehabilitation plantation forests. All timber from 'People's Forests' (*hutan rakyat*) is allocated to local needs within each regency and municipality. Timber trading across regions is allowed only once local needs have been met (Nurrochmat and Hadiyati 2010a).

As one of the largest centres for wood processing in Central Java, the Jepara region relies heavily on surrounding regions, such as Pati and Blora, for its timber supply. If the Regulation on Allocation of Wood for Local Needs is fully enforced, the Jepara region may need to source its wood from regions further away, which may lead to higher product prices and the loss of competitive advantage.

Other policy constraints that may negatively affect the Indonesian wooden furniture industry were revealed in a related study by Nurrochmat and Hadiyati (2010b). These are mainly related to the absence of policies and institutional arrangements to ensure the sustainability of timber sources.



Photo by Moerdani Usman

Community forests on the outskirts of Jepara provide future raw material sources for the furniture industry.

3.3. Proposed solutions

National and local policies are needed to address issues related to the allocation of raw materials, production and marketing, as well as the internal capacity of Jepara furniture businesses. Nurrochmat *et al.* (2012) propose three strategies for improving the Jepara furniture industry.

The first recommendation is to develop policies that support the allocation of wood for industries with high added value and large numbers of employees. Small-scale furniture businesses need more attention in terms of strengthening capacity and access to the financial capital they need to scale-up production. One of the most reasonable proposals is to apply cross-price subsidies between high-quality and lower-quality logs. That is, Perum Perhutani could sell lower-quality teak at very low prices, while increasing

the price for premium-quality teak. To secure and increase the supply of raw materials, the Jepara government should initiate agreements with wood-producing regions elsewhere in the country. The government should also create policies that encourage the Jepara furniture industry to use alternative wood sources, such as lesser-known species from agricultural plantations or gardens, for example, wood from rubber, jackfruit, durian and other trees grown outside plantation forests. Serious reforestation efforts and policies supporting People's Forests are also pivotal strategies for improving the availability of raw materials.

The second recommendation is to develop policies designed to improve production patterns and marketing systems. To ensure continuity of wood supply, use of 'superior teak' species that can produce high-quality timber in less time should be encouraged. Seedlings of 'superior teak' can be offered to the public at affordable or subsidised prices. To cope with the widening gap between demand and supply, in the short term Perum Perhutani may selectively shorten the cutting cycle, guided by solid scientific evidence; shorter timber cutting cycles will lead to increased stock for the industry. Dual cutting cycles and optimisation of forest thinning are other techniques that may prove beneficial. Developing People's Forests will help forest communities to meet their needs, as they will gain benefits in terms of farming, firewood and construction timber. Applying a dual cycle will also support the preservation of ecological functions, because it will mean an end to clear-cutting. Perum Perhutani could also optimise the use of its timber terminal to cut the costs of transporting timber to the processing industry.

Finally, to foster and strengthen small-scale furniture businesses, policies that support partnerships between large- and small-scale furniture businesses are strongly recommended. Forming and/or strengthening clusters of furniture manufacturers to reduce the costs of transporting materials would improve production efficiency and market access. Cluster formation and strengthening will also lead to more effective communication and transactions between furniture manufacturers and suppliers. Consumers will also benefit from greater efficiency and effectiveness in obtaining furniture.

3.4. Project activities for moving forward

The project involved an intensive multi-stakeholder process designed to develop the Roadmap for the Jepara Furniture Industry through policy formulation. For further details on the project's achievements in influencing policy development for the Jepara furniture industry, see Chapter 6.

International efforts to encourage sustainable forest management through timber certification may also relieve Jepara's timber supply constraints. However, most small-scale furniture manufacturers in Jepara have very limited knowledge of such schemes and their relevance to the sustainability of their business (Yovi *et al.* 2009). To redress this lack of knowledge, the project worked to improve small-scale manufacturers' understanding of timber certification; further details are in Chapter 5.

Log traders propose to stock up on timber when prices are low, improve communication and cooperation among log traders, create wider networks among log brokers outside Jepara and boost capital (Yovi *et al.* 2009). Small-scale furniture manufacturers also need to develop collaborative strategies with the growing furniture industries surrounding the region, in order to overcome the timber shortages and increase their competitiveness (Nurrochmat and Hadiyati 2010a). Project activities served to boost collaborative efforts to overcome the limitations associated with operating on a small scale both for the district of Jepara and the province of Central Java (see Chapter 4).

In an effort to provide a model for supplying raw materials to Jepara's furniture industry, CIFOR and FORDA worked together to plant 1000 fast-growing teak species as part of the furniture value chain project (Abdullah 2012). Jati Unggul Nusantara (JUN), as the fast-growing teak species is known, is cloned from superior-quality teak samples using DNA technology. The species is expected to produce 0.2 m³ of wood within five years. At this rate of growth, if 10 000 JUN trees were planted at the time of the project, 6000 m³ of wood would be ready for harvest in 2020 – which amounts to 13% of Jepara's total need for timber for furniture making. Preliminary research indicates that private lands are the most suitable locations for



Photo by Sulthon

Fast growing teak species are now widely cultivated across Jepara to fill future needs of the furniture industry.

planting these JUN trees, and both smallholder farmers and small-scale furniture manufacturers should be able to cultivate the trees in their own backyards.

Indeed, people in Jepara seem to be increasingly aware of the potential for growing their own teak, as indicated by the numerous young teak plantations scattered throughout the Jepara countryside (Yovi *et al.* 2009). Sopiana's (2011) study on community forests in Jepara found that many villages have indeed long had planting groups as a long-term investment. Although their efforts are not business oriented, there remains huge potential to encourage and involve locals to further develop community forest activities in the future.

4. The Jepara Small-scale Furniture Producers Association: Strengthening collective action

4.1. Strengthening SMEs in Jepara

As small-scale furniture manufacturers often face major problems related to marketing, capital and wood acquisition, Purnomo *et al.* (2009) proposed a strategy that targeted actors along the horizontal dimension of the value chain. As part of this approach, the project facilitated the formation of the Jepara Small-scale Furniture Producers Association (APKJ), which helps



Photo by PVC Team

Small-scale furniture producers gather at the official launch of APKJ in 2009.

its members to become independent and competitive and strengthens their bargaining position in the global market.

The presence of this collective organisation will make it easier to implement other strategies that aim to address vertical dimensions of the value chain (see Chapters 2, 3 and 5). Members are invited to take part in capacity-building workshops, which cover topics such as financial and organisational management, marketing and business communications, access to capital, quality control, timber legality and eco-certification. Other activities include collective marketing through the APKJ web portal, development of a group trademark, and support for participation in trade exhibitions.

During the final year of the project, several studies assessed the impacts of the project on APKJ members and other small-scale furniture manufacturers in Jepara. All APKJ members explicitly mentioned having derived benefits through their involvement within the association, and most agreed that APKJ



Photo by FIC Team

Jepara Head of District, Hendro Martoyo, shows his support at the official launch of APKJ in 2009, closely watched by representatives from ASMINDO, APKJ and CIFOR.

should continue (Achdiawan 2012). Most members also felt that APKJ had opened up opportunities that were not available to non-members, ranging from improved market access to new marketing innovations.

The marketing innovation referred to is the Internet portal, which members use to promote their furniture. However, despite the portal's potential, members noted a need to establish clearer procedures and mechanisms for using the tool. Improving cohesion among members was also deemed important; few APKJ members had managed to form a new joint venture among themselves (Achdiawan 2012).

An impact assessment study (Nooryasyini *et al.* 2011a) also found that APKJ members have been able to improve their access to markets through participation in trade exhibitions.

In addition, many members noticed that their businesses had started to generate more income within a few years of joining the association. Several members surveyed in 2008 and 2010 noted that their revenue had grown from IDR 297 million in 2008 to IDR 317 million in 2010. Furthermore, 78% of APKJ members had increased their product sales within the previous year, compared with 44% of non-members (Achdiawan 2012).

No difference was observed between APKJ champions and other APKJ members in terms of involvement with the association. The median gross revenue of APKJ champions in 2011 was IDR 150 million, similar to other members. However, this amount is slightly below the median gross revenue of non-APKJ members. Nevertheless, about 67% of champions indicated that sales and profits had steadily increased compared with the previous one, three, five, and even 10 years (Achdiawan 2012).

APKJ members and champions said that their business had improved in several areas, namely better sales, profits and market expansion, and an increase in the quantity of production and quantity of raw material purchases; this was in contrast to non-members (Achdiawan 2012).

Furthermore, better access to training and capacity building also generated positive impacts for APKJ champions. Six out of 14 champions immediately received loans from Bank Rakyat Indonesia (BRI) after participating in the bank's financial training. These ranged in size from IDR 10 million to 50 million; the producers invested the loaned capital in their furniture businesses (Achdiawan 2012).

Nevertheless, despite some anecdotal evidence from the field concerning successful capital compliance by some APKJ members, accessing capital remains the biggest problem for most small-scale furniture manufacturers in Jepara (Yovi *et al.* 2012). Furthermore, most small-scale furniture manufacturers still have no direct relationship with buyers (Nooryasyini *et al.* 2011b).

It should be noted that the 200 members of APKJ account for less than 2% of all small-scale furniture manufacturers in Jepara (Yovi *et al.* 2012).

4.2. Strengthening SMEs in Central Java and beyond

Given the new China–ASEAN FTA, Indonesia's furniture industry must be prepared for intensified competition both internationally and nationally. In China, upstream and downstream furniture industries are fully integrated; Indonesia's furniture actors must similarly learn to collaborate to make the industry strong and competitive.

One of the aims of the formation of the APKJ is for members to become 'local champions' or agents of change for other small-scale enterprises throughout Jepara and its surrounding regions.

As an initial step in that direction, during the fourth year of the project, CIFOR and the APKJ held a province-wide meeting for the industry, with attendees including small-scale furniture business operators, government institutions and other related stakeholders.



Photo by Melati

APKJ participates for the first time at a national furniture expo in Jakarta.

The meeting provided an opportunity for participants to learn about other furniture business associations around Central Java and introduce the work carried out in Jepara as part of the furniture value chain project. The meeting culminated with the formation of the Indonesian Small-scale Furniture Producers Community (Komunitas Pengrajin Kecil Nusantara). The community is intended to function as a communication platform for small-scale furniture manufacturers in Central Java, Yogyakarta and beyond, and as a source of recommendations for future policy and developments within Indonesia's furniture industry (FVC Team 2011c).

4.3. Overcoming gender constraints in the furniture value chain

An important aspect that is often overlooked is gender relations, even though it plays a huge role in the economy. Gender should be incorporated into

value chain analysis because gender relations and the ways that value chains function may affect each other; many women lack bargaining power and are employed at low levels in the value chain to cut production costs, and their employment may contribute to changes in gender relations in the domestic sphere (Mayoux 2003 in Fauzan *et al.* 2009).

The traditional role of women in the domestic sphere is a major determining factor in their decision to work in the furniture industry, according to Fauzan *et al.*'s (2009) study on gender relations in Jepara's furniture value chains. The assumption that women are responsible for domestic work has often prevented them from seeking out jobs in carving or additional income opportunities from other employers in other villages. Women skilled in woodcarving who choose to stay in their own village are faced with three options: to continue their involvement in the industry as it is but possibly having fewer orders in the future; to continue their involvement in the industry at lower levels that do not require their carving skills and thus are paid less; or shift to other areas with occasional involvement in manufacturing the furniture if considered profitable (Fauzan *et al.* 2009).

Furthermore, women's involvement in the furniture industry differs for each type of value chain (Fauzan *et al.* 2009). Using Schmitz's (2005) governance models for the furniture value chain, four patterns of gender relations were identified. The market-based value chain (suppliers and buyers remain at a distance, the product is standardised or easily customised, level of switching is low) is characterised by the lowest level of gender segregation in its production process, but women's involvement is heavily undervalued in order to keep product prices low. A balanced chain (reciprocal dependence between buyers and suppliers) tends to have more clearly gender-segregated production for efficiency reasons; for example, female workers might be replaced by men if the latter can perform additional tasks outside working hours. A directed value chain (buyers exercise greater control over other firms in the chain, buyers have doubts about suppliers' competence) inclines more strongly towards gender segregation, with the 'domestication' of women in the sanding process because of the lead firm's preference for minimalist product designs. The hierarchical chain (lead firms take direct ownership of



Male and female workers are often assigned different roles throughout the Jepara furniture value chain. Both in large-scale factories as well as small-scale furniture workshops, male workers tend to be given the responsibility to do more technical work such as sawing, operating heavy machinery and electronic devices, and assembling. Female workers, on the other hand, to sand, sort and clean up, or deal with financial and managerial issues. However, both male and female workers in Jepara seem to have the same opportunities to practise wood carving.

some operations in the chain) involves the most gender segregation because of the mechanisation of its production systems, generally assumed to be the domain of male workers (Fauzan *et al.* 2009).

Fauzan *et al.* (2009) conclude that in Jepara ‘it is “socially acceptable” that, being women with an obligation to take care of the family, female workers are commonly employed as daily paid workers which would enable them to simultaneously perform their domestic responsibilities and income

generation'. Furthermore, 'apart from being located at the weakest point of the chain where their employment could be easily ended, their concentration on this seasonal labour force also provides little opportunity to upgrade or advance in their work' (Fauzan *et al.* 2009).

Similar results emerged in Nansereko's (2010) gender study on Jepara's furniture value chain. That study found that both male and female workers are actively involved at every node of the value chain, conducting mainly primary and support activities, respectively. However, more men than women are engaged in value addition, with men making more decisions and in better-paying jobs than women. This arises because women are

Box 5. Gender roles in Jepara's furniture value chain

Excerpt from Nansereko (2010)

Both men and women are involved in all six nodes in the furniture value chain, namely retailers, finishing companies and exporters (furniture warehouses), small-scale furniture workshops, sawmills, wood retailers and forest plantations. However, women are more highly concentrated in warehouses than anywhere else along the value chain. In the warehouses, women sand the furniture pieces, paint them and/or varnish them by hand (rarely using a spray gun) and then wrap them for shipping.

In furniture workshops, women also carve and source materials, mainly by telephone. Other work done by women includes bookkeeping and record keeping, managing cash payments and customer relations, and overseeing the quality of the finished products.

By contrast, men work in all six nodes, with their tasks distinct from women's work. They design furniture, source furniture materials in person, lift logs or furniture pieces, saw timber, maintain sawing equipment, do carpentry, carve and pack heavy articles. Men also sand using a sanding machine, repair cracks and apply spray finishes.

Women occasionally also work in some male-dominated activities, namely marketing, pricing, making furniture catalogues and deciding where to re-invest profits.



Photo by FVC Team

Female participants listen in on a workshop about wood characteristics.

seen as lacking in furniture-making skills and because some types of work, such as operating complex machinery, are perceived as too dangerous for women. Another reason is the cultural division of labour, where men make money and women tend the home, feed the family and educate the children (Nansereko 2010).

The skills gap between male and female workers in Jepara considerably affects their respective returns to labour. However, men's and women's skills can be upgraded in order to achieve cost and differentiation advantages, thus driving down the costs of production and building greater competitive advantage. However, boosting the involvement of women in the industry will require changes to the socio-cultural environment (Nansereko 2010).

Reflecting upon previous gender studies on Jepara's furniture value chain, Purnomo *et al.* (2010) attempt to understand the position of women and their preferences in the value chain, as a step towards designing strategies to generate greater benefits for women.

Purnomo *et al.* (2010) note that the APKJ was not aimed at either men or women, but was set up as a gender-neutral organisation. However, social norms in Jepara discourage women from going out on their own at night (when most APKJ meetings are held) and women are often uncomfortable attending predominantly male meetings (Purnomo *et al.* 2010).

To address this problem, women in the industry were invited to take part in focus group discussions to examine how the project could be improved to suit their needs. It emerged that impacts could be enhanced if actions were specifically designed for women. As most of the women noted, flexible conditions within market-based value chains are preferable to other types of chains.

As a result, the moving-up scenario, which includes training on marketing furniture specifically for women, is a high priority for female workers. Other scenarios, namely the organising producers associations, collaborating down and developing green products, are expected to generate benefits for both women and men, but, as they are not gender-specific, they do not contribute to balancing gender relations. Overall, it is recommended that specific actions be designed for women (Purnomo *et al.* 2010).

Purnomo *et al.* (2011a) examined how the four scenarios introduced in Chapter 1 could be adapted to benefit women. Their analysis indicated that a forum for women only should be established within the SME association. Women preferred workshops or meetings to be run for no more than half a day, rather than all day, and they function more effectively in an all-female group than when they form a minority in a mixed-gender group (Purnomo *et al.* 2011a).

As part of the project's efforts to empower female actors within the Jepara furniture industry, a workshop was conducted for female sanders. In collaboration with IWAPI (the Indonesian Female Entrepreneurs Association) and APKJ, the furniture value chain project provided special skills training for female workers to enhance their ability to manage their own business (FVC Team 2011d).

One of several workshops aiming to improve small-scale furniture manufacturers' access to capital targeted female workers in the furniture industry, particularly those who had worked only as casual labourers. The workshop, held in collaboration with IWAPI and APKJ, covered financial management, simple accounting systems and bank loan management (FVC Team 2012a).

4.4. Gender in the value chain analysis

Results from the furniture value chain project in Jepara were compared and contrasted with findings from other gender and value chain studies across Asia, Africa and South America (Shackleton *et al.* 2012), with several key findings emerging.

First, value chains for forest products provide full- and part-time work for women in many developing countries. The jobs are poorly paid but they offer flexible working arrangements (Shackleton *et al.* 2012).



Photo by FVC Team

Participants engage in a business management workshop specifically designed for female workers.

Second, women have a low profile in these value chains because their inputs are either informal or are perceived as having little worth. The invisibility of women in forest product value chains means that policy makers often overlook women's needs. Policy and practice rarely directly support women and, in some cases, may even criminalise them. Broad policies that promote women's development seldom translate into action on the ground. Specific policies that support women working in forest product value chains may substantially improve benefits for women (Shackleton *et al.* 2012).

Third, socio-cultural, religious, technical, policy and institutional barriers often prevent women from working and trading in forest product value chains. Given the challenges involved, a prerequisite for finding ways to overcome these barriers is good understanding of women's roles in forest value chains (Shackleton *et al.* 2012).

As was shown to be the case in Jepara, encouraging and strengthening collective action among women may improve their opportunities in value chains for forest products. Women-only groups are more encouraging for women than mixed-gender groups. Furthermore, groups for women working in forest product value chains can build on existing women's self-help or social groups. However, women-only groups require additional training in literacy and skills, as well as in technologies suited to women (Shackleton *et al.* 2012).

Finally, the diversity in value chains means that there is no single way forward. Nevertheless, better understanding of the position of women in value chains and their preferences is a step towards devising strategies to empower specific groups of women, in specific value chains in specific contexts (Shackleton *et al.* 2012).

5. The 'green furniture' scenario: Building and enhancing access to green markets for small-scale furniture manufacturers

5.1. Major problems encountered by furniture makers

Major obstacles encountered by small-scale furniture manufacturers in Jepara include obtaining raw materials, ensuring product quality, marketing products and sustaining business capital. These four problems are very much interconnected and need to be addressed simultaneously.

Fluctuations in timber prices make it difficult for small-scale manufacturers to purchase good-quality timber, which affects product quality. Many producers opt for cheaper, low-quality timber from younger trees, which compromises the sustainability of timber sources (FVC Team 2011e).

Furthermore, most small-scale manufacturers market their products not to end consumers but mainly to middlemen, wholesalers, big furniture companies or exporters. With no set standards for product quality, small-scale manufacturers have a weak bargaining position and are forced to accept whatever price buyers offer them. As a consequence, their sales income often does not cover their production costs, which places pressure on them to sell as many products as possible at any price (FVC Team 2011e).

Another problem is that buyers often do not make their payments on time, causing manufacturers to delay work. To circumvent this cash flow problem,

many manufacturers sell their deposit cheques at 6–7% lower than their initial value. High-interest loans from banks offer another avenue by which small-scale manufacturers attempt to obtain quick cash (FVC Team 2011e). These interconnected problems create a vicious cycle that leads small-scale manufacturers deeper into poverty, along with declining timber resources and environmental degradation, reduced market competitiveness and a poor image for the Jepara industry.

5.2. Timber certification

In recent decades, the idea of sustainable forest management through timber certification has been promoted internationally. Furniture made from timber certified as coming from sustainable sources is qualified ‘green furniture’, and can be sold to environmentally conscious consumers at a premium price. The aims of schemes to encourage certification of furniture are to conserve forest resources, ensure sustainability in the furniture-making industry and improve the welfare of furniture manufacturers. A strategy that encourages certification could stimulate demand for furniture from sustainable sources and thus could help those in the Jepara furniture industry resolve some of their problems (Purnomo *et al.* 2011b).

However, the initial uptake of certification schemes throughout the furniture industry has been slow, even though many accredited institutions are ready to conduct certification schemes in Indonesia, such as the Tropical Forest Trust (TFT), Indonesian Ecolabel Institute (LEI) and the Forest Stewardship Council (FSC) (Purnomo *et al.* 2011b).

Several factors may account for the apparent lack of interest in certification schemes. First, although price for certified furniture has increased annually by between 6% and 30%, consumers’ willingness to pay has been moving in the opposite direction, thus reducing the uptake of timber and furniture certification schemes (Purnomo *et al.* 2011b). Generally, Indonesian domestic consumers are less willing to pay for certified furniture, whereas international consumers from the United Kingdom and Norway have relatively high willingness to pay, at 16% and 7.5%, respectively. This



Photo by Taufik Istiqjal

Certified 'green' furniture feature in a Jepara showroom.

indicates that certified furniture products should be targeted to a specific international niche market. From the supply side, large manufacturers are better set up for certification than small-scale manufacturers (Purnomo *et al.* 2011b).

In a survey of actors along the furniture value chain concerning their perceptions of certification, approximately 25% of small-scale manufacturers said they would support the certification scheme if timber prices were lower. Furthermore, most log traders had little or no knowledge about timber certification; 10% objected to a scheme that would further complicate timber transactions, and 18% supported the scheme on the basis that it would enable them to fetch higher timber prices and bigger profits (Yovi *et al.* 2009).

Given these findings and the potential value of certification schemes for the industry, the project developed a strategy designed to boost capacity in timber certification.

Box 6. Indonesia's timber legality assurance system

Excerpt from Yovi (2011)

Indonesia's Timber Legality Assurance System (SVLK) is the only certification scheme in which participation by industrial forest concessions, production forest concessions and community plantation forests is made mandatory by the government.

The system was created to ensure the legality of timber and timber products. It guarantees that each licence holder and owner of a private forest who has undergone VLK certification and met all verification requirements complies with all existing government regulations related to the legality of timber and forest products.

Introduced in 2010 as part of a move to curb illegal logging in the country, the SVLK aims to grant Indonesian furniture manufacturers greater access to the global market because it provides a guarantee to buyers that the timber and timber products come from legal and environmentally sound sources.

Furthermore, the SVLK is expected not only to benefit society and the government through its support of sustainable forest management, but also to benefit companies by requiring them to develop better management systems. Direct results of better management are higher measurable inputs, processes, costs and outputs/outcomes, as well as qualified staff competencies, all of which will ultimately improve the company's performance.

Following Indonesia's commitment in 2011 to engage in legal timber trade with the European Union under a Voluntary Partnership Agreement, the SVLK will support Indonesia in having its timber and timber products deemed legal upon entry into EU markets.

However, although the Indonesian government recently allocated more than US\$300 000 from the state budget to subsidise SVLK certification for small-scale manufacturers, the process can still cost tens of millions of rupiah, which manufacturers cannot afford. Small-scale manufacturers are thus encouraged to form cooperatives and apply for group certification.

Poor promotion of the SVLK means that private forest owners and small-scale furniture manufacturers often do not understand it. Lack of clarity

of certification mechanisms and objectives, concerns over the high cost of certification and the risk of reducing competitiveness through higher production costs are three main reasons for actors' lack of interest in the scheme.

Given the variation in understanding of SVLK certification, helping those in the industry before the system comes into operation is a priority. Problems persist in the process of knowledge transformation in the SVLK. The small numbers of competent facilitators are not comparable to the extent of existing forests, which creates problems for plans to implement the SVLK, which is scheduled for early 2013.

As facilitation may take a relatively long time – one to three years depending on the level of readiness of community forest management – the availability of continued funding is crucial. Strengthening SVLK-related competencies will require continuous and close assistance by both government and non-governmental organisations.

Comprehensive strategies that connect upstream industries (private forests) with downstream industries (small-scale furniture manufacturers) are important for the sustainability of Jepara's furniture industry. In addition, actors should take advantage of the certification subsidies for small-scale industrial licences that were introduced by the Jepara district government.

5.3. Project activities for moving forward

The 'green furniture' scenario forms part of the overall solutions suggested by the project to address problems in the Jepara furniture industry. The introduction of certification schemes is expected to boost furniture makers' profit margins by enabling them to produce premium-priced certified green furniture catering to a specialised niche market.

To help Jepara's small-scale furniture makers enter the premium market, CIFOR and PPEI (Centre for Indonesian Export Development) jointly held a workshop for them on the 'chain of custody for export purposes'. The workshop introduced participants to the basic systems and standards involved in the timber chain-of-custody certification scheme and showed

them how the scheme can be implemented throughout the timber and furniture market chain, explained the requirements for documenting the whole certification process, and taught them how to conduct internal auditing. Many members of the APKJ attended this workshop.

A few months following the chain-of-custody workshop, Nooryasyini *et al.* (2011c) conducted a survey to assess local APKJ champions' progress in pursuing the green furniture scenario. In terms of business management, 28% of the attendees said they already had a system for documenting their raw material use and production-related purchases, and only 20% record their financial flows regularly (Nooryasyini *et al.* 2011c). As compliance with certification schemes requires consistent application of basic managerial practices, these findings indicate that small-scale manufacturers have a long way to go before they will be ready to take part.

In addition, 64% of the small-scale manufacturers surveyed do not fully understand the whole process of timber certification, stating that they gain very basic information about certification from the workshop. Most producers also described the scheme as difficult to implement, mainly because of their lack of familiarity with the process, which they perceive as complicated and expensive. As a result, none of the producers who participated in the workshop has yet taken any steps towards certification (Nooryasyini *et al.* 2011c).

Nevertheless, most producers are now at least aware of certification and its potential to improve their business conditions. As certification has only just been introduced to the wider small-scale furniture-making community, it is understandable that most manufacturers are still unsure about the technical and financial requirements. Ongoing support and assistance from the local government and other actors should be provided to continue to encourage small-scale manufacturers to adopt certification (Nooryasyini *et al.* 2011c).

Furthermore, regional policy also should aim to boost marketing of certified furniture and further encourage certification (Purnomo *et al.* 2011b). For example, the Roadmap for the Jepara Furniture Industry is part of the project work aimed at mobilising stakeholders to support the green furniture scenario. For more details, see Chapter 6.

6. The future of Jepara's furniture industry

6.1. Projections based on current conditions

We carried out a 10-year projection (2013–2023) for Jepara's furniture industry to forecast future outcomes in the case of a business-as-usual scenario.

Industrial demand for timber in Jepara was recently calculated to be 864 771 m³, with 24% annual growth (Achdiawan and Puntodewo 2011). At this rate, Perhutani, which supplies 85% of the Jepara region's timber, will be able to fulfil only 1% of demand by 2030. To avert future shortages, fast-growing timber species have been planted throughout the region. Even with these plantations, however, the total potential volume of teak throughout Jepara will not be able to meet the soaring industrial demand. Forecasts indicate that, by 2030, Jepara district will be able to meet only 2% of total timber demand. These figures indicate a worrying trend for the sustainability of Jepara's teak furniture industry (CIFOR *et al.* 2012).

Total export value is forecast to reach US\$3.77 per kilogram furniture weight in 2022, compared with US\$2.16 per kilogram in 2003. Increases in export value will need to be matched by an increase in furniture quality, and continuous innovation to stimulate export demand may be required. If quality standards can be maintained, growth in the annual export value



Photo by Taufik Istiqbal

Sustainable supplies of good quality timber is needed to ensure the future survival of Jepara's furniture industry.

may reach at least 1.37% (CIFOR *et al.* 2012), which is still well below the national growth target for annual furniture exports of 8–10% and the Jepara target of 7%.

Capital demand also is projected to increase in the next 10 years. According to Prestvik (2008), if 68% of furniture businesses apply for loans at a total annual inflation rate of 10%, IDR 356 billion will need to be made available from formal financial institutions, with IDR 87 billion of that allocated for small businesses. Local cooperatives will also need to provide IDR 34 billion for members' loans, with informal loans between family and friends to reach approximately IDR 4 billion (CIFOR *et al.* 2012). Given this huge potential demand for capital, financial institutions and the government must prepare carefully to find ways to give small businesses access to the capital they greatly need.

6.2. Project achievements

Monitoring and evaluation of the project's impacts on people's livelihoods is an integral part of action research. An impact assessment survey (Achdiawan 2012) was conducted in February and March 2012, during the fourth year of the furniture value chain project. The assessment used the same questionnaire and method as in Prestvik (2008), with additional questions on the impacts of CIFOR's research project.

Survey respondents included a subset of the sample in Prestvik (2008), as well as representative members and champions of the Jepara Small-Scale Furniture Producers Association (APKJ). Questionnaires aimed to elicit respondents' views of the changes experienced by manufacturers and APKJ members and champions relative to households in Jepara not engaged in making furniture. APKJ 'champions' are core members or those who perform key roles in the association (Achdiawan 2012).

The survey found that approximately 10% of furniture workshops visited in 2008 had closed by 2012, because of a lack of capital and orders from buyers. Most had shifted into activities such as trading and agriculture. The median gross revenue of those who continued in the furniture trade was IDR 222 million (USD 24 000) in 2012, compared with IDR 210 million (22 500 USD) per active workshop in 2008 (Achdiawan 2012). Furniture manufacturers' incomes were consistently higher compared with non-producers and ex-producers (Achdiawan and Puntodewo 2011).

A shift in the market saw manufacturers serving more domestic consumers in 2012: 75% of workshops that served the export market in 2008 have since moved into the domestic market. This shift may be related to the recent global crisis, which caused international markets to shrink slightly (Achdiawan 2012).

Furthermore, respondents no longer cited marketing as their main problem, thanks to the CIFOR project. Rather, for 80% of APKJ champions, the availability of equipment for furniture processing (i.e. dry kilns) has now become their main problem. Furniture makers who are not APKJ members

Box 7. Roadmap for Jepara's furniture industry 2012–2022

Excerpt from CIFOR *et al.* (2012)

Jepara's furniture export market is growing at the slow rate of 1.39% per year. By contrast, the central government has set a target of 8–10% growth for national furniture exports, and the Jepara district government has a target of 7% for regional growth in 2022.

To enhance the local furniture industry, the Jepara district government, in collaboration with stakeholders, developed a comprehensive roadmap for use in guiding the implementation of industry-related action plans between 2012 and 2022. The plans cover several sectors of the industry, including raw material supplies, access to capital, marketing, human resources, institutions and physical and non-physical infrastructure. The following paragraphs highlight the details of each plan:

1. Raw materials: extensive introduction of fast-growing tree species, extensive implementation of the SVLK (Timber Legality Assurance System), diversification of the use of tree species, intensive collaboration between upstream and downstream industries in ensuring the provision of timber either from within or outside the Jepara region, development of a comprehensive database on raw material needs throughout the region, intensive research on alternative timber sources, efficient management of industrial waste and establishment of a centralised timber market within the region.
2. Access to capital: improve access to capital for small-scale furniture manufacturers, establish grants for certain production tools and machinery and for access to marketing channels and raw material sources, develop regulations that support access to capital, collaborate with non-governmental organisations or the private sector to open up opportunities for corporate social responsibility programmes that target small-scale industries, and increase the implementation of small-scale credit schemes (Kredit Usaha Rakyat).
3. Marketing: establish a distinct brand for Jepara's furniture products, eliminate market barriers, diversify market niches, establish an institution that can monitor domestic market transactions, and use information technology and trade shows for local and international marketing channels.

4. Human resources: provide training for small-scale furniture manufacturers in business management, wood processing, marketing, information technology, finance, entrepreneurship, product design, communications, administration documentation, taxation, production, occupational health and safety, and exports–imports.
5. Infrastructure development: establish quality roads, timber terminals, warehouses, international seaports, airports, energy sources, international trade show centres, information centres, accommodation, industrial centres, industrial tourism centres and industrial museums.
6. Institutional strengthening: encourage close collaboration with education and research institutions, professional associations and government bodies; and develop regulations that support Jepara's export market.

continue to experience problems with market access, equipment, wood quality and wood supply (Achdiawan 2012).

The survey also revealed aspects of project initiatives requiring improvement. Clear rules and consensus must be established to maintain cohesion among APKJ members, especially to ensure equal access to resources (Achdiawan 2012). Similarly, Nooryasyini *et al.* (2011c) found that 42.9% of APKJ members were not fully satisfied with the association, mainly because its programmes had failed to reach all small-scale manufacturers.

Furthermore, several innovations introduced through the APKJ, such as the collective marketing web portal, had not been immediately adopted by all members. Thus, external interventions may be needed to accelerate the adoption (Achdiawan 2012).

In summary, after four years, the FVC project had several achievements, notably the formation of the Jepara furniture roadmap and improved capacity of small-scale furniture manufacturers. However, although the project generated benefits for APKJ members and champions, these did not extend to furniture manufacturers in the wider Jepara area. As the project enters its final year, it must expand its reach to the wider community, by encouraging members of the association to spread their success to non-

members. APKJ members and champions could act as agents of change, as they now have the capacity to share their business innovations and improve conditions throughout the industry (Achdiawan 2012).

6.3. Roadmap for the furniture industry

Ongoing research indicates that stakeholders in the Jepara furniture value chain are not well connected and rarely collaborate. Seeing potential to improve the efficiency of the furniture industry, the project proposed that the Jepara local government develop a comprehensive roadmap to support collaboration in the industry. The aim of this approach is to empower less connected and more vulnerable stakeholders and to minimise conflicts between parties (Irawati and Purnomo 2012).

Strategic workshops to support furniture makers in dealing with the increasingly competitive market were also conducted as part of the project. In the first of these, furniture makers from Jepara and government officials from Central Java were invited to discuss existing policies that affect the furniture industry and the livelihoods of those within it. The workshop created an opportunity for stakeholders to engage in intense dialogue and to give feedback to improve policy (FVC Team 2010c).

In several subsequent workshops throughout 2011 and 2012, the idea of developing a comprehensive roadmap specifically for Jepara's wooden furniture industry was examined further. A bottom-up approach was adopted to develop strategic guidelines for future developments within the industry between 2013 and 2023. Participants included government offices, industry associations, small-scale manufacturer representatives, higher education bodies and other related stakeholders. An initial draft of the roadmap, which incorporated existing functions of government bodies as well as aspirations of other stakeholders, was released in early 2011 and ultimately made into a Jepara district regulation in 2012 (FVC Team 2011f, 2011g, 2012b).

The Jepara Furniture Industry Roadmap 2013–2023 is a positive output resulting from a long process of reflecting, planning, acting and monitoring

throughout the lifetime of the project. The roadmap has strong potential to strengthen small-scale furniture makers' bargaining position, connect them to wider market networks, improve trust in and support from government bodies and contribute to the sustainability of the furniture industry. It also has the potential to redress the power imbalance among actors in the furniture value chain, and improve both livelihoods and furniture value chain governance with the onset of the ASEAN–China Free Trade Agreement (Purnomo and Irawati 2012).

6.4. Developing industry regulations for occupational safety and health

A similar process to that used for the roadmap is underway to develop a legal framework covering occupational safety and health (OSH) practices for



Photo by Taufik Istiqal

A factory worker uses a face mask during a potentially hazardous finishing technique. Proper occupational safety and health practices are mostly conducted by big furniture companies. Small-scale furniture makers are yet to comply to such standards.

workers in the furniture industry. Work practices along Jepara's furniture value chain were found to barely comply with basic OSH standards, such as the use of personal protective equipment (Yovi and Sidiq 2012). Although many people in the industry acknowledge the need for health and safety at work, few possess sufficient understanding of the importance of OSH protection or of the rights and obligations of company management and government institutions.

Most small-scale furniture businesses in Jepara do not provide their employees with safety equipment such as goggles, helmets, gloves or protective jackets because of limited funds and unfamiliarity with their use (Nooryasyini *et al.* 2011c). Furthermore, work insurance is non-existent, with most businesses considering that existing wages are sufficient for workers' livelihood needs (Nooryasyini *et al.* 2011c).

The government had provided OSH guidelines and supervision for less than 1% of the units in the industry; this was confined to furniture production stage and failed to reach workers and managers in log yards (Yovi and Sidiq 2012). The failure among management to implement OSH systems for workers in small workshops has compounded the high risk of work-related accidents and health effects. Incidents have been reported frequently, including finger loss from use of machines, hernia, hearing loss or reduction, lung illness, and possibly also kidney dysfunction (Yovi and Sidiq 2012).

During a focus group discussion in early 2012, stakeholders agreed to a proposal to conduct an OSH pilot project in a small-scale furniture production centre in Jepara. An *ad hoc* team was established to involve stakeholders in each stage of the planning, implementation, development and supervision of OSH protection. Further efforts are underway to increase the role of local government in OSH guidance and supervision through involvement of related local sets of working units. Ultimately, there is a critical need for regulation at the district level to create a local budget for implementing OSH protection in Jepara (Yovi and Sidiq 2012).

6.5. Impacts beyond the project

The project also generated several impacts beyond its initial target of small-scale furniture manufacturers and the Jepara region. The project team has shared information on the use of value chain methods with project partners, university students and the international scientific community throughout the duration of the project. As a result, the value chain approach has been adopted within several studies conducted by project partners, particularly FORDA's REDD and REDD+ studies in Kalimantan, Jambi and South Sumatra; ACIAR's palm and pig commodity chains project in East Nusa Tenggara and non-timber forest product market chain study in Burkina Faso; and CIFOR's impact assessment on the rattan value chain in Kalimantan and Java.

The value chain approach has been taught to hundreds of undergraduate and postgraduate students at IPB in Bogor, West Java, and Jepara's STTDNU. Furthermore, students from across Indonesia, as well as from Norway, the



Photo by FVC Team

Jepara Head of District, Hendro Martoyo shows his support for the development of the Jepara Furniture Roadmap.

Netherlands, New Zealand and the United Kingdom, did internships with the project. APKJ also attracted many people to Jepara, including students from Gadjah Mada University (UGM) in Yogyakarta, to learn from the organisation's experiences.

Several papers published during the project lifespan have been quoted in other scientific articles, including 'Value chain approach of furniture: action research to improve power balance and enhance livelihoods of small and medium enterprises' (Purnomo *et al.* 2009), 'Value chain governance and gender in the furniture industry' (Purnomo *et al.* 2010), 'Roles of information technologies for SME furniture business' and 'How does the marketing portal work for SME furniture producers?' (Suyamto and Irawati 2011). A presentation on green furniture during a national conference on green business also raised the interest of many scholars and businesses in the project's publications; the presentation was later published in IPB's national journal.

The project work also supported the skills development of research partners, university students, actors in the local furniture industry and local government agencies. Research partners and university students from Indonesia and overseas received all necessary support to implement the value chain analysis in their own studies. Students from local universities STDNU and STIENU were also trained in conducting surveys using a variety of research tools such as GPS tracking, interviews and questionnaires.

Local furniture industry actors who were asked to document their personal stories as part of the project were given guidance in writing. After their stories had been published, many of the writers expressed their appreciation for the project and for being given the skills to share their personal narratives on Jepara's furniture industry.

The project also supported the Jepara Government Planning Agency in strategic planning for the furniture industry and provided it with an introduction to health and safety at work.

Community impacts from the project emerged in terms of economic, social and environmental changes. Some readers of the furniture photo book later contacted furniture buyers. Local students whose involvement in project surveys raised their awareness of furniture makers' living conditions were inspired to organise a film festival with the aim of supporting Jepara's furniture industry and carving culture. APKJ also established internships for local college students interested in issues affecting the furniture industry.

CIFOR's short film entitled 'Survival of Javanese furniture' increased public awareness of the struggles of small-scale furniture manufacturers and improved understanding of the differences between cheap mass-produced furniture and more expensive high-quality furniture. Furthermore, the film increased stakeholder understanding of various issues affecting the furniture business.

The Jepara Furniture Tourism Map also enhanced the district's commercial advantages by improving access between producers and consumers in both domestic and international markets.

On a more long-term scale, if the furniture industry is more sustainably managed, demand for wood resources may increase even further, possibly encouraging people to grow trees and improve environmental conditions.

6.6. Hopes and dreams

The furniture industry is highly dynamic, largely because of its sensitivity to copyright infringements, new entrants, substitute products and consumer preferences. Industry players must react to global business competition not only by being aware of the industry's structure, but also by analysing their own resources and combining strategies for premium competence and competitiveness. This section describes the ideal state for the furniture industry in 2023, looking at timber supplies, access to capital, marketing, human resources, infrastructure and institutional governance.

6.7. Timber supply

The Jepara furniture industry embodies distinctive cultural values in the form of solid wood carving. Several copyrighted carving designs have strengthened Jepara's identity in the international furniture market. Thus, without neglecting current furniture trends, which favour minimalist designs, ideally, in 2023, distinctive carving designs will continue to be developed.

With a target of 7% annual growth, the Jepara furniture industry is estimated to generate more than USD 250 million by 2023. This will be accompanied by an increase in demand for raw materials, in terms of both quality and quantity.

Timber quality must be prioritised, because Jepara's high-quality carving designs require the use of mature teak wood. Perum Perhutani is expected to continue to supply the high-quality timber needed. Modern minimalist furniture designs that do not require high-quality teak wood could use alternative wood species or medium-quality teak wood.

Although Jepara's community forests can meet only 5% of the industry's timber demand at the moment, they should be producing larger quantities by 2023. Therefore, if community forests in Jepara receive the support they need to cultivate teak and alternative wood species, timber scarcity will hopefully be less of a problem in 10 years. By integrating government programmes at local and national levels, timber farming could become a lucrative economic activity that contributes to improved livelihoods for community farmers.

Ease of access in obtaining raw materials also will hopefully be greater by 2023. This change encompasses simpler administrative processes for timber purchasing, improved accessibility of timber grown by community farmers outside Jepara, and the establishment of a timber terminal for Jepara's furniture industry. With strong commitment from stakeholders, the timber terminal will be able to operate over the long term, and thus provide various types of timber at affordable prices while benefiting community farmers. In addition, by 2023, timber producers associations in Jepara will ideally have built strong networks with timber producers from outside the Jepara region.

Given the importance of consumer trust for the industry, industry players must support the Timber Legality Assurance System (SVLK), which the national government is developing to respond to international requirements. Group certification schemes, collaborations between small-scale and large-scale enterprises, and the establishment of cooperatives are other options for helping industry players obtain certification. The Indonesian government is planning for the SVLK to be accepted by the international market so that it replaces existing certification schemes. A target is to have 10% of those in Indonesia's furniture industry using raw materials certified under the SVLK by 2023. The SVLK uses a 'one step only' model, certifying the main management unit but not conducting chain-of-custody certification. Therefore, it would be highly desirable to ensure a solid supply of certified timber by 2023. Encouraging collaboration between certified timber suppliers and those in the furniture industry would be a useful strategy for ensuring the production of certified furniture.

Using design as a means of strengthening the industry is a major challenge given the complex dynamics of furniture trends. Collaboration between furniture enterprises and designers from design schools in Jepara will ideally help meet this challenge. Designs could also respond to international consumer trends by integrating different materials into the furniture. The use of technology to improve productivity and timber efficiency will hopefully be integrated into furniture operations in Jepara by 2023.

Ideally, the government would support these goals by regularly providing accurate data on current and projected developments in the furniture industry, to make it easier to predict dynamics in timber demand and supply.

6.8. Access to capital

Giving small-scale furniture enterprises greater access to capital by 2023 is a central target. Local government and related associations have a major role in securing such access. It is projected that in the next 10 years, demand for capital to fund furniture manufacturing operations will reach IDR 500 million a year, and funding will be accessible through banks, money lenders,

friends and cooperatives. Ideally, various capital funding schemes will have been established by 2023, including soft loans, corporate social responsibility grants and cooperatives. To date, small-scale furniture enterprises have had government-supported schemes such as Kredit Usaha Rakyat (KUR), Program Nasional Pemberdayaan Masyarakat (PNPM) and Koperasi Serba Usaha (KSU).

Achieving this will require firm commitment from the local government, which will need to be closely monitored. Therefore, future policies will rely on active inputs from furniture enterprises and from the central government. Further capital could be generated from sectors outside the furniture industry, such as tourism. The development in 2011 of the Jepara Furniture Shopping and Tourism Map should support this aim.

6.9. Marketing

Given Indonesia's size (the national population exceeds 260 million), the market for Jepara's furniture will hopefully be well developed by 2023. Ideally, an institution that can maintain data on domestic transactions will have been established, making it easier for all to understand the dynamics of the industry. The same institution could also generate data on international market dynamics, including consumer trends, making those data accessible for all industry players, so that they can respond appropriately to consumer trends.

The local government will also, hopefully, be carefully supervising furniture export transactions by 2023, in order to ensure consistent product quality, to build market trust and to protect furniture makers. The full operation of the SVLK will ideally have contributed to design enhancement, quality control, consumer service improvements, stronger negotiation skills and greater competitiveness in the international market.

Furniture from Jepara needs to be promoted through active participation in national and international trade exhibitions. Internet marketing portals that are designed to meet consumer demands will hopefully have been built by



Different actors along the furniture value chain are approached and encouraged to share their personal stories and involvement within the industry. Home interviews and writing workshops are conducted to improve their capacity in writing these stories.

2023. Strategies such as this will not only extend business networks among furniture producers and consumers but may also shorten the distribution channel and reduce costs. If these goals are achieved, the industry's target of 7% annual growth by 2023 would be more feasible.

6.10. Human resources

A comprehensive inventory of existing human resources will ideally be available by 2023. The use of professional certification schemes will guarantee staff competence, especially artisans and carvers, which in the long run may improve furniture quality.

To boost staff competence, stakeholders will hopefully provide training on business management, production techniques (timber preservation and

drying), marketing, information technology, finance, entrepreneurship, design, finishing technology, communication, administration, taxation and administrative processes for exports and imports. Ideally, for efficiency, a body will have been created to centralise the training programmes and support the use of professional certification schemes.

6.11. Infrastructure

Hopefully, by 2023, major improvements will have been made to infrastructure, including public roads, timber terminals, warehouses, energy sources, international trade exhibition facilities, information centres, hotels, tourist apartments and restaurants, industrial centres, industrial tourism villages and a furniture industry museum. Plans to develop Jepara's main transport facilities, including an export-oriented airport and seaport, should continue in the near future.

The establishment of a timber terminal or auction centre is also high on the agenda as a means of ensuring that furniture makers can obtain competitively priced raw materials. The existence of such terminals may also reduce the unnecessary role of brokers and middlemen.

6.12. Institutional governance

By 2023, synergised collaborations among institutional groups within and outside Jepara ideally will have been forged. Related research and educational institutions include SMKs, CIFOR, FORDA, BPPT, Dewan Riset Daerah (DRD), STDNU, STIENU and APEPSI. Professional associations also play a crucial role in improving the Jepara furniture industry. These include ASMINDO, APKJ, HPKJ, IWAPI, ASEPHI, HIMPI, HIPMI, KADIN, DEKRANASDA, APINDO, ORGANDA, HIPPI and PHRI.

Central and local government will need to be actively involved in managing the performance of the industry. Governments could help resolve conflicts between stakeholders through policies that support the industry and

encourage the close involvement of related institutions. Both levels of government should be responsible for policy implementation and evaluation, to ensure policies contribute to a fruitful business climate.

Another hope is that, by 2023, Jepara will have achieved long-term market competitiveness, to be made possible through the identification of relevant resources, selection of resources needed to meet future market demand, measurement of intangible resources (particularly knowledge), introduction of programmes that enhance emerging competence and capabilities, rapid response to external challenges, and constant development, extension, protection, conservation and renewal of resources.

If these actions are taken, it is hoped that by 2023 the Jepara furniture industry will have achieved higher economic growth, with better employment opportunities and a better-designed eco-centric development scheme.

6.13. How to get there

To realise the vision and mission for Jepara's furniture industry, several plans have been developed to deal with raw material supplies, access to capital, human resources, institutional governance, and physical and non-physical infrastructure.

Indonesia's national economy is growing at a rate of 7% per annum, and Jepara is growing at 5%. The furniture industry is growing nationally at a rate of 8–10% per annum.

Jepara has set a target growth rate of 7% per annum for the furniture industry. In reality, however, the current growth rate is 1.39% per annum. Achieving the targeted goal will require effective support of furniture manufacturing and product sales. In sustaining the industry's competitiveness and uniqueness, the Jepara district government must prioritise the development of its furniture industry above other wood-based industries.

6.14. Action plan

6.14.1. Timber supply

Timber in demand by the Jepara furniture industry falls into three groups: mahogany, teak and mixed wood. It is expected that Perhutani will be unable to meet growing demand in the future. Initiatives such as support for community forests, silvicultural training by Perhutani and the Ministry of Forestry, and wood marketing are needed to deal with the shortage. Reforestation and plantation of green belts are also needed to ensure an ongoing supply of raw materials. Central and local governments must also support efforts to obtain chain-of-custody certification for community forest timber. The following actions are recommended to ensure that furniture makers in Jepara continue to have an adequate supply of raw materials.

Cultivation of fast-growing timber species

Fast-growing timber species have the physical, mechanical and chemical characteristics ideal for use in furniture making. Several fast-growing timber species have been developed under various commercial products and plans. One timber species promoted by the government is Jati Unggul Nusantara (JUN), which is planned for cultivation outside forest reserves or private forests. As a premium species, JUN requires intensive management and supervision from Perhutani and the Ministry of Forestry throughout each of its growth stages. The government should provide land in community areas and use cultivation techniques to facilitate better access to premium seedlings at an affordable price.

JUN can be felled at the age of 10 years. Although its physical, chemical and mechanical characteristics are similar to those of conventional teak species, it is categorised as a second-class type of timber that is vulnerable to termite attacks when it is young. The older the timber, the more likely it will survive termite attacks and other pests and diseases.

If 250 ha of land or 100 000 seedlings are planted each year, approximately 30 000 m³ of timber will be available by 2026, or even up to 120 000 m³ by 2030. This projection is based on an area less than that of conventional plantations in community forests in 2007, which covered 715 ha of

land. If 715 ha of JUN species were planted each year, approximately 85 000–429 000 m³ of timber would be available by 2030.

Implementation of the SVLK (Timber Legality Assurance System)

To guarantee that timber is sourced from verified management units, the national government introduced the SVLK under Ministry of Forestry Decree No. P38/Menhut-II/2009. The aims of the scheme are to control timber management and increase timber prices.

In its National Forestry Plan 2012–2030, the Ministry of Forestry set a target of nationwide timber certification and verification. Additional targets include obtaining SVLK certification for at least 50% of forestry units between 2010 and 2014. If all furniture enterprises, from timber suppliers to furniture manufacturers, obtain SVLK certification, sale prices may improve. All furniture enterprises should therefore be fully certified as a step towards achieving the target growth rate.

Existing studies indicate that Jepara's furniture export growth will reach only 1.39% by 2020, far below the national growth rate of 8–10%. Setting a target of full certification for at least 5–10% of furniture enterprises should enable export prices for furniture to rise.

Diversification of products and raw materials

Diversification of products and the raw materials used is an important factor in efforts to boost production. Furniture manufacturers are challenged to continuously innovate and create new furniture products. Another reason to use a variety of raw materials, whether timber or synthetic substances, is to be sure that there is a sufficient and affordable supply of materials for small-scale manufacturers.

Stakeholder engagement in the supply of raw materials

Ensuring a supply of raw materials requires stakeholders to work together extensively. One option is to build agreements with timber-producing regions. Logs from timber-producing regions can be processed exclusively

into furniture in Jepara, further boosting the industry's performance in the domestic market.

Availability of data on the timber supply–demand gap

There is known to be a huge gap between the demand for timber and the available supply. However, quantitative data are difficult to obtain because of issues such as inaccuracies in data on the timber supply and demand and differences in the types and sizes of timber. To make such data readily available, timber management and timber distribution systems must be well planned and implemented, closely controlled and regularly evaluated.

To obtain accurate data on raw material consumption, existing data on timber entering Jepara district can be utilised. Documents on Transportation of Timber and Logs (*Surat Angkutan Kayu Olahan atau Kayu Bulat*) need to reflect existing conditions to ensure the availability of accurate data on the types and volume of timber needed for the entire Jepara furniture industry.

Using other wood species as raw materials

Different timber species have different physical, chemical and mechanical characteristics, and these are factors when categorising timber according to its type and use. Certain timber species are used only for woodwork, firewood or construction, for example. However, timber scarcity may force people to ignore the traditional uses of certain wood species, because the higher price of good-quality timber increases production costs, whereas use of other types of wood for making furniture, such as merbau from Papua, mango and jackfruit may reduce the supply–demand gap.

Collaboration with tree farmers in cultivating species to supply timber

Tree farmers in community forests should be encouraged to engage in plantation and intensive cultivation in order to supply timber, which will be allocated to Jepara furniture manufacturers. Farmers will be given incentives to manage sustainable timber plantations and training in silvicultural practices to ensure timber quality.

Industry players must lobby the government to ensure they receive the necessary policy support at the macro and micro levels. Subsidies for machinery and equipment, technical training and other supporting functions are needed to ensure continuous innovation and quality management throughout the industry.

Efficient management of industrial waste

Technological solutions can be used to minimise the amount of industrial waste generated during furniture production. As only a small proportion of the industry use their industrial waste, all those in the industry need to be instructed in optimum use of raw materials.

Collaboration with tree farmers from outside Jepara

Out of the total supply of raw materials, 11.47% is sourced from regions outside Java, 31.20% is supplied by Perhutani and 55.00% comes from community forests across Java (Hadiyati 2011). Timber from within Jepara district accounts for only 0.46% of the total demand, because the district offers little good-quality timber (Hadiyati 2011). Excluding timber sourced from Perhutani, this means that two thirds of the timber supply comes from outside Jepara. Given this heavy dependence on outside regions, it is important to build relationships with tree farmers in Maluku and Southeast Sulawesi.

Establishment of timber terminals

For better monitoring of timber transactions, a designated meeting place for timber buyers and sellers is needed. The formation of a timber terminal may lead to better timber management and encourage more transparency in timber pricing.

6.14.2. Access to capital

The following recommendations aim to ensure that capital is readily available to those in the Jepara furniture industry in 10 years.

Provide accessible capital for small- and medium-scale furniture manufacturers

With increasing prices of raw materials and other items required for manufacturing furniture, production costs will continue to soar, placing pressure on small- and medium-scale furniture manufacturers. Giving these SMEs support in accessing capital should be a priority in the near future.

Provide accessible soft loans

Capital is required not only for furniture manufacturing, but also for storage, timber collection and marketing. State financial institutions or the private sector should extend more soft loans to meet the industry's need for capital.

Provide grants to small- and medium-scale furniture manufacturers

Grants in the form of production tools and accessories, marketing assistance and access to free raw materials are useful for reducing the need for capital among manufacturers and artisans.

Develop regulations that support the availability of capital

The national target growth rate for industry of 8–10% in the next 10 years, as outlined in the National Furniture Roadmap, requires giving SMEs full support in terms of access to capital and marketing. Government intervention at local and national levels is needed to ensure that capital is widely available.

Encourage companies from outside the furniture industry to offer support through corporate social responsibility programmes

Engagement with corporate social responsibility programmes from state-owned enterprises and the private sector (national and international) that are not directly related to the furniture industry could provide a solution to the industry's problems regarding the supply of timber and tools, development of technology, access to capital and product marketing.

Offer credit schemes for small- and medium-scale furniture manufacturers

Kredit Usaha Rakyat (KUR) was launched in 2007 as a credit scheme targeting SMEs and cooperatives, offering capital and financial investments underwritten by the government.

The aims of the state programme are to (1) fast-forward the development of the real sector and empower SMEs, (2) improve SMEs' access to capital and (3) alleviate poverty and enhance employment opportunities. The government guarantees up to 70% of KUR's financial risks, with the other 30% guaranteed by six financial institutions, namely Mandiri, BRI, BNI, Bukopin, BTN and BSM.

SMEs and cooperatives can access KUR under the following terms and conditions: (1) loans of up to IDR 5 million are charged an annual interest rate of 24% and (2) loans of IDR 5 million–500 million are charged an annual interest rate of 16%.

Additional programmes are required to complement KUR, such as: (1) the establishment of cooperatives to enable capital loans and savings among members; (2) better access to government programmes such as Lembaga Penyaluran Dana Bergulir (LPDB) and Program Kementerian Bina Lingkungan (PKBL) and (3) collaboration with financial institutions in supervision of financial management.

Provide direct assistance through the local government

The local government should allocate funds from the state budget for assisting SMEs with cash funding, facilities, production-related infrastructure and marketing.

6.14.3. Marketing

Create a Jepara furniture brand

To build market competitiveness, initiatives for branding the industry are required. Branding can be achieved through careful development of the Jepara Furniture Carving geographical indicators. The geographical indicator

will function as a common copyright protector for furniture workshops in Jepara and may boost competitiveness if product quality is maintained.

Increase the number of export destinations

The Jepara furniture industry exported products to 102 destinations in 2009, a great increase compared with five years earlier. An even greater increase in the number export destinations should be encouraged over the next 10 years.

Diversify market and furniture products

A small proportion of Jepara furniture manufacturers sell their products exclusively to certain markets and buyers. To strengthen their bargaining position and boost their prices, these businesses need to expand their market. To do this, they need useful information on market conditions and alternative sales avenues.

Establish a body dedicated to monitoring domestic sales

Documentation of domestic sales of furniture is inadequate and unsystematic. A government body or independent institution needs to be tasked with monitoring, documenting and reporting domestic sales of furniture, particularly for premium products. The information on patterns in these transactions will be of use in predicting market trends and developing product designs for the domestic market.

Use information technology and trade shows for local and international marketing

It is essential for businesses to effectively use information technology to extend their reach to the global market, monitor trends and create product designs. A comprehensive database on export destinations, importers and product specifications is also required. Information on local and international sales, buyers and sellers should be made available online. These steps are very important for comparing export and import values for other countries and for boosting competitiveness.

6.14.4. Human resources

The Jepara furniture industry can be most effectively developed through its human resources. A comprehensive map of those employed in the industry is needed. Workers should receive training to ensure they are qualified and certified, and the use of technology should be encouraged among furniture producers. Technological diffusions may form geographical distributions of specific furniture products, in accordance with existing potential human resources.

Well-planned, regular training is need to develop staff capacity. Training should cover the following topics:

1. Management: Training is needed to improve the managerial skills of SMEs without ignoring existing local knowledge. Training should cover appropriate and cost-effective business planning, capital funding, human resource management, supervision and evaluation of production, and product marketing.
2. Production (wood conservation and drying): High-quality furniture begins with effective treatment of raw materials; SMEs should therefore receive training in wood conservation and kiln drying.
3. Marketing: As marketing, promotion and packaging are key determinants of the success of product sales, training in marketing is important for ensuring the sustainability of Jepara's furniture industry.
4. Information technology: SMEs should be trained in the use of information technology, which can be used to improve product development, production processes and marketing.
5. Finance: Financial management throughout all stages of production and marketing is important for maintaining a healthy business cash flow.
6. Entrepreneurship: SMEs should receive training in innovations, promotions, business development and access to capital so they are better equipped to deal in the global furniture market.
7. Design and finishing: Furniture produced in Jepara is usually sent to other regions for further development and finishing. If they are trained in furniture design and technical finishing processes, furniture workshops will be able to add value by developing ready-to-use products and directly access end consumers.

8. Communication: Training in communications may lead to improved social relations between furniture manufacturers, tree farmers and consumers.
9. Documentation and administration: If SMEs can properly document their product designs, market distribution channels and raw material needs, their businesses will be better equipped to survive.
10. Taxation: SMEs should receive training to ensure they understand their tax obligations and can calculate and include taxes as part of their total production costs.
11. Production: Training is needed to enhance SMEs' use of production technology so that their products satisfy market requirements.
12. Occupational health and safety: OHS training is important to ensure productivity. Government regulation is also needed.
13. Administration on exports and imports: Training on administrative aspects of timber supply and finished products will help SMEs understand the formal process of exporting and importing.

6.14.5. Infrastructure

Appropriate public infrastructure is very important for supporting furniture manufacturing and product marketing. Particular attention is needed in the following areas:

1. Roads: Public roads connect timber suppliers with furniture manufacturers, and manufacturers with markets and consumers. High road connectivity ensures the ease of doing business.
2. Inter-island seaports: An inter-island seaport needs to be developed in Jepara to improve product shipping.
3. Energy security: Furniture production requires a lot of energy, including electricity and fuel, making energy security important for the sustainability of the furniture industry. Therefore, the Jepara district government should work closely with the Tanjung Jati Natural Gas Power Station to ensure a sustainable supply of energy.
4. International trade show facilities: To facilitate widespread marketing, an international-standard trade show facility should be constructed within the Jepara region.

5. Information centre: A specially designed information centre that provides information on different types and designs of furniture needs to be established to assist consumers in choosing furniture and provide manufacturers with better information on consumer trends.
6. Hotels and tourism infrastructure: Accommodation for consumers visiting from outside the Jepara region is necessary. The development of such infrastructure may also help boost tourism to Jepara more generally. Tourism services and hotels must display a distinctive Jepara character.
7. Industrial centres: Industrial centres, that is, clusters of certain types of product manufacturers, will both enable consumers to find products and assist manufacturers in better positioning themselves in the market.
8. Industrial tourism villages: To motivate consumers, industrial tourism villages should be developed with exhibitions on the different types of products and how they are made.
9. Furniture museum: A dedicated museum that holds exhibitions on various aspects of the furniture industry will stimulate consumers to seek further information and possibly order furniture.

6.15. Institutional strengthening

Strengthening ties among institutions related to the furniture industry may result in improved outcomes in Jepara. The following institutions play an important role in future developments of the industry:

1. Education and research institutions: SMK, CIFOR, FORDA
Education and research institutions play an important role in developing innovative product designs, identifying opportunities and finding solutions to industry-related problems, as well as providing policy recommendations.
2. Professional associations and NGOs: ASMINDO, APKJ, HPKJ, IWAPI, ASEPFI, HIMPI, HIPMI, KADIN, DPKJ, DEKRANASDA, APINDO, ORGANDA, PHRI, HIPPI, LAKPESDAM NU, FEDEP, FLP, FRK-IFJ
Inter-institutional collaboration needs to be fostered to ensure continuity of industrial production in terms of marketing, production and timber supplies.

3. Education and technological development institutions: BPPT, DRD, STTDNU, STIENU, SMKN 2 and ABPEPSI
Cutting-edge technology and industrial innovations will always be available if education and technological development institutions continue to update their research and communicate their findings to those in the industry.
4. Government institutions: Ministry of Industry, Ministry of Trade, Ministry of Forestry, Bappeda, BKPM, Local Economic Bureau, SMEs and tourism industry, DPRD and DEKOPIN

Intensive collaboration between local and central government bodies and financial institutions are expected to encourage industrial growth at the local and global scales.

Regulations and policies designed to support Jepara's furniture production and exports must help SMEs gain better access to raw materials, tools and technologies, as well as improve their technical and managerial skills. In addition, market information, marketing opportunities and access to capital must be readily available to ensure sustainability of the industry.

6.16. The role of stakeholders in implementing the action plan

Without strong commitment from all stakeholders in the industry, achieving the ideal conditions for 2023 may not be feasible. The main roles of institutions in Jepara in carrying out the Roadmap are set out in Table 3.

As the table shows, securing timber supplies requires available land, scheduled plantings and cultivation, as well as good forest management. Meeting timber demand involves not only sourcing the timber, but also collaborating with local institutions and other timber-producing regions. Timber certification schemes must be encouraged as a step towards fetching higher prices for furniture. The Ministry of Forestry and Perhutani also need to collaborate in implementing the SVLK, with full support from government policies. Both institutions are also responsible for technical

Table 3. The role of stakeholders in implementing the Jepara Roadmap 2013–2023

Rawmaterials	Action plan				
	Access to capital	Marketing	Human resources	Infrastructure	Institutional strengthening
DISHUT BUN	V				
DPRD					V
DISKOP. UKMPP		V	V	V	
Bappeda					V
DISPERINDAG		V	V	V	
Perhutani	V				
FRK				V	
JFDC				V	
APKJ			V		
HPKJ	V				
ASMINDO			V		
STIENU				V	
STTDNU				V	
SMKN 2				V	
Financial institutions/banks		V			
DISOSNAKERTRANS				V	
GAPOKTAN	V				
DISHUBKOMINFO			V	V	
PU-ESDM					V
DINAS CIPTA KARYA and TATA RUANG					V
DISPARBUD					V
DISDIKPORA					
SETDA					

INSTITUTIONS

supervision of planting, tree maintenance, cultivation and capacity building of tree farmers. Ways to encourage the diversification of raw materials through the use of alternative timber species and the minimisation of industrial waste also need to be considered.

Financial institutions should also become involved in facilitating soft loans, grants and credit schemes in order to strengthen furniture producers' and tree farmers' access to capital. The Ministry for Small and Medium Enterprises is expected to supervise this.

Together with the Ministry of Industry, Ministry of Trade, APKJ and ASMINDO, the Ministry for Small and Medium Enterprises will be responsible for supporting marketing by providing market information, managing furniture clusters and providing insights into consumer trends, with the aim of better guiding SMEs in developing production plans. Market diversification, monitoring of domestic transactions and use of information technologies are also steps that will help SMEs cope with market conditions. Training programmes for up-skilling workers are the responsibility of educational institutions such as STIENU, STDNU and JFDC. Bappeda too plays an important role as the main planning authority for future infrastructure developments in Jepara.

All of the suggested plans can be implemented if the institutional setting is appropriate. Although all stakeholders are responsible for institutional governance, the DPRD is expected to facilitate relations between institutions to ensure that the entire action plan is implemented appropriately. Finally, local regulations and policies should fully support the action plan by clearly defining responsibilities.

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Appendix:
Jepara tourist map
and shopping guide

javamebel.com

www.javamebel.com is a marketplace connecting buyers and sellers, using the Internet to increase outreach at low cost. This joint marketing portal has been developed to help small and medium enterprises in Jepara thrive. Members of the Jepara Small Craft Association (APKJ) market their products through the site, directly connecting with potential buyers.

Data sources

- CIFOR 2010 Jepara road network map at a scale of 1:50 000 and a census report of small-scale furniture producers
- BAPPEDA 2008 Thematic map of the district of Jepara, used for administrative boundary data and road network
- BAKOSURTANAL Digital topographic base map of Indonesia (RBI) with the basic scale of 1:50 000, sheet numbers 1409-313, -314, -331, -332 and -334, used for the road network and settlement data
- Tourism and Culture Unit, District of Jepara. Map of Jepara's tourism interest points.

The boundaries shown on this map are not an official reference.

Photographs by Taufiq Istiqlal, Murdani Usman and Diana Vela

The Jepara Furniture Value Chain Project is funded by the Australian Centre for International Agricultural Research (ACIAR) and implemented by the Center for International Forestry Research (CIFOR) in collaboration with the Forum Rembuk Kluster (FRK), the Government of Jepara District, Forestry Research and Development Agency (Balitbanghut), The Ministry of Forestry and the Faculty of Forestry, Bogor Agricultural University (IPB).

www.cifor.org/furniture



Fish chair



Betawi chair



Marlboro chair



Lounger



FRK - IFJ



Australian Government

**Australian Centre for
International Agricultural Research**

Jepara Furniture

Tourist map and shopping guide



Mirror frame



Crab chair



Dressing table



The carving city of Jepara

The region of Jepara has been renowned since the reign of Queen Kalinyamat (1549–1579). At that time, Jepara was the main commercial port on the island of Java and a naval base. Queen Kalinyamat was instrumental in the development of a sculpture tradition, which is still an economic mainstay of Jepara. Jepara-style carving has unique characteristics because it marries features of the carving styles of the Majapahit Kingdom with a contemporary style of Chinese origin.

Queen Kalinyamat made Jepara into both a prosperous and a powerful, famous region. To commemorate her reign, the anniversary of Jepara is celebrated on the day she was crowned as ruler of Jepara, the 12th day of Rabiul Awal 956H or 10 April 1549. Her coronation was marked with the four-word slogan, *'Trus karya tataning bumi,'* which can be interpreted as 'Keep working hard to build the region.'

Reviving the Jepara furniture industry

Although Jepara is located outside the main economic and tourism corridor of Java, it has its own special advantage, which makes it a unique and valuable destination for tourists and other guests. For a long time, Jepara has been recognised for its master carvers and carpenters, and this Central Javanese city has come to be known as 'The Carving City of Jepara'.

Unfortunately the Jepara furniture industry has been in decline since the 2000s; similar industries have developed in other places and teak wood sources are depleted. The local government has therefore decided to try to revive the glory of the furniture industry and of Jepara carving.


Although the Jepara furniture industry has been known for hundreds of years, tourists or buyers who come to Jepara have trouble finding furniture of the type and quality they desire. This is because there is no reliable guide for finding the many furniture workshops and stores.

This map benefits tourists, buyers and furniture artisans alike. Tourists can easily find the type of product they are looking for, with the price and quality of their choice. Carpenters and carvers scattered across Jepara have the opportunity to interact directly with buyers.


Apart from the wood furniture industry, Jepara has various other manufacturing industries that support the local economy, some of which have been included in this guide.

This is the gateway to the district of Jepara, either from Demak or Kudus. The industry in this region is dominated by official industrial centres set up by the local government.

Mayong

Mayong is the centre for clay roof tiles. The sales area is located on the right of the main road from Jepara to Kudus . Products offered here include roof tiles such as Mantili, Supersoka, plastered roof ridges and shingle. Through marketing, products have reached many areas in Indonesia and Malaysia.

Gemiring Lor

These shops, on the eastern edge of the map, are close to the Kudus District . Products offered here include *gebyog*, carved wooden walls and doors, and jamb carvings for traditional Javanese wooden houses.

Kriyan

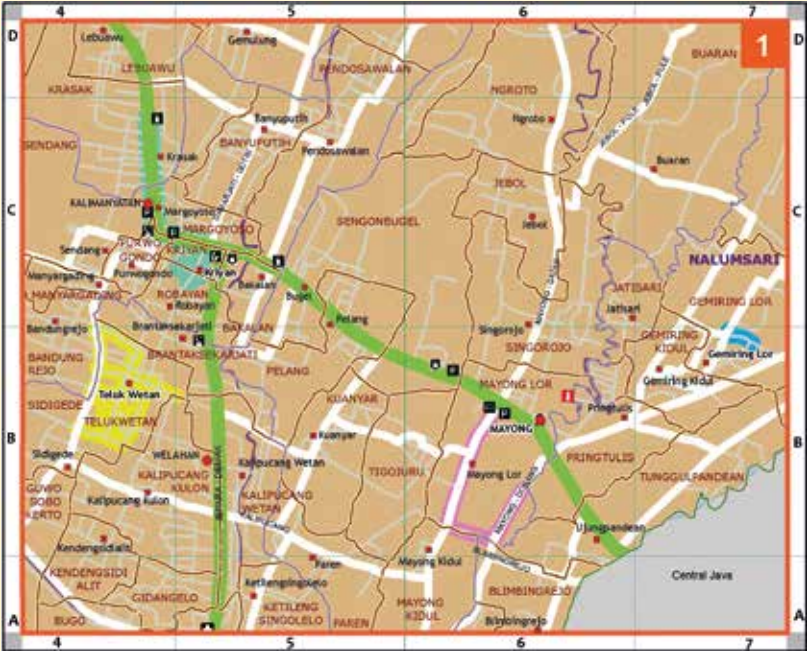
This area is specified by the local government as a centre for white steel (monel) manufacture. Usually sold as jewellery or

How to use this map

For the sake of efficiency, woodworkers who make similar products usually cluster in one location. This practice has made it easy to identify groups by

the products they sell. The clusters described here include both official industrial centres set up by the government and informal groups of producers. The clusters are named according to the main product they offer. For ease of use, several clusters

Krasak–Gemiring area



home decorations, Indonesians who have made the hajj wear white steel bracelets produced in this area as a status symbol ■.

Telukwetan

The village of Telukwetan is the centre of the rattan industry, where you can buy many

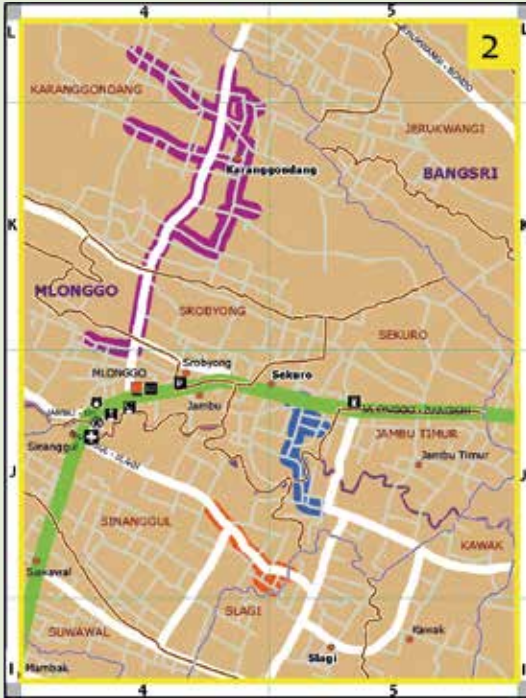
types of furniture made from rattan or a combination of rattan and wood ■.

Nearby, in the village of Pelemkerep, Mayong District, on the right of Mayong District office, is the monument that marks the birthplace of R. A. Kartini, the Indonesian women's emancipation heroine (B6).

are grouped by location and shown on detailed maps. The main map covers the entire region. On this map, each cluster boundary is depicted with a different colour. For orientation purposes the map is set in a three by three kilometres grid with

the rows labelled A, B, C, etc and the columns 1, 2, 3, etc starting from the bottom left corner. The detailed maps are not all drawn to the same scale, but each is equipped with the corresponding labels and grid.

Bondo–Sekuro area



This area includes the districts of Mlonggo, Bangsri and Pakisaji. Several furniture production centres are located here.

Karanggondang

From the main road that connects Jepara to Pati, turn left at Mlonggo. Follow the road towards Karanggondang ■. Products sold here include folding chairs and lounge chairs.

Sekuro

The main product produced here is the extendable table ■, which is made from local teak and targeted at the domestic market.

Slagi

Slagi, located south of Sekuro, is the centre for the slatted, outdoor Marlboro bench, a chair with a high backrest, horizontal stripes and a curved armrest on each side ■. Products are made for export to the United States, Germany, Brunei Darussalam and Africa.

Kedungcino–Mulyoharjo area

Several groups of artisans work in this region.

Mulyoharjo

From the Ratu Shima main road heading towards Mulyoharjo, turn left on Belakang Gunung Street ■. This area has been set up as a centre of wood sculpture by the district government. The statues are made from various types of wood including rain tree wood, coffee wood, teak root, wood waste and fossilized or recycled wood.

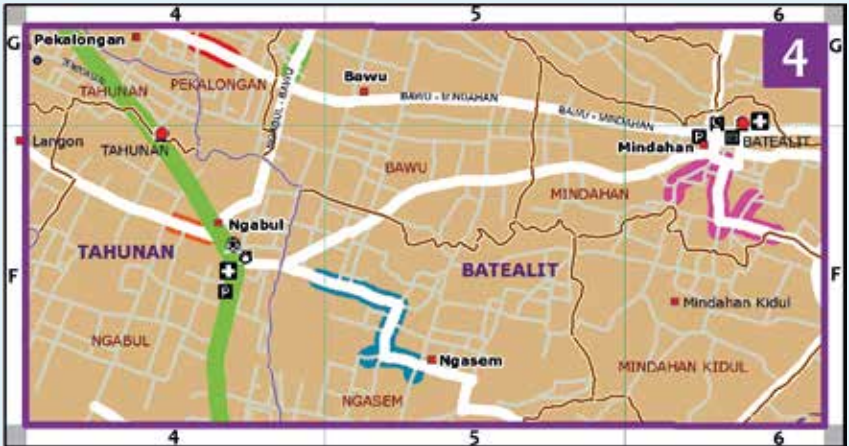
Bandengan

Bandengan is north of Mulyoharjo. Go north on the Ratu Shima main road and turn left at the sign for Bandengan ■. The unique products offered here include furniture shaped like boats, as well as

chairs and bookcases. These export quality products, made from old teak salvaged from boats, are produced for the European and North African markets.

Kedungcino

The northernmost furniture shops in this area are at Kedungcino. From the Ratu Shima main road turn left on the Wonorojo–Bandengan road that goes to Kedungcino ■. The speciality in this location is garden furniture including the grape chair, a chair carved with a grape ornament on the back of the seat, and the *betawi* chair, of Batavian traditional design. Made from local teak, the products are targeted at the domestic market and sold in an unfinished state.



Ngabul–Mindahan area

This area covers the subdistricts of Tahunan and Batealit. Several groups of carpenters and carvers work here.

Ngabul

Ngabul is well known for antique, wooden furniture with ancient designs and carving, and products made from older, recycled wood ■. Both indoor and outdoor

products are produced to meet export standards. Products are targeted at the domestic market, as well as for export to destinations such as Malaysia, France and Australia.

Ngasem

Daybeds and baby cots can be found in the Ngasem area ■. Other products include sofas, dressers, kitchen sets, *gebyog* and gazebos.

Mindahan

To the east in Batealit, Mindahan is the sales centre for nightstands and divans ■. Made from local teak and targeted at the domestic market, these products are on sale as unfinished products.

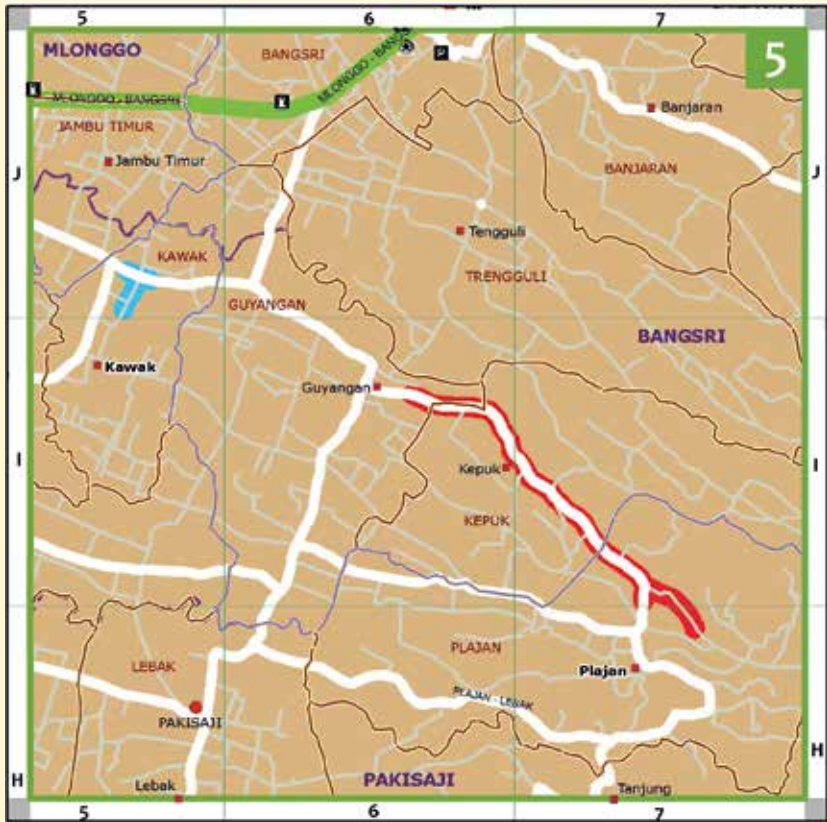
Bawu

Located in the northern area of the map ■, Bawu is the place to find wooden easels made from teak and mahogany for both local and export markets.

Pekalongan

Pekalongan, to the west of Bawu ■, is where you can find coat racks made of mahogany and intended for the domestic market. Outside this area, products from Pekalongan can be found in Jepara, Yogyakarta and Surakarta (Solo).





Bulakbaru–Dongos area

The Bulakbaru–Dongos area includes the subdistricts of Tahunan, Pecangaan and Kedung.

Troso

The district government has designated Troso as the centre of the weaving industry, located on the main road from Demak to Jepara. Turn left on to the road leading to Bulakbaru. Products offered here include tablecloths, pillowcases, curtains, gloves, long cloths and mats.

Dongos

Northwest of Troso is Dongos, which covers quite a large area. Here you can find a special piece of furniture known as the eagle and stair chair. Products are made from mahogany and targeted at both domestic and export markets.

Bugel

Bugel is located to the west of Dongos. This area is famous for the crab chair (*kursi yuyu*), a chair designed in the shape of a crab. It has four curved legs without a backrest and its armrest has seven stripes. The products here are made from local teak and intended for domestic and export markets.

Menganti

Menganti is located northwest of Bugel. From the Bulakbaru road, turn right at the Bugel–Mantingan junction. Products include the Roman style chair and the *balero* chair, a dining chair with a high backrest and five stripes. Besides these two items, other products found here are the *salina* chairs, which consist of four dining chairs and one

Kawak–Plajan area

The Kawak–Plajan area includes the subdistricts of Pakisaji, Mlonggo and Bangsri.

Kawak

This area can be reached via the main road from Mlonggo to Bangsri; turn right at the road that goes to Guyangan. After about 1.5 km, turn right again ■. The flagship item in this area is the

rekal, a stand for the Qur’an or any other book.

Plajan

From Kawak, go southeast to Guyangan. The selling location is quite extensive, following the Guyangan to Plajan road ■. Plajan is the place to buy stackable office chairs and the peanut bench, an outdoor chair shaped like a peanut.



round dining table, the basket chair and various tables.

Kerso

Kerso is north of Menganti ■. In this area you can find *betawi* and *salina* chairs, the balero chair, various dining chairs, and the box seat, a chair with box motifs.

Jondang

Jondang is located south of the Bulakbaru road. From Menganti, go south, past the crossroads at

Kedung, and you will arrive at Jondang ■. Specialities from this area include pot chairs, made for flower pots, and Roman style chairs. Carved from local teakwood, these products are manufactured specifically for the domestic market.

Bulakbaru

Located on the western edge of the map ■, Bulakbaru is famous for one product, the nightstand or bedside table. *Terawangan* transparent carvings are also found here, along with sideboards and cabinets.

Tegalsambi–Sukosono area



The Tegalsambi–Sukosono area covers the subdistricts of Sukosono, Tahunan and Jepara. There are fewer workshops and showrooms in this area but there is still variety.

Demaan

Demaan, in the north of the map ■, is well known for its corner seats. This item is made from a combination of teak and rosewood, which results in a gradation of two colours of wood. Products are targeted at the domestic market.

Krapyak

Going south along Kalinyamat Road and turning right at Randsampit Street, you arrive at the centre for chair production, in particular the minimalist Hong Kong chair, a chair with Chinese style ornamentation ■. Products are produced for the domestic market and sold as unfinished furniture.

Tegalsambi

Further down the road going south to Mantingan Kalinyamat, turn right towards Tegalsambi, and there are centres for dresser manufacture ■. Frames for mirrors and various types of table can also be found here.

Mangunan

In this area the *bale-bale*, a wooden daybed, is manufactured ■. Other products, which are sold on the domestic market, include cabinets and laundry baskets.

Demangan

Demangan is the centre for sideboards, nightstands, lawn chairs and *krapyak*, which are wooden blinds for indoor use ■. Products are exported to destinations such as Taiwan, Singapore and Germany.

Semat

As in Demaan, furniture produced in this area combines teak and rosewood, and includes dining chairs, guest chairs, patio chairs, display cases, wardrobes and desks ■. The historical point of interest in this area is the statue of R. A. Kartini, located at the intersection of KS Tubun, HOS Cokroaminoto, Kartini and Pemuda streets.

Mantingan–Sukosono area

The Mantingan–Sukosono area is located close to downtown Jepara, about 3 km from the centre on the main street from Jepara to Demak.

Tendok

Along Tendoksari Street there are many types of frames for paintings and mirrors ■. The products are usually for export to the East Asian market, especially to China and Korea. A *pigura* is a wooden picture frame.

Langon

Not far from Tendok, on Sidodadi Street, there is a *ketapang* centre ■. Tables and beds made in *ketapang* style have distinctive legs that curve inwards and are usually made from teak, mahogany or durian. These products are exported to destinations such as Korea, Japan and France.

Still around Langon but further south at the crossroads of Sidodadi and Sultan Hadlirin streets, you will find a centre for coffin manufacture ■. Items are made from teak or mahogany and sold on the domestic market.

Sukosono

From Langon, follow the road that connects Dongos to Sukodono and you will arrive at the centre for furniture made in shapes inspired by plants and animals ■. The best known products from this area are chairs with carvings of crabs, dragons, fish and roses. These products are intended for sale on domestic and export markets.

Rau

Rau, at the southwestern corner of the map, is the centre for corner seats ■. Products are made from teak and mahogany and intended for the domestic market.

Mantingan

Mantingan, in the northwest of the map, is the centre for sideboards, bookcases and display cabinets ■. Products are exported, especially to Belgium. Miniature furniture for children and dolls can also be found here.

Sukodono

In the vicinity of Sukodono, there is a centre for salina seats ■,

Kuwasen–Kecapi area

This area is located near Jepara city centre, and extends into the subdistricts of Jepara, Pakisaji, Tahunan and Batealit.

Senenan

On the main Jepara–Pati road, slightly north of Senenan and on the left is a centre for wooden relief carving ■. Immediately east of Senenan is a production centre for Roman and Monaco style furniture ■.

Kecapi

Kecapi is the centre for carved partitions and room dividers. The showrooms are along Citrosono street up to Sosrokartono crossroads on the northwest side ■.

Bulungan

This is the centre for cabinet manufacture. The showrooms extend along Sosrokartono street; turn left to go north on the road heading to Bulungan ■. You can find any kind of cabinetry here, from wardrobes and bookcases to shelving units, chests of drawers and sideboards.

Bawu

Bawu is located southeast of Kecapi, on the



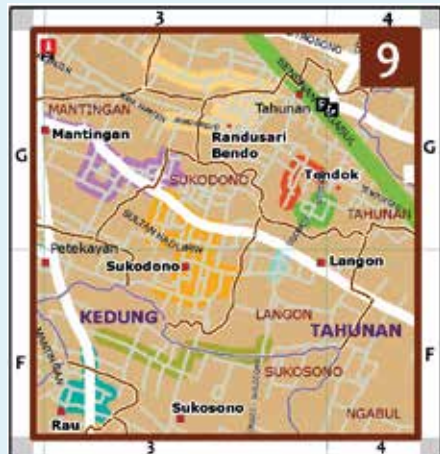
crossroads of two streets, Kecapi–Bawu and Rukmini ■. This area is the centre for the king's chair, named as such because it replicates the kind of chair used in palaces in England.

which have a wide variety of shapes and ornaments, including carved roses. Salina seats are generally produced for the domestic market.

Randusari Bendo

In the north, especially around Jayadi Rojo Street, you will find a centre for sofas. The area is known as Randusari ■. Bedroom sets and door frames are also made and sold here.

You can visit some historical sites in this neighbourhood, including the Mantingan mosque complex. This ancient mosque was built during the reign of the Sultanate of Demak, in the Saka year 1481 or 1559 AD, by Emperor Hadlirin, the husband of Queen Kalinyamat and brother-in-law of Sultan Trenggono, the last ruler of the Sultanate of Demak. This was the second mosque built in Indonesia, and became the centre of Islamic proselytising on the north coast of Java. In this complex you can also find the graves of Sultan Hadlirin and Waliullah Bah Abdul Jalil, also known as Sheikh Siti Jenar.





Teak forest in Jepara



Using a chainsaw to shape the wood



Offloading logs



Assembling a chair



Carrying the log



Sanding the furniture



The Jepara region in Central Java is one of Indonesia's largest furniture-making centres, providing livelihood for thousands of small-scale furniture manufacturers and their families. Like other stakeholders along the Indonesian furniture industry value chain, these producers are affected and challenged by a range of dynamic changes.

To strengthen Jepara furniture makers' potential to enter the global market, a multi-stakeholder project, 'Mahogany and teak furniture: action research to improve value chain efficiency and enhance livelihoods', was conducted with the support of the Australian Centre for International Agricultural Research (ACIAR).

This book outlines the research process and the outcomes that were achieved throughout the five-year project. The project laid some crucial foundations for small-scale furniture makers to build on, including the formation of the Association of Jepara Small-scale Furniture Producers (APKJ) and the development of a furniture industry roadmap for 2013–2023.

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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, CIRAD, the International Center for Tropical Agriculture and the World Agroforestry Centre.

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