



Untangling the Regulatory Environment: Why do Wood Processing Businesses in Indonesia Fail to be Competitive in the Global Market?

Lukas Rumboko Wibowo¹ · Nur Hayati⁵ · Achmad Rizal Bisjoe² · Dewi Ratna Kurniasari¹ · Kristiana Tri Wahyudiyati³ · Digby Race^{4,6,7}

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Abstract

Smallholder tree planting has long been practiced by rural people throughout the tropics. However, the competitiveness of Indonesian wood products has decreased in the global market. Indonesia's wooden furniture for instance, was assessed to have declined in competitiveness during 2006 to 2015. In addition, the World Economic Forum in its latest annual Global Competitiveness Index report (2019) lowered Indonesia's position from 45th position to 50th in the product market. Although the small- and medium-scale wood processing businesses have begun to focus on commercial forest management goals, the way in which the competitiveness of their timber products is affected by forestry regulations remains a debate with significant policy implications. New regulations have been designed and implemented to solve various problems associated with smallholder-managed forests, such as specific administration of smallholder forest products, regulation of access to forests for people living near forests, and attempts to bridge the gap in forest management expertise between forestry companies and rural communities. However, rather than producing positive results for those concerned, new regulations appear to have become an additional constraint. This study aimed to map how regulations have influenced small-scale tree planting and wood processing industries in Indonesia, both directly and indirectly. It also examines the extent to which these regulations can be reformed to become an efficient and effective legal instrument in governing small-scale tree planting and wood processing industries. In addition, this study explored two less examined issues, namely: (1) Have the regulations become too complex and constraining? and (2) How does Indonesia create an 'enabling' regulatory environment? The study found that excessive regulation of commercial timber production reduces the interest by smallholders in tree growing. In addition, complicated regulations tend to increase the transaction costs incurred by those involved in commercial timber production.

Extended author information available on the last page of the article

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Introduction

Stringent Forestry Regulations

Over the last 25 years, smallholder ownership of forests has grown rapidly, contributing to a global forest transition (Permadi et al., 2017). Khalil et al., (2017, p.7) defined smallholders as farmers operating under structural constraints such as access to sub-optimal amounts of resources, technology and markets. Smallholders' involvement in forest management in the tropics has significantly increased, demonstrating their important roles in addressing the adverse impacts of deforestation (Gilmour & Fisher, 1997; Wiersum et al., 2013). Since 1990, the number of smallholder plantations, including household woodlots and village-scale plantations, has tripled globally (Bauhus et al., 2010). There are more than 570 million farms worldwide, most of which are small family-operated businesses (Lowder et al., 2016), and are partly dependent on forestry (Food and Agriculture Organization of the United Nations (FAO), 2020). It has been noted that smallholders' motivations for engaging in forest management, including tree planting, are high (Nambiar, 2019). Agricultural innovations, economic development, modernization, government trade and pricing policies for agricultural products, infrastructure, and emerging domestic and international timber markets have triggered the growth of smallholders' involvement in forestry plantations (Perdana et al., 2012). Smallholders have become the backbone of wood supply in some countries including India, Vietnam, Thailand and China (Nambiar, 2019).

In Indonesia, smallholders in rural areas have long adopted tree planting as a strategy to optimize the expected utility of land, limited labor availability, and other constraints (Maryudi et al., 2015). In a number of tropical countries, smallholders have begun to focus on commercial goals in managing their forests (Byerlee, 2014; Guillerme et al., 2011). Smallholder tree planting is increasingly recognized for supporting rural livelihoods, including supplying timber for processing industries (Barr & Sayer, 2012; Martín et al., 2012). Recent studies indicate that forest-related income shows significant regional variation, but averages 22% (ranging from 6 to 44%) of total household income across the tropics. However, the contribution of forest resources to the livelihoods of smallholders who live in or near forestlands, and the way in which this is affected by forestry regulations, is an ongoing debate with significant policy implications (Angelsen et al., 2014).

An important angle in the debate about the way in which smallholders and communities use and benefit from timber focuses on the barriers of stringent and complex forestry regulations (Kaimowitz, 2003; Suh & Emtage, 2005) that smallholders must operate within to achieve meaningful profits (Larson & Ribot, 2007; Pokorny & Johnson, 2008). Most small-scale commercial forestry activities in developing countries are illegal or have an unclear status under existing laws (Anton et al., 2015; Cunningham et al., 2017; Kaimowitz, 2003), resulting in business uncertainty and a

reluctance to invest (Suh & Emtage, 2005). Those involved generally do not have permits or formal management plans. They do not pay taxes and often work without permission in forests claimed by governments or large-scale landholders (Kaimowitz, 2003; Tulus Tambunan, 2005, 2009; Woller, 2004). Thus, legality compliance continues to be a significant challenge for the development of smallholder forestry. Compliance with forestry regulations is expected to reduce the unfair competition in timber markets resulting from the sale of timber that originates from illegal sources and distorts market prices (Vasquez, 2004).

In Indonesia however, since the implementation of a timber assurance (SVLK) regulation (The Minister of Trade Regulation No. 15/2020 concerning Forestry Industry Product Export Provisions), the competitiveness of the country's wooden furniture has decreased in the global market, especially in the United States, Japan and Australia. Indonesia's wooden furniture for example, experienced a decline in competitiveness from 3.14 in 2006 to 2.65 in 2015 on the Revealed Comparative Advantage index (RCA) (Nurkomariyah et al., 2019). The figure represents export competitiveness of a country in a commodity traded globally (Setyawan et al., 2016). If the RCA index is > 1 , then that the country has a comparative advantage or competitiveness. The higher the index value, the higher its competitiveness (Suwita, 2016). Even the World Economic Forum (WEF) in its latest annual Global Competitiveness Index (GCI) Report (2019) lowered Indonesia's position from 45th position to 50th. Indonesia's competitiveness has also declined in the product key indicators (i.e., skill of human resources, labour market, non-tariff barriers, taxation policy and subsidy) in the market (Product Market) (World Economic Forum, 2019). Indicators causing the decline are the effects of tax policy and subsidy distortions on competitiveness, market dominance, and non-tariff barriers, as well as the complexity of tariffs on Indonesian products (Giurca et al., 2013; Suryandari et al., 2018; T Tambunan, 2008). Veneer products, for example, declined in export value by around 20% from US\$ 115.26 million in 2018 to US\$ 92.16 million in 2019. Meanwhile, the export value of manufactured timber products recorded a decline of around 11% year on year in the same period. As a result, the export value of processed wood products in general decreased slightly by around 4% compared to the previous year throughout 2019. In response to such conditions, the Indonesian Forest Corporation Association (APHI) have proposed fiscal incentives to encourage investment and export of forest products in 2020. Some of the fiscal concessions that want to be proposed include the acceleration of 10% value added tax (VAT) refunds and the abolition of the 10% value added tax (VAT) for logs (Kontan, 2020). Another example is the Certificate of Origin (CoO), which is a mechanism for determining and verifying the origin of products in order to obtain preferential tariffs (Latifah, 2015). A Technical Barrier to Trade (TBT), such as the SVLK, is considered as a trade barrier. According to Giurca et al., (2013) the International Forest Law, Enforcement, Governance and Trade (FLEGT) policy has reduced the number of exports of wood products to the European Union.

Additional Transaction Costs

Forest regulations can imply additional transactions costs that are especially burdensome for smallholders, small-scale chainsaw millers, small-scale and medium wood processing industries, and other local forest users who produce relatively small amounts of timber (Tacconi, 2007). Transaction costs are defined as costs incurred by business actors both officially and unofficially (Rindfleisch, 2019). Official fees include taxes, levies and third-party contributions related to business activities. Transaction costs also include unofficial or illegal fees that place a high burden on business actors (Jaweng et al., 2016; Rindfleisch, 2019; Williamson, 2007; Yousuf, 2017). Unofficial transaction costs include costs for goods distribution between regions and security costs. Unofficial fees are collected by unauthorized parties without a legal basis (Jaweng et al., 2016). Unofficial costs or illegal payments, were noted by Asikin (1997) as a practice that happened on goods distributed between regions. Compared to official levies, the process of imposing illegal payments is closed and informal. The culture of illegal levies practices has been rooted in business practices in Indonesia, both for small and large scale businesses. In addition, Asikin (1997) in his research found that based on research shows that 22% of the total levies paid by smallholder business have no linkages with the business being carried out. The existing of illegal levies make higher transaction cost paid by business entities. Andadari et al. (1997) define levies or charges are payments that are drawn by bureaucrats either directly or indirectly, in order to facilitate services. Unofficial levies payments that are drawn by unscrupulous officer, are actually prohibited by regulation and usually made for personal gain. The high transactions costs associated with operating legally are a major factor that typically confines small-scale commercial forestry to the informal sector. Existing laws and regulations require extensive paper work, payments, and visits to government offices. Professional foresters must sign certain papers and the offices that process those papers are typically located far away. When low-income people visit these offices, the officials they need to talk to may be away or unwilling to receive them. It frequently takes a long time to get any response, and the officials may send papers back several times for corrections (Kaimowitz, 2003).

Situations of widespread corruption and disrespect for the rule of law typically favor groups that have sufficient resources to pay bribes, develop informal links with government officials, and hire armed guards (World Bank, 1997). This puts households that engage in small-scale forestry activities at a clear disadvantage (Kaimowitz, 2003). Krott (2005) argues that regulations have been introduced to solve problems associated with smallholder-managed forests, including the administration of smallholder forest products, the limited forest access among people living near forests, and the large gap in forest management capacity between forestry companies and rural communities. However, Sahide and Giessen (2015) pointed out that instead of producing a positive result for those concerned, regulations may actually be more of a constraint. Quite often, smallholder tree planting is highly regulated, and this becomes a disincentive for farmers to plant trees (Foundjem-Tita et al., 2013; Guillerme et al., 2011; Weyerhaeuser et al., 2006).

In this article, we use the definition of regulatory frameworks from Maryudi et al. (2015). Regulatory frameworks are defined as regulations issued by public administrators at the sub-national and national levels, and emerging market-based regulatory frameworks (i.e. voluntary certification of sustainable forestry and mandatory timber legality verification). Therefore, this study aims to map the extent that regulations have directly and indirectly influenced small-scale tree planting and small-scale and medium-scale wood industries in Indonesia. However, the focus of the study is small-scale and medium-scale wood industries in the selected area, particularly in Bulukumba District, South Sulawesi Province, Gedongwani, Lampung Province and Boalemo, Gorontalo Province. The article also focuses on wood processing industries related to producing sawn timber, broomstick and wood pallet, veneer, plywood and small-scale growers that supply these processing industries. In this research, small-scale growers means tree growers who planted or managed trees on private land, which is also called farm forestry, and growers who planted trees on state forest land called community plantation forestry. We observed farm forestry in the case of Bulukumba District, and community forest plantation in the case of Gedongwani, Lampung Province, and Boalemo, Gorontalo, Province. Farm forestry is commonly managed privately by the land owner as an agroforestry system (i.e. integration of annual crops with trees). Community forests have a significant role in the supply of wood for the Indonesian timber industry (Apuri et al., 2018; Nawir et al., 2007). Community forest plantations (HTR) aim to increase the contribution by forestry to economic growth and to reduce national unemployment and poverty (i.e. pro-growth, pro-job, pro-poor). Through the HTR program, the government provides local communities with improved access to land tenure, financial credit and commercial markets (Herawati et al., 2010; van Noordwijk et al., 2007). The study also examines the extent to which those regulations can be used as efficient and effective legal instruments for regulating and governing small-scale tree planting and timber-based industries. In addition, the study explores what (Pacheco et al., 2008) noted were two less explored issues:

- (1) the effect of regulations on how timber operations are organized and what this means for smallholders' benefits; and
- (2) how market engagement influences benefit sharing from timber use and processing (Molnar et al., 2007), which has broader implications for smallholders' livelihoods.

Why does a Government Regulate Timber?

The track record of the forestry sector in many parts of the world is disappointing. Unsustainable harvesting, illegal logging and trade of forest products, corruption, and the pursuit of short term political interests (i.e., local and national political elections) of people seeking to be elected leaders are just some of the misconducts that defy regulatory efforts, leading to deforestation and forest degradation (Smyle et al., 2016). Illegal logging had a global value of between US\$ 30 and 100 billion, or 10–30% of the global wood trade in 2012 (Nellemann, 2012). For instance, around

40% of the wood-based products imported into the EU from South-east Asia (including China) were estimated to originate from illegal sources (Hirschberger, 2008; Lawson & MacFaul, 2010; Luttrell et al., 2011; Meyfroidt et al., 2010). Imports from these regions mainly consist of furniture and other processed wood products (i.e., plywood and veneer, sawn wood, round wood, pulp) (Hirschberger, 2008).

In Indonesia, one of the most important timber producing countries in South-east Asia and an important export partner supplying different markets in Europe and Asia (ITTO, 2011), the forestry sector is in the midst of a crisis because of the long-standing disparity between the high processing capacity of woodworking industries and the limited supply of timber. This supply–demand imbalance has been dogging Indonesia’s forestry sector for decades and is a key structural problem that drives illegal logging and illegal timber trade in the country (Obidzinski & Dermawan, 2010). In Sumatra, for example, illegal logging carried out by a well-known timber businessman has cost the state’s finances around IDR 227.02 trillion or more than US\$ 15,979 billion in 2015 (Siregar & Zul, 2015). The Commission of Corruption Eradication (KPK) in 2015 reported aggregate state losses from the domestic commercial value of unreported timber production during 2003–2014 amount to between US\$ 60.7 billion and US\$ 81.4 billion (IDR. 598 and 799 trillion), or between US\$ 5 billion and 6.8 billion per year. This dramatic increase was driven by the rapid expansion of commercial land-clearing and a significant rise in both domestic and international log prices (Directorate of Research and Development Deputy For Prevention Corruption Eradication Commission (KPK) Republic of Indonesia, 2015).

Many commentators have argued that “better enforcement” and “more regulation” are the appropriate responses to illegal logging and illegal timber trade in the global market (Smyle et al., 2016). Major European importers, companies and manufacturers using timber sourced from the tropics have also faced increased scrutiny of their timber supply chains over the last decades. This includes pressure from governments and non-government organizations (NGOs) to adhere to higher standards, and an increasing awareness among consumers (Lawson & MacFaul, 2010).

To facilitate local communities to manage their forests, current forest regulations in Indonesia are, in effect, a way to define how the state and its citizens relate to each other and what rights over lands and natural resources have been granted to enable them to manage their forests. “Their forests” are understood as including all forests: public, private, and communal forests (Smyle et al., 2016). However, the selection of policy regulations is shaped by a number of aspects. Those aspects include legal and political responsibilities of public bureaucracies (M. A. K. Sahide & Giessen, 2015), the capacity and competencies of the executing institutions (Hubo & Krott, 2013), and the power relations among concerned stakeholders (Krott et al., 2014). From a “rights-based” viewpoint, collaboration between “the state” and its “citizens” in building and executing regulations is foundational (Smyle et al., 2016). Nonetheless, different countries are at different stages of developing their legislation and implementing regulations. The impact of these regulations will also be determined by which types of individual and company are subject to the legislative requirements (Norman et al., 2017).

In the twentieth century, forest regulation was the exclusive domain of relatively autonomous forest agencies. The practice of forestry was believed to be a

“professional, modern science,” with forester practitioners as the prevalent source of knowledge and technical expertise. Public forest agencies defined the production and protection objectives and proposed regulations that would ensure the scientific management and conservation of forests. Underlying this world view were often unspoken biases: only technical foresters have the skills, knowledge and resources to efficiently manage and protect forests, and to maximize the economic returns vital to finance needed forest management. Consequently, regulations were generally too complex and full of technical jargon as to be incomprehensible to outsiders (Smyle et al., 2016). It is therefore no surprise that in recent years, regulatory patterns have become much more complicated (Lipschutz, 2000).

The Flawed Nature of Regulations

In reality, forest management laws vary between countries (Forest Legality Alliance, 2014). In comparison to the forestry sector, other industries are generally less regulated and more profitable (e.g. agriculture, mining, tourism, real estate), and forest conversion is often a less complex and more financially rewarding option than sustainable forest management (Smyle et al., 2016). Many countries also have highly complex laws with contradictions between different regulations (Forest Legality Alliance, 2014). While some will argue for the government to take a larger role through greater regulation and control, others will argue as persuasively for deregulation and reduction of the government’s presence and role. Clearly, as with all such complex issues, the answers for the forest sector will lie somewhere in between (Smyle et al., 2016). Government regulations have large effects on industrial wood production and are often cited as a factor that provides unfair trade advantages among countries. Almost every country requires compliance with national forest management laws, proof of land tenure, and provides statutory protection from illegal trespass (Cubbage et al., 2010). The weak enforceability of complex, prescriptive, top-down regulatory structures has consequences in terms of perverse and unintended outcomes, including:

- A diminished respect for law, judicial systems and forest sector institutions;
- A favoring of entrenched economic and political interests that are able to circumvent or disregard forest regulations with impunity;
- Insurmountable obstacles to local peoples’ pursuit of legal, sustainable, forest-based livelihoods;
- Unacceptable levels of environmental degradation caused by the common practice of circumventing and ignoring cumbersome and unenforceable rules; and
- In some cases, cascading forest charges and fees levied by public forest agencies in order to cover their underfunded mandate, leading to increasing costs imposed on all actors (public, private, communal) and further eroding the potential competitiveness of sustainable forest management.

Regulatory failures are more prone to occur when:

- The real purpose of the regulation is to raise revenue and/or exercise governmental and/or vested interest control over forest lands;
- There are strong contradictions and inconsistencies between sectoral laws, policies and regulations (e.g., between mining, agriculture, forestry and protected areas) that negatively affect forests;
- Regulations are inconsistent with property rights or customary practices;
- There is a lack of institutional capacity or political will to monitor and enforce regulations;
- The approach is prescriptive with a focus on enforcement and processes, rather than on the desired outcomes, such as improved wildlife habitat and water quality, or reduced risk of catastrophic fire;
- The rules are poorly adapted to the place and conditions, often a result of “importing” ideas from elsewhere without adjusting them as needed; and
- There is a lack of political will to apply the rules and/or to do away with the corruption, cronyism, wealth concentration and rent seeking that are all too often enabled by the status quo (Smyle et al., 2016).

Method

Study Location

Lampung Province was selected as a case-study site. This province was selected because it has a history of Social Forestry implementation and it has been the site of many land-use and land tenure conflicts. Lampung Province is also one of the provinces beyond Java Island that is closest to the central government. Verbist and Pasya (2004) noted that Lampung Province faces frequent land use and tenure conflicts relating to forest management. The sharp increase in population and a confusing and contradictory land use policy (and its implementation) are two key variables that have contributed to the existing land-use and land tenure conflicts. Gorontalo Province was selected for several reasons, including: it is one of the most remote provinces in Indonesia (in contrast to Lampung); and similar to Lampung, it is also facing a high level of tenurial conflict (Asri, Golar, & Rachman, 2018; Rahim, 2019; Soerjatisnanta et al., 2020). The Forest Management Unit (FMU) was chosen based on conversations with several respondents during the preliminary study that noted the location is one of the FMU considered to be advanced in terms of their capacity for forest planning, management and administration. The site has also been facing a high level of land use competition for the developing maize industry (Wibowo et al., 2019). The research also included field-work in Bulukumba Regency in South Sulawesi Province. We selected Bulukumba because it is one of the regencies in South Sulawesi where farm forestry is developing. Additionally, this farm forestry represents an example of smallholder out-growers that supply timber to small-scale and medium-scale wood processing industries (Wibowo et al., 2019).

In this study, we employed a qualitative design (Bryman, 2006, 2012). This method incorporated a mixed-methods analysis of the private sector’s interests and the dimensions of small-, medium- and large-sized wood processing businesses. The

study focused on the performance of small-, medium- and large-sized wood processing industries. Referring to the Regulation of the Minister of Trade No. 64/M-IND/PER/7/2016 concerning the number of workers and the investment value for industrial business classification. The Regulation of the Minister of Trade No. 64/M-IND/PER/7/2016 concerning the number of workers and the investment value for industrial business classification. Article 3 paragraph (1) of the regulation states that a small-sized industry is a business that employs a maximum of 19 workers and has an investment value of less than US\$ 69,145, excluding land and buildings for business premises. Article 4 paragraph (1) states that medium-sized industries employ a maximum of 19 workers and has an investment value of at least US\$ 69,145 or paragraph (2) a business that employs at least 20 workers and has an investment value of at most US\$ 1,039,115. Article 5 states that a large-sized industry is a business that employs at least 20 workers and has an investment value of more than US\$ 1,039,115.

The research method was conducted through the following stages: review of policy and company documents; in-depth interviews with selected senior policy-makers, program managers and company staff; presentation and discussion of a draft report at a policy workshop; and a revised report and recommendations presented at policy workshops and 'labs'. Policy 'labs' differed from the workshops in that these involved just a small number of related policy makers than came together from at least four institutions to discuss the main obstacles and challenges for the development of small- and medium-scale wood processing businesses.

The in-depth interviews were guided by open-ended and semi-structured questionnaires. The interviewees were selected using a purposive sampling method. The interviews were conducted with 14 national-level key informants that included policy-makers, university-based researchers and representatives from NGOs, and the Indonesian Forest Corporation Association (APHI). Numerous provincial-level interviews were also undertaken. In Gorontalo Province, we interviewed 20 key informants including provincial policy-makers from related institutions, (i.e., forestry services, Watershed Management and Protected Forest Technical units Agency [BPDASHL], State Forest Technical Unit Agency [BPKH], the head of the Forest Management Unit, the head of Provincial Regional Development Planning Agency). In addition to, the research also carried out interviews with NGO officers, farmers, a village chief, the head of a youth organization, and the Director and Managers of small-sized wood processing industries and large-sized industrial forest plantation. In Lampung Province, 22 key informants included provincial policy-makers from related institutions (i.e. Forestry Services, Provincial Planning Agency, BPDASHL, BPKH, Production Forest Management Technical Unit [BPHP], NGO officers, the head of Forest Management Unit (FMU), Forest Extension Officers and medium-sized and large-sized wood processing industries). In addition to, the study also carried out interviews with timber traders, heads of cooperatives, farmers, owners of a small-scale sawn mill and the owners and Manager of a larger timber company. In Bulukumba, the total number of interviewees was 21, consisting of 8 key informants from the Central Technical Units (e.g. BPDASHL Jeneberang Saddang, Social Forestry Office and Environmental Partnership in Sulawesi region, BPHP Region XV Makassar), Forestry Services, representatives of the timber industry, Central and

Regional technical units of the South Sulawesi Provincial Forest Service. In addition, we also did interviews with staff from the Bulukumba Environment and Forestry Service, the village chief, village officers, community leaders, timber industry, and traders. The interviews conducted with the micro-scale, small-scale and medium-scale wood processing industries focused on how is ease of doing (business entry) timber-related business in Indonesia and how forestry regulations impacted on their business. The field work for this research was conducted from October 2017 to February 2018. The interviews with key informants were usually between 2–4 h in duration. Interviews were conducted in offices and at hotels or cafes, depending on the willingness and convenience of the key informants.

We also conducted a series of focus group discussions (FGDs) involving relevant stakeholders at the central government, provincial government, and village government levels. At the central government level, 30 stakeholders actively participated in the discussions. This FGD aimed to explore the current status of, and the issues associated with, the development of small- and medium-scale wood processing industries. In Gorontalo Province, 15 stakeholders participated in the FGD, while the village-level FGD involved 20 farmers. In Lampung Province, the FGD involved 15 stakeholders, while the village-level FGD involved 7 farmers. Here, we also held a FGD with the local FMU involving 15 people. At the provincial level, the FGD aimed to identify problems associated with the forestry management laws and regulations. The village-level FGDs aimed to explore the field-based problems experienced by farmers and farmer groups. Prior to organizing the FGD with relevant stakeholders at central level, such as the ministry of forestry, other relevant ministries, academics and NGOs, researchers conducted an audition to get approval from the head of institutions and also targeted stakeholders. The research team did the same thing when holding FGDs at the local level.

Results

Trees and Trade: Is the Timber Industry Over-Regulated?

In Indonesia, timber is under-valued. Widyantoro (2020) noted that the selling price of logs from natural forests is very low. The Indonesian Forest Corporation Association (APHI) recently reported that the price of fresh cut meranti wood harvested in 2020 was only US\$ 90 to US\$ 98 per m³. This means that this is not enough to cover the cost of production, which is on average above US \$ 98 per m³. To improve industry performance in the forestry sector, the Ministry of Environment and Forestry (MoEF) has developed and implemented social forestry policies and programs through the MoEF regulation No. P. 83/2016.. Indonesia's national policy of allocating 12.7 million ha of state-owned land to be managed by local communities is an important political decision. This policy not only aims to encourage community participation in developing plantation forests but also to increase the supply of wood for the development of the forestry industry and improve the livelihoods of local people. However, it is not easy to meet the target since there is timber industry over regulated. For instance, the Indonesian Furniture and Crafts Association reported

that there are 32 government regulations (i.e., regulation on raw material, imported processing machinery) that still hinder Indonesia's furniture exports (Neraca, 2015). Based on our regulatory mapping, in the forestry sector, both in the upstream side from business to entry to the procurement of raw material sources to the production process and trade in products produced from the production process, has been regulated rigidly.

According to key informants from The Indonesian Forest Corporation Association (APHI), it is widely recognized that the timber industry and trade in Indonesia is over-regulated and there is a need for new incentives and disincentives, rather than more regulations., the Indonesian Furniture and Crafts Association reported that there are 32 government regulations (i.e., regulation on raw material, imported processing machinery) that still hinder Indonesia's furniture exports (Neraca, 2015). Furthermore, to start running a business (i.e. timber business) in Indonesia requires 8–12 procedures (i.e. a Business Domicile Declaration Letter, Tax Registration Code, a nuisance permit) and obtaining a building permit requires 9–16 procedures (i.e. village approval letter, legalized land certificate, environment management statement letter) and to register land and building rights requires 5–8 procedures (i.e. land value zone declaration letter application letter of the issuance of land and building tax) depending on the regions (Jaweng et al., 2016). For example, if a timber processing company can meet the requirements for wood export production in accordance with the applicable regulatory provisions, then there should be incentives available to the company such as reduced export taxes. In Indonesia, there are many sectors and institutions governing the timber industry and trade. There are at least three main ministries governing different aspects of the timber industry; the MoEF, which has the authority to regulate the upstream or primary/raw materials sectors; the Ministry of Industry which has the authority to regulate secondary raw materials of the forestry industry; and the Ministry of Trade which has the authority to regulate timber trade. Despite the industry regulations provided by these Ministries, the primary, secondary and tertiary sectors of the timber industry are poorly integrated due to strong of sectoralism. For example, the Ministry of Trade revoked Regulation (Number 15/2020) concerning Provisions for Export of Forestry Industry Products. This regulation eliminates the obligation of exporters to include verification of the legality of wood of the products they sell abroad (Forestdigest, 2020). The Ministry of Environment and Forestry on the other hand is still optimistic and continues to encourage the fulfillment of the timber legality verification system (Agroindonesia, 2015). After receiving public criticism, through Regulation (Number 45/2020) which was issued on May 11, 2020, the Minister of Trade revoked the regulation so that the requirement to include V-Legal as an export provision was valid again (Forestdigest, 2020).

Key informants from the timber industry also acknowledged that wood products are over-regulated. Furthermore, according to the Indonesian Forest Corporation Association/Asosiasi Pengusaha Hutan Indonesia (APHI) (2019), so far the timber industry has not been integrated with the manufacturing industry sector. Many investors find it difficult to get small-scale industrial permits in and around company concessions. Then there is an overlap between central and regional regulations. Many regulations govern the forestry sector in a strict

and detailed manner. For instance, the Governor's Regulation in North Sumatra (No. 10 of 2020), regarding the management of the Grand Forest Park (Tahura) conflicts with the Presidential Instruction (No. 7 of 2019) concerning the acceleration of Ease of Doing Business. The regional regulation appears to hinder investment in the forestry sector in North Sumatra, as we were told that there are businesses who have applied for permits since 2012 but until now the Regional Government has not issued a forestry investment permit due to the local regulation (Aziz, 2020). While many companies reported feeling excessively burdened by the numerous levies, such as local government levies, land and building taxes. These regulations do not encourage the growth of the processing industry that increases value-adding, but the regulations were viewed by many as simply the government's pursuit of revenue. However, the regulation is not a problem if it is aimed at encouraging an increase in product value through value-adding. The foundation of the regulatory authority of the Ministry of Industry is in accordance with Act No. 3 of 2014 concerning industry development, which encourages an increase in value-adding in the timber industry. One key informant stated: *"... we are more focused on developing efforts in the secondary sector or intermediate products, such as veneer woods, and sawn timber"*.

According to the key informant from the Ministry of Industry, the policy to ban log exports and encourage sawn timber production is a good step to boost the value-adding of wood products. According to this informant, the Ministry of Industry does not agree with the export of whole logs from Indonesia because it has negative outcomes for the country in terms of human resources development, technology adoption, and advancements in research, development and innovation. This log export ban policy is based on Regulation No. 44 of 2014.

Key informants from the Ministry of Trade mentioned that the Ministry only regulates timber traceability. This Ministry ensures that traded products meet the necessary environmental and sustainability requirements, which determine the legality of the timber being traded. The legal basis for the foreign trade policy in the export sector is Law No.7 of 2014. In Article 38 (1), the Government regulates foreign trade activities through policies and controls over exports and imports. This regulation is then reduced to the regulation of the Ministry of Trade (Permendag 13/2012 on general provisions in the field of exports).

According to the key informants from APHI, to advance the timber industry in Indonesia, there should be regulatory integration between the Ministry of Industry, the Ministry of Trade and the MoEF. The government is seen as being too hasty in developing regulations. The regulations are often too detailed or rigid, such as with spacing between plants and types of plants that can be planted. One key informant from Boalemo stated: *"... For example, agroforestry is prescribed in the regulation as a planting system of 3 × 3 m spacing, but when there are rocks present then smallholders will necessarily adjust this spacing to avoid the rocks. But this could then present accountability problems for the smallholders'. The Ministry of Environment and Forestry tries to find smallholders to punish. There is a need for some brave and outspoken members of the Ministries to attempt to solve these problems"*.

The Voice of Small- and Medium-Scale Wood Processing Industries

Informants from a medium-scale wood processing industry located in Lampung reported that compared to China, Indonesia's timber industry- and trade-related regulations are far more complicated. In particular, it is believed that there are many overlapping regulations. For example, to develop a production capacity of 6000 m³ per year, a permit must be issued by the Central Government. For businesses with a production capacity of about 2000 m³ per year, the regulation requires a permit to be obtained from the District Government, and for a production capacity between 2000–6000 m³, the permit is required from the Provincial government, and this is considered an inefficient process. Then, once achieving a production capacity of 6000 m³ or greater, it needs a longer period to process the required permits by the Central Government.

Another key informant from small-scale wood processing industry said that the regulatory requirements to establish a business in the timber industry such as a broomstick include: (1) a business license for primary processing industry; (2) SVLK; (3) company registration certificate (TDP); (4) business place permit; (5) trading business license (IIUP); (6) industry register certificate (TDI); (7) business license for timber forest product primary industry (IUIPHHK); (8) a Tax ID Register (NPWP); and (9) Notarial certificate (notarial deed). In brief, there are at least 12 permits to be obtained by a business in the timber industry, and this does not include regulations relating to the trading of timber products. Based on interviews with owners of a sawmilling business, Table 1 outlines some of the regulation-related costs that are incurred by timber businesses. Outside of the formal levies, they must pay illegal levies (illegal payments) Andadari et al. (1997) define levies or charges as payments that are drawn by bureaucrats either directly or indirectly, in order to facilitate services. Unofficial levies payments that are drawn by unscrupulous officer, are actually prohibited by regulation and usually made for personal gain. Informants saw a need for regulatory support to prevent the imposition of illegal levies.

Timber Trade and Small-Scale Wood Processing Businesses in Lampung, Gorontalo and Bulukumba

A key informant from a medium-scale wood processing industry located in Lampung Province explained the history of the establishment of the company. His company has experienced transition from sawmilling to plywood production. The company began producing plywood in 2014 and its production capacity is now around 6000 m³ per year.

The capital required by a timber company engaged in the processing of plywood operating in Lampung Province to produce 6000 m³ per year is about US\$ 692,743 excluding the land. Employing 250 laborers, the investment cost for the prior sawmilling operation with a similar production capacity was only about US\$ 139,677. However, markets for the sawmilling products were more limited

Table 1 Costs of regulation for businesses in the timber industry

No	Type of permits	Cost (US\$)	Remarks
1	Business Place Permit (SITU)	241.4 per year	Depends on the size of area (business footprint), This statement actually based on the interview conducted towards one of key informants (the owner of the timber industry, but the respondent interviewed did not mention a range of area)
2	Retribution (Local taxation)	12.8 per year	
3	Company Registration Certificate (TDP), Industry Register Certificate (TDI)Company Business License (SIUP),	41.4 per year	
4	Nuisance permit (HO)	Not mentioned	Every three years

Source: Primary data (2017)

because the output was restricted to pallets or boards, while the plywood market was found to be more flexible.

The main source of raw material for a timber company engaged in the processing of plywood operating in Lampung Province is rubber trees (60–70%), with the remainder being a mixture of sengon (*Paraserianthes falcataria* L.Nielsen), red jabon (*Anthocephalus macrophyllus*), mango (*Mangifera indica*), and dadab (*Erythrina variegata*). The company prefers not to process sengon because it is expensive and profits can only be made if the processed products is exported. The company prefers mainly to use rubber as raw materials since the purchase price is cheaper than the other species. Rubber contains a high amount of glucose, which is an advantage for processing plywood and veneer. To obtain raw materials, a timber company engaged in the processing of plywood operating in Lampung Province establishes relationships with about 40 suppliers, and considers them employees. In addition, the company has also entered into a purchase contract with a state-owned plantation company (PTPN VII) for five years to guarantee the sustainable supply of raw materials.

The owner of a timber company engaged in the processing of plywood operating in Lampung Province argued that the viability of all plywood businesses depends on the sustainable supply of raw materials. According to a manager of a timber company engaged in the processing of plywood operating in Lampung Province, the company was unable to acquire their own land for timber planting, due to limited availability of land and difficulty in obtaining land permits. The company is also only able to provide assistance for nursery operations for local out-growers, but not for general tree planting, because of financial constraints and lack of skilled people.

According to the company informant, they have a secured five-year supply of raw materials from the community gardens and the contract with PTPN VII. Currently, due to the low prices that farmers are receiving for their rubber trees (about US\$ 0.35 per kg), many rubber farmers are cutting down their trees to sell and then switching to other productive crops. These farmers are harvesting their rubber trees and replanting with cassava and maize crops. The company informant stated: “... *I do not know the condition of raw materials after five years into the future. I hope the community-based forest plantation can succeed, so it could supply timber to my company. I believe the community-based forest plantation can succeed if there are simple regulations and incentives*”.

The transportation of raw materials from the community lands is not complicated, provided the delivery is accompanied by a declaration letter (note of transporting). However, the transportation of timber from state-owned forests is more complicated because informal fees may be collected by irresponsible individuals. If this happens, the company provides the impacted small-scale out-growers with compensation.

On average, a key informant interviewed said that a timber company engaged in the processing of plywood operating in Lampung Province sells 500 m³ of plywood each month. The sales are in the domestic market. The company produces two grades of plywood (Grades 1 and 2), with a price difference of around US\$ 0.14–0.21 per sheet. Interviews were also conducted with two informants from a business engaged in the production of broom and shovel handles as well as pellets for bioenergy. The company exports its products to Canada, Turkey, Kuwait, Tunisia, Algeria and other

Middle East countries. They also export the products to Europe and Australia which have higher quality requirements than exporting to other countries. Eucalypt timbers are required to supply products to these markets but the supply of such wood is limited. Whereas, if using *Acacia mangium* wood, the quality is low and not suitable for broom and shovel handles because the stem is typically not straight.

In addition to a timber company engaged in the processing of plywood operating in Lampung Province, we interviewed the small-scale wood processing industry located also in Lampung. The company was established in 1994 to meet a demand from Kuwait for broomsticks. The company employed 5 laborers. In addition to the broom handle production, the company also produces timber furniture and clocks. The company has a zero-waste production policy, with any timber residues being processed into pellets for bioenergy.

According to the company owner, the industry still lacks a reliable supply of raw materials. There are several criteria for the quality of timber required by the company, including straight logs and that the timber must have soft fibers; otherwise, the company cannot compete with China that has high quality materials and products. The owner has travelled to China several times and observed the country's eucalypt plantations that produce long and straight stems over a short period of five to six years. The industry in China is also strongly supported by substantial research and development investments.

The company produces up to 4000 broom handles with a length of 120 cm and diameter of 34 mm per month. The weekly local demand in Lampung alone is about 32,000 sticks with a length of 90–100 cm and a diameter of 19 mm. The types of timber used include waru (*Hibiscus tiliaceus*), pulai (*Alstonia scholaris*), durian (*Durio zibethinus*), mahogany (*Swietenia mahagoni*), melinjo (*Gnetum gnemon*), and rubber (*Hevea brasiliensis*). According to the owner of the small-scale wood processing industry located in Lampung, her company is currently paying attention to a growing demand for its products from Korea and Japan, but it has a limited capacity to meet this demand due to capital and electricity supply constraints. The limited electricity supply is a key constraint for the growth of small businesses in Lampung. The owner stated: “... if we are using electricity from the State-owned Electricity Company (PLN) rather than using my generator, we can save 30 percent of the cost. We propose to increase our electricity demand from PLN, but PLN has not granted my proposal so that it is why the small industry is difficult to develop. Now we are applying for a loan so we can use biomass for electricity. We are asking US\$ 110,345 to buy machines from China for producing 10 tons of pellets per month.”. The owner further stated: “... the company uses pellet-producing machines manufactured in China as they are around half the price of those from Europe. The quality of domestically-produced machines is lower than those from China and Europe. For pellet production, the company considers that only the machines from China are feasible. Around 60 percent of the production costs are for materials, machinery and labor. Machine operation requires up to five workers, and the profit margin is 10–15 percent”.

The trade of timber from farm forestry throughout Indonesia is currently subject to the Ministerial Regulation (P.30/2012) regarding business administration of timber products produced from farm forestry.. This regulation has been amended by the

Ministerial Regulation (P. 85/2016), which has been viewed favorably by some timber businesses and smallholders. This regulation will help to minimize government interference and enable farmers to undertake self-assessments of timber that will be harvested for sale. Timber originating from forest rights such as farm forestry can be harvested on the basis of the legal title i.e. Ownership Land Certificate (SHM) or *Girik* land letter issued by village head. The document needed is a confirmation from a village head that the timber is produced in the local area. In contrast, for timber sourced from state-owned forests, the administration mechanism for timber trading under Regulation No. 71/2016 applies. Timber companies must pay a reforestation fund (DR) and a levy in the form of a provision for forest resources (PSDH).

Lessons from Bulukumba show that the issuance of local regulations is sometimes counterproductive to the development of community-based commercial forestry (CBCF). Community-based commercial forestry is a community-based forest management that focuses on the development of commercial timber, such as teak, sengon, jabon and other species. CBCF can be defined as the use, management, and conservation of forests by communities (Arts & de Koning, 2017). CBCF aims to achieve improvements to both local livelihoods and forest conservation (Agrawal, 2001). For example, local regulation No. 4/2014 concerning the management, utilization and administration of forest products originating from forest rights or farm forestry is contradictory with central government regulations (P.30/MENHUT-II/2012 concerning business administration of timber products produced from farm forestry). Two years after being introduced, this regulation was revoked because many articles in the local regulation were contrary to the central government's policy. For example, in the case of logging permits, the Central Government Regulation does not apply a logging quota, but the local regulation uses a quota system. For individual licenses, a maximum logging quota of 200 m³ per year is applied and business licenses apply a quota of 1,000 m³ per year.

Discussion

Barriers to Business Entry

Small-Scale Tree Growers

The main problems faced by small-scale tree growers, both farm forestry (private forest) and community-based forest plantations, are increasingly limited land, low availability of superior seeds, poor cultivation techniques and little information about the specifications of wood needed by industry. Another problem is the limited capital of farmers and the absence of financial assistance, especially from financial institutions. One farmer explained *"I was forced to rent out the land to be planted by people who were interested in investing in wood plantations at a price per hectare of US\$ 207.44. Once my land is rented, there is no certainty when the plants will be harvested. It could be 7 years or even 10 years depending on the investor"* (farmer from Srikaton Village, Gedongwani, Lampung). It is not surprising that the land rental model with this system by investors outside the village is mostly carried out

in the villages of Budi Lestari and Srikaton. The land tenants develop timber crops and food crops, such as corn or cassava monocultures. Respondents we interviewed admitted that with this system they were disadvantaged, but they had little choice. Many farmers in Budi Lestari and Srikaton villages also have to sell their trees when they are 2–3 years old to middlemen in the village at low prices due to financial pressures..

Especially for community-based forest plantations, in general, farmers must meet various administrative requirements that are often not easy, such as photocopies of identity cards, stamped application letters, recommendations for community-based forest plantation permits from village heads, draft recommendations from village heads that must be approved by the sub-district, land sketches, local government support, and other administrative requirements. In addition to administrative issues, the location of land allocated to farmers is also far from residential areas, so planting trees requires additional costs. *"My community-based forest plantation area is more than 5 km in distance, sir, so it's better if I plant the seedlings in my yard near my house,"* said a respondent from Rumbia Village, Boalemo, Gorontalo. This case illustrates that the community-based forest plantation approach in the field needs various improvements, both in terms of farmer institutions, improving the quality of seedlings, nurseries, and transportation of seedlings.

Wood-Based Processing Industries

A study by Jaweng et al. (2016) on the 'Ease of Doing Business' (EoDB) reform in 10 major business cities in Indonesia shows that business entry in these cities is still quite difficult and requires a long time to process permits. For instance, in some regions, obtaining a business permit takes 20 days. Based on research done by Jaweng et al., (2016), shows that the national target for obtaining business permit or starting business is only seven working days. The existence of a Business Domicile Declaration Letter (SKDU) or a Comparative Letter in Denpasar, Bali, has added procedures and time delays, and raises unofficial costs when starting a business. Essentially, the SKDU letter is a document that requires the applicant to obtain a Tax Registration Code Number (NPWP) in accordance with the regulations of the Director General of Taxation (No. 20 of 2013). Applicants can obtain the SKDU letter in the local district and sub-district. The requirement for the SKDU letter is burdensome for businesses, because it does not have a service time limit. In order to obtain this agreement, businesses usually pay an unofficial fee of US\$ 69–103 (Jaweng et al., 2017). Likewise, obtaining construction permits in some areas can take more than two months. In addition, the business actors also must obtain a nuisance permit (HO). The HO is required if, during its operations, the business could cause 'danger, loss or nuisance'. The HO is one particular permit that contains retribution. However, the variation in HO collection practices raises uncertainties for business actors regarding the costs of starting a business.

Cases in Gorontalo, Lampung and Bulukumba demonstrate there are a number of barriers to business entry. Licensing procedures and costs to be incurred both formally and informally are still a burden on business people. The average time for the necessary procedures to be passed at the case study locations is still long

with more than 10 stages to complete before being eligible to start a business. These facts are corroborated (Jaweng et al., 2016) who stated the existence of the Taxation Law (No. 28 of 2009) was mostly interpreted by regional governments as a tool to increase local revenue. Consequently, local governments are competing to find additional revenue, such as with the HO permit coupled with the absence of guidance on tariff structures. Innovative policy steps are required in several regions to simplify the licensing process by eliminating the need for the HO permit (Fig. 1).

Several of the 10 major business cities in Indonesia are still hampered by long business establishment procedures and remain targets to reduce business establishment complexities and the time frame. Likewise, obtaining building permits and transferring rights over lands and property involve long procedures and substantial costs for applicants (Jaweng et al., 2016). Business licensing services are still characterized by a complex bureaucracy, which hinders business activities. Normatively, business licenses are legal instruments that must be owned by business actors to obtain legality, guarantee of protection, and administrative documents. However, the process of obtaining the permit is not easy: the applicant must navigate complicated procedures and requirements, with high fees and unpredictable time commitments. The Doing Business 2017 report (World Bank, 2017) shows that starting a business in Indonesia requires applicants to work through 11 procedures over a period of 24.9 days at a cost of 19.40% of per capita income. Based on research done by Jaweng et al., (2016), shows that the national target for obtaining business permit or starting business is less 14 working days.

Figure 2 illustrates that Palu is ranked first in the transaction cost sub-index (100). This means none of the business actors in Palu objected to the costs of taxes, retribution and donations from the local government. Levies on the distribution of goods do not exist and so do not burden the business actors. In addition, no business actor is charged an informal security fee by any party. Makassar and Gorontalo ranked 11th and 12th, respectively. Lampung occupied a worse position, with the second lowest ranking (Jaweng et al., 2016).

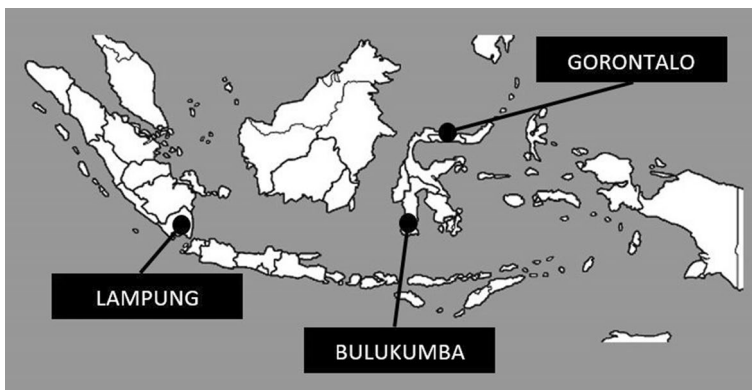


Fig. 1 Map of research sites. Source: kibrispdr (2022) modified

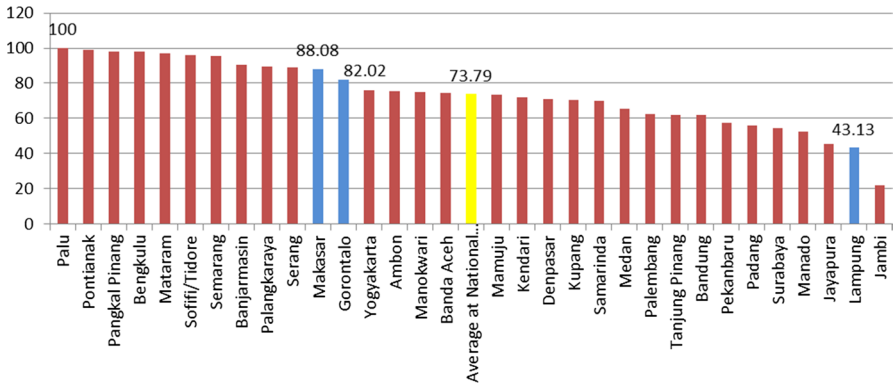


Fig. 2 Sub-Index Ranking of Transaction Costs. Source: Jaweng et al., (2016)

Barriers to business entry could result in prospective investors cancelling their investment in wood processing industries. Constraints, in terms of procedures, regulations and costs, will certainly have a significant impact on the competitiveness of timber products. So, if at the beginning of the business, many actors are burdened with fees and regulations, the worst case is that they will withdraw and shift or relocate their investment to other sectors or to other areas that are economically more feasible. This initial phase, according to Jaweng et al. (2017), is also a decisive signal that becomes the basis for business owners to make investment decisions; they will either continue to the operational stage or cancel their investment. Only with the success of the initial phase will business owners progress to the next stage, including obtaining guarantees of legal and security protection, accessing various government services, obtaining facilities, and dealing with other institutions such as banks for credit, and the procurement of goods or services.

Key Factors to Strengthen Small-Scale Wood Processing Businesses

Small-Scale Tree Growers

In order to strengthen tree growers, there are many interventions that can be carried out by relevant stakeholders, especially the government. In terms of capital limitations or factors, the government can decentralize funding by encouraging the formation of a Regional Public Service Agency that specifically provides funding assistance for farmers. A centralized funding system with coverage throughout Indonesia, making the central funding agency (BLU) less effective. Local governments also need to encourage financial institutions, both banks and non-banks, to dare to provide low-interest loan funds to timber farmers. To overcome the factors of low seed quality and cropping, both local and central governments need to provide incentives for efforts to encourage the emergence of smallholder timber off-takers. The ‘timber off-takers’ are the timber companies that want to buy products produced by smallholders. In addition, the government can also encourage strategic partnerships between farmers and wood processing industries in the regions. Another option is to

encourage small, community-based timber industries to grow in community-based forest plantation areas.

In order to increase the competitiveness of farmers, the government needs to make various supportive policies that support farmers. One of the important policies that can be implemented is to provide subsidies for farmers in obtaining the Indonesian timber legality assurance system called (SVLK). Since the establishment of the Indonesian timber legality assurance system through P.38/Menhut-II/2009 as a mandatory instrument, all timber harvested from private forest must be assured its legality through a set of assessment process (M. Sahide & Naufal, 2017). Economically, most of the private forest farmers in Indonesia are relatively low income and they have to spend a lot of money for the assessment process costs upfront (starting from US\$ 690 depending on the area to be certified) while the premium price promised after obtaining certified timber legality (S-LK) is not guaranteed (Laraswati et al., 2020). Moreover, based on the regulation (P.30/Menlhk/Setjen/PHPL.3/3/2016), the S-LK is only valid for 10 years from the time of issuance. After that, surveillance must be undertaken at least once in two years after obtaining the S-LK, and the estimated cost is around 70–80% of the cost of the initial assessment process (Suryandari et al., 2017).

Wood-Based Processing Industries

The slow growth of wood processing industries such as saw mills, veneer and plywood mills, manufacture of wood pallets and broom handles at the study sites, is influenced by many factors. Jaweng et al. (2017) state that there are 10 key factors for success in regional economic governance in Indonesia, namely: (1) Quality of regional regulations; (2) Licensing mechanisms; (3) Transaction fees; (4) legal access and certainty over land; (5) Interaction between the Regional Government and the private sector; (6) Private business development programs; (7) Capacity and integrity of regional heads; (8) Infrastructure; (9) Security and conflict resolution; and (10) Employment. However, in our opinion, there are other factors at play, namely strengthening the coordination between government institutions and to harmonize regulations, and the need to further develop incentives. Partnerships between timber growers and different parts of the industry will also be a key factor in strengthening the wood processing industries. The absence of policies that encourage the integration of upstream and downstream processors has resulted in lower profits for farmers. Middlemen still play a key role in determining the price. There is a need for more small-scale wood processing industries that are willing to buy timber at a higher price than the middlemen. Also, government support in the form of working capital is needed to increase the capacity of these small-scale wood processing industries to buy timber directly from farmers.

Deregulating the Regulatory Framework

Based on this study's findings, we argue that timber commodity-related regulations in Indonesia are still complex, although there have been some improvements in timber production from Social Forestry policies and programs. The complex

regulations are particularly relevant to the industrial sector, where they can inhibit development if a business is seeking to increase its timber production capacity. The burden of regulations can also deter business establishment. The transaction costs for timber industry businesses are also high. However, there are some positive aspects of the regulations that should be retained. For example, the Ministry of Trade should retain the regulation that regulate the obligation of exporters to include verification of the legality of wood of the products they sell abroad since the regulation in accordance with the Ministry of Environment and Forestry in encouraging the fulfillment of the timber legality verification system. Policy measure to issue the regulation (Number 45/2020) that stated the requirement to include V-Legal as an export provision was valid again is right policy.

In contrast, similar businesses in China are supported by government in the form of subsidies. Buyers of the timber products were given the ease of doing business in China. For instance, small-scale industries were given subsidies for the purchase of machinery, while Small-scale out-growers were given the help of excellence seeds and production facilities. Figure 3 illustrates that in the study site of Gorontalo, for example, based on the perceptions of business people, the quality of regulation, employment constraints, numerous interactions between local governments and business actors, and higher transaction costs are all still problems that must be solved. Jaweng et al. (2017) asserted that quality regulation can be viewed from the following aspects: *firstly*, juridical aspects; *secondly*, the substance which includes disconnection between the objectives of the goods, the clarity of legal subjects, the clarity of the object, the conformity of the philosophy of levies, and the clarity of procedures, time and costs; and *thirdly*, in terms of principles that include fair competition, negative economic impacts, barriers to public access, and public interest, freedom of trade and violations of government authority.

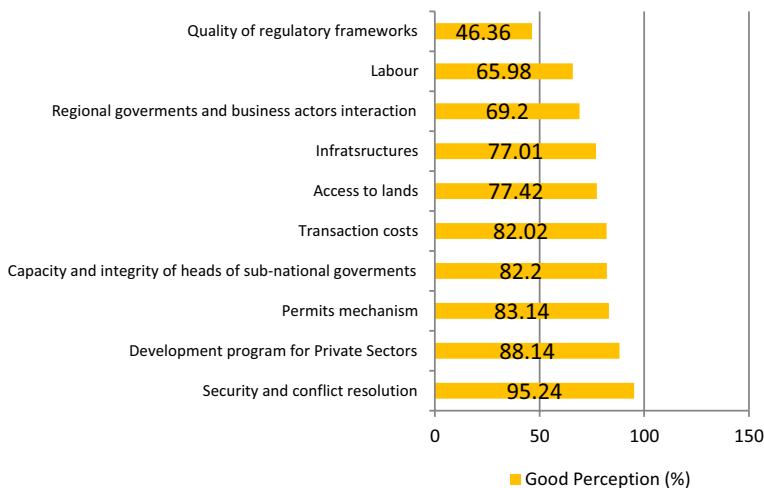


Fig. 3 Business actors' perceptions of the 10 key factors determining success in Gorontalo's economic governance. Source: Jaweng et al. (2017)

The situation in Lampung was similar to that reported for Gorontalo. The quality of regulation, employment, interactions between local governments and business actors, and transaction costs are all still become problems that must also be solved. In relation to high transaction costs, the informants believed regulatory support is needed to prevent the imposition of illegal levies. Even though the office in charge of issuing permits has installed closed circuit television (CCTV) to monitor every regulation transaction, at a practical level, the imposition illegal levies to timber companies still often occurs. It is difficult to eliminate illegal levies, even though businesses are installing CCTV to monitor and record the business activities. As stated by one informant: “... *often in the office waiting room, there has been a warning not to carry out illicit fees in the form of words written on a wide banner, but in reality it is harder to avoid for getting license (i.e., SITU and SIUP). Only on the table, the head of the sub-district does not ask fees, but the other employees sometimes ask for fees*”. In brief, industry actors in Lampung and Gorontalo stated that access to land was still difficult, especially in Lampung. In addition, infrastructure such as roads and electricity supplies are still lacking. Likewise, the transaction costs are high. Local government support for smallholders is also still lacking. The quality of regulations is still low and licensing mechanisms remain complicated.

According to the same informants (i.e. the owners of small- and medium-scale wood industries, the Indonesia Forest Corporation Association (APHI), and managers of timber industries) the regulations need to be simplified and the government should provide facilities and land to support raw material production and processing industry development. For instance the central government should deregulate some related regulations (i.e. Permendag No. 12/MDAG.PER/2/2017, Permendag No. 84/M-DAG/PER/12/2016 concerning restrictions on the cross-sectional area of processed wood and Permen LHK No.P.12/MENLHK-II/2015 as well as No.P.1/MENLHK/SETJEN/KUM.1/1/2019). In addition, the local government should provide incentives and ease of doing business, for instance simplify permit to establish on farm timber industry. Essentially, the central and district governments should work to develop policies that will better connect the upstream and downstream sectors. The quality of regulation is also quite alarming. The findings show that there are still disconnections between regulations at the upstream and downstream levels. This regulatory gap can be seen from the cases in Lampung and Gorontalo where many wood industries experience difficulties in obtaining quality raw materials. Fortunately, in Lampung the plywood industry can still source material from rubber wood, but the sustainability over the next decade is questioned by some business people.

Conclusion

Synchronization between local government regulations and the central government regarding the management, utilization and administration of forest products is needed to support competitive local timber markets in Indonesia. The over-regulation of timber businesses has demotivated smallholders from engaging in commercial tree growing. In addition, complicated regulations make the implementation

of Community-Based Commercial Forestry difficult, particularly due to the high transaction costs incurred by timber businesses. There is a need for simplification of the existing timber business regulations, particularly to reduce the time and costs involved in seeking business permits. For smallholders with limited knowledge, capital and experience in managing a timber business, the government needs to support these actors by issuing simple and understandable regulations. As such, policy deregulation is a rational option to make timber products more competitive and generate greater profits for small-scale timber growers in Indonesia.

Taxation Law also needs to accommodate an incentive to encourage Community-Based Commercial Forestry at the local level. Therefore, amendments to this law need to accommodate any local business, particularly agriculture and forestry-related businesses, in order to support local economic development. An incentive-based taxation system would better motivate smallholders to plant timber trees and develop closer partnerships with local wood processing industries.

The existence of the Job Creation Act (UU No. 11/2020), which is also called the Omnibus Law is a step forward and is expected to be a way to move beyond the complexity of regulations and licensing mechanisms for small-scale tree growers and wood-based processing industry. For example, in the formation of cooperatives which were previously regulated to be formed by at least 20 people (UU No. 25/1992 on cooperatives), it has been changed to at least 9 people. In Article 7 paragraph (e) the government simplifies the procedures and types of business licensing with a one-stop gate service system and frees up licensing fees for small businesses. In summary, the government will provide licensing facilities and investment incentives, such as fiscal, income tax, and export incentives. This policy provides positive hope for the tree growers and wood processing industry, but what needs to be observed is that the policy should not be distorted by extra-legal behavior through political patronage and 'free riders' actions, which has led to higher transaction costs.

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Authors and Affiliations

Lukas Rumboko Wibowo¹ · Nur Hayati⁵ · Achmad Rizal Bisjoe² · Dewi Ratna Kurniasari¹ · Kristiana Tri Wahyudiyati³ · Digby Race^{4,6,7}

✉ Lukas Rumboko Wibowo
lrumboko@yahoo.com

Dewi Ratna Kurniasari
dewiratna_sahidi@yahoo.com

Digby Race
digby.race@usp.ac.fj

- ¹ Research Center for Population, National Research and Innovation Agency (BRIN), Jakarta, Indonesia
- ² Research Center for Ecology and Ethnobiology, National Research and Innovation Agency (BRIN), Makassar, Indonesia
- ³ Former Tropenbos Indonesia, Bogor, Indonesia
- ⁴ Tropical Forests and People Research Centre, Forest Research Institute, University of the Sunshine Coast, Maroochydore 4558, Australia
- ⁵ Institute for the Application of standards for Environment and Forestry Instrument Makassar, Makassar, Indonesia
- ⁶ Land and Management and Development, University of the South Pacific, Suva, Fiji
- ⁷ Fenner School of Environment and Society, Australian National University, Canberra 2601, Australia