



Contents lists available at ScienceDirect

Forest Policy and Economics

journal homepage: www.elsevier.com/locate/forpol

Revenue loss from legal timber in Indonesia

Sonny Mumbunan*, Riko Wahyudi

Research Center for Climate Change, University of Indonesia (RCCC-UI), Gedung PAU Lt. 8,5, Kampus UI, Depok 16424, Indonesia

ARTICLE INFO

Article history:

Received 14 January 2015

Received in revised form 18 June 2016

Accepted 19 June 2016

Available online xxxxx

Keywords:

Forest revenue loss
Forest fiscal policy
Timber royalty
Reforestation fund
Indonesia

ABSTRACT

The link between forest revenue administration and under performance of revenues from legal timber has received little attention in the literature. This article analyzes revenues from the timber royalty and reforestation fund fee, two important forest non-tax revenues in Indonesia whose tropical forest has been under threat of extensive deforestation particularly from commercial timber logging. It shows that revenue realization does not reflect potential with two key findings: first, timber royalty revenues represent only 52% of their potential, and second, revenues from reforestation fund fee suggest a counter-intuitive pattern – revenue realization is 34% above its potential. We provide plausible explanations from the perspective related to features of revenue collection. We further consider policy relevance in terms of forest revenue administration.

© 2016 Elsevier B.V. All rights reserved.

1. Introduction

Forests make a significant contribution to public revenues in tropical regions around the world (Whiteman and Lebedys, 2006). In Indonesia, collected revenues are generally below their potential (Kelly, 2012; Handadhari, 2005). The loss of non-tax revenues (NTRs) from the forestry sector is estimated to be approximately IDR 2.5 trillion annually (KPK, 2013). Revenues derived from forest resources are often used to finance development in general as well as forestry-related measures (Searle, 2007; Krott, 2005). A low revenue collection likely contributes to low capacities to implement public services. The public budget for climate change mitigation in Indonesia, for instance, is able to address only 15% of the targets in the national plan for green house gas emission reduction, including those directed to the forestry sector (MoF, 2012).

Improved information and better understanding of revenues in the forestry sector can help to enhance the governance of forest revenues. How much are the potential and collected revenues from timber? How large is the gap between them and what might explain the revenue loss? This paper poses these questions for two sources of revenue, i.e. timber royalty known as forest resource rent provision (PSDH/Provisi Sumber Daya Hutan) and reforestation fund fee (DR/Dana Reboisasi) fee, which represent the country's two most important non-tax revenues in the forestry sector, and seeks to explain the revenue collection-potential gap in relation to the system of revenue administration. This is one of the first studies to look at these questions systematically.

Similar research merely estimates forest revenues (e.g. Kim et al., 2006), highlights potential revenue loss due to illegal logging (e.g. Human Rights Watch, 2013), and qualitatively discusses possible causes of revenue shortfall especially from legal timber. Conversely, this research seeks to understand revenue administration from the specific policy context and setting within which it operates.

We are able to show using official data that revenues from forest resource rent provision (PSDH), a timber royalty, and fee for reforestation fund (DR) do not reflect their potentials. Moreover, on the contrary to existing studies that focus on corruption as an overriding explanation of revenue shortfall (e.g., Tacconi et al., 2009), which we hold as a profoundly important factor, this study offers an explanation from a wider perspective of forestry revenue administration by highlighting a variety of factors related to billing, payment and reporting.

This paper is organized as follows. It briefly provides the context for revenue management and forest economic rent (Section 2), revenues from legal timber in Indonesia (Section 3) before explaining the research methodology (Section 4). In Section 5, findings are presented and discussed. In Section 6, policy implications are discussed in relation to forestry revenue administration.

2. Revenue management and forest economic rents in Indonesia

In many tropical countries, forests are owned by the state and the government seeks to capture economic rents from forest resource use through a set of fiscal instruments and schemes (Karsenty, 2010). In Indonesia, rents from forest are captured through tax and non-tax revenues. Tax revenues accounts for about IDR 13.8 trillion or USD 1.5

* Corresponding author.

E-mail address: sonny.mumbunan@ui.ac.id (S. Mumbunan).

billion (2011 data, including tax revenues from agriculture) while non-tax revenues contribute around 3.3 trillion rupiah or 362 million US dollar (2011 data). Forest non-tax revenues (NTRs or *Penerimaan Negara Bukan Pajak*, PNBP) are the focus of this study. Forest NTRs are categorized into timber and non-timber. Timber NTR comprises four types of revenues: reforestation fund, forest resource provision, forest utilization, and stumpage value compensation. Non-timber NTR covers additional areas including, among others, forest area use for non-forest purposes, violation of forest exploitation, tourism and hunting.

Theoretically, economic rents from forest use should be collected at each step of the timber extraction chain. Non-tax revenues include license fees and fees according to annual allowable cut, stumpage volume, felled timber volume, volume of logs transported to the log pond, volume of processed products, and volume of exported wood products (Karsenty, 2010). In Indonesia, the Ministry of Forestry collects rents based on the concession area and cut timber volume at the log pond. Land area-based rent is collected via the forest utilization permit fee (IUPH), while volume-based rent is collected via the forest resource rent provision (PSDH), and reforestation fund (DR), which applies only to timber from natural forests. Partial coverage of the value chain may lead to sub-optimal rent capture.¹

PSDH and DR are the focus of this study. These are *ex post* instruments in that they collect actual or realized revenues after forest resources have been used (Brosio, 2006). Together the instruments constitute a large portion of overall forest revenues; in 2011 for instance, they accounted for 83% of total NTRs from both timber and non-timber (Table 1).

Under Indonesia's fiscal decentralization, some forest NTRs are collected and distributed to central, provincial and local governments through revenue sharing arrangements. Timber royalty (PSDH) and the reforestation fund fees (DR) are among those shared.

3. Revenue and information flows in legal timber

The collection of timber NTR follows a process involving revenue flow and information flow about revenues, encompassing billing, payment and reporting activities (Fig. 1). At the billing stage, a holder of a forest utilization permit (concessionaire) submits a proposal of production output to the authorizing official which then issues production report document to the concessionaire and billing official. Following this, a payment order for the timber royalty and the reforestation fund fee is issued by the billing staff and forwarded to local forest agencies and technical units at the Ministry of Forestry. Companies pay NTR on the basis of this order to the Ministry of Forestry's treasury who will later deposit the payment to state treasury.

In terms of information flow about revenues, the concessionaire needs to submit a payment report to the local forest agency who in turn submits it to the provincial forest agency and, at the same time, makes this information available to the secretary general, business directorate general and head of technical service unit, all of which are at the Ministry of Forestry. A consolidated payment report is then submitted by the finance auditor at the Ministry of Forestry to the minister of forestry and its secretary general. Only agencies related to forestry are involved in the revenue and information flows in this entire process – from billing to payment and reporting.

4. Methodology

The calculation of potential revenues from the timber royalty and reforestation fund fee from timber production uses the official formula and tariff, given below, and secondary data published regularly by

government agencies. Data paucity and data inconsistency necessitated some assumptions. The results of the calculation are compared with estimated and collected revenues from timber royalty and reforestation fund fee published by the Ministry of Forestry in order to estimate the revenue potential-realization gap.

4.1. Data and assumptions

4.1.1. Timber production

Round timber production data for the period 2007–2012 was obtained from Forestry Statistics 2012 (see Table 2). Based on size, round timber was categorized into round timber (diameter > 30 cm) and small round timber (diameter < 30 cm). Round timber can be produced under the following permits: (1) timber forest product utilization business permit from natural forest (IUPHHK–HA, *Izin Usaha Pemanfaatan Hasil Hutan Kayu Hutan Alam*); (2) timber utilization permit (IPK, *Izin Pemanfaatan Kayu*) and other valid permit (ILS, *Izin Lain yang Sah*); (3) *Perum Perhutani* (state-owned forest enterprise); (4) timber forest product utilization business permit from plantation forest (IUPHHK–HT, *Izin Usaha Pemanfaatan Hasil Hutan Kayu Hutan Tanaman*); and (5) other sources (*Sumber Lainnya*). Other sources category includes timber from community plantation forest (HTR), community forest (HKm) and timber outside forest areas.

Small round timber was assumed to be produced only under the timber utilization permit (IPK) and other valid permit (ILS), while sources of round timber were IUPHHK–HA, IUPHHK–HT, *Perhutani*, and other sources (community plantation forest, community forest, and others), including IPK/ILS. Data for weight of timber per timber species produced using a IUPHHK–HA permit were obtained from Statistics Indonesia (BPS, 2012).

4.1.2. Definition of timber

For the calculation of forest resource rent provision (PSDH), timber refers to all timber that are subject to NTR, which would include timber from natural forests, plantation forests, and community plantation forests as well as other forests area subject to this fee. As for reforestation fund, timber refers to any timber obtained or taken only from natural forests.

4.1.3. Categorization of timber, price, and tariff

The simulation for PSDH in this study refers to benchmark prices for timber by type and by source² and make the following assumptions. Timber from IUPHHK–HA uses round timber benchmark price for each type as applied in Region 1 (covering Kalimantan, Sumatera, Sulawesi and Maluku) and 2 (Papua, Nusa Tenggara and Bali). The quantity of round timber by type is derived from total timber production multiplied by the weights assigned to each timber type and to each region (both type and region are percentage proportion of total timber production).

Timber from IPK/ILS is divided into round timber (diameter > 30 cm) and small round timber (diameter < 30 cm) with a 50:50 proportion. Small round timber comes from land clearing prior to industrial timber plantation (*Hutan Tanaman Industri*, HTI) and mining activities in forest areas. Round timber (diameter > 30 cm) is further grouped into *Meranti* (*Shorea* spp.) and *Rimba Campuran* (mixed species) with a 50:50 proportion. Round timber uses the benchmark price of *Meranti* and *Rimba Campuran* in Region 1 while small round timber uses the price for timber with a diameter of less than 30 cm.

Timber from *Perhutani*, the state owned forestry enterprise, by species is classified as *teak* and forest timber (*kayu rimba*) with a 45:55 proportion as suggested in the proportion of timber production in the 2011 annual report of *Perhutani*. *Teak* (*Tectona grandis*) is the primary product of *Perhutani*, contributing around 45% to total timber production. The remainder 55% of timber production is obtained from forest

² Attachment to the trade minister regulation issued in 2007 on determining benchmark price for the calculation of timber and non-timber NTRs.

¹ Sub-optimal rent capture due to partial coverage of the extraction chain should be differentiated from sub-optimal rent capture due to the NTR structure and system (Amacher et al., 2001) or timber quality (Vincent, 1990). For a more general discussion on sub-optimal forestry rent capture in Indonesia, see Brown (1999).

Download English Version:

<https://daneshyari.com/en/article/6544860>

Download Persian Version:

<https://daneshyari.com/article/6544860>

[Daneshyari.com](https://daneshyari.com)