

Losing Luster: Addressing Tax Evasion in Myanmar's Jade and Gemstone Industry

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Key messages

- Jade and gemstone mining ranks among Myanmar's most lucrative industries, generating as much as tens of billions of dollars annually. Yet government revenues capture only a small fraction of this value, and most citizens do not share in the sector's potential benefits.
- The government selectively overtaxes the small portion of jade and gemstones passing through official channels, while companies avoid most payments by under-reporting and undervaluing their production. Under the table payments to regulators and power brokers facilitate these and other forms of tax evasion.
- Improving revenue collection requires significant reform of the tax system, including revision of fiscal terms, restructuring of permitting and valuation processes, and strengthening of monitoring and oversight.

Executive summary

Jade and gemstones mined in Myanmar account for billions of dollars of the country's annual GDP. However, tax collection remains limited relative to the value of the sector: based on Myanmar's latest Extractive Industry Transparency Initiative (EITI) reports, the industry generated only MMK 367 billion (approximately USD 369 million) in revenues during fiscal year (FY) 2014/15, and an additional MMK 457 billion (approximately USD 373 million) during FY 2015/16.¹

Depending on various production and price assumptions, taxes collected could represent between 2.3 percent and 16.1 percent of the value of the jade and gemstone sector in FY 2014/15 and 0.9 to 9.1 percent of the sector's value in FY 2015/16. Industry stakeholders interviewed by the Natural Resource Governance Institute (NRGI) suggested that the value of revenues collected likely fell towards the lower end of this spectrum—between approximately two percent and five percent of the value of production.

Low revenue realization results from flaws in Myanmar's current fiscal framework, as well as high levels of corruption and informal taxation. This report examines areas for improvement in relevant laws, regulations and practices. It does not address the conflict between the Myanmar military and ethnic armed groups or the division of power between the Myanmar military and civilian government—two political questions equally important to stemming tax evasion.

Myanmar relies on over-taxation of the relatively small percentage of production marketed at semi-annual emporiums to generate the majority of government revenues. Ad valorem tax rates for jade and gemstones sold at emporiums in FYs 2014/15 and 2015/16 were more than 30 percent of production value for private companies and more than 70 percent of production value for joint ventures. Decreasing capacity at emporiums in recent years has depressed government tax collection.

Meanwhile, most jade and gemstone production by value goes untaxed or under-taxed. Based on EITI data, it appears that as much as 59 percent to 74 percent of jade by volume could have gone unregistered in FYs 2014/15 and 2015/16. Production that is registered is dramatically undervalued by government valuation bodies; data indicate that companies declared and paid royalties on less than one percent of the likely value of jade and gemstone production.

While the government does recoup some revenues through permit fees, this has not come without costs. Due to a confidential licensing process, many companies have allegedly secured permits through bribes. Thus, this structure incentivizes officials to permit areas greatly exceeding the government's supervisory capacity, while companies obtaining the most permitted area pay the least in taxes per acre.

¹ Myanmar EITI reports list total jade and gemstone revenues of MMK 387 billion (USD 389 million) in FY 2014/15 and MMK 708 billion (USD 578 million) in FY 2015/16; however, these figures overstate the sector's contribution and have been recalculated for the purpose of this report. For additional discussion, see note 32.

Despite steps towards more democratic representation in the 2015 elections and the National League for Democracy's (NLD) stated commitment to tackling corruption, tax evasion in the jade and gemstone industry remains largely unabated. This report proposes several reforms for taxation of Myanmar's jade and gemstone sector, including to:

Revise fiscal terms. Myanmar's official tax system double or triple taxes jade and gemstones, motivating companies to underreport or undervalue their production. Revisions of the Myanmar Gemstone Law, Union Tax Law and subsequent regulations should:

- Establish a clear and fair tax code by eliminating revenue streams other than permit fees, production royalties and corporate income tax.
- Maximize the tax base by shifting from sales-based taxes (levied at the emporium) to production-based taxes (levied at the mine site).
- Apply taxes uniformly, to reduce opportunities for companies to evade taxes by selectively registering as joint ventures or private concessions.
- Strengthen ministry and parliamentary review of agencies and state-owned enterprises charged with collecting revenues, which have at times unilaterally created tax loopholes that directly contradict the letter of the law.
- Distinguish between taxes on companies and taxes on small-scale and artisanal mining.

Restructure valuation and permitting processes. Permit allocation and royalty assessment systems under current and proposed laws remain highly vulnerable to rent seeking. In order to secure the government a fair share of income from jade and gemstone production, the Ministry of Natural Resources and Environmental Conservation (MoNREC) should:

- Adopt an open bidding process for all concessions, with only companies demonstrating a certain level of past tax compliance eligible to seek future permits.
- Provide for multiple, independent, and detailed valuations of jade and gemstones for the purpose of royalty payments.
- Bar companies or the Myanmar Gems and Jade Entrepreneurs Association (MGJEA), from participating in adjudicating either the permitting or valuation processes.

Strengthen oversight. The government's failure to adequately oversee mining operations and prosecute encourages companies and their affiliates to engage in illegal activities. Priorities for relevant ministries and law enforcement bodies include:

- Strengthening monitoring of mining operations, including by hiring additional staff, improving monitoring procedures and criteria, and utilizing available technologies to oversee concessions.
- Developing an auditing unit with capacity to perform meaningful financial and physical audits of jade and gemstone companies' reports.
- Levying appropriate penalties for permit and contract violations, as required by law.

Introduction

Myanmar’s mineral wealth is slipping through its citizens’ fingers. The country accounts for more than 90 percent of global jade supply, and is a leading source for high-quality rubies, sapphires and other varieties of colored gemstone.^{2,3} Jade and gemstone mining generates billions of dollars annually, making it one of Myanmar’s most significant industries.

However, the public has benefitted little from extraction of these finite resources. Myanmar’s two latest reports to the Extractive Industries Transparency Initiative (EITI), released in March 2018, show that the government has recouped few revenues from the sector relative to its value.⁴ Instead of supporting investment in education, health and other development needs, jade and gemstone profits have helped fuel corruption and internal armed conflict.⁵

Reform of the fiscal framework for jade and gemstones therefore deserves urgent attention. Outdated fiscal terms, flawed assessment procedures and tepid government enforcement have facilitated widespread tax evasion. Addressing persistent weaknesses of the tax system can help to generate revenues, which may address Myanmar’s development needs and debt obligations.-

Myanmar accounts for more than 90 percent of global jade supply, but the public has benefitted little from extraction of these resources.



Figure 1. Jade production, 2006-2015 (thousand metric tons)⁶

- 2 Official jade production increased more than fourfold from an average of 10,000 tons annually in the early 2000s, peaking at over 40,000 tons per year in 2010 and 2011. Conflict between state armed forces and the Kachin Independence Army (KIA) suspended mining operations in the Hpakan/Lonekhin gemstone tract in 2013 and 2014, temporarily reducing output during those years. Extraction returned to levels exceeding 30,000 tons reported annually in 2015 and 2016.
- 3 This report uses the term “gemstone” to refer to colored gemstones other than jade unless otherwise noted. Government statistics suggest a decline in production of colored gemstones, from around 50 million carats annually in the early 2000s to just over 10 million carats in more recent years. Lower output from deposits at Mong Hsu, as well as increasing output from Mozambique, have partially eroded Myanmar’s share of the global ruby market.
- 4 See Myanmar Extractive Industries Transparency Initiative, “EITI Report for the Period April 2015 - March 2016” (2018) [hereinafter “2015/16 EITI Report”]; “EITI Report for the Period April 2014 - March 2015” (2018) [hereinafter “2014/15 EITI Report”]; “Report for the Period April 2013 - March 2014” (2015) [hereinafter “2013/14 EITI Report”].;
- 5 See Global Witness, “Jade: Myanmar’s ‘Big State Secret’” (2015). See also Mia Newman “Multifaceted: Governance and Conflict Risks in Myanmar’s Ruby Industry” (Natural Resource Governance Institute: 2018); Transparency and Accountability Network of Kachin State, “Beyond Liability: Preliminary Report on Jade Mining” (2016).
- 6 Myanmar Central Statistical Organization and Myanmar Gems Enterprise.



Figure 2. Gemstone production, 2006-2015 (million carats)⁷

The current government has recognized an imperative to reform the jade and gemstone business. MoNREC announced a moratorium on the issuance or renewal of mining permits in mid-2016.⁸ MoNREC has also established a Jade and Gemstone Supporting Committee tasked with publishing a national gemstone policy, including principles for taxation.⁹

However, the limited and protracted nature of reform leaves open the possibility that the industry will soon return to business as usual. Although the moratorium has triggered a fall in official production, some companies have continued to mine illegally during this period.¹⁰ The draft recommendations of the Jade and Gemstone Supporting Committee have yet to result in concrete change. Meanwhile, an amendment to the Myanmar Gemstone Law currently before the parliament would leave the current regime largely intact.¹¹

This report seeks to support and inform efforts to improve tax collection from Myanmar’s jade and gemstone sector. The following sections (1) survey the fiscal framework; (2) evaluate tax payments received; (3) identify challenges for revenue collection; and (4) propose several priorities for reform.

7 *Ibid.*

8 Before 2016, the jade and gemstone sector fell under the purview of the Ministry of Mines. The newly-elected NLD government subsequently consolidated the Ministry of Mines with the former Ministry of Environmental Conservation and Forestry to create the Ministry of Natural Resources and Environmental Conservation.

9 The drafting of a national policy represents an important step towards accountable governance of the sector. However, the representativeness and effectiveness of this process may be constrained by the exclusion of key stakeholders from the committee. Most notably, the military and ethnic armed groups—which together exercise significant de facto authority in certain gemstone producing regions—do not appear to have been invited to participate.

10 See, e.g., Htet Naing Zaw, “Military Officers Transferred Over Jade Mine Bribes, Killings in Rakhine” *The Irrawaddy*, 23 May 2018.

11 NRGi reviewed a draft version of the proposed Myanmar Gemstone Law and submitted comments to the parliament in June 2017.

I. The fiscal framework for jade and gemstones

Myanmar nominally administers an unusual hybrid tax/royalty plus production-sharing regime for the jade and gemstone sector.¹² Tax provisions have been unevenly enforced in practice, with the government selectively overtaxing a relatively small portion of production but failing to collect significant revenues on much of jade and gemstones mined. Frequent changes to the tax code, overlapping provisions, vague exemptions and poor coordination between government institutions have also frustrated revenue collection efforts.

The Myanmar Gemstone Law establishes several key features of the fiscal framework for jade and gemstones, including permit fees, royalties and production sharing arrangements.¹³ Originally adopted in 1995, the outgoing Union Solidarity and Development Party (USDP) government amended the statute in 2016 during the final session of parliament. The sitting NLD-led government has contemplated further modifications.

The state-owned Myanmar Gems Enterprise (MGE), which exists under MoNREC, administers most taxes authorized by the Gemstone Law. In part because successive legislatures have failed to adequately articulate certain dimensions of the tax system in the Myanmar Gemstone Law,¹⁴ important elements of Myanmar's fiscal framework have been determined through opaque rulemaking by MGE.

Prior to FY 2014/15, jade and gemstone companies claimed exemption from taxes other than royalties based on Articles 27 and 31 of the Myanmar Gemstone Law.¹⁵ The passage of the 2014 Union Tax Law nullified these exemptions, and companies have since been required to pay special goods tax (a form of commercial tax) on certain jade and gemstones sales as well as corporate income tax on profits.¹⁶ The Internal Revenue Department (IRD) of the Ministry of Planning and Finance (MoPF) collects both.

12 The tax frameworks of most mineral-producing countries feature both royalties levied as a percentage of the value of the resource extracted and corporate income taxes levied as a percentage of profits. Production sharing agreements exist mostly in the oil and gas sector, but rarely for mining. See generally Natural Resource Governance Institute, "Primer: Fiscal Regime Design" (2015).

13 The Myanmar Gemstone Law primarily governs the country's gemstone sector, while the Myanmar Mines Law, which establishes a distinct regime, governs other minerals. The continued legal and institutional separation between jade and gemstones and minerals has helped to consolidate control by vested interests and facilitated rent-seeking. See Paul Shortell, "Does Myanmar Need a Gemstone Law?" *Myanmar Times*, 25 January 2017.

14 Recent drafts of the proposed 2017 Myanmar Gemstone Law, for example, do not clearly address the collection of certain revenue streams, including the floor price for signature bonuses (or "license fees"), fees on emporium or private jade and gemstone sales, and a new "fund for healthcare, education, infrastructure, and development" required for "medium-scale" mining licenses.

15 See Section III(E) for further discussion.

16 The general rate of special goods tax for rough jade and precious gemstones has varied significantly from year to year, decreasing from 30 percent under the 2014 Union Tax Law to 15 percent under the 2015 Union Tax Law, 20 percent under the 2016 Union Tax Law, and 15 percent under the 2017 Union Tax Law. As of 2018, jade and gemstone sales at the emporium are exempt from special goods tax.

Table 1. Key revenue streams collected from the jade and gemstone sector¹⁷

Type	Revenue stream	Responsible agency	Notes	Applicable rate, FY 2014/15	Applicable rate, FY 2015/16	Current rate ¹⁸
Signature bonus	Permit fees	MGE	Private mining permits are awarded based on the highest offer in a closed bidding process overseen by MGE; Joint ventures pay a flat rate based on the permit area	Floor price of MMK 1 million per acre for private three year permits; MMK 100 million per acre for private five year permits		<i>Not specified</i>
Tax on production	Production royalty	MGE ¹⁹	Assessed by regional valuation bodies at the mine site or local MGE office	20% for jade & precious gemstones; 10% for semi-precious gemstones		
Tax on sales	State production share	MGE	Collected by MGE based on joint venture sales; in practice, only collected at emporiums	40%	25%	
	Special goods tax	IRD ²⁰	Applies to all sales; in practice only collected at emporiums.	<i>exempt</i>	15% for rough; 5% for polished	<i>Exempt</i> ²¹
	Foreign currency sales royalty	MGE and IRD	Applies to foreign currency denominated sales; in practice only collected at emporiums	10%		3% for rough; 1% for polished
	Emporium fee	Central Committee	Applies to emporium sales only	1%		1%
	Other fees	MGE	Supervision fees (service fees) and incentive fees applied to certain joint venture sales	1% to 2%		<i>Not specified</i>
Tax on profits	Corporate income tax	IRD	Calculated based on companies' net income	<i>exempt</i>	25%	

17 Based on the 1995 Myanmar Gemstone Law and subsequent amendments, 2014 Union Tax Law, MGE's model joint venture contract, and other directives shared with NRGi by MGE. Does not include a number of relatively insignificant revenues streams, including customs duties, withholding tax, and capital gains tax (collected by IRD) or land rental fees (collected by MGE and/or the Forest Department).

18 Incorporating changes anticipated under the 2018 Union Tax Law and the draft 2018 Myanmar Gemstone Law.

19 Although MGE remains responsible for assessing royalties, since approximately 2016, companies have made payments directly to the Department of Mines.

20 MGE initially collected special goods tax from emporium sales, and then remits these payments to IRD.

21 Exemptions in recent Union Tax Laws only extend to emporium sales; sales outside the emporium remain technically subject to special goods tax.

Myanmar’s legal framework distinguishes between joint ventures with MGE, which are governed by production-sharing agreements, and private concessions. These are subject to overlapping but distinct tax rules.²² Many companies operating as joint ventures also control private concessions, and the ability to shift production or profits between these creates opportunities for tax arbitrage.²³

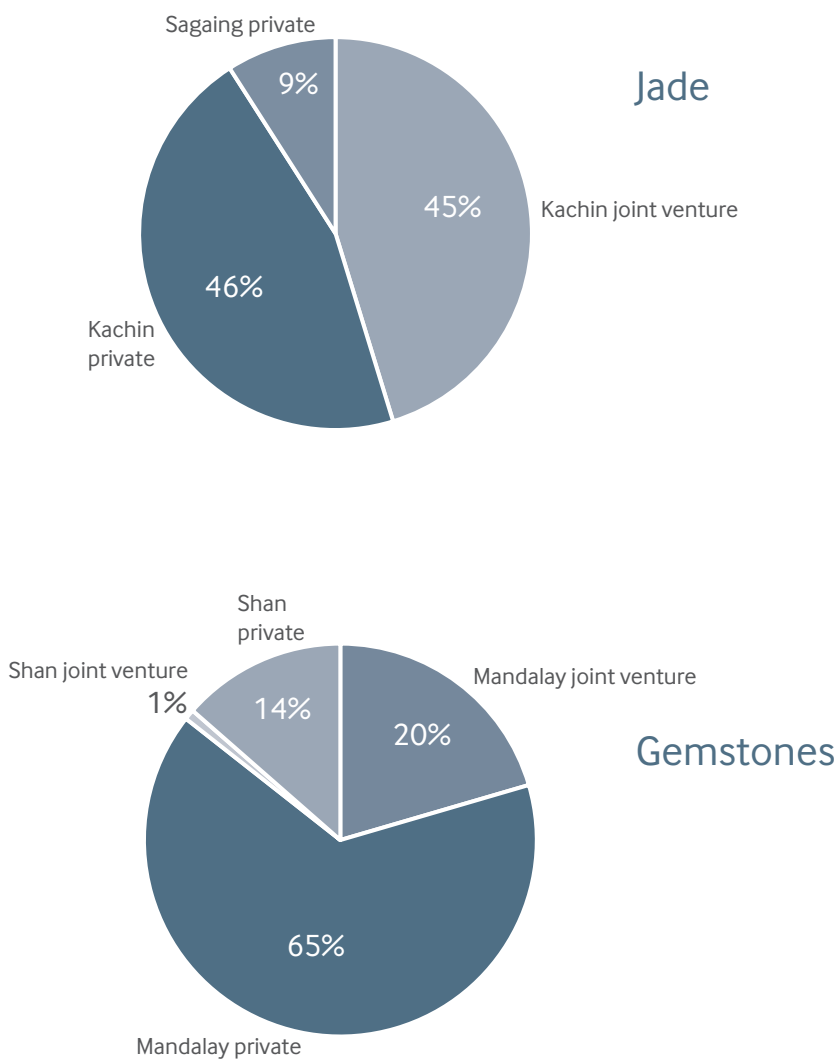


Figure 3. Permitted area by region and permit type (%), FY 2015/16²⁴

22 Beyond their distinct tax obligations, joint venture and private operations are subject to differing permitting processes, licensing terms and degrees of regulatory oversight. However, given that the same company may operate both privately and as a joint venture, these legal distinctions tend to blur in practice.

23 In FY 2015/16, for example, approximately half (24 out of 50) of jade and gemstone companies included in the EITI scope appeared to hold both joint venture and private permits. This figure excludes the small number of jade and gemstone companies that did not appear to hold mining permits of any type.

24 Based on the 2015/16 EITI Report.

A. TAXATION OF PRIVATE CONCESSIONS

In FY 2015/16, privately held concessions officially accounted for between 52 percent of reported jade production by volume, and 94 percent of reported gemstone output by volume.²⁵ Private operators are subject to a 20 percent royalty based on the value of production and, beginning in fiscal year 2015, a 25 percent tax on net corporate income. However, routine undervaluation of production and underreporting of profits has minimized royalty and tax payments.

Myanmar has depended on alternative revenue streams to help compensate for underpayment of royalties and corporate income tax by private concessions. Partly due to its lack of monitoring capacity, MGE collects a large share of tax from private concessions in the form of permit fees.²⁶ Commercial tax has also served as an imperfect substitute for production royalties and income tax in certain years.

Routine undervaluation of production and underreporting of profits has minimized royalty and tax payments.

B. TAXATION OF JOINT VENTURES

MGE enters into production-sharing arrangements with certain private companies. These joint ventures have represented a significant and growing share of official jade production, reaching approximately 48 percent in 2016, but account for just six percent of official gemstone output by volume.²⁷ A model joint venture agreement sets fiscal and operational terms for joint ventures.

Although the total official tax rate for joint ventures well exceeded 60 percent of the value of production in FY 2015/16, joint ventures actually pay at much lower rates. Like private companies, joint ventures dramatically undervalue their production to avoid paying production royalties at the 20 percent rate specified by law. Unlike private companies, joint ventures pay minimal fees to secure their permits.

The production sharing mechanism accounts for most joint venture revenues. MGE monitors day-to-day mining operations at joint venture sites and stores higher-quality jade and gems in its Nay Pyi Taw vault. The government's model contract stipulates that joint ventures must market their production at the emporiums, semi-annual jade and gemstone fairs convened in Nay Pyi Taw by the Emporium Central Committee. Joint ventures remit the government's share of sales income to MGE.

25 However, government statistics may understate the scope of operations, since oversight of private jade and gemstone concessions remains minimal.

26 Under Myanmar's jade and gemstone tax framework, "permit fees" are synonymous with the general concept of "signature bonuses," or one-time fees paid at the time of contracting.

27 Based on the 2015/16 EITI report. Joint ventures' share of production differs somewhat from their share of total area licensed for production: In FY 2015/16, jade joint ventures accounted for 14,556 acres, or 45 percent of total area; gemstone joint ventures accounted for 677 acres, or 21 percent of total area.

Companies negotiated a reduction in the state’s production share from 40 percent to 25 percent beginning in FY 2015/16. In theory, this was intended to provide tax relief to offset the elimination of the commercial tax and corporate income tax exemption for jade and gemstones. Yet in practice, taxes lost from the reduction in the government’s production share has vastly exceeded new revenues collected. While obtaining new exemptions from commercial tax, companies have generally obscured income and exaggerated losses in order to avoid paying substantial corporate income tax.

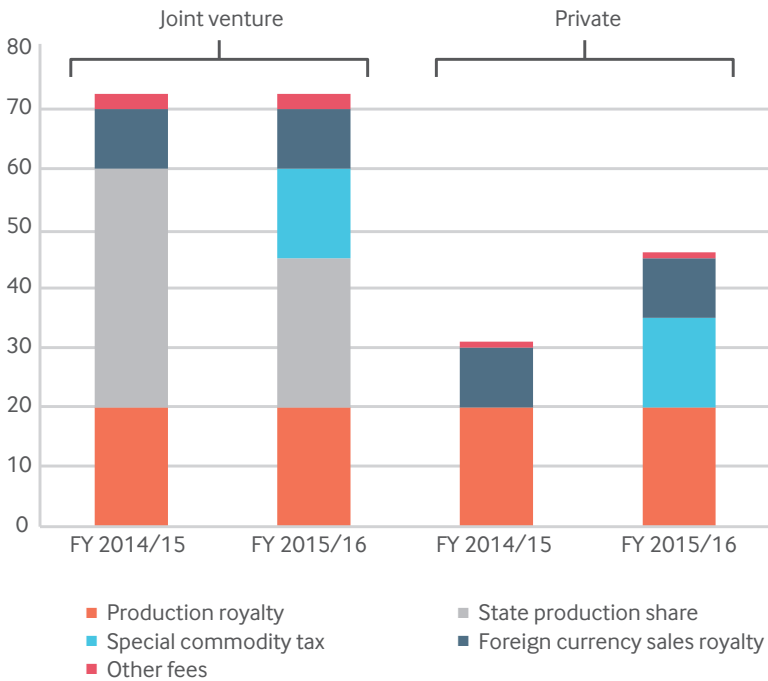


Figure 4. *Ad valorem* tax rates applicable to joint ventures and private companies (%), FYs 2014/15 and 2015/16²⁸

28 Does not include revenue streams that are not calculated ad valorem (based on the value of production), including corporate income tax (applicable in FY 2015/16 only) and permit fees (applicable both years).

C. TAXATION OF ARTISANAL MINING

Myanmar's jade and gemstone sector includes significant artisanal and small-scale mining (ASM), with more than 200,000 such miners estimated to be active in the Hpakant/Lonekhin gemstone tract alone.²⁹ The 1995 Myanmar Gemstone Law did not recognize the right of citizens to engage in small-scale and artisanal extraction, and so at present ASM actors generally bargain with permit holders for access to gemstone resources, illegally mine on company concessions, or informally pick through the waste generated by industrial mining operations.³⁰ Lacking any legal or administrative recourse, many such miners enter into abusive work arrangements with local "bosses."

The government's imperative to tax is diluted where citizens extract minerals using small-scale and artisanal methods. Since the country's lowest income citizens usually conduct ASM, the redistributive function of taxation is greatly diminished in these cases. As a practical matter, governments also face greater challenges to collecting revenue from ASM miners, many of which operate informally. For these reasons, countries that do subject ASM gemstone mining to direct taxation generally do so at flat or nominal rates.³¹

Although 2016 amendments to the Myanmar Gemstone Law created a new category of small-scale and artisanal gemstone mining permits, they contain no parallel provisions for taxing these operations. The Sagaing regional government has begun developing an ASM registration system for the Khamti gemstone tract in collaboration with MGE, which may serve as a model for other states and regions. However, at this stage it is too early to evaluate the effectiveness of this new system.

29 See Myanmar Gems Enterprise, "Those who search for jades illegally: The Ye Ma Say" (undated briefing).

30 New categories of small- and subsistence-scale jade and gemstone mining permits were included in the 2016 Amendment to the Myanmar Gemstone Law. Due to the review of the law underway by the sitting parliament, subsequent regulations have not been published detailing an allocation scheme for these licenses.

31 See generally "Chapter 3: Deciding on fiscal terms" in Paul Shortell and Emma Irwin, "Governing the Gemstone Sector: Lessons from Global Experience" (Natural Resource Governance Institute: May 2017).

II. Jade and gemstone tax payments

Myanmar's current regime has yielded relatively few government revenues. This section seeks to approximate the value of formal payments realized from jade and gemstone production from FYs 2014/15 and 2015/16. It goes on to observe that many other profits are channeled into private coffers through significant informal payments made by companies to business partners, regulators and local power brokers.

A. OFFICIAL PAYMENTS

EITI data indicate that the Myanmar government collected a total of MMK 367 billion (approximately USD 369 million) in income from the jade and gemstone sector in FY 2014/15 and an additional MMK 457 billion (approximately USD 373 million) in FY 2015/16. (See Table 2.) The most significant revenue streams over the two fiscal years were the state's portion of joint venture sales income (25 percent), sales royalties (24 percent), permit fees (23 percent) and commercial tax (13 percent). Notably, production royalties and corporate income tax represented just three percent and 1.3 percent of government income, respectively.

Type	Revenue stream	FY 2014/15	FY 2015/16
Signature bonus	Permit fees	81.9	106.4
Tax on production	Production royalty	7.3	17.2
Tax on sales	State production share	122.9	80.2
	Special goods tax	0	108.7
	Foreign currency	96.0	101.7
	Emporium fee	12.8	7.3
	Other fees	32.5	13.2
Tax on profits	Corporate income tax	0	10.5
Other payments		13.8	11.6
Total (MMK billions)		367.1	456.9
Total (USD millions)		369.0	373.3

Table 2. Jade and gemstone tax payments (MMK billions), FYs 2014/15 and 2015/16³²

32 Based on the 2014/15 and 2015/16 EITI reports with author's modifications. Special goods tax and corporate income tax of approximately MMK 15 billion and MMK 5 billion, respectively, were initially reported in FY 2014/15. These payments are not included in Table 2, since neither tax was applicable to jade and gemstones in that year (companies reported that payments were on non-jade and gemstone business activities). In FY 2015/16, special goods tax reported by EITI was MMK 360 billion, MMK 250.9 billion of which was reportedly collected by IRD and MMK 108.7 billion of which was reportedly collected by MGE. However, given the total emporium sales (about MMK 847 billion) and the tax rate (less than or equal to 15 percent), the maximum special goods tax the government could have collected should have been around MMK 127 billion—less than half the reported amount. Communication between NRG, EITI and IRD indicate that companies paid special goods tax reported in excess of this amount on their commercial activities in other (non-mining) sectors. Table 2 therefore assumes special goods tax payments of MMK 109 billion in FY 2015/16 (the amount reported by MGE in that year).

Stakeholders generally concur that the value captured by taxation represents a small fraction of the total gains resulting from jade and gemstone extraction. However, since few credible indicators exist by which to judge the “true” value of the sector, determining the extent of undertaxation remains challenging.

Since few credible indicators exist by which to judge the “true” value of the sector, determining the extent of undertaxation remains challenging.

In the absence of dependable data, calculations of the jade and gemstone sectors’ value depend on a number of subjective assumptions. The Annex to this report discusses how, under several scenarios, jade production could have been worth between USD 2 billion to USD 15.5 billion in FY 2014/15, and between USD 3.7 billion and USD 43.1 billion in FY 2015/16. It also conservatively estimates that gemstone production could have represented between USD 278 million and USD 340 million in FY 2014/15 and between USD 385 million and USD 470 million in FY 2015/16.³³ Taking these estimates together, revenue collection could have accounted for between 2.3 percent and 16.1 percent of the value of the jade and gemstone sector in FY 2014/15 and between 0.9 to 9.1 percent of the sector’s value in FY 2015/16. (See Table 3.)

As an alternative to these calculations, NRGi interviewed a number of industry stakeholders on their views of the sector’s size. Interviewees generally considered that between 15 percent and 25 percent of jade, by value, passes through the emporium. This would suggest that Myanmar’s revenue in FYs 2014/15 and 2015/16 was worth approximately two percent to five percent of the value of production.³⁴

Table 3. Comparing tax payments to sector value estimates, FYs 2014/15 and 2015/16

Estimates of total sector value (USD millions) ³⁵			Implied rate of tax realization (%)		
FY 2014/15	Low avg. price assumptions	High avg. price assumptions	FY 2014/15	Low avg. price assumptions	High avg. price assumptions
Low underreporting assumptions	2,288	6,697	Low underreporting assumptions	16.1	5.5
High underreporting assumptions	5,183	15,853	High underreporting assumptions	7.1	2.3

FY 2015/16	Low avg. price assumptions	High avg. price assumptions	FY 2015/16	Low avg. price assumptions	High avg. price assumptions
Low underreporting assumptions	4,091	11,623	Low underreporting assumptions	9.1	3.2
High underreporting assumptions	14,700	43,551	High underreporting assumptions	2.5	0.9

33 EITI data does not disaggregate data collected from the jade industry versus the gemstone industry. However, MGE data shared with NRGi suggests that revenue collection from jade is much more robust than for gemstones. MGE reports collecting approximately MMK 139.3 billion in jade revenues and MMK 2.9 billion in gemstone revenues in 2015. Comparing this to the lowest jade and gemstone sector value estimates from the Annex of this report suggests value realization of approximately 3.1 percent for jade compared with approximately 0.6 percent for gemstones.

34 Jade and gemstones available at the FY 2014/15 and FY 2015/16 emporiums were worth upwards of EUR 3.6 billion, or approximately USD 4.4 billion (although not all of these were sold in those years).

35 For a detailed description of sector value estimates, see the Annex of this report.

B. INFORMAL PAYMENTS

While avoiding official taxation, many jade and gemstone companies make significant unofficial payments to business partners, regulators and armed groups. Such expenditures may match or significantly exceed companies' revenue payments to government. Informal expenditures often arise in the form of (1) contracting arrangements, (2) facilitation fees and (3) parallel taxation.

Third parties conduct mining operations on behalf of permit holders in many cases. Permit holders also enter into consortia in order to mine much larger contiguous areas. Under such arrangements, operating companies typically compensate the legal owner with a share of production or sales.³⁶

Companies pay bribes in order to engage in a range of illegal activities, including but not limited to mining without a permit and smuggling jade and gemstones out of the country.^{37,38} Interviews suggest that some officials may also expect facilitation payments in order to obtain necessary permits, use certain roads and ensure security at mine sites.³⁹

The Kachin Independence Army (KIA) collects "tax" payments from companies operating in jade mining areas. Revenues collected by the KIA reportedly include permit fees and a 10 percent royalty on production.

Significant unofficial payments to business partners, regulators and armed groups may match or exceed companies' revenue payments to government.

36 The Myanmar Gemstone Law prohibits both subcontracting and entering into consortiums.

37 See, for example, note 9.

38 See, for example, Htoo Thant, "Companies smuggling raw jade stones busted," *Myanmar Times*, 2 March 2017; Kyaw Myo Min, "Police Arrest 20 For Jade Smuggling in Myanmar's Hpakant," *Radio Free Asia*, 14 February 2017.

39 Based on interviews with jade company representatives conducted between 2016 and 2018.

III. Challenges for jade and gemstone taxation

Myanmar's current tax system deprives the public of many of the potential benefits of jade and gemstone extraction. Significant policy change remains necessary to reduce tax evasion and discourage informal payments. Reforms should encompass changes to the legal code, ministry processes and enforcement practices alike.

The following section outlines the challenges associated with (1) the allocation of tax responsibilities among government institutions; (2) tax collection through the permitting process; (3) tax collection based on production; (4) tax collection based on sales; (5) tax collection based on company profits; and (6) tax monitoring and enforcement.

A. ALLOCATING TAX RESPONSIBILITIES

The fiscal framework for jade and gemstones should efficiently allocate tax collection roles between government institutions, and ensure that institutions carry out these functions in an accountable manner. Myanmar's laws do not adequately specify the division of tax collection responsibilities between relevant ministries and departments. Institutional mandates have thus developed in an ad hoc manner, with several negative consequences: (1) Uncertainty over the division of tax authority has caused shared enforcement of certain revenue streams and under-enforcement of others; (2) MGE has assumed taxation responsibilities that conflict with its role as a joint venture partner; (3) weak oversight of MGE has facilitated under-taxation; and (4) formal industry participation in determining tax obligations has compromised the integrity of the revenue collection regime.

Myanmar's legal framework splits most revenue collection responsibilities between MoNREC and MoPF. However, a lack of clarity regarding the respective taxation duties of each institution has led to gaps and overlaps between their roles. For instance, the Myanmar Gemstone Law and Union Tax Law leave unclear authority for assessing and collecting foreign currency sale royalties and special goods tax on jade and gemstones.⁴⁰ Laws further fail to specify the division of fiscal roles within MoNREC between the Department of Mines and MGE, including for the assessment and collection of permit fees and production royalties.

Limited coordination between and within ministries has exacerbated these challenges. For example, IRD levies commercial tax on jade and gemstone emporium sales, but lacks support for taxing transactions outside the emporium. It also lacks operational information necessary to assess companies' financial declarations for the purpose of collecting corporate income tax.

Limited coordination between and within ministries has exacerbated revenue collection challenges.

⁴⁰ In practice, MoNREC and MoPF have shared or swapped responsibility for these revenues. The lack of clarity of ministries' respective roles is reflected in EITI declarations; certain companies reported paying some special income tax to both MGE and IRD, while others first declared paying to one and then switched to the other during the reconciliation process.

MGE bears commercial responsibilities that tend to undermine its regulatory functions. The state-owned enterprise enters into joint ventures on behalf of the state.⁴¹ At the same time, it exercises de facto authority over regulation of the jade and gemstone industry, including the assessment and collection of most revenues.

MGE's obligations to joint venture partners have at times conflicted with the state-owned enterprise's broader mandate to maximize tax collection.⁴² For example, MGE has sought to reduce the volume of jade available at emporiums so that its joint ventures may realize higher sales prices. This has crowded out private companies that had participated at previous emporiums, driving more jade sales into the black market and depriving the government of potential revenues.

MGE has also exercised significant de facto autonomy to rewrite or reinterpret the legal code, with important consequences for tax policy. Although MGE is technically subject to MoNREC supervision, general deference by the ministry has left the state-owned enterprise's discretion largely unchecked. Judicial review of administrative action in Myanmar remains similarly limited.⁴³ Refusal to make the Myanmar Gemstone Rules and other key legal documents accessible also shields MGE from public scrutiny.

A lack of meaningful executive, judicial or public review of MGE's determinations has opened the door for regulatory capture. Opaque deal making has allowed companies to circumvent the laws adopted by the relatively transparent and representative parliament. Perhaps most notably, officials have suggested that the 20 percent royalty on raw jade and precious gemstone production in the Myanmar Gemstone Law was intended to function as simply a "registration fee."⁴⁴ This reading contradicts the plain language of the statute, which the parliament reaffirmed in the 2016 Amendment to the Myanmar Gemstone Law.⁴⁵ However, companies have evaded royalty payments worth billions of dollars by relying on MGE's interpretation.

Allocation of revenue collection and management responsibilities to MGJEA, which represents private industry, has created further conflicts of interest. First, MGJEA's participation in the valuation process subverts the independence of the royalty collection mechanism. MGE procedures stipulate that an MGJEA representative sits on the jade and gemstone valuation bodies responsible for determining companies' royalty payments. The 2016 Amendment to the Myanmar Gemstone Law (which was principally drafted by the head of a prominent jade and gemstone company) has further guaranteed MGJEA three seats on the Central Supervisory Committee, the entity responsible for hearing valuation appeals. MGJEA's duty to represent its member companies creates a clear conflict of interest that should bar its participation in adjudication of those same companies' tax obligations.

41 MGE also independently markets a relatively small amount of jade at Nay Pyi Taw emporiums. Although these transactions account for a relatively insignificant portion of emporium sales, their omission from EITI reports raises questions about how MGE manages its resulting revenues.

42 Beyond taxation, MGE's dual commercial imperative to maximizing production has overshadowed other important regulatory functions, resulting in widespread violations of operational, environmental, and safety standards by its joint ventures and private operators alike.

43 See generally Melissa Crouch, "Access to Justice and Administrative Law in Myanmar" (USAID: 2014).

44 Based on NRG meeting with MGE, June 2018. Officials did not clarify whether the "registration fee" interpretation originated in parliament, MGE, or another entity.

45 This interpretation also runs counter to MGE's own valuation procedures, which state in Article 43 that "the company/society holding the permit shall pay royalty based on the value determined by the valuation body, in Myanmar Kyats in accordance with . . . 20 percent in the case of ruby, sapphire, jade and diamond."

Second, MGJEA's role in revenue management has facilitated unjust enrichment of government officials. A joint Emporium Central Committee, composed of MGE officials as well as MGJEA representatives, has administered a one percent "emporium fee" collected from jade and gemstone emporium sales. The committee deposits these fees into an MGJEA account, which does not appear to be subject to any public audit or formal government oversight.⁴⁶ Following the change in government, members of MGJEA reported that outgoing senior members of the U Thein Sein administration embezzled close to USD 100 million in accumulated emporium fees from this account.⁴⁷

B. TAXING PERMITS

Allocation of extractive permits may facilitate efficient taxation in two ways. Permitting can directly generate revenues in the form of permit fees, or one-time fees paid to the state following the award of a contract.⁴⁸ The permitting process can also indirectly encourage revenue collection, since governments may refuse to grant or renew permits to companies who do not comply with their tax obligations.

Under the 1995 Myanmar Gemstone Law, the government allocated one-acre blocks to private companies through a closed competitive bidding process. MGE directives require blocks be awarded to the highest bidder, with minimum bids set at MMK 1 million for blocks with a three-year tenure and MMK 100 million for blocks with a five-year tenure.⁴⁹ Companies confidentially negotiated joint ventures for blocks of up to 50 acres in size with MGE, apparently without any formal selection criteria, and pay relatively low permit fees based on the size of their concession.^{50,51}

The following section suggests that (1) Myanmar's permitting regime has generated substantial revenues, but not without certain perverse effects, and (2) previous rounds of permit allocation have not encouraged overall tax compliance. Revisions of the permitting system adopted in the 2016 Amendment to the Myanmar Gemstone Law, and further modifications contemplated by the current parliament, remain insufficient to address these effects.⁵²

46 Although government and private stakeholders generally consider emporium fees to be public funds, MGE has not promulgated guidelines for the collection and management of these revenues.

47 See Chan Mya Htwe, "Tribunal to investigate gem association embezzlement claims" *Myanmar Times*, 2 June 2016.

48 Permit fees (more commonly "signature bonuses") can be an attractive form of taxing the natural resource sector, especially in countries with weak rule of law. Levied at the beginning of the project cycle, they may be calculated and collected at minimal cost. They also reduce the risks to governments compared with revenues based on production and sales, which may vary depending on both the success of the venture and the effectiveness of regulatory oversight. On the other hand, it is difficult to ensure that signature bonuses reflect the approximate value of the resource to be extracted. Significant upfront costs can deter investors, especially small- and medium-sized enterprises with more restricted access to financing. Further, dependence on signature bonuses creates a financial incentive for governments to issue additional extractive licenses. This can accelerate the rate of resource depletion and reduce the state's capacity to supervise operations.

49 See generally MGE Licensing Directives. A working committee composed of high-level officials from the then Ministry of Mines, has been officially responsible for receiving and evaluating license applications. A cross-ministerial Leading Committee for the Development of Myanmar Gemstone Industry reviewed and approved recommendations from the working committee. The leading committee was at one point chaired by the president and more by the Union minister.

50 In practice, companies have secured joint venture contracts through patronage. See Global Witness, "Jade: Myanmar's 'Big State Secret'" (2015).

51 See MGE Licensing Directives, Art. 8.

52 The 2016 Amendment entails significant revisions to the permitting framework. It envisions tiered large-, medium-, small- and subsistence-scale production permits, generally aligned with the system established under the 2015 Myanmar Mining Law. The proposed revision of the Myanmar Gemstone Law would not significantly modify this scheme except to eliminate the category of "large-scale" licenses.

Given its limited supervision of non-joint venture operations, MGE has largely relied on the permitting process to generate revenues from privately held jade and gemstone mines. MGE collected signature bonuses (permit fees) from jade and gemstone mining companies worth MMK 82 billion in FY 2014/15 and MMK 106 billion in FY 2015/16, according to EITI data.⁵³ This suggests that permit fees represent between 40 percent and 50 percent of all government income from private jade and gemstone production.⁵⁴

However, secrecy in the permitting processes has masked collusion between officials and companies. In practice, companies have secured many if not most private licenses through under-the-table payments.⁵⁵ This has diverted significant, though unknown, quantities of Myanmar's natural resource wealth from public spending to private coffers.⁵⁶

Since companies have allegedly secured many permits through bribery, Myanmar's permitting process has not motivated greater tax compliance. MGE licensing directives do not include tax history or other factors as criteria for permit allocation.⁵⁷ Among the companies included in the scope of Myanmar's EITI reports, a negative correlation exists between companies' total permitted acreage and the taxes per acre that companies paid to the government.⁵⁸ (See Figure 5.) A number of factors potentially underlie this trend.⁵⁹ Yet, at minimum, the data underscore that the companies that have been most successful in securing permits may be the least efficient in terms of revenue generation.

Given its limited supervision of non-joint venture operations, MGE has largely relied on the permitting process to generate revenues from privately held jade and gemstone mines.

53 Based on 2014/15 and 2015/16 EITI reports.

54 Author's calculations based on 2014/15 and 2015/16 EITI data. Permit fees account for approximately 32 percent of government income excluding revenue streams only paid by joint ventures. Assuming all other revenue streams are paid half by joint ventures and half by private concessions (as is roughly the case at emporiums), then permit fees account for 48 percent of estimated private company payments.

55 Based on interviews with jade company representatives conducted between 2016 and 2018. See also Global Witness, "Myanmar's 'Big State Secret'" (2015).

56 The structure of the permitting regime also has important non-tax consequences; partly due to relatively short permit tenures (usually of three to five years), operators have tended to mine at maximum speed with minimal investment in infrastructure, environmental compliance or community development.

57 Based on the MGE Licensing Directives, bid price appears to be the only officially relevant criterion.

58 Jade and gemstone companies paying revenues more than MMK 750 million in FY 2014/15 or MMK 1 billion in FY 2015/16 were required to unilaterally report their legal ownership, production, sales, and revenue payments to EITI. Based on this threshold, 69 companies (FY 2014/15) and 50 companies (FY 2015/16) made disclosures to Myanmar EITI. These companies are referred to as "companies in the EITI scope."

59 Several possibilities should be considered, including (1) that companies acquiring larger permitted areas mine significantly less intensively than companies acquiring smaller permitted areas; (2) that companies acquiring larger permitted areas mine significantly lower-quality jade than companies acquiring smaller permitted areas; and, (3) that companies acquiring larger permitted areas are more likely to subcontract operations or form mining consortia than companies acquiring smaller permitted areas. Option 1 clashes with stakeholder accounts that companies are developing almost all permitted jade areas using heavy machinery. Option 2 also seems unlikely since most joint ventures—which are generally allocated larger permit areas—mine the higher-quality deposits located in the Hpakan/Lonekhin gemstone tract. Stakeholder interviews suggest that the arrangements described in option 3 do exist; however, companies' permits and contracts prohibit them.

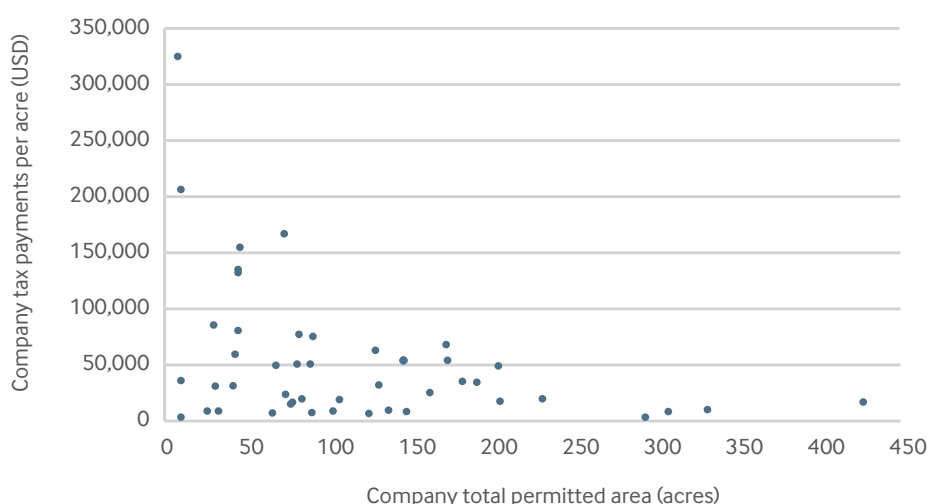


Figure 5. Comparing permit allocation and tax payments among jade and gemstone companies, FY 2015/16⁶⁰

C. TAXING PRODUCTION

Many gemstone-producing countries rely principally on production royalties to generate revenue.⁶¹ Royalties assessed at the “mouth of mine” help to ensure the state receives a fair share of revenues relative to the value of total output, and generally present fewer challenges to administer than taxes on sales or profits.⁶² In Myanmar, taxation of jade and gemstone production is diminished by (1) failure by companies to register their production with the government (2) undervaluation of the jade and gemstones that are reported.

Before 2016, the government licensed jade and gemstone mining operations far exceeding the government’s monitoring capabilities. Active permits covered more than 35,000 acres in FY 2015/16.⁶³ With only a fraction of MGE’s staff of approximately 580 delegated to monitor gemstone tracts, many operations have gone unsupervised.⁶⁴ MGE estimates that it is able to oversee all joint ventures and approximately one third of private permits—which together would account for between 60 and 70 percent of total production.

60 Author’s elaboration based on 2015/16 EITI Report. Figure only includes data for companies included in the EITI scope in that year.

61 See “Chapter 3: Deciding on fiscal terms,” in Shortell and Irwin, *Governing the Gemstone Sector*.

62 This section addresses production-based royalties only. Before FY 2016/17, Myanmar also levied a separate royalty on foreign currency sales at the emporium. This was replaced in the 2016 Amendment to the Myanmar Gemstone Law with a three percent fee on rough stone or a one percent fee for polished stones.

63 Based on FY 2015/16 EITI Report.

64 Based on data MGE provided directly to NRG. See Irwin, *Gemstone Scoping Study* (2016).

Limited supervision of mine sites raises the threat of selective enforcement, and creates opportunities for rent seeking by regulators. To the extent production monitoring does occur, it may be lacking in rigor. MGE’s presence in gemstone tracts has not prevented widespread violations of environmental, safety and fiscal obligations by joint ventures and private companies alike.

Myanmar nominally levies a 20 percent royalty on jade and precious gemstones that are declared. Yet companies paid just MMK 25 billion in royalties between FY 2014/15 and FY 2015/16—equivalent to around one percent of the value of jade and gemstones sold at the emporium in those years.⁶⁵ This suggests that the government failed to collect around USD 923 million each year in revenues on emporium sales alone. The true amount forfeited through non-collection of royalties is substantially greater, since emporium sales account for only a fraction of jade and gemstones produced annually.⁶⁶

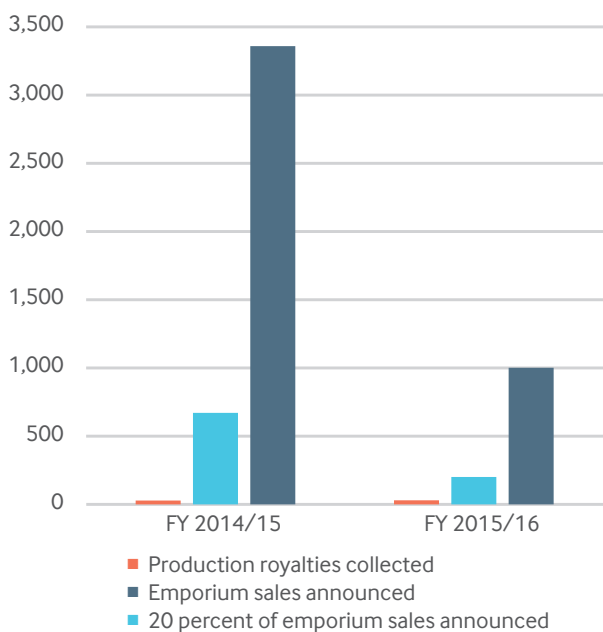


Figure 6. Comparing jade and gemstone companies’ production royalty payments and emporium sales (USD millions), FYs 2014/15 and 2015/16⁶⁶

65 Based on FY 2014/15 and FY 2015/16 EITI reports.

66 Royalty payments based on 2014/15 and 2015/16 EITI reports. Emporium sales based on data provided to NRGJ by MGE. Note that not all jade and gemstone sales announced were finalized in FYs 2014/15 and 2015/16; certain traders renege on commitments made at the emporiums.

These surprisingly low production royalties reflect deficiencies in the valuation process, or the set of procedures by which the government determines the value of extracted jade and gemstones for tax purposes.⁶⁷ Myanmar's process is outlined in the Myanmar Gemstone Law and more thoroughly detailed in Procedures for Valuation and Imposing Royalties on Rough Jade and Gemstones promulgated by MGE. However, in practice, officials appear to have inconsistently enforced key aspects of the guidance document and neglected other provisions altogether.

The procedures require holders of jade and gemstone mining permits to promptly report all production to regional valuation bodies, located in major jade- and gemstone-producing districts.⁶⁸ Valuation bodies should consist of at least nine members, including a chairman and two other officers from MGE, three representatives from state/regional and local government, and three industry representatives.^{69,70} MGE may also form a third party monitoring body composed of two experts in jade/gems, two business owners, one MGE representative, and one community leader, but does not appear to have exercised this option regularly prior to 2017.⁷¹

MGE exercises substantial discretion to select members and to modify valuation bodies' composition, functions and duties.⁷² The current configuration of valuation bodies appears slightly modified from what the procedures stipulated.⁷³ The presence of all members during valuation is not required, and some valuation bodies have, in practice, only comprised a few MGE representatives.^{74,75} Although participating MGE officers are generally skilled in gemology, it is unclear whether government and community representatives possess comparable expertise.

The procedures specify certain broad criteria for assessing jade and gemstone values.⁷⁶ However, the submission of jade prior to cutting and/or the removal of outer layers limits valuation body members' capacity to accurately assess its quality. Civil society and industry stakeholders have reported that certain valuation bodies determine values based only on weight, assuming lowest possible quality. Companies may also selectively open "windows" to lower-grade sections of jade to secure a lower valuation.

67 Valuation of jade and colored gemstones presents special challenges due to their diverse physical characteristics (prices reflect a wide range of factors, many of which are not easily comparable between gemstones) and opaque markets (rapidly evolving consumer preferences remain poorly documented). The technical complexity and subjectivity inherent in the valuation process tend to create opportunities for rent seeking, which can limit revenue collection by the state. See generally "Chapter 4: Improving valuation processes" in Shortell and Irwin, *Governing the Gemstone Sector* (2017).

68 See Valuation Procedures, Art. 44. Twelve valuation bodies appear to be currently operating; see Emma Irwin, *Myanmar EITI Gemstone Scoping Study* (Myanmar Extractive Industries Transparency Initiative: 2016).

69 See Valuation Procedures, Art. 19.

70 *Ibid.* at Art. 46.

71 *Ibid.* at Art. 85. The third party is composed of a community leader selected from the relevant township, a jade/gem expert selected from the relevant township, an executive representative from MGE, an external jade/gemstone expert and two jade/gemstones business owners. However, when and how these members are selected remains unclear.

72 *Idem.* at Art. 21-22; Art. 24. Although MGE remains responsible for the valuation process overall, the Department of Mines now reportedly collects royalty payments. Permit holders should deposit applicable royalties with the Myanmar Economic Bank. The Procedures also indicate that companies should pay "supervision and valuation fees" to MGE. How these fees should be assessed, collected and managed, is not specified; nor do these revenues (if they exist) appear to be disclosed in reporting to EITI.

73 Irwin, *Gemstone Scoping Study* (2016) at 41-42.

74 Valuation Procedures, Art. 32 (Rule 34c).

75 Irwin, *Gemstone Scoping Study* (2016) at 39.

76 Valuation Procedures, Art. 48.

Following inspection, the mining permit holder and all members of the valuation body should confidentially submit their value estimates to the chairman. The chairman makes a final determination, which should not be lower than the lowest preliminary value.⁷⁷ Prevailing processes do not bind the valuation committee chairman to accept the highest or median valuation submitted by members. In practice, valuation bodies have reportedly determined royalty payments based on standard, per-volume basis rather than assessing stones' true value.⁷⁸

Valuations are not reviewed by an independent and technically competent agency. Permit holders objecting to the valuation body's assessment may appeal the determination to the Central Gemstone Supervisory Committee (CGSC). The 1995 Myanmar Gemstone Law only loosely defines the CGSC's composition to include officials from "relevant government departments" and gemstone experts; the 2016 amendment further stipulates that the committee shall include three representatives from MGJEA.⁷⁹ It is unclear how the CGSC has been convened in practice, and what procedures it follows for reviewing jade and gemstone valuations.

D. TAXING SALES

Most formal—and therefore taxable—sales of jade and gemstones occur at semi-annual emporiums arranged in Nay Pyi Taw by the Emporium Central Committee. Companies sold approximately USD 1.2 billion in jade and USD 11 million in gemstones at the emporium in FY 2014/15, as well as approximately USD 685 million in jade and USD 7 million in gemstones at the emporium in FY 2015/16.⁸⁰ The government relies heavily on these sales for jade and gemstone revenues.⁸¹ EITI data indicate that around 70 percent of tax payments collected in FYs 2014/15 and 2015/16 were collected at emporiums.

77 *Id.* at Art. 52-63.

78 Based on interviews with jade company representatives conducted between 2016 and 2018.

79 Second Amendment to the Myanmar Gemstone Law (2016), Art. 34.

80 Official announcements of emporium sales have typically overstated the actual value of sales completed and taxed, since between at least 2011 and 2015 deals frequently fell through following an initial agreement with the buyer. Only 50 percent of all sales agreed to at emporiums during that period were ultimately paid out. Higher grades of jade were particularly susceptible to non-completion; on average, incomplete sales of jade were worth more than 50 percent higher, per kilogram, than completed jade sales. Although the forces underlying these trends remain unclear, various theories have been proposed. By one account, incomplete sales reflect certain opportunistic Chinese traders securing as much supply as possible and then reneging on commitments when they do not identify suitable buyers. Data may also lend support to reports that companies use the emporium to legitimize jade that was either mined illegally or is intended to be sold informally outside the emporium. As of last year, MGE has increased the deposit payment required by buyers to five percent of a lot's value and begun to blacklist traders who do not complete sales. These measures appear to have been at least somewhat effective in reducing the volume of incomplete transactions; 88 percent of sales by value from the mid-year emporium in 2016 have been concluded to date.

81 Taxing gemstone sales, as opposed to production, is unusual since this encourages black market transactions and stifles the development of value-added activities. See generally "Chapter 5: Supporting beneficiation" in Shortell and Irwin.

However, the government derives these payments from over-taxation of a small—and shrinking—base. The Myanmar Gemstone Law required all jade and gemstones to be marketed at emporiums until it was amended in 2016. Nevertheless, many if not most jade and gemstones have been sold through informal or semi-legal channels. Most stakeholders consulted during the compilation of this report indicated that the emporium represented between 15 percent and 25 percent of the total value of the jade sector.⁸² Stakeholders generally consider gemstone sales at the emporium insignificant relative to the industry's total value.

Stakeholders generally consider gemstone sales at the emporium insignificant relative to the industry's total value.

This section highlights two principle factors underlying non-participation at the emporium: (1) Myanmar's official sales events remain limited in number and capacity; (2) the government taxes emporium transactions at unusually high rates; and (3) companies can sell at comparable prices with minimal tax rate in neighboring China, India and Thailand.⁸³

The decreasing scale of emporiums in recent years has imposed an effective cap on formal jade and gemstone sales. Before 2012, the government held multiple emporiums per year, marketing between 12,000 and 21,000 tons of jade annually.⁸⁴ More recently, the total volume available has ranged from 4,000 to 7,000 tons. The discrepancy between official output and emporium sales has widened as a result, reaching between 72 percent and 88 percent annually, by volume, between 2014 and 2016.⁸⁵

82 This range appears consistent with other accounts. Interviews conducted by Global Witness suggest that underreported jade accounts for as much as 80 percent of production by value; similarly, the sector scoping study conducted by Myanmar EITI estimates that 70 percent of production goes undeclared.

83 Based on interviews with jade company representatives conducted between 2016 and 2018.

84 Based on information available via the Central Statistical Organization (mmsis.gov.mm) and data MGE disclosed to NRGJ.

85 *Ibid.*



Figure 7. EUR-denominated jade emporium sales (USD millions), 2011-2016⁸⁶

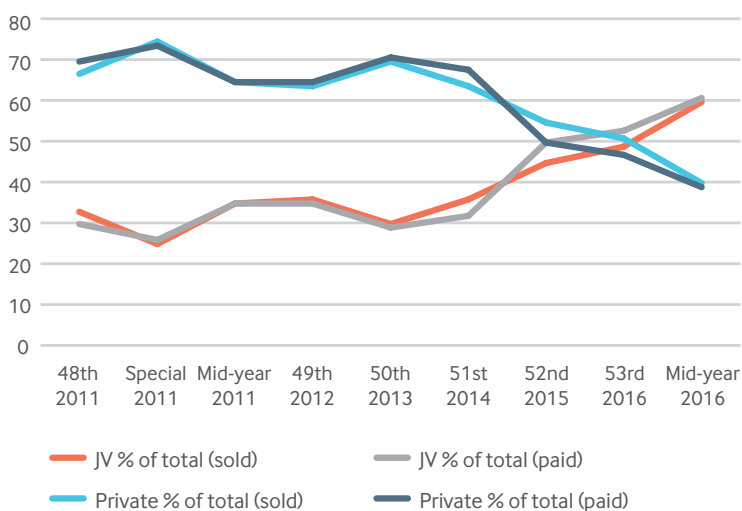


Figure 8. Share of joint venture and private emporium sales (%), 2011-2016⁸⁷

86 Based on data MGE provided directly to NRGI. Local currency (MMK) jade sales and colored gemstone sales, which are not included, account for a relatively small portion of overall emporium sales. For a discussion of sales announced versus sales completed, see note 79.

87 Based on data MGE provided directly to NRGI.

Officials indicate that this narrowing of emporium sales has been motivated by MGE's belief that constrained supply will stimulate higher bidding prices for its joint ventures.⁸⁸ The actual price effects of this strategy have been minimal.⁸⁹ Meanwhile, restricting the emporium has had the more significant effect of crowding out private sellers from the formal sector. Non-joint venture sales have fallen from approximately 70 percent of all emporium transactions by value in 2011 to around 40 percent of all emporium transactions by value in 2016.⁹⁰

High tax rates for emporium sales also motivate companies to sell jade and gemstones informally. Prior to FY 2015/16, Articles 27 and 31 of the 1995 Myanmar Gemstone Law exempted companies from paying commercial tax on jade and gemstones for which royalties had been paid. Repeal of the exemption allowed commercial tax to begin at 15 to 20 percent of total sales value for rough stones.⁹¹ For joint ventures, these levies exist in addition to the 25 percent production share owed to MGE. Adding in various fees, the government's total take from emporium sales in FY 2015/16 ranged between approximately 15 and 45 percent of sales value.

In light of these costs, emporium sales offer relatively few benefits. Competitive bidding for jade lots can increase sellers' profit margins, particularly for higher quality grades. However, stones smuggled into China could potentially fetch comparable or better margins once accounting for tax.⁹² Gemstones attract many fewer international buyers and are purchased at less competitive rates at emporiums, and thus virtually all high-quality stones leave the country illegally. While one half to one carat Myanmar rubies may sell for between approximately EUR 300 to EUR 3,000 when cut and polished (or approximately EUR 100 to EUR 1,000 in rough form), gemstones available at emporiums in FY 2014/15 and 2015/16 sold for just EUR 4 to 6 per carat.⁹³

88 Based on meeting with MGE, June 2018.

89 Because the emporium accounts for a fraction of total jade and gemstone supply by volume and value, modifications to emporium size are unlikely to have a determinative impact. As a practical matter, emporium price levels documented by MGE do not appear to have changed significantly over recent years.

90 Based on data MGE disclosed to NRGi.

91 See note 13.

92 Based on interviews with jade company representatives conducted between 2016 and 2018.

93 Polished price data based on Irwin, Gemstone Scoping Study; emporium data based on FY 2014/15 and FY 2015/16 EITI reports.

E. TAXING PROFITS

Although Myanmar nominally taxes companies' net income at a uniform rate of 25 percent, corporate profits have not generated substantial revenues. This has been due to (1) exemptions claimed by jade and gemstone companies between 1995 and 2014, and (2) a lack of government capacity to detect fraud.

Between 1995 and 2014, jade and gemstone companies claimed exemption from corporate income tax under Article 27 of the 1995 Myanmar Gemstone Law, which states that "following the payment of [the production] royalty under sub-section (a), [permit holders] have the right to be exempted from payment of taxes under any other existing law in respect of the sale of the said gemstone." Similarly, Article 31 of the Myanmar Gemstone Law prevented further taxation on the sale of stones for which the 10 percent foreign currency sales royalty had been paid. Through FY 2014/15, the minimal corporate income tax paid was based on profits earned from jade and gemstone companies' sales of excess diesel fuel.⁹⁴

Companies' justification for not paying corporate income tax rests on a tenuous interpretation of the Myanmar Gemstone Law. Articles 27 and 31 refer to "taxes in respect to the sale" of jade and gemstones, suggesting taxes calculated as a result of jade or gemstone sales. This language does not seem to imply an exemption to corporate income tax—which is calculated based on companies' net income, and not their sales.

Since the government lacks the capacity to meaningfully audit companies, the potential for companies to dodge taxes by manipulating balance sheets is high. Companies may obscure income and overstate costs to reduce their tax obligations through various means. Beyond simple fraud, this may include use of shell companies, to hide or transfer profits offshore,⁹⁵ and abusive transfer pricing, where the local subsidiary of a company sells commodities to a foreign subsidiary at a fraction of the market cost.⁹⁶

Although jade and gemstone companies owed corporate income tax beginning in FY 2015/16, payments remained relatively insignificant. According to EITI data, Myanmar companies paid a collective total of just MMK 6.1 billion (USD 4.3 million) in that year.⁹⁷ By comparison, Mozambique's large-scale Montepuez ruby mining project paid the government USD 21.7 million (MZN 1.36 billion) in corporate income tax in FY 2015/16 alone.⁹⁸ Among companies that reported corporate income tax in FY 2015/16, tax payments amounted to 1.5 percent of the value of their reported emporium sales, on average.

94 Based on meeting with IRD, June 2018.

95 For more on how company ownership structures allow companies to avoid tax payments, see Aaron Sayne, Erica Westenberg and Amir Shafaie, *Owning Up: Options for Disclosing the Identities of Beneficial Owners of Extractive Companies* (Natural Resource Governance Institute: August 2015).

96 See generally, Natural Resource Governance Institute, "Transfer Pricing in the Mining Sector: Preventing Loss of Income Tax Revenue" (August 2016).

97 FY 2014/15 and FY 2015/16 EITI Reports.

98 Mozambique Extractive Industries Transparency Initiative, *Final Report of the Independent Administrator of EITI in Mozambique* (February 2018).

F. AUDITING AND ENFORCEMENT

Failure to enforce the rule of law has cultivated a culture of impunity in the jade and gemstone industry. The Myanmar Gemstone Law prescribes prison terms and fines applicable to various offenses, including production outside of official concessions, illegal mining on official concessions, failing to register or falsifying production and unlawfully transporting, selling or exporting jade and gemstones.⁹⁹ Moreover, MGE's joint venture agreement provides that "an organization appointed by MGE or [MoNREC] shall have the right to inspect production and storage records" and that "MGE may, if necessary, appoint an external auditor" to verify company records. Yet despite routine and severe violations of relevant laws and contract terms, relevant ministries and law enforcement officials have routinely declined to investigate, report or penalize companies' illegal activities.

Failure to enforce the rule of law has cultivated a culture of impunity in the jade and gemstone industry.

Challenges to holding rule breakers accountable include (1) the government's inability to adequately access and audit company records; (2) a lack of clear and workable procedures for documenting violations or processing complaints; and (3) the prevailing influence of Myanmar's military over civilian law enforcement bodies.

The government's investigatory powers remain limited. The Auditor General Office does not receive sufficient information to audit MGE or its joint ventures, nor does it make its reports public.¹⁰⁰ Current banking laws shield financial records from investigation by MoPF or other government bodies.¹⁰¹

Authority and procedures for enforcement also remain unclear. Although the Myanmar Gemstone Law delegates inspection responsibilities to the Department of Mines, in practice MGE has assumed many. Neither entity appears to have developed standards for collecting evidence, formalizing complaints and transmitting these to the police, Office of the Attorney General, or other relevant law enforcement bodies.

Finally, civilian law enforcement efforts must also contend with the reality of de facto military control in most jade and gemstone producing regions. Although this presence has supported government investigations in certain cases, it has mostly served to perpetuate corruption. The military's political power has largely insulated it from criticism. In perhaps the most telling example, MoNREC and Myanmar's Anti-corruption Commission have failed to take meaningful action in response to the alleged theft of millions of dollars in emporium funds by former military officers serving in the U Thein Sein government.¹⁰²

99 Notably, however, the law does not outline specific penalties for most of the forms of tax evasion described in this report.

100 Based on meeting with Auditor General Office, May 2017.

101 Based on meeting with IRD, June 2018.

102 Although a special committee under the supervision of MoNREC assembled in mid-2016 to investigate the allegations, no public findings have been issued in over two years. This has prompted certain stakeholders interviewed by NRG1 to characterize the proceedings as a "sham."

IV. Recommendations for reform

Over the past decade, mining has depleted Myanmar's valuable jade and gemstone resources at increasingly rapid rates. Meanwhile, the government has recouped minimal revenues compared to the value of resources extracted, preventing citizens from meaningfully benefitting from mineral extraction. Reforms realized under the NLD government to date have been insufficient to address widespread tax evasion. Moreover, with the current administration more than halfway through its five-year term, the window for change is quickly closing.

The following section outlines an ambitious but achievable agenda for meaningfully addressing jade and gemstone revenue collection by 2020. It suggests that the government should aim to (1) establish streamlined, uniform, and fair fiscal terms for jade and gemstone mining projects; (2) adopt transparent and technocratic procedures for permit allocation and valuation; and (3) expand monitoring, auditing and enforcement.

A. REVISE FISCAL TERMS

De facto jade and gemstone tax collection practices in Myanmar bear little resemblance to the official "on paper" system. The government taxes the relatively small share of production sold via the emporium at high rates, but companies avoid most payment through underreporting, undervaluation, and fraud. Myanmar's complex and onerous tax code is partly to blame for these outcomes. Reforms should streamline the fiscal framework, making it uniform and fair.

Myanmar could simplify its fiscal regime for jade and gemstones by eliminating revenue streams other than permit fees, production royalties and corporate income tax. These three revenue streams balance distinct benefits and risks in terms of securing the government a fair share of the value of production, reducing the administrative challenges of tax collection and minimizing risk to private investors. (See Table 4.) This regime presents several additional advantages compared to the current system:

- Removing the threat of double or triple taxation (companies must officially pay production royalties plus special goods tax, and in the case of joint ventures the state's production share), which has motivated companies to underreport production or claim dubious tax exemptions.¹⁰³
- Eliminating government dependence on emporium sales to generate revenues, which prevent the liberalization of jade and gemstone sales and encourage black market transactions.
- Reducing asymmetries between the tax obligations for joint ventures and private operations, which create opportunities for companies to game the tax system.

¹⁰³ Myanmar's production sharing arrangements between MGE and companies does not resemble PSCs in the traditional sense. Instead, the state's production share acts essentially as a substitute royalty—albeit one levied at the point of sale rather than the mine site.

Table 4. Advantages and challenges by type of revenue stream

	Accuracy relative to value of production	Ease of administration	Risk to private investors
Permit fees	Low	High	High
Production royalties	High	Medium	Medium
Corporate income tax	Medium	Low	Low

The government should avoid exemptions, such as the now defunct Articles 27 and 31 of the 1995 Myanmar Gemstone Law, which undercut revenue collection. Informal loopholes have also arisen through administrative determinations, such as MGE's refusal to assess royalties at the legally required rate. Greater legal transparency remains necessary to avoid similar actions in future. Adopting notice and comment procedures and making jade and gemstone rules and directives promptly available online can help to support accountable decision-making by ministries and state-owned enterprises.

Finally, the legal code should distinguish tax requirements for companies and ASM. Certain countries collect flat fees or nominal taxes (less than three percent) from ASM production.¹⁰⁴ However, more onerous rates or complex procedures pose a bar to formalization of these actors.

B. RESTRUCTURE VALUATION AND PERMITTING PROCESSES

Companies have routinely utilized weaknesses in Myanmar's tax assessment practices to avoid revenue payments. Bribes have helped to secure uncompetitive fee rates in the permitting process, and artificially low valuations of jade and gemstone production. Addressing tax evasion requires making both licensing and valuation procedures more transparent and technocratic.

With respect to permit allocation, a general practice of securing permits through under the table payments has rendered the bidding process uncompetitive and reduced government income from permit fees. MoNREC should adopt an open bidding process to reduce revenue loss and safeguard the integrity of the permitting process. Joint ventures seeking to obtain or renew permits should be subject to the same bidding and disclosure requirements as private companies.

Reforms should also strengthen the independence and accuracy of Myanmar's valuation practices. Two significant conflicts of interest remain embedded in the current composition of valuation bodies and the CGSC: (1) industry representatives are empowered to impact their own royalty payments, and (2) MGE is expected to assess royalties for joint ventures in which it participates on behalf of the state.

A lack of checks on valuation determinations by the valuation body chairman raise the risk of corruption in the valuation process. Consistent with best practices in other countries, Myanmar should assess royalties based on the highest among several independent assessments.¹⁰⁵ The government may also adopt mandatory

¹⁰⁴ See "Chapter 3: Deciding on fiscal terms" in Paul Shortell and Emma Irwin, *Governing the Gemstone Sector*.

¹⁰⁵ See "Chapter 4: Improving valuation processes" in Paul Shortell and Emma Irwin, *Governing the Gemstone Sector*.

minimum values based on the grade or other physical characteristics of production.

Simultaneously, development of assessor capacity and detailed procedures remain necessary to support accurate valuations. Useful measures may include:

- Expanding assessment criteria beyond those available in the valuation procedures
- Developing and making available to assessors regularly updated sales data on jade and colored gemstones
- For jade stones, requiring permit holders cut jade or remove a significant portion of the exterior “crust” prior to valuation
- Publishing detailed procedures for appealing initial valuations
- Mainstreaming the participation of competent third party monitoring bodies in the valuation process.

C. STRENGTHEN OVERSIGHT

Though critically important, fiscal restructuring and procedural safeguards alone cannot address illegality in the jade and gemstone sector. Tax evasion will only be meaningfully reduced once the government (1) strengthens oversight of mining operations, (2) develops auditing capacity and (3) levies penalties against companies engaged in unlawful activities.

Limited supervisory capacity within MGE leaves companies with significant leeway to evade taxation by underreporting jade and gemstone production. Indeed, certain operators have circumvented the current moratorium on permit allocation and renewal to continue mining illegally.¹⁰⁶ Stemming tax losses due to underreporting requires investment in government monitoring capacity and strengthening coordination with law enforcement.

First, MoNREC should quickly recruit additional mine inspectors. Training and performance evaluations remain necessary to transform site visits from “check-the-box” exercises to genuine assessments. Because bribery of staff in mining regions appears widespread, the government may consider tying mine inspectors’ compensation to certain benchmarks (e.g., awarding bonuses relative to the amount of company fraud identified), or periodically rotating personnel between gemstone tracts.

Second, MoNREC should seek to undertake joint law enforcement activities with military and police, including confiscating heavy machinery operating illegally in jade mining areas. Enforcement of checkpoints could significantly cut down on smuggling, given the limited traversable routes in and out of jade and gemstone tracts. However, the effectiveness of this strategy depends on the degree of cooperation from regional military officials—many of whom benefit directly or indirectly from illegal mining operations.¹⁰⁷

¹⁰⁶ See, for example, note 9.

¹⁰⁷ See Global Witness, “Jade: Myanmar’s ‘Big State Secret.’”

Rigorous auditing remains necessary to detect and deter fraud by jade and gemstone companies. In line with best practices for state-owned enterprises, MGE should undertake and publish audits each fiscal year.¹⁰⁸ To the extent that MGE continues to enter into joint ventures for jade and gemstone operations, it should utilize the provisions outlined in its current model contract to require that its partners undergo detailed audits.

Given the complexity of jade and gemstone sector transactions and the limited capacity of the Auditor General Office, the Myanmar government would ideally form a special auditing unit dedicated for this purpose with the power to (1) review companies' business and financial records and (2) conduct randomized physical audits to verify accurate production and sales declarations. Although auditing agencies may take various forms, this would require at minimum a combination of IRD's tax knowledge, MGE's familiarity with the gemstone sector and international expertise in auditing mineral operations.

Finally, the government should commit to penalizing companies that continue to violate relevant law, contract, and permit provisions. In such cases, the Myanmar Gemstone Law empowers MoNREC to suspend or cancel a permit, levy fines or blacklist the company and its principals. It further specifies criminal penalties for failure to register jade and gemstone production or pay royalties.¹⁰⁹ Similarly, under the Myanmar Income Tax Law, IRD may reassess corporate income tax if MoPF finds that a company intended to defraud in order to evade taxation.¹¹⁰

¹⁰⁸ See Organisation for Economic Co-operation and Development (OECD), "Guidelines on Corporate Governance of State-owned Enterprises" (2015); Natural Resource Governance Institute, "State Participation and State-Owned Enterprises" (March 2015).

¹⁰⁹ Responsibility and procedures for enforcing these penalties remains unclear based on the Myanmar Gemstone Law and other relevant statutes surveyed by NRGi.

¹¹⁰ See 2011 Myanmar Income Tax Law, Art. 6.

Conclusion

Tax evasion has helped to concentrate the profits of the jade and gemstone industry in the hands of a few, preventing the sector from supporting Myanmar's broader economic and social development. The current moratorium on jade and gemstone permitting and the ongoing efforts to articulate a national gemstone policy have created an opportunity to revise largely ineffective tax policies. But progress has been limited, and the current government must act swiftly if it intends to enact meaningful change before upcoming elections in 2020.

In the short term, the government may demonstrate its commitment to reform by meeting three key benchmarks: (1) rebalancing fiscal terms to streamline revenue collection and eliminate double taxation; (2) ensuring the government a fair take by strengthening valuation and permitting processes; and (3) ramping up monitoring and enforcement operations in order to deter future illegal activities. While each element of tax reform is insufficient to change the status quo alone, in combination, these changes can put Myanmar's government and citizens on track to realizing a more equitable share of its natural resource wealth.

Addressing the technical challenges associated with revenue collection is only a first step. Work remains to ensure that the government manages mineral revenues in a sustainable manner.¹¹¹ Myanmar stakeholders must also come to a consensus on how to divide tax responsibilities and natural resources revenues between the national government and subnational government units.¹¹² Significant political dialogue and technical developments are necessary to address both of these questions. In the meantime, ensuring comprehensive collection of revenues remains essential so that all citizens may share in the benefits from Myanmar's jade and gemstone mining industry.

¹¹¹ See generally Andrew Bauer et al., "State-Owned Economic Enterprise Reform in Myanmar: The Case of Natural Resource Enterprises" (Natural Resource Governance Institute and Renaissance Institute: 2018).

¹¹² See generally Andrew Bauer et al., "Natural Resource Federalism: Considerations for Myanmar" (Natural Resource Governance Institute: 2018); Andrew Bauer et al., "Sharing the Wealth: A Roadmap for Natural Resource Revenue Sharing in Myanmar" (Natural Resource Governance Institute: 2016).

Annex. Approximating the value of Myanmar's jade and gemstone industry

Despite the significance of jade and gemstone extraction to Myanmar's economy, the opaque industry's value remains difficult to quantify. This stems, in part, from the nature of the commodity: gemstones' quality varies widely, reported weights may not accurately reflect true volume and reliable reference prices are scarce. Significant illegal activity in the sector compounds these challenges, with underreporting and undervaluation reducing the integrity of available data.

This annex discusses the potential value of jade and gemstone extraction in Myanmar. This analysis does not definitively state the size of the market—an impossible task with currently available information—but instead should enable stakeholders to understand revenue payments in light of a range of potential values. Given their unique markets and data constraints, this annex addresses jade and colored gemstones in separate sections.

A. VALUING THE JADE SECTOR

The Myanmar government registered an average of EUR 1 billion per year (approximately USD 1.2 billion based on 2018 exchange rates) of jade and gemstones sold at emporiums held between 2012 and 2016.¹¹³ China—which consumes the vast majority of jade produced in Myanmar—reported importing approximately USD 2.6 billion in precious stones per year, on average, over the same period.¹¹⁴

However, these official figures are generally considered to underrepresent the scale of the jade industry. For example, Global Witness calculated that official jade production in 2014 could have been worth between USD 5.6 billion and USD 30.8 billion under differing assumptions.¹¹⁵

Most unofficial assessments of the jade sector to date have been production-based; they calculate value by multiplying the volume of production and estimated unit prices. This section assesses the potential value of Myanmar's jade extraction under a range of production and pricing assumptions.

¹¹³ Calculated based on emporium data MGE disclosed to NRG. The EUR 1 billion figure refers to sales ultimately paid out. A significant percentage of emporium sales pledged at previous emporiums were never completed (see note 79), and these are not included in the average.

¹¹⁴ Based on UN Comtrade data (China's reported imports from Myanmar). Chinese trade data illustrates a dramatic and unrepresentative spike in jade and gemstone sales in 2014. This could reflect multiple years of backlogged imports not registered due to border conflict (fighting between the KIA and Myanmar military interfered with the jade trade in 2013/2014) or administrative reasons.

¹¹⁵ See Global Witness, "Jade: Myanmar's 'Big State Secret'" (2015). For alternative estimates of the jade sector see David Dapice, "A Grand Bargain: What it is and why it is needed" (Proximity Designs: 2016).

Volume of production

Officially, jade companies mined 16.3 million kilograms of jade (or 486 kilograms per permitted acre) in FY 2014/15 and 35.6 million kilograms of jade (or 1,108 kilograms per permitted acre) in FY 2015/16. However, failure to register jade with the government can understate the volume of production. Limited supervision of many mining operations leaves open the potential for significant underreporting.¹¹⁶

EITI data reveal significant differences in reported output between companies. Most companies included in the EITI scope operate primarily as joint ventures under regular supervision by MGE.¹¹⁷ Thus we can presume that they make more accurate declarations than unsupervised private concessions. Companies in the EITI scope reported mining 1,186 kilograms of jade per permitted acre in FY 2014/15, more than twice the average reported volume across all companies. In FY 2015/16, companies in the EITI scope reported 4,280 kilograms per permitted acre, or nearly four times the average.¹¹⁸

Table A3 calculates the potential value of the jade sector based on two production scenarios. A “low” production estimate assumes zero jade production beyond what companies officially report. A “high” estimate assumes that all companies mine at a similar intensity to those included in the EITI scope. Under the “high” estimate, between 59 percent and 74 percent of jade by volume could have gone unregistered in FYs 2014/15 and 2015/16.

Average unit price

The quality, and therefore price, of jade varies significantly both across and within grades.¹¹⁹ For example, at Myanmar's 2014 emporium, Grade D jade sold anywhere between EUR 3 per kilogram to EUR 15 per kilogram, while imperial jade sold at prices ranging from EUR 500 per carat (EUR 2.5 million per kilogram) to EUR 10,000 per carat (EUR 50 million per kilogram). (See Table A1.) Thus, a miniscule percentage of high-quality production by weight accounts for a disproportionate share of production by value.

Comparing total sales volumes and prices reported to EITI, the average unit price of jade sold appears to be USD 123 per kilogram in FY 2014/15 and USD 104 per kilogram in FY 2015/16.¹²⁰ Government and industry stakeholders generally consider emporium jade sales to reflect arm's length prices, thanks to a competitive bidding process. However, it is unclear whether official jade sales reflect the true distribution of grades in the market.¹²¹

116 See Section III(C) (“Taxing production”)

117 See note 57.

118 Author's calculations based on 2014/15 and 2015/16 EITI data.

119 Models may also not accurately reflect significant variation in average unit prices across years. Jade prices, for example, experienced dramatic growth beginning around the mid-2000s and appeared to peak in late 2013 or early 2014 before falling significantly.

120 Author's calculations based on 2014/15 and 2015/16 EITI data.

121 The higher value a stone, the greater the incentive to smuggle and sell informally. Certain industry stakeholders interviewed said that because higher margins were rarely realized for low-quality jade at emporiums, much of this is sold outside.

Table A1. Jade reference unit price ranges by grade (EUR), 2012-2016¹²²

Type	Unit	Emporium					
		2012 (49th)	2013 (50th)	2014 (51st)	2015 (52nd)	2016 (53rd)	Mid-2016
Imperial Jade Rough	1 carat	1,000 – 17,000	1,000 – 15,000	500 – 10,000	500 – 10,000	300 – 6,000	500 – 20,000
Commercial Jade Rough	1 kilo	1,500 – 250,000	500 – 250,000	750 – 200,000	500 – 175,000	500 – 270,000	500 – 55,000
High Grade Utility Jade	1 kilo	10,000 – 300,000	7,500 – 300,000	7,500 – 200,000	5,000 – 200,000	5,000 – 90,000	10,000 – 80,000
Utility Jade Rough – A	1 kilo	150 – 3,000	100 – 2,000	100 – 2,000	100 – 1,500	100 – 1,500	100 – 1,500
Utility Jade Rough – B	1 kilo	75 – 150	50 – 100	50 – 100	50 – 100	50 – 100	50 – 100
Utility Jade Rough – C	1 kilo	15 – 50	15 – 50	15 – 50	10 – 50	10 – 50	10 – 50
Utility Jade Rough – D	1 kilo	5 – 15	5 – 15	3 – 15	3 – 10	3 – 10	3 – 10

Table A2 calculates an alternative average unit price by multiplying the assumed share of production and reference price for each grade. The percentage of production attributable to each grade is based on an exercise conducted by Proximity Designs, a Myanmar-based non-profit social enterprise.¹²³ The low end of the price range calculated by MGE in Table A1 is taken as the reference price for each respective grade.¹²⁴

Table A2. Alternate jade average unit price estimates, FY 2014/15 and 2015/16

FY 2014/15			FY 2015/16		
Estimated average price (EUR/kg)	Estimated share of volume (%)	Price x share of volume	Estimated average price (EUR/kg)	Estimated share of volume (%)	Price x share of volume
2,500,000	0.01	250.0	2,500,000	0.01	250.0
750	3.49	26.2	500	3.49	17.5
100	6.5	6.5	100	6.5	6.5
50	10	5.0	50	10	5.0
15	20	3.0	10	20	2.0
3	60	1.8	3	60	1.8
Total average EUR/kg		292.5	Total average EUR/kg		282.8
Total average USD/kg		388.7	Total average USD/kg		313.8

122 Calculated by MGE based on emporium sales.

123 See David Dapice, "A Grand Bargain: What it is and why it is needed," (Proximity Designs: 2016).

124 Both between and within grades, the frequency of jade decreases exponentially as quality increases.

For example, among commercial grade stones marketed at the emporium, the average unit price was EUR 2,012 per kilogram in FY 2014/15 and EUR 1,802 per kilogram in FY 2015/16—values falling within the lowest percentage point of the total distribution. Thus, the lower bound from Table A1 appears to be a more reliable proxy of average values than prices closer to the middle of the T range.

Table A3 relies on both price scenarios. A “low” price estimate is based on sales reported to EITI. A “high” estimate is calculated based on Table A2.

Value estimates

Valuing Myanmar’s jade extraction remains challenging given the lack of complete and reliable data. As discussed above, apparent value of the sector varies substantially depending on production and pricing assumptions. Table A3 therefore models the value of jade production based on “low” and “high” production and pricing estimates.

FY 2014/15	Low average price assumptions	High average price assumptions
Low underreporting assumptions	2,288	6,697
High underreporting assumptions	5,183	15,853

Table A3. Jade sector value estimates (USD millions), FYs 2014/15 and 2015/16

FY 2015/16	Low average price assumptions	High average price assumptions
Low underreporting assumptions	4,091	11,623
High underreporting assumptions	14,700	43,551

Assuming no unreported production and average sales prices equivalent to those at the emporium suggest a sector size of USD 2 billion in FY 2014/15 and USD 3.7 billion in FY 2015/16. On the other end of the spectrum—assuming significant underreporting of production and substantially higher average prices than at the emporium—the value of production could have reached as high as USD 15.5 billion and USD 43.1 billion in FYs 2014/15 and 2015/16, respectively.

Other assumptions generate values falling in between these two extremes. For example, assuming official figures capture most of production by volume but underestimate average prices, the sector might have been worth around USD 6.4 billion in FY 2014/15 and USD 11.2 billion in FY 2015/16. On the other hand, assuming that emporium sales represent true average prices but that a substantial share of production was not reported, jade output could have been valued at USD 4.9 billion in FY 2014/15 and USD 14.3 billion in FY 2015/16.

B. VALUING THE GEMSTONE SECTOR

The colored gemstone industry presents more acute challenges to valuation than does jade. Private concessions, subject to limited monitoring, account for more than 90 percent of gemstone production. Neither emporium data nor Myanmar EITI disclosures yield substantial or representative information from the industry.

A substantial gap exists between gemstone emporium sales (USD 7.3 million in FY 2015/16)¹²⁵ and available trade data (with trade partners' reported imports of rubies and sapphires from Myanmar valuing approximately USD 127 million in 2015).¹²⁶ As with jade, stakeholders widely believe that these official figures significantly understate the value of the sector.

This section examines the value of Myanmar's gemstone sector from two angles. First, it estimates the potential value of the sector based on official production volumes and certain reference prices. Second, it discusses the likely value of production in light of available trade statistics.

Production-based estimate

As in the case of jade discussed above, we can estimate the possible value of the gemstone industry by multiplying the volume of production and estimated unit prices. Myanmar reported producing 13.5 million carats of colored gemstones in FY 2015/16. Because available data does not allow for any assessment of the extent of underreporting, this volume is taken as given.

This report assesses the value of gemstone production based on these volumes and three different reference prices. (See Table A3.) Most gemstones sold at the emporium are of relatively low quality; furthermore they may not fetch competitive prices.¹²⁷ Using the average unit sales price from the emporium, approximately USD 7 per carat in 2014/15 and USD 4 per carat in 2015/16, as a reference price would imply an incredibly low valuation of the sector. In FY 2015/16, emporium prices suggest total production of USD 52 million, when official gemstone imports from Myanmar in that year were twice that amount.

Table A4 relies on two alternative reference prices. First, it applies the average unit sales price of Mozambican rubies sold by Gemfields in 2014 and 2015, or approximately USD 25 per carat.¹²⁸ These unit values are considered to accurately reflect market prices since Gemfields markets its rubies via competitive auctions. However, this estimate may understate the value of Myanmar's production, given that Myanmar rubies tend to be of higher quality than those mined in Mozambique.

125 2015/16 EITI Report.

126 Based on UN Comtrade data (countries' reported imports from Myanmar).

127 While a large number of unaffiliated Chinese traders create competitive conditions for jade emporium sales, the same does not hold for colored gemstones. Collusion among a relatively small pool of Thai buyers has generally resulted in colored gemstones at the emporium selling at less favorable rates.

128 Author's calculations based on Gemfields annual reports. Sales from 2014 and 2015 were calculated together in order to reflect a balanced distribution of low-quality and high-quality production.

Second, Table A4 applies the average unit sales price of reported ruby and sapphire imports from Myanmar, or approximately USD 35 per carat.¹²⁹ Although this appears to be the most accurate reference price available, it remains unclear whether it accurately reflects the distribution of quality across production. Moreover, it is possible that traders undervalue imports in official declarations to avoid taxation.

Based on Mozambican and trade reference prices, Table A4 conservatively suggests that gemstone production could have been worth between USD 278 million and USD 340 million in FY 2014/15 and between USD 385 million and USD 470 million in FY 2015/16.

FY 2014/15	Emporium	Gemfields 2014/15	UN Comtrade 2015
Reference price	6.81	25.21	34.84
Value of production	75,181	278,313	384,626

Table A4. Gemstone sector value estimates (USD millions), FYs 2014/15 and 2015/16

FY 2015/16	Emporium	Gemfields 2014/15	UN Comtrade 2015
Reference price	3.85	25.21	34.84
Value of production	51,911	339,916	469,761

Countries importing rubies and sapphires from Myanmar reported trade worth approximately USD 126 million in 2015. Yet barely any gemstone imports from Myanmar were registered by either Thailand or India—where most gemstones mined in Myanmar undergo cutting, polishing, and treatment. Thailand reported only importing USD 597,124 in rubies and sapphires from its neighbor in 2015; India reported no significant imports.¹³⁰

Assuming that Thailand and India together imported at least as many gemstones, by value, as countries reporting imports, then Myanmar's exports in 2015 would have been worth a minimum USD 252 million. This figure represents a modest minimum estimate; stakeholder interviews indicate that the vast majority of supply by volume and value goes to Myanmar's neighbors.

Official statistics indicate that Thailand alone exported USD 519 million in polished rubies and sapphires in 2015.¹³¹ Using average value addition rates, this would imply that the country imported rough rubies and sapphires worth approximately USD 173 million in that year.¹³² Presuming that India also imports a significant quantity of gemstones from Myanmar, this strengthens the credibility of the range calculated under the production-based model.

¹²⁹ Based on UN Comtrade data (countries' reported imports from Myanmar). Only countries reporting both net weight and sales values are included in the average.

¹³⁰ Based on UN Comtrade data (countries' reported imports from Myanmar).

¹³¹ See Gem and Jewelry Institute of Thailand, "Thailand Colored Stone Industry Review 2015" (June 2016). Statistics could underestimate the value of this trade, depending on the degree of underreporting and/or undervaluation by Thai exporters.

¹³² The total value originating from Myanmar would be somewhat lower, since Thailand also imports significant quantities of colored gemstones mined in other countries.

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