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Myanmar's Attractiveness for Investment in the Energy Sector

A Comparative International Perspective

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About this report

This report was produced jointly by the Myanmar Institute for Strategic and International Studies (MISIS) and the Norwegian Institute of International Affairs (NUPI) and supported by the Ministry of Foreign Affairs of Norway. The report builds on primary and secondary data. Primary data collection included in-depth interviews with 19 actors in the petroleum and renewable energy sectors, as well as informal consultations with over 40 participants at the Sixth Myanmar Oil & Gas Exhibition in Yangon in January 2016. The secondary data include 43 international rankings and indices, as well as academic literature and reports of international organizations.

Executive summary

- **Myanmar's needs:** Myanmar is severely affected by energy poverty, and needs to invest a greater share of GDP in the energy sector than any other country in Asia. It is estimated to require a total of USD 650 billion by 2030 to satisfy its growing demand for energy – USD 170 billion from foreign investors and the remainder from domestic sources. Investment is needed in both the petroleum and renewable energy sectors. Due to lack of capital, technology and knowhow in Myanmar, much of the necessary investment will have to come from abroad. However, the World Bank ranks Myanmar's general investment climate as only 167th out of 189 countries. This report examines the strengths and weaknesses of Myanmar's business climate in the petroleum and renewable energy sectors: how it compares with other countries, especially in ASEAN; what matters to foreign investors; and how this situation can be improved.
- **Not resting on one's (new) laurels:** The recent international interest in Myanmar may prove counterproductive for the country's investment climate, if this upsurge in interest induces the government to slow down in its reform efforts. When the novelty of Myanmar wears off, that may become a problem. Indeed, possible signs of such a slowdown can be observed already. According to official data, FDI in Myanmar decreased significantly in the first four months of 2016 compared to the same period in 2015. Investors were increasingly cautious and worried about the slow pace of reform, delays in establishing a panel to approve new investment projects and the lack of clarity on the country's new economic development strategy (DVB, 2016). This highlights the importance of working constantly to improve the investment climate and staying in close contact with investors, keeping them informed about developments.
- **Challenges common to the petroleum and renewables sectors:** Lack of data and information for market entry; fragmented institutional and regulatory framework; low levels of electricity access and digitalization; low international oil prices.
- **Challenges in the petroleum sector:** Limited supply-industry infrastructure and lack of local engineers; MOGE petroleum sector monopolization and conflicts of interest; limited geological data; complicated taxation; weak government–business communication; challenges in finding local partners; time-consuming licensing procedures; paper-based communication and lack of e-government; production-sharing agreements biased towards participation of large oil companies, excluding smaller ones; frequent changes in legislation; closed downstream market.
- **Challenges in the renewable energy sector:** No national target or legislation on renewable energy; no dedicated public agency regulating the sector; lack of business associations; subsidies for grid electricity generated from fossil fuels disadvantage off-grid renewables; access to suitable land; complex mountainous terrain and protected areas as well as political instability in these areas; underdeveloped grid system for large-scale production; lack of data on the renewable-energy resource potential; limited infrastructure for technical support and maintenance; high cost of installing solar panels and wind turbines; disintegrated biofuel production and supply markets; lack of local specialists; no taxation system for renewables; security risks in conflict-prone Kachin, Rakhine and Shan states.
- **Opportunities in the petroleum and renewable energy sectors:** Government commitment to reform; advantageous location as part of the Greater Mekong Subregion and ASEAN, close to the Chinese and Indian markets; significant resource base, especially natural gas, hydropower and bioenergy; rapidly rising energy demand in Myanmar and neighbouring countries; high demand for investment in refineries, oil terminals, oil barges and petrol stations; opportunities in retail business; new petroleum and renewable energy laws are underway; abundant semi-skilled

labour, and low cost of unskilled labour; low levels of corruption and criminality. Initially, companies may perceive the business climate as unpredictable, but, having entered the market, and having learned and adapted to local conditions, companies experience greater predictability.

- **Opportunities in the petroleum sector:** Relatively transparent tender system; equal treatment of investors; government experience and capacity; market maturity. Myanmar's strategic location, with rapidly rising energy demand among hundreds of millions of people in the neighbouring countries and low transportation costs (especially for gas delivery to China, India and Thailand), represents an opportunity to foreign investors.
- **Opportunities in the renewable energy sector:** Latecomer advantage; low level of electrification increases cost advantage of off-grid electrification; support from international donors; strong civil society actors are promoting renewable energy development.

Myanmar in international rankings

- **This report identifies 43 potentially relevant indices** that either directly or indirectly assess the investment climate and conditions for doing business. Out of these 43 indices, 22 include Myanmar, most of them only from 2014 onwards.
- **Where Myanmar is included, it is generally ranked low.** Myanmar ranks lowest of the ASEAN countries in the World Bank's Ease of Doing Business Index. However, it jumped from 182nd place in 2015 to 167th in 2016, but is ranked last out of the 58 countries covered by the 2013 version of the Resource Governance Index (RGI). International indices and rankings often fail to reflect the realities and dynamic changes underway in Myanmar as viewed by the interviewees for this report. This divergence indicates scope for improving Myanmar's position in the rankings. Furthermore, indices and rankings often use data that are two or three years old and no longer reflect the reality and processes taking place in a country undergoing rapid change, as is the case with Myanmar.
- **Out of 43 indices, only six target the energy sector:** Out of these six, only the RGI and Climatescope cover Myanmar.
- **Myanmar faces a dilemma:** The government can choose to make an effort to get Myanmar included in more rankings – but in the current situation, the country is likely to be ranked low. Low rankings may have an adverse effect on the country's FDI attractiveness to potential investors. On the other hand, being a white spot on the rankings map is also a disadvantage.

Recommendations for improving Myanmar's position in international rankings

- **Consider establishing a dedicated government agency or designating an existing public body to handle international rankings.** This has proven a successful strategy in some other countries. To be effective, such an agency should not focus on promoting superficial amendments to legislation merely for the sake of improving Myanmar's international standing. It should serve as an information channel, systematically monitoring the internal reform processes and informing the government of necessary reforms and promoting them, while also informing international organizations about reforms implemented.
- **Set up a data-collection team.** Lack of relevant data is a major obstacle to improving Myanmar's position in international rankings and attractiveness for investment. A dedicated team of researchers could create databases and datasets related to Myanmar's business climate. Such a

team could be formed as part of a new government agency on rankings, if one is created, or at the Directorate of Investment and Company Administration (DICA) and the Myanmar Investment Commission (MIC), which currently serve as main interlocutors with foreign investors and international donors. The team could also be a contact point for international organizations creating and updating rankings. International experts could be invited to train the team and assist in elaborating an appropriate strategy for data collection.

- **Interact actively with multilateral and development agencies.** The Asian Development Bank (ADB), GIZ, UNDP and the World Bank provide technical assistance as regards reform of investment policies. For instance, the ADB and International Finance Corporation (IFC) assisted the government of Myanmar in preparing and adopting a new Foreign Investment Law in 2012. However, Myanmar could open up more and provide assistance to international organizations in their data-gathering activities within the country. Myanmar could put the issue of investment climate improvement on the agenda in its relations with donor organizations and major partner countries such as Germany, Japan, Norway, the UK and the USA.

Recommendations for the petroleum sector

- **Avoid volatile resource nationalism, as that reduces predictability and frightens investors.** In Myanmar, the state's share of petroleum revenues is among the highest in the world, from the signature bonus (USD 15 million) to the actual share of production. Myanmar can draw inspiration from Cambodia's experience in using Production Sharing Contracts (PSCs), considered to be among the most attractive in Southeast Asia. Even minor changes such as a 3–5% reduction of the government share of PSCs or a reduction of the signature bonus may make the country more attractive for investment. In general, for the investment climate to be seen favourable by investors even small-scale positive changes must be continuously observed.
- **Ensure a clear division of powers.** Responsibility for regulation of the petroleum sector has been concentrated in the hands of Ministry of Electricity and Energy and Myanmar Oil and Gas Enterprise (MOGE). MOGE combines the roles of operator, regulator and service provider, creating conflicts of interest and raising concern on the part of foreign companies. Unbundling MOGE's responsibilities would also improve Myanmar's position in international rankings – the Resource Governance Index in particular, which assesses potential conflicts of interest in state-owned companies.
- **Open up the downstream business.** This would yield numerous benefits for the local economy through greater competition, while also making it more attractive for international oil companies to invest in Myanmar. It would also send positive signals about the country's commitment to liberalizing the economy in general.

Recommendations pertaining to both the petroleum and renewable energy sectors

- **Prioritize energy FDI at DICA and MIC.** Neither at DICA nor at MIC is energy FDI separated from other FDI. In order to streamline the process, a special unit could be created within the MIC to consider and approve applications for energy investment separately from FDI applications in other sectors.
- **Improve state–business communication.** The government should make its interaction with foreign investors more transparent. Interviewees for this report assessed dealing with the government as cumbersome. The Ministry of Energy, DICA and MIC could organize more regular information exchange meetings with investors. Myanmar Business Forum (MBF), Myanmar Oil

and Gas Services Society (MOGSS), the Union of Myanmar Federation of Chambers of Commerce and Industry could also serve as effective communication channels for exchanging feedback between the government and foreign investors. In 2016, MIC's failure to organize regular meetings made investors concerned about the expected changes in legislation. As Kyaw Win Tun, Director of DICA, noted: 'normally, the MIC is supposed to hold meetings twice a month, but it's been able to meet only three times during this fiscal year' (DVB, 2016).

- **Ensure an effective communication strategy.** Any planned and actual changes in the legislation, regulatory regime, public institutions and other areas that may impact the investment climate should be announced as early as possible, in order to reduce unpredictability. The agencies responsible for FDI policies (e.g. DICA and MIC) could take special responsibility for ensuring this.

Recommendations for the renewable energy sector

- **Set up a renewable energy agency.** Regulation of renewable energy would benefit from streamlining: today, responsibility is fragmented among different ministries, and the lack of a strong and clear national renewable energy policy exacerbates the situation. Establishing a special agency under the Ministry of Energy would have several advantages: (1) help reduce the complexity and fragmented roles of the many public entities responsible for renewable energy; (2) reduce the workload at the Ministry of Energy; (3) send a clear signal to investors that renewable energy has been prioritized, to facilitate market entry; and (4) improve two-way interaction between business and government. Myanmar can learn from the successful experience of countries with ministries or government institutions specifically assigned to renewable energy promotion – like India, with its Ministry of New and Renewable Energy (MNRE), or Sri Lanka, with its Ministry of Power and Renewable Energy (MPRE). India ranks as no. 3 on the E&Y Renewable Energy Country Attractiveness Index (RECAI) and as of May 2016 it was seen as being among the top performers on renewable energy reform and in attracting FDI in renewables (Ernst & Young, 2016). Establishing a specialized agency and adopting policies to develop renewables could make Myanmar a candidate for inclusion in RECAI.
- **Establish a renewable energy association for foreign investors.** The Renewable Energy Association of Myanmar (REAM) exists, but our respondents assessed it as weak and ineffective, and as enjoying little support from the government. Establishing an association similar to the Myanmar Oil and Gas Services Society (MOGSS) would help to unite industry players, promote their interests and represent them vis-à-vis state institutions.
- **Reform the renewable energy tax policy.** A special tax regime could be established to promote renewables; moreover, government subsidies for electricity generated from non-renewable sources should be eliminated. Tax incentives for renewables could be more generous, and rates lower compared to other ASEAN countries, to encourage foreign investment in Myanmar.

1. Introduction

Despite its considerable reserves of natural gas and renewable energy potential, Myanmar has one of the world's highest levels of energy poverty and is thus also among the countries in greatest need of foreign investment and technology in the energy sector. Even if electricity supply were to grow 15% per year, it would take five years to close Myanmar's current demand gap – and demand in the meantime is predicted to grow by 12% annually. In order to achieve electricity access for the entire population by 2030, Myanmar would need USD 444 million, or 10% of GDP, in investments every year (World Bank and Australian Government, 2011). This is the highest rate of any country in Asia; East Timor, with the second highest rate, would need to invest only 2.7% of GDP per year.

Due to the lack of capital, technology and knowhow in Myanmar, much of the needed investment will have to come from abroad. According to Dale and Kyle (2015), 'since 2012, Myanmar has transformed from a "pariah state" and one of the world's least attractive business climates into a "frontier economy" transitioning to a democratic form of government and attracting foreign direct investment from around the world.' However, much remains to be done. In the World Bank's 2015 Ease of Doing Business ratings, Myanmar was ranked 167th out of 189 countries (World Bank, 2016). Foreign energy investment will be one of Myanmar's most important interfaces with foreign countries and companies, and thus an important aspect of foreign policy. Since 2012, the Asian Development Bank (ADB), the World Bank, other large international institutions, as well as the EU, Japan, the USA and other countries, have started re-engaging with the Myanmar government, gradually opening up opportunities to attract FDI, not least in the energy sector.

This study provides a comprehensive overview of Myanmar's position in international rankings related to the energy sector and the investment climate, for oil and gas as well as renewable energy. The report addresses the following overarching questions:

- In what ways does and does not Myanmar provide a stable and predictable environment for international companies in the energy sector?
- From the perspective of foreign investors, how does Myanmar compare to other investment destinations – especially other ASEAN countries and emerging petroleum producers?
- How does Myanmar perform on international rankings, and how can it most effectively improve its position?
- What information and international rankings do foreign investors use in assessing Myanmar?
- How does Myanmar balance the need to attract FDI against national interests, including protection of the environment?
- How does the business climate for renewable energy investment in Myanmar compare to that for oil and gas?

We focus on the following aspects of the business climate: the forms and essence of state–business interaction in the energy sector, local content requirements, role of state-owned oil companies, tax and procurement system, licensing system, role of government agencies in attracting FDI, perceptions of stability and predictability of public policy. We also examine the experiences of other countries in the ASEAN region, for lessons to be extracted from their strengths and weaknesses.

The report builds on primary and secondary data. Primary data collection included in-depth interviews with 19 actors in the petroleum and renewable energy sectors (see Annex 1), as well as informal consultations with over 40 participants at the Sixth Myanmar Oil & Gas Exhibition in Yangon in January 2016. The secondary data include 43 international rankings and indices (see Table 4), as well as reports prepared by international organizations, scholarly articles and media sources (see list of references). Central to the report are the secondary data from the international rankings; qualitative data from interviews and conversations are used for supportive and interpretive purposes.

2. Overview of Myanmar's energy sector

2.1. Oil and gas

Myanmar is rich in both onshore and offshore hydrocarbon resources that belong to the 'most productive segments of Myanmar's economy' (O'Kane, 2014: 17). At present, Myanmar's proven oil reserves are estimated at 50 billion barrels (U.S. Department of Commerce, 2016). However, experts believe that the country's oil fields may hold reserves on a level with those of Brazil or the British sector of the North Sea, or potentially even greater (*Economist*, 2014). According to the International Energy Agency (IEA), Myanmar's daily oil output makes up a mere 0.02% of global production (cited in UKTI 2015: 2); and, due to limited local capacity, Myanmar continues to import a substantial share of its petrol and diesel. The country sourced 42% of its petrol and 11% of its diesel domestically, importing the remainder, chiefly from Thailand and Singapore (UKTI 2015: 5). According to the US Energy Information Administration (2016), the '...limited production and refining capacity are insufficient to meet rising domestic consumption for crude oil and petroleum products, making the country a net petroleum liquids importer.'

However, gas reserves are more plentiful: they include 283 billion cubic meters of proven natural gas, similar to the reserves of Thailand (see Table 1), with a total value around USD 75 billion at current prices.

Table 1. Natural gas reserves

Global rank	Country	Proven reserves (bcm)
1	Iran	34,020
2	Russia	32,600
3	Qatar	25,070
11	China	3,300
13	Indonesia	3,001
30	Vietnam	699
39	Myanmar	283
43	Thailand	256

Source: CIA Factbook 2016.

2.2. Renewable energy

Myanmar produced 12.247 terawatt of electricity in 2014 (ADB, cited in Nam et al., 2015). Fossil fuels account for 32% and hydropower accounts for 67%. Most electricity is generated from hydropower. Table 2 shows electric power generation in Myanmar by energy source. The country's total installed capacity of 4422 MW is low compared to that of other ASEAN countries: Thailand has 32,600 MW and Vietnam has 26,300 MW (Oxford Business Group, 2015: 89).

Table 2. Electric power generation mix (installed capacity in 2014)

Source	Total MW
Hydro	3005
Gas	1236
Coal	120
Oil	56
Minihydro and solar	5
Total capacity	4422

Source: Nam et al. 2015: 9.

However, Myanmar has the highest technical solar potential among the countries of the Greater Mekong Subregion (see Table 3). For instance, in the Central Myanmar Dry Zone area, potential available solar energy is estimated at 51973.8 TW per year. The ADB (2015: 3) views solar energy as

the most economical source of electric power, but mainly for off-grid applications (e.g. solar-powered battery-charging stations, solar home systems, village mini-grids with solar components) and not for large-scale production.

We now turn to some solar-power investment projects currently considered particularly significant. First, in 2014 the company Green Earth Power (Thailand) and the Myanmar Ministry of Electricity and Energy signed a Memorandum of Understanding on construction of a 220 megawatt station in Minbu, Magway Region, in central Myanmar. Total investment is estimated at USD 350 million. Second, also in 2014 the US firm ACOS Energy signed an agreement with the Ministry of Electricity and Energy, on construction of a 300 megawatt solar power plant in Thae Se township and Na Buu township in central Myanmar, with a total investment of USD 480 million.

Table 3. Technical solar potential: Greater Mekong Subregion

Country	Technical potential (MW-peak)
Myanmar	26,962
Thailand	22,801
Vietnam	13,326
Lao PDR	8,812
Cambodia	8,074
Total	79,975

Source: Lahmeyer International and GeoModel Solar cited in ADB 2015.

According to ADB (2015: 3) wind-power has insignificant potential and has been little developed. Also other types of renewables such as biomass and biogas have been poorly developed. Biofuel production is at the initial stage of development, ‘with discouraging experience so far’ (ADB, 2015: 67). Myanmar’s biogas potential is considerable, with some 600,000 farm households and 5,000 village groups having sufficient livestock manure for small- to medium-scale biodigesters. However, previous investments have been unsuccessful due to lack of technical and maintenance support (ADB, 2015: 3). Maintenance issues, the high cost of installing biodigesters, low agricultural productivity, lack of investment in R&D for the various types of feedstock – all serve as obstacles to rapid development of biogas in the country.

2.3. FDI in the energy sector

According to the OECD FDI Regulatory Restrictiveness Index, Myanmar was the second most restrictive economy for FDI (foreign direct investment) as regards statutory restrictions in 2012 (OECD, 2014: 97–98). However, Myanmar has a pressing need for FDI. According to McKinsey (2013: 9) Myanmar will require a total of USD 650 billion by 2030 to satisfy growth in demand (USD 170 billion to be attracted from foreign investors and the rest from domestic sources). Out of the USD 650 billion, 320 bill. are required for infrastructure development. Myanmar has the greatest power- sector investment needs among countries in Southeast Asia. For Myanmar, FDI has been a major factor, helping to create 350,000 job throughout the country in 2011–2016. According to McKinsey (2013: 5), 10 million jobs can be created by 2030 if expected growth continues and if more than 170 billion USD of FDI can be brought in.

From 2012 to 2016, Myanmar attracted USD 28.33 billion of FDI. In contrast, it had received only 40 billion USD of FDI in the period 1989–2012 (with China as the main contributor). FDI into Myanmar reached 9.5 billion USD in FY 2014–2015, as against only USD 4.1 billion in the previous fiscal year. As total projected investment for 2014–2015 had been USD 5 billion, the actual amount exceeded it nearly by 100%. This dramatic increase has been possible largely thanks to the greater involvement of foreign energy actors who were awarded concessions in 2013 and have invested in the country since then. Oil and gas accounted for 35% of FDI in 2014–2015. Petroleum FDI has been on the rise ever since 2012, when the new Foreign Petroleum Law was adopted (see Figure 1). Results for

FY 2015–2016 fiscal year show that FDI in the oil and gas sector has achieved the highest-ever amount (USD 4.8 billion) in the history of Myanmar. In general, petroleum FDI has followed the overall tendencies of FDI inflows to Myanmar. FDI in the renewable energy sector is not specified by the Directorate of Investment and Company Administration (DICA) but is subsumed under the power FDI category. FDI in renewables has been negligible as yet, but foreign investors are currently exploring opportunities for investment in solar, wind and biomass sources.

China, Vietnam, Singapore, the UK, Hong Kong and Japan are the biggest investors in Myanmar (see Figure 2). One reason why the USA does not figure more prominently in Figure 2 is that US companies often invest in Myanmar through branch offices located in South Korea or Singapore. Thus, FDI from these two countries includes investments originating in the USA or elsewhere. Also Indonesian companies are showing greater interest in investing in Myanmar.

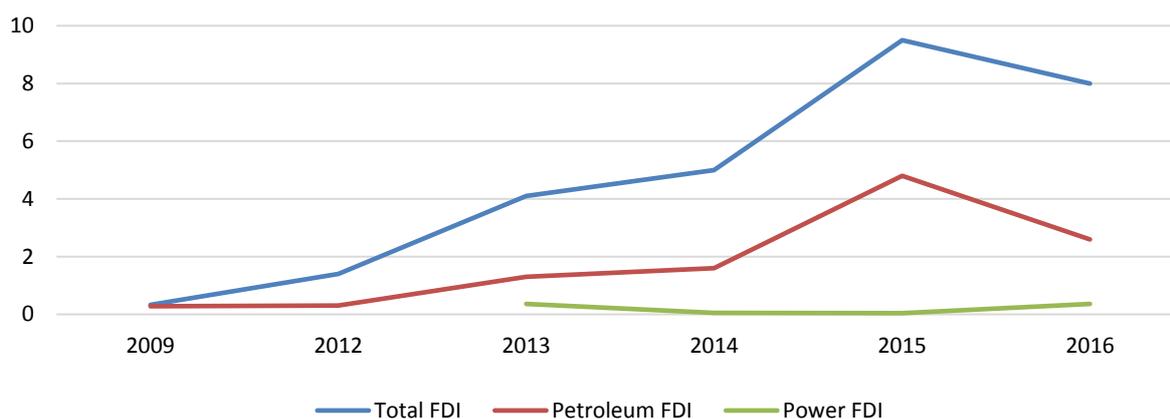


Figure 1. Myanmar total FDI vs. petroleum and power FDI (billion USD)

Sources: DICA 2013: 15; DICA 2016; Reuters 2014.

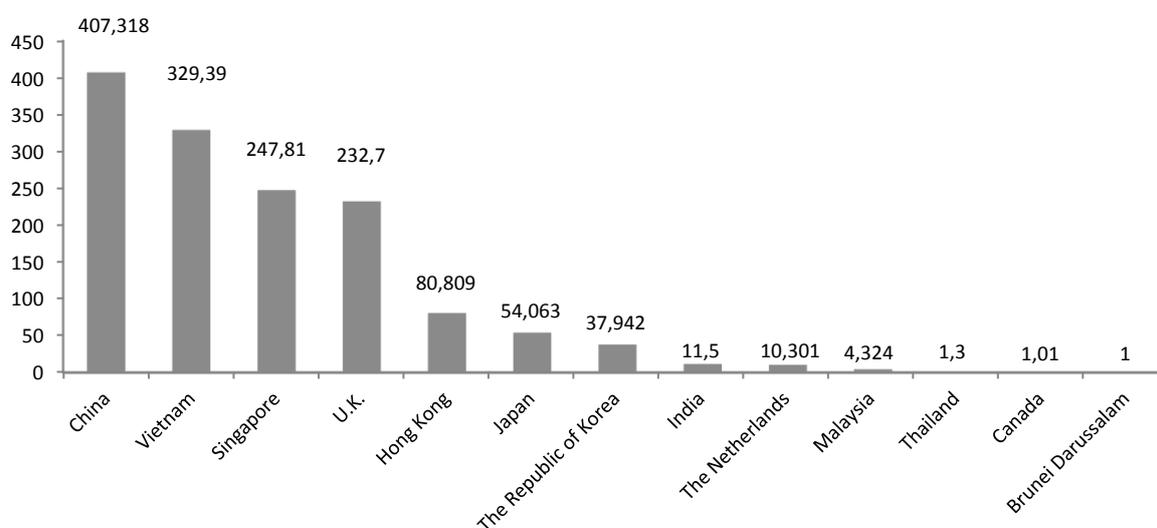


Figure 2. FDI in Myanmar by country of origin (million USD)

Source: DICA 2016.

2.4. Main foreign players

Myanmar has a long history as an oil producer. During the period 1886–1962, the petroleum industry was largely under the control of Burmah Oil Company (BOC), which discovered the Yenangyaung (1887) and Chauk (1902) oil fields. In 1962, the petroleum sector was nationalized (O’Kane, 2014: 73). Myanmar Oil and Gas Enterprise (MOGE) controlled the oil and gas industry in the period from 1962 to 1988; no foreign investors operated in the country during that time, because of the ‘strict nationalistic policy and the lack of an appropriate legal framework’ (MOGSS, 2016: 103). The first friendly signals were sent to foreign investors after 1998 due to the partial liberalization of the industry. Since then, oil majors like Chevron, CNOOC, Daewoo, International, ONGC, Petronas, PTTEP, Total and Unocal have invested in Myanmar, participating in exploration and production activities within the framework of Production-Sharing Contracts (PSCs). The owner of such PSCs is the state-owned company MOGE, under the Ministry of Energy.

Largely because of the US-imposed sanctions, only a few international oil companies were operating in the country before 2012. These sanctions were eased in 2012, triggering increased interest in Myanmar on the part of European and Asian investors. In 2012, Myanmar opened the door by inviting foreign investors to bid for onshore and offshore blocks. At present, 17 foreign and local companies are working on 27 onshore exploration blocks and oilfields. There are 20 foreign companies implementing exploration and production activities on 36 offshore blocks. Among them are BG, Chevron, ConocoPhillips, ENI, Oil India, Ophir, PetroVietnam, Shell, Statoil, Total and Woodside.

Prior to 2012, four major operators had discovered and produced natural gas. Total in cooperation with Chevron, PTTEI and MOGE were the first: they discovered gas in 1992 and started gas exports in 1998. Petronas Carigali Myanmar Limited (PCML) together with Nippon Oil, PTTEPI and MOGE had their first discovery at the Yetagun field in 1992, followed by production in 2000. The third operator, Daewoo, together with GAIL, ONGC Videsh and KOGAS, discovered gas reserves in 2004 and began production in 2014. And the fourth operator, PTTEPI, discovered gas in 1997 at the Zawtika field and started production in 2014.

Aside from numerous foreign oil companies, the government relies heavily on the assistance of foreign consultants in complex matters related to petroleum production and exploration activities. Foreign consultants and practitioners are hired directly or indirectly via consulting firms, many of which are located in neighbouring countries like Japan, Malaysia, Singapore or Thailand. Consultants should also be recognized as important actors shaping the investment climate in the energy sector.

3. Myanmar in the rankings

3.1. Investment climate formation in emerging markets

There are various challenges involved in studying the business climate in resource-rich countries in transition. One is the frequent lack of reliable data (Overland, 2011; Dansie, Lanteigne and Overland, 2010). Another is the issue of informality: informality is sometimes viewed as a problem-solving instrument in transition economies, so informal institutions and practices often play a more prominent role than in developed countries (Dunn, 2003; Peng, 2003). Because informal practices are difficult to capture and measure, research on economic issues or the business environment may not fully reflect the reality on the ground.

Before taking an investment decision in a specific country, investors often consult assessments by the World Bank, IHS Global Insight, Transparency International, the Economist Intelligence Unit, etc. However, as explained, these indices may fail to provide an industry-specific assessment of the business climate. Aggregate country rankings (like the World Bank's Ease of Doing Business Index) are not always helpful for companies seeking to understand the business climate in a specific industry.

In emerging economies like Myanmar it is important to take contact with peer companies already operating in the country, to gain informal insights into current operating conditions and the rules of the game. Networking activities and communication channels are particularly valuable. Informal insights, albeit subjective, can prove essential for a company seeking to explore the business climate and take investment decisions. Thus, collecting information from directly involved market participants can serve as an alternative and complementary approach to assessing the business climate in a given industry by the reports of international organizations.

Moreover, there has also been criticism of using international rankings as guides to the business climate in emerging economies. According to *The Economist* (2015), 'a favourable spot in the World Bank's list (*Ease of Doing Business Index*) is useful when pitching for foreign-direct investment or aid. Yet when such a measure becomes a target of policy, it may cease to be a reliable guide.' For instance, Russia had risen from rank 120 in 2010 to rank 62 out of 189 countries in 2015 – while domestic and foreign capital fled the country. As Sergei Alexashenko put it, 'the situation in Russia is not just bad, but downright ugly' (*Moscow Times*, 2015). Rwanda is another example. The government of Rwanda has a unit under the Ministry of Foreign Affairs 'whose exclusive focus is on improving the country's place in international rankings' (Cooley and Snyder, 2015: 5). As a result, despite pervasive poverty and underdevelopment, the country made a leap from 158th place in 2005 to 32nd place in 2014, ahead of Israel (35th), Belgium (36th) or France (38th) (World Bank, 2013). Rwanda is a country that seeks to improve its position on the Index 'by amending regulations in ways that have little substance' (*Economist*, 2015). These amendments often include targeted improvement of formal regulations (e.g. reducing the time needed to get access to electricity) while failing to reflect actual implementation practices. The problem with the Ease of Doing Business Index is that it is based not on company surveys but on assessment of legal norms and regulations which often 'may be out of touch with reality' (*Economist*, 2015). Statistics on getting access to electricity are also not the best indicator, as they say nothing about the reliability of power supply, thus raising more questions about the actual ease of doing business in a given country.

Moreover, indices and rankings often use data that are two or three years old, no longer reflecting the reality and processes underway. This is especially true in countries undergoing rapid change – such as Myanmar. For instance, the World Bank Ease of Doing Business Report issued in 2014 uses data on 2012–2013, thus informing companies about the situation of the past but failing to reflect current dynamics.

3.2. Analysis of existing international rankings and indices

For the present report, we identified 43 rankings and indices that assess (directly or indirectly) the investment climate and conditions for doing business in various countries (see Table 4). The list comprises diverse rankings and indices. The indicators were included for various reasons: direct (Resource Governance Index) or indirect (e.g. Asia Pacific Investment Climate Index) relevance to the energy sector; coverage of political risk (e.g. Country Risk Service); assessing the general business climate (e.g. World Bank Ease of Doing Business Index) or specific aspects of the business climate (e.g. Transparency International Corruption Perception Index); measuring FDI (e.g. Inward FDI Performance Index); as well as other indices and rankings that cover and assess the business climate. Covering political risk is also important, as that remains an issue in developing economies where governments often play a negative role through red tape, expropriation, corruption, regulations that restrict FDI and non-tariff barriers which in turn affect the investment climate. As noted by Conklin (2002), the interventionist role played by government is especially acute in the natural resource sector, with the risk of nationalization, heavy taxation or new regulations being particularly severe in many countries. In this regard, the Index of Economic Freedom is a useful tool for a risk-return analysis, as it provides an indication of how safe investors are from government intervention (Conklin, 2002).

None of the 43 ‘doing business’ indices fully cover the investment climate in any given country: they provide certain perspectives and shed light on certain issues. Some indices and rankings remain interrelated; also, some rankings rely on data from other indices.

Attempts have been made to create composite indices. For instance, in compiling the 2015 Corruption Perception Index, Transparency International used 12 data sources, including existing rankings and indices such as the Bertelsmann Foundation Transformation Index, the Economist Intelligence Unit Country Risk Ratings, the Global Insight Country Risk Ratings, and the World Justice Project Rule of Law Index (Transparency International, 2015). Another example of a composite index is the Forbes Best Countries for Business Index, which draws on data from the Heritage Foundation, the World Economic Forum, Transparency International, Freedom House, the World Bank, the CIA, and the Property Rights Alliance. One problem with composite indices is that they use data from different and sometimes non-comparable sources as well as from different years. For example, Transparency International used the Bertelsmann Foundation Transformation Index for 2016 and the Global Insight Country Risk Ratings for 2014 in the same version of its Corruption Perception Index.

3.3. Myanmar’s position in international investment climate rankings

Of the 43 rankings and indices, Myanmar is included in 21 (see Table 4 and Figure 3). Table 4 lists international investment climate rankings and when Myanmar was included the first time. As that was generally from 2014 onwards, they cannot provide a long-term perspective on how Myanmar’s performance has changed. Myanmar is ranked very low in most of the rankings where it is included.

Table 4. Myanmar in the rankings

World Bank business rankings and reviews	
1. The Little Data Book on Private Sector Development	Since 2013
2. Ease of Doing Business Index	Since 2014
3. Subnational and Regional Doing Business	Since 2014
4. Business Environment and Enterprise Performance Survey (BEEPS)	×
5. Investment Climate Assessment	×
6. Investing across Borders	×
7. Global Investment Promotion Benchmarking	×
8. Better Regulation for Growth	×
9. Business Environment Snapshots	×
10. Entrepreneurship Database	×

Other rankings and reviews	
11. Globalization Index	1970–2013
12. Economic Freedom Index	Since 1980
13. <i>The Economist</i> Country Risk Service (EIU)	Since 1997
14. Country Credit Survey (Institutional Investor)	Since 2001
15. Transparency International Corruption Perception Index	Since 2003
16. Bertelsmann Transformation Index (BTI)	Since 2006
17. US Department of State Investment Climate Statements	Since 2009
18. Inward FDI Performance index	Since 2011
19. Inward FDI Potential index	Since 2011
20. Euromoney’s Country Risk ratings	Since 2011
21. Resource Governance Index (RGI)*	Since 2013
22. Asia Pacific Investment Climate Index by Vriens & Partners	Since 2013
23. COFACE Business Climate Rating	Since 2013
24. COFACE Country Risk Rating	Since 2013
25. Global Competitiveness Index (World Economic Forum)	Since 2013
26. Investment Policy Review (OECD)	Since 2014
27. Climatescope	Since 2015
28. D&B Country Risk rating	n.d.
29. IHS Global Insight Country Risk Ratings	n.d.
30. Energy Trilemma Index	×
31. Political Risk Index (PRIX)	×
32. Ernst & Young Renewable Energy Country Attractiveness Index	×
33. Linaburg-Maduell Transparency Index	×
34. ADB Investment Climate Surveys	×
35. International Country Risk Guide (ICRG) / Political Risk Investor PRS Group	×
36. ADB Investment Climate Surveys	×
37. Global Entrepreneurship Monitor (GEM)	×
38. Regulatory Impact Analysis (RIA) Inventory	×
39. IMD World Competitiveness Scoreboard	×
40. A.M. Best Rating	×
41. OECD Product Market Regulation Index	×
42. Business Environment (EIU)	×
43. Venture Capital and Private Equity Country Attractiveness Index	×

× - Myanmar is not included

* Indices in **bold** specifically cover the energy sector

Of the 43 rankings, only six specifically concern the energy sector: The Resource Governance Index (RGI); the Energy Trilemma Index; Climatescope; the PRIX Index; the Ernst & Young Renewable Energy Country Attractiveness Index and the Linaburg-Maduell Transparency Index. The only one of these that covers Myanmar is the RGI. Several tentative conclusions can be offered here. First, investors use general country indices to learn about the country and then draw conclusions about the energy sector based on these rankings. Second, relying on general business rankings may not be helpful for understanding the specific business climate in the petroleum or renewable energy sectors. Third, the energy sector is often governed by different rules and regulations compared to other industries.

In fact, only a few rankings are relevant for the energy sector in Myanmar. The PRIX Index and the Linaburg-Maduell Transparency Index are inapplicable. The PRIX index forecasts the effects of political developments on oil exports from the world’s 20 largest petroleum-exporting countries, but Myanmar is not among these major exporters at present. The Linaburg-Maduell Transparency Index measures the transparency of sovereign wealth funds in resource-rich economies. Myanmar has not established such a fund, making that index irrelevant for Myanmar; in any case, it has limited relevance for the business climate.

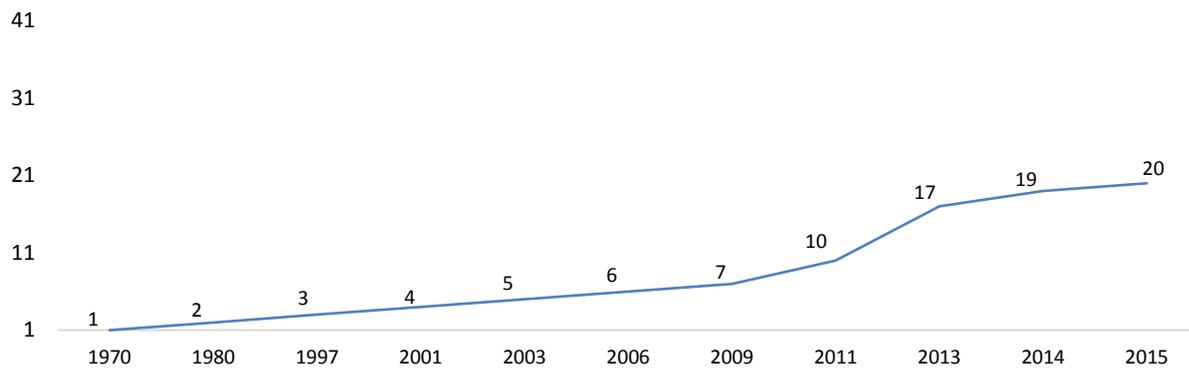


Figure 3. Number of international ratings covering Myanmar by year

The RGI and Climatescope have been applied to Myanmar before; two others (Energy Trilemma Index and Ernst & Young Renewable Energy Country Attractiveness Index) may cover Myanmar in the future. We therefore discuss these in further detail here.

1) *The Energy Trilemma Index*, compiled by the World Energy Council, assesses countries in terms of their capacity to pursue sustainable energy policies along three dimensions: ‘Energy security: the effective management of primary energy supply from domestic and external sources, the reliability of energy infrastructure, and the ability of participating energy companies to meet current and future demand; energy equity: the accessibility and affordability of energy supply across the population; environmental sustainability: the achievement of supply and demand-side energy efficiencies and the development of energy supply from renewable and other low-carbon sources’ (World Energy Council, 2015). The Index covers 130 countries and sets no limits in terms of country selection – so Myanmar may be included someday. Part of the reason why Myanmar has not been included thus far relates to the difficulties of data availability, as the index requires comprehensive macro- and micro-level country data to capture energy performance and the contextual framework.¹

2) *Climatescope*. In 2015, the country finished 37th among all Climatescope countries. Myanmar’s ranking rose five places from 2014, when it scored 0.78. This was largely due to improved scores on several indicators. Myanmar’s score on the Enabling Framework indicator ‘increased year-to-year from 0.65 to 0.84, while its ranking improved from 49th to 44th’ (Climatescope, 2015: 135). Myanmar also improved its score on the Clean Energy Investment & Climate Financing indicator due to the increased investment in clean energy (575 million USD).

3) *The Ernst & Young Renewable Energy Country Attractiveness Index (RECAI)* measures the attractiveness of the renewable energy industry based on assessment of five main factors: energy imperative (assessing the prioritization of renewables compared to fossil fuels and the extent to which electricity costs impact the case for renewable energy); policy enablement (the country’s long-term energy strategy and policies to support and achieve it); project delivery and diversity of natural resources (including the analysis of energy market access, infrastructure and finance indicators); technology potential (analysis of power offtake, incentive regimes, existing mechanisms such as feed-in tariffs, premium tariffs, auctions, green certificates); and technology weightings (assessing current and projected investment in renewables) (Ernst & Young, 2016). For each of the five factors a series

¹ Energy performance relates to supply and demand, the affordability of energy access, and the environmental impact of the energy use. The contextual indicators cover the broader aspects of ‘energy performance including societal, political and economic strength and stability’ (World Energy Council, 2015).

of datasets are composed and converted into several subscores to create one general RECAI score for each country. Myanmar is not covered by the index, mainly because of the lack of an institutional environment and policies for promoting renewable energy. Therefore, we consider it premature for Myanmar to work towards RECAI inclusion, as it fails on all five factors and will need to conduct comprehensive reforms to be eligible for assessment. One such reform measure would be the creation of a separate government institution responsible for renewable energy (see subsection 6.2 for details). Moreover, to obtain a high score a country must move away from energy subsidies in electricity production. Since the government subsidizes grid electricity in Myanmar, the country would get a low score in terms of market attractiveness for renewable energy. Data availability is again an issue here. The Ernst & Young index relies on extensive country and sector statistics that Myanmar does not produce.

4) *The Resource Governance Index (RGI)* was previously compiled by the Revenue Watch Institute, which was later became the Natural Resource Governance Institute (NRGI). It assesses the quality of governance in the petroleum and mining sectors (Revenue Watch Institute, 2013). The governance dimensions covered include the institutional and legal setting; reporting practices; safeguards and quality controls; and enabling environment. In the most recent index update (2013), Myanmar was ranked 58 out of 58 countries, i.e. an extremely unattractive place for investment in the petroleum sector. On the dimension 'Institutional and Legal Setting' the country scored 8 out of 100 points. Main weaknesses concern the lack of rules defining the licensing system, the role of governmental bodies, tax payment to the budget from national companies, established fiscal system for petroleum revenues, as well as widespread corruption and frequent policy changes that pose a significant risk. Moreover, there is in Myanmar no law on freedom of information. The data collected for 2013 relate largely to the period before 2013 and do not cover the changes in Myanmar since then. The new index update is planned for release in 2017. We expect to find that Myanmar will have improve its score (data from 2016) thanks to ongoing reform measures, as well as the adoption of an environmental and social impact assessment system to be applied to all exploration and production projects involving foreign investors. Furthermore, Myanmar joined the Extractive Industries Transparency Initiative (EITI) as a candidate country in 2014, which also help improve its score.

On the 'reporting practices' dimension of the RGI, Myanmar is ranked 57 out of 58 countries, scoring only 5 out of 100 possible points. That indicates significant gaps as regards public disclosure of information on licensing and contractual terms as well as insufficient coverage of energy industry data available to the public. According to NRGI, the Ministry of Finance or the Ministry of Energy should be the main sources of information in this regard. Some information on licence fees and subsidy costs is published by the Central Bank of Myanmar, but only in a paper-based format with no data available online. The same concerns the Central Statistical Organization, which has published only selected data on gas production and export volumes.

On the 'safeguards and quality controls' dimension, Myanmar was ranked 57 out of 58 countries, scoring only 2 points out of 100. This low score was due the lack of oversight mechanisms over extractive sector management. The major problem is sudden fiscal policy changes and the fact that the decisions of the licensing authorities cannot be appealed. In addition, according to the Revenue Watch Institute (2013: 1), 'Myanmar's auditor general has the authority to scrutinize extractive revenues, but audit procedures are not known, reports are not made public, and the auditor's findings are not systematically presented to lawmakers.'

Finally, on the dimension 'enabling environment', Myanmar ranks last, 58, scoring only 2 points out of 100. Major problems here are poor control of corruption, government ineffectiveness, lack of democratic accountability or the rule of law. Moreover, the main state-owned company Myanma Oil and Gas Enterprise (MOGE) publishes little information on its activities. The 2017 RGI update should indicate where progress has been achieved from 2013 to 2016, and where further efforts need to be made. As energy FDI increased greatly during that period, significant improvement of governance can be expected in the petroleum sector. The first successful democratic elections in

Myanmar in many decades will improve the country's standing, even though the military has retained control in several key areas. While we assume that Myanmar managed to achieve some progress in other areas as well (adoption of an environmental and social impact assessment procedure, EITI, and other measures), this was not significant enough to explain the large FDI inflow into the petroleum sector. Thus, we may argue that foreign investors were driven by expectations of possible changes and progressive reforms, and not so much by actual changes in the business climate. Moreover, it is also reasonable to assume that foreign investors applied a risk-return investment logic (Conklin, 2002), expecting the high risk level in Myanmar to be compensated by higher returns on investments.

It is also important to note that the World Bank's Ease of Doing Business provides a general assessment of the business climate and should be viewed as the most widely used and cited as regards general analysis of business conditions. Table 5 shows that Myanmar is the bottom performer among the ASEAN countries in this index, scoring low on all indicators – including starting a business, dealing with construction permits, getting access to electricity, registering property, obtaining credit, protecting minority investors, paying taxes, trading across borders and resolving insolvency. Myanmar's score on enforcing contracts remains among the lowest in the world (ranked 187 out of the 189 countries covered by the 2016 index). However, Myanmar did move up from 182nd place in 2014 to 167th place in 2015.

However, an improved position in international rankings does not necessarily translate into a significant rise in FDI. Jayasuriya (2011) studied whether improvements in rankings led to greater FDI from 2006 to 2009, in developed and developing countries. While he found a significant relationship for the average country, there is only an insignificant, although positive, impact on FDI inflow when applied to developing economies. Moreover, states pursuing large-scale reforms do not necessarily manage to attract significant FDI. Part of the explanation may be that rankings provide only part of the story, and formal indicators of reform measures are not always helpful in assessing an investment climate in developing economies as they fail to capture other factors such as informality and discrepancies between formal legal norms and their application. In assessing Myanmar's investment climate in the energy sector, it is important to complement the external perspective provided by international rankings with an internal one based on the experiences and views of market players on the ground (see Section 4).

Table 5. World Bank Ease of Doing Business ranking of ASEAN nations

Country	2012	2013	2014	2015
Singapore	1	1	1	1
Malaysia	18	12	6	18
Thailand	17	18	18	49
Brunei Darussalam	83	79	59	84
Vietnam	98	99	99	90
Indonesia	129	128	120	109
Cambodia	138	133	137	127
Philippines	136	138	108	103
Lao PDR	165	163	159	134
Myanmar	-	-	182	167

Source: World Bank (2016).

There is a dilemma: on the one hand, the government can work on getting Myanmar included in more rankings; on the other hand, in the present situation the country is likely to be ranked low – which could have an adverse effect on the country's FDI attractiveness, as investors may be reluctant to enter a country that is assessed so negatively. Myanmar could opt out of the majority of rankings, and focus on improving its business climate and entering the rankings at a later stage at a higher level. There is a problem with this approach, though: being part of a ranking system may create a stronger incentive for the country to improve the investment climate and its main indicators, while being outside the ranking system may lower the pressure for change.

4. Further assessment of the investment climate in Myanmar

4.1. Market knowledge and information sources used by foreign companies

What information sources do foreign investors utilize in order to succeed in Myanmar? We asked our respondents to comment on how foreign investors learn about the investment climate in the energy sector and which sources they use to obtain reliable information. The general perception was that the investment climate in Myanmar is heterogeneous. As the CEO of one private company noted, ‘every company entering the market has to start from scratch. This causes lots of disappointment as you cannot copy the success strategies of those companies that have already operated in Myanmar. Thus every company needs to come up with its own entry strategy.’ However, while strategies need to be company-specific, data collection practices about the investment climate tend to be more similar across companies.

In devising a successful entry strategy, international oil companies rely on various sources. We find that companies use three main tools in trying to understand the petroleum and renewable energy sectors in Myanmar: doing market research; use of advisory services; and international sources and rankings. Figure 4 shows the priority order of the most common sources of information that primarily foreign companies but also other stakeholders use in learning about the investment climate in Myanmar. Companies generally rely on a combination of sources. Our respondents were asked to rank sources from the most important (1) to the least important (3) (see Figure 4).

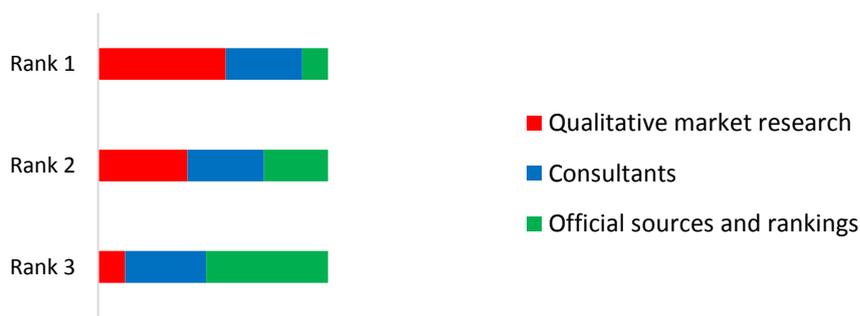


Figure 4. Sources of information on business climate in the energy sector in Myanmar

This framework can also be presented on an ‘informal–formal’ dimension. As shown in Figure 4, investors rely more on informal sources of information than formal ones in making investment decisions. Doing one’s own market research implies reliance on informal sources through networking, attending conferences and meetings; valuable information is often transmitted by word of mouth. It is imperative to be present in Myanmar for some time and learn from the inside. Companies do their own market research by establishing small offices with employees who spend time in the country, gathering information mainly through informal sources and networks. As the head of a foreign petroleum company noted, ‘for the moment, market intel is pretty low, next to nothing. What do companies do? They talk to locals and foreigners working here, they network.’ Another company CEO stressed that ‘rankings are insufficient; the only way is to go and talk to people.’ Numerous companies from Japan and Singapore establish representative offices in Myanmar for this type of information gathering, and as a result these two countries are seen as well informed about the business climate in Myanmar.

When asked whether international rankings present a realistic portrait of the investment climate in Myanmar, most respondents said that some of the rankings do not reflect the real situation. As the head of a foreign oil company noted, ‘the Corruption Perception Index is inaccurate when applied to Myanmar. We have experienced zero corruption cases over several years. From my experience, the level of corruption is higher in Indonesia compared to Myanmar. But the World Bank’s Ease of Doing Business is more attuned to show the real picture – maybe because it uses more reliable

sources.’ The head of a foreign engineering company emphasized that ‘international rankings have been wrong portraying the business climate. We have not experienced a single act of corruption in one year. I would rather say that rankings put Myanmar so low because so little information is available and the sources have low transparency.’ Better access to data partly explains how Myanmar can move from 157th place in 2013 to 147th in 2015 in the Transparency International Corruption Perception Index (Transparency International, 2016).

One researcher interviewed for this study mentioned that, apart from the Resource Governance Index, hardly any of the existing rankings reflect the petroleum sector as such. Most respondents noted that part of the reason why Myanmar does so poorly on international rankings is not necessarily related to poor governance, weak law enforcement or pressure from the state, but rather due to lack of data. If data are not available for a certain indicator, then by default the score gets set to ‘low’, ‘poor’, ‘weak’, etc.

Thus, increasing the availability of data is a key measure for boosting Myanmar’s investment climate. However, this is not only a matter of data availability – also important are path-dependent practices and inertia on the part of government officials and bureaucrats. As one respondent noted, ‘sometimes the necessary information is there, but the government is not eager to disclose it because they were under sanctions for so many years and kept many things confidential and were not interested in disclosing them. Now they’re trying to open up and policies are changing, but inertia is still there.’

While sceptical towards the international rankings, several respondents took a positive view of the initiative of the Myanmar Centre for Responsible Business (MCRB)² to study the 100 largest enterprises (including energy firms) in the country. This initiative aims at improving disclosure practices and enhancing transparency on the part of Myanmar companies (Myanmar Centre for Responsible Business, 2014, 2015). The MCRB study compares the websites of 100 of the largest Myanmar companies and scores them on what they report concerning corporate governance and business practices, particularly as regards corruption, organizational transparency, human rights, health, safety and the environment (HSE). However, it includes only published information and does not assess actual firm performance. As noted by one expert we interviewed, ‘international rankings are not so helpful, but the MCRB ranking of company performance gives the real picture.’

4.2. Obstacles and opportunities for foreign energy investors

The opening of the Myanmar economy to foreign investors led to an exploration rush by international companies after 2012. Yet, Myanmar is still regarded as a difficult place to do business. The government’s take in the petroleum sector is among the highest in the world. That, coupled with geological uncertainties and lack of data, should make the country less attractive to foreign investors. However, its quick learning curve, strategic location and untapped potential can still make Myanmar attractive. The improvement in the investment climate from 2012 to 2016 is also an important factor. As the CEO of a private firm argued, ‘until recently there used to be four Ls: investors *looked, listened, learned...and left*. Now the situation has improved and makes them stay interested in the market. Some enthusiasm has been spurred by progress made so far, but it still remains slow.’

According to the World Bank’s 2014 Enterprise Survey, access to finance, land, and electricity are major constraints to doing business in Myanmar. Almost equally important is the shortage of skilled labour. Figure 5 shows the major concerns related to investing in Myanmar, from the most important (access to finance) to the least important (crime, theft and disorder). A positive trait is that crime rates in Myanmar are negligible compared to the other ASEAN countries. The lack of concern about crime and crime-related losses ‘provides some much needed good news for Myanmar’s investment climate’ (World Bank, 2014: 4).

² MCRB is a Yangon-based joint initiative of the UK-based Institute of Human Rights and Business and the Danish Institute for Human Rights aimed at providing a platform for the creation of knowledge, capacity and dialogue to foster more responsible business practices.

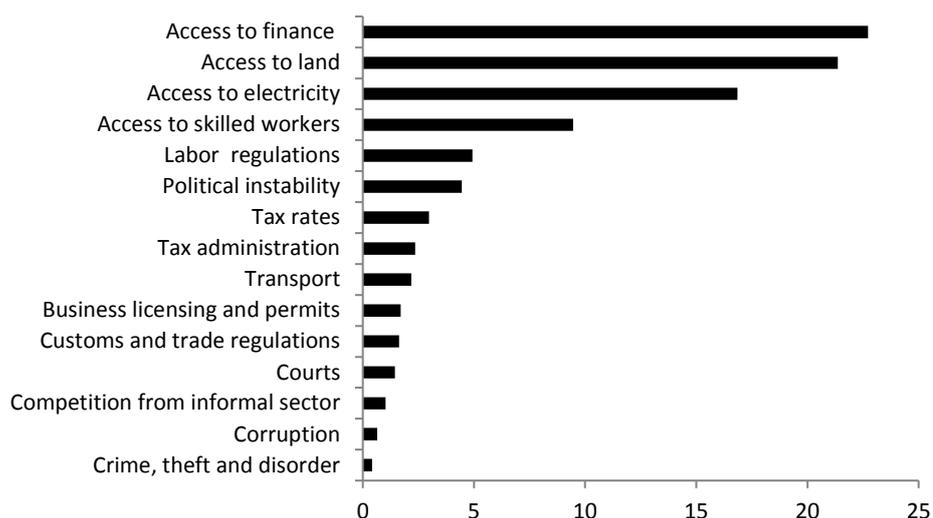


Figure 5. Main concerns of investors in Myanmar (World Bank Enterprise Survey 2014)³

Figure 6 shows that Myanmar relies more on own funds than bank loans for investments in fixed assets (World Bank, 2014: 6) – indicating deficiencies in the country’s banking sector. Table 6 provides a regional comparison of the investment climate among the Asia Pacific countries in 2014. Myanmar is ranked second last on rule of law, openness to international trade and business, political stability, taxation, corruption and fiscal and monetary administration, doing only slightly better than Bangladesh. However, according to the World Bank (2015), Myanmar made noticeable progress on its taxation system in 2014, especially by reducing the corporate income tax rate.

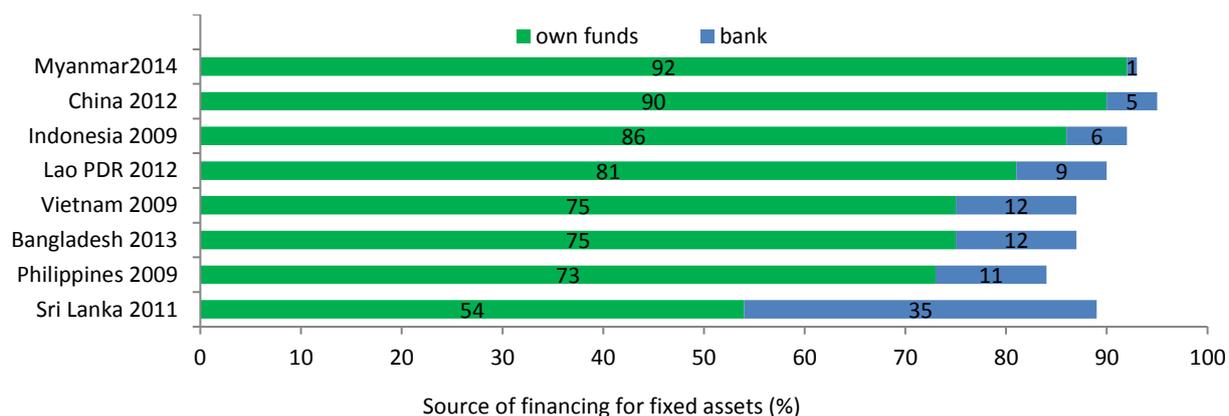


Figure 6. Source of finance (World Bank Enterprise Survey 2014).

Table 6. Asia Pacific Investment Climate Index 2014

Rank	Economy	I. Rule of law	II. Openness to in. trade & business	III. Political stability	IV. Taxation	V. Corruption	VI. Fiscal & monetary admin.	Overall Score
1	Singapore	2	2	2	1	2	1	89.8
2	New Zealand	1	3	1	3	1	6	87.1

³ In 2014, the World Bank conducted its first Enterprise Survey in Myanmar involving 632 firms of varying sizes ‘Enterprise Survey is the world’s most comprehensive company level data in emerging markets and developing economies’ (World Bank, 2014).

3	Hong Kong	4	1	5	2	4	3	86.9
4	Australia	3	4	4	10	3	4	80.4
5	Brunei	9	10	3	4	7	2	73.5
6	Taiwan	6	5	7	7	6	7	73.1
7	Japan	5	7	6	11	5	10	72.9
8	South Korea	8	8	8	6	8	5	69.5
9	Malaysia	7	6	11	5	9	9	66.9
10	Thailand	10	9	18	8	10	12	57.4
11	China	11	13	10	14	11	8	54.6
12	Philippines	12	11	13	16	12	11	51.6
13	Vietnam	15	15	9	15	15	16	47.7
14	Cambodia	17	12	14	9	18	15	47.3
15	Indonesia	16	16	17	12	16	13	46.7
16	Sri Lanka	14	14	16	19	14	19	44.9
17	India	13	19	15	20	13	18	43.7
18	Laos	19	20	12	17	19	14	41.9
19	Myanmar	18	17	19	18	17	17	39.7
20	Bangladesh	20	18	20	13	20	20	35.7

Source: Vriens & Partners (2014: 5).

Because oil was there already in the 19th century, Myanmar has considerable experience with oil and gas extraction and a long history of relevant legislation (MCRB, IHRB and DIHR, 2014: 56):

- the Oilfields Act (1918)
- the Oilfield Rules (1936)
- the Petroleum Act (1934)
- the Petroleum Rules (1937)
- the Essential Supplies and Services Act (Law No. 13/2012)
- the Water Power Act (1927)
- the Oilfields (Labour and Welfare) Act (1951)
- the Petroleum Resources (Development Regulation) Act (1957)
- the Law Amending the Petroleum Resources (Development Regulation) Act (1969)
- the Oilfield (Workers and Welfare) Act (1951)
- the Myanmar Petroleum Concession Rules (1962)
- the State-Owned Economic Enterprises Law (1989)

All these laws were passed 25 or more years ago and none of them are fully relevant for current conditions in the industry. Moreover, the law texts are not easily available to the general public. The 1918 Oilfields Act is being revised; however, the draft revised version has not been made publicly available (MCRB, IHRB and DIHR, 2014: 55).

Until 2015 Myanmar had no proper environmental legislation in place to regulate the petroleum sector. Following the recommendations of the ADB and based on the guidelines of the IFC and the experiences of neighbouring countries, the Ministry of Environmental Conservation and Forestry adopted Notification No. 616 / 2015 on 29 December 2015, setting out the procedure for Environmental Impact Assessment (EIA) (*Myanmar Times*, 2016). It stipulates that every project with potential adverse effects must be reviewed by the Ministry before being approved. Deputy Minister for the Ministry of Environmental Conservation and Forestry, Daw Thet Then Zin, noted that the EIA procedure can be used to identify potential consequences of projects on socioeconomic development with the aim of reducing the impact on the environment, and that 'EIA systems would be applied in Myanmar as they have been across the ASEAN countries' (*Myanmar Times*, 2016). The EIA procedure is an important element in sustainable natural resource management and has been adopted by many resource-rich countries. It is also important as regards the Resource Governance Index (RGI), which

includes assessment of the country's environmental performance and application of environmental norms to extractive resource projects involving foreign investors.

Law enforcement has remained weak in Myanmar. Several pieces of recently enacted legislation, like the labour law and the taxation law, are not appropriate for the oil and gas industry. For instance, it is difficult for oil and gas companies to hire staff for a rotational work schedule of 28 days on and 28 days off for offshore operations, as the Myanmar Labour Law allows only 48 working hours and 6 working days per week. Anything exceeding a 48-hour work-week is subject to overtime charges.

Another challenge is the limited infrastructure in the petroleum sector. The lack of banking facilities is the greatest problem, but currency regulations are also an important issue. Other challenges relate to underdeveloped transportation, insurance, medical assistance and evacuation services and offshore supply base. Energy companies investing in Myanmar experience added costs and the need to spend time on extra planning for their project.

The low availability of geological data is a serious obstacle to local and foreign companies alike. Myanmar has no unified repository system with geological data. Geological studies are time-consuming and costly, with the overall probability of finding resources being quite low. As an expert interviewed for this study noted, 'companies that invested in offshore production in recent years expect first production to start in 2030. There is quite a high degree of uncertainty due to the difficulties of geological exploration.' This is, however not directly linked to the business environment, so the government's ability to improve the situation is limited. Relevant ministries can only assist the companies by providing full support and reducing the bureaucratic burden entailed in exploration activities.

Another challenge is finding a local partner. When bidding for onshore blocks and offshore shallow-water blocks, companies need to find an appropriate local partner. Foreign investors have to create joint ventures with a government enterprise (generally MOGE). This restricts the operations of foreign companies. In Myanmar, there are more private service companies operating in the oil and gas industry than public ones, making it difficult to find the right local partner as regards technical capability, professionalism, due diligence and compliance.

Furthermore, production-sharing agreements remain cumbersome for foreign oil and gas companies. Myanmar's offshore blocks are large and, because of limited seasonal climatic windows, only the big petroleum players have the capacity to enter into production-sharing contracts (PSC). The company's share of a PSC is generally low, so only significant discoveries are economically viable. Thus, the current structure of PSCs does not accommodate the development of marginal fields. Moreover, not much technical data on the blocks is publicly available. If foreign companies are interested in the data that do exist, access requires approval from MOGE, often slowing down the entire process from the start.

Lack of skilled professionals, especially engineers, is another problem. The average productivity of workers in Myanmar (in USD 1700) is 70% lower than the average in the ASEAN region (individually: USD 8400 in Thailand; USD 7800 in China; USD 6500 in Indonesia; USD 5500 in the Philippines and USD 2200 in Vietnam) (McKensie, 2013: 2). As for local content requirements regarding human resources, the Myanmar legislation is almost non-existent. As the CEO of a private company interviewed for this study argued, 'lack of regulations as regards local content is a huge loss for Myanmar. They need to adopt a clear set of rules to ensure recruitment of non-skilled and skilled local labour and provision of training to them to upgrade their qualifications. Each new PSC should specify the rules for this.' According to informal practice, 80% of employees and workers are foreigners and paid more than locals; 20% are local staff, mainly unskilled labour. Some companies like Total apply a 30/70 division, drawing on international best practices. Chinese energy companies (e.g. CNPC) prefer to hire Chinese. As one local expert explained, 'Chinese companies bring their labour and usually hire only a few Burmese. This disappoints locals a great deal.' One interviewee representing the private sector indicated that 'foreign investors tend to recruit more foreign unskilled employees. But I am sure there is more space for locals and Myanmar needs to increase its local content rate.' When asked

about importing foreign specialists, our respondents emphasized that there are no formal restrictions, and it is a relatively easy process because no scrutiny or approval of qualifications is required. According to the Oxford Business Group (2015: 77), at present there are no procedures for applying and obtaining work visas for foreign nationals.

Besides the challenges described here, mention must be made of *opportunities* that attract foreign investors. In March 2012, a new Foreign Investment Law⁴ was passed, applicable also to investment in the oil and gas and renewable sectors. With this law, the government hoped to obtain technology and capital from foreign companies to revive the country's dwindling oil industry. Several important changes were introduced regarding interaction with foreign investors and the goal of attracting FDI in the country. These incentives include the following (ADB, 2015: 56):

- 5-year income tax holiday for foreign investors;
- exemption from tax on profits if the profits are maintained in a reserve fund and reinvested in Myanmar within 1 year;
- for exported goods, income tax relief of up to 50% of the profits;
- deductions for R&D expenses;
- right to carry forward a loss and offset it against profits for up to 3 consecutive years from the year the loss is sustained;
- exemptions or relief from customs duties for the import of machinery, equipment, instruments, machinery components, spare parts, and materials required for the enterprise.

Foreign investors are also allowed to invest in the oil and gas sector through joint ventures in an 80/20 shareholding ratio in favour of the foreign investor (Oxford Business Group, 2015: 87), giving them significant control over the company, unlike previously. Moreover, the law specifies which business activities are allowed for foreigners and which activities are restricted. For instance, foreign investors are now allowed to lease but not own property. The law 'also assures investors that their investments will not be nationalized during the contract period, their permits will not be terminated without good reason, and their foreign currency can be repatriated in the same foreign currency' (ADB, 2015: 56).

It is important to note that while the petroleum sector is regulated by the Foreign Investment Law of 2012 as well as drawing on five different petroleum laws adopted in different periods of the country's history, Myanmar has no specific laws on renewable energy or related FDI. The sector is regulated solely by the Foreign Investment Law. A renewable energy strategy is currently under preparation (ADB, 2015: 3). In order to attract FDI, the 1984 Electricity Law permitted the participation of private actors in generation projects; and public energy utilities may establish joint ventures with foreign firms in hydropower and petroleum projects (ADB, 2015: 55).

Other existing opportunities should be viewed through the lens of the external and internal energy supply–demand situation. Myanmar has vast potentials in natural gas. Today, more than 70% of the country's offshore gas production is exported to China and Thailand. If new gas deposits are discovered in Myanmar, there will be a considerable market for gas, not only in China and Thailand but in India as well. According to McKinsey (2013: vii), the 500 million people living in neighbouring countries like China and India represent a large market where the potential for energy is also growing. Myanmar's strategic location, with rising energy demand in neighbouring countries and low transportation costs (especially for gas delivery to China, India and Thailand), represents an opportunity for foreign investors.

Also domestically the rapidly growing energy demand among Myanmar's population of approx. 54 million presents an opportunity. There are plans for increasing the share of natural gas in the generation mix by 2030. The current generation mix includes more hydropower than natural gas. However, hydropower production is unstable; Myanmar suffers frequent electricity cuts during the

⁴ The 2012 Foreign Investment Law 'simplified the process for investment application and offers several tax breaks, incentives and guarantees rights and protections for foreign business ventures' (DICA, 2016).

dry season, and only 33% of the population has access to electricity from the grid. By 2030, the electrification ratio in Myanmar is planned to rise to 92%. That will require installed capacity of 24,980 megawatt (MW). According to the masterplan, 4,247 MW of power generation will come from gas-fired power plants, which in turn will require minimum 1,300 million standard cubic feet of natural gas, and here foreign companies can contribute substantially.

According to McKinsey (2013: 5), Myanmar's GDP will rise past USD 200 billion by the year 2030, four times the present level.⁵ This indicates potentially high growth in consumption, including the consumption of energy. Currently, crude oil consumption in Myanmar is 11 million barrels per year. Estimated crude oil consumption by 2030 will be 140 million barrels per year. Along with the growing demand for oil, there will be significant potential to invest in refineries, oil terminals, oil barges, depots and petrol stations. Thus there are market opportunities for increased production or imports, storage, bottling, distribution and retail of LPG in Myanmar. At present, the local distribution market for petroleum products is monopolized by local suppliers, and access for foreign operators is restricted. Since 2012, several foreign firms have expressed interest in supplying diesel, gasoline and LPG product; however, the government has retained control over the sector, and even joint ventures are not allowed. If this changes, numerous opportunities will emerge, given the size and growth trajectory of the market. Local suppliers experience bottlenecks in their supply chains due to insufficient capacity and infrastructure, so this is an area where large foreign companies can contribute and make a difference. When asked about their perspectives on limited access to FDI in various industries, all respondents stressed that no limitations exist, except for the uranium sector. The oil and gas sector was viewed as the most open and advanced, with the only limitations concerning downstream business. Since 2012 the Ministry of Energy (MOE) and Myanmar Petrochemical Enterprise (MPE) have mooted the idea of privatising energy firms in refining business and creating joint ventures with foreign investors (Oxford Business Group, 2015: 85), but nothing has come of this as yet.

It should also be stressed that civil society and the media have a strong role in Myanmar. All respondents pointed out that both local and foreign companies are increasingly scrutinized by civil society actors in issues related to corporate governance and corporate social responsibility. According to the Myanmar Centre for Responsible Business (2014: 16) investment in the petroleum sector has 'been associated with human rights abuses in the past and although decreasing, still remain a concern.' Since 2012, there have been many instances where the actions of corporations have been questioned in the media. The PWINT THIT SA 'Transparency in Myanmar Enterprises' Initiative promoted by the Myanmar Centre for Responsible Business (MCRB) provides a basis for assessing the activities and performance of the 100 largest companies as regards compliance with the anti-corruption code, as well as their record on organizational transparency and human rights, health, safety and the environment. Civil society actors play an important role by collecting data on the operations of local and foreign companies. They help to fill some data gaps, thereby adding more transparency to the investment climate from the perspective of internal and external actors alike.

Weak state capacity in Myanmar, combined with the political transition, has given NGOs considerable room for manoeuvre. As one of the experts interviewed explained, 'government's ability to execute is limited because of lacking competences and capacity in public administration. The government is overwhelmed by NGOs and spends much time dealing with them. Strong bureaucracy could easily deal with enormous pressure from NGOs. But our bureaucracy is immature.' It is not only NGOs that play a role here: there are also other influential organizations like the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI). Regulators struggle to counter such powerful associations and often have to seek their permission prior to approving or rejecting even simple things such as association registration.

⁵ The consumption can increase by 20 million people spending USD 100 billion compared to the present number of 2.5 million people spending 35 billion USD.

4.3. Public procurement and taxation in the energy sector

Procurement

The main criteria in MOGE tenders are technical competency, financial capability, experience, expertise and technical know-how in the exploration and development in offshore areas. Winning bids are awarded production-sharing contracts (PSCs). In Myanmar, unlike some other resource-rich countries, a new PSC does not require approval or ratification by the legislature (MCRB, IHRB and DIHR, 2014: 55). Based on previous tenders, a committee evaluates the application by its signature bonus and work plan. Those who pass the preliminary stage are allowed to view the block and access data and information, free of charge,⁶ with the assistance of the geological and geophysical team of MOGE. They are then invited to submit proposals for up to three blocks. The fiscal terms are generally non-negotiable, apart from the signature bonus, work commitment and training fund. According to every PSC, oil companies must obtain MOGE approval to participate in the tender process if the amount exceeds USD 100,000. For amounts less than USD 100,000 the company is permitted to procure on its own management without MOGE approval.⁷ According to a local energy expert, 'the approval process at MOGE is usually time-consuming as meetings are often postponed due to unavailability of key employees responsible for decision-making.'

One of the biggest tenders took place in 2013. Most of our respondents noted that, unlike the situation in many other emerging countries where the tender system is opaque, the entire tender process and issuing of licenses was transparent when these tenders took place in 2013. As the head of a foreign company saw it, 'selecting the bidder is quite transparent. Still the system has several drawbacks and flaws in a sense that the rules on the part of the regulator (MOGE) are not always consistently applied.' However, another expert noted, 'foreign investors faced no differences in government attitude and treatment in 2013.' Although the system is perceived as being transparent, it still needs to be further improved. The lack of an electronic system for processing tenders is the key barrier. The head of a private company had a different view regarding transparency: 'Chinese companies operate easily in Myanmar as they are flexible with existing non-transparency while companies from Japan or the US need more information before taking investment decisions.' Poor communication often affects coordination between the government and companies: tenders may be cancelled without the stakeholders being properly or quickly informed. Newspaper announcements are the main source of information in this regard. Otherwise, keeping up-to-date requires staying in close and constant contact with the relevant public bodies. Moreover, even though tenders are publicly announced, the selections committee does not publish detailed results, informs only about the winners. This indicates an overall need to promote e-government in Myanmar, because the situation affects perceptions of the investment climate. The licensing process is also complicated. Box 1 provides an example of a licensing procedure in the petroleum sector.

Box 1. Licensing process

After obtaining a block for exploration, a company needs to import investment or drawback that fall under import license application procedure. The company must submit a pro-forma invoice with separate summaries of investment and drawback items. The items remaining in the country describe investment equipment, whereas drawback items (e.g. drilling rigs and heavy equipment) will leave the country after completion of the project. For investment or drawback machinery and equipment, the operator must submit an application of import by requesting a letter to MOGE in

⁶ Unlike Myanmar, other resource-rich countries like Kazakhstan provide geological information during the tender process, but not free of charge.

⁷ In MOGE, the process for submission of procurement approval passes through two levels: The Technical Committee and the Steering Committee.

Naypyidaw. MOGE then applies to the Ministry of Electricity and Energy. Next, the Ministry of Electricity and Energy must obtain permission from the Myanmar Investment Commission (MIC) for import approval, mentioning the operative requirements. After receiving permission from the MIC, the Ministry of Electricity and Energy will act as focal point for communications with relevant Ministries. The total number of working days for the approval process is 45–60 days. Applications for import of explosives for onshore seismic operations must be submitted to the Ministry of Electricity and Energy, which then sends a request letter to the Ministry of Defence and to the Myanmar Investment Commission for further approval. This approval process takes approximately 120 days. These two examples indicate the cumbersome and time-consuming procedures that must be streamlined if the process is to be made more efficient.

Taxation

Myanmar's tax regime, currently in transition, creates many uncertainties for energy investors despite some progress achieved since 2012. The system in its present form remains ineffective and is at the incipient stage. The government has no tradition of taxation, and is struggling to understand how to go about it. Numerous consulting companies have provided comprehensive overviews of the technicalities of the Myanmar taxation system (see Deloitte, 2016; KPMG, 2016; PWC, 2014).

In Myanmar, the contractor is obliged to sell 20% of its crude oil production or 25% of its natural gas production on the domestic market, after all royalties and taxes are deducted (NRF, 2015). According to one expert interviewed for this study, the 'tax level in the petroleum sector remains a major hurdle for FDI. If foreign investors discover a new oil field after investing USD 10 billion, they need to pay 50% back to the state and so I doubt they will be enthusiastic about entering. The government's take of oil and gas resources is one of the largest compared to other countries.' MOGE is the main body responsible for tax relations with foreign investors, and this is enshrined in the PSCs. The PSC clause implies that MOGE coordinates the tax collection process with foreign investors, making it a one-stop-shop. As an expert explained, 'they have a clear-cut content of rules and regulations on the part of the government.' Concerning PSCs and taxation, the head of a private company stressed:

We are comfortable with the PSCs. Even though there is no new petroleum law recently adopted, these PSCs act as a law. However, the new tax code is currently in conflict with PSCs. For instance, according to the new law for exporting gas one has to pay 8% tax which is in contradiction with the PSCs. These make investors slightly worried. There is an urgent need to elaborate a new petroleum law that would incorporate present conditions and new tax code provisions.

According to the head of a private company:

Taxation is a serious issue here. Regulations are not clear. Even tax officers and government staff often do not understand the regulations. What is good that if you complain your issue gets solved. Otherwise, there is little transparency and it has to be improved a lot. Constant and maybe also necessary changes in the tax code create high unpredictability thus keeping investors in transition and under pressure all the time.

One positive note, respondents said that they felt the government did not change contracts (PSCs) with investors and apply new tax rules, even though international rankings (like the Economic Freedom Index) tend to classify Myanmar as one of the worst performers in this regard. As noted by a DICA representative, 'the tax system changes every year – consistency is a challenge. But contracts cannot be normally changed. If there are some changes in laws, we try to fully protect the investor.'

In the renewable energy sector, tax policy may become a key tool for boosting development. The renewable industry has lagged behind the petroleum sector in terms of government attention, regulatory environment and stakeholder interest. One of the main issues has the government's lack of relevant experience. This has implications for the taxation regime, which today provides fewer

incentives to companies to invest, compared with other attractive renewable energy destinations such as Thailand or Indonesia.

4.4. Assessing the role of public agencies responsible for attracting FDI

Respondents were also asked about the activities of various local agencies in attracting FDI to the country. Here we found consensus about the commitment of the government to pursue the reforms necessary to attract FDI. Responsibility for FDI policy is assigned to the Directorate of Investment and Company Administration (DICA), which serves as a one-stop shop and offers numerous services for foreign investors including establishment and registration of joint ventures. DICA has a special unit, the Myanmar Investment Commission (MIC), that is responsible for all practical matters concerning relations with foreign investors (DICA, 2016).⁸ MIC operates at a higher political level than DICA as its main function is to approve large FDI projects and also to act as an oversight body for DICA. As one interviewee put it, 'DICA is the kitchen and MIC is the menu offered to investors'. Following the adoption of the Foreign Investment Law in 2012, MIC has been restructured and now consists of representatives and experts from government ministries, departments, governmental and non-governmental institutions. Its key function is to review and approve investment proposals and inform foreign investors about the local market situation, including changes in legislation. MIC also approves repatriation of profit for foreign companies through a screening process; final approval takes one to two weeks.

MIC should be seen as an entry-point for foreign investors. Investors need to take part in the bidding system, and interact and negotiate with the Ministry of Electricity and Energy. After agreeing on the contractual terms with foreign investors, the Ministry gives the go-ahead to MIC, which then screens the contract on a case-by-case basis and makes a final decision on whether to allow an investor to come in and start business. Thus, MIC is the highest authority in terms of issuing licenses and allowing investors to enter Myanmar's energy sector.

Our respondents saw DICA as being the most transparent and reliable source of information among the public agencies. However, as noted by one private-sector respondent, 'MIC still has huge room to improve the usability of the information it offers to investors. Some information is missing or inconsistently presented. They should do more than this and expand their capacity.' According to several respondents, MIC has been focusing on and encouraging FDI in trade, agriculture and infrastructure in order to speed up the country's economic development and create more job opportunities. Energy FDI is not singled out on the MIC agenda: special responsibility for energy-related FDI has been assigned to the Ministry of Electricity and Energy.

After investors enter the market and are green-lighted by MIC, the Ministry of Electricity and Energy comes into the picture. The entire petroleum industry in Myanmar is run by this ministry, as it is responsible for coordinating and implementing energy projects. The Ministry of Electricity and Energy also acts as the coordinating body for all types of energy in Myanmar, including renewables, and has oversight of four state-owned enterprises/departments:

- the Energy Planning Department (EPD) responsible for coordination, management and regulation activities
- Myanmar Oil and Gas Enterprise (MOGE)⁹ formally responsible for oil and gas exploration and production

⁸ 'MIC objectives are to protect investors according to the new investment law promulgated by Union Hluttaw (Parliament); to safeguard environmental conservation; to deeply emphasize on social impact; to practice accounting and auditing in accordance with international standard in financial matters including transparency and accountability; to create job opportunities; to ensure enforcement of the labour law; to support corporate social responsibility policies; and facilitate transfer of technology to Myanmar' (MIC, 2016).

⁹ MOGE accounted for 16% of total government revenues and 10% of total government expenditures in 2012–2013 (NRGI, 2016: 1).

- Myanmar Petrochemical Enterprise (MPE) responsible for managing refineries and processing activities
- Myanmar Petroleum Products Enterprise (MPPE) covering retail and wholesale distribution of petroleum products.

In 2013 the National Energy Management Committee was set up to streamline energy policy in Myanmar. The Committee includes representatives from the Ministry of Electricity and Energy, MOGE and ten other governmental institutions involved in energy development (NRF, 2015).

Of these six actors, MOGE is the key government agency dealing with foreign investors. The Ministry of Electricity and Energy invites multinational corporations to participate in upstream projects in Myanmar, in cooperation with MOGE, using PSCs (DICA, 2016). MOGE conducts activities related to exploration and production of crude oil and natural gas in onshore and offshore fields, and has main responsibility for procurement and taxation policies, as explained in previous section of this report.

Myanmar's formal structure of governmental bodies responsible for the energy sector and the management of the petroleum sector is similar to the system in many other countries. However, the distinct role of MOGE should be noted. All respondents agreed that the functioning of MOGE has numerous drawbacks and pitfalls. Especially foreign investors interacting with MOGE need to take into account its many and often conflicting roles. MOGE is an onshore operator, partner in offshore PSCs, regulator, service provider and human resource supplier, all at the same time. As the main regulator, MOGE has the authority to approve exploration programmes, development and work plans and annual budgets. It also monitors contractor performance against agreed obligations, including taxation. This excessive concentration and monopolization of functions in MOGE often leads to conflict of interests and biased decision-making. As one expert we interviewed put it:

Today MOGE is working as an operator, a regulator and a service provider. They play the football game and also referee it at the same time, which is a clear case of conflict of interest. MOGE's role as regulator should be separated and assigned to a different agency. Joint ventures should be formed not only with MOGE but also with other companies.

Aside from conflicts of interest, MOGE lacks coordination capacity; that leads to inefficiency and has negative implications for investors. This problem is deeply rooted in corporate governance practices in Myanmar. As the CEO of a local company pointed out, 'we need to do more corporate training and capacity-building. For instance, I talked to people at Myanmar Petrochemical Enterprise and they seem not to fully understand what a conflict of interest is.'

Furthermore, as the majority of respondents noted, the government needs to change its approach towards foreign investors. For instance, the MIC's Notification 49 – also known as 'the Negative List – specifies what is prohibited for investors, rather than presenting opportunities and focusing on what is permitted.

While MOGE coordinates international cooperation in the petroleum sector, other ministries regulate domestic renewable energy policy. However, they carry no responsibility for cooperation with foreign investors. The Department of Research and Innovation at the Ministry of Education is responsible for promoting renewables and off-grid rural electrification. The Ministry of Environmental Conservation and Forestry (MOECAF) coordinates the production of biomass from forestry. The Hydropower Generation Enterprise (HPGE) and the Myanmar Electric Power Enterprise (MEPE) are the major power-generating corporations. The Yangon City Electricity Supply Board (YESB) supplies electricity in Yangon; the Electricity Supply Enterprise (ESE) supplies power to the rest of the country. The Ministry of Agriculture and Irrigation (MOAI) coordinates the production of biofuels, micro-hydropower, bioenergy from agricultural residues, as well as biogas (ADB, 2015: 55).

Inter-ministerial coordination is very poor, and there are no capacities for communicating or operating with foreign investors. According to ADB (2015: 56) and the ASEAN Centre for Energy (ACE) (2016: 46), the institutional framework for coordination in the renewable energy sector is fragmented

because it is coordinated by multiple government agencies; as a result, Myanmar lacks a unified policy for promoting the development and use of its renewable energy resources and attracting FDI. As noted by one of the experts interviewed for this study, ‘investors are often confused when it comes to finding the right government partner in the renewable energy sector.’ While the petroleum sector has an institutional legacy and several powerful domestic players, the institutions regulating renewable energy are still in their infancy.

Part of the problem is the absence of a national renewable energy plan with targets. Different ministries set targets for different types of biofuels (e.g. the Ministry of Electric Power has aimed to develop around 472 MW of installed capacity, or about 15% of total generation capacity, from small hydropower generation plants by 2016). According to ADB (2015: 56), the government also announced that biodiesel and bio-ethanol would be utilized as substitutes for 10% of oil and gasoline imported from abroad by 2020. However, massive land-areas are necessary to produce this amount of fuel, and access to land is already complicated. Myanmar’s Five-Year National Development Plan (2011–2015) included measures to promote private investment in renewable energy technologies and the elaboration of a strategy for renewable energy. Main reforms carried out thus far relate to merging of the two power ministries and composing a draft of a new Electricity Law aimed at replacing the 1984 version (ADB, 2015: 55). Table 7 presents the key stakeholders responsible for energy policy (petroleum and renewable energy) and attracting FDI in the country.

Several conclusions can be drawn. First, to boost FDI in the energy sphere, a special agency or unit should be created under DICA or MIC, to deal solely with foreign energy companies. Second, MIC should foster a friendlier approach towards investors, shifting from a prohibitive role towards a facilitating one. Third, while MOGE has a monopoly on regulation of the petroleum industry, regulation of renewable energy is highly fragmented among various ministries; the absence of a national policy on renewable energy adds to the problem. Fourth, MOGE’s roles as operator, regulator and service provider will need to be unbundled in order to reduce the risk of conflicts of interest and also improve management efficiency in the energy sector. Unbundling would bring greater transparency, thereby also improving Myanmar’s position in international rankings.

Table 7. Institutional framework and key institutions for energy FDI

Area	Key stakeholders
Investment climate	
FDI policy	Directorate of Investment and Company Administration (DICA)
Review and approval of investment proposals and practical assistance to investors in Myanmar	Myanmar Investment Commission (MIC)
Strategic planning and streamlining Myanmar’s energy policy and FDI	National Energy Management Committee (NEMC)
Myanmar’s largest business federation representing 770 foreign companies	Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI)
Oil and gas sector	
Control and management of the industry	Ministry of Electricity and Energy (MEE)
Coordination, management and regulation	Energy Planning Department (EPD)
Exploration and processing, procurement and taxation and international cooperation	Myanmar Oil and Gas Enterprise (MOGE)
Managing refineries and processing activities	Myanmar Petrochemical Enterprise (MPE)
Distribution of petroleum products	Myanmar Petroleum Products Enterprise (MPPE)
Renewable energy	
Renewable energy development and promotion	Department of Research and Innovation, Ministry of Education (formerly Ministry of Science and Technology)
Electric power: hydropower	Hydropower Generation Enterprise (HPGE) Myanmar Electric Power Enterprise (MEPE)
Electric power: thermal, power generation, transmission and distribution, mini-hydro	Yangon Electricity Supply Board (YESB) Electricity Supply Enterprise (ESE)
Biomass and firewood	Ministry of Agriculture and Irrigation Ministry of Environmental Conservation and Forestry

Energy efficiency	Ministry of Industry
Official communication channels between government and foreign investors¹⁰	
Practical matters with foreign investors	Myanmar Business Forum (MBF)
Access point for foreign and local service companies on exploration and production issues	Myanmar Oil and Gas Services Society (MOGSS)

The Myanmar government has also sent commercial representatives to several countries in order to attract FDI. Already in 2014 Myanmar was planning to send a commercial attaché to the USA to help improve economic ties between two countries – well before President Obama announced the lifting of remaining sanctions on Myanmar, as requested by State Counsellor Daw Aung San Suu Kyi during her visit to the USA in September 2016 (*Wall Street Journal*, 2016). Myanmar currently has commercial attachés (trade representatives) in the following nine countries: Thailand, China, Belgium, India, Republic of Korea, Singapore, Japan, the USA and Hong Kong.¹¹

Commercial Attachés act as the first point of contact for FDI. According to our interview with the Deputy Director General of the Myanmar Ministry of Commerce, the first group of officials were appointed directly by the President’s Office under the previous government. They were also placed under the care of relevant embassies in the countries to which they have been assigned, but were to report directly to the Office of the President, bypassing the cabinet and line ministries.

In other Myanmar embassies where there is no dedicated commercial attaché, the task usually is the responsibility of one of the senior mission diplomats – a first or second secretary, occasionally even the head of mission involved in trade-related matters. As these officials are the very first point of contact, it is important that they play an active role. Their activities can be enhanced and expanded for the energy sector with specialized training and a capacity enhancement programme for some attachés to destination countries well-known in the energy-related sector. As trade representation can play a central role for the country’s economy, their activities should be carefully managed and regularly reviewed. Perhaps it would now be more appropriate for the commercial attachés to report to the Ministry of Commerce, which has also recently established a Trade Promotion Agency within the Ministry in addition to DICA and MIC.¹²

4.5. Communication channels between the government and business

An essential condition for foreign investors to succeed in Myanmar is to have access to smoothly-functioning channels of communication with the state. Of our 19 respondents, 16 opined that, for a company to be successful, there must be regular access to the government and to communication through formal networks and associations. Information exchange is crucial in view of the absence of a functioning and stable regulatory framework. However, since 2012, the inflow of investors has limited the capacity of local governments to deal with them. Moreover, the local authorities often lack the necessary competence and expertise. This may lead to severely delayed decisions and projects. As the representative of one foreign company told us, ‘it is very slow here. People do not respond in time. Meetings are not attended by key government officials or local CEOs. This also indicates that local stakeholders often do not take such meetings seriously.’

All respondents noted the lack of an established, regular communications channel between the government and foreign businesses for information exchange. Interaction takes place within a largely informal and irregular framework, and each company has to find its own way of dialoguing with the state – DICA, MIC, MOE or MOGE. As a representative of a local company said,

Foreign companies are more privileged than local ones when it comes to assistance in surviving in the local environment. Last year we had an issue with one foreign company as they did not pay for our services. We started a dispute process but we couldn’t find any government institution that could

¹⁰ For more detailed description of the roles played by MBF and MOGSS see Subsection 4.5.

¹¹ From July 2016 – the Ministry of Foreign Affairs International Contacts Directory.

¹² Interview with U Min, Deputy Director General. Ministry of Commerce, on 28th Sep 2016.

assist us even though we asked many of them. Foreign investors are more privileged as they can turn to their embassies for help.

Another expert pointed out, ‘big investors can easily get meetings arranged with the government through embassies, but again this cannot be viewed as a regular exchange that would contribute to a more predictable investment climate.’

There is also the Myanmar Business Forum (MBF), an institutional platform aimed at bringing together government and private actors. It was established in 2014 between the government and the Union of Myanmar Federation of Chambers of Commerce and Industry, with the help of International Finance Corporation (IFC), part of the World Bank Group. The official goal of MBF is ‘to help to develop a favourable business environment that can attract domestic and foreign investment...MBF enables the private sector to identify obstacles to growth and promote regulatory reforms that improve the business environment’ (MBF, 2016). Among the MBF’s working groups there is one on natural resources, which works on the following issues: clarification of MIC Notification 49 that limits local participation in the sector; tax issues related to production-sharing contracts; environmental approval processes; employing foreign workers; and enhancing the transparency of tender processes. The group unites local and foreign oil companies, service providers, NGOs and law firms specializing in petroleum issues. Representatives of relevant ministries are invited to the meetings; they receive inputs (often in the form of practical proposals) from investors and respond to them. They then discuss internally, and try to fulfil the requirements. However, many respondents pointed out that the MBF has a low degree of influence.

To compensate for the lack of regular communication channels, private companies establish their own coordination mechanisms, especially in the area of offshore cooperation. One such platform is the Myanmar Oil and Gas Services Society (MOGSS), established in 2013, an association that had 93 local and foreign companies and 167 members as of 2016, up from 116 in 2014. The purpose of the association is to adopt international standards and best practices in the petroleum sector and act as a collective voice.¹³ As one of the experts interviewed stressed, ‘MOGSS is a hub for many foreign companies and it also serves as an access point for local companies which service petroleum projects in exploration and production areas.’ However, the role of MOGSS is limited, as it has failed to act as a lobbying agency protecting the interests of its members and influencing the legislation and decision-making process in the petroleum sector.

As for renewable energy, the Renewable Energy Association of Myanmar (REAM) exists, but our respondents assessed it as weak and ineffective, and also lacking state support. Moreover, renewable energy is currently beyond the scope of Myanmar Business Forum (MBF). Thus, renewable energy actors lack effective institutional platforms for interaction with the government. Companies must often act on an individual basis, which is understandable given the immature state of development of the entire industry in Myanmar. Creating a special working group on renewable energy at MBF would help to promote discussion between the government and private companies.

4.6. Comparing the petroleum and renewable energy sectors

Table 8 specifies the main challenges involved in investing in the petroleum and renewable energy sectors in Myanmar, according to our respondents. The first five problems are common to the petroleum and renewable energy sectors. Ongoing inter-ethnic conflicts constitute a serious concern for investors. Lack of sufficient information about market entry indicates weaknesses of international indices and rankings as regards the investment climate in Myanmar. Thus preparing for market entry is time-consuming and costly. The fragmented institutional and regulatory framework serves as a barrier in both sectors. Still, the petroleum industry is seen as more transparent and understandable than the renewable energy sector.

¹³ The aim of MOGSS is ‘to promote transparent dealings, a responsible service sector and growing capability among society members’ (MOGSS, 2016).

Table 8. Major obstacles for investment in the energy sector (in order of priority, from most significant to least significant) as perceived by respondents

Petroleum sector		Renewable energy
Common for the two sectors		
1.	Active conflicts in different parts of the country	
2.	Lack of data and sufficient information for market entry	
3.	Fragmented institutional and regulatory framework	
4.	Low global oil price	
5.	Limited electrification and digitalization	
Specific to the two sectors		
6.	Limited infrastructure in petroleum service industry and lack of local engineers	No national target plan for renewable and lack of renewable energy laws
7.	MOGE monopolization and conflicts of interest	No special public agency regulating the industry
8.	Limited geological data	Lack of business associations
9.	Taxation	Limited public administration capacity
10.	Weak government-business communication	Energy subsidies for electricity and lacking tax policy
11.	Finding local partners	Complex mountainous terrain and protected areas
12.	Time-consuming license application procedures	Access to land, food security ¹⁴ and tilling rights
13.	Paper-based communication and lack of e-government	Underdeveloped grid system for large-scale production
14.	PSCs allow for participation of large players and exclude smaller ones	Missing data assessing the renewable energy potential
15.	Weak business associations	Lack of infrastructure for technical support and maintenance
16.	Access to land	High cost of installing solar panels and wind turbines
17.	Frequent changes in legislation	Disintegrated biofuel production and supply markets
18.	Closed downstream market	Lack of local specialists

Finally, low electricity coverage and level of digitalization serve as technical barriers to the operations of foreign firms and thus improving such basic infrastructure should be a priority for the government. As the CEO of a foreign company operating in Myanmar stressed, ‘I think the study of the investment climate as such makes little sense in a country that has only 37% electricity coverage. You can be No. 1 in electronic government, but if you have no electricity you’ll automatically come last in the rankings.’

The issues specified for the renewable energy sector show that the whole industry is currently in a pilot phase. FDI has been low, and the government lacks capacity to regulate the sector and attract FDI. Moreover, unlike oil and gas, energy generated from renewables cannot be stored, making transmission a major problem. The grid infrastructure and electricity transmission capacity are inadequate for large-scale production of renewable energy, rendering the market attractive only for the development of off-grid applications and small-scale energy production. Building large transmission lines and expanding the electricity grid is expensive and requires major investments (Harrison, 2015: 848). Government policy for subsidizing electricity tariffs is a further stumbling block for FDI in the industry. Renewable energy requires significant initial investment, so electricity tariffs need to match market rates to make it a competitive and profitable business.

FDI in the petroleum sector has far surpassed that in other parts of the economy. Despite the problems indicated in Table 8, numerous foreign companies have invested in onshore and offshore projects in the country and find the investment climate attractive. Table 9 specifies opportunities when it comes to investing in the petroleum and renewable energy sectors in Myanmar, as indicated by our respondents.

¹⁴ The demand for food products (cereals, edible oils, sugar) and for animal feed (coarse grains, broken rice) is increasing. Therefore, most crops currently cultivated cannot be used for biofuel production (ADB, 2015: 67).

Table 9. Opportunities as perceived by respondents

Opportunities in the petroleum and renewable energy sectors	
1. Government commitment to reform	
2. Location advantage (China, India, Greater Mekong Sub-region and ASEAN)	
3. Available resources especially natural gas and potential for renewables	
4. Rising demand for energy in Myanmar and neighbouring countries	
5. High demand for investment in refineries, oil terminals, oil barges and petrol stations	
6. Opportunities in retail business	
7. Foreign Investment Law of 2012	
8. Legislation: petroleum and renewable energy laws are underway	
9. Strong civil society actors	
10. Human resources: low labour costs for unskilled labour	
11. High degree of trust in the society, low corruption and level of crime	
Sector- specific opportunities	
Oil and gas industry	Renewable energy
12. Relatively transparent tender system and equal treatment of investors	Opportunities for local off-grid electrification
13. Government experience	Latecomer advantage
14. Long history of oil and gas extraction in Myanmar	Increased assistance from international donors

The country's energy potential can be realized and investment climate improved, provided that reforms are sustainable and oriented towards a long-term perspective. When asked why the company decided to invest in Myanmar, one of the interviewed CEOs replied:

First, preliminary geological studies show that oil and gas reserves are there. There is also a strong belief among many specialists that the resources are there. More exploration is required; as only scant information is currently available about the country's geological situation. However, a period of at least 10 years is necessary for new exploration and production projects to start paying off... And we are committed to stay here for the next 10 years. Second, the strategic location of Myanmar between China and India is also an important factor.

This indicates that foreign investors view their operations as long-term, based on the belief that the government will continue to reform and improve the investment climate within the next decades. This is fuelled by the fact that in 2013 Myanmar announced its reform commitments in the energy sector in the 'Joint Statement on Good Governance and Transparency in the Energy Sector' between the Myanmar and US Government as part of their commitment to the G8 Partnership on Extractives (US Department of State, 2013). The same year, Myanmar also became a member of the Multilateral Investment Guarantee Agency¹⁵ under the World Bank and joined the Extractive Industries Transparency Initiative (EITI) as a candidate country in 2014 (EITI, 2014).

Strategic location and proximity to big markets coupled with abundant natural resources contribute to making Myanmar a potentially attractive destination for investors. Myanmar's domestic energy needs are also growing rapidly, and FDI is needed to expand the domestic petroleum industry. The 2012 Foreign Investment Law, recent changes in legislation and the ongoing elaboration of petroleum and renewable energy laws may also further enhance the country's attractiveness.

For the petroleum industry, respondents mentioned factors like Myanmar's relatively transparent tender system, equal treatment of foreign investors, and government experience with the industry dating back to the 19th century as being attractive. An important advantage of oil and gas compared to renewables is that the government has an institutional legacy and experience in

¹⁵ The Agency provides political risk insurance against non-commercial risks to private sector investors and lenders.

developing and managing the sector, whereas the renewable energy industry (with the exception of hydropower) lacks specialists, knowledge and skills not only in the engineering professions but also in the public sector, complicating the regulation and creation of conditions attractive for FDI. As one local expert pointed out, 'we lived in a socialist era and used PSCs during that time. Then the military era followed and PSCs were also there. Now we are doing the same. So the petroleum industry isn't a new business. But the government lacks capacity in the renewable energy sector as it is entirely new to them.' The government also concentrates its best human resources in the petroleum sector. However, that is not unique to Myanmar, but is found in many other developing economies that have recently started developing renewable energy.

The investment climate in the renewable energy industry in turn provides opportunities for companies specializing in local off-grid electrification solutions based on renewable energy sources. Another positive factor is the latecomer advantage. With renewable technologies currently becoming less expensive worldwide, Myanmar may enter the market at relative low cost, compared to if it had opened up in 2005. The industry is also supported and promoted by numerous international donors (e.g. ADB, IFC, the World Bank). However, government action is needed to remove or at least reduce energy subsidies for existing energy generation and to avoid putting new renewable energy at a disadvantage.

4.7. Predictability of the investment climate

In order to evaluate the operating environment, it is necessary to analyse the predictability of the business climate. The predictability of an investment climate relates to the ability of government to ensure consistency in rule application, avoidance of arbitrary decision-making, equal treatment of investors and transparency in communication with foreign investors. A World Bank (2004: 23) study has shown that, by improving policy predictability, the likelihood of new investment may grow by as much as 30%. While our respondents acknowledge that the investment climate in Myanmar is challenging, with various risks and inefficiencies, they also see it as relatively predictable for foreign players. Whereas most international rankings rate the business environment in Myanmar as very unpredictable, closer study of the perceptions of directly involved market players yields a different picture: the business environment is viewed as relatively predictable. That said, 'relatively predictable' does not mean 'easy'. As noted by a foreign expert interviewed for this study:

In fact, local laws and legislation are more structured than many think or expect. There is a certain logic behind all this. I think foreigners should not apply a Western framework directly. They need to learn the local rules of the game to anticipate potential changes and see that government actions may be often predictable. But language is also a factor here.

The business climate is perceived as being less predictable to companies at the time of entry; however, having entered the market, and having learned and adapted to the local environment, companies report higher predictability – for companies that have learned how to pursue successful strategies. Three main factors are used in combination to ensure successful entry: the company's own market research; active use of consultancy services; use of international sources of information. After entering the market, companies need to ensure that they have direct access to the state.

One main factor behind unpredictability in Myanmar concerns the functioning of public administration. As one of the interviewed experts pointed out:

Public bodies are hesitant to take major decisions, no one agency can take a quick and efficient decision. Usually, they freeze and investors need to wait a long time before the decision is taken...In many ways, lack of competence and skills is a reason why it takes so long for them to review requests from investors. But there is a learning process involved.

This factor features among those deemed most essential when it comes to assessing policy predictability in the energy sector in Myanmar. In an interview carried out by the Oxford Business Group (2015: 89) Kyaw Hlaing, chairman of Smart Group of Companies and MOGSS, stated: 'the government needs to fast-track its reforms, and so it must move out incompetent officials who are slowing progress. There is no time to teach them the ways of the new, reformed economy.'

5. The investment climate in ASEAN: country case-studies and lessons for Myanmar

5.1. General overview

In a couple of years...Myanmar can easily be at the stage where they are doing as well as other (ASEAN) members.
Charles Schneider, Senior World Bank Economist, 2013.

For decades, Myanmar was neglected by foreign investors, and is therefore the last untapped oil producer in Asia. It is emerging an attractive destination for companies from other ASEAN countries, due to the fact that internal markets in Southeast Asia are now largely satiated after decades of economic growth, foreign direct investment flowing into the region, industrial development and assistance from international donors. Myanmar is a new, large and unsaturated market of considerable interest to numerous economic actors in the region. Indeed, Myanmar has a latecomer advantage.

Another advantage is that the country is located close to other developing and emerging economies in South-East Asia and can learn directly from other ASEAN countries. As shown in this report, Myanmar faces numerous challenges as regards developing its investment climate. However, these challenges are far from unique: several other ASEAN countries have had to deal with similar challenges, and are still trying to cope with them. As to market access, Table 10 shows that Myanmar, along with Brunei and India, has a highly restrictive regime. This ranking takes into account the presence of restrictive market entry measures, the number of sectors with open access, joint venture requirements, limits on foreign-owned shares, as well as permit requirements.

Table 10. Limited market access, by WTO classification

Country	Limited market access
Singapore	low
Vietnam	low
Malaysia	medium
Indonesia	medium
Philippines	medium
Thailand	medium
Cambodia	medium
Laos	medium
China	medium
Brunei	high
India	high
Myanmar	high

Source: Massmann 2016.

The ASEAN countries offer a diversity of experiences that can be useful for Myanmar's development path. Singapore can serve as a role model and source of inspiration in many ways, particularly as regards anti-corruption, rule of law and FDI policies. According to Khin Maung Myint, Vice President and Head of the Foreign Relations Committee of the National Democratic Party for Development (NDPD), Myanmar needs to reform its civil service, and Singapore would be the most relevant country to learn from, given their common colonial past and British norms embedded in the legal systems of both countries (*Global New Light of Myanmar*, 2016). Also Thailand is relevant, as the two countries share a border and are similar in terms of culture, geography and population size. Thailand is also one of the biggest markets for renewable energy in Southeast Asia, with a relatively business climate attractive to domestic and foreign energy investors. Cambodia is similar to Myanmar in level of development. Indonesia has accumulated significant experience in managing its natural resources and attracting FDI. Indonesia and Cambodia have experienced similar political transformations and can

offer numerous lessons, both positive and negative, to Myanmar in terms of economic development and attracting FDI. These two countries serve as cases in the following two subsections.

5.2. Indonesia

Indonesia is similar to Myanmar in terms of energy potential, not only in oil and gas, but also solar, wind, hydro, geothermal, hydro and tidal power. Indonesia has been moderately successful in attracting energy FDI. However, despite its success among the ASEAN countries, Indonesia faces certain challenges in attracting FDI; and current investment in the energy sector in exploration, production and distribution is not sufficient to cover actual needs (ADB, 2015: 12). In this regard the challenges are similar to those confronting Myanmar. Indonesia may find itself a net energy importer by 2019, largely because of lack of investment in the energy sector, with several players exiting the market; on the other hand, the country remains an attractive market as it has significant experience with energy FDI and attracts the interest of various Asian national oil companies seeking to expand their reserve bases (Bauerschmidt et al., 2015: 31). There are several lessons that Myanmar can learn from the Indonesian situation and experience.

First, compared to other ASEAN countries, Indonesia should be seen as a top performer in equal treatment and non-discrimination of foreign investors (see Table 11). Unlike Myanmar, Indonesia has a single investment law that applies to both foreign and domestic investors, and it applies a non-discrimination approach that is reflected in national legislation. Myanmar, however, is the only country in the ASEAN region that requires special approval for transfer of funds. Furthermore, in an attempt to improve its investment climate, the Indonesian government revised its Negative Investment List in 2016. In particular, it specifies that large-scale power plants can be fully owned by foreign investors from 2016 onwards (an increase from permitted foreign ownership of 95% to 100%). Possessing full control makes ownership more attractive to investors (Gorman et al., 2016). It also sends a signal to investors that the government has taken a more permissive approach to FDI.

As for FDI in the Indonesian oil and gas sector, foreign ownership in the range of 49–75% is allowed, according to Presidential Regulation No. 39/2014. Maximum allowed foreign ownership in geothermal facilities is 90%; 95% in geothermal services; 95% in electrification utilities; and 100% in biomass pellets. This is an important lesson for Myanmar, which has adhered to its Negative List 49, creating obstacles for investors. The Myanmar government should revise this list to make it more permissive – with all revisions being clearly communicated to investors. The Myanmar Business Forum could serve as a communication channel, as it is already dealing with the Negative List 49 in its special working group on natural resources.

Table 11. Equal treatment and non-discrimination of foreign investors in ASEAN

Country	Single investment law for both domestic and foreign investors	Principle of national treatment / non-discrimination	Negative list approach	Guarantee of free transfer of funds provided by law
Indonesia	Yes	Yes	Yes	Yes
Vietnam	Yes	Yes	Yes	Yes
Lao PDR	Yes	Yes	—	Yes
Cambodia	Yes	Yes, except for land	—	Yes
Philippines	2 investment laws	Yes	Yes	Yes
Malaysia	Yes	No	—	Yes
Thailand	2 investment laws	No	Yes	Yes
Myanmar	Domestic and foreign investment laws are separate	No	Yes, but requires further clarification	Yes, but with approval

Source: Thomsen 2014.

Second, Indonesia was the first country to sign a first major production-sharing agreement (PSA) in 1966 and has significant experience in using PSAs for oil and gas exploration (Inkpen and

Moffett, 2011: 241). It created conditions allowing investors to build strong petroleum associations 'to lobby government agencies for the harmonization of laws and regulations' (Luong and Weinthal, 2010: 211).¹⁶ Myanmar should facilitate the creation of similar associations which would serve as platforms for effective state-business communication and for making the voice of investors heard. There is also negative experience with the use of PSAs in Indonesia from which Myanmar could learn. Bauerschmidt et al. (2015: 31) note that implementation of PSAs has not been improved for many years and many challenges still remain: complicated regulations, lack of extension policy, uncertainty surrounding cost recovery (Government Regulation No.79/2010), cumbersome labour regulation, difficulties in bringing in foreign workers and an unclear taxation policy. Myanmar today has a flexible regime regulating labour relations with foreign investors and many firms, making it relatively easy to bring in foreign workers. Any new legislation adopted in Myanmar should keep labour regulations simple and favourable to investors, so that they do not experience sudden or negative shifts.

Third, despite its numerous challenges, Indonesia has been relatively successful in its policy of economic diversification. From 1975 to 1981, Indonesia intensively produced and exported its oil resources. To develop other sectors of the economy, the government channelled the oil revenues into infrastructure, basic industries, agriculture and education (Zen, 2010: 7). It also promoted import-substitution policies. This move helped to diversify the economy and limit the resource curse. Myanmar has a different starting point, as the country has not yet begun major resource extraction, which is expected only after 2020. Therefore, Myanmar should establish strong institutions and develop other sectors of the economy *before* large-scale oil and gas extraction commences. Oil revenues could then further strengthen other sectors and make economic development more sustainable. Current FDI in the energy sector can serve as a source for implementing diversification policies. Myanmar is also well-placed for diversifying its economy, as the current path of its economic growth of 7–10% is similar to that of Indonesia (average 4.4–7.9% growth in 1970–2008).

Fourth, Myanmar should learn from Indonesia's negative experience in domestic energy supply, which resulted in uneven energy distribution across the country. Due to underinvestment and ineffective management, access to energy in Myanmar 'is poor relative to regional peer nations and oriented disproportionately towards the country's economic growth centres' (ADB, 2015: 12). Myanmar thus needs to ensure more equal distribution of access to energy in order not to overburden major big urban centers like Yangon, Mandalay and Naypyidaw, which lack energy and other infrastructure to accommodate people migrating from rural areas.

5.3. Cambodia

Cambodia is viewed as having a liberal investment climate with a legal and policy framework that favours foreign investors. The government offers various investment incentives, including corporate tax holidays of up to eight years, a 20% corporate tax rate after the incentive period ends, duty-free import of capital goods, and no restrictions on capital repatriation (US Department of State, 2014: 1). However, these incentives are compromised by widespread corruption, 'a limited supply of skilled labour, inadequate infrastructure (including high energy costs), and a lack of transparency in government approval processes' (ibid.).

Cambodia is similar to Myanmar in that any major oil deposits and other natural resources are yet to be discovered. It has 19 onshore and six offshore blocks with four areas remaining in dispute with Thailand; one of the offshore blocks (Block A) is estimated to contain 700 million barrels of oil and 3–5 trillion cubic feet of natural gas (Ferrari, 2015). Information on other blocks has not been made publicly available. Potentials for both petroleum and renewable energy are considered to be higher in Myanmar than in Cambodia. For instance, the solar power potential of Cambodia is 8 gigawatt, compared to nearly 27 gigawatt (GW) in Myanmar (see Table 3). Even though Cambodia's wind-power potential is estimated at 65 GW compared to 33.8 G in Myanmar, the technical potential

¹⁶ Another resource-rich country with strong petroleum associations formed by foreign investors is Kazakhstan (Vakulchuk, 2014: 195; Luong and Weinthal, 2010: 211).

is lower, with 18–72 MW in Cambodia to 86–343 MW in Myanmar (ADB, 2015: 10). Myanmar's biomass potential is also three times greater than that of Cambodia.

Although Myanmar is endowed with greater natural resources, the investment climate is seen as being more favourable in Cambodia. First, unlike Myanmar, Cambodia sets no limits as to the establishment of businesses fully owned by foreigners, and no restrictions on their rights as regards competition with state-owned companies (US Department of State, 2014: 8).

Second, similar to Indonesia and Myanmar, Cambodia uses PSAs. Cambodia's PSA model is viewed as the most attractive one in the region. The terms are favourable to foreign investors as the royalty rate amounts to 12.5% of total production and the signature bonus is set at USD 200,000, in contrast to Myanmar's USD 15 million bonus (Ferrari, 2015). In addition, unlike Indonesia, Cambodia offers generous terms for PSA cost recovery: an investor may obtain up to 90% of the post-royalty production for this purpose – assessed as the most generous in Southeast Asia (Ferrari, 2015). Moreover, PSAs do not specify any participating interest on the part of state-owned enterprises in Cambodia (unlike MOGE in Myanmar). Myanmar should learn from Cambodia's experience with PSAs, as improving PSA terms for foreign investors could help to compensate for the current uncertainties in oil discoveries.

Third, despite favourable PSA terms, Cambodia, like Myanmar, lacks a clear legal framework for regulating the petroleum and renewable energy industries. The first petroleum law is currently being prepared according to best practices, in cooperation with international organizations. The state has recognized that numerous challenges exist and need to be dealt with. According to Meng Saktheara, senior official at Cambodia's Ministry of Mines and Energy, 'we are still facing a lot of challenges to attract investment. [The law is] not very clear right now. There are a lot of issues from our perspective, such as the legal framework [and] service capacity, which will need to improve to support oil and gas operations. Even the infrastructure [is not sufficient]' (NIKKEI, 2014). Government acknowledgement of necessary reforms sends a positive signal to investors and boosts trust. This approach should be also considered by the Myanmar government.

6. Conclusions

Myanmar's opening up to the world and abundant natural resources have attracted many international players. The oil and gas sector has been the main engine of growth, and considerable amounts of FDI have poured into the industry. However, to sustain and increase FDI, the government will have to show further commitment and stick closely to its economic reform strategy and set targets. Importantly, before Myanmar starts large-scale production and begins to benefit from resource extraction, it is essential for the country to build strong institutions and promote economic diversification policies, to minimize the risk of a resource curse. In this respect, investment climate is part of a larger economic reform strategy, an important source of institution building and growth.

Policies and measures for improving the investment climate in the energy sector can be classified as short-term or long-term. Short- and medium-term measures are presented in the Executive Summary. Long-term policies and measures are incremental and of a general nature, require many years before full implementation is achieved. Such long-term policies and measures for Myanmar include the following: creating stable and predictable legal and regulatory environment, promoting the rule of law and law enforcement, improving the tax regime, reducing red tape, strengthening anti-corruption institutions, promoting effective and transparent fiscal policies, improving the education system, developing e-government mechanisms and promoting transparency in activities of foreign investors and state-business communication (see also Annex 2). These will require effort from numerous public and private institutions in Myanmar, and should be integrated into a country-wide economic development strategy. Also required is constant work to improve technical infrastructure in the energy industry, such as transportation, insurance, medical assistance, evacuation services and offshore supply base.

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Annex 1

19 in-depth interviews were conducted for this report:

- Relevant government representatives from DICA (Directorate of Investment Company Administration), Myanmar Investment Commission (MIC) which are part of the Ministry of National Planning and Economic Development and Ministry of Commerce.
- Local and foreign company representatives, including BSL Offshore Containers, FRAMES, Myanmar Shipyards – Dong A (MSDA), Smart Technical Services, Statoil, Malaria Consortium, Mandalay Technology, Myanmar Inspection and Technology (M.I.T.), VARD, WAFE Myanmar Engineering Services.
- Think-tanks and research centers working in Myanmar, including KWR International, Frontier Myanmar and Myanmar Centre for Responsible Business (MCRB).

Annex 2

Table 12. New Energy Architecture’s four pillars of an enabling environment

1.	Effective and Transparent Governance and Institutions				
1.1	Create an Integrated energy plan (IEP)				
1.2	Establish Institutions and frameworks to deliver the Integrated energy plan				
1.3	Strengthen public participation and support, and improve energy literacy				
1.4	Strengthen regulatory framework for environmental and social standards				
1.5	Increase transparency of extractive industries and implement Extractive Industries Transparency Initiative				
1.6	Strengthen the capabilities of Myanmar Oil Gas Enterprise and consider the appropriate National Oil Company model				
2.	Investment Frameworks to Enhance Supply and Efficiency				
2.1	Reform energy subsidies				
2.2	Establish energy efficiency standards and regulations				
2.3	Expand rural energy access				
2.4	Develop a clear vision and legal framework for private Investment				
2.5	Create an Investment framework and reform state enterprises to expand domestic energy supply				
2.6	Assess power generation options and Integrate these into a power development plan				
2.7	Strengthen transmission and distribution networks				
3.	Strategies Generating Long-Term Value				
3.1	Assess options for building local Industry				
3.2	Improve human capacity within energy sectors				
3.3	Identify ‘green growth’ opportunities				
3.4	Strengthen the macroeconomic environment				

‘Four Pillars’ of an enabling environment

-  Policy Initiatives
-  Technology & Infrastructure
-  Market structures
-  Human capacity

Source: Table created by authors based on World Economic Forum 2013: 7.