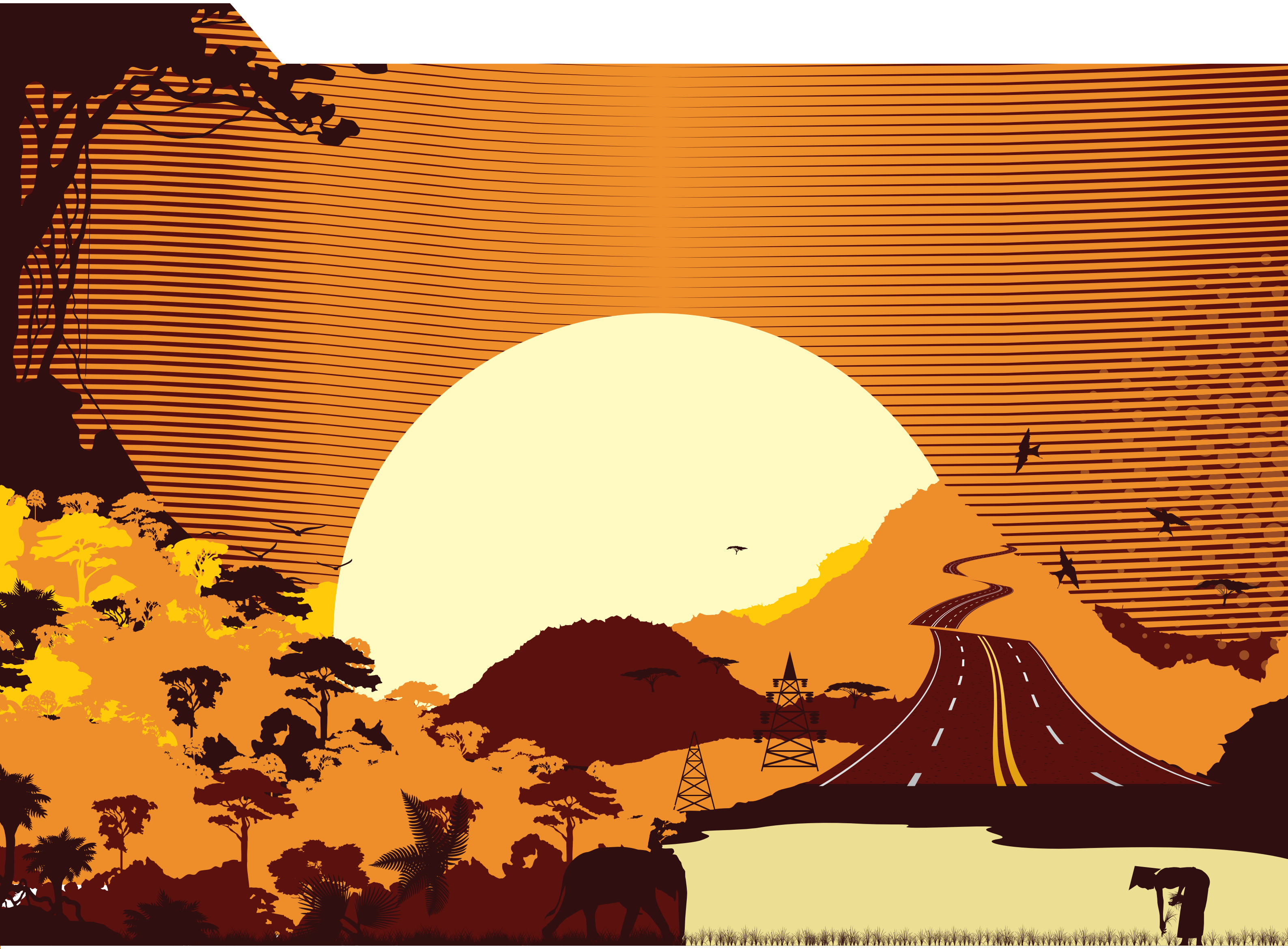
OECD Development Pathways

Multi-dimensional Review of Myanmar

VOLUME 2. IN-DEPTH ANALYSIS AND RECOMMENDATIONS



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Foreword

In 2013 the OECD launched the first Multi-dimensional Country Review (MDCR), a new series that looks at economic development along the lines of inclusive growth, i.e. growth that is also equitable and sustainable and that improves the overall well-being of citizens. The series aims to identify key constraints to broad-based development, and to formulate appropriate policy recommendations to address these constraints, including sectoral as well as cross-cutting issues.

The Republic of the Union of Myanmar is the first country to engage in such an MDCR. The first phase – a broad diagnostic assessment across a wide range of topics – was completed in July 2013 with the publication of a first report. The second phase was conducted in 2013-14 and the current report presents its conclusions and policy recommendations. The two reports are closely linked with each other, and were undertaken during a phase of fast-paced changes in Myanmar, which has embarked on a new path of openness and development since 2011.

The first phase diagnostic report evaluated the state of development in Myanmar across a wide range of topics, including natural resources and environmental conditions, human and physical capital accumulation, and various dimensions of institutions. It highlighted some favourable pre-conditions, such as endowments in natural resources and the country's important geostrategic location in Asia, but also identified challenges. The economy is – as yet – dominated by the agricultural sector which contributes 34% to GDP and provides employment for around 60% of the population. In order to generate productivity gains and higher incomes for the population, transformation towards a modern economy will be essential. The second chapter of the present report thus looks at the constraints and potential for modernisation of the agriculture, manufacturing and services sectors.

The first report also devoted an important section to the accumulation of human capital, finding that literacy rates and very basic education are moderately good but that issues in education in general, especially in secondary and vocational training, could become a crucial bottleneck for development in many respects. Hence, the present report's third chapter focuses on education and skills, presenting evidence of constraints (notably for the private sector) as well as formulating policy recommendations and priorities to improve educational outcomes.

The first report also noted that "access to finance has been one of the most critical issues faced by private enterprises in Myanmar for many years", giving evidence of many instances of financial constraints. The present report takes a broader perspective and analyses multiple sources of financing, including external inflows such as official development assistance and foreign direct investments, as well as domestic financing from government revenues. It also highlights the broader constraints to financial markets development and develops policy recommendations to mitigate constraints.

The first report identified the "lack of institutional and social capital" as the key constraint to Myanmar's development. Given that institutions are inherently cross-cutting and multi-dimensional, no single chapter could adequately capture their relevance and importance. Instead, each of the three chapters of the present report devotes important sections to the analysis of institutional constraints, notably regarding agricultural and private sector constraints and the business environment, educational policies and institutions, as well as financial market regulations and supervision.

Overall, the report finds that the demand for reform is immense. Myanmar will need to upgrade its agricultural sector, manage structural transformation towards the secondary and tertiary sector, reform and upgrade the educational system, especially with regard to vocational training, and improve management of financial resources – all in a manner that ensures sectoral and regional balance. The country has embarked on the path of reform with a breath-taking pace and is making impressive progress in many domains. Nevertheless, it will be crucial to sustain this drive in order to establish institutions that are conducive to development outcomes and to improve the conditions for development and well-being of its citizens.

To this end, the third and final phase of the Multi-dimensional Country Review will support Myanmar's reform efforts through the development of a coherent and balanced vision of modernisation, and guidance on sequencing and implementation of the key policy recommendations developed in the present report. Building on a participative process combined with further analysis and evidence, the third phase will conclude in 2015 with a final report.

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The team was led by Margit Molnar, Head of Competitiveness and Structural Analysis Unit and Jan Rieländer, Head of Multi-dimensional Country Reviews, under the direction of Mario Pezzini, Director of the OECD Development Centre and Carl Dahlman, Head of Global Research, OECD Development Centre. The report was drafted by Margit Molnar, Masato Abe, Martha Baxter, Derek Carnegie, Linda Fulponi, Charles Pigott, Koon Hui Tee, Alexa Tiemann and Edouard Turkisch. Significant inputs were provided by David Abonyi and Gordon Israel, statistical assistance by Vararat Atisophon, and administrative support by Myriam Andrieux and Pranee Suriyan. Charles Pigott edited the publication and the OECD Development Centre's publication team, in particular Gemma Nellies, turned the draft into a publication. The cover was designed by Aida Buendia.

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Acronyms and abbreviations

ACC	ASEAN Cosmetic Committee
ACCSQ	ASEAN Consultative Committee on Standards and Quality
ACH	Automated Clearing House
ADB	Asian Development Bank
AEC	ASEAN Economic Community
AIMS	Aid Information Management System, Myanmar
AMDA	Association of Medical Doctors in Asia
APWG	Automotive Product Working Group
ASEAN	Association of Southeast Asian Nations
ATM	Automatic teller machine
BD	Budget Department, Myanmar
BDS	Business development services
BOP	Balance of payments
CAR	Capital Adequacy Ratio
CARTC	Central Agricultural Research and Training Centre, Myanmar
CBL	Central Bank Law, Myanmar
CBM	Central Bank of Myanmar
CCS	Central Co-operative Society, Myanmar
CEIC	Compare Economic Data for Countries (CEIC Data)
CESR	Comprehensive Education Sector Review, Myanmar
CIT	Corporate income tax
CLC	Community Learning Centre
CLMV countries	Cambodia, Lao PDR, Myanmar and Viet Nam
CSO	Central Statistical Organisation
DAC	Development Assistance Committee
DAR	Department of Agriculture, Myanmar
DB	Doing Business (World Bank)
DHSHD	Department of Human Settlements and Housing Development, Myanmar
DICA	Directorate of Investment and Company Administration
DoF	Department of Fisheries, Myanmar
DPA	Development Partnership Administration
DPWC	Development Partners Working Committee
EIF	Enhanced Integrated Framework
EITI	Extractive Industries Transparency Initiative
EPZs	Export processing zones
EU	European Union
FAMCC	Foreign Aid Management Central Committee, Myanmar
FAMWC	Foreign Aid Management Working Committee, Myanmar

FAO	Food and Agricultural Organization
FDA	Food and Drug Administration, Myanmar
FDI	Foreign direct investment
FERD	Foreign Economic Relations Department, Myanmar
FIAS	Foreign Investment Advisory Service
FIL	Foreign Investment Law, Myanmar
FTZs	Free trade zones
FY	Fiscal year
GAPs	Good agricultural practices
GATS	General Agreement on Trade in Services
GDP	Gross domestic product
GIZ	Deutsche Gesellschaft fur Internationale Zussammenarbeit
GMS-BF	Greater Mekong Sub-region Business Forum
GRET	Groupe de Recherches et d'Échanges Technologiques
GTB	Global Treasure Bank, Myanmar
GTHS	Government Technical High Schools, Myanmar
ICOR	Incremental capital to output ratio
ICT	Information and communications technology
IDCR	Indian Development Co-operation Research
IDE-JETRO	Institute of Developing Economies-Japan External Trade Organization
IFC	International Finance Corporation
IMF	International Monetary Fund
IOM	International Organization for Migration
IPM	Integrated pest management
IRD	Internal Revenue Department, Myanmar
ISIC	International Standard Industrial Classification of All Economic Activities
ISO	International Organization for Standardization
IT	Information technology
ITC	International Tax Compact
ITC	International Trade Centre
JETRO	Japan External Trade Organization
JICA	Japan International Cooperation Agency
KNU	Karen National Union
LBVD	Livestock Breeding and Veterinary Department, Myanmar
LIFT	Livelihoods and Food Security Trust Fund
LPI	Logistical Performance Index
LTU	Large Taxpayer Units
LUCs	Land Use Certificates, Myanmar
MADB	Myanma Agriculture Development Bank
MAPCO	Myanmar Agribusiness Public Corporation
MAPT	Myanmar Agricultural Produce Trading Corporation
MDCF	Myanmar Development Co-operation Forum
MDCR	Multi-dimensional Country Review
MDPWG	Medical Device Product Working Group
MEB	Myanma Economic Bank
MEMI	Myanmar Economic and Management Institute

MFI	Microfinance institution
MFL	Microfinance Law, Myanmar
MFTB	Myanmar Foreign Trade Bank
MICB	Myanmar Investment and Commercial Bank
MICE	Meetings, incentives, conferences and exhibitions
MIDB	Myanmar Industrial Development Bank
MLFRD	Ministry of Livestock, Fisheries and Resource Development, Myanmar
MNEC	Mon National Education Committee
MNPED	Ministry of National Planning and Economic Development, Myanmar
MOAI	Ministry of Agriculture and Irrigation
MOCO	Ministry of Co-operatives, Myanmar
MOECF	Ministry of Environmental Conservation and Forestry, Myanmar
MOF	Ministry of Finance
MOH	Ministry of Health, Myanmar
MOHT	Ministry of Hotels and Tourism, Myanmar
MOI	Ministry of Industry, Myanmar
MoLESS	Ministry of Labour, Employment and Social Security, Myanmar
MoST	Ministry of Science and Technology, Myanmar
MoU	Memoranda of Understanding
MRF	Myanmar Rice Federation
MSE	Microfinance Supervisory Enterprise, Myanmar
MSEC	Myanmar Securities Exchange Center
MSLE	Myanmar Small Loan Enterprise
MSU-MDRI	Michigan State University – Myanmar Development Resource Institute
MTEF	Medium-term expenditure frameworks
MTFF	Medium-term fiscal framework
MTOs	Money Transfer Operators
NEC	National Education Committee, Myanmar
NES	National Export Strategy, Myanmar
NESAC	National Economic and Social Advisory Council, Myanmar
NFPE	Non-formal primary education
NGO	Non-governmental organisation
NMSP	New Mon State Party
NQF	National qualifications frameworks
NSSA	National Skills Standards Authority, Myanmar
OAs	Other accounts
OAG	Office of the Auditor General, Myanmar
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
PAC	Public Accounts Committees, Myanmar
PACT	Partner Agencies Collaborating Together
PAP	Programme Aid Partnership, Mozambique
PDC	Planning and Development Committee, Myanmar
PEM	Public expenditure management
PFM	Public financial management
PFPWG	Prepared Food-stuff Product Working Group
PIT	Personal income tax

PPD	Plant Protection Department, Myanmar
PPPs	Private-public partnerships
PPWG	Pharmaceutical Product Working Group
PSGB	Private and semi-government banks
PWC	Price Waterhouse Cooper
R&D	Research and development
RBPWG	Rubber-based Product Working Group
RML	Reuters Market Light, India
RPL	Recognition of Prior Learning
RSCs	Rice Specialisation Companies, Myanmar
SAO	State administrative organ
SEZs	Special economic zones
SFA	State Fund Account
SLORC	State Law and Order Restoration Council, Myanmar
SMEs	Small and medium-sized enterprises
SMIDB	Small and Medium Industrial Development Bank, Myanmar
SMS	Short Message Service
SOB	State-owned bank
SOEs	State-owned enterprises
SPS	Sanitary and phyto-sanitary
TFP	Total factor productivity
TMHSPWG	Traditional Medicine and Health Supplements Product Working Group
TVET	Technical and vocational education and training
UMFCCI	Union of Myanmar Federation of Chamber of Commerce and Industry
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USGS	United States Geological Survey
VAT	Value-added tax
VET	Vocational Education and Training
WTO	World Trade Organization
YCDC	Yangon City Development Committee

Executive summary

Myanmar faces a crucial few years ahead in shaping its economic growth towards a more rapid, sustainable and equitable trajectory. This will require fundamental changes in the structure of the economy. While the share of value-added of the manufacturing sector has increased over the last decade, Myanmar is still an agrarian country. Fortunately, Myanmar possesses a wealth of assets and opportunities that potentially enable it to pursue a development strategy to modernise the agriculture sector and to transform into a manufacturing- and services-based economy. This report investigates how to achieve structural transformation and pays particular attention to the requirements in terms of workforce skills and financing.

Transformation towards a modern economy: Upgrading agriculture, manufacturing and services

Modernising Myanmar's agricultural sector by building linkages to complementary non-agricultural activities could kick-start structural transformation. Myanmar's location at the heart of a vibrant region offers potential to expand its range of agricultural export products and destinations. However, the sector faces structural constraints as most farms are small, low-productivity, subsistence-level holdings and must deal with a lack of access to finance, low quality inputs and a lack of skills. A modern agricultural sector will require a robust financial system as well as improved extension services and farmer education. Furthermore, inadequate agri-food health and safety regulatory systems are holding back Myanmar from moving into high-value and high-quality products for increasingly demanding export markets. Providing a strong enabling environment that addresses these shortcomings will be more effective than direct subsidies.

Myanmar's manufacturing is dominated by small and medium-sized enterprises (SMEs), while state-owned enterprises (SOEs) largely underperform. Export-oriented infrastructure and the business environment more generally are key priorities for modernisation. Most of Myanmar's industrial zones do not have international-standard infrastructure or clear investment procedures as they were not originally intended to serve export markets. Firms also report that corruption, access to finance, lack of skilled workers, lack of technology and access to land and office space are major obstacles. Specific means to address some of these issues and stimulate the growth of manufacturing SMEs could include setting up a funding facility for SMEs in co-operation with international development agencies until the financial sector is adequately developed to provide the necessary funds, easing the regulatory burden on SMEs through a dedicated agency and "single-window" service centres. Developing and implementing a nation-wide strategic plan for the development of special economic zones (SEZs) and industrial zones will also be important.

Growth in the services sector is likely to outpace that of the economy as a whole in Myanmar, as this sector benefits disproportionately from rising incomes and the resulting demand from wealthier consumers. The transport and logistics and tourism sectors have particularly high potential. Reforms and public investment in transport and logistics are needed, with priority on regulatory reforms, education and training programmes, and upgrading road networks. Tourism policies should focus on developing popular locations to manage increased visitors and promoting more balanced tourism.

Filling the skills gap

Firms in Myanmar identify a lack of skilled workers as a serious obstacle to their operations. Young people are often not "work ready" by the time they complete their education and workers instead tend to acquire skills on-the-job. High school drop-out rates hold back the development of higher level skills beyond basic literacy and numeracy, and education quality is jeopardised by insufficient teacher training.

A key challenge is that education and skills policies in Myanmar are supply – rather than demand – driven and should better respond to the needs of the labour market. Systematically gathering and publishing information and data about evolving skills demand would support evidence-based policy making that is more responsive to labour market demand. Introducing institutionalised arrangements to include social partners in designing and implementing skills policy would also help ensure that education and training programmes are relevant to the needs of business and the wider economy. For such arrangements to be effective policy-making processes in education should be simplified. Currently a large number of ministries have responsibility for education and training.

Many of the jobs likely to be created as Myanmar industrialises will require strong technical and vocational skills, but technical and vocational education and training (TVET) is currently limited, with just 0.5% of upper secondary students enrolled in TVET programmes. A significant boost to expand capacity is necessary. An expansion of TVET could also provide useful skills to the large numbers of students who never reach higher education. Including workplace training in TVET courses and ensuring that teachers keep up-to-date with modern industry standards will be important quality aspects. Similarly, few opportunities exist for adult training. Employers' investment in training to develop workers' skills is limited, with over half of firms spending nothing on training. Public-private partnerships could be an adequate tool to meet the training needs of adult workers and address the existing skills mismatch.

Financing development

Realisation of Myanmar's potential will depend upon how effectively the country can mobilise and allocate financial resources to support its development needs. The financial resources required are on a considerably larger scale than have been available during the pre-reform decades. In order to sustain economic catching-up with other Asian economies, Myanmar would need to scale up investments significantly from current levels.

Inflows from external sources – mainly official development assistance (ODA) and foreign direct investment (FDI) – are expected to surge and are likely to be important in financing development during the remainder of this decade. However, domestic sources, from government revenues and private savings, will have to supply the bulk of development finance, and will need to increase significantly, particularly as the initial surge from external sources recedes. Improvement in the effectiveness with which resources are allocated will be equally important. Presently, the institutions in the government and financial system that are responsible for allocating and mobilising financial resources are underdeveloped and markets are hampered by a range of constraints and distortions.

The regulations for foreign investment will need to be clarified and refined to ensure that FDI inflows are efficiently utilised and contribute to the development of the private sector. Institutional arrangements for integrating ODA inflows into government planning and budgeting should also be strengthened.

Government revenues will need to be raised substantially, mainly through reforms to the tax system. Extensive reforms will be needed to develop mechanisms for ensuring that government revenues are allocated in line with development priorities and to ensure fiscal sustainability. The presently fledgling fiscal federalism institutions also need to be elaborated to allow for greater decentralisation.

The capabilities of the financial system should be strengthened in several respects. Notably, the effective functioning of markets through a range of financial instruments and the allocation of savings could be improved. Integration of the fragmented components of the financial system, particularly the rural financial system, will be critical. Relaxation of regulatory and other constraints on financial institutions and markets is essential to begin this process. Direct government interventions, such as subsidies, may be needed for a time in certain well-defined areas, but the success of financial system strengthening will depend on market-driven development of financial institutions and markets.

Sustaining reforms

The country has embarked on the path of reform with a breath-taking pace and is making impressive progress in many domains. Nevertheless, it will be crucial to sustain this drive in order to establish institutions that are conducive to development outcomes and to improve the conditions for development and well-being of its citizens.

To this end, the third and final phase of the Multi-dimensional Country Review will support Myanmar's reform efforts through the development of a coherent and balanced vision of modernisation and guidance on implementation of the key policy recommendations developed in the present report. Building on a participative process combined with further analysis and evidence, the third phase will conclude in 2015 with a final report.

Multi-dimensional Review of Myanmar
Volume 2. In-depth Analysis and Recommendations

Chapter 1

Assessment and recommendations

Myanmar possesses multi-faceted development opportunities. The country is endowed with a wealth of resources, including fertile land, minerals, hydrocarbons, forests and water resources as well as a relatively young population. Myanmar's geographical location suggests potential as a regional trading hub. However, as highlighted in the diagnostic first phase of the Multi-dimensional Country Review (MDCR) of Myanmar (OECD, 2013), in order to achieve stable and sustainable development in the long term, the country must address various key challenges.

First, the economy remains dominated by the agricultural sector and improving productivity in agriculture is needed to raise rural incomes and increase demand for non-agricultural goods and services as well as to free up labour for the non-agricultural sectors. Indeed, sustainable development will require a structural transformation towards the manufacturing and services sectors. Second, though literacy rates and basic education levels are adequate there are numerous constraints in the secondary education and vocational training that may limit development in many respects. Third, constrained access to finance has been one of the most critical issues faced by private enterprises in Myanmar for many years and poses a potential obstacle to future development of the private sector.

Accordingly, this second phase report of the MDCR of Myanmar provides an in-depth analysis of these three main issues and detailed policy recommendations for addressing them. The in-depth analysis and policy recommendations from this second phase are based in part on findings from primary surveys such as the recently completed country-wide business survey in Myanmar (OECD, UMFCCI and UNESCAP, 2014) as well as insights gathered from intensive dialogues with key stakeholders.

Chapter 2 focuses on measures to modernise the agricultural sector and promote the transformation towards a manufacturing and services-based economy. Crucially, while services can become important drivers of growth in developing countries, this can only be achieved in tandem with growing the manufacturing sector. Moreover, modernising the agricultural sector by building linkages to complementary non-agricultural activities can also initiate a structural transformation towards a more manufacturing and service-based economy. Chapter 3 looks at the present state of skills and education, presents evidence of constraints they may pose (notably for the private sector), and formulates policy recommendations and priorities to improve educational outcomes. Chapter 4 examines the cross-cutting issue of how to finance the necessary investments for development. The chapter takes a broader perspective and analyses multiple sources of financing, from both external and internal sources. It also highlights the broader constraints to financial markets' development and develops policy recommendations to mitigate constraints.

Structural transformation towards a modern economy: Upgrading agriculture, manufacturing and services

Modernising the agricultural sector

The agricultural sector is a significant contributor to the economic output, export earnings and employment in Myanmar. Looking ahead, agricultural exports will remain a key pillar of growth for the economy. First, the country is endowed with a rich and varied agricultural resource base, including abundant supplies of fresh water and marine resources and rich tropical forests, which allow it to produce a wide array of agri-food products. Second, its strategic location at the crossroads of India and People's Republic of China (China) and bordering numerous Southeast Asian countries as well as the Indian Ocean offers Myanmar the possibility to become an agri-food trade hub in the region, particularly given the strong import demand from China. Third, the country's accession to the World Trade Organization (WTO) and the forging of closer regional integration with the ASEAN Economic Community (AEC) by 2015 will offer greater market access opportunities for Myanmar's agri-food exports.

However, the agricultural sector will be confronted with structural changes in the demand for agri-food exports. In particular, the driving forces of rising incomes, urbanisation and changing lifestyles will increase the demand for greater variety and sophistication of agri-food products. Indeed, quality, safety and value-added attributes are increasingly defining the products demanded. In addition, the trend towards quality and product differentiation is no longer affecting only high-value products but also staples, even in low-income countries.

Fundamentally, Myanmar will need to upgrade its agricultural sector and develop a modern agri-food eco-system in order to meet the changing demand and market opportunities for high-value and quality agri-food products over the coming years. At present, the agricultural output mix (crops, livestock, fisheries and forestry) is dominated by the crop sector. Furthermore, in the crop sector, the concentration in the production and trade of only a few commodities indicates that Myanmar is not fully exploiting its diverse and rich agricultural resource base. Hence, Myanmar must adapt its agricultural outputs to new demands by diversifying and upgrading its product offerings, which will essentially require developing a modern agri-food system.

Key constraints and issues impeding the modernisation of the agri-food sector

To identify the constraints and determine their importance to export performance, industry members were interviewed using a structured common questionnaire, adapted as necessary to the sector. All are members of the Union of Myanmar Federation of Chamber of Commerce and Industry (UMFCCI). These industry leaders, operating at the production as well as intermediate and final stages of the supply chains, are well positioned to identify constraints all along the chain and to provide insights as to their causes, particularly at the farm level.

Findings from interviews with industry members of UMFCCI suggest that the key constraints to Myanmar's agri-food exports growth potential can be broadly classified into four areas.

- **Poor infrastructure.** Notably, there are inadequacies in: electricity; telecommunications systems; transportation systems, including roads and feeder roads; and air cargo and port facilities and storage/cold storage facilities. Several of these constraints, such as roads, electricity and telecommunications, are particularly severe in rural areas where agricultural production occurs.

- **Lack of financing.** This is a major constraint which impedes the investment needed to upgrade present product offerings and to diversify toward higher value-added products. Industry members highlighted the need for a more flexible financial system adapted to the needs of the sector, in particular for commercial agriculture as well as for complementary services. The lack of finance at the producer level also impedes not only the adequate use of complementary inputs such as fertilisers and good quality chemicals in the short run but also longer run investments for modernising productive structures and for mechanisation.
- **Inadequate skills and R&D.** Industry members also voiced concern that farmers' agronomic skills and knowledge are inadequate. This was attributed to the low overall level of education of producers and the limited availability of extension services. Upgrading the knowledge of producers with respect to the use of chemicals as well as promoting good agricultural practices (GAPs) was considered of high importance to improving product quality. But a number of industry members noted that there was lack of R&D in the sector to improve quality and production techniques.
- **Insufficient government services.** In particular, there are insufficient government services to support the exploration of new market opportunities in Asia and elsewhere in a systematic way. This was seen by some industry players as possibly affecting their potential entry into new markets. Insufficient supplies of government services to ensure food safety, plant and animal health were seen to increase risks to production and to market access.

Key policy findings and recommendations for modernising the agricultural sector

The report identifies five main sets of policy findings and recommendations for responding to the changing demand for agri-food products and for relaxing the key constraints to the upgrading and modernisation of the agricultural sector. In addition, the lack of infrastructure is critical and the issue and is addressed in the later section on accumulation of physical capital.

i) Structural reforms will help to expand the financial services available to farmers

Building a robust financial system for the agricultural sector as well as for the wider rural economy is needed to tap market opportunities, and in particular to expand and upgrade the agri-food value chains. Key policy findings and recommendations in this area include the following.

- The Farm Land Law (2012), when fully operational, should help to alleviate constraints on access to finance by providing for Land Use Certificates (LUCs) to be used as collateral for loans. However, it is important that the certificates are actually accepted as collateral for loans by banks. Some monitoring of the use of LUCs in the commercial banking system should be undertaken either through bank reporting obligations or through special surveys (Kloeppinger-Todd and Sandar, 2013).
- Collaboration between the Global Treasure Bank and the Myanmar Agriculture Development Bank (MADB) could provide synergies for developing strategies to meet growing needs in the rural economy, building on their presence and experience in rural areas. Notably, both banks could be instrumental in meeting financial needs for

agri-food export expansion through the financing of value chain clusters. Learning from the experiences of other Asian countries (for example, Bank Raykat of Indonesia or the Agricultural Bank of Mongolia, as well as the experiences of other countries such as Thailand) could provide invaluable lessons on how to assist in such a transformation.

- Commercial banks should be allowed to operate in the agricultural sector, both to receive deposits and to distribute loans. To ensure their willingness to lend and not simply accept deposits, such banks could also be required to allocate a share of loans to farmers over the medium and long term so as to promote deeper investment by the sector itself.
- The microfinance approach of the Co-operative Credit Societies can provide much needed capital in rural areas. Strategies to increase funds available that meet agricultural production cycles are needed. In particular, the two-acre limit even for high-value products may be too restrictive, but studies are needed to estimate needs. Since certain high-value crops may need irrigation or greenhouse facilities, some consideration of longer-term loans for such investments could be envisaged. Such financing can assist in development of export-oriented production of high-value crops for smallholders, since earnings per acre are up to four to ten times greater compared to generic rice.
- There is a need to expand the current nascent warehouse financing facilities to permit farmers to extend loan repayment periods beyond harvest time, when prices are at their lowest. Warehouse financing is widely used in both developed and developing countries and can improve farmers' finance. Here there is a role for private-public partnerships (PPPs) in expanding such facilities, particularly in the rice-growing regions. The Food and Agricultural Organization (FAO) is currently constructing six of these and the rice service corporations are likewise reported to be providing such facilities, although no estimates of their size or number are available.
- Establishing a weather index based crop insurance scheme would help to mitigate losses from Myanmar's climatic fluctuations.

ii) Expanding agricultural extension services and farmer education help spread modern farming practices

Low levels of agronomic knowledge and skills of producers are identified as contributing to poor product quality as well as low productivity. Closely linked to the availability and quality of extension is the agricultural education system, which is reported to be in need both of curriculum revision and of strengthening of agricultural research training. There are numerous ways to extend the quantity and quality of extension services to farmers, including the following:

- Upgrading of the curriculum for extension professionals through continual training and the strengthening of the links between agricultural research and extension services.
- Expanding the delivery of technical information and training as well as weather warnings and market price data through the use of the Internet, radio and smart phones. Systems for this purpose are now being developed by the Ministry of Livestock, Fisheries and Rural Development (MLFRD) and could be scaled up across products if proven successful.
- Expanding the use of village-based approaches with local leader formulas, such as farmer-to-farmer approaches, in the transfer of knowledge and skills. Increased attention should be given to determining farmer needs from farmers themselves.

- Using co-payment schemes for specific types of technical assistance – even very minimal payments can be useful to identify what types of training and assistance are needed.
- Where appropriate, adopting public-private approaches, with government oversight, in the provision of extension services. This can extend the reach of extension services.

iii) Strengthening agri-food health and safety regulatory systems and increasing government assistance will help to promote exports

Greater government services support in two areas will be needed. First, the agri-food health and safety regulatory systems should be strengthened. Myanmar's regulatory agencies are currently severely resource constrained, lacking sufficient certified laboratories, testing equipment and qualified operational personnel, according to authorities of both the Plant Protection Department (PPD) and Food and Drug administration (FDA). There is only one accredited (ISO 17025:2005) government laboratory in Myanmar, in Nay Pyi Taw, which can test residue levels of a number of pesticides. It is imperative to relax the constraints on these agencies as rapidly and as efficiently as possible. Several policy options should be considered.

- Increasing ISO certified laboratories' technical staff and updating of technical competences, and mobile laboratories at border check points. Reported increases in budget allocations for equipment and personnel should improve the situation in the near future; however the sustained availability of sufficient resources needs continual monitoring to ensure that Myanmar can build a reputation for supplying safe food.
- Using fee-based services for government inspection, testing and certification services provided to exporters. Many developed countries have taken this approach and the services indicate where the real needs are in the system.
- Using PPPs for inspection, testing and certification for conformity to international standards with the government retaining oversight and legal authority over their implementation.
- Using PPPs for training for chemical use and integrated pest management (IPM) as well as Good Agricultural Practices (GAPs) at the farm level. This can involve periodic training sessions of village staff followed by co-operative forms of dissemination to farmers. Formalised agreements with evaluation service providers can ensure that international standards are met.

Second, there should be greater government assistance to promote exports. Myanmar's trade associations rely largely on their own initiatives and financing to identify new markets and to be informed about regulations and export opportunities. Efforts by government agencies to facilitate contacts with new markets and to promote Myanmar's agri-food products seem warranted, particularly given the impacts which agri-food trade can have growth and development. The efforts should be done by the Department of Trade Promotion of the Ministry of Commerce. They could include funding of producer and exporter participation in food fairs world-wide as well as simple visits to government offices for trade promotion and to inform market participants about Myanmar's products.

iv) Myanmar has the potential to expand its range of agricultural export products and destinations

Myanmar's National Export Strategy (NES) has identified a number of priority sectors through which it will foster sustainable inclusive and equitable export-led growth. These include rice, fish and crustaceans, pulses, beans and oilseeds, with rubber as an emerging priority sector. To develop a strategic plan to activate Myanmar's potential value chains in these sectors will require not only in-depth analysis of their production potential and market opportunities, but also the identification of trade capacity needs. Building on Myanmar's NES, several candidates for further value chain development can be identified, in particular: fruits and vegetables and fish/crustaceans, which can integrate smallholders to markets for high value products; and rice, because of its widespread production and opportunities for upgrading. The critical constraints in satisfying evolving markets facing these sectors and possible ways they might access new market opportunities are briefly reviewed below.

The *mango value chain* provides an example for improving access of Myanmar fruit and vegetables to global markets. Demand for high-value tropical fruits has been rising, providing Myanmar with additional export opportunities, but low productivity, quality and lack of compliance with food safety certifications limit exports. But ensuring food-safety compliance is not easy particularly when traditional smallholders are to be integrated into evolving markets, as experience from Viet Nam indicates. As an example, development of the mango value chain has been underway for a number of years but success has been limited. Firms have not been able to export to high-end markets consistently or in significant quantities. Thus investment is stymied and demand for complementary services and inputs stagnates. Significant constraints are found at all stages of the value chain from inputs to marketing, many of which lower firm competitiveness.

Expansion of fisheries exports to high income markets will require meeting evolving regulatory standards. Expected increases in fish demand globally provide Myanmar with growing export opportunities. Because exports make use of a wide array of services and processing facilities, they should generate substantial non-agricultural employment beyond the fish production/catch sector. But the sector may have difficulty tapping into these export opportunities because of a variety of constraints including: lack of finance to expand the fish supplies from both aquaculture and marine fisheries; lack of sufficient technical skills along the chain affecting both productivity and the quality of outputs; lack of hard infrastructures such as electricity, transportation facilities and cold storage facilities at airports and ports. As rising food safety and sustainability are now significant features of international fish trade and marketing, these constraints could limit exports to more lucrative markets, thus efforts to meet food safety requirements must be undertaken. Building upon Myanmar's sustainability could provide opportunities for development of markets for eco-labelled fish exports.

Rice value-chain performance also needs to be improved and to move toward branding. Myanmar's natural resource endowments make it particularly suited to producing rice, yet its performance in terms of productivity and export market earnings has waned over the past decades. The rice value chain is in need of upgrading at all stages from the farm level to milling and processing (Wong and Wai, 2013). This is critical to the sector's development as markets are moving to quality-defined branded products. In addition there are opportunities for development of rice-processing industries to supply both domestic and export markets. Building of rice value chains to access high end markets can benefit from strategies to develop branding, but only if a reputation for quality can be established and maintained. Branding of rice and rice products should be high on the policy agenda.

v) Clustering, contracting and other alternative organisational structures may strengthen the impetus for modernisation

A number of organisational structures have the potential to foster modernisation in the agricultural sector. The *clustering* of value chains in a given area can allow firms to exploit synergies and linkages both vertically, between one stage and another, and horizontally among players at the same stage. Clustering has been found to improve the competitiveness of firms/farms through benefits from collaboration as well as economies of scale in the provision of services and of government support. The proximity of firms and farms at different stages of the value chain can create firm/farm linkages that initiate dialogue and collaboration to resolve common problems affecting the entire chain, such as implementation of standards or improving market information and access.

Contract farming can help to improve productivity and inclusiveness. Contracts provide for acquisition of inputs through credit, for technical assistance and for a guaranteed price at harvest, thus relaxing the constraints the typical farmer faces in these areas. Given that Myanmar's small farmers are constrained by a lack of quality inputs, credit and technical assistance, the use of contract farming to integrate farmers into value chains could be an economically viable solution for farmers and exporters as well as agri-food processors aiming to expand markets. From a public policy perspective, there is a role for government to support the establishment of contract farming where smallholders are involved. Ensuring a transparent legal framework for contracts between farmers and agribusiness needs to be considered as the sectors develop.

Encouraging co-operation through producer and exporter associations and promotion of new ways of doing business can also help to modernise agriculture. Myanmar has just begun to develop its producer associations and these need to be encouraged as they can contribute to fostering collaboration in finding solutions to common problems as well as in building important social capital. The Myanmar Farmers Association could serve as an umbrella organisation for a variety of producers' associations. Industry associations involving all stages of the value chain should be fostered since they stimulate collaborations that can contribute to developing new ways to respond to nascent market opportunities and to provide an important ingredient for building of value chain clusters. In addition, it is also useful to explore alternative ways of doing business in the agriculture sector, in particular by capitalising on the expansion of modern telecommunications. The use of information and communication technologies (ICT) is seen as important tool for the dissemination of market information to small agricultural producers to improve their decision-making capacity on where and when to sell as well as educational materials on agricultural practices and likelihood of weather-related risks.

Developing the manufacturing sector

The modernising of the agricultural sector with its linkages to complementary non-agricultural activities can also initiate a structural transformation towards a more manufacturing- and service-based economic structure. This will complement the government's strategy to develop the manufacturing sector into a major pillar of growth in its multi-pronged development strategy. However, a lack of information on the conditions and environment in which manufacturers operate represents a major obstacle to identifying effective policy recommendations (World Bank, 2014).

In light of this, the *Myanmar Business Survey* (OECD, UMFCCI and UNESCAP, 2014) was conducted to fill this information gap and to assess the status of the business community, including both domestic and foreign manufacturers. The OECD and the United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) carried out the business survey jointly with the UMFCCI. This comprehensive nation-wide business survey comprises 1 018 manufacturing firms that are from all states and regions, of various firm sizes and engaged in a range of manufacturing activities. Findings from the *Myanmar Business Survey* will help to identify key constraints to growth and to facilitate the formulation of policy recommendations to develop the manufacturing sector.

Key constraints and issues confronting the manufacturing sector

Further statistical explanatory factor analysis and theoretical considerations suggest that the obstacles confronting the manufacturing sector can be broadly categorised into six groups (in order of their statistical significance): i) corruption; ii) access to financing; iii) access to markets, labour, supplies and technologies; iv) regulations and taxation; v) infrastructure and utilities; and vi) conditions for international business. The first three constraints are especially important.

i) Corruption

- Although corruption can be present in various aspects of economic transactions and interactions with the public authorities, the survey focused on under-the-table payments required to register a firm or to get a business licence or a permit. While 38.5% of manufacturers found it not necessary to pay above the officially required fees, over half of the respondents calculated the amount of extra payments for registration, a licence or a permit to be MMK 500 000 (Myanmar kyats) or less (equivalent to slightly above USD 500). There were a few respondents that perceived the required extra payments to exceed MMK 5 million (over USD 5 000).

ii) Access to finance

- **Over half of firms need more financing and roughly half have external debts.** On average, the respondents mobilise more than 80% of financial resources from informal financing, namely personal savings and loans. Approximately 10% of financial needs are supported by retained earnings. The share of institutional loans is low, with 5% of total financing provided by both commercial banks and state development banks. Close to 1% of financing is obtained through asset-based financing. As expected, sophisticated financial instruments such as equity financing (for example, corporate stocks), corporate bonds and leasing are uncommon in Myanmar.
- **Slightly over half of the respondents think that they do not have adequate financing in general (but over one-third of the respondents do not need external loans) and only one-half of manufacturers have access to loans.** Nearly two-thirds of the manufacturers that borrow do so to finance expansion. Firms tend to borrow more to meet working capital needs rather than to invest, which reflects the scarcity of long-term lending in Myanmar.
- **The biggest obstructions to accessing institutional loans in Myanmar are unfavourable borrowing conditions** such as stringent collateral requirements, complicated application procedures, the small size of loans and high interest rates. The lack of sophistication of lenders about the needs of manufacturers has discouraged the use of external financing. The quality of banking services is found to be less crucial to having access to formal loans.

iii) Access to markets, labour, supplies and technologies

- **Skill shortages are a severe barrier to manufacturing.** Nearly 60% of all respondents find skill shortages a major problem. Among the sub-sectors, those firms engaged in the manufacture of electrical machinery, motor vehicles, petroleum products and chemical products find it more difficult than the average to recruit skilled workers. Computer and IT-related jobs are facing the most acute shortage of workers at the skilled and unskilled worker level as well as in top management. Jobs requiring other technical skills or analytical thinking, creativity or initiative are also hard to fill. Across job categories, professionals and skilled workers are in greatest shortage but firms would also like to see more interns in most job categories. Overall, little investment is made in workforce development; over one-half of the respondents allocate no funding to training for their workers.
- **Innovation is considered important but firms spend little on it.** Over half of respondents consider innovation to be critical to their business, with automobile, chemical, electronics and ICT sub-sectors most likely to hold this view. Over 40% of firms have introduced new products; however, process innovation has been less common. Surprisingly, investment in new products to enter into export markets is also weak. Despite the importance manufacturers attach to innovation, 56% of them do not spend at all on it. This is likely to be related to the small size of most firms, which prevents them from exploiting economies of scale and for which fixed costs of innovation may be prohibitive.

Key policy findings and recommendations to develop the manufacturing sector

The *Myanmar Business Survey* results provide useful insights for policy makers about the priorities for their interventions to enhance the business climate and the competitiveness of manufacturers in order to nurture the development of the manufacturing sector effectively. Policies to develop manufacturing in Myanmar need to be based on: 1) the major impediments to manufacturing development; 2) the importance of SMEs in the manufacturing sector; and 3) stakeholders' involvement in policy making and implementation. The following policies are recommended for consideration.

- An SME development fund could be a tool to enhance access to finance for SMEs. While continued emphasis should be placed on the development and strengthening of the capabilities of the financial system to allocate financial resources (see Chapter 4 for more details on mobilisation and allocation of financial resources), a dedicated SME fund could bridge the financing gap in the meantime. This should be done in co-operation with international development agencies that want to channel funding to manufacturing SMEs.
- Easing the regulatory burden would require creating and enforcing a fair and transparent legal and regulatory regime for manufacturers. For example, a clear contract policy for public (and private) procurements with manufacturers and an e-procurement system would be important to have.
- An SME development agency could be tasked with assessing the costs and benefits of specific laws/regulations and eradicating unnecessary roadblocks. To facilitate compliance for SMEs and expand the services offered to them, such an agency could also be tasked with setting up "single-window" SME service centres in each capital of the states and regions of Myanmar. This should be done in co-operation with other relevant ministries, financial institutions and business associations. These service centres should

handle all business registrations, licensing, permits and tax collection in streamlined, simplified and transparent procedures and disseminate regulatory, financial, technical and market information to the manufacturers.

- To overcome constraints in infrastructure and access to suitable land, a nation-wide strategic plan for the development of special economic zones (SEZs) and industrial zones could help overcome constraints in infrastructure and access to suitable land. This should include the selection of strategic locations (e.g. deep sea ports) and objectives (e.g. cross-border production, export gateways); the planning and designing of necessary infrastructure meeting international standards – such as roads, utilities, telecommunications and waste management facilities – for fostering key industry clusters; the promotion of foreign direct investment (FDI) and domestic private sector investment; and the building of capacities for managing SEZs and industrial zones.
- As a first step to overcoming the skills shortage for manufacturing firms, it would be useful to upgrade existing industrial training centres and conduct a mapping exercise of available training courses with research and training institutes, such as chambers of commerce and industry, universities, colleges and vocational schools, and disseminate information on available training courses on business and management as well as technology and engineering (see Chapter 3 for broader discussion on technical and vocational education).
- To better understand manufacturers' needs and build a basis for public-private dialogue, it is important to conduct annual manufacturer surveys (including micro manufacturers, manufacturing co-operatives and manufacturing entities in the informal sector), that are an upgrade over the present industrial zone survey conducted by the Central Statistical Office (CSO) and Ministry of Industry (MOI), and disseminate their results through print media (such as white papers, studies and flyers), information sessions, seminars and the portal website.
- Lastly, regular consultation mechanisms with manufacturers at both national and sub-national levels could help with co-ordination, the identification of pressing problems and needs for action. These consultation sessions should bring together the private sector, including local business associations and foreign investors. The results of the consultations and related action plans could be published on an annual basis.

Seizing opportunities in the services sector

Services will play an important role in Myanmar's transition to a modern diversified economy from one mainly reliant on agriculture. Services increasingly contribute to economic development, both indirectly by improving the quality and efficiency of goods production and directly through provision of high-productivity modern services such as finance, business and ICT. In Myanmar, transport and logistics and tourism have especially great growth potential.

Key constraints and issues concerning services sector development

i) Transport and logistics sector

- The non-road domestic transport sector is dominated by state-owned enterprises (SOEs), including Myanmar Railways and Inland Water Transportation, that depend on captive customers in government and among other SOEs. Their prices are fixed below costs, requiring government support to remain in operation. They are further constrained by underinvestment in rolling stock and in supporting rail and port infrastructure. Myanmar Airways is also state-owned but competes against privately owned firms on a more competitive basis and runs a joint venture, Air Mandalay, with a Singapore-based partner.

- Given these limitations, road transport is particularly important. However, the operation of an efficient road transport sector remains constrained by underdeveloped road networks, outdated vehicles, the scarcity of skilled workers, low competition and insufficient supporting logistics. A study of private sector trucking along a major corridor running from Yangon to Kunming in China highlighted the sector's need for increased access to highways, greater investment in roads and bridges, improved business management education and financial sector reforms to improve the availability of insurance. The broader logistics industry also needs to develop alongside transportation, and non-contract-based business practices and inadequate warehousing facilities which create supply chain inefficiencies need to be addressed.

ii) Tourism sector

- Leisure tourism can be a key engine of economic growth, particularly in well-located countries featuring attractive natural, historical and cultural sites, such as Myanmar. Business and MICE (meetings, incentives, conferences and exhibitions) travel are also likely to become more important as the country continues to build strong economic relationships in the region and globally. However, the nature of the sector can make it complicated to foster. The implementation of travel and tourism development strategies – particularly regionally balanced ones – requires a broad range of investments in skills, infrastructure and ancillary services.

Key policy findings and recommendations to growing the services sector

i) Transport and logistics sector

- Additional public investment is needed, with education and training programmes and the upgrading and expansion of both national and local road networks being priority areas. In addition, regulatory reform, including liberalising SOE-led sectors, can help to improve competition. Harmonisation of regulations, such as per-axle weight restrictions, with neighbouring countries could help to encourage cross-border transportation industries.
- Policies to streamline and prevent overlapping responsibilities between government agencies such as the Ministry of Transport, the Ministry of Rail Transport, the Ministry of Construction and other ministries and local development committees should also be examined.

ii) Tourism sector

- Although Myanmar has significant potential in travel and tourism, the improvement of domestic transportation systems – both long-distance and within destinations – is critical for the sector's growth. Increased domestic and international competition should help to accommodate the rising travel demand and to improve the quality of services offered. The gradual liberalisation envisaged by the ASEAN arrangement may also allow for competitive airlines in Myanmar to adjust to these new pressures.
- Tourism in Myanmar tends to be highly geographically concentrated, with most domestic and international tourism concentrated in Yangon, Bagan, Mandalay, Inle and Kyaikhto. The concentration strains infrastructure and services at these sites and pushes

up prices. Indeed, about 94% of international arrivals to Myanmar in 2012 not crossing land borders entered through Yangon, a trend that would place particular strain on the capacity of Yangon International Airport if it were to continue. Thus, policies should focus on developing popular locations to manage increased numbers of visitors. In addition, promoting more balanced tourism can help relieve pressures on local capacities and may even be used to support regional development programmes.

Accumulation of human capital and addressing skills gaps

Sustainable economic development in Myanmar hinges on the accumulation of human capital and, more critically, addressing skills gaps. Building up the right skills in the workforce will be essential to support Myanmar's structural transformation. Firms in the country identify a lack of skilled workers as a serious or very serious obstacle to their operations, one that ranks ahead of any other obstacle. Indeed, according to findings from the 2014 *Myanmar Business Survey* (2014), 57% of firms in Myanmar have experienced a shortage of skilled workers. This rises to 61% for firms in the hotel and restaurant sector and to 66% for firms in the construction sector. The shortages could become even more acute as the country industrialises if the right skills policies are not put in place. Many of the jobs likely to be created as Myanmar industrialises will require strong technical and vocational skills.

As the *Initial Assessment* revealed, time is of the essence. Myanmar's population will start ageing soon, so there is a risk that the country could get old before it gets rich if the momentum for development is not seized now (OECD, 2013). The size of Myanmar's potential workforce (people aged 15-64) will be fairly stable at around 40 million until 2035, after which it will begin to fall and the dependency ratio will rise as the population ages. While investing in basic education remains important, the investments will take time – a generation – to bear fruit, whereas Myanmar needs to develop the right skills in a much shorter time frame. As the right skills in the workforce will need to be developed fast, a strong case can be made for a policy focus on training and re-training for adults.

The approach used to assess Myanmar's skills situation follows the framework of the OECD Skills Strategy, which focuses on three critical aspects: how to develop relevant skills; how to encourage people to contribute their skills to the economy; and how to use people's skills effectively.

Developing relevant skills in Myanmar

Developing the right skills requires good quality education and training systems that are responsive to the needs of the labour market and of society at large. It also involves ensuring that access to education and training is equitable and that people are encouraged to learn. In Myanmar, the education system leaves a significant part of the population without the skills that are needed in the labour market.

Key constraints and issues in developing relevant skills

- **Higher level skills are limited.** Many people do not have education above the primary level, as shown by the sharp drop in enrolment rates after the primary level, as well as the falling completion rates with each level of schooling. In addition, only 11% of young people reach university (ADB, 2013). Indeed, Myanmar has a much lower rate of students in tertiary education than other ASEAN and neighbouring countries. Among tertiary graduates, there is a strong concentration in humanities, arts and social sciences, potentially at the expense of education and health specialisations. There is, however, a high proportion of science and engineering students.

- **The vocational education and training (TVET) sector is limited.** Many of the jobs likely to be created as Myanmar industrialises will not require university-level education but rather strong technical and vocational skills, complemented by solid foundation skills. Currently just 0.5% of upper secondary students are enrolled in TVET education. TVET is also limited in terms of the range of courses on offer: the "v" for "vocational" in TVET often appears overlooked and the focus is much more on a narrow definition that emphasises technical training. Furthermore, the technical skills that are taught in the framework of the current TVET system do not seem to be linked to the real needs of the economy. Findings from the *Myanmar Business Survey* (OECD, UMFCCI and UNESCAP, 2014) show that firms identify computer and ICT skills and technical skills as the most commonly lacking skills across almost all occupation groups. For skilled workers specifically, more than a quarter of firms report skills gaps in: computer and ICT, management and leadership, technical skills, and creativity and initiative.
- **The quality of education is low.** There are concerns about the quality of education, in particular that it undermines skills development. Quality is jeopardised in particular by limited teacher training and problems with teacher motivation. Teacher training in Myanmar is limited and primary school teachers in particular tend to be inexperienced. In addition, the quality of teaching in Myanmar's border areas is jeopardised by difficulties in recruiting teachers to those areas, which is particularly challenging.

Key policy findings and recommendations for developing relevant skills

- **Address barriers to education access.** It will be important to address the financial and other non-financial barriers to access to education that keep enrolment and completion rates from improving more quickly. Barriers include care or work responsibilities that children may have outside of school, the physical distance children need to travel to school (especially secondary schools), the language of instruction for children for whom Myanmar language is not their mother tongue, and inadequate provision of services for children with disabilities. A number of countries are providing fees and targeted public funding to facilitate participation of students. In China, upper secondary education typically requires fees, but the government is planning to introduce a number of measures, both at the national and provincial level, to try to overcome financial barriers and to ensure that as many students as possible stay on at school. The measures include a national scheme to offer a CNY 1 500 (Chinese yuan renminbi) per year subsidy to students in TVET schools, largely covering their fees and an initiative to make tuition free for upper secondary vocational school students.
- **Undertake reforms to enhance TVET.** As well as increasing the provision of TVET, the government should consistently engage employers, unions and the interests of students in TVET to ensure that the organisation and the content of programmes meet the needs of business and the wider economy. The inclusion of all these different actors is vital. Second, TVET systems need to take full advantage of workplace learning. Most vocational programmes in OECD countries involve some element of workplace learning. Workplaces provide a strong learning environment in which to develop hard skills in using modern equipment as well as soft skills (for example, teamwork, communication and negotiation). Workplace learning can include work-shadowing, longer internships and informal learning and training for employees. Given that Myanmar plans to introduce a training

levy, one option could be to assign some of this levy for apprenticeship/workplace training schemes. For example, in Hungary, employers are required to contribute 1.5% of their payroll to such schemes, representing almost one-third of total national expenditure on school-based TVET. In addition, TVET teachers and trainers need to be familiar with the modern workplace, as they typically have little or no industry experience. Teachers could, for example, spend part-time between industry and teaching as is the case in countries such as Switzerland.

- **Improve quality of teachers and training.** First, along with reviewing the selection process, efforts need to be made to improve teaching's attraction as a career choice. Second, a possible way to increase the supply of teachers would be to make entry pathways into the teaching profession more flexible. For example, introducing the option of a two-year teacher training course for university graduates of other disciplines would open up an additional entry point into the profession. Third, as teachers gain experience, they are promoted from primary school to lower secondary school and finally to high school. Thus, the government may also wish to consider de-linking promotions with the level of schooling. The type of pedagogy suited to primary school pupils is different from that needed for older students, so arguably the skills that the teachers are required to have are also different.

Activating skills supply

Developing skills is a considerable investment for any country. To realise the returns on this investment, successful skills policies need to activate skills supply so that skilled people do not withdraw from the labour market but actively contribute to it. When people are not working, they can quickly lose the skills they once had or, during their time not working, the types of skills demanded by the labour market can change. On the other hand, emigration can deplete the pool of skilled workers (brain drain) unless such workers return to the domestic labour market later on in their career.

Key constraints and issues in activating skills supply

- **Unemployment, especially youth unemployment, is a concern, alongside possible skills mismatches.** Few people in Myanmar are identified as inactive. Labour force participation rates are among the highest in the region and female labour force participation rates in particular are especially strong. However, unemployment is a concern in Myanmar, although it does not seem to be captured by official statistics. World Bank figures place the unemployment rate at just over 4% and youth unemployment at 11.5%, while the latest figures from Myanmar's Department of Labour place the overall unemployment rate at 5.4%. However, an internal survey by Myanmar's parliamentary planning and finance development committee in January 2013 revealed that the unemployment rate could be as high as 37%. Youth unemployment in particular is seen as a growing concern. In addition, there is also an element of skills mismatching. Anecdotal evidence, at least from major cities, tells of university graduates unable to find jobs that meet their expectations and an unwillingness to do "nonprofessional" jobs.
- **Brain drain is also of concern.** Figures on the number of Myanmar migrants vary depending on the source. According to the World Bank's *Migration Factbook 2011*, the country has an official stock of emigrants of 514 000 persons. However, other sources put the number of Myanmar emigrants in other Asian countries (Thailand, Malaysia, Singapore, Bangladesh, Japan and Korea) in the range of 2.2-4.8 million persons,

excluding emigrants in many other countries (such as India, China), where no data are available. Other estimates place the total real number closer to 5.5 million, making Myanmar's emigration rate particularly high, even when compared with other "high emigration" countries such as the Philippines. Hence, given a total population of 50-60 million, while the official stock of migrants stands at around 1% of the population, the unofficial stock may be actually closer to 10% of the population.

Key policy findings and recommendations for activating skills

- **Activating skills for youths.** Better career advice that informs students, teachers and parents of where there are good job prospects would help to address the problem of skills mismatch to some extent. Encouraging entrepreneurship, rather than relying on employment within existing firms, could also be a way to ensure that young people are actively contributing to the economy.
- **Encouraging domestic skilled workers to remain in the country or emigrants to return to Myanmar.** The focus of policy of the Ministry of Labour, Employment and Social Security (MoLESS) seems to be aimed at formalising the large unofficial flows of Myanmar nationals abroad rather than encouraging skilled workers to stay in Myanmar. On the other hand, Myanmar's diaspora represents a considerable pool of skilled workers who could contribute to Myanmar's economy if they return. While most left for Thailand with just a primary education and very few had any prior vocational training, emigrant workers will have gained skills in important sectors through their experience working abroad. Among surveyed Myanmar emigrant workers in Thailand, the preferred job after returning correlates more strongly with the type of job held prior to migrating than with the job currently held in Thailand. Hence, policy incentives will need to be put in place so that returnees put their skills to use in the sectors where they have built up experience. In addition, just 3% of migrants surveyed planned to return to big cities or other areas where there are jobs in Myanmar; 78% wanted to return to their hometowns or villages, often to farm their own land. However, the reality of job opportunities in Myanmar may oblige them to move to large cities and other areas of job creation. Hence, it would also be useful to focus on creating jobs in non-agricultural activities in rural areas, through an agricultural value chain approach that generates linkages with complementary services and inputs.

Putting skills to effective use

People's skills are not always used effectively in the workplace. Workers may not be well matched with their jobs, either having more skills than needed for the tasks that they are required to perform or too few skills. Such mismatches make the workers less productive.

Key constraints and issues concerning the effective use of skills

- **Employment services are improving but there are signs of skills mismatches.** Under the new Employment and Skills Development Law passed in August 2013, employers will be obliged to inform Labour Exchange Offices about present and forthcoming vacancies which, if implemented, should ensure that the offices have an accurate picture of local demand. However, there are signs that workers may not be well matched to jobs in terms of the skills they have and the skills demanded by the job. Employers' organisations and government officials report that young people are often not "work ready" by the time they complete their initial education, or even after graduation from university. In addition, the incentives for employers to invest in their employees may be insufficient, even if employers benefit from such investments.

- **Currently public provision of training is very limited in Myanmar and employers spend very little on training their workers.** The MoLESS runs four Skill Training Centres that provide training in a fairly small number of skills. These Skill Training Centres are also largely geared to training Myanmar nationals to work abroad under the Employment Permit System. Over half of all firms do not spend anything on training for employees.
- **In Myanmar, there is also a lack of strong partnerships** at local and national levels between schools, universities, employment services and employers that may be hampering smooth transitions and an effective utilisation of skills. Less than 4% of firms with a shortage of skilled workers have responded to this challenge by strengthening links with schools or universities in order to secure people with the right skills. In 2006, Myanmar universities established Community Development Centres to improve such links, but their impact appears limited.
- **National qualifications frameworks (NQF) are an important element of a national qualifications system, but in Myanmar a NQF is not yet fully established.** A NQF serves to develop and classify qualifications according to a set of criteria applicable to specified levels of learning outcomes. This has the advantage of increasing the consistency of qualifications and also creating more transparency for individuals and employers. However, there is currently no consistent qualifications framework in Myanmar that provides transparent and reliable information about the skills that people have; and there is a lack of standardisation across courses, quality control and certification. Many different ministries run courses and issue certificates, often in the same/similar skills areas, but there is no consistency between them in terms of curricula or standards. The result is that certificates have very little signalling value to employers about the skills that potential employees actually possess.

Key policy findings and recommendations for utilising skills effectively

- **Improving skills mismatches.** Employers need to be encouraged to invest in the skills of their workers. Government schemes, especially for individuals with low levels of skills, are also often necessary to solve the problem of insufficient skills in the labour force and to achieve an optimal match between workers' skills and job requirements. This suggests a role for publicly financed provision of training, especially for workers in sectors where employers may be unwilling to invest owing to a higher likelihood of employees leaving for other firms. Second, there could be scope for implementing measures such as those in a number of OECD countries whereby a small tax on businesses is used to finance training. This solution is being pursued in Myanmar. There could also be greater engagement of business associations in the provision of industry-specific training, with costs covered from membership contributions. By mutualising the costs, such arrangements could provide an incentive for the private sector to provide training.
- **Helping to smooth transitions from education to the workplace.** A smooth transition from school or university to the workplace can help ensure that skills are utilised effectively. Reform of the simple pass/fail matriculation system could help facilitate transitions, as would evidence-based careers advice services. In this regard, there should be graduate surveys to provide information and track education-to-work transitions in Myanmar. The government could also consider ways of giving young people the opportunity to obtain work experience before completing their initial education. Finally,

government policies should encourage strong partnerships between schools, universities, employment services and employers to ensure a smooth transition between education, training and employment. These partnerships have two functions: first, they help to ensure that people find work that is in line with their skills; and second, they act as a feedback mechanism to ensure that acquired skills fit the needs of business.

- **Ensuring that the on-going construction of a qualifications framework in Myanmar is well co-ordinated among ministries.** A national qualifications framework would help people signal the skills they have to employers. In addition, it will be important for people who have already obtained skills informally to be able to signal them to the market. Hence, Myanmar could consider establishing a Recognition of Prior Learning programme which would be recognised within the NQF to help those individuals who have never had, or who do not have, the opportunity to access formal learning.

Strengthening the skills system

As Myanmar undergoes political and economic transition, its skills system needs to adapt to the new context. Historically, ministries had responsibility for education and training in their policy domain, often to service the skills needs of SOEs. Increasingly, the skills system needs to support a market-based, modernising economy, so the structures and policy-making processes need to change accordingly. A whole-of-government approach is essential as a broad range of policy fields are implicated in developing, activating and effectively using skills, including education, science and technology, family affairs, employment, industrial and economic development, migration and integration, social welfare and public finance. Creating linkages between these different policy fields is essential for ensuring efficiency and avoiding duplication of effort.

Key constraints and issues concerning the skills system

- **The policy-making framework is complex, with limited resources compounding the issue.** A large number of ministries have responsibility for education or training programmes, and co-ordination between different ministries poses a challenge for the design of a coherent skills strategy for Myanmar. In addition, limited public sector capacity compounds the problem. Resources to design skills policies and to implement them, both in terms of financing and expertise, are strained.
  - ❖ The National Education Committee (NEC), chaired by the Union Minister for Education, is the national level co-ordinating and decision-making body governing education in Myanmar. Another 11 ministries which have responsibility for education institutions are represented in the NEC at the Deputy Minister level. Under the NEC, higher education matters are dealt with by two councils: the Universities Central Council and the Council of University Academic Bodies. The Universities' Central Council is responsible for policy formulation and implementation of higher education institutions.
  - ❖ The Comprehensive Education Sector Review (CESR), initiated in July 2012, is led by the Ministry of Education with the involvement of other ministries and development partners (bilateral and international organisations). The purpose of the CESR is to develop policies, legislation and plans for the education sector using accurate and up-to-date information, culminating in a costed education sector plan. In 2013, an Education Promotion Implementation Committee was formed under the auspices of the President's Office, composed of an Advisory Board and a Task Force, and is tasked

with providing recommendations to the committee that is drafting the National Education Law.

- ❖ The MoLESS has responsibility for broader skills policies beyond the formal education sector. A Workforce Development Plan sets the direction for developing skills in the workforce. In 2013, each region and state government drafted Workforce Development Plans to feed into a national-level plan overseen by MoLESS. The National Skills Standard Authority (NSSA) under the Department of Labour also has responsibility for policy development (including drafting new laws).
- ❖ The new Employment and Skill Development Law, which came into force in November 2013, establishes a central body for employment and skill development comprising members from ministries, local governments, industry, employers' organisations and labour organisations. A "skill development team" under the central body will have responsibility for specifying skills standards and quality assurance mechanisms (assessment and certification) as well as managing the skill development fund.

- **Important information and data are lacking and there is little systematic involvement of social partners in policy design.** In addition to institutional complexity and overlapping responsibilities, effective policy making is hindered by a lack of accurate information and data. Myanmar's public sector institutions do not systematically gather and publish data and evidence about evolving skills demand and use it to design policies. For example, the last labour force survey was carried out in 1990, although another is planned for 2015/16. Given this lack of information, policy naturally tends to be more supply-driven than demand-driven and so is not very responsive to the needs of the labour market. There is also little systematic involvement of social partners (i.e. employer and employee representatives) in policy design. As well as better information, greater involvement of social partners in designing and delivering education and training programmes would be another way of ensuring that skills policies are more demand-driven and responsive to the needs of the labour market.

Key policy findings and recommendations to strengthen the policy framework for skills

- **Improving co-ordination.** In order to reduce complexity and enhance the coherence of policy making, the government could consider consolidating operational responsibility for education and training (both general and TVET) into a smaller number of ministries.
- **Developing better information and introducing institutionalised arrangements to include social partners.** Policy making would be strengthened by better information and data and involvement of social partners. Better information might be provided either through one-off surveys of graduates (both from general education and those leaving TVET) to establish labour market outcomes, or by tracking cohorts of individuals through education into employment to map out career histories. For instance, for the TVET field in Korea, there is a good research base on post-secondary vocational education and training (Kis and Park, 2012). The Korean Research Institute for Vocational Education and Training conducts research that supports the development and implementation of TVET policies. There are various surveys that provide useful information on the transition from school to work, the outcomes of education and training programmes and on the labour market. Together with better information and data, greater involvement of social partners in designing and delivering education and training programmes would be another way of ensuring that skills policies

are more demand-driven, hence responding to the needs of the labour market. Recently, social partners have been included in an Advisory Board to the Education Promotion Implementation Committee. This is an encouraging sign to build on, and institutionalised arrangements to include social partners would likely lead to more effective skills policy making and implementation.

Mobilising the external and internal financial resources for development

Over the past decades, the investment share in Myanmar has been very low in comparison with other Asian countries, leading to a significant gap in capital stocks. Investment reached a 9% share of GDP in the 1990s and around 13% in the 2000s. Nevertheless, this still pales in comparison to many Southeast Asian economies, where investment has been more than 30% of GDP. Given low investment shares and low income, the capital stock per capita in Myanmar is also much lower than in other Asian countries.

Based on these initial conditions, in order to catch up with other Asian economies, the investment share in Myanmar must be significantly boosted to an average of 21-30% of GDP annually until 2035, compared with 16.7% in 2012. This implies that the investment share would have to rise substantially over time, starting below the average in the medium term and rising to at least 30% and as much as 43% of GDP by 2035.

Inflows from external sources – mainly overseas development assistance (ODA) and FDI – are expected to surge in response to the lifting of sanctions and are likely to be particularly important in financing development through the remainder of this decade. Remittances from migrants working in foreign countries can also be an important source of financing for development, especially for Myanmar, which has a large diaspora of migrant workers. However domestic sources, from government revenues and private savings, will have to provide the bulk of development finance, and they will need to increase significantly over time, particularly as the initial surge from external sources recedes.

Critically, the realisation of Myanmar's growth potential will hinge on how effectively the country can mobilise financial resources externally and domestically, and, equally crucially, how efficiently these resources are allocated to support the country's development. Achievement of these goals, will require broad and extensive structural reforms – in the management and regulatory frameworks for ODA, FDI and remittances, and to government revenue mobilisation and to the financial system.

Mobilisation and allocation of external resources

Key constraints and issues for mobilising and allocating external resources

i) ODA

- The government of Myanmar is engaged in reforms of ODA data collection and procedures and the new Aid Information Management System is about to become operational. Currently, Myanmar line ministries manage and report their co-operation projects and associated funds, and the Foreign Economic Relations Department (FERD) within the Ministry of National Planning and Economic Development (MNPED) collects all information and provides inputs for the national budgeting process.
- The approval procedures for loans and projects are very comprehensive but can also be cumbersome and time-consuming. For example, loans apparently pass through the President's Office three times during the approval process. Along similar lines,

multiple line ministries seem to be consulted in the early stages and multiple bodies (such as the Foreign Affairs Policy Committee) must be included prior to approval. These multi-layer consultation mechanisms can turn out to be time-consuming and difficult, thus hampering effective development co-operation. Moreover, beyond the planning process, monitoring and evaluation have so far received little attention but will become important to avoid rent-seeking and corruption.

ii) FDI

- Overall, the process of obtaining permission for investment is complex, with sometimes overlapping responsibilities of different bodies (e.g. in some sectors approval from both Myanmar Investment Commission and line ministries is required) and considerable room for discretion of the Myanmar Investment Commission. Added to this, the environment for foreign investments holds some challenges, such as a weak judiciary and complex and overlapping taxation. There are a multitude of tax preferences given to foreign firms, which may entail considerable tax revenue losses, that deserve a thorough review.
- FDI in natural resources and power provision projects accounted for more than 90% of FDI between 2010 and 2012. More recently, the sectoral composition of FDI has become more diversified, with increasing investments in manufacturing and services, which could potentially have sizeable spillover effects for the economy.
- Myanmar's overall business environment is still challenging. The country joined the IFC's Doing Business Indicators in 2013, and was ranked 182nd out of 189 economies in 2014. The country scores for starting a business, protecting investors, enforcing contracts and getting credit are particularly low. Improving the business climate will also be crucial to sustain diversification of FDI towards higher shares of manufacturing and services over the longer run.

iii) Remittances

- Not all migrants remit money home, but of the 50% to 70% of migrants that do, the majority prefer informal mechanisms for their transfers. For example, in one study, 20% of migrants reported using banks, while in the other two surveys, 2-5% reported using official channels. Costs for informal channels are reported to be around 2.5-10% of the remitted amount, with considerable differences in the type and amounts of fees. Formal transfers are generally considered to be more expensive (around 10-20% of remittance amounts). Nevertheless, some banks have recently started to offer remittances services at (initially) discounted rates between Myanmar and neighbouring countries.

Key policy findings and recommendations for mobilising and allocating external resources

i) ODA

- In view of the many projects that are expected in the future, consideration should be given to revising the approval procedures so that they absorb less time and fewer resources to pass through the various bodies. Consideration should be given to combining the functions of the Foreign Aid Management Central Committee (FAMCC) and the Foreign Aid Management Working Committee (FAMWC) and streamline and shorten approval processes.

- In addition, minimum thresholds could be set out to exempt small projects from the formal approval process. This would free up capacity in the affected ministries and agencies for other tasks. Second, monitoring and evaluation will become important to avoid rent-seeking and corruption. As funds are increasingly disbursed to the government directly, monitoring mechanisms should be put in place, as well as evaluation mechanisms to learn about the impact of projects. This approach could include the setting up of participatory workflows to support capacity building, the collection of information and the linking of funding with strategic objectives and outcomes.

ii) FDI

- There should be greater focus on making the regulatory framework more conducive to investments. The Foreign Investment Law is a step forward compared to the previous law, for example in including a broad definition of investments. However, there is still room for further improvement and clarification.
- For example, the clauses ensuring investor protection could be more specific, and are in some cases defined on a more limited basis than is usual in FDI laws of other countries. Criticism has been given to the large and discretionary role that the Myanmar Investment Commission plays for many decisions related to the approval of investments and the absence of clear criteria for decisions. This set-up has the advantage that authority is centralised in a body with high-level officials that can provide close alignment with policy priorities, but the discretionary leeway also creates uncertainty for investors and should be replaced by clear criteria and procedures in the longer run.
- The recent diversification of FDI inflows can potentially have sizeable spillover effects for the economy. The government should continue to foster balanced FDI growth across all sectors, including natural resources, power projects, as well as manufacturing and services projects.
- Policy measures should also aim to improve the business environment across sectors. For example, there should be a focus on addressing weaker areas such as starting a business, protecting investors, enforcing contracts and getting credit, all of which are crucial to attract foreign investments.

iii) Remittances

- The government should seek to formalise remittance flows. Legalising migration and providing migrants with official documents could help migrant workers obtain better-paid jobs and facilitate access to formal money transfer channels. This in turn would support higher inflows for households and foreign exchange revenues for the government. The government should also consult neighbouring governments to legalise and register Myanmar migrants, and assist emigrants already working abroad with basic paperwork.
- The government is undertaking multiple reforms in the banking sector from which remittance inflows can also benefit. Greater market penetration and competition could bring down the cost of remittance transfers. But investments into payments infrastructure will be crucial as well, because better payment systems will lower the direct costs for banks, especially for small amounts. For example, in Rwanda the economy has experienced a sizeable decline in remittance costs as a result of reforms of its payment systems.

Mobilisation and allocation of domestic resources

Key constraints and issues for mobilising and allocating domestic resources

i) Government revenues and fiscal system

- The level of available government revenues is too low to support the expenditures needed to finance Myanmar's development, social and other needs for public services. Myanmar's development plans and the need to narrow the gaps between it and other Asian developing countries in social needs are likely to require revenues in the range of at least 20% of GDP, or roughly equal to that of Cambodia and still below the ratios of Lao PDR and Viet Nam. While revenues from natural resources are likely to fill a significant part of the gap, Myanmar risks becoming too dependent on natural resources to finance its government spending. Overdependence on natural resources also tends to undermine government accountability and discipline, as spending can be effected without taxation of domestic citizens.
- Myanmar's tax revenues are highly reliant on direct taxes, and although most tax rates are broadly in line with those of other developing countries, there is some leeway for reforms, especially in the structure of taxes (direct vs. indirect taxes, commercial tax vs. a general VAT).
- In addition, a review of Myanmar's current tax system and the structure of its tax revenues in comparison with other Asian developing countries suggests that, while there is some scope to raise revenues by increasing rates in some areas, much will depend on better collection. Indeed, the overall efficiency with which taxes are collected has been further constrained by the antiquated systems for assessing tax liabilities and the, until recently, relatively low thresholds for key taxes.
- Effective public expenditure management (PEM) is crucial to the three main objectives of overall public financial management (PFM): maintenance of fiscal stability; ensuring that expenditure allocations are in line with national development and other priorities; and achieving efficient delivery of public services. In Myanmar, key limitations in the budget process include weak linkages between national development plan objectives and the budget process; lack of comprehensiveness and transparency in the budget (particularly limited by the extensive use of "other accounts" [OAs]); weak control of overall budget outcomes; inadequacies in rules and procedures necessary for effective public services delivery; and limited capabilities for external audit and public scrutiny and accountability.

ii) Financial system

- Myanmar authorities face key challenges regarding the decisions about the basic structure of the banking system. Specifically, the supervisory structure currently implies fragmented, overlapping or conflicting responsibilities in several cases, such as regarding the Microfinance Institution which conducts microfinance business but also has supervisory tasks. Many of the provisions of Myanmar's bank regulatory system are similar to those of other developing countries in the region. However some regulations are exceptionally stringent, including the officially specified rates for bank deposit and lending rates, and collateral requirements for loans.
- The future of the state-owned commercial banks (SOB) and other government controlled banks is another key but more difficult question that probably will need to at least begin to be addressed in the near term. Policy burdens and regulatory restrictions

on the SOBs have resulted in low to negative profitability, at least for the largest two, and competition in the banking sector is still limited.

- Myanmar's financial system is at a very early stage of development, characterised by a near-complete dominance of commercial banks, which account for nearly all the assets of the formal financial system; the absence of formal financial markets; and a very limited array of financial instruments and services. Of all the segments of the Myanmar economy, the rural sector is the most underserved by the formal financial system. Only about 2.5% of total loans go to the rural sector, even though it accounts for 30% of GDP and two-thirds of employment and the limited range of products is also an obstacle to agricultural development.
- The very early stage of financial market development in Myanmar is not surprising given that there were virtually no formal financial markets prior to 2011. There is still no domestic currency interbank or other short-term money market; no secondary market for government securities (and until very recently only a very limited primary market); and no primary or secondary corporate bond markets.

Key policy findings and recommendations for mobilising and allocating domestic resources

i) Government revenues and fiscal system

- In a positive way, Myanmar's government has begun an extensive programme of PFM reforms to improve the effectiveness with which expenditures are allocated, financed and managed. The reforms taken thus far have already yielded some significant accomplishments, especially in making the budget process more transparent to the public and accountable to its elected representatives. More importantly, the government (Office of the President) has established PFM Steering and Technical Committees to guide the PFM reform process and the Ministry of Finance[1] and MNPED have been jointly charged with developing the PFM reform strategy. Development of an initial medium-term budget framework (focusing on a medium-term fiscal framework) is a key priority for the medium term. Further reforms should address the separation of the preparation of the current budget and the capital budget into the responsibility of a single authority.
- Improving tax collection in general will require a multitude of reforms. A comprehensive set of regulations for tax administration has yet to be fully established to address limited and fragmented taxpayer registration. The recently established Large Taxpayers' Unit makes progress in this direction.
- Reforms to budget management would also help to align development objectives with budget allocation: the FY 2013/14 budget projects an increase in health spending to 0.9% of GDP and in education spending to 1.8% of GDP. Substantial further increases are likely to be needed if Myanmar is to achieve its development objectives, but this is likely to depend on the extent and rate at which general government revenues, particularly tax revenues, can be raised.
- Generally, there is some leeway for reforms and increases in tax rates. Compared with its CLMV neighbours, Myanmar is heavily reliant on direct taxes. Some tax rates, e.g. the general commercial tax, are also lower than in other countries in the region. Structural tax reforms and some moderate rises in tax rates could further contribute to increases in government revenues.
- The accounting, reporting and collection of revenues from natural resources have been opaque. The government's commitment to move toward adherence to the Extractive

Industry Transparency Initiative (EITI) is an important step toward improving the utilisation of natural resource revenues. Success in managing natural resource revenues will also depend on progress in reforming the overall management of public finances. Consideration should also be given to shifting from the present system of charging royalties for natural resource use (now 12.5%) toward some combination of resource royalties and rent taxes, which tend to be more effective in encouraging investment in exploration and development.

- The success of reforms to increase government revenues will also require restraint and careful targeting of subsidies and tax preferences for investment and other purposes. Subsidies on fuel and basic fuel items have become large and difficult to reverse in a number of other ASEAN countries. Myanmar has also introduced an array of tax holidays, exemptions and other preferences to attract foreign investment. Although these preferences appear roughly comparable overall to those applied in other Asian developing economies, care will need to be taken to ensure that such preferences are carefully designed to be as cost-effective as possible.
- On the other hand, Myanmar faces important choices about how to further develop and elaborate the fiscal federal system. The overall extent of fiscal decentralisation will probably need to increase, with a greater share of overall government spending at the local government level. If not, the ambitious objectives of creating a federal state with sufficient autonomy over local affairs to support a consensus in favour of maintaining the Union are unlikely to be achieved. Second, the states/regions will probably need to assume greater responsibility (although shared with the Union government) for education, health and other social welfare spending and policies, although this may require some changes in existing constitutional provisions and legislation. Key steps which could be taken in the near term include: the institution of an explicit aggregate ceiling on Union transfers to state/region governments; establishment of explicit and transparent criteria for allocating the transfers and the portion of state/region deficits they will cover; and raising the interest rate on state/region borrowing from the Union to the commercial bank maximum lending rate. Over the longer term, a more effective system for financing the gap between state/region expenditure responsibilities and their own revenue needs to be nurtured, using a combination of revenue sharing and conditional and unconditional transfers.

ii) Financial system

- Policies should focus on strengthening and developing the capabilities of the formal financial system focusing on three objectives: to better extend its outreach into the economy; to improve the efficiency with which domestic savings are gathered and allocated; and to provide a wider range of products and services to serve the needs of the population.
- Financial system development should focus on establishing institutions and markets that are commercially sustainable. However, liberalisation of the banking sector and substantial improvement in its capabilities and the broadening of facilities to provide financial services to the rural sector within the medium term are particularly urgent as they are likely to be important keys to the success of Myanmar's overall development plans.
- This will require a longer-term process of institutional development of financial institutions, financial markets, and in financial regulation and supervision. The approach to the regulation of banks and (as they develop) other financial institutions will need

to shift away from the present near-exclusive reliance on regulatory limits ("command approach") toward the regulatory paradigm that has developed internationally in which regulation is focused as much or more on ensuring that financial institutions have the incentives and capabilities to operate in a financially prudent manner. Supervisory responsibilities should be streamlined, with the Central Bank of Myanmar (CBM) as a central authority.

- Improvement of the effectiveness of the banking sector will require significant relaxation of bank regulations in certain areas in the near term as well as the beginning of reforms to convert the state-owned banks (SOBs) into more effective commercial entities. As competition increases, the banking sector may also need to undergo some restructuring; and authorities also face important choices about the pace and scope of opening to foreign bank participation in the domestic market.
- The authorities face important choices in determining the priorities to be given to the development of the stock versus bond markets. Stock markets, however, need to be fairly well developed and supported by extensive infrastructure and strong regulatory/supervisory capabilities if their benefits are to be realised. International experiences suggest that stock market development in Myanmar needs to be linked to that of the ASEAN region to overcome domestic limits to market scale and should be regarded as a longer-term project whose benefits will be manifest gradually.
- Reforms to liberalise the commercial banking system are critical to improving the rural financial system. Potential reform measures include raising or (preferably) eliminating the ceiling on bank lending rates, the restructuring of the MADB into a commercially oriented entity focused on a broader range of rural lending and generally extending the range of products and services offered by the microfinance sector. The supervisory responsibilities for microfinance institutions (MFIs) may also need to be modified or clarified in certain areas and regulatory and capital requirements could be increased to ensure sustainability.
- Development of key components of the financial infrastructure will be necessary to the feasibility and ultimate effectiveness of reforms to develop the rural financial system. Particularly important are the pending establishment of an inter-bank market, which is essential to integrating rural financial institutions into the overall financial system, and the planned institution of a credit bureau.

Note

1. The former Ministry of Finance and Revenue was recently renamed the Ministry of Finance and will be cited as such throughout this report.

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Chapter 2

Structural transformation towards a modern economy: Upgrading agriculture, manufacturing and services

Myanmar possesses vast assets and opportunities that enable it to modernise the agricultural sector and to pursue a potentially structural economic transformation towards a modern economy. This chapter focuses on measures to modernise the agricultural sector and promote the transformation towards a manufacturing and services-based economy. Importantly, while services can become important drivers of growth in developing countries, this can only be achieved in tandem with growing the manufacturing sector. Moreover, modernising the agricultural sector by building linkages to complementary non-agricultural activities can initiate a structural transformation towards a more manufacturing and service-based economy.

Myanmar faces a crucial few years to come in shaping its economic growth towards a more rapid, sustainable and equitable development trajectory. This will require fundamental changes in the structure of the economy, which is at present reliant on the agriculture sector. Fortunately, Myanmar possesses a wealth of assets and opportunities that potentially enable it to pursue multi-pronged development strategies to modernise the agriculture sector as well as to transform the economy into one that is manufacturing and services-based.

Gaining momentum to jump on the development bandwagon of the region is even more crucial as Myanmar's population will start ageing in a couple of decades. Before that happens, the demographic dividend needs to be reaped and the potential of the economy lifted by productivity-enhancing reforms, including reforms to boost investment in agriculture. This will enable a modernisation of the agriculture sector, which is essential to increase the sector's productivity and to raise agri-food exports. The increase in labour productivity will also allow incomes to rise and reduce poverty. As the marginal product of the labour in agriculture is now very low and a large share of the population resides in rural areas, large productivity gains for the overall economy can be reaped by freeing labour for manufacturing and service sector employment.

Key findings

- Myanmar's well-endowed agricultural sector has the potential to become a major agri-food producer and trade hub in the region, if it can increase its productivity and modernise the sector. To achieve this goal, key policy measures should focus on expansion of financial services, enhancing extension services and education, strengthening agri-food safety as well as improving government services. Importantly, the fostering of value chains could provide impetus to modernising the agricultural sector.
- Adopting a value-chain approach to stimulate agricultural production and exports would create demand for complementary output of manufacturing and services sectors, thus reinforcing the multi-pronged development path.
- The manufacturing sector has shown some positive signs of development, following various development strategies such as fostering the growth of private sector, coupled with second phase reforms since 2011. However, findings from primary surveys such as the recently completed country-wide business survey in Myanmar showed that manufacturers face several key constraints such as corruption, lack of access to finance and skills shortage. Given the importance of SMEs in the manufacturing sector, policy measures which help to foster the growth of the SMEs will be crucial in the development of the manufacturing sector.
- Services sector will also play an important role in Myanmar's transition to a modern economy. In particular, the transport and logistics and tourism sectors have high potential to grow, create jobs and produce beneficial spillovers to the rest of the economy. Key policy measures relate to reforms in priority areas such as education and training

programmes as well as policies to improve transport and tourism infrastructure and promotion of more balanced development of tourism areas.

Modernising the agricultural sector

Modernising and upgrading the agricultural sector is critical to achieving Myanmar's goals of economic growth and structural transformation.[1] The agricultural sector accounts for nearly 32% of GDP and 20% of export earnings. Its share of employment, at 60%, is much higher. The gap between employment and output shares in agriculture reflects low labour productivity that translates into low agricultural incomes. Indeed, agricultural income per capita is roughly USD 200 per year, the lowest among its Asian neighbours (MSU-MDRI, 2013); and most farms are subsistence-level holdings, with over 50% of farms being less than five acres (two hectares). Nearly two-thirds of the population live in rural areas and approximately 30% of the rural population live in poverty. Raising incomes in rural areas will require not only raising agricultural productivity but also expansion of agriculture's linkages to non-agricultural activities to stimulate employment in non-farm sectors. Expanding agricultural exports in a value-chain framework which can drive these linkages could be key to this transformation.

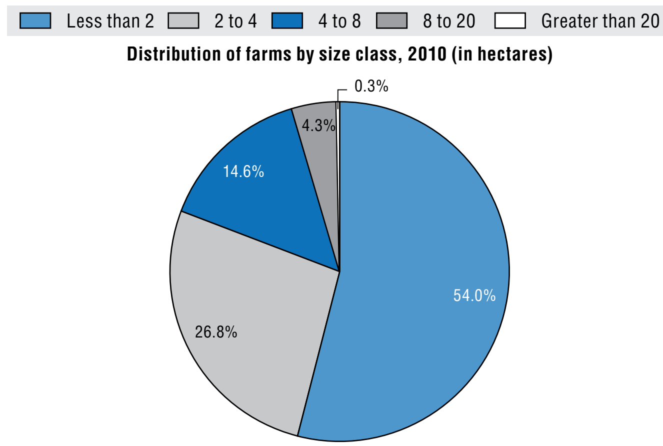
This section first provides a brief overview of the agricultural sector and identifies the key constraints for developing agricultural value chains for modern agri-food trade. It then suggests ways to improve the policy and institutional framework for the agricultural sector and discusses how the development of agricultural value chains may provide a way to capture and create new market opportunities as well as to promote economic development in rural areas.

Myanmar's agricultural sector has considerable opportunities for expansion and diversification but faces structural constraints

Myanmar has a sizeable potential to become an agri-food trade hub in the Southeast Asia region. Its rich and varied agro-ecological zones, abundant supplies of water as well as abundant marine and freshwater fish resources and tropical forests allow the production of a wide array of agri-food products (Htut, 2012). There is also room for expansion of agriculture given the availability of as yet uncultivated lands. Furthermore the country's location – bordering China and India and, with access to dynamic economies of the Middle East and the rest of Asia – as well as its membership in the World Trade Organization (WTO), the Association for Southeast Asian Nations (ASEAN) and other regional associations provide Myanmar with numerous export market opportunities.

Smallholder agriculture will continue to dominate agricultural production in the near future, but some restructuring of the sector may be required to increase productivity and raise incomes. Some 40% of farms, or over 2 million, are smallholder commercial farms with 2 to 20 hectares.[2] Their participation in demand-driven markets will be central to the modernisation of the sector and critical to expanding exports. But some 55% of farms (2.7 million) are less than 2 hectares (30% with little over 1 hectare) and are essentially subsistence farms with very low incomes and assets (Figure 2.1). In addition, some 22% of rural households are estimated to be landless with limited income possibilities (Table 2.A1.1). Improving income opportunities for this large number of subsistence farms as well as landless rural households is a major challenge for Myanmar. This will require pursuing a variety of strategies, from raising agricultural productivity, and diversifying to high-value crops to promoting non-agricultural employment in rural areas.

Figure 2.1. **Myanmar agriculture consists predominantly of small farms**



Source: MOAI (2013), *Report on Myanmar Census of Agriculture 2010*, Nay Pyi Taw, Myanmar.

StatLink http://dx.doi.org/10.1787/888933134008

Rice sector productivity needs to increase to raise incomes and export earnings

Myanmar produces a wide array of crop, livestock and fisheries products and their output has been growing strongly over the past two decades (Table 2.1) (Tables 2.A1.2 and 2.A1.3). Furthermore, aggregate agricultural output (crops, livestock, fisheries and forestry) is dominated by crops, which account for nearly 75% of the total agricultural output value, and 24% of total gross domestic product in 2012-13.

Table 2.1. **Output of rice has grown more slowly than that of other crops**

Average annual growth rates of the main agricultural commodities in %, 1990/91 to 2010/11

Paddy (rice)	4.2
Paddy – USDA	1.2
Maize	10.0
Pulses	14.7
Oilseeds	6.0
Fish products	8.7
Animal products	12.2
Spices and condiments	9.0
Rubber	10.9

Sources: Author's calculations from CSO (2013), *Myanmar Data on CD-ROM 2011*, Central Statistical Organisation, Ministry of National Planning and Economic Development, Nay Pyi Taw, Myanmar; Rice-USDA estimate, International Rice Research Institute, World Rice Statistics Online *http://ricestat.irri.org:8080/wrs2/entrypoint.htm*.

Rice is Myanmar's main crop.[3] Rice productivity is low and its output has been growing more slowly than that of other crops. This is of concern because raising its productivity will be a key element in moving households out of poverty, although the farm size may remain a major constraint to raising incomes. In addition, low productivity is seen as an obstacle to the government's aim to regain Myanmar's role as an important rice exporter and earner of foreign exchange. Indeed Myanmar was the world's largest exporter of rice in the early 1960s. An assessment of rice sector performance is difficult given the lack of accurate data

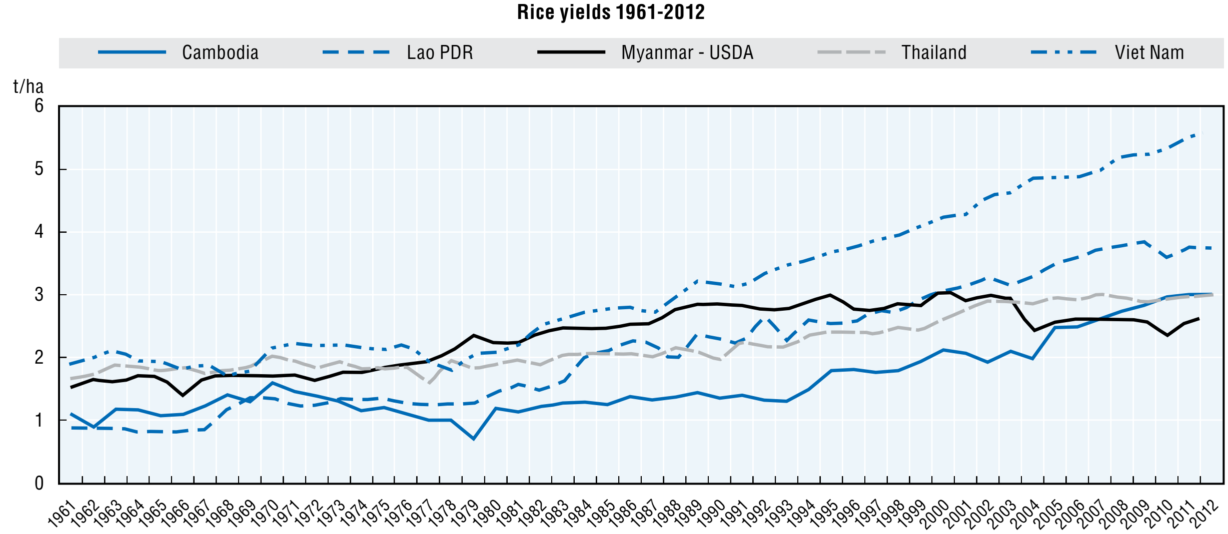
(Box 2.1). Nonetheless, there appears to be substantial room for increasing yields, given the performances of similar neighbouring countries (Figure 2.2).

Box 2.1. **Accurate rice data are needed for development of effective policies**

The two main agricultural data sources, the Food and Agriculture Organization with the Myanmar Ministry of Agriculture and Irrigation (FAO-MOAI) and the United States Department of Agriculture (USDA), provide significantly different estimates of output, the area harvested and yields (Figures 2.A1.1 and 2.A1.2). Evidence from recent in-depth studies of Myanmar's agricultural sector suggests that the USDA estimates are more accurate (MSU-MDRI, 2013; Denning et al., 2013; Wong and Wai, 2013; Dapice, 2011). Comparison of the USDA estimates with neighbouring country performances suggests that there is substantial room for increasing yields in the Myanmar rice sector. However more accurate, reliable data will be fundamental to developing effective rice policies.

Figure 2.2. **Myanmar rice yields are growing slowly**

Rice yields 1961-2012



Sources: FAO (2014), *FAOSTAT, http://faostat.fao.org/* for Lao PDR, Viet Nam, Thailand, Cambodia and International Rice Research Institute, World Rice Statistics Online *http://ricestat.irri.org:8080/wrs2/entrypoint.htm*.

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A preliminary analysis of rice productivity by farm size and regions indicates that both increasing farm size and mechanisation can raise labour productivity and thus incomes, even if productivity remains fairly low in absolute terms on average (Box 2.2). Increasing productivity will also require improvement in seed quality, increased use of inputs of fertiliser and pesticides and improved technical skills (MSU-MDRI, 2013). Access to machinery, particularly by small farmers, is being addressed through the Mechanised Farming Co-operatives Society and the Myanmar Rice Federation's plans for the development of Farmer Services Centre. But increases in productivity alone may not be sufficient to compensate for small farm size and incomes risk remaining low.

Many crops could potentially be exported but quality needs to improve

Growth in demand for high value agri-food products is expected to continue over the next decade, bringing new market opportunities. The *OECD-FAO 2014-2023 Agricultural Outlook* (OECD and FAO, 2014) projects continued growth in import demand for high-value

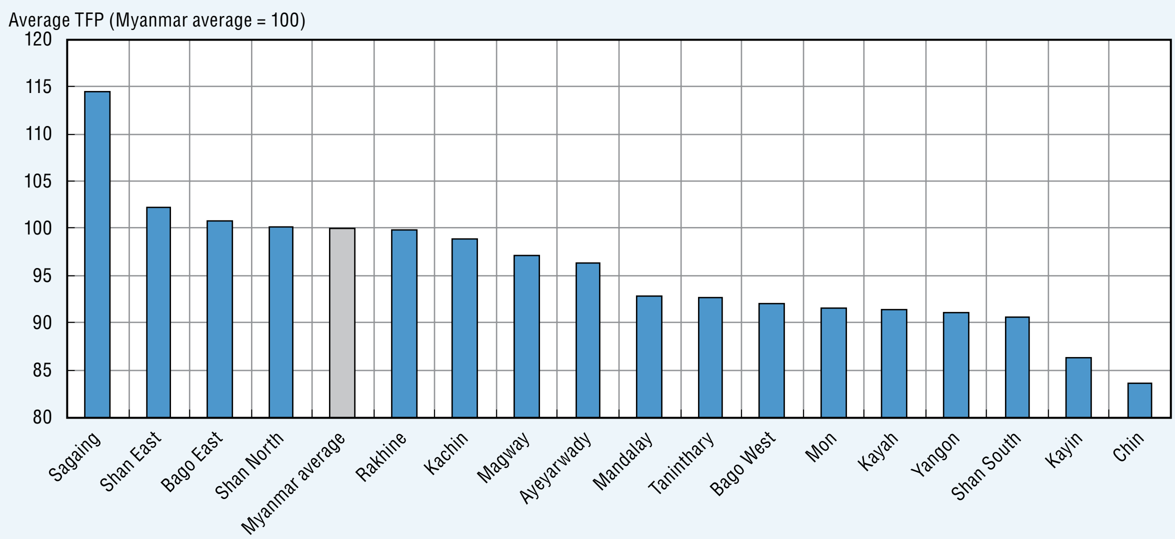
Box 2.2. **Farm-specific and local factors determine most of the productivity differences in rice farming**

While the design of agricultural policy is generally constrained by a dearth of reliable data on the sector's performance, the Myanmar Census of Agriculture, 2010, conducted by the Ministry of Agriculture and Irrigation with the support of the Food and Agriculture Organization, offers useful insights on farm-level behaviour and input use. This information, which was collected from more than 500 000 farms, was used to assess patterns in productivity, which will need to be improved to develop a strong export sector and to support Myanmar's transformation to a manufacturing and services-driven economy.

While farm productivity in rice production should be higher in regions that grow rice intensively, the analysis finds that among the five main rice regions, Ayeyarwady, Sagaing Bago East, Yangon and Bago West, farm productivity is both above and below the Myanmar average. Average total factor productivity (TFP) in rice production, which measures the proportion of output not explained by farm input use (including land, labour, motorised and non-motorised tools and draught animals) is highest in the regions of Sagaing, Shan East, Shan West and Bago East where it is above the national average (Figure 2.3). For Sagaing and Bago East, this is likely the result of comparatively favourable growing conditions.

Figure 2.3. **Rice productivity is highest in Sagaing Region and lowest in Chin State**

Average total factor productivity in rice production, by region



Source: Authors' calculations, using *Myanmar Census of Agriculture 2010* data.

StatLink http://dx.doi.org/10.1787/888933134046

Although there are considerable regional differences in average productivity levels, the individual differences are driven much more by farm- and local-level factors. Of the total Theil index of inequality in farm TFP across the country, 87.2% is attributable to within-region factors and only 12.8% is attributable to regional differences. TFP tends to be higher in female-headed households and those located in village tracts/wards with better access to national roads and communication facilities and in areas not recently vulnerable to natural disasters. Part of the within-region differences are also due to scale effects. On average, farms between five and ten acres are most productive, with productivity levels tending to increase up to this size category and falling sharply thereafter.

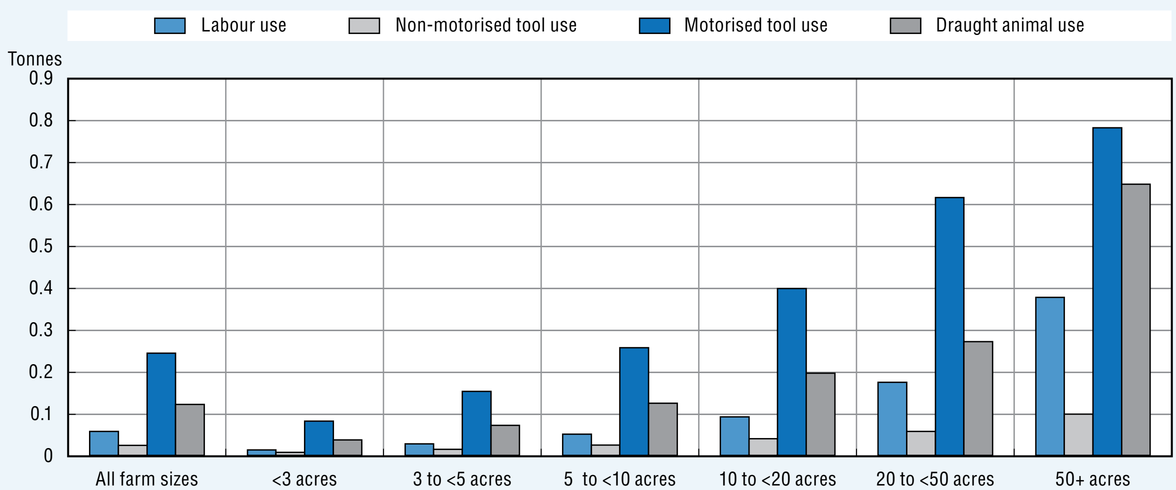
While TFP does not increase with farm size past the mid-sized level, the marginal products of non-land inputs increase with farm size as they become relatively scarcer factors of production (Figure 2.4). The marginal products (the additional predicted output gained from adding an extra unit of input, and equal

Box 2.2. **Farm-specific and local factors determine most of the productivity differences in rice farming** *(cont.)*

to the value of the input under perfect competition) of these inputs are nevertheless quite low, particularly for labour. The marginal product of labour also increases with the use of modern equipment and draught animals, both of which are generally used in greater amounts relative to labour on larger farms. The marginal product of labour averages 0.038 tonnes per acre for farms without motorised equipment and 0.071 tonnes for those using at least one motorised tool. Similarly, though less dramatically, the average marginal product of farms without any draught animals was only 0.045 tonnes, below the 0.058 tonnes of those using at least one animal. Larger and modern farms may therefore be able to offer better wages to agricultural workers.

Figure 2.4. **The marginal products of inputs tend to increase with farm size**

Average marginal product in tonnes, by farm size



Source: Authors' calculations, using *Myanmar Census of Agriculture 2010* data.

StatLink http://dx.doi.org/10.1787/888933134065

products globally and in the Asia-Pacific region of nearly 2% per year (Table 2.A1.4).[4] Tapping into growing agri-food markets in the region and globally can provide needed stimulus to agricultural output growth in rural areas of Myanmar (Vokes and Goletti, 2013). To reap the benefits of the demand growth, however, exports must satisfy increasing demands for safety and quality.

Products of low quality are limited to market destinations that pay low prices. For example, Myanmar's rice export quality is low with most exports sold at the lowest international standard (25% broken) compared to the highest standard (5% broken). This difference in quality can result in a price discount of 20% or more. Myanmar exports are thus often destined to low-income countries for consumption or to middle-income countries such as China for use in processing. Industry representatives have suggested that even pulses and rubber could fetch higher prices (15% or more for pulses) if they could meet higher quality standards, and similarly for rubber. Where products do not meet international food safety standards, they are simply denied market access. For example, there is little trade in Myanmar livestock products owing in part to lack of supply but most importantly owing to failure to meet international animal health standards. In the case of fruits and vegetables, excess pesticide residues limit access to markets. Indeed, knowing of

Myanmar farmers' excess use of pesticides or use of illegal pesticides, traders do not even attempt to enter most export markets.

A strategy to diversify and upgrade quality is also needed to avoid market risks. Myanmar's agricultural crop sector exports are concentrated on a limited number of products, with pulses, rice and rubber accounting for 65%, 16% and 13% respectively of total crop export value (Figure 2.5). Pulses are typically exported as generic products and to a limited number of market destinations, so they may be subject to greater market risks in terms of price and quantity fluctuations than quality-differentiated products. For example, nearly 70% of pulses are exported to India to fill a production gap which can vary with India's own production or with supplies from new market entrants. Upgrading quality, adding value and diversifying market destinations over the medium term to minimise such risks should be considered a strategy applicable to all products from rice to rubber.

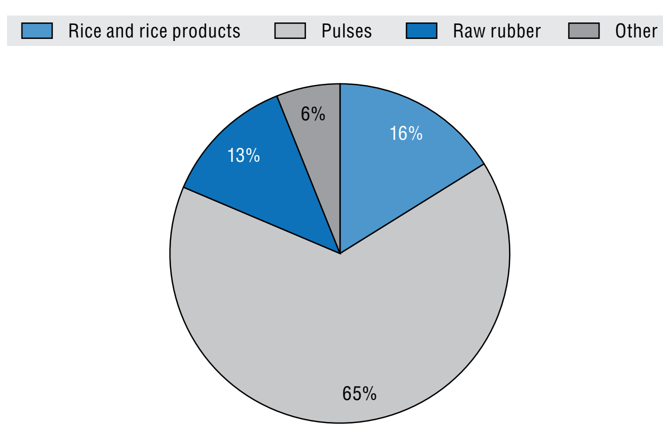
Lack of finance, low quality inputs and lack of skills seriously constrain exports

Myanmar's constraints on agricultural exports operate on two levels: those affecting all sectors and all stages of the value chains; and those that are specific to a given stage in the chain and/or a specific product.[5] The constraints common to all sectors are the poor quality of hard infrastructure – that is, the physical structures and facilities needed at an economy-wide level, including electricity supplies, telecommunications systems and transportation facilities such as roads, ports and airports. These constraints are particularly severe in rural areas where production occurs. Producers and traders are often obliged to substitute lack of public infrastructure with private, higher-cost solutions, such as fuel-based generators in place of national electricity supplies, which lowers profits and dampens incentives for investment.

Among soft infrastructure, that is, the set of institutions, laws and policies governing the economy, the most binding and pervasive constraint on exports is the lack of an adequate financial system. This limits performance because it reduces the investments needed to upgrade and to diversify toward higher value/value-added products. Other constraints include insufficient government food safety inspection services, which increase production risks and limit market access, and the lack of government support to explore

Figure 2.5. **Pulses are Myanmar's most valuable export crops**

Export shares of Myanmar's main agricultural crops, 2010/11 (% of crop export value)



Source: CSO (2013), *Myanmar Data on CD-ROM 2011*, Central Statistical Organisation, Ministry of Planning and Economic Development, Yangon.

StatLink http://dx.doi.org/10.1787/888933134084

new market opportunities, which limits market entry potential in relation to competitors. In addition, without stable and transparent trade and macro policies, exporters are subject to added risks in doing business that further inhibit investment. These constraints raise costs of production and exporting and doing business more generally, leading to a loss of competitiveness with respect to competitors who are not subject to similar constraints.

According to industry members, farmers hold a pivotal position in meeting product quality requirements, but are often ill-equipped in terms of assets, inputs and knowledge to meet these requirements. At the producer level, product quality – that is, meeting international safety and quality standards – is almost unanimously seen as the major problem. Farmers appear trapped in a low quality and low productivity production system owing to a simultaneous lack of quality inputs, financing and skills/knowledge. Lack of sufficient supplies of quality seeds has been identified as one of the most binding constraints to quality and productivity. Government authorities and experts concur that relaxation of these constraints is key to increasing earnings in the sector (Aung and Golletti, 2013; Aung Shein; Oo and Schwe, 2013; Denning et al., 2013) (Box 2.3).

The lack of quality fertilisers and pesticides is seen by industry members to generate risks for output quality and market access. The high cost of imported fertilisers and pesticides has meant that producers often turn to lower quality products, which often

Box 2.3. **Quality seeds are key to improving crop quality and productivity**

Responsibility for the production and distribution of certified seeds as well as their research and development (R&D) is under the Department of Agriculture and the Department of Agricultural Research of the Ministry of Agriculture and Irrigation (MOAI). Limited funding for R&D for varieties adapted to local conditions has meant that production and distribution of high quality seeds has not been able to keep up with needs of the agriculture sector. Yet research and development of new varieties are crucial to productivity growth. Furthermore, research has focused on rice and, more recently, pulses, but has essentially neglected the possibilities offered by other high-value crops/plants. Reliance on the government for both research on and dissemination of certified varieties has no doubt limited availabilities of these higher-value products.

With the new Myanmar Seed Law, which encourages private sector development of the domestic seed business, both the development and production of seeds for commercial use should expand. The law also provides for a big push to develop research facilities in the state agricultural sector. It is however generally recommended that hybrid and high-yielding variety reproduction and distribution be undertaken by the private sector, as in most countries this is a more efficient approach to responding to farmer needs (Denning et al., 2013).

Farmers have generally used their own seeds from previous harvests because of seed costs and availability, so expanding these markets could lower costs and increase the varieties used. The use of saved seeds in Myanmar has generated low quality output because of lack of appropriate storage conditions necessary to preserve the seed variety quality characteristics in subsequent use. Seed quality deteriorates in storage and so does output from those seeds. However, since farmers will likely continue to use their own seeds, improving their production quality is important particularly for local markets. Experts have also underlined the need for development of local variety certification systems as well as the production of certified local varieties that can then be distributed by informal farmer mechanisms with appropriate varietal control (Oo and Schwe, 2013; Denning et al., 2013).

contain prohibited substances. Many of these products have entered Myanmar's markets illegally because of the lack of sufficient government border controls or testing capacities. As their labels and instructions are not in the Myanmar language, farmers use these products unaware of their consequences for health and safety. This situation creates major risks for output quality and consequently market access.

The third major constraint is the lack of farmers' agronomic skills and knowledge. This can be attributed to the limited extension services available to producers and their overall level of education. Upgrading producers' knowledge of chemicals as well as promoting good agricultural practices (GAPs) are considered by industry representatives to be of high importance to improving product quality and meeting new export demands.

Industry members have highlighted the need for a more flexible financial system adapted to the needs of the sector, in particular for commercial agriculture, as well as complementary services. Lack of financing has limited product upgrading. For example, lack of finance has limited the updating of technologies and structures in the rice sector where many of the mills in use are of small capacity, poorly maintained, and with out-dated technologies (Wai and Wong, 2013; Dapice, 2011). Similar financial constraints affecting access to new technologies, equipment and structures were believed to generate price discounts in export markets for rubber and tea of up to 20%. Development of efficient fruit export value chains, where costly storage and packing facilities are prerequisites, were also stymied. See Chapter 4 for an in-depth analysis on the development of the rural finance sector.

Institutions and policies need to be reformed to stimulate agricultural growth

Going forward, Myanmar's agricultural policies and institutional framework should focus on providing an enabling environment for the agricultural sector to respond efficiently to market signals in the allocation of resources. The best way for the government to increase incomes in agriculture is through public expenditure on research and development to increase agricultural productivity and to promote innovation in products and processes as well as to provide hard and soft infrastructure, rather than through direct market interventions (OECD, 2012). While Myanmar's past agricultural and trade policies that largely disconnected producers from markets have been rescinded (Box 2.4), their effects on performance and the sector's structure have not disappeared. Agricultural policies and institutions are powerful tools to shape the structure and performance of the sector and, therefore, need to be evaluated in terms of their impacts on producers, consumers and budgets prior to their adoption and implementation. This will require not only use of analytical policy tools but also an accurate data collection system.

Resolving ambiguity in land tenure and production rights should improve production incentives

The most important unresolved issues are security of land tenure and freedom in crop choice. These are fundamental to providing incentives for investment and production in the sector. The Farm Land Law (2012) formalises land use and tenure rights through the issuance of land use certificates (LUC). However, the availability of LUC is not sufficient for ensuring that these provide appropriate investment and production incentives to farmers given their lack of knowledge in how these might be employed to finance investment or production. The development of educational programmes on how to effectively use LUCs to finance investment and production are warranted to assist farmers in understanding the options these provide.

Box 2.4. **Myanmar's agriculture has been shaped by a range of government policies**

The following laws, policies and interventions have had significant influence on the development of agriculture in Myanmar:

1953: The Land Nationalisation Act (1953) nationalises all farmland, prohibiting its sale, transfer, mortgaging or rental. Tillage rights are granted instead and the law sets the maximum size of holdings.

1962-1986: The government mandates cropping choices and specifies compulsory procurement quotas for main crops with set prices. A government monopoly on exports and imports is held through the Myanmar Agricultural Produce Trading Corporation (MAPT).

1987: Compulsory rice procurement is abolished.

1989: Compulsory rice procurement is reinstated, but with reduced procurement rates.

1988-2002: Crop choice is formally freed, but government imposed choices are still enforced for paddy crops, cotton and sugarcane. Procurement rates of rice are reduced, trade in pulses is liberalised and the MAPT operates only for trade in controlled crops.

1989 and 1992: Summer paddy trade is liberalised.

1990: The Myanmar Agricultural Development Bank is established.

2003-07: The MAPT and rice procurement system are abolished. Private rice export is allowed.

2008: Rice Specialisation Companies are granted export licences in return for assistance to farmers through contract farming and aid for developing supply chains.

2011-Present: The Farmland Law (2012) and Virgin, Fallow and Vacant Land Law (2012) grant tillage rights and allow land to be transferred and mortgaged and for confiscation to be contestable, although the state retains ownership of all land. Cropping choice freedom remains subject to administrative permission. Markets are opened and registered traders are allowed to acquire rice export licences.

Source: MSU-MDRI (2013), *Strategic Choices for the Future of Agriculture in Myanmar: A Summary Paper*, Michigan State University and Myanmar Development Institute Center for Economic and Social Development, July, *http://fsg.afre.msu.edu/Myanmar/myanmar_diagnostic_report_summary_july_2013.pdf*.

The security of land-use rights appears to be tied to conformity to past land use designations (Chapter IV, 12-h and Chapter III-9d of the Farm Land Law), although permission can be granted to alter the land use designations by special request to an administrative body for farmlands. This procedure generates unnecessary transactions costs and without well-defined criteria for decision making can lead to inconsistent ad hoc decisions. In contrast, the Protecting Rights and Enhancing Economic Welfare of Farmers Law (2013) does guarantee crop choice freedom.[6] This ambiguity across legislation with respect to crop choices and land tenure security can generate uncertainty, impede efficient resource allocation and dampen investment incentives.

A thorough review of the Farm Land Law and the Vacant, Fallow and Virgin Land Law regulating land use rights and investment in agriculture and their implications is addressed in the *OECD Investment Policy Review: Myanmar* (OECD, 2014). Among the key recommendations of that review with respect to land rights were: to accelerate land registration for land tenure security to increase investment in agricultural production;

to harmonise land legislation and to allow for decentralised land management; and to recognise and protect customary land tenure. The *Review* also provides important guidelines for sustainable investment in agriculture, including: the compulsory use of Economic and Social Impact Analysis for investments; the setting up of monitoring and reporting mechanisms; the establishment of independent accessible procedures to address grievances; and the development of appropriate safeguards when granting large land areas to commercial investors.

Agricultural policies need to focus on raising productivity but avoid distorting market signals

Agricultural policies should focus on raising productivity and facilitating structural adjustment to increase income-earning capacities rather than responding to demands for higher prices. The Protecting Rights and Enhancing Economic Welfare of Farmers Law introduces the possibility of price support to rice farmers *"when necessary"* through the use of a buffer stock scheme. The Law provides for the government to buy rice above market prices if prices fall below an administratively set price for a given length of time and to store and subsequently market the rice stocks when prices increase. The precise budgetary implications will depend on the price at which the government buys the rice as well as the storage and marketing costs. In addition to budgetary costs, such policies also raise domestic rice prices and can have an impact on consumers' food expenditures, which for rice represents approximately 18% of total household expenditures.[7] While implementation of the policy is subject to the *"when necessary"* clause, such a policy could be a slippery slope towards other price support interventions when market prices fall. Such policies would impede the transmission of market price signals and distort resource allocation.

Buffer stock schemes to stabilise domestic prices have repeatedly been shown to be both ineffective and costly (Johnson, 1976; Salant, 1983; Glauber et al., 1989; Williams and Wright, 1991, Cashin et al. 1999). Because the schemes entail large budgetary costs and the funds for operating them are limited, they simply fail to achieve their objective while incurring sizeable costs.[8] As with all subsidies, buffer stock schemes are an inefficient way to support producer incomes compared to providing farmers with other options when incomes decline, such as social safety nets. These alternatives can be designed to target those most at risk, such as smallholders, using farm size or past earnings criteria, rather than providing support to all producers regardless of size. The recent experience in Thailand of guaranteeing rice prices above world market prices is instructive for Myanmar. Not only did it reduce exports and market shares as farmers sold to the government rather than markets, but it also generated high budgetary costs estimated to be in excess of 1% of GDP and did not provide benefits to smallholders whose participation was considered too costly given transportation costs, administrative procedures and payment delays. In devising any income support scheme in agriculture, all costs and benefits as well as their incidence across all market players, including consumers, need to be included.

Improving the organisation of agriculture-related ministries could increase administrative efficiency and ensure consistency in policies across agro-food sectors

The current structure of agriculture-related government institutions stands in the way of efficient policies. Myanmar has three separate ministries governing the agricultural sector: the Ministry of Agriculture and Irrigation (MOAI) for crops, the Ministry of Livestock, Fisheries and Rural Development (MLFRD) for livestock, fish and rural development and the Ministry of Environmental Conservation and Forestry (MOECF) for the environment and forestry. In practice, agricultural production is undertaken in a much less divided fashion. Farms are often mixed enterprises and many of the new issues arising in the sector are of a cross-cutting nature, such as environmental sustainability and climate change impacts. This makes close co-operation among the ministries necessary to promote sector-wide coherent regulations and efficiency in budgetary allocations. For instance, the need for co-ordination and financing of common tasks in R&D, extension, as well as agricultural and rural finance, suggest consideration of how to merge these tasks under one entity or a specific supra-administrative agency to ensure co-ordination in objectives and policies as well as to increase administrative efficiency.

Budgetary allocations indicate some shift towards greater investment in research, but irrigation structures remain the priority (MOAI, 2014). Available aggregate data on budgetary expenditures for the MOAI however do not permit a detailed analysis of its policy stance. The data do indicate that priority is given to irrigation, which is allocated over 90% of the capital budget in 2013/14 and 88% of the planned capital budget for 2014/15. The budget allocations also indicate an increase in importance given to agricultural research and education. The capital budgets for the Department of Research (under the Department of Agriculture) and the Yezin Agricultural University, its main agricultural research university, are to increase from 0.004% in 2013/14 to over 4% in 2014/15, while current expenditures continue to account for about 2% of total expenditures. Investment in agricultural R&D is fundamental to increasing productivity and to promoting innovation in agriculture. Thus, increases in its funding are an important move in the right direction.

Reforms could help to expand the financial services available to farmers

A robust financial system for the agricultural sector as well as for the wider rural economy is needed to take advantage of market opportunities, foreign and domestic, that are likely to develop in the near future (Kloeppinger-Todd and Sandar, 2013). This is even more important if new approaches to expanding trade, such as agri-food value chains and their clusters, are pursued. The following suggestions are offered for further reflection.

The Farm Land Law when fully operational should relax financial constraints somewhat since the LUCs can be used as collateral for loans. It is important that these are effectively accepted as collateral for loans by banks. Some monitoring of their use in the commercial banking system should be undertaken either through bank reporting obligations or special surveys (Kloeppinger-Todd and Sandar, 2013).

A strategy to attract savings or a revision in deposit-to-loan ratios could be considered to overcome funding constraints for lending by the Myanmar Agriculture Development Bank (MADB). This could include increasing interest rates above inflation rates and providing security for deposits. A reflection on the MADB's future role in the financing of the agricultural sector seems warranted given the growing needs of the sector. Its present network of branches across the country and local knowledge of credit needs/risks means that expansion of its financial services and development of its commercial banking capabilities could allow it to become an effective and vibrant rural financial institution.

The Global Treasure Bank now operates as a commercial bank that aims to provide a full range of banking services to clients and to extend its financial reach from farmers to rural industries and service providers. Collaboration with the MADB could provide synergies for developing strategies to meet the growing needs in the rural economy, building on their presence and experience in rural areas. In particular the two banks could both be instrumental is meeting financial needs of the agri-food export expansion through financing of value-chain clusters. Learning from the experiences of other Asian countries could provide invaluable lessons on how to assist in such a transformation. Successful transformations from state rural lending institutions to commercial rural banking systems include Bank Raykat of Indonesia, the Agricultural Bank of Mongolia and the rural lending institutions of Thailand.

Commercial banks should be allowed to operate in the agricultural sector, both to receive deposits and to distribute loans. To ensure their willingness to lend and not simply accept deposits, such banks could also be required to allocate a share of loans to farmers over the medium and long term so as to promote deeper investment by the sector itself (Kloeppinger-Todd and Sandar, 2013),

The microfinance approach of the Co-operative Credit Societies can provide much needed capital in rural areas. Strategies to increase funds available to meet agricultural production cycles are needed. The present two-acre limit on loans even for high-value products might be too restrictive, but studies are needed to estimate needs. Since certain high-value crops may need irrigation or greenhouse facilities, some consideration of longer-term loans for such investments could be envisaged. Such financing can assist the development of export-oriented production for smallholders since earnings per acre are up to four to ten times higher than for generic rice. Some experts however doubt their efficacy given past experience in co-operative credit in Myanmar (Turnell, 2014).

There is a need to expand the current nascent warehouse financing facilities to permit farmers to extend loan repayment periods beyond harvest time, when prices are at their lowest (Giovanucci et al., 2000). This approach is widely used in both developed and developing countries and can improve farmers' finance. There is a role for public-private partnerships (PPPs) in expanding such facilities, particularly in the rice growing regions (USAID, 2007). The Food and Agriculture Organization (FAO) is currently constructing six of these facilities and the Rice Specialisation Companies (RSCs) are likewise reported to be providing such facilities, although estimates of the magnitude or number are not available.

Establishing a weather index-based crop insurance scheme would help to mitigate losses to farmers from catastrophic climatic risks, Floods and droughts strike the majority of farmers two to three times every five years according to the *Report on Myanmar Census of Agriculture* (2010) and these often generate significant damage to crops, livestock and fisheries for entire communities. Given that unpredictable losses from these catastrophes can mean defaults on loans, with the risk of curtailed future borrowing capabilities and even loss of land use rights, mitigating the consequences of catastrophic risks is important to sector performance and livelihoods. Weather index-based schemes are applied to the entire farm community and are less complex to operate than traditional crop insurance schemes that require detailed farm-level data. They also reduce moral hazard in claims as well as adverse selection since it is not the individual risk that is being insured but that of the community or a specific area (Barnett and Mahul, 2007; World Bank, 2010; 2011). Furthermore, premiums can be incorporated in government loan fees or could be subsidised particularly in the case of smallholders. The availability of crop insurance should increase the willingness of commercial banks to lend to farmers since the risk of default is lessened. Downstream agri-food firms may also be more willing to lend to farmers who are insured against catastrophic losses. The FAO is co-operating with the government of Myanmar to develop catastrophic risk management tools.

There is a role for government to assist in managing risks due to catastrophic events, such as severe drought, floods or disease outbreaks, which affect many farmers over a wide area and are beyond a farmer's or markets' capacity to cope. Government policies should however not provide support to deal with normal risk, as minimum intervention prices or payments that are triggered when prices or returns are low may even be counter-productive and induce more risky farming practices (OECD, 2011).

Expanding agricultural extension services and farmer education can help spread modern farming practices

Low levels of agronomic knowledge and skills of producers have been identified as contributing to poor product quality as well as low productivity. All agricultural extension services are currently under the Department of Agriculture (DAR) of the MOAI, which is tasked with the technology transfer and training of farmers in modern agricultural practices. The present approach is a traditional top-down one with few financial resources. On average, each village manager is required to maintain direct contact with farmers over a few village tracts or villages with 1 215 to 2 450 hectares of cropland, which means that not all farmers are reached (Cho, 2013). Many farmers are thus constrained to obtain technical assistance from agro-input dealers, which may not be optimal from an economic or environmental perspective. Furthermore, the real needs of farmers are not being recognised in the top-down extension strategy and this approach may need to be revised to be more efficient and effective.

A number of programmes are being undertaken to increase training for extension professionals, mainly by the Central Agricultural Research and Training Centre, which aims to upgrade technical knowledge and provide training in how to deliver extension services. Closely linked to the availability and quality of extension services is the agricultural education system, which is reported to be in need both of curriculum revision and the strengthening of agricultural research training (Cho, 2013). There are numerous ways to extend the quantity and quality of extension services to farmers, including the following.

- Upgrading the curriculum for extension professionals through continual training and the strengthening of the links between agricultural research and extension services.
- Expanding the delivery of technical information and training as well as weather warnings and market price data through the Internet, radio and smart phones. This capability is now being developed by the MLFRD and could be scaled up across products if proven successful.
- Expanding the use of village-based approaches with local leader formulas, such as farmer-to-farmer approaches in the transfer of knowledge and skills.[9] Increased attention should be given to determining farmer needs from farmers themselves.
- Using co-payment schemes for specific types of technical assistance. Even very minimal payments can be useful to identify what types of training and assistance are needed.
- Adopting public-private approaches in the provision of extension services with government oversight may extend the reach of extension services.

Agri-food health and safety regulatory systems need to be strengthened to meet international market requirements

Increasing trade in agri-food products means Myanmar needs to ensure that it has the capacity to meet added demands for inspection, testing and certification for both exports and imports. Myanmar has a fairly detailed legal framework for food safety, plant and animal health and follows international benchmarked standards. The implementation of the standards is spread over three ministries: the Food and Drug administration (FDA) under the Ministry of Health (MOH), the Plant Protection Department (PPD) under MOAI, and the Livestock Breeding and Veterinary Department (LBVD) under MLFRD. These organs are responsible for inspection, testing, registration and licensing of all foods, plants and plant products, animals and animal products and feeds that are imported or exported.[10] Since a product may require several certificates, the tasks need to be efficiently co-ordinated and carried out. Otherwise, the procedures can generate losses in time and money to traders and lead to safety risks that can damage reputation.

Myanmar's regulatory agencies are currently severely resource constrained, lacking sufficient certified laboratories, testing equipment and qualified operational personnel according to authorities of both the PPD and FDA.[11] There is only one internationally accredited government laboratory (ISO 17025:2005) in Myanmar, in Nay Pyi Taw, which can test residue levels of a number of pesticides. Because of this, traders are often required to send samples abroad for testing, increasing costs in time and money. With limited resources and the increase in border trade, the risk of entry of illegal foods and agro-chemical inputs has risen and, according to authorities, much is simply not checked.

It is imperative to relax the constraints on these agencies as rapidly and as efficiently as possible. Suggested actions include the following.

- Increasing ISO certified laboratories and technical staff, updating of technical competencies, and providing mobile laboratories at border check points. Reported increases in budget allocations for equipment and personnel should improve the situation in the near future; however, the availability of effective resources needs continual monitoring to ensure that Myanmar can build a reputation for supplying safe food.
- Using fee-based services for government inspection, testing and certification provided to exporters. Many developed countries have taken this approach, which can reveal where the real needs are in the system.
- Using PPPs for inspection, testing and certification for conformity to international standards with the government retaining oversight and legal authority over their implementation. The PPPs can consist of a private firm with whom the government establishes a contract to undertake specific tasks of conformity assessment with respect to specific international or domestic regulations. Under the arrangement, the firm is recognised as a government agency for inspection and certification purposes, which enhances its market for such services, and the government reduces its costs for personnel and administration. However there needs to be government oversight through third party monitoring and evaluation.
- Using PPPs for training for chemical use and integrated pest management (IPM) as well as good agricultural practices at the farm level. This can involve periodic training sessions of village staff followed by co-operative forms of dissemination of information to farmers. Formalised agreements with evaluation service providers can ensure that international standards are met.

Increased assistance to promote exports and development of value chains can improve market opportunities

Facilitating contacts with new markets to promote Myanmar's agri-food products through public and private collaboration should be on the agricultural trade policy agenda. Increases in agri-food trade can stimulate growth and development in rural areas because of the linkages between the agricultural and non-agricultural sectors. Myanmar's trade associations rely largely on their own initiatives and financing to identify new markets and to be informed of regulations and export opportunities. The Department of Trade Promotion of the Ministry of Commerce could possibly open a special portal for agri-food products to disseminate information on importing country's food safety regulations as well as market information to facilitate trade, ranging from tariffs and tariff quotas to rules of origin. Other efforts can include websites, similar to that of Chile's export promotion agency, Pro-Chile, the funding of producer and exporter participation in food fairs worldwide as well as simple visits to government trade offices to inform market participants about Myanmar's products. These efforts can also be useful in attracting investment partners over the coming years to expand investments in developing sectors such as dairy and meats.

Improving the performance of agricultural value chains and integrating Myanmar's over 2 million commercial smallholders (those with 2-20 hectares) into them can provide a way to harness emerging demand-driven market opportunities to modernise the agriculture sector, improve its performance and raise agricultural/rural incomes.[12] The value-chain approach generates linkages to complementary non-agricultural services and inputs at each stage of the chain from input supplier to producer to consumer that can ignite the wider process of the transformation in the rural economy (Haggblade et al., 2002; Reardon et al., 2009; Reardon et al., 2012a; Reardon, 2014). These complementary inputs and activities add value to the product and include a wide range of services such as processing, transportation, technical assistance, marketing and logistics and the provision of inputs ranging from chemicals to machinery. Locating these activities in rural areas near production generates investment, employment and income opportunities leading to further growth. These can stimulate the flow of labour to the non-agricultural sector and thus also improve overall labour productivity in agriculture.

Improving food safety compliance will be crucial to accessing export markets

To tap into growing foreign markets for high-value products will require complying with increasingly stringent food safety regulations as well as satisfying demands for quality attributes (Fernandez-Stark et al., 2011). Myanmar's agri-food product quality is generally low, with the exceptions of fish, sesame and specific pulses, and if food safety is included many products have difficulty meeting international standards. Satisfying the food safety regulatory requirements of ASEAN countries should be a priority in anticipation of the establishment of the free trade regime beginning in 2015. But building capacity to meet evolving food safety standards of high income countries, given their market potential, should also be part of Myanmar's medium-term strategy.

Competing for market entry means building capacity to meet a range of standards. The rise of private standards in the agro-food sector, which not only include regulatory requirements but also process standards governing how these requirements are satisfied, is now routinely required by importers, in particular those selling to retail chains (Fulponi, 2007; Humphrey 2005; Henson and Jaffee, 2006). These requirements often include additional standards for environmental sustainability through GAPs or fisheries resource management as well as international labour standards.

To assist in building capacity to meet these new standards as well as SPS requirements and to ensure compliance PPPs could be used even if government oversight is often still needed (Hopper and Almeida, 2012). Identifying viable partnership opportunities that can make a difference to improving food safety capacity and outcomes could help expand resources for food safety and SPS matters more generally.

Myanmar has the potential to expand its range of agricultural export products and destinations

The use of a wide set of organisational and marketing strategies may be needed to spur modernisation and growth in the agriculture sector and to include a broad range of small commercial farmers (Byerlee et al., 2014; Haggblade et al., 2012).[13] Strategies such as collective marketing organisations, contract farming, and agro-food clusters as well as large vertically integrated operations may be able to promote modernisation and inclusiveness more rapidly than unorganised market participation (Vorley et al., 2007; Vorley et al., 2009). The choice of organisational structure depends on the initial conditions in the sector, including its access to hard and soft infrastructures, the asset mix of different players, and the commitments of local government and business/producer associations. The possible benefits of these alternative strategies, however, need to be evaluated by region and sector given the wide differences in initial conditions across Myanmar.

Myanmar's National Export Strategy (NES) has identified a number of priority sectors through which it will foster sustainable inclusive and equitable export-led growth. These include rice, fish and crustaceans, pulses, beans and oilseeds, with rubber as an emerging priority sector, To develop a strategic plan to activate Myanmar's potential value chains in these sectors will require not only in-depth analysis of their production potential and market opportunities, but also the identification of trade capacity needs.[14] As beneficiary country under the Enhanced Integrated Framework (EIF) of the WTO's Aid for Trade initiative, Myanmar will benefit from assistance to mainstream trade into its development strategy and to relax trade-related technical constraints.

Building on Myanmar's NES, several candidates for further value chain development can be identified, in particular: fruits and vegetables and fish/crustaceans, which can integrate smallholders to markets for high value products; and rice, because of its widespread production and opportunities for upgrading. The critical constraints in satisfying evolving markets facing these sectors and possible ways they might access new market opportunities are briefly reviewed below.

The *mango value chain* provides an example for improving access of Myanmar fruit and vegetables to global markets. Demand for high-value tropical fruits has been rising, providing Myanmar with additional export opportunities, but low productivity, quality and lack of compliance with food safety certifications limit exports (Narrod et al., 2007; Fernandez-Stark et al., 2011). But ensuring food safety compliance is not easy particularly when traditional smallholders are to be integrated into evolving markets as experience from Viet Nam indicates (Box 2.5). As an example, development of the mango value chain has been underway for a number of years but success has been limited. Firms have not been able to export to high-end markets consistently or in significant quantities. Thus investment is stymied and demand for complementary services and inputs stagnates. Significant constraints are found at all stages of the value chain from inputs to marketing, many of which lower firm competitiveness (Box 2.6).

Most mango exports are destined for China with little emphasis on quality attributes. If exports are to expand to high income countries in Asia, Europe and North America, Myanmar will have to meet increasingly stringent regulatory and private standards in the near future. The MOAI in co-operation with the UN Food and Agricultural Organization (FAO) has already begun developing a certification system to permit exports to Singapore that could be applied more widely to other destinations and products.

Expansion of fruit and vegetable exports are well known for creating links to non-agricultural services and inputs and thus opportunities for the growth of SMEs in rural areas. Furthermore, supplies of less than export quality production could be used in processing industries, generating additional non-farm employment in rural areas. It is these non-agricultural employment links generated by value chains that are an important stimulus to the transformation process of the rural economy.

Box 2.5. **Improving food safety: Learning from Viet Nam's dragon fruit experience**

Efforts to improve smallholder access to export markets for Dragon fruit involved upgrading production methods so as to meet regulatory SPS requirements and private standards, such as GlobalGap. Local government, agricultural services and several donors collaborated in upgrading production quality of dragon fruit to meet market demands. Food safety practices were improved for many producers and there has been an increase in exports by smallholders. However the project found that changing agricultural practices and hygiene as well as increasing record-keeping by small farmers was difficult. The lack of skilled personnel to train compliance in private standards as well as lack of basic infrastructures in certain rural areas also contributed to limit smallholder upgrading. The market fundamentals also changed over the project period, with entry of new players and increased competition in markets. Thus project findings recommend that future efforts reflect carefully on time needed to induce fundamental changes and those initiatives be closely aligned with market developments. Given the time needed to upgrade production standards for smallholders it is important to begin the process as rapidly as possible. Myanmar could greatly benefit from participating in the World Bank Global Food Safety Partnership which would provide added resources and capacity to improve its food safety compliance.

Source: World Bank (2014a), *Global Food Chain Partnerships*, World Bank, Washington, DC, *www.worldbank.org/en/topic/agriculture/brief/global-food-safety-partnership*.

Box 2.6. **Constraints on the mango value chain**

Input and producer stage: Few mango cultivars have the required quality features for export and orchards are too old. Low technical skills and knowledge levels in plant protection, growing practices and post-harvest handling give rise to plant disease and pests that adversely affect quality. Producers, even orchard growers, lack adequate information on the latest growing techniques or inputs.

Post-harvest stage: Post-harvest handling systems are inadequate: there are no cold storage facilities due to a lack of electricity and only one packing house exists which is operated inefficiently owing to high costs and low utilisation rates.

Export stage: Transport to borders and airports are poor. There are no cold storage facilities and no hot bath facilities to meet food safety requirements which add to costs at destination. Missing information on market opportunities and regulatory requirements and certification procedures and few active market contacts are further constraints.

Remedies for the constraints include: investment in new orchards with new varieties; improvement of technical skills in pest/disease control; improvement in post-harvest practices and cold storage; improvement in hard infrastructures such as electricity, transportation, and cold storage and hot baths facilities; and increased sharing of market and regulatory information.

Source: Myat (2012) and interviews with exporters and trade associations.

Rice chain performance needs to be improved through upgrading of quality and the building of reputation. Myanmar's performance in the rice export market has been poor in recent decades partly because of low quality and productivity. Myanmar was the world's largest rice exporter in the 1930s and experts suggest Myanmar has potential to regain in part its role as a major rice exporter thanks to its natural endowments (Kudo et al., 2013; MSU-MDRI, 2013). The rice value chain is in need of upgrading at all stages from the farm level to milling and processing (Wong and Wai, 2013). This is critical to the sector's development as markets are moving to quality-defined branded products. This upgrading has happened in China and is occurring even in lower-middle income countries such as India (Reardon et al., 2012b). The building of a rice value chain to access high end markets can benefit from development of strategies for improving quality and building reputation as a reliable supplier of quality rice. Branding of specific high quality rice varieties, such as Pawsan, could therefore be envisaged. This could be done through developing specific rice varieties through PPPs between commercial seed companies and the DAR, application of GAPs at the producer level and ensuring traceability down the chain. A range of varieties with specific quality characteristics adapted to different markets could also be considered in the development of rice value chains. In addition, development of rice processed products linked to specific rice brands or varieties and/or production processes for export and domestic markets should be considered, as these stimulate further linkages with non-agricultural sector activities. Branding of rice and rice products should be high on the agenda.

Since rice production is widespread, there is an opportunity to build linkages across agricultural commodities that make use of similar service sectors, such as inspection and testing as well as marketing and technical assistance, many of which can be done through PPPs. The presence of several value chains in a given area allow for economies of scale in government services and institutional support and make the development of complementary service and input industries more economically attractive.

Expansion of fisheries exports to high income markets will require meeting evolving regulatory standards. Myanmar is well endowed with both marine and fresh water resources and fisheries production has risen by 8% per annum on average over the past decade.[15] While there are no exact figures available, the fisheries sector is estimated according to FAO to employ nearly 3 million people year round and generates some 3.3% of total export earnings. Expected increases in fish demand globally provide Myanmar with growing export opportunities. Because exports make use of a wide array of services and processing facilities, they should generate substantial non-agricultural employment beyond the fish production/catch sector. But the sector may have difficulty tapping into these export opportunities because of a variety of constraints including: lack of finance to expand the fish supplies from both aquaculture and marine fisheries; lack of sufficient technical skills along the chain affecting both productivity and the quality of outputs; lack of hard infrastructures such as electricity, transportation facilities and cold storage facilities at airports and ports.

As rising food safety and sustainability are now significant features of international fish trade and marketing, these constraints could limit exports to more lucrative markets, thus efforts to meet food safety requirements must be undertaken. Food safety regulations are the most binding constraint for high income markets. While some firms are already able to access high income markets in North America, the European Union and Asia, food safety standards remain a challenge for most. Upgrading facilities to comply with food safety standards is a must and needs to remain a high priority.

While capturing growing export opportunities can bring important economic benefits to the sector, the sustainability of fishery resources including their ecosystems is fundamental to its long-run development and growth. The Department of Fisheries (DoF) is responsible for the sector's sustainability policy as well as the conservation and rehabilitation of fisheries resources. According to the DoF sustainability policies are currently being enforced among the industry players as well as local fishery communities according to the DoF.[16]

Ensuring that these policies follow international guidelines could also provide an initial step to build access to new markets for "eco-label" products. There is a rising demand for "eco-label" products, but the supply of products from developing countries that meet the necessary standards is at present limited. Complying with these standards could provide Myanmar's fisheries with an opportunity to be a front runner among its competitors and to develop high value niche markets. Compliance with the certifications for food safety and an "eco-label" builds reputation and opens new markets, and thus merits further attention to its practical application in Myanmar fisheries. In meeting these newer standards, PPPs could be used to develop technical assistance and the certification programmes in order to limit excessively burdening government agencies. In fisheries, as in other products, adapting to evolving market demands remains key to growth.

Alternative organisational structures may provide greater impetus to modernisation: Clusters and contracting

Clustering of value chains in a given area can allow firms to exploit synergies and linkages both vertically, between one stage and another, and horizontally among players at the same stage. Clustering in agriculture has been found to improve the competitiveness of firms/farms due to benefits from collaboration as well as economies of scale in the provision of services and government support. This proximity of firms and farms at different stages of the value chain can create firm/farm linkages that initiate dialogue and collaboration to resolve common problems affecting the entire chain, such as implementation of standards or improvement of market information and access (Galvez-Nogales, 2010). However, catalysing such collaboration and interaction most often requires support of local government institutions and professional associations. These provide help in meeting objectives through technical assistance, training programmes and market research as well as professional support for its strategic development. Their participation is considered fundamental to the take-off and development of clusters. Stimulating the development inclusive value chains particularly for high-value products such as fruits and vegetables often requires striking a fragile balance promoting smallholder inclusion and economic viability of commercial operations (Box 2.7).

With Myanmar's large potential in fruit and vegetable production, the cluster approach may be more beneficial to promoting growth and meeting standards than the present unorganised approach, particularly if smallholders are to be included. It could also make better use of plant packaging facilities and promote collaborative efforts to finance storage and treatment facilities necessary for market entry. These benefits could also be realised without a formal cluster as in the case of Myanmar's fish-processing industry, which shares processing plants. However, the structure and membership of the cluster might facilitate such activities more rapidly by fostering associative actions. Kenya's experience with smallholders provides some insights into this approach that might be adapted to Myanmar (Box 2.8).

Box 2.7. **Stimulating development of inclusive value chains**

Government can promote economically viable inclusive value chains by providing firms with an enabling environment including hard and soft infrastructures that are conducive to private sector investment. The development of horticulture value chains requires ensuring government services to assist in complying with food safety and quality requirements of importing countries. If these basics are missing, outcomes for smallholders will not be efficient or equitable and investment incentives limited.

Temporary fiscal incentives such as reduced tax rates or access to financing might be considered to stimulate firms to invest in improving and expanding value chains. These incentives should have sunset clauses as well as require firms which benefit from them to be accountable, by providing evidence of their activities with smallholders, such as training in GAP or private standards programmes. External funding or PPPs with downstream firms should also be considered to finance investments necessary to upgrade smallholder production in terms of food safety/quality.

Government assistance in identifying markets and developing commercial contacts could also provide incentives for firms to upgrade or expand their product chains. A Myanmar market linkage programme could be developed for producers and exporters to visit prospective export markets to better understand market demands and thus stimulate improved production practices by smallholders. For instance a Market Linkage Programme has been used with success in Pakistan, for development of the mango value chain where some smallholders have now been able to export to European supermarkets after learning about what is required. Such efforts would also serve to acquaint potential buyers with Myanmar products.

Box 2.8. **Kenya's avocado cluster: How it was done**

Kenya's experience in building an avocado cluster may be instructive in understanding how clusters could improve output, inclusiveness and linkages to non-agricultural activities, although caution is needed in transferring experiences across countries.

The cluster project organised Kenya's small, resource-poor farmers into producer groups that were able to access inputs, improved quality control and linkages to diversified markets including higher-priced export markets and the lower-priced processing sector market. The cluster project also created non-agricultural firms and employment to service the agricultural sector and its downstream activities, such as transport, processing and marketing. While the initial conditions of avocado farmers in Kenya resemble those of many present producers in Myanmar, they operated in a business and institutional environment with substantial experience in exporting to high-value markets and in developing new products for markets that are only applicable to avocados. Myanmar's market position is significantly different in that it lacks basic infrastructures, support institutions and a business community with substantial experience in meeting evolving market demands.

Though the approach cannot be applied in its entirety, different aspects of the Kenya example could prove beneficial in Myanmar. These include the building of producer-trader associations and the involvement of local government and health authorities in defining strategies to improve food safety, efficiency and competitiveness in the different sectors.

Source: Jones and Webber (2010), "Achieving synergies through clustering – Kenyan avocados", C.W. Webber and P. Labaste (eds.), *Building Competitiveness in Africa's Agriculture: A Guide to Value Chains Concepts and Applications*, World Bank, Washington, DC.

Contract farming remains the general approach to incorporate small farmers into markets where ensuring quality, safety and delivery volumes for buyers are important.[17] Contracts provide for acquisition of inputs through credit, for technical assistance and for a guaranteed price at harvest, thus relaxing the constraints the typical farmer faces in these areas. Research has found that the use of contracts tends to increase incomes of small holders compared to those farmers not using contracts (Miyata et al., 2009; Da Silva, 2009; Prowse, 2012). Given that Myanmar's small farmers are constrained by a lack of quality inputs, credit and technical assistance, the use of contract farming to integrate farmers into value chains could be an economically viable solution for farmers and exporters as well as agri-food processors aiming to expand markets. From a public policy perspective, there is a role for government to support the establishment of contract farming where smallholders are involved.

Myanmar already makes use of contract farming through some 58 Rice Specialisation Companies (RSCs). These RSCs supply inputs, technical assistance as well as loans to be repaid at harvest under contract fixed price deliveries. These may have relaxed constraints to technical assistance but outcomes with respect to financing inputs have not been very successful, as most borrowers have defaulted on their loans. Because rice is a generic product with no specific quality attributes it may not be well suited to contract farming. However there are opportunities for contract farming in the fruit and vegetables sector, where quality and safety requirements need to be ensured all along the chain. Given Myanmar's potential for production of these crops, contract farming may provide a useful way to increase inclusiveness of very small farmers, since even one hectare of production can be highly remunerative. Incentives for contract production and value chain activities could be provided through tax concessions or access to preferential loans. Ensuring a transparent legal framework for contracts between farmers and agribusiness needs to be considered as the sectors develop.

The experience of the Chinese government's attempt to incentivise the private sector to work with smallholders through promotion of leading ("Dragon Head") firms is also instructive (Box 2.9). Subsidies are given to these leading firms to upgrade agricultural practices and integrate farmers into export chains. At the same time, the government has promoted industry associations that bring together producers and farmers to discuss strategies and market opportunities as well as how to overcome the scale problem in meeting standards while remaining competitive. Promoting producer and industry associations are considered to be important to building social capital necessary for furthering co-operation in meeting challenges of the sector (Da Silva, 2009; Shepherd et al., 2009). The approaches should not be taken as rigid models to be applied as is, but rather as examples that might be applicable to specific Myanmar agricultural outputs.

Encouraging co-operation through producer and exporter associations could relax constraints to information and technology access

In many countries, producer associations and in some cases co-operative marketing arrangements have proved beneficial in resolving both technical and informational constraints or in finding approaches to improve product quality. Myanmar has just begun to develop its producer associations (Ostrum and Anh, 2007). These need to be encouraged as they can contribute to fostering collaboration in finding solutions to common problems as well as in building important social capital. The Myanmar Farmers Association could serve as an umbrella organisation for a variety of producers' associations. The recently

Box 2.9. **Upgrading and linking smallholders to export markets: China's Dragon Head firms and industry associations**

China's government has supported the development of leading, large-scale enterprises, or "dragon-head" enterprises. These targeted enterprises help many smaller firms and farmers by involving them in their supply chains and providing them guidance on production practices that improve food safety and quality. The national- and provincial-level key dragon-head enterprises are mainstays of the move toward a more industrialised agricultural system. Since it is difficult for a firm to deal with thousands of small farmers or for farmers individually to contact or to negotiate with firms, private voluntary industry associations between farmers and industry have been formed. These national or local industry associations serve to link government, firms and farmers. They have been effective in developing strategies for sectorial development, safeguarding members' rights, improving communication and co-operation among members and most importantly communication on relevant food safety standards and requirements. The associations also offer smallholders training in management as well as technical skills so that they can meet standards needed to access export markets. This approach allows smallholders to remain competitive in international markets with stricter standards (Huang, 2011, Dong and Jensen, 2007).

formed Myanmar Rice Federation (MRF) is an example of an industry association with both large and small participants. It is currently developing a network of local producers, input suppliers' and millers' associations along with the RSCs and the Myanmar Agribusiness Public Corporation (MAPCO) to provide market information, technical assistance and training to members to incentivise modernisation and market oriented behaviours.

Industry associations involving all stages of the value chain should be fostered since they stimulate collaborations that can contribute to new ways of responding to nascent market opportunities and provide an important ingredient for the building of value chain clusters. For instance, efforts are now underway by Myanmar's industry associations to work with farmers on meeting quality standards through training sessions on food safety standards and good agricultural practices, including chemical use. The efforts are being made with a view to exploiting trade opportunities for the sector under ASEAN 2015, but also for market expansion to high-income countries in Europe and elsewhere.

New ways of doing business may also help to modernise agriculture

It is also useful to explore alternative ways of doing business in the agriculture sector, in particular by capitalising on the expansion of modern telecommunications. The use of information and communication technologies (ICT) is seen as an important tool for the dissemination of market information to small agricultural producers to improve their decision-making capacity on where and when to sell as well as educational materials on agricultural practices and likelihood of weather-related risks. In countries where access to telephone or Internet services are available in rural areas, mobile technologies are being employed to deliver market information and extension services to farmers (Labonne and Chase, 2009; Mittal et al., 2010; Chhachhar and Hassan, 2013; World Bank, 2014b) (Box 2.10).

The e-Choupal initiative developed by ITC Ltd of India provides a useful example of the potential uses of new technologies in connecting farmers to information and markets (Box 2.11). This initiative could be at least partially adapted to Myanmar's needs, particularly

Box 2.10. **ICT: Improving market price information dissemination**

Accessing up-to-date price information at different local market locations can improve farmers' decision-making and incomes. Market information services using mobile technologies can provide tailored access to up to date local market information. These are generally offered by the private sector and are often fee-based unless subsidised by public authorities. Examples include:

India: *Reuters Market Light (RML)* fee-based mobile phone dissemination of price and market data. It now has 1.3 million subscribers and provides information in eight languages for over 300 crops, *www.reutersmarketlight.com*.

Thailand: *1677 Farmer Information Superhighway* mobile phone dissemination of essential agricultural market information for free. There are now 250 000 subscribers and over 40 business and state agencies collaborate in the programme material development. A competition to improve applications is held each year, *www.telenor.com/sustainability/initiatives-worldwide/using-mobile-to-improve-farming-skills/*.

Pakistan and Bangladesh: mobile phone dissemination of price and markets information, with daily SMS alerts. It allows farmers to calculate where to get the best price using the app of the Agricultural Commodity Trade project, *www.telenor.com/sustainability/initiatives-worldwide/pakistan/*.

Senegal and Ghana: *Manobi and Esoko* mobile phone dissemination of market information in collaboration with government, business and international organisations. Both operate in a number of countries in Africa, *www.manobi.sn* and *www.esoko.com*.

Traditional ICT tools such as radio are still widely used to disseminate price information on a daily or more frequent basis particularly where phone or Internet access in unavailable or where literacy and costs are too constraining. The content varies widely: some provide only national or regional data while community-based radio stations provide local market information. For instance in Mozambique community radio programmes disseminate local market prices, transportation costs and quantities, *www.farmradio.org*.

Box 2.11. **Alternative marketing strategies hold promise in Myanmar**

E-Choupal is the telecentre initiative of India's ITC Ltd to improve agricultural production and procurement efficiencies. Its Internet kiosks in rural areas deliver price and market information in the local language on a daily basis.The initiative aims to trigger a virtuous cycle of higher incomes, increased capacity for farmer risk management, larger investments and higher output quality. ITC provides infrastructure and connectivity at e-Choupal centres, each of which serves four to five villages with web portals and access to current market prices at e-Choupal procurement centres located within a 30-50 km radius. This access allows the farmer to determine where to deliver his product. Delivery is free of charge and the number of intermediaries is reduced in the process. The e-Choupal centres also provide model farms and engage in training and technical assistance, mostly free of charge. This set-up also integrates e-Choupal retail shops so that information and products in urban centres are made available at the rural level to reduce travel and time investments for rural populations. This approach leverages rural areas into large corporate markets and thus improves earnings as well as the quality of life in rural areas.

Sources: Annamalai and Rao (2003), "What works: ITC's E-Choupal and profitable rural transformation", World Resources Institute, Washington, DC; *www.echoupal.com*.

for rice and pulses. While the control of the e-Choupal initiative by one company can be criticised for its exercise of market power in some rural areas, the arrangement could be modified in Myanmar to allow competition while still providing for the empowerment of rural areas through modern telecommunications at both the buyer and seller level.

Developing the manufacturing sector

Modernising the agricultural sector by building linkages to complementary non-agricultural activities can also assist in initiating a structural transformation towards a more manufacturing and service-based economy. These linkages facilitate a gradual transition of labour from agriculture to non-agricultural sectors. Indeed, the transformation from an agrarian to an industrial nation is one of the crucial development steps that many developing countries have aimed for. Such an economic transformation must be attained through the enhancement of access to markets and resources as well as the improvement of the productivity of the manufacturing sector through capital deepening and the development or adoption of improved technologies.

Such a transformation is integral to the government's strategy to develop the manufacturing sector into a major pillar of growth in its multi-pronged development strategy. Indeed, the government has been particularly focused on developing its still-nascent manufacturing sector, following the example of the export – and FDI – led development strategy which a number of Myanmar's neighbours have undertaken in the past decades. The government has implemented new investment laws and made plans to develop other key legal frameworks such as the SME and industry laws and the intellectual property law. Additionally, the government is promoting the development of industrial zones and special economic zones as one of the main industrialisation strategies to enhance trade and investment in the manufacturing sector.

Against this background, this section first reviews the current trends and challenges of industrialisation in Myanmar. In particular, it highlights the key developments and growth strategies in the manufacturing sector, focusing on the roles of regional industrial zones and special economic zones as well as other infrastructure development. It also presents the results of the recently completed nation-wide business survey in Myanmar. Findings from the *Survey of Businesses* in Myanmar help to identify the key constraints to growth and facilitate the formulation of policy recommendations to develop the manufacturing sector.

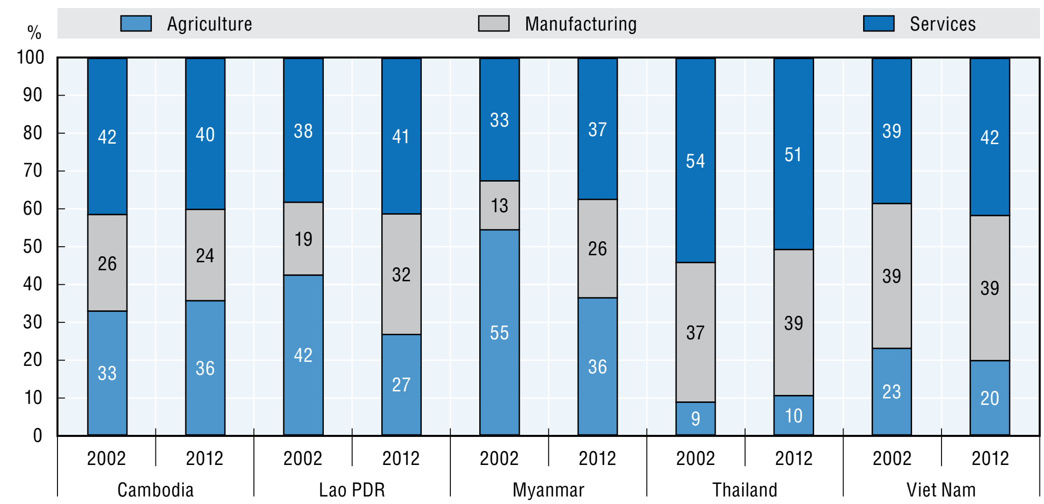
The manufacturing sector is growing from a small base

While the share of value-added of the manufacturing sector has increased over the last decade, Myanmar is still an agrarian country, even compared with its neighbouring countries of Cambodia, the Lao PDR and Viet Nam. Notwithstanding the doubling of the share of manufacturing value-added in GDP, the manufacturing sector is still the smallest in Myanmar, while the agricultural sector remains dominant. Compared to other neighbouring countries, Myanmar's manufacturing share of GDP is also amongst the lowest (Figure 2.6).

Myanmar is a net importer of various manufactured goods and a net exporter of natural resources and agricultural products (Figure 2.7), as would be expected given its stage of development. While net exports are dominated by natural gas, teak and agri-products, Myanmar imports large amounts of industrial goods such as iron and steel, automobiles, machinery and electronic products. The data also reflect the competitive advantage that Myanmar currently has in the labour-intensive apparel and accessories industry, as shown by that industry's positive net export figure.

Figure 2.6. **Myanmar has increased manufacturing activities**

Value added by sector (percentage) in 2002 and 2012

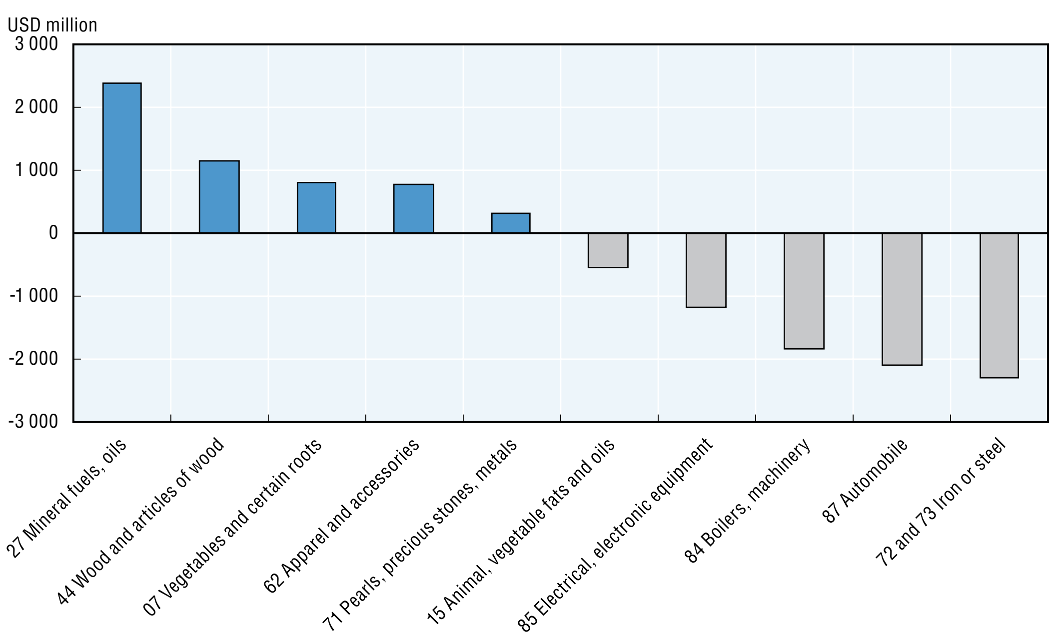


Source: Compiled by the author based on the data of UNESCAP (2014), *ESCAP Online Statistical Database 31 March 2014*, UNESCAP, Bangkok, accessed at *www.unescap.org/stat/data/* on 22 May 2014.

StatLink http://dx.doi.org/10.1787/888933134103

Figure 2.7. **Myanmar is a net importer of manufactured goods**

Net exports (in blue) and net imports (in grey) of Myanmar in 2012, in USD millions



Note: The first two-digit number of every item indicates the two-digit HS codes. The figures in the table were estimated as the differences between export and import amounts of the same two-digit HS codes.

Source: Compiled by the author based on the data of ITC (2013), *Trade Map – International Trade Statistics* (database), International Trade Centre.

StatLink http://dx.doi.org/10.1787/888933134122

The manufacturing industry is dominated by SMEs, particularly in food and beverages

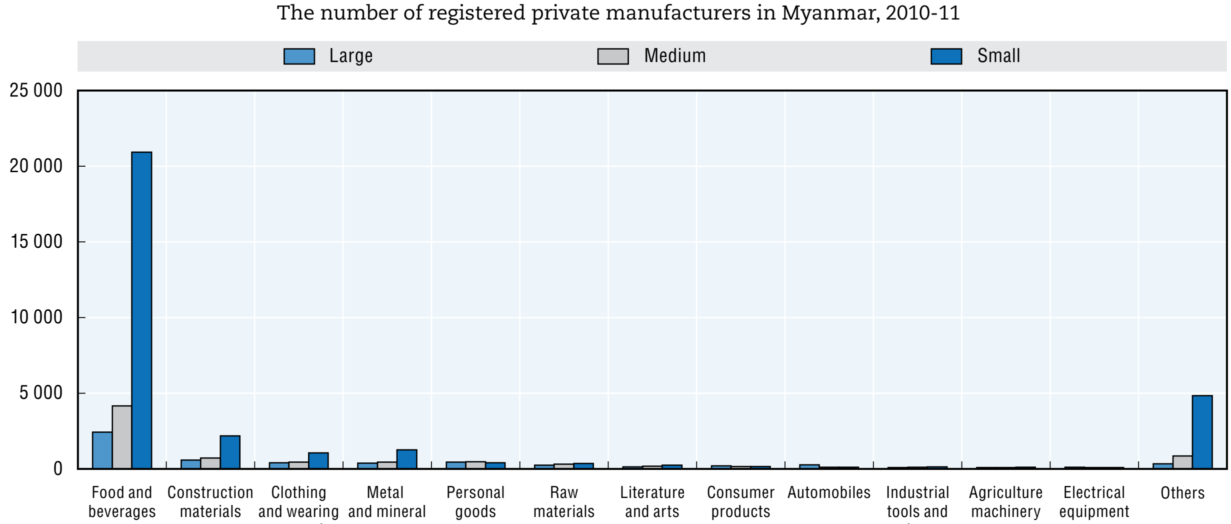
In Myanmar, two ministries serve as the primary supervisors of manufacturers of various sizes, sub-sectors and ownership structures as well as legal status. The Ministry of Industry (MOI) assists private manufacturers of small, medium and large sizes as well as State Owned Enterprises (SOEs) in manufacturing, while the Ministry of Co-operatives fosters micro manufacturers, cottage industries, and manufacturing co-operatives. Although there is no single or complete list of manufacturers in Myanmar, it can be roughly estimated that nearly 60 000 registered manufacturing firms operate in Myanmar, plus a number of small or micro players in the informal sector (OECD, 2013).[18] In 2011, 73% of total manufacturing value-added was produced by private enterprises, 26% by SOEs and 1% by co-operatives (Interconsulting, undated). In terms of numbers of firms, SMEs[19] dominate the private manufacturing sector in Myanmar, in particular the food and beverage sector, followed by the construction materials, apparel and metal/mineral sectors (Figure 2.8).

Although the number of SOEs has been declining rapidly, they still play a large role in various sub-sectors. According to the Central Statistical Organisation (CSO), there were 639 state-owned enterprises operating in the manufacturing sector at the end of FY 2011/12 (CSO, 2013). The manufacturing SOEs are present in a range of sub-sectors covering almost all key manufacturing classifications.[20] The major sub-sectors include heavy metal products, construction materials, food and beverages, apparel, industrial raw materials, personal goods, and printing and publishing (Figure 2.9).

Many manufacturing SOEs are grappling with challenging cost structures and high expenditure burden. For the aggregate of manufacturing SOEs revenues have persistently remained far below capital expenditures, often turning negative (Figure 2.10). This could suggest that such state-owned manufacturing operations are unsustainable for the long-term unless the government heavily subsidises their deficits. The reasons for the

Figure 2.8. **Smaller food and beverage firms dominate manufacturing in Myanmar**

The number of registered private manufacturers in Myanmar, 2010-11



Source: Compiled by the author based on the data of CSO (2013), *Myanmar Data on CD-ROM 2011*, Central Statistical Organisation, Ministry of National Planning and Economic Development, Nay Pyi Taw, Myanmar.

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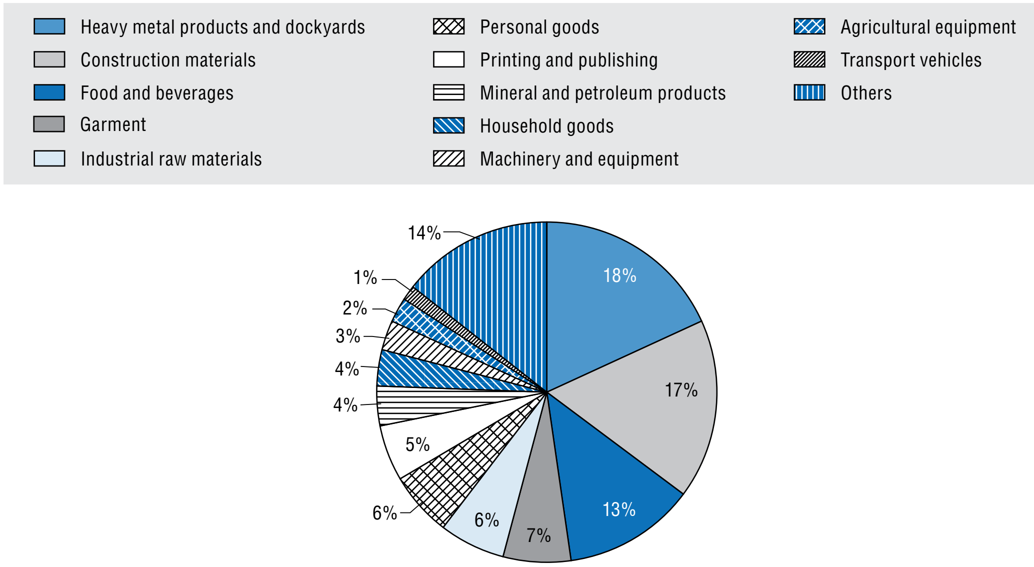
Figure 2.9. **Manufacturing SOEs operate in various sectors**

SOEs' manufacturing activities FY 2010/11



Source: Compiled by the author based on the data of CSO (2013), Myanmar Data on CD-ROM 2011, Central Statistical Organisation, Ministry of National Planning and Economic Development, Nay Pyi Taw, Myanmar.

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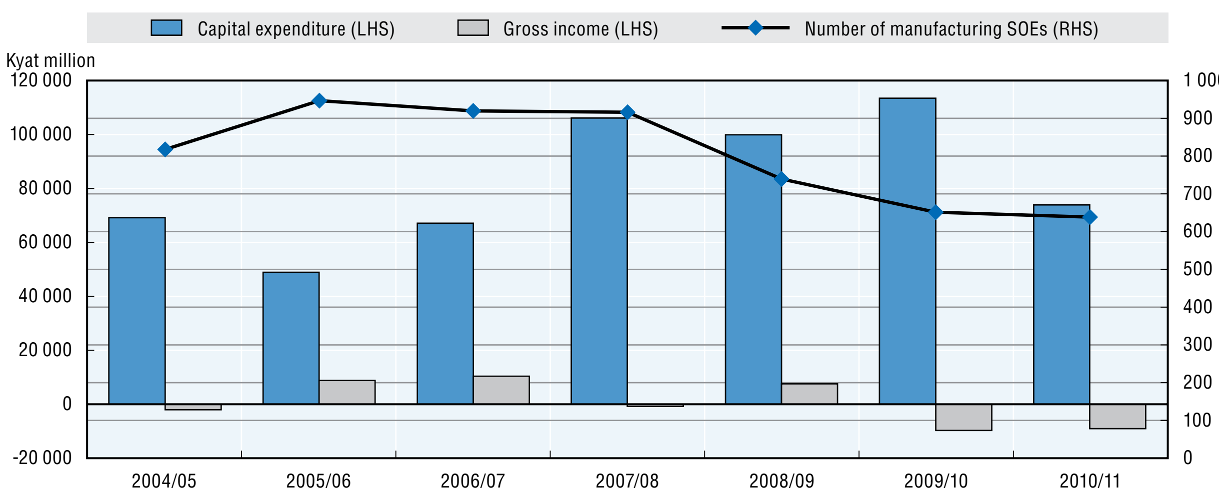
Figure 2.10. **SOEs have recorded unstable performances**

Number, investment and profit of manufacturing SOEs from 2004 to 2011, in kyat millions



Source: Compiled by the author based on the data of CSO (2013), *Myanmar Data on CD-ROM 2011*, Central Statistical Organisation, Ministry of National Planning and Economic Development, Nay Pyi Taw, Myanmar.

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difficulties of manufacturing SOEs include low productivity, high cost structures and poor management, and even large political interventions in some cases (Kubo, 2013).

The number of manufacturing SOEs has gradually declined since the middle of the 2000s in line with the government's privatisation scheme for unprofitable SOEs and promotion of the private sector that began in 1995.[21] The government, mainly the Ministry of Industry, has privatised SOEs primarily through auctioning, leasing or establishing joint ventures with local and foreign investors. Direct sales are also conducted occasionally for the privatisation of relatively small factories and facilities (Ministry of Industry, undated).

Domestic investment and FDI have shifted towards the manufacturing sector since the recent reform process began

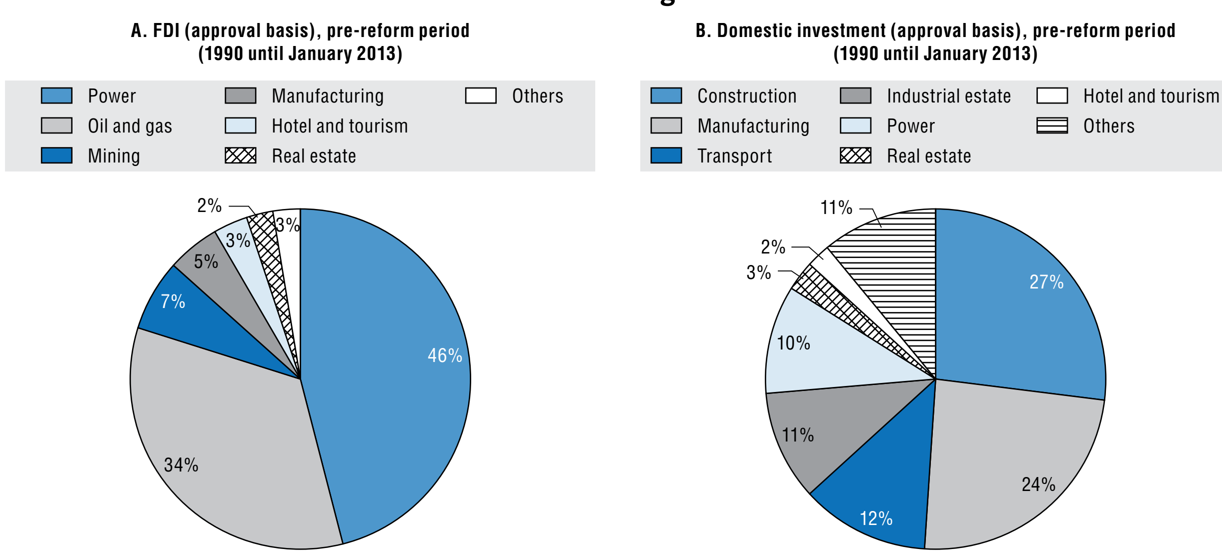
Both domestic and foreign investors have changed their attitudes and behaviour toward business opportunities in Myanmar since the present reform process was initiated. These changes are reflected in the changing sector profile of domestic investment and FDI in Myanmar. In the pre-reform era, FDI predominantly went to the power sector and extractive industries, namely the oil, gas and mining sectors. During that period, manufacturing ranked in fourth place among major sectors for FDI, followed by hotels and tourism and real estate (Figure 2.11). For domestic investment, manufacturing ranked second, with hotels and tourism in the seventh position.[22]

Importantly, since the reform process, there has been a clear shift in both types of investments towards the manufacturing sector, which is now the top-ranked sector among all economic activities (followed by hotels and tourism and then transport and communications and power) (Figure 2.12). This shift could reflect investors' optimism about the growth prospects of the manufacturing sector in Myanmar. Although there are no official statistics on investments in sub-manufacturing sectors, various sources such as news and magazine articles suggest that some key sub-sectors, including automobiles, electronics, apparel and processed food, have attracted new investments.[23]

Development strategies aim to enhance private sector involvement in the manufacturing sector

Since Myanmar abandoned its long-standing socialist policy in 1988, the government has implemented several development strategies to foster the manufacturing sector in Myanmar. These strategies can be grouped into three key areas.

Figure 2.11. **Power and extractive industries dominated FDI before reform, while manufacturing was second**



Source: Compiled by the author based on the data of the Directorate for Investment and Company Administration (DICA) (2014).

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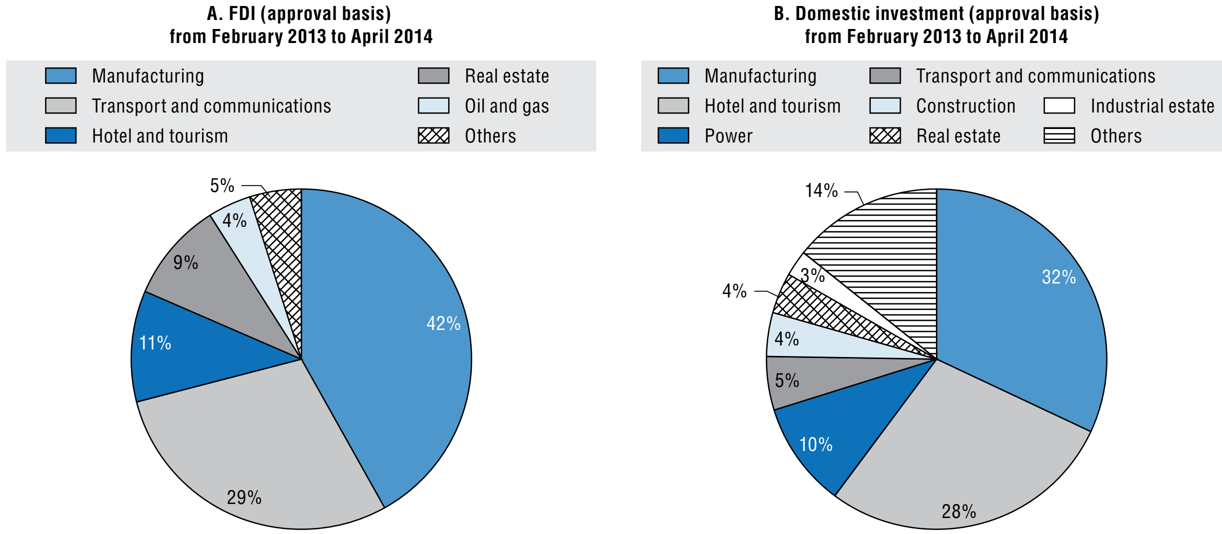
Figure 2.12. **Both domestic investment and FDI have shifted toward the manufacturing sector**



Source: Compiled by the author based on the data of DICA (2014).

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First, development strategies were implemented to foster the private sector in the manufacturing sector. While the government encouraged the private sector's involvement in the development of the sector by opening up markets where SOEs dominated before, they also encouraged SOEs to collaborate with domestic and foreign investors through joint ventures and partnerships (Kubo, 2013). This strategy aimed to enhance SOEs' productivity through knowledge and technology transfer from the private sector and to provide room for the private manufacturers to flourish. It also developed and enforced both foreign and domestic investment laws to provide a level playing field for business investors.

Second, the government streamlined organisations for working with the manufacturers. The Ministry of Industry and the Ministry of Co-operatives directly worked with manufacturers, dividing their responsibilities based on the size and ownership of the manufacturing entities. The Ministry of Industry supervises manufacturing SOEs, many of which have been privatised or are currently undergoing the privatisation process. It also works with sub-national governments at the state and regional levels to develop industrial zones in areas where a number of manufacturing SMEs have been relocated since the early 1990s (Abe and Dutta, 2014). The Ministry has also provided human resource training to SME manufactures for their skill development through nation-wide industrial training centres.[24] In 2012, the Ministry also established the SME Development Centre in Yangon, which provides business development services and credit guarantee for bank financing as well as training for supply-side capacity building for effective cluster and value chain development. The Ministry of Co-operatives oversees micro-sized manufacturers and manufacturing co-operatives through two competing departments, providing business development services and capacity-building training. It also works on microfinancing schemes in collaboration with the Ministry of Finance[25] (MOF) and international development agencies such as the UNDP. Both ministries have developed regulatory and policy frameworks for the development of manufacturers in Myanmar.

Other economic ministries are also involved in the development of the manufacturing sector. The Ministry of National Planning and Economic Development (MNPED) works for business registries through single service offices and investment promotion, including its secretariat services to the Myanmar Investment Commission. The Ministry is also responsible for the development of select special economic zones (SEZs) in order to promote FDI inflows and exports. While its main responsibility is trade promotion and facilitation for manufactured goods, the Ministry of Commerce supervises various business associations, including their apex body, the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI), which provides business development services and capacity-building training to member SME manufacturers.

In addition, the government has set up 19 technical committees for 19 product categories to advance standardisation of industry products (Annex 2.A2). Such standards and certificates need to be competitive enough for securing the access to foreign markets and in line with international or regional standards such as the ASEAN standards. They also require proper inspection systems and procedures to assess the quality of the manufacturing sector (Aung Min and Kudo, 2012). Third, the government has established several key legal and regulatory frameworks to govern the growth of the manufacturing sector in Myanmar. The development of the major legal and regulatory frameworks in the post-socialist era relevant to the manufacturing sector can be broadly divided into two phases: the first phase from 1988 to 1996; and the second phase from 2011 to the present (Table 2.2).

During the first phase of reforms, from 1988 to 1996, the government focused on the development of local manufacturing SMEs, which were at the nascent stage after the three decades under the socialist regime. It also encouraged domestic investment in the sector while opening up the economy and privatising a number of SOEs. During this phase, the government also tried to achieve balanced industrial development among the major provinces of Myanmar by establishing a number of industrial zones at the regional level, except in those areas affected by security uncertainties.

The first phase of reforms achieved only limited economic growth initially and, from 1997 to 2010, the reform process stagnated due to various reasons such as the still-dominant roles of SOEs in business, negative sentiment towards foreign investments, international economic sanctions and on-going civil wars with ethnic minorities. During this period, the economy was sustained mainly by its rich natural resources such as minerals, natural gas and hydroelectricity and lucrative border trade (CSO, 2013).

Table 2.2. **The reform process began its second phase in 2011, in the post-socialist era**

Phases	Laws and regulations	Year enacted	Responsible authorities
First phase (1988 to 1996)	Foreign Investment Law	1988	DICA, MNPED
	State-owned Economic Enterprises Law	1989	DICA, MNPED
	Private Industrial Enterprise Law	1990	Ministry of Industry
	Promotion of Cottage Industries Law	1991	Ministry of Co-operatives
	Co-operative Society Law	1992	Ministry of Co-operatives
	Myanmar Citizens Investment Law	1994	DICA, MNPED
Second phase (2011 to the present)	Law Amending the Promotion of Cottage Industries Law	2011	Ministry of Co-operatives
	SEZ Law and Dawei SEZ Law	2011	MNPED
	New Foreign Investment Law	2012	DICA, MNPED
	Revised SEZ Law	2013	MNPED
	New Myanmar Citizens Investment law	2013	DICA, MNPED
	SME Law	Expected in 2014	Ministry of Industry

Source: Compiled by the author from various sources.

In contrast to the first phase, the second and current phase of reforms, initiated in 2011, has promoted export- and FDI-led development strategies while trying to create a positive business environment for investors, mainly through the development of SEZs and the enforcement of new business laws. The Ministry of Industry has submitted a new SME Law to the Parliament, which is expected to be endorsed by 2014. Both the Private Industrial Enterprises Law and the Myanmar Company Act[26] are similarly expected to be revised within a couple of years, while other business-related laws, such as legislation on intellectual property and on arbitration, have also been drafted in co-operation with international donor agencies (Myanmar Legal Services, 2014). Additionally, the present phase also emphasises the development of necessary infrastructure and utilities, such as road upgrading, power plant building and the opening of deep sea ports, particularly infrastructure to support cross-border production networks. It is apparent that Myanmar aims to follow the success of its neighbouring countries through export – and FDI – driven development, and such a direction has already borne some fruit, as reviewed in the previous sections.

Lastly, the Government of Myanmar has built industrial zones and special economic zones as two primary strategies for the manufacturing sector's development. The two are related but different concepts but, as discussed below, both types of zones enhance production agglomeration and foster industrial clusters.[27]

Industrial zones and special economic zones have been developed to promote manufacturing

Industrial zones that incorporate various relocated manufacturers enhance production agglomeration and help to develop industrial clusters, allowing participating firms to achieve internal and external cost reduction. They can foster synergies that offer important advantages to manufacturers by helping them to achieve dynamic competitiveness collectively, rather than as individual firms, through, for example, joint actions for procurement, marketing and training. Specific benefits include knowledge spillover, labour market pooling, input sharing and lower product shipping costs (Rosenthal and Strange, 2001). In summary, industrial zones can provide benefits from: a) collective efficiency gains due to the availability of a specialised labour force and specialised machinery and input suppliers; b) the collective pull of traders and buyers; and c) a positive business atmosphere where information and knowledge are easily shared (Bellandi, 2002).

While sharing a number of the characteristics of industrial zones, SEZs, also known as free trade zones (FTZs) or export processing zones (EPZs), aim to attract FDI by facilitating multinationals' exporting operations as well as by enhancing their access to the domestic market. As a result, they allow host governments to develop and diversify exports while maintaining protective barriers for domestic industries, thereby creating employment and incorporating new policies, namely export and FDI-led development strategies (UNESCAP, 2012). In a number of developing countries (e.g. China and India), SEZs have succeeded in promoting FDI inflows and in enhancing the export business. The principles incorporated in the basic design of SEZs include: a) a geographically delimited area (usually physically secured); b) a single administration; c) eligibility for benefits based upon physical location within the zone and a separate customs area (duty-free benefits); d) streamlined procedures often under separate special laws and regulations; and e) incentives from government investment promotion agencies (FIAS, 2008; UNESCAP, 2012).

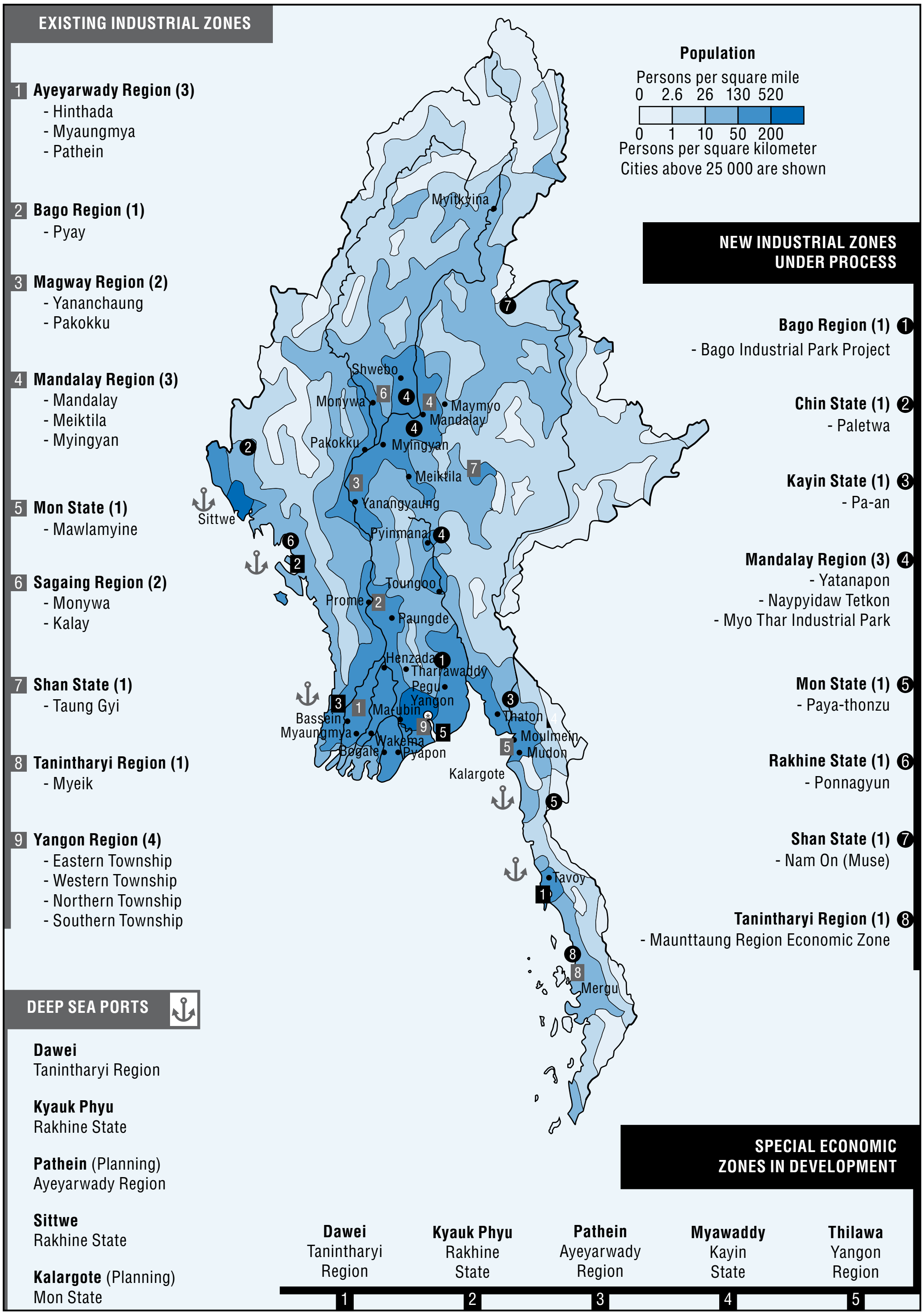
Before 1988, manufacturers in Myanmar, mostly SMEs, were spread all over the country. However, since 1990 the State Law and Order Restoration Council (SLORC) has relocated SMEs to newly established industrial zones around towns and cities in order to facilitate effective industry agglomeration (Thein, 2012). At present, there are 18 industrial zones, with another 10 in the pipeline. Major SMEs and large manufacturers are located in the industrial zones, while micro-sized manufacturers or "cottage industries" are located outside of the industrial zones. In order to further spur industrial development and attract foreign investment, three SEZs are being developed: a) Dawei SEZ, located in Tanintharyi Region; b) Kyauk Phyu SEZ, located in Rakhine State; and c) Thilawa SEZ, located 20 km south of Yangon. Two more SEZs are planned to be built in Pathein, Ayeyarwady Region, and Myawaddy, Kayin State (Figure 2.13).

Regional industrial zones serving the SMEs are faced with constraints

The main objectives of industrial zones in Myanmar are to foster private manufacturers and to attain equitable development among states and regions in encouraging domestic investments. Since 1990, 18 regional industrial zones (and 34 district level industrial zones) have been developed under the supervision of the state/provincial governments (JETRO, 2013) (Table 2.3). Daily supervision is undertaken by the Industrial Zone Supervision Committees, which are composed of investors, and by the Industrial Zone Management Committees, which comprise related public agencies such as the Ministry of Industry and local governments. The Department of Human Settlements and Housing Development (DHSHD) of the Ministry of Construction developed the majority of the industrial zones in Yangon. In other regions, state/regional/district authorities developed and now supervise the industrial zones. In 1996, the first foreign joint venture developed an industrial zone meeting international standards (Mingaladon) in Yangon for foreign investments. Since 2000, domestic private investors have been developing industrial zones,[28] and all currently planned new industrial zones will be developed by the private sector. Firms in industrial zones can operate with a land-leasing agreement with a management agency, and in some cases firms can purchase land in industrial zones (JETRO, 2013).

Since its initial stage in the early 1990s, the development of the industrial zones has aimed to serve local markets at the regional or district levels, and no serious consideration has been given to attracting FDI or to exporting. This has resulted in several constraints impeding the growth of the manufacturing sector. First, it is apparent from the selection of locations of the industrial zones that the majority of the existing ones were developed around major cities that had no severe security issues at the time of their development. This often resulted in the relocation of existing SME manufacturers from urban areas to the neighbouring industrial zones. The majority of industrial zones have no international level facilities, such as waste-water treatment plants, and no worker safety standards, making them vulnerable to pollution and labour issues. Second, there is no working relationship with the Myanmar Investment Commission; thus, neither one-stop services nor clear investment procedures are available to investors (JETRO, 2013). Third, decentralisation of management and supervision with no quality standards and guidelines has resulted in different levels of services, infrastructure and facilities among the industrial zones. Indeed, recently the biggest problem at the industrial zones has been the significant increase of land prices and office rents as a result of the negative impact of the ongoing economic reforms. Most of the individual industrial zones have diverse

Figure 2.13. **The government has developed regional industrial zones and special economic zones as the main development strategy for the manufacturing sector**



Source: Compiled by the author based on DICA (2013), *Myanmar Investment Guide*, Directorate of Investment and Company Administration, Ministry of National Planning and Economic Development, Nay Pyi Taw, Myanmar; MMRD (2013), *Mandalay Construction Directory 2013-2014*, Myanmar Marketing Research and Development, Yangon, pp. 22-23.

Table 2.3. **Industrial zones serve SME manufacturers**

No.	State/Region	Industrial zone	Year of opening	No. of companies operated	Total area (hectare)	Workers per firm (2009-10)
1	Yangon	North (12 zones)	1990	1 093	3 634.7	38.6
2		South (2 zones)	1996	3	350.2	
3		East (10 zones)	1992	3 204	1 295.1	
4		West	Unknown	659	Unknown	
5	Mandalay	Mandalay	1990	1 379	501.5	9.7
6		Myingyan	1995	265	66.2	
7		Meiktila	1997	290	156.0	
8	Sagaing	Monywa	1999	632	147.8	6.9
9		Kalay	2004	76	67.7	
10	Magway	Yananchaung	1998	90	69.5	5.0
11		Pakokku	1998	274	153.3	
12	Bago	Pyay	1992	143	48.9	6.5
13	Ayeyarwady	Pathein	1993	51	43.0	6.9
14		Myaungmya	1995	9	23.5	
15		Hinthada	1995	9	34.9	
16	Shan	Taung Gyi (Ayethaya)	1995	932	365.0	4.3
17	Mon	Mawlamyine	1995	83	69.2	5.2
18	Tanintharyi	Myeik	1999	8	128.9	131.6
	Total			9 200	7 155.4	21.5

Source: Compiled by the author based on the data of JETRO (2013), *Data Collection of Industrial Zones in Myanmar*, JETRO Yangon Office, February; and CSO (2014), *Industrial Zone Survey, 1 January 2014*, Central Statistical Organisation, Ministry of National Planning and Economic Development, Yangon.

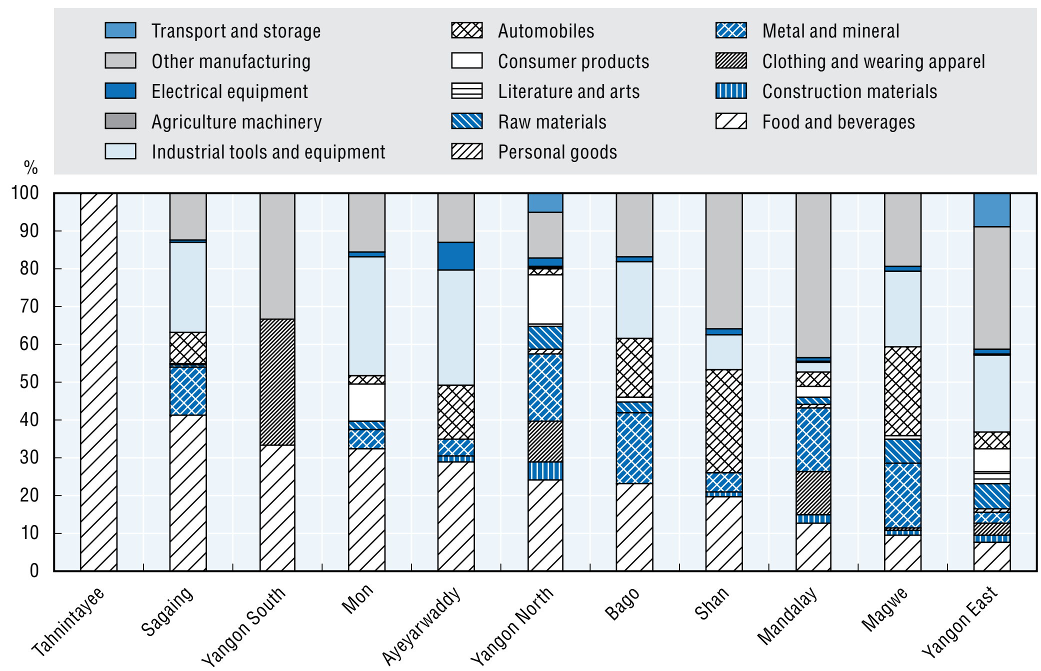
industrial structures, although the food and beverages sub-sector is typically the largest (Figure 2.14).[29]

Among the 18 regional industrial zones, the Mingaladon Industrial Zone, which encompasses the Mingaladon Pyinmabin and Yangon Industrial Zone in the North Township of Yangon, is the one and only industrial zone that has been developed for FDI attraction with infrastructure that meets international industrial standards for manufacturing. The Zone was initially developed by a state-foreign joint venture between DHSHD and the Mitsui & Co. Ltd. of Japan in 1996. It is at present managed by DHSHD and Kepventure Pte. Ltd. of Singapore (with investment by Zaykabar Co., Ltd., a Myanmar conglomerate in the construction and telecommunications sectors) (JETRO, 2013).

Mingaladon hosts large manufacturers with more than 500 workers per firm, which marks a clear distinction from other industrial zones in Yangon and other regions, whose clients are predominantly SME manufacturers. Its sales and profits are also the highest among those of all the industrial zones (Figure 2.15). At present, the Mingaladon Industrial Zone is fully occupied and there is no room to host new manufacturers.[30] Apparel, construction materials, and food and beverage producers comprise 60% of the firms in Mingaladon. Other smaller sub-sectors include industrial raw materials, consumer goods, automobiles and agricultural machinery. It is interesting to note that, despite the apparent success of the Mingaladon Zone, no other similarly high-standard industrial zones were subsequently developed until the recent announcement of development plans for several new high-standard zones in Myanmar, such as Dawei, Kyauk Phyu and Thilawa.[31]

Figure 2.14. **Industrial zones host a variety of industries but food and beverages as the majority**

Distribution of industrial sectors in industrial zones by the number of firms, 2013



Source: Compiled by the author based on the data of JETRO (2013), *Data Collection of Industrial Zones in Myanmar*, JETRO Yangon Office, February.

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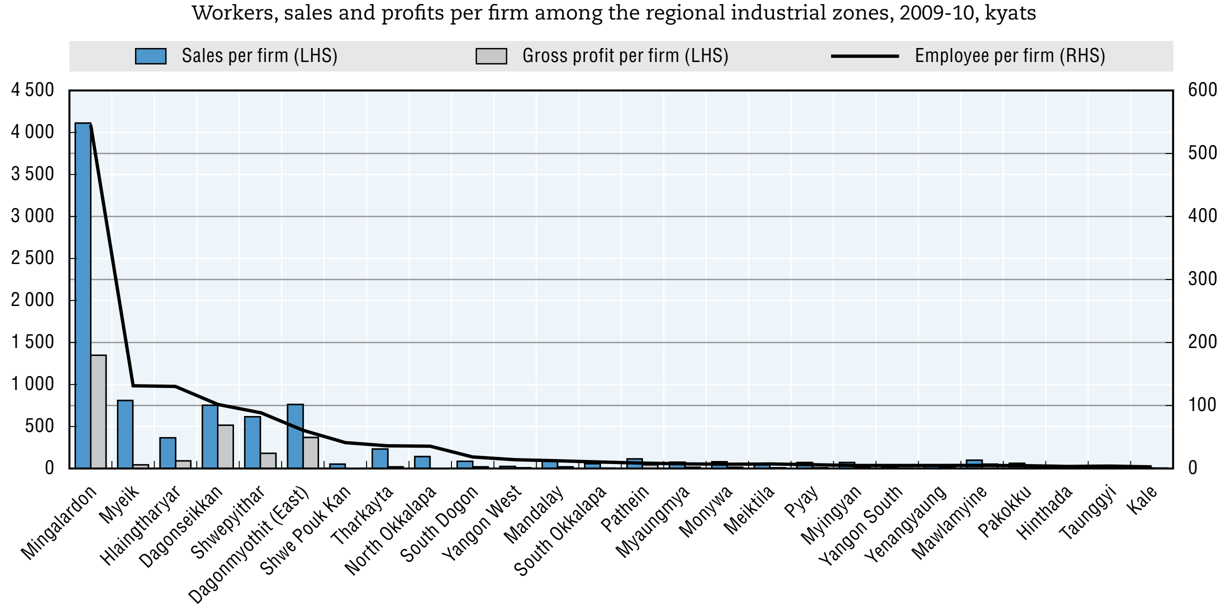
Figure 2.15. **Mingaladon has been the most successful industrial zone in Myanmar so far**

Workers, sales and profits per firm among the regional industrial zones, 2009-10, kyats



Source: Compiled by the author based on the data from CSO (2014), *Industrial Zone Survey, 1 January 2014*, Central Statistical Organisation, Ministry of National Planning and Economic Development, Yangon.

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New Industrial Zones and Special Economic Zones are being developed

Ten new industrial zones are under development or planned in Bago, Chin, Kayin, Mandalay, Mon, Rakhine, Shan and Tanintharyi. Their objective is basically identical to that of the existing industrial zones but they are also intended to promote the government's objective of achieving balanced geographical development of Myanmar, including the development of some remote areas where regional agreements or ceasefire agreements between the central government and rural military groups permit the establishment of such zones (Kudo, 2007). Private developers have been invited to develop those new industrial zones.[32] However, there is no plan to build these industrial zones up to international standards as in Mingaladon.

The government has so far planned to develop five SEZs, adopting an export- and FDI-led development strategy, in Dawei, Kyauk Phyu, Myawaddy, Pathein and Thilawa. To meet the government's objective to foster manufacturing and export/import operations, these SEZs are to be built at logistical and industrial hubs to facilitate access to markets as well as resources. Dawei SEZ, Kyauk Phyu SEZ and Pathein SEZ are to be equipped with international deep sea ports. Myawaddy SEZ has an inland location on the Myanmar-Thailand border along the East-West Economic Corridor (Box 2.12), which facilitates cross-border trade and production, particularly for labour-intensive industries such as apparel. Thilawa does not have a deep sea port but is located just south of Yangon, the commercial and industrial centre of Myanmar.

The development of the SEZs has been led by the private sector, mainly by foreign investors. Thai investors have been active at the Dawei, Myawaddy and Pathein SEZs while Japan and China have committed to support the development of SEZs in Thilawa and Kyauk Phyu, respectively. A number of Hong Kong, China-based apparel manufacturers have announced plans to relocate some of their factories from China to the Thilawa SEZ. Finally, Indian, Indonesian and Singaporean investors are also interested in the Pathein SEZ.[33]

Lack of a deep sea port for Yangon is an obstacle to manufacturing development[34]

One of the bottlenecks to manufacturing development in Myanmar is the lack of a deep sea port to serve as a key logistical gateway of Yangon, the commercial and industrial centre of Myanmar.[35] A deep sea port is particularly crucial for the manufacturing sector because it is needed to facilitate the movement of goods for both sales and supply for export and import operations. Deep sea ports, because of the depth of their water, have the capability to accommodate large and heavily loaded ships. It is commonly observed throughout the world that the manufacturing sector develops best when located adjacent to a large deep sea port. Unfortunately, Yangon has no deep sea port, although it is equipped with two river ports, Yangon port and Thilawa port.

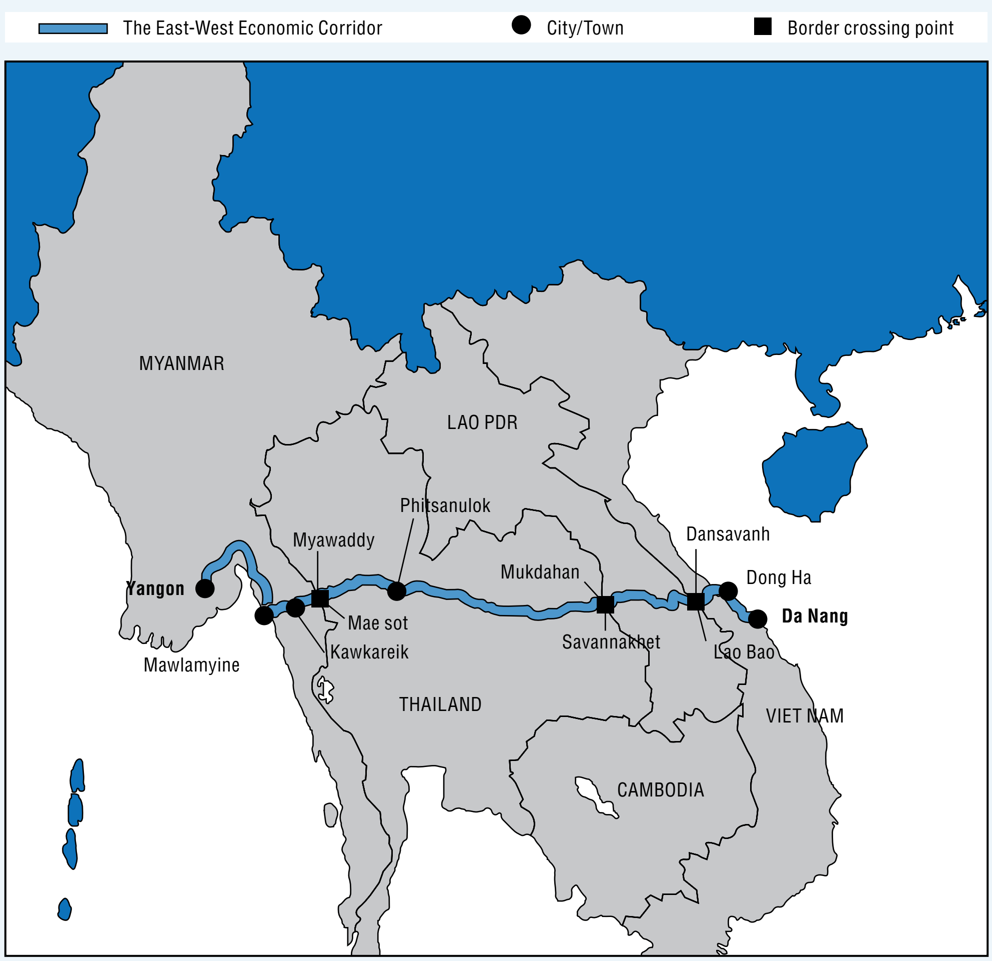
Two existing deep sea ports, Sittwe and Kyauk Phyu,[36] are along the northwest coastline of Myanmar; however, their locations are far from the central region of Myanmar (and the East-West Economic Corridor). Further investment is required to upgrade their facilities and capacities. Their roles in manufacturing are likely to be limited to serving as regional logistics hubs for specific development purposes (e.g. gateways to and investment destinations for South Asia and China). Plans have been made to develop another SEZ in Dawei that will include a deep sea port. This project has been strongly supported by Thailand, which aims to develop large-scale utility infrastructure and diversified industrial clusters, including heavy industries. However, the Dawei port is located on the southern coastline, approximately 700 km from Yangon and 300 km from Mawlamyine, the western

Box 2.12. **The East-West Economic Corridor**

The East-West Economic Corridor crosses the central regions of four countries, Viet Nam, the Lao PDR, Thailand and Myanmar, and links the South China Sea and the Andaman Sea by roads of international standards. It starts from the Da Nang deep sea port in Viet Nam, and runs through Savannakhet, the Lao PDR, and Mukdahan, Phitsuanulok and Mae Sot in Thailand, to Myawaddy and Moulmein, Myanmar before finally reaching Yangon (Figure 2.16).

The development of the Corridor has been led by the Asian Development Bank and financially supported by Japan, Thailand and the World Bank since the middle of the 1990s (ADB, 2010). The development of the East-West Economic Corridor within the Myanmar territory was delayed owing to international sanctions but recently resumed after the start of the present political and economic reforms of Myanmar. Specific actions include the long-awaited construction of a new road link between Myawaddy and Kawkareik, which will replace mountainous one-lane roads along Route 85, and has been supported by Thailand (MEMI, 2007). The Corridor is expected to enhance the movement of goods and services among the four countries, fostering, in particular, the cross-border production networks of the automobile, electronics and apparel sectors.

Figure 2.16. **The East-West Economic Corridor**



Source: Elaborated by the author from Asian Development Bank, Performance Evaluation Report, "Lao People's Democratic Republic and Socialist Republic of Viet Nam: Greater Mekong Sub-region: East–West Corridor Project", December 2008 [*www.adb.org/sites/default/files/29271-LAO-PPE.pdf*].

hub of the East-West Economic Corridor. Although the Dawei port has a geographic advantage with regard to market access to Thailand, Myanmar's main trade partner, it is far from the traditional industrial clusters of Myanmar.

In addition to these three development plans for deep sea ports, two more projects to develop deep sea ports close to Yangon, in Pathein and on Kalargote Island, are planned (see Figure 2.13 for their locations). The plan for Pathein has been recently proposed by Indian, Singaporean and Thai investors, and includes in addition to a new deep sea port, a couple of SEZs around Pathein, and expressway and railway links between Yangon and Pathein. Pathein is located 150 km west of Yangon and its deep sea port is planned for either Ngayoke Bay or Ngwesaung-Chaung Thar at the western coastline of the Ayeyarwady region, another 50 km west from Pathein (Consult Myanmar, 2013). This project, once completed, could extend the East-West Corridor to Pathein.

Kalargote Island, located between Mawlamyine and Yay on the Tanintharyi coast, has been periodically considered as a potential deep sea port location by various agencies for the past three decades (cf., MEMI, 2007). The most recent proposal was made by a Thai investor in 2013 to develop the island as a deep sea port to serve the future industrial clusters along the East-West Economic Corridor and nearby states (Irrawaddy, 2013). Under the plan, the island will not only become a gateway for import and export operations at the existing and planned industrial zones in Kayin State and Mon Sate, but will also facilitate Thai-Myanmar border trade and production through the Three Pagoda border pass and the Myawaddy SEZ. The Kalargote Island project has clear advantages over the other port development projects, including proximity to Yangon (the commercial and industrial centre of Myanmar), the East-West Economic Corridor, the industrial zones in Kayin and Mon States and Thailand.[37]

The business climate presents challenges for the manufacturing sector

While the Myanmar manufacturing sector has the potential to achieve quick development, its realisation is highly dependent on the adoption of a coherent and appropriate combination of policy measures for the sector. However, a lack of information on the conditions and environment in which manufacturers operate has been a major obstacle in formulating effective policy recommendations (World Bank, 2014c).

A *Survey of Businesses* in Myanmar 2014 was therefore conducted to fill this gap and to assess the status of the business community, including both domestic and foreign manufacturers. The OECD and UNESCAP carried out the business survey jointly with the UMFCCI (Abe and Molnar, 2014). This comprehensive nation-wide business survey included 1 018 manufacturing firms from all states and regions and of various firm sizes, manufacturing activities, and nationalities (Table 2.A3.1). Firms surveyed represent almost all manufacturing activities which are categorised by the United Nations' International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4, with over 40% of the surveyed firms belonging to the food products and beverages sector.[38, 39] Sampled manufacturers have a range of 1 to nearly 3 000 employees with an average of 70 employees. Over 40% of the sample firms are micro enterprises with fewer than 10 employees. More than one-third of the firms are small enterprises with 10 to 49 employees, and approximately 14 are medium sized with 50-249 employees. Nearly 7% of firms surveyed are large enterprises with 250 or more employees (see Annex 2.A3 for details).[40] While fewer in number, the large enterprises make the most significant contribution to employment; 68% of total employment among respondents is in firms with 250 or more employees. Among the sampled manufacturers, nearly 11% (typically smaller firms) operate informally,[41] and 5%

are foreign firms, mostly multinationals. Half of surveyed firms have been in business for over 14 years, and less than one-fifth are younger than five years. One-fifth and two-fifths of the firms conduct exporting and importing business, respectively. Finally, 27% of the respondents are female and 73% are male.

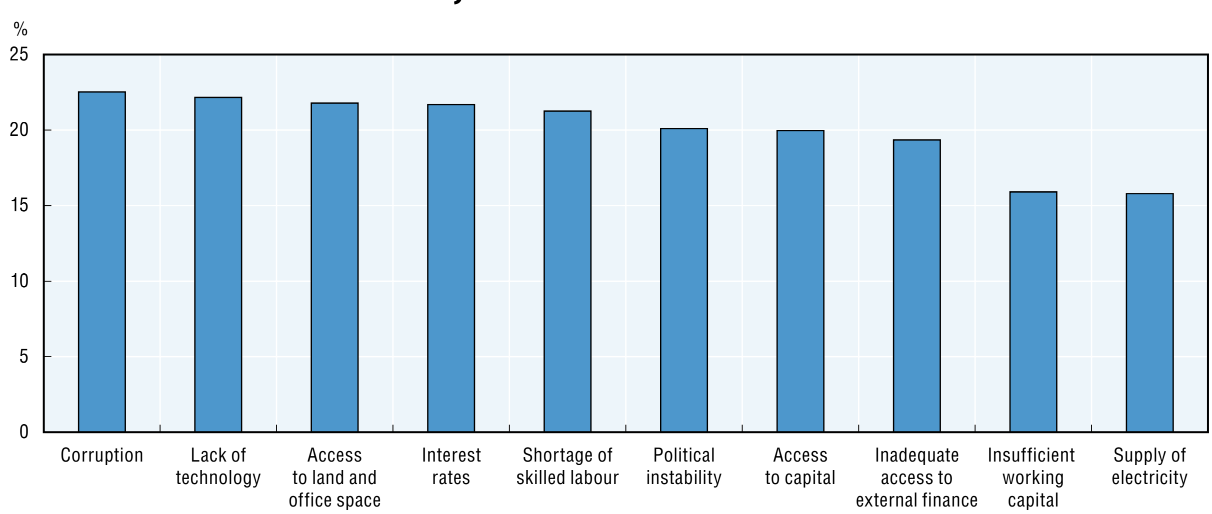
Corruption, lack of technology and access to land and office space are major obstacles

Among the 34 choices of major obstacles to the current operations of surveyed manufacturers (ranging from infrastructure issues to human and institutional capital), corruption was identified most frequently as a very severe obstacle (Figure 2.17). Other serious obstacles to firms' current operations are lack of technology (see the next section) and access to land and office space. The price hikes of land and offices (and housing in general) – a side effect of the present reform process of Myanmar – have emerged as a severe issue for both local and foreign businesses recently (JETRO, 2013). Interest rates and a lack of skilled labour also appear to constitute important barriers to operations, as does political instability. Next in importance are financing problems, notably access to external financing and inadequate working capital. Electricity supply, which is often cited as a bottleneck to business activity in developing countries (and not just to manufacturing), surprisingly ranks below corruption, technology, skills and financing issues. Some aspects of institutional capital, including the protection of intellectual property rights, taxation, business and labour regulations, and administrative procedures all appear at the very bottom of the ranking of the major obstacles to business operations (see the detailed ranking in Figure 2.A3.1).

Further statistical explanatory factor analysis and theoretical considerations indicate that the obstacles for manufacturing can be broadly categorised into six groups in order of their statistical significance (importance):

- Corruption.
- Access to financing.

Figure 2.17. **Corruption, lack of technology and access to land and office space are major obstacles to manufacturers**



Source: OECD, UMFCCI and UNESCAP (2014), *Myanmar Business Survey* (database).

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- Access to markets, labour, supplies and technologies.
- Regulations and taxation.
- Infrastructure and utilities.
- Conditions for international business.

Corruption is the most crucial issue while international business is relatively least critical for manufacturers in Myanmar at present. These results provide useful insights for policy makers in terms of where to prioritise their interventions to enhance the business climate for the manufacturers most effectively.

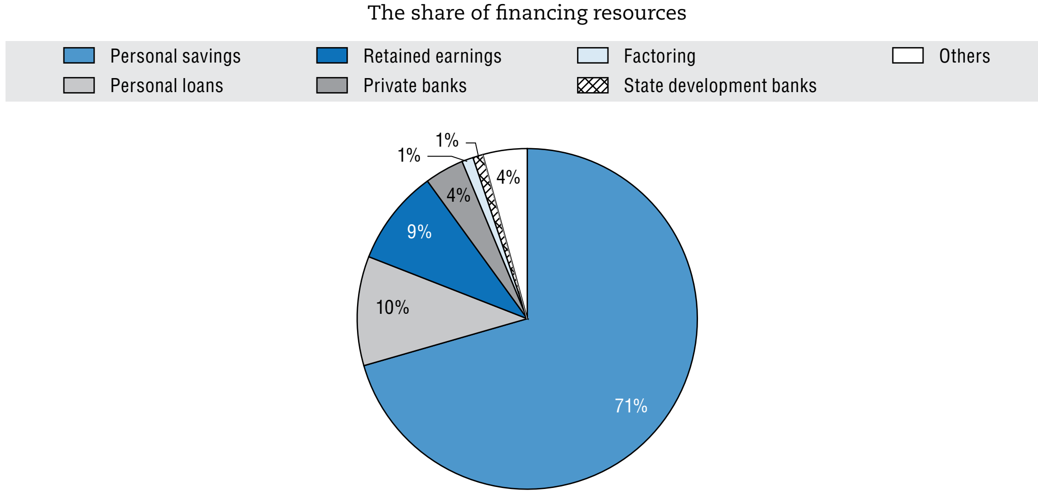
Corruption can take various forms and be present in various economic transactions and interactions with the public authorities. One question asked by the survey was whether under-the-table payments were required to register a firm or to get a business licence or a permit. While 38.5% of respondents found it not necessary to pay above the officially required fees, over half calculated the amount of extra payments for registration, licences or permits to be MMK 500 000 (Myanmar kyats) or less (equivalent to slightly above USD 500). A few respondents reported that the required extra payments exceeded MMK 5 000 000 (over USD 5 000).

Access to formal financing is limited. Over half of firms need more financing and roughly a half have external debts. On average, the respondents mobilise more than 80% of their financial resources from informal financing, namely personal savings and loans (Figure 2.18). Approximately 10% of financial needs are supported by internal financing (i.e., retained earnings). The share of institutional loans provided by both commercial banks and state development banks is low at 5%. Close to 1% of financing is obtained through asset-based financing (i.e., factoring).[42] As expected, sophisticated financial instruments such as equity financing (e.g. corporate stocks), corporate bonds and leasing are uncommon in Myanmar. Indeed, only a few firms are frequent customers of banks, with one-quarter not using banking services at all, although 52% have a current account.

Slightly over half of the respondents think that they do not have adequate financing in general and only one-half have access to loans (although over one-third of the respondents say they do not need external loans). Nearly two-thirds of the manufacturers that borrow

Figure 2.18. **Manufacturers rely mainly on personal sources for financing**

The share of financing resources



Source: OECD, UMFCCI and UNESCAP (2014), *Myanmar Business Survey* (database).

StatLink http://dx.doi.org/10.1787/888933134293

do so to finance expansion. Firms tend to borrow more to meet working capital needs rather than to invest, which reflects the scarcity of long-term lending in Myanmar. The majority of the firms that borrow obtain loans worth less than USD 5 000 and there are only a handful of firms that borrow over USD 5 million. The median interest rate at which firms borrow is 13%, which is equal to the regulated bank lending rate; 3% of respondents pay a 2% interest rate on their loan, while, at the other extreme, 5% of firms pay rates at or above 30%, which is the regulated lending rate by micro-finance institutions or credit co-operatives.

The biggest obstructions to accessing institutional loans in Myanmar are unfavourable borrowing conditions (such as stringent collateral requirements), complicated application procedures, the small size of loans and high interest rates. The lack of manufacturers' familiarity and needs has further impeded access to external financing. Interestingly, the quality of banking services is found to be less crucial to having access to formal loans.

Access to markets, skilled labour, supplies and technologies are also seen as important. Innovation is considered important but firms spend little on it. Over half of respondents consider innovation to be critical to their business, with automobile, chemical, electronics and ICT sub-sectors most likely to hold this view. Over 40% of firms have introduced new products; however, process innovation has been less common. Almost three-quarters of firms that adopted innovative products or processes did so to increase revenue and about half to increase their responsiveness to customer needs or to improve the quality of their goods and services. Less than a quarter of firms implemented innovations to increase their competitive positions, to develop a new business or to gain market share in foreign markets. Similarly, environmental impacts, corporate social responsibility or the improvement of ICT capabilities featured much less as motivations for innovating. Surprisingly, investment in new products to enter export markets is also weak.

Despite the importance manufacturers attach to innovation, 56% of them do not spend at all on this activity. This is likely to be related to the small size of most firms, which are unable to realise economies of scale and for which fixed costs of innovation may be prohibitive. The top 2% of manufacturers in the sample, in contrast, spend the equivalent of USD 100 000 or more on R&D. Finally, nearly 40% of respondents protect their intellectual properties mainly through established trademarks, patent applications and design registrations.

Skill shortages are a severe barrier to manufacturing. Nearly 60% of all respondents find skill shortages a major problem. Among the sub-sectors, those firms in electrical machinery manufacturing, motor vehicle manufacturing, petroleum product manufacturing and chemical product manufacturing find it more difficult than the average to recruit skilled workers.

Computer and IT-related jobs are facing the most acute shortage of workers at the skilled and unskilled worker level as well as in top management. Jobs requiring other technical skills or analytical thinking, creativity or initiative are also hard to fill. Across job categories, professionals and skilled workers are in greatest shortage but firms would also like to see more interns in most job categories. At the other extreme, there is a relative abundance of workers with competence in foreign languages, who have good communications skills or experience in sales and customer service.

Overall, little investment is made in workforce development as over one-half of the respondents allocate no funding to training of their workers. The majority of the respondents only provide in-house training to deal with skill shortages, spending a minimal USD 200 per employee per year.

Policy suggestions for addressing challenges in manufacturing

The manufacturing sector faces various issues such as corruption, lack of technology, inadequate and expensive financing, lack of skilled labour, inflation of land and rent prices, and inadequate supplies, all of which are most likely to constrain growth in the sector. In addition, particularly SMEs face a regulatory burden that often overstretches their capacity. This calls for more effective government interventions to enhance the competitiveness of the manufacturing sector in Myanmar.

Policies to develop manufacturing in Myanmar need to be based on: 1) the major impediments to manufacturing development; 2) the importance of SMEs in the manufacturing sector; and 3) stakeholders' involvement in policy making and implementation. The following policies are recommended for consideration.

An SME development fund could be a tool to enhance access to finance for SMEs. While continued emphasis should be placed on the development and strengthening of the capabilities of the financial system to allocate financial resources (see Chapter 4 for more details on mobilisation and allocation of financial resources), a dedicated SME fund could bridge the financing gap in the meantime. This should be done in co-operation with international development agencies that want to channel funding to manufacturing SMEs (Box 2.13).

Easing the regulatory burden would require creating and enforcing a fair and transparent legal and regulatory regime for manufacturers. For example, a clear contract policy for public (and private) procurements with manufacturers and an e-procurement system would be important to have.

An SME development agency could be tasked with assessing the costs and benefits of specific laws/regulations and eradicating unnecessary roadblocks. To facilitate compliance for SMEs and expand the services offered to them, such an agency could also be tasked with setting up "single-window" SME service centres in each capital of the states and regions of Myanmar. This should be done in co-operation with other relevant ministries (such as the Ministry of Industry, the MNPED, the MoF, the Ministry of Commerce and the Ministry of Co-operatives), financial institutions and business associations (e.g. UMFCCI). These service centres should handle all business registrations, licensing, permits and tax collection in streamlined, simplified and transparent procedures and disseminate regulatory, financial, technical and market information to the manufacturers. They also should establish help desks with their staff members and external experts, such as certified public accountants, attorneys and business consultants, and dispatch those experts for consulting services.

The centres should be upgraded over time to be business development services providers as well as business and technology incubators for the local manufacturing communities, providing financing and tax-related services and comprehensive technical and marketing assistance to both start-ups and existing manufacturers, while providing such services through an SME business support portal website.

To overcome constraints in infrastructure and access to suitable land, a nation-wide strategic plan for the development of SEZs and industrial zones could help overcome constraints in infrastructure and access to suitable land. This should include the selection of strategic locations (e.g. deep sea ports) and objectives (e.g. cross-border production, export gateways); the planning and designing of necessary infrastructure meeting international standards – such as roads, utilities, telecommunications and waste management facilities –

Box 2.13. **Experiences with SME development funds in other Asian countries**

In Asia, some countries (e.g. India, Japan and Malaysia) have developed SME funds, or apex SME banks, and provided various financial services to the SME sector. Their financial services may include: short-term loans; long-term loans; trade finance and export credit; and credit guarantee and insurance schemes (UNESCAP, 2012). SME funds could also oversee policy prescriptions, business development services and training and the flow of credit (and equity) to the SME sector.

The government-led SME funds are required as SMEs are often discriminated against by commercial banks during loan issuance because of the larger transaction costs as well as higher financial risks associated with the rather fragmented and less profitable SMEs. The key success factor of an SME fund is to develop comprehensive risk management skills, improving information transparency (UNESCAP, 2012). Lack of risk management skills and political interference in such a fund's SME lending could contribute to substantial non-performing loan problems.

Typically, such SME funds provide some of the following services: i) assistance to banks and financial institutions, in developing loan programmes for supporting manufacturers; ii) training to both state development banks and commercial banks to build institutional capacity and human resources (for example, risk appraisals, loan modifications and consulting functions), while enhancing understanding of banks' management and staff of manufacturers and their needs; iii) provision of long-term development loans and short-term safety-net loans for manufacturers; iv) setting up of credit guarantee schemes to encourage banks to assist manufacturers; and v) assistance in the establishment of a credit bureau to record manufacturers' credit history for the banking sector's risk evaluation and loan appraisals; vi) periodical reviews of the laws on assets and collateral in co-operation with relevant economic ministries; and vii) the provision of trade finance through the banking sector.

for fostering key industry clusters; the promotion of FDI and domestic private sector investment; and the building of capacities for managing SEZs and industrial zones.

As a first step to overcoming the skills shortage for manufacturing firms, it would be useful to conduct a mapping exercise of available training courses with research and training institutes, such as chambers of commerce and industry, universities, colleges and vocational schools, and disseminate information on available training courses on business and management as well as technology and engineering (see Chapter 3 for a broader discussion on technical and vocational education); upgrade existing industrial training centres in order to develop managerial and technical skills; design and implement a simplified and streamlined institutional framework for the development of science and technology at both the national and the sub-national levels through institutional networking and co-ordination, capacity building and infrastructure development (e.g. science and technology parks); subsidise SME manufacturers, as well as other key stakeholders, for R&D, technology transfer and technology commercialisation through various financial and non-financial measures including special tax schemes; develop the patent office and its portal website; subsidise patent, design and trademark applications made by manufacturers (to reduce the cost of filing such applications domestically and overseas) through the SME service centres; organise information sessions and training courses on innovation and intellectual property systems; organise training courses on ICT applications for business management, productivity improvement and new product/service development; provide

SMEs with grants, subsidies, tax credits and/or low-interest commercial loans for new product development and participation in international trade fairs/exhibitions.

To better understand manufacturers' needs and build a basis for public-private dialogue, it is important to conduct annual manufacturer surveys (including micro manufacturers, manufacturing co-operatives and manufacturing entities in the informal sector), that are an upgrade over the present industrial zone survey conducted by CSO and MOI, and disseminate their results through print media (such as white papers, studies and flyers), information sessions, seminars and the portal website.

Finally, regular consultation mechanisms with manufacturers at both national and sub-national levels could help with co-ordination, the identification of pressing problems and needs for action. These consultation sessions should bring together the private sector, including local business associations and foreign investors. The results of the consultations and related action plans could be published on an annual basis.

Seizing opportunities in the services sector

The services sector will play an important role in Myanmar's transition to a modern economy from one now reliant on agriculture. Growth in the services sectors is likely to outpace that of the economy as a whole in Myanmar, as this sector benefits disproportionately from rising incomes and the resulting demand from wealthier consumers for more personal and social services such as education and health care. Services increasingly contribute to economic development indirectly by improving the quality and efficiency of goods production and directly in high-productivity modern services such as finance, business and ICT.

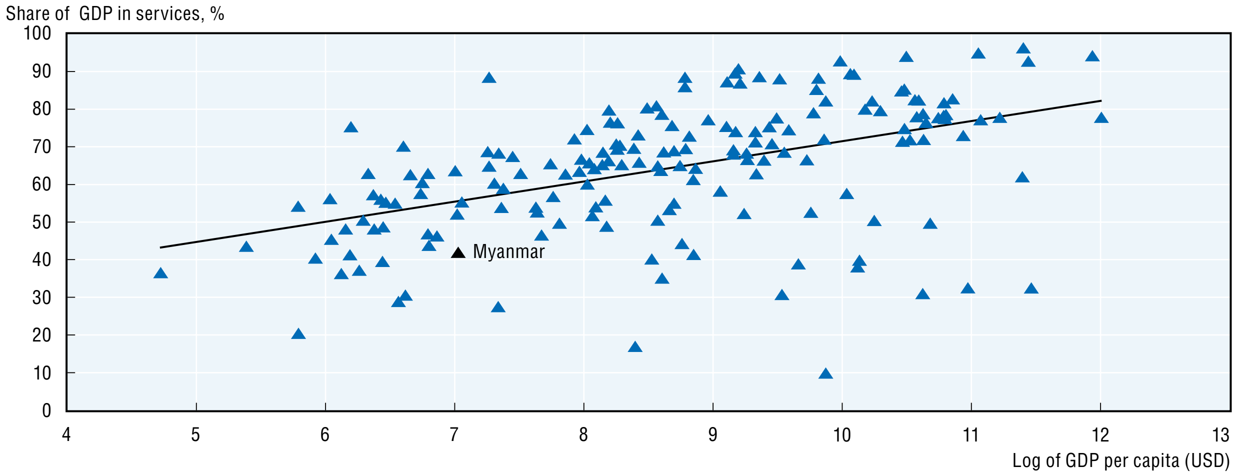
The services sector retains room for considerable expansion in Myanmar for several reasons. First, the share of total GDP of the services sector remains comparatively low. Between 1990 and 2011, the value added of the services sector increased from 34% to 42.8% of GDP, respectively, and from 31% to 39.5% of total employment, respectively. In spite of gradual increases in the contribution of the services sector to Myanmar's economy, its share of total value added remains low in international comparisons, even considering Myanmar's level of development (Figure 2.19).

Second, in low-income countries such as Myanmar, limited domestic demand makes tradeable services particularly important growth drivers. The constraint from domestic demand and a lack of openness to trade have impeded the growth of the services exports. Despite accounting for about 2.6% of overall ASEAN GDP, Myanmar accounts for only 0.26% of the value of the region's services exports. Services exports have been declining in Myanmar as both a per cent of GDP and of world services exports, though both show recent signs of improvement (Figure 2.20). For the most part, services in Myanmar are highly isolated from international competition. Although improvements are being made, notably through the ASEAN Framework Agreement on Services, Myanmar is ranked 121st out of 148 countries on the GATS Commitment Index (World Bank, 2010).

The transport and logistics and tourism sectors have particularly high potential to grow, to create jobs and to produce beneficial spillovers for the rest of the economy (OECD, 2013). Myanmar has a strategic location for growing the transport and logistics sectors, given its location between the two emerging giants of China and India and its access to the Indian Ocean via the Bay of Bengal. In addition, the present reform process and relaxed international sanctions should help to boost the growth in the tourism industry.

Figure 2.19. **Myanmar's services share of GDP is somewhat low for its income level**

Per cent of GDP in services versus the log of GDP in USD per capita, 2012



Note: The services sector includes construction sector, but excludes utilities.

Sources: United Nations Statistics Division (2013), *National Accounts Estimates of Main Aggregates* (database), United Nations, New York, *https://unstats.un.org/unsd/snaama/Introduction.asp*; World Bank (2013), *World Development Indicators* (database), World Bank, Washington, DC.

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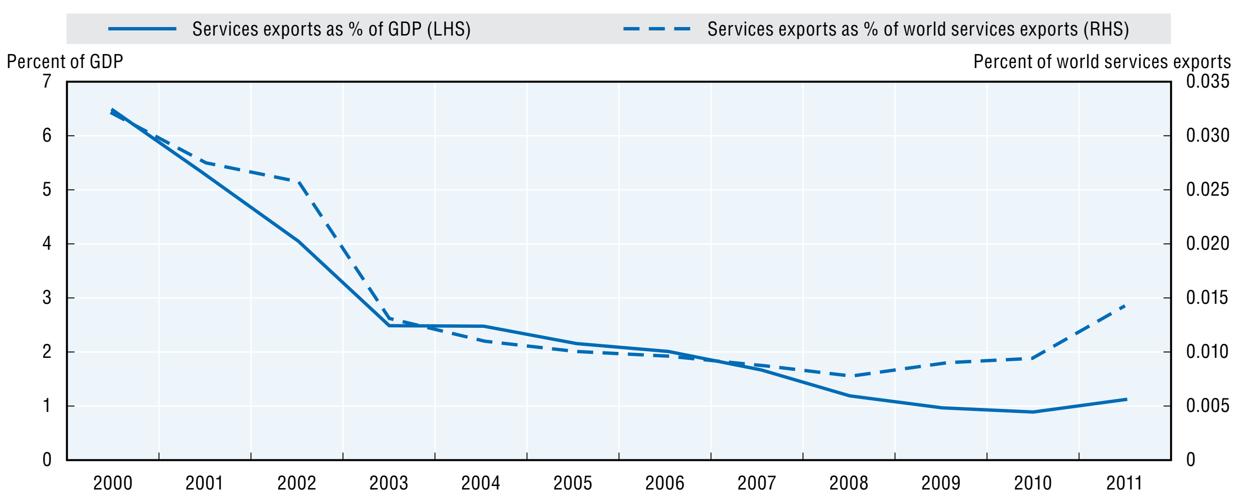
Figure 2.20. **The importance of Myanmar's services exports declined through most of the 2000s**

Services exports as a share of GDP and of world services exports, 2000-11



Source: ITC (2013), *Trade Map – International Trade Statistics* (database), International Trade Centre.

StatLink http://dx.doi.org/10.1787/888933134331

The potential of the transportation and logistics services needs to be harnessed to help support growth in other sectors

An efficient transportation and logistics sector will be required for Myanmar to develop export industries and achieve balanced regional development. Currently, the sector underperforms relative to its peers. Indeed, in the World Bank's Logistical Performance Index (2014), Myanmar's overall score (2.25) was worse than other countries in East Asia and the Pacific on most of the six dimensions considered: customs, infrastructure, international shipments, logistics compliance, tracking and tracing, and timeliness

(World Bank, 2014d). This poor performance raises the costs of internal and international trade, creating significant barriers to the country's growth.

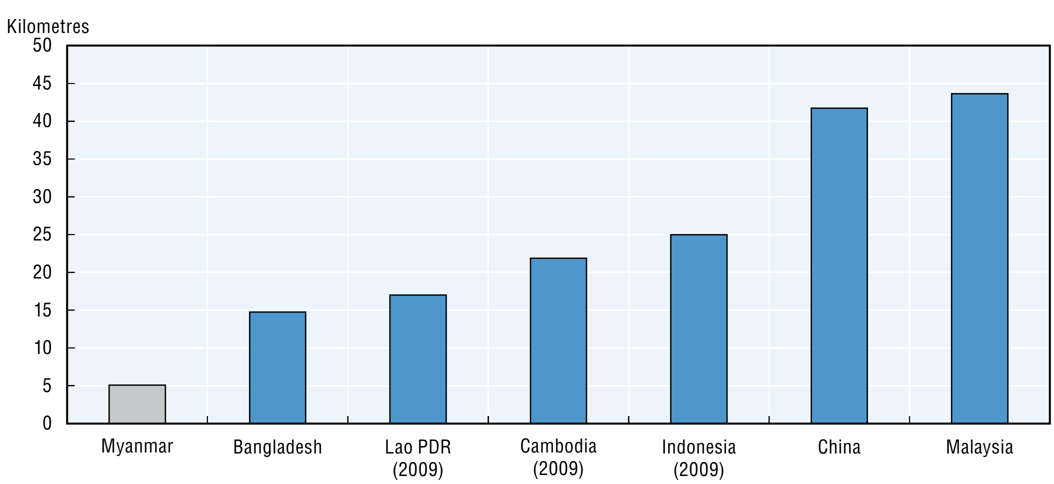
The non-road domestic transport sector is dominated by SOEs, which control Myanmar Railways and the Inland Water Transportation Corporation that depend on captive customers in government and among other SOEs. Their prices are fixed below costs, requiring government financial support to remain in operation. They are further constrained by underinvestment in rolling stock and in supporting rail and port infrastructure. Myanma Airways is also state-owned, but competes against privately owned firms on a more competitive basis and runs a joint venture, Air Mandalay, with a Singapore-based partner.

Road transport is particularly important. Despite increased numbers of trucks on the road (between 1990 and 2011, the number of light trucks rose from 10 355 to 28 068 and the number of heavy trucks increased from 22 188 to 36 820), the efficiency of the road transport sector remains constrained by underdeveloped road networks, outdated vehicles, the scarcity of skilled workers, low competition and insufficient supporting logistics (Figure 2.21). A study of private sector trucking along a major corridor running from Yangon to Kunming in China highlighted the sector's need for increased access to highways, greater investment in roads and bridges, improved business management education and financial sector reforms to improve the availability of insurance (GMS-BF, 2012). Broader logistics services also need to develop alongside transportation, including non-contract-based business practices and improved warehousing facilities to alleviate supply chain inefficiencies. Transport delays and a lack of refrigerated facilities and trucks, for example, prevent agricultural goods from being kept consistently cool or frozen while in transit, shortening shelf-life, reducing value and potentially creating health risks.

Reform and additional public investment are needed. Education and training programmes and the upgrading and expansion of both national and local road networks should be priority areas. In addition, regulatory reform, including liberalisation of SOE-led sectors, can help to improve competition. Harmonisation of regulations, such as per-axle weight restrictions, with neighbouring countries could help to encourage cross-border transportation industries.

Figure 2.21. **Myanmar's road network is much smaller than those of its neighbours**

Kilometres of road per 100 square kilometres of land area in selected countries, 2010



Source: World Bank (2014e), *World Development Indicators* (database), World Bank, *http://data.worldbank.org/data-catalog/world-development-indicators*.

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Unfortunately, a fragmented institutional structure poses an important barrier to the development of comprehensive solutions to the complex challenges facing the transport and logistics sectors. Primary responsibilities lie with the Ministry of Transport, the Ministry of Rail Transport and the Ministry of Construction, but authorities overlap among these and other ministries and local development committees. The development of an efficient transport sector is further complicated by decision making on developing road networks that the Asian Development Bank describes as more motivated by political goals of regional integration than cost-benefit analysis (ADB, 2012).

Myanmar has significant potential in travel and tourism

As a services export sector, tourism can be a significant driver of economic growth, particularly in well-located countries featuring attractive natural, historical and cultural sites, such as Myanmar. Indeed, the performance of the tourism sector has been strong. International visitors to Myanmar grew by 92% in 2013, from 1.06 million visitors in 2012 to 2.04 million visitors in 2013. Looking ahead, international visitors are projected to reach 3 million in 2014; and by 2020 this figure could reach 7 million under the Myanmar Tourism Master Plan 2013-20. Employment in tourism and directly related industries is expected to grow from 293 700 in 2012 to between 563 056 and 1 497 801 in 2020 (MOHT, 2013). Business travel and travel for meetings, incentives, conferences and exhibitions (MICE) are also likely to become more important with economic growth and as the country continues to build strong relationships in the region and beyond. However, the nature of the sector can make it complicated to foster. The implementation of travel and tourism development strategies – particularly regionally balanced ones – requires a broad range of investments in skills, infrastructure and ancillary services.

Increased domestic and international competition should help to accommodate the rising demand for travel and improve the quality of services offered. The CLMV Agreement of 2003 and ASEAN's Open Sky policy planned to begin in 2015 should encourage more visitors by removing restrictions on international commercial airline operations (Cambodia, Lao PDR, Myanmar and Viet Nam form the CLMV group of countries). The gradual liberalisation envisaged by the ASEAN arrangement may also allow for competitive airlines in Myanmar to adjust to these new developments. Eased rules on entering the hotel market and expanding operations are perhaps even more important for maintaining Myanmar's competitiveness as a travel destination. Construction of new accommodations has not kept pace with increases in the number of visitors in recent years, as administrative barriers and remaining limits on foreign investment in tourism have discouraged development.

Improved domestic transportation systems and promotion of more balanced tourism will be critical

By itself, increased competition will be an insufficient driver of growth in travel and tourism in Myanmar. Public and private investment is needed to providing supporting infrastructure, skills and training in the related industries on which tourism depends. Tourism development strategies could therefore focus on both targeted goals to provide quality assurance standards and investment in skills and branding activities; and on addressing broader issues such as public infrastructure development, health and hygiene, access to electricity and the development of mobile and IT services. The improvement of domestic transportation systems – both long-distance and within destinations – is of critical importance in this regard.

Tourism in Myanmar tends to be highly geographically concentrated. Most domestic and international tourism is concentrated in Yangon, Bagan, Mandalay, Inle and Kyaikhto, straining infrastructure and services at these sites and pushing up prices, particularly in the high season from November to February. About 94% of international arrivals to Myanmar in 2012 who did not cross land borders entered through Yangon, a pattern that will place particular strain on the capacity of Yangon International Airport if it continues. In addition to further developing popular locations to manage increased numbers of visitors, promoting more balanced tourism can help relieve pressures on local capacities and may even be used to support regional development programmes.

The Ministry of Hotels and Tourism's (MOHT) *Myanmar Tourism Master Plan, 2013-2020* proposes comprehensive solutions to address many of these challenges. MOHT estimates that the implementation of the 23 priority projects in the Master Plan will cost USD 215.6 million and that all 38 projects outlined in the plan will cost USD 486.8 million Projects include the USD 160 million MICE Investment Promotion Programme to develop MICE facilities in Yangon, Mandalay, Bagan and Inle Lake and the USD 150 million allocated for the development of the Tada Oo Hotel Zone in Mandalay. MOHT and Ministry of Education also plan to collaborate in investing USD 10 million in capacity building in Yangon University's tourism department to improve tourism education. The specialised training offered here will be a first step toward a long-term goal of establishing a stand-alone tourism university.

Although the expansion of travel and tourism is a broad project encompassing many cross-cutting issues, it should benefit from the relatively coherent institutional structures often missing in other sectors in Myanmar. The MOHT has a lead responsibility on many of the key issues addressed in the Master Plan. The private sector is also organising to improve coordination on current activities and future developments. Since its founding in 2012, the Myanmar Tourism Federation has worked to reduce congestion at Yangon's airport (by promoting tours entering and exiting the country from other airports) and to establish hotel investment zones, including through the Myanmar Tourism Development Company.

Conclusion

Fundamentally, Myanmar will need to pursue a multi-pronged development strategy to upgrade its agricultural sector as well as transforming its economic structure towards a manufacturing and services-based economy.

Modernising the agricultural sector

- Policies should focus on developing a modern agri-food eco-system, in order to meet the changing demand and market opportunities for high value and high quality agri-food products over the coming years.
- Towards this goal, key policy recommendations are to focus on building a robust financial system for the agricultural sector to tap market opportunities, and to expand and upgrade the agri-food value chains. Agricultural extension services and farmer education could help to address the challenge of low levels of agronomic knowledge and skills of producers and hence spread modern farming practices. More importantly, Myanmar has the potential to expand its range of agricultural export products and destinations. Building on current production and expected market potential, several candidates for value chain development can be identified. These include mangos, fisheries and rice.
- Modernising the agricultural sector with its linkages to complementary non-agricultural activities can also initiate a structural transformation towards a more manufacturing and services-based economic structure.

Developing the manufacturing sector

- The objectives of the government with respect to its export-led and FDI-led development strategies for the manufacturing sector are clear: to build the capacity of its manufacturing sector; to promote FDI into the sector; to enhance the competitiveness of SME manufacturers; and to promote exports of manufactured goods. The government has been active in developing its own policy frameworks, institutions and linkages with the manufacturers.
- The manufacturing sector faces various issues such as corruption, lack of technology, inadequate and expensive financing, lack of skilled labour, inflation of land and rent prices, and inadequate supplies, all of which are most likely to constrain growth in the sector. In addition, particularly SMEs face a regulatory burden that often overstretches their capacity. This calls for more effective government interventions to enhance the competitiveness of the manufacturing sector in Myanmar. For example, an SME development fund could be a tool to enhance access to finance for SMEs, while an SME development agency could be tasked with assessing the costs and benefits of specific laws/regulations and eradicating unnecessary roadblocks. A nation-wide strategic plan for the development of SEZs and industrial zones could help overcome constraints in infrastructure and access to suitable land. To address skills shortage for manufacturing firms, it would be useful to conduct a mapping exercise of available training courses with research and training institutes.

Seizing opportunities in the services sector

- The services sector will increasingly play a key role in the economic development indirectly by improving the quality and efficiency of goods production and directly through high-productivity modern services such as finance, business and ICT.
- In particular, policies should harness the growth potential of the transport and logistics and tourism sectors. To enhance the transport and logistics sector, reforms and additional public investment are needed, with priority on regulatory reforms, education and training programmes, and the upgrading and expansion of road networks. Indeed, the improvement of domestic transportation systems – both long-distance and within destinations – is also critical for growing the tourism sector. Tourism policies should also focus on developing popular locations to manage increased numbers of visitors and promoting more balanced tourism.

Notes

1. On June 2012, President U Thein Sein declared that a key policy of the reform strategy for economic development was that of sustaining agricultural development towards industrialisation and all-round economic development.
2. Farm size classes have been converted from acres to hectares with 2.471 acres = 1 hectare and size classes indicated here are approximate to the distribution in acres. In acres these are: less than 2.99 acres 31.9%; 3 to 4.99 acres 22.1%; 5 to 9.99 acres 26.8%; 10 to 19.99 acres 14.6%; 20 to 49.99 acres 4.3%; and 50 acres and above 3%.
3. Rice accounts for nearly 50% of the area harvested and is produced by 55% of farm households on average, but shares in some states exceed 90% (*Myanmar Census of Agriculture 2010*).
4. China will likely continue to be Myanmar's most important trading partner over the next decade because of its location, market size, strong food import demand as well as growing constraints on its own agricultural production. However the growing import demand in markets in Asia and the Pacific should also be a target for export expansion.

5. To identify the constraints and determine their importance to export performance, members of Myanmar's agro-food trade associations were interviewed (Table 2.A1.5). These industry leaders, operating at the production as well as intermediate and final stages of the value chains, are well positioned to identify constraints all along the chain and to provide insights about their causes, particularly at the farm level. A short summary table of key responses is provided in Table 2.A1.6.
6. *Myanmar Times,* 3 November 2013, *www.mmtimes.com/index.php/in-depth/8688-revised-farmer-protection-law-quietly-comes-into-effect.html*.
7. Food expenditures account for nearly 70% of total household expenditures with rice accounting for 18%. Myanmar Monthly Household Expenditure 2006, in CSO (2011), *Myanmar Agricultural Statistics (1997-98 to 2009-2010)*.
8. Unless there are unlimited public funds or access to foreign borrowing, the schemes will fail to be financially viable and will simply collapse.
9. Farmer Field Schools under the FAO offer a new approach to disseminating information on production and agronomic practices. These have only been used in limited areas but have been successful in Myanmar and elsewhere.
10. The National Food Law (1997), the Fertiliser Law (1990), the Animal Health and Development Law, the Pesticide Law (1990) and the Pest Quarantine Law (1993) provide the legal framework for food safety and plant and animal health in Myanmar.
11. As an indication of resource constraints, the PPD, with limited staff of 15 technicians, tests some 500 pesticide samples each year. There are over 2 000 trade names of agro-chemicals to be tested.
12. Smallholder commercial farmers are found to be most efficient in the use of resources.
13. Not all smallholders may be able to participate successfully in these new market configurations, but with non-farm linkages full or part-time employment should be created as well as agricultural employment on larger farm operations.
14. The Central Dry Zone region and the Mandalay area, for example, hold promise in the production of pulses, oilseeds and fruits and vegetables for export to China, Bangladesh and India and possibly Thailand, India and Japan (for sesame). The Delta and Rakhine coastal regions, meanwhile, could specialise in fisheries and aquaculture shellfish production as well as tropical fruits and even bamboo for packaging to sell in China, Thailand, Japan and Europe (Reardon, 2014).
15. Fisheries production rose from 1.6 million tonnes in 2002/03 to nearly 4.5 million tonnes in 2011/12 according to Department of Fisheries, Ministry of Livestock, Fisheries and Rural Development.
16. These include periods during which certain species cannot be captured, limitations on net sizes, establishment of protected zones for crab and the management of fish and prawn production, among others.
17. In Viet Nam, over 90% of cotton and fresh milk and over 40% of tea and rice production are done through contract farming, and in China some 18 billion hectares were planted under contract farming arrangements in 2001 (Guo et al., 2005; Prowse, 2012; Hue, 2004). Contracting is widely used in India for seed, poultry, dairy, potatoes, rice and horticulture.
18. It is also estimated that more than 80% of businesses are operating in the informal sector in Myanmar. More details on manufacturing enterprises can be found in OECD (2013, p. 107).
19. While the Government of Myanmar has been developing a new SME definition under the new SME law, the Ministries of Industry and of Co-operatives have defined micro, small, medium and large manufacturers as firms with fewer than 10, 10-50, 51-100 and over 100 workers, respectively (OECD, 2013b).
20. See the detailed classifications of manufacturing activities at *https://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=27*.
21. According to the author's interviews with a few officials of the Ministry of Industry at various points during 2013, this trend has been accelerated and the Ministry aims to reduce the number of manufacturing SOEs to fewer than 50 during 2014, only maintaining some key strategic manufacturers as state-owned.
22. Note that the figures are based on approved investment proposals by the Myanmar Investment Commission and may not reflect the actual investment flows in Myanmar, although the figures can properly present the trends of business investments in Myanmar.
23. Visit the following websites for more information: *www.mmtimes.com/* and *www.elevenmyanmar.com/*.

24. The existing industrial training centres have recently trained over 1 300 individuals annually (interviewed at the Ministry of Industry in July 2014).

25. The former Ministry of Finance and Revenue was recently renamed the Ministry of Finance and will be cited as such throughout this report.

26. This oldest business law in Myanmar was enacted in 1914 based on the Indian Company Act, while Myanmar (then Burma) was occupied by the United Kingdom.

27. The agglomeration strategy refers to the geographical concentration of production facilities and activities (Healey and Ilbery, 1990). Firms in the same industry tend to locate themselves close to one another, leading to geographical concentration of the industry. The producers of substitutable products locate in close proximity to each other so as to reduce transaction costs. As a result of production agglomeration of firms in the supply chains, there emerge industrial clusters in specific geographic areas. Industrial clusters are often established and developed in coastal areas, river basins or logistical hubs in order to be close to transportation and logistics facilities, thus further reducing the costs of distribution links.

28. Established in 2001, Shwe Than Lwin Industrial Zone in Yangon North was developed and supervised by the Swe Than Lwin Company, which is a diversified trading company for vehicles, automotive parts, construction materials, heavy machinery and agro-products. Similarly, in 2002, Anawrahta Industrial Zone was opened in Yangon North by War War Win Co., Ltd., which is an industrial services provider. Thilawa in Yangon South was initially developed by the Union of Myanmar Economic Holdings Limited (UMEHL) as a state-private joint venture. UMEHL is one of two major conglomerates run by the military (through the Ministry of Defence), the other being the Myanmar Economic Corporation (MEC). See more details at *http://www2.irrawaddy.org/article.php?art_id=14151&page=7*].

29. For example, Myeik Industrial Zone hosts fishery industries only for processed food (JETRO, 2013).

30. The author's interview with the chief representative of JETRO Yangon Office in 2013.

31. In contrast to the success of Mingaladon, some planned industrial zones, such as North Dagon Industrial Zone in Yangon East and Than Lyin/Kyauk Tan industrial zones in Yangon South, have failed to be established as manufacturing hubs. Instead, they became housing projects, hosting the housing communities as well as various services sectors under the supervision of the Yangon City Development Committee which is the administrative body of Yangon (JETRO, 2013).

32. The majority of new industrial zones will be developed by the private sector. For example, Hpa-An industrial zone was developed by Sjwe Than Iwin Co., Ltd in 2012. In addition, the Ministry of Communication, Post and Telegraph plans to upgrade the Yatanapon Ciber City in Mandalay, which was initially developed in 2007 for ICT companies, into a regional industrial zone with services provided by the Yatanapon Teleport Co. Ltd.

33. The observation is based on various sources and interviews.

34. This section was developed mainly based on a number of the author's interviews with government officials and industry experts in both the manufacturing and transport sectors in 2013-14.

35. This indicates that there is no deep sea port along the East-West Economic Corridor, either.

36. There is also a plan to develop a China-led special economic zone at Kyauk Phyu along with the recently opened international natural gas and oil pipelines between China and Myanmar.

37. The Myanma Port Authority is supposed to take the lead in two projects in co-operation with the Ayeyarwady regional government, the Mon State government and the MNPED.

38. This is in line with the results of other earlier business surveys in Myanmar (for example, the Industrial Zone Surveys 2005-10 of the Central Statistical Organisation.

39. See more details at *https://unstats.un.org/unsd/cr/registry/isic-4.asp*.

40. The definition of small and medium-sized enterprises (SMEs) varies country by country. The definition used for the present survey is based on UNESCAP (2012).

41. Interestingly, three medium-sized enterprises and one large enterprise in the survey have never registered with any public authorities.

42. Although it is not substantial yet, it is an interesting result as factoring exceeds other financing sources, such as state development banks and money lenders.

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ANNEX 2.A1

Tables and charts on agricultural sector

Table 2.A1.1. **Estimated share of rural households without land**

	2003	2010
Rural population (‘000) (a)	32 427	31 825
Average household size (persons)	5	5
Total rural households (‘000) (b = a/5)	6 485	6 365
Households with agricultural holdings (‘000) (c)	3 465	4 987
Estimated rural households without landholdings (‘000) (b-c)	3 020	1 378
Estimated share of rural households that are landless	47%	22%
Share < 1 acre	8%	3.9%
Share with 1-5 acres	22%	38.5%
Share with > 5 acres	23%	36%

Source: MOAI, *Report on Myanmar Census of Agriculture 2010*; FAO, *Statistics of Rural Population, FAOSTAT*. The share of rural households was calculated as follows: number of rural households = rural population/average household size. Method adapted from MSU-MDRI 2013 report *A Strategic Agricultural and Food Security Diagnostic for Burma*.

Table 2.A1.2. **Area harvested of main agricultural commodities, in thousands of acres**

		1990-91	1995-96	2000-01	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Paddy		11 762	14 907	15 573	16 822	18 246	19 952	19 796	19 960	19 912	19 796
Maize		309	399	520	723	789	808	853	877	897	961
Oilseeds	Groundnuts	1 308	1 272	1 448	1 689	1 804	1 867	2 014	2 086	2 141	2 167
	Sesame	2 454	2 234	3 064	3 306	2 934	3 378	3 536	3 685	3 863	3 754
Pulses	Black gram	337	1 170	1 510	1 933	2 014	2 219	2 422	2 441	2 528	2 607
	Green gram	269	1 128	1 744	2 032	2 342	2 485	2 634	2 566	2 660	2 770
	Pigeon peas	170	592	884	1 365	1 319	1 400	1 455	1 511	1 523	1 564
	Chick peas	391	391	406	505	553	664	691	739	809	819
Tea		142	148	166	179	183	188	190	193	195	196
Spices/condiments		243	242	434	532	560	533	565	554	574	566
Vegetables		339	444	732	1 035	1 094	1 132	1 189	1 255	1 297	1 339
Fruits		454	492	687	899	936	1 001	1 017	1 044	1 102	1 111

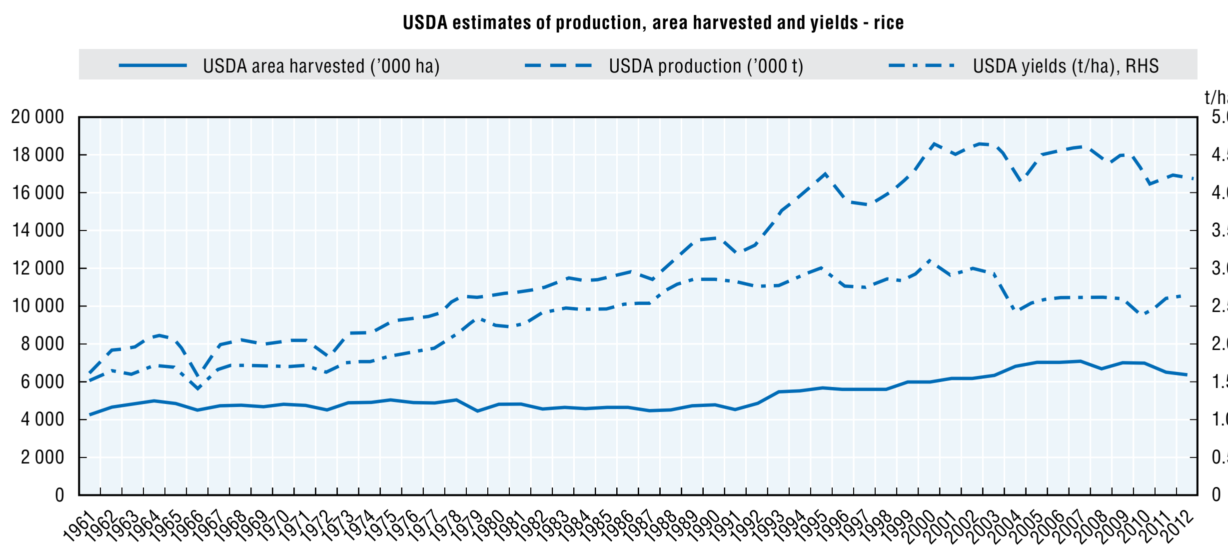
Source: CSO (2013), *Myanmar Data on CD-ROM 2011*, Central Statistical Organisation, Ministry of National Planning and Economic Development, Nay Pyi Taw, Myanmar.

Table 2.A1.3. **Annual production of main agricultural commodities, in thousands of tonnes**

		1990-91	1995-96	2000-01	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Paddy		13 748.30	17 669.60	20 986.90	24 360.90	27 245.80	30 435.00	30 954.10	32 058.50	32 165.80	32 065.10
Maize		184.10	270.40	358.90	771.10	903.50	1 015.80	1 128.10	1 184.70	1 225.70	1 354.40
Oilseeds	Groundnuts	464.60	583.40	719.50	931.20	1 022.90	1 087.90	1 202.20	1 284.20	1 340.50	1 370.10
	Sesame	212.40	298.80	375.80	473.90	438.50	613.50	701.10	765.70	790.10	787.40
Pulses	Black gram	98.70	365.40	523.30	899.10	1 004.90	1 181.90	1 359.30	1 423.20	1 485.30	1 578.30
	Green gram	61.90	332.10	511.00	777.70	930.00	1 038.10	1 177.80	1 220.00	1 314.70	1 338.10
	Pigeon peas	41.70	142.30	315.30	546.80	599.60	645.10	719.10	765.00	760.60	824.20
	Chick peas	102.00	91.40	117.40	235.20	260.30	329.70	347.90	397.60	434.40	459.40
Tea		35.90	52.40	63.00	75.60	79.00	83.20	87.00	90.20	92.60	94.50
Spices/condiments		237.20	257.40	719.50	1 039.80	1 253.50	1 186.40	1 323.80	1 325.20	1 420.40	1 447.00
Fisheries		808.29	742.29	1 413.89	2 442.76	2 844.09	3 152.45	3 518.42	3 902.07	4 320.43	4 559.67
Meat products		189.41	265.79	498.28	1 008.29	1 227.45	1 402.22	1 558.17	1 716.24	1 982.99	2 184.65

Source: CSO (2013), *Myanmar Data on CD-ROM 2011*, Central Statistical Organisation, Ministry of National Planning and Economic Development, Nay Pyi Taw, Myanmar.

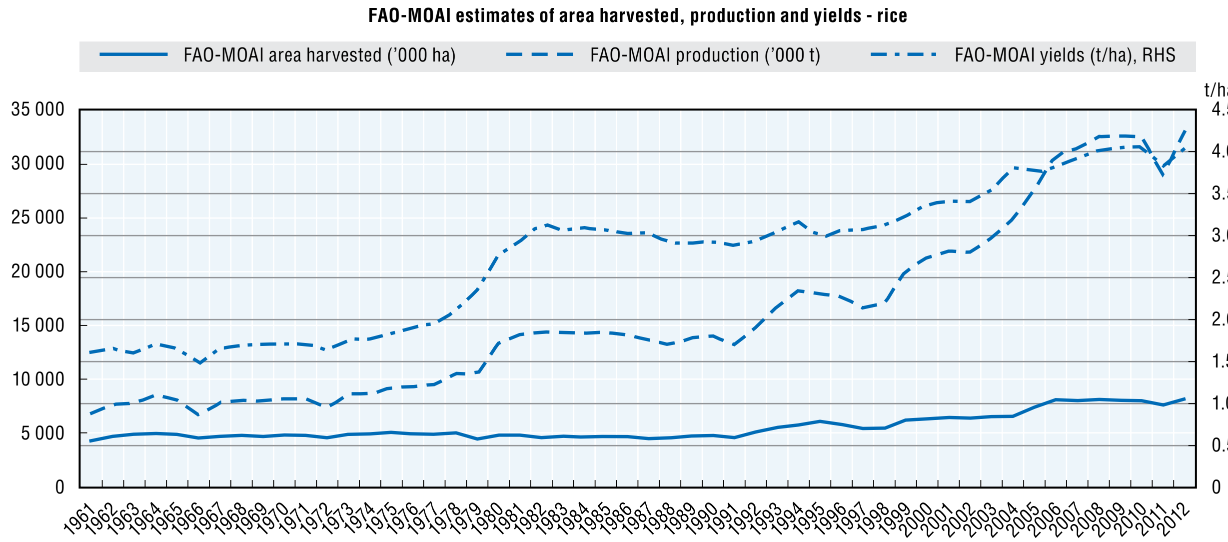
Figure 2.A1.1. **Area harvested, production and yields of rice-paddy 1961-2012**



Source: International Rice Research Institute, World Rice Statistics Online *http://ricestat.irri.org:8080/wrs2/entrypoint.htm*.

StatLink http://dx.doi.org/10.1787/888933134369

Figure 2.A1.2. **Area harvested, production and yields of rice-paddy 1961-2012**



Source: FAO (2014), *FAOSTAT*, Food and Agriculture Organization, Rome, *http://faostat.fao.org/*.

StatLink http://dx.doi.org/10.1787/888933134388

Table 2.A1.4. **Projected import demand 2014-2023 (average growth in % per annum)**

	Poultry	Beef	Pigmeat	Dairy-SMP	Fish	Oilseeds	Rice	Sugar
World	2.77	2.54	1.95	2.49	1.97	1.21	3.12	1.88
China	3.71	9.38	7.08	3.8	1.58	1.87	1.15	0.98
Asia-Pacific developing	3.52	4.34	3.68	2.4	2.63	1.74	2.45	2.52

Source: OECD-FAO Agricultural Outlook 2014-2023, *http://dx.doi.org/10.1787/agr_outlook-2014-en*.

Table 2.A1.5. **Agriculture producers' associations interviewed**

Representatives of the following producer and industry associations were interviewed to collect their views on the major constraints facing the sector:

- Myanmar Pulses, Beans and Sesame Seeds Merchants Association
- Myanmar Timber Merchants Association
- Myanmar Food Processors and Exporters Association, Food Industries Supporting Laboratory
- Myanmar Food Processors and Exporters Association
- Myanmar Rubber Planters and Producers Association
- Myanmar Livestock Federation
- Myanmar Fisheries Association
- Myanmar Rice Federation
- Myanmar Fruit, Flower and Vegetable Producer and Exporters Association
- Myanmar Organic Agriculture Group
- Myanmar Farmers Association

Table 2.A1.6. **Main sector constraints identified by Myanmar's trade associations**[1]

	Output quality	Productivity	Low quality inputs	Lack of access to Finance	Low skill/ knowledge	Food Safety-plant protection services	Lack of hard Infrastructure– telecom/roads/ energy
Pulses	Low	Low	*	**	*	*	**
Oilseeds	Low	Low	*	**	*	**	**
Rubber	Low	Low	**	**	**	**	**
FFV	Low	Low	**	**	**	**	**
Tea	Low	Low	n.a	**	**	**	**
Rice	Low	Low	**	**	**	*	**
Fisheries	na	n.a	n.a	**	*	*	**
Livestock	Low	Low	n.a	**	n.a	*	**

1. Summary of constraints considered to be significant in firm or sector operations overall.
* denotes significant constraint and
** denotes very significant constraint.

ANNEX 2.A2

Measures on standardisation

Standardisation on relevant industrial products is an important area for the Ministry of Industry, Myanmar. It is crucial not only for industrial development but also for gaining market access to regional and global markets as well as adhering to ASEAN integration measures.

In ASEAN, the *ACCSQ (ASEAN Consultative Committee on Standards and Quality)* is processing the harmonisation of related products' standards with its 11 Working Groups:

1. Working Group-WG 1
2. Working Group-WG 2
3. Working Group- WG 3
4. JSC EEE (Joint Sectoral Committee for Electrical and Electronic Equipment)
5. RBPWG (Rubber –Based Product Working Group)
6. ACC (ASEAN Cosmetic Committee)
7. PPWG (Pharmaceutical Product Working Group)
8. PFPWG (Prepared Food-stuff Product Working Group)
9. MDPWG (Medical Device Product Working Group)
10. TMHSPWG (Traditional Medicine and Health Supplements Product Working Group)
11. APWG (Automotive Product WG)

In the area of ASEAN integration on Standards and Quality, the Ministry of Industry is responsible for three Working Groups: JSCEEE, RBPWG and APWG, as a focal Ministry.

In addition, in order to encourage the ASEAN integration on standard conformance as well as to reform the Myanmar manufacturing sector, the government of Myanmar initiated the Standardisation Programme in 2013. The Ministry of Science and Technology is a Focal Ministry for such activity, and a total of 19 Technical Sub-committees were organised for concerned products' and sectors' co-operation with relevant in-lined ministries. These Technical sub-committees are as follows:

1. Food Product Standardising Technical Sub-Committee
2. Automotive Product Technical Sub-Committee
3. Management System Technical Sub-Committee
4. Cosmetic Product Technical Sub-Committee
5. Pharmaceutical Product Technical Sub-Committee

6. Agro-Based Product Technical Sub-Committee
7. Medical Device Technical Sub-Committee
8. Building, Air-port, Road and Bridge Construction Technical Sub-Committee
9. Traditional Medicine Technical Sub-Committee
10. Rubber Based Product Technical Sub-Committee
11. ICT Products and Communication Technical Sub-Committee
12. Chemical Products Technical Sub-Committee
13. Mechanical Engineering Technical Sub-Committee
14. Energy Technical Sub-Committee
15. Wood-Based Product Technical Sub-Committee
16. Life Stock and Fishery Product Technical Sub-Committee
17. Environmental Quality Technical Sub-Committee
18. Boiler Technical Sub-Committee
19. Electrical and Electronic Equipment Technical Sub-Committee

In connection with this action, the Ministry has the obligation to implement three Technical Sub-committees for Automobile Products, Rubber-Based Products and Electrical and Electronic Products, in co-ordination with the Ministry of Science and Technology. Numerous concerned ministries and sector's entrepreneurs are aligned with each other in each Technical Sub-Committee.

Currently, each Technical Sub Committee has been discussing to define the National Standard of their prioritised products that would be based on International Standards and/or ASEAN harmonised standards. These will then be submitted as the proposals to the Ministry of Science and Technology (MOST) in order to approve and promulgate.

MOST has been undertaking to promulgate a Law on Standardisation since 2012. Importantly, the *Myanmar Standardisation Law* has been approved by the Parliament and it was officially declared on 5 July 2014. According to this Standardisation Law, a Standardisation Council and Accreditation Body shall be officially formed. Nevertheless, it is critical to focus on enhancing the efficiency of work in the following areas, in which all Technical sub-committees require technical and financial assistance:

- Establishment of certified laboratories for relevant products
- Skilled technicians
- Installation of required test apparatus as of specific standards for each product
- Capacity building for those implementing such a standardisation taskforce
- Public awareness and participation.

Source: Ministry of Industry, Myanmar.

ANNEX 2.A3

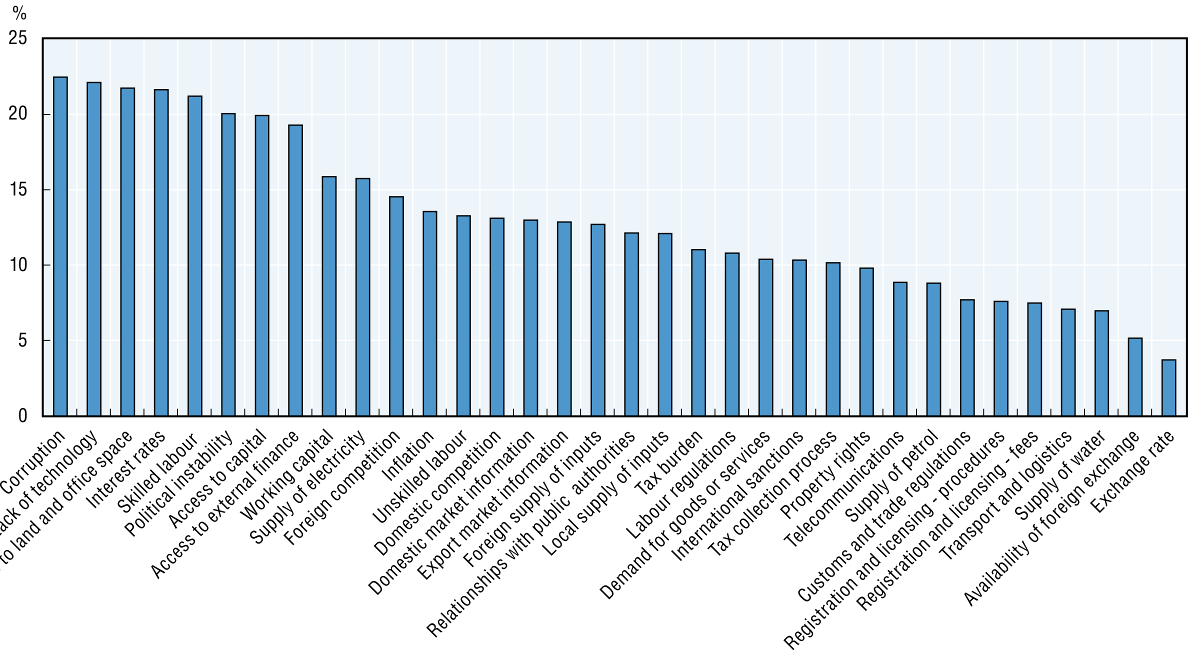
Findings from Myanmar business survey

Table 2.A3.1. **Details of manufacturer samples for the OECD-UNESCAP-UMFCII Survey**

	Micro	Small	Medium	Large	Total
Ayeyarwady	15	16	10	0	41
	36.6%	39.0%	24.4%	0.0%	100.0%
Bago	25	21	2	1	49
	51.0%	42.9%	4.1%	2.0%	100.0%
Chin	11	5	0	0	16
	68.8%	31.2%	0.0%	0.0%	100.0%
Kachin	29	9	0	0	38
	76.3%	23.7%	0.0%	0.0%	100.0%
Kayah	12	1	1	0	14
	85.7%	7.1%	7.1%	0.0%	100.0%
Kayin	19	15	1	1	36
	52.8%	41.7%	2.8%	2.8%	100.0%
Magway	11	12	0	0	23
	47.8%	52.2%	0.0%	0.0%	100.0%
Mandalay	99	119	36	8	262
	37.8%	45.4%	13.7%	3.1%	100.0%
Mon	11	9	1	0	21
	52.4%	42.9%	4.8%	0.0%	100.0%
Rakhine	9	9	3	0	21
	42.9%	42.9%	14.3%	0.0%	100.0%
Shan	82	29	2	0	113
	72.6%	25.7%	1.8%	0.0%	100.0%
Sagaing	23	18	1	1	43
	53.5%	41.9%	2.3%	2.3%	100.0%
Tanintharyi	9	4	0	0	13
	69.2%	30.8%	0.0%	0.0%	100.0%
Yangon	65	116	80	58	319
	20.4%	36.4%	25.1%	18.2%	100.0%
Nay Pyi Taw	4	2	0	0	6
	66.7%	33.3%	0.0%	0.0%	100.0%
Total	424	385	137	69	1 015
	41.8%	37.9%	13.5%	6.8%	100.0%

Note: Three samples are excluded owing to missing data; thus, the number of total samples is 1 018.
Source: OECD, UMFCCI and UNESCAP (2014), *Myanmar Business Survey* (database).

Figure 2.A3.1. **Obstacles to manufacturers cited by survey participants**



Source: OECD, UMFCCI and UNESCAP (2014), *Myanmar Business Survey* (database).

StatLink http://dx.doi.org/10.1787/888933134407

Chapter 3

Filling the skills gap in Myanmar

This chapter analyses Myanmar's education and training system with a focus on the skills in Myanmar's workforce. It looks at how to develop relevant skills – especially through technical and vocational education and training (TVET) – how to encourage people to actively contribute their skills to the labour market, and how to make sure people's skills are put to effective use. The chapter also assesses and provides recommendations for strengthening the policy framework for the skills system in Myanmar.

Building up the right skills in the workforce will be essential to support Myanmar's structural transformation. Firms in the country identify a lack of skilled workers as a serious or very serious obstacle to their operations and one that ranks ahead of any other obstacle. This constraint could become even more acute as the country undergoes economic modernisation and the right skills policies are not put in place. Many of the jobs likely to be created as Myanmar industrialises will require strong technical and vocational skills.

As the *Initial Assessment* revealed, time is of the essence. Myanmar's population will start ageing soon so there is a risk that the country could get old before it gets rich if the momentum for development is not seized now (OECD, 2013a). The size of Myanmar's potential workforce (people aged 15-64) will be fairly stable at around 40 million until 2035, after which it will begin to fall and the dependency ratio will rise as the population ages.[1] While investing in basic education remains important, the investment will take time – a generation – to bear fruit, whereas Myanmar needs to develop the right skills in a much shorter timeframe. This builds a strong case for a policy focus on training and retraining for adults. This is especially important given Myanmar's "lost generation" of people now of working age who suffered from reduced education opportunities and the deteriorating quality of education under the previous regime.[2]

Key findings

- High drop-out rates are holding back the development of higher level skills beyond basic literacy and numeracy, and education quality is jeopardised by insufficient teacher training. Many of the jobs likely to be created as Myanmar industrialises will require strong technical and vocational skills, but technical and vocational education and training (TVET) is currently very limited, with just 0.5% of upper secondary students enrolled in TVET.
- Firms in Myanmar identify a lack of skilled workers as a serious obstacle to their operations. Young people are often not "work ready" by the time they complete their initial education, or even after graduation from university, and workers instead tend to acquire skills "on-the-job". Employers' investment in formal training to maintain, develop or increase workers' knowledge and skills is however very limited: over half of all firms do not spend anything on training for employees.
- Few people in Myanmar are identified as inactive, but while labour force participation rates are generally high, there are signs that unemployment, in particular youth unemployment, is a growing concern. Students face difficulties in making the transition from school to work due to the design of the current matriculation system and a lack of reliable information on the employment and earning prospects of different career options.
- Up to 5.5 million Myanmar nationals work abroad; this diaspora represents a huge skills pool which could potentially contribute to Myanmar's economy.
- The framework for policy making, both for the formal education sector and for wider skills policy, is complex and a large number of ministries have responsibility for education

or training programmes. Effective policy making is also hindered by a lack of accurate information and data, and limited engagement with social partners.

The approach used to assess Myanmar's skills situation in this chapter follows the framework of the OECD Skills Strategy (Box 3.1), namely looking at how to develop relevant skills, how to encourage people to contribute their skills to the economy and how to use people's skills effectively.

Developing relevant skills in Myanmar

Developing the right skills requires good quality education and training systems that are responsive to the needs of the labour market and society at large. It also involves ensuring that access to education and training is equitable and encourages people to learn. In Myanmar, the education system leaves a significant part of the population without the skills that are needed in the labour market. Employers' organisations and government officials report that young people are often not "work ready" by the time they complete their initial education, or even after graduation from university. Entrants into the labour market instead tend to acquire necessary skills by learning on-the-job.

Drop-out rates need to improve to develop skills beyond basic literacy and numeracy

Basic literacy and numeracy levels in Myanmar are relatively high and comparable with levels in some middle-income countries (Figure 3.1). Literacy rates are higher among 15-24 year olds compared with the adult population more broadly, suggesting that new entrants into the workforce will be even better equipped with these basic skills. High reported literacy attainment may be the result of a nation-wide adult literacy programme introduced in 1973 along with several summer literacy programmes underway since 1996 and the first initiatives within the long-term education development plan 2001-30 (OECD, 2013a). However, functional literacy rates[3] are suspected to be much lower (UNESCO, 2014a).

Beyond basic literacy and numeracy, higher level skills are limited. Many people do not have education above the primary level: 65% of household heads have achieved only primary education or less, and only around 15% of household heads have completed secondary school or above. In rural areas, the situation is even starker as 75% of rural dwellers have only primary education or less, compared to 37% of urban residents (UNDP, 2011). While total enrolment rates have been improving in recent years (OECD, 2013a), figures show that there is a sharp drop in enrolment rates after the primary level, as well as falling completion rates with each level of schooling (Table 3.1).

Financial and other non-financial barriers to access keep enrolment and completion rates down. Only primary education is compulsory and free in Myanmar, although this will be extended to include lower secondary education from 2014.[4] With relatively low state spending on education (5.1% of government spending in 2012-13, equivalent to 1.4% of GDP),[5] it falls to households to bear the cost: 70% of total spending on education is by households (JICA, 2012). The fees for lower secondary school are MMK 500 (Myanmar kyat) per year (less than USD 1), but additional costs for stationery, sports and libraries plus the parent teacher association mean that the actual cost is higher. Perhaps more significantly, other costs or barriers linked to low incomes still apply. For instance, children often need to help parents with work and elder siblings often care for younger ones. The government has recently been increasing the amount of stipends available, aiming to provide 200 000 pupils with four-year stipends in order to encourage pupils to stay in school.

Box 3.1. **The OECD Skills Strategy**

The OECD Skills Strategy provides countries with a framework to analyse their skills strengths and weaknesses using a framework that encompasses three pillars.

Developing relevant skills: Ensuring that the supply of skills is sufficient in both quantity and quality to meet current and emerging needs is a central goal of skills policies. Supply can be ensured by developing the right mix of skills through education and training, and by influencing the flow of skills by attracting and retaining talent. Supply is not only responsive to demand but also has an important influence on demand. The skills being developed may actually match labour market needs, but this is not necessarily a good thing for a country's overall development if the market is demanding only low-skilled workers. Training people in higher-level skills can help countries move up the value chain into producing more sophisticated goods and services and avoid becoming stuck in a low-skills equilibrium.

Activating skills supply: People may have skills but for a variety of reasons may decide not to offer them to the labour market. In OECD countries, many individuals are out of the labour force by choice, because of their personal/family circumstances or because there are financial disincentives to work. Integrating under-represented groups into the labour force can increase the skills base in an economy. However, this requires identifying inactive individuals and possibly retraining them, ensuring that the benefit system offers them financial incentives to enter or return to the labour market, and removing demand-side barriers to hiring. In developing countries, financial disincentives to work are rare as benefit systems are under-developed. However, issues such as "brain drain" may be more pertinent.

Putting skills to effective use: Investing in skills is just the first step; successful skills policies also need to ensure that available skills are used effectively so that no investment is wasted. Moreover, the match between the skills demanded in a job and the skills of the person doing the job has an impact on further skills development: unused skills tend to atrophy, while new skills are, to a large extent, developed informally, often through work experience.

An effective skills strategy ensures policy coherence across the three pillars while strengthening the enabling conditions that underpin the skills system as a whole.

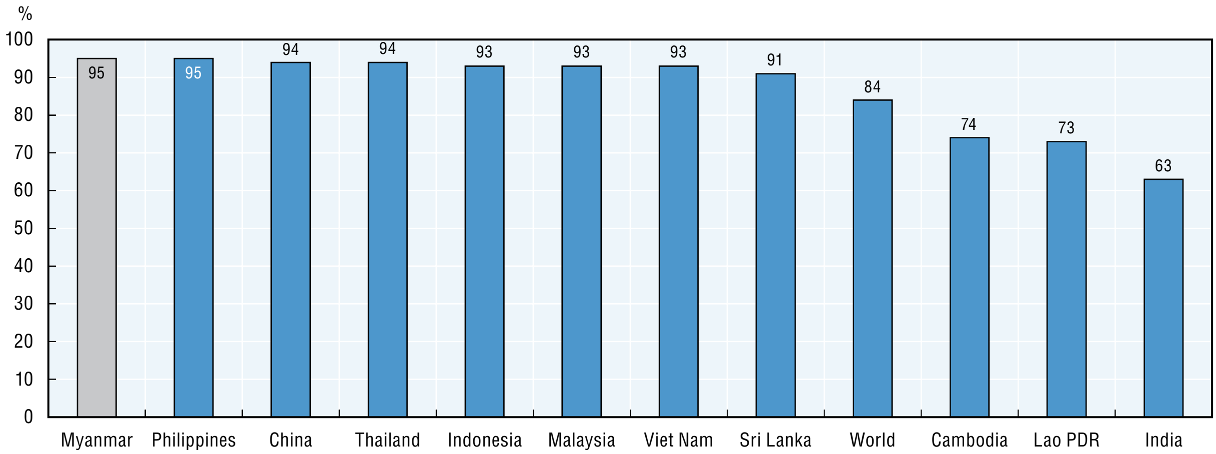
The OECD Skills Strategy shifts the focus from traditional proxies of skills, such as years of formal education and training or formal qualifications/diplomas attained, to a much broader perspective that includes the skills people acquire, use and maintain – and also lose – over the course of a whole lifetime. People need a range of both hard and soft skills that help them to succeed in the labour market, to contribute to better social outcomes and to build more cohesive and tolerant societies.

The OECD Skills Strategy defines skills (or competences) as the bundle of knowledge, attributes and capacities that can be learned and that enable individuals to successfully and consistently perform an activity or task and can be built upon and extended through learning. The concepts of "skill" and "competence" are used interchangeably in this report. The sum of all skills available to the economy at a given point in time forms the human capital of a country.

Source: OECD (2012), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264177338-en*.

Figure 3.1. **Myanmar has high rates of adult literacy**

Adult literacy rate in Myanmar compared to peers, as percentage of total adults, 2005-11



Notes: Figure for Myanmar corresponds to 2011. Figures for all other countries correspond to the most recent data available between 2005 and 2010. UNESCO defines literacy as the ability to read and write with understanding a simple statement related to one's daily life. It involves a continuum of reading and writing skills, and often includes basic arithmetic skills (numeracy). The definition of the Myanmar Ministry of Education is largely in line with that of UNESCO.

Sources: Ministry of Education (2012), *Education Development in Myanmar*, The Republic of the Union of Myanmar; UNESCO (2014b), *UNESCO Institute for Statistics Data Centre* (database), United Nations Educational, Scientific and Cultural Organization, *http://stats.uis.unesco.org/*, accessed 23 April 2014.

StatLink http://dx.doi.org/10.1787/888933134426

Table 3.1. **Enrolment rates fall off after the primary level**

	%
Net enrolment rate (2010/11)	
Primary	84.6
Lower secondary	47.2
Upper secondary	30.0
Completion rate (2009/10)	
Primary	81.2
Lower secondary	71.7
Upper secondary	30.8
Transition rate (2009/10)	
Primary to lower secondary	80.8
Lower secondary to upper secondary	90.6

Source: Department of Myanmar Education Research Bureau (2012), *Lifelong Learning for All through CLCs*, Resource Person's Paper, Regional Conference on Community Learning Centres (CLCs), 26-28 September, Bangkok, Thailand.

The physical distance that children have to travel to school in Myanmar may also be a barrier to education, especially at the secondary level (OECD, 2013a). Recent expansion efforts have seen more schools being opened in rural areas, particularly lower secondary schools, and it is hoped that this will improve enrolment rates. To ensure that completion rates rise as well, attention should also be paid to the other financial and non-financial barriers to access discussed here.

Drop-out rates may be improved if the language of instruction in classrooms was adapted to the local communities that schools serve. Mother-tongue based education has been shown in many cases to lower drop-out rates and to improve attendance (Smits, Huisman and Kruijff, 2008). Evidence also shows that children who begin education in their mother tongue make a stronger start and continue to perform better than those who start school with a new language (Lall and South, 2013). The situation in Myanmar is particularly challenging for the education system as the country's linguistic geography is complex: given the ethnic diversity in many states and regions, there may be several mother tongue languages represented in any classroom.

The government has recently started trying to address this issue: although almost all teaching is in the Myanmar language, the government recently began to provide some materials, such as textbooks, in 15-20 other national languages for use in the first grades of primary school. In practice, instruction may also be in the mother-tongue, or a mix of the Myanmar language and the mother tongue, especially for the first years of primary school. However, in some schools that are not run by the central administration, such as in Mon state, mother-tongue based teaching is already taking place and could be a good model going forward (Box 3.2). In schools run by the central government, careful consideration that balances concerns for the rights of children, educational outcomes and the allocation of limited financial resources will be needed to decide which language will be used as the language of instruction in any particular school or class.

Disabilities can also be a barrier to access to education and educational achievement is lower for people with disabilities in Myanmar. Over a million people, or 2.32% of the population, in Myanmar have some form of disability (Department of Social Welfare and the Leprosy Mission International, 2009). Enrolment rates for children with disabilities are far below the national average, with nearly half of them never attending school, compared to a national primary school enrolment rate of 85%. There is some public provision of education or training for people with disabilities, but it is too limited in scale to have a significant impact: less than 1.7% of people with disabilities have ever had contact with these services (Department of Social Welfare and the Leprosy Mission International, 2009).[6] Children with all but the most severe disabilities should be included into mainstream schools (OECD, 2000). The advantages are manifold: integration provision leads to better educational outcomes for the students themselves; it can also reduce the social stigma of disability that can be reinforced by segregation of students; and, in general terms, integrated provision is usually either less expensive than or equally as costly as segregated provision.

Given the comparatively low completion rates in primary education (OECD, 2013a), the government has introduced schemes to provide primary education to children who have dropped out or never enrolled. A "special programme for over-aged children in primary classes" allows seven-to-eight year olds to complete primary education in three years, and nine-year-olds to complete it in just two years. A non-formal primary education (NFPE) programme targets older children who do not have primary education. Classes are provided for two hours a day, six days a week, for two years. Children who complete the NFPE course and meet the required standards – which are the same as for formal school – can enrol in secondary school. NFPE classes often take place in the evenings, allowing children with care or work responsibilities at home to attend. In some cases, NFPE programmes are run in partnership with or solely by international organisations or non-governmental organisations. For example, UNICEF partners with the Ministry of Education to support NFPE in 76 townships. The courses taught include the Myanmar and English languages, maths, science, social studies and life skills equivalent to the government primary school curriculum, as well as livelihood skills training such as handicrafts production.

Box 3.2. The Mon education system: A model for Myanmar's states?

Parallel systems of education exist in some parts of the country. In some states where there have been long-running armed conflicts, ethnic minority groups have established distinct education systems which run in parallel to the state system (Lall and South, 2013). For example, the Karen National Union (KNU) has incorporated the culture of the Karen people into curricula that are used in around 1 000 schools using a Karen dialect. Children who have studied in this system are usually unable to speak the Myanmar language fluently and do not sit the national matriculation exam that is required to pursue tertiary level studies in Myanmar. In Mon state, there is also a distinct education regime, but it allows greater integration with the state education system and therefore offers more opportunities for students. The Mon education system could be a model for other states in Myanmar.

An ethnic insurgency in the Mon state began in 1948, soon after Burma (Myanmar) gained independence. In the 1970s, the New Mon State Party (NMSP) established its own education system in the areas of the state under its control. This alternative system was a means to provide education to children in conflict areas who would otherwise have gone without. It also enabled teaching in the Mon children's mother tongue. The parallel education system was a means through which the Mon ethnic identity could be preserved and reproduced, particularly after 1962 when the state-mandated school curricula were centralised and all subjects had to be taught in Burmese (the Myanmar language) only.

Since 1992, the Mon education system has been administered through the Mon National Education Committee (MNEC). In 1995, a ceasefire agreement between the NMSP and the government saw this non-state education system expand throughout Mon state. In the 2010-11 academic year, the MNEC oversaw 36 227 students and 808 teachers in 272 Mon schools – 156 national schools and 116 government ("mixed") schools.

In Mon national schools, primary school students are taught solely in the Mon language. At the secondary level, teaching is in the Myanmar language and follows the national curriculum, preparing the students to sit the national matriculation exam. The MNEC also has partnerships with government schools in areas where there are Mon populations. These "mixed schools" follow the government curriculum and offer extra classes in Mon language and history. Students of these non-state or "mixed" systems can therefore continue on to tertiary education in Myanmar.

The Mon education system preserves the Mon language and culture while allowing students to integrate into the mainstream Myanmar system later on. Given that language rights are often an important demand of ethnic minority groups in Myanmar, reforming the mainstream education system to allow the use of minority languages could help promote peace and reconciliation. In this regard, the Mon example could serve as a useful model for other states in Myanmar.

Sources: Lall, M. and A. South (2013), "Comparing models of non-state ethnic education in Myanmar: The Mon and Karen National Education Regimes", *Journal of Contemporary Asia*, Vol. 44, No. 2.

For adults, second chance or alternative learning pathways are more limited. Since the mid-1990s, 3 040 Community Learning Centres (CLCs) have been established throughout Myanmar with the support of UNDP and UNESCO to provide non-formal education. This includes non-formal primary education, early childhood care, basic literacy, functional literacy, skills-based literacy,[7] skills training (including activities such as sewing, weaving, handicrafts, hair cutting, using English as a foreign language, and improved agricultural techniques) and other continuing education (UNESCO, 2002). CLCs are created at the initiative of communities and do not receive government resources. Monasteries are also traditionally places of lifelong learning.

There are also plans to expand the number of monastic schools to help improve access to education. Monastic schools play an important role in expanding access to education, especially for poorer students and those in rural areas. Historically, the monastery was the centre of culture and education in village life, before any formal public education system existed. Monasteries remain important centres of learning for children and adults alike, and have played an active role in national literacy programmes and other endeavours. Monastic schools are funded by donations from the community, either monetary or in kind, and teachers are unpaid volunteers.[8] Teaching follows the same curriculum as in the state (Ministry of Education) basic education schools.

As schools can be established relatively easily in existing monasteries, monastic schools could be a fairly low-cost way to rapidly expand access. Such expansion would be beneficial as long as concerns about quality are addressed. Ensuring that teachers are trained and receive a salary that is equivalent to that of teachers in the mainstream system would also help to attract and develop talent. There are already proposals to provide management training for head teachers of monastic schools. However, the expansion plans are unlikely to address access problems in areas where religions other than Buddhism are widely practised, for example in Chin or Kachin states, as parents may prefer not to send their child to a monastery to learn. In these areas, different solutions to expanding access to basic education will need to be sought.

More and better technical and vocational education and training will be needed

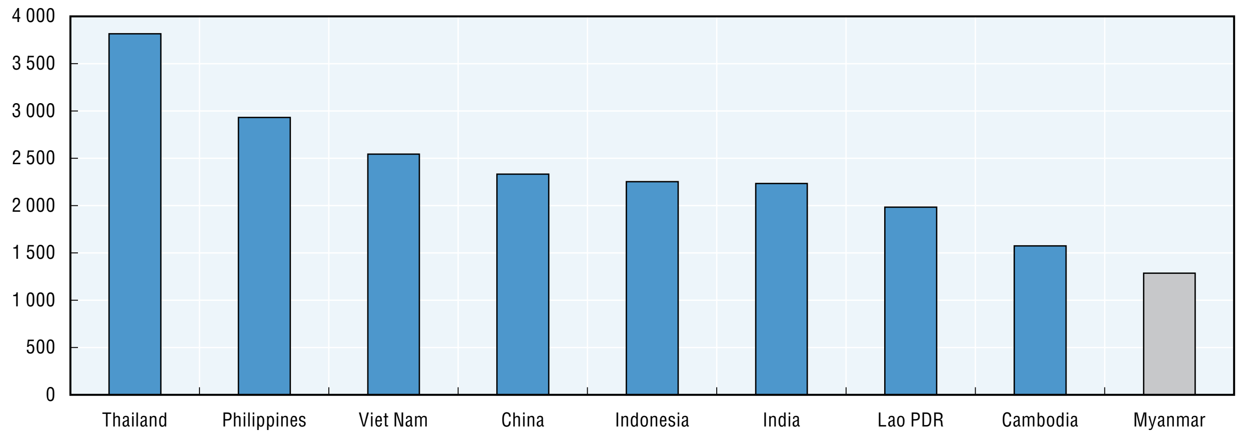
The basic education system – including its curriculum, structure and the final matriculation exam – is geared towards preparing students for university, a goal few ever reach. A greater focus on technical and vocational education would better serve the needs of an industrialising economy such as that of Myanmar and would provide more useful skills to the large numbers of students who do not reach higher education. Just 11% of young people in Myanmar reach university (ADB, 2013a); Myanmar consequently has a much lower rate of students in tertiary education than other ASEAN and neighbouring countries (Figure 3.2).

While upgrading universities will be an important goal, especially for the longer-term goal of becoming a "knowledge economy",[9] scaling up and improving the quality of TVET is a more immediate priority. Many of the jobs likely to be created as Myanmar industrialises will not require university-level education but rather strong technical and vocational skills, complemented by solid foundation skills.[10] Forecasts indicate that 10 million non-agricultural jobs could be created by 2030, with 6 million of them in manufacturing (McKinsey Global Institute, 2013). In tourism, another sector tipped for expansion, conservative estimates predict the creation of nearly 300 000 jobs by 2020, while more ambitious growth scenarios imply over 1 million new jobs (Ministry of Hotels and Tourism, 2013).

The TVET sector is currently fairly limited in Myanmar. The government classifies TVET into four categories (Box 3.3). Overall, there is a considerable gap between potential demand for TVET and the training capacities of public providers. Training capacities are also under-utilised and there is a high drop-out rate in TVET institutions (for example, 40% after the first year of government technical institutes). Access to TVET in rural areas is also very limited, with training being largely provided only by agricultural extension services (Kohn and Huttemeier, 2013).

Figure 3.2. **Few people in Myanmar study at the tertiary level**

Number of students in tertiary education per 100 000 inhabitants



Note: All data are for 2011 except for the Philippines (2009).

Source: UNESCO (2014b), *UNESCO Institute for Statistics Data Centre* (database), United Nations Educational, Scientific and Cultural Organization, *http://stats.uis.unesco.org/*, accessed 23 April 2014.

StatLink http://dx.doi.org/10.1787/888933134445

Box 3.3. **Categories of TVET in Myanmar**

The government classifies TVET in Myanmar into four categories:

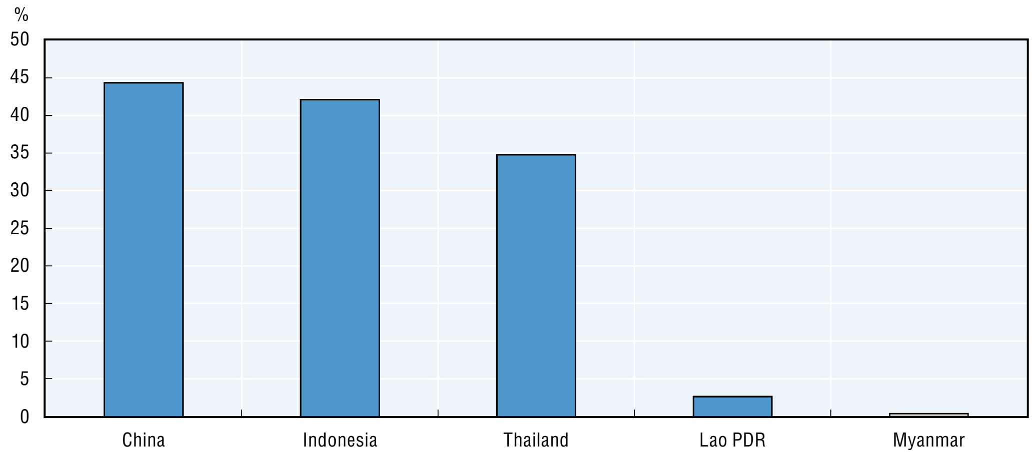
1. ***Private TVET:*** Courses run by private institutions, typically two-to-four-month training courses that generally do not have entry requirements in terms of previous education and which do not currently lead to certification.
2. ***Non-formal vocational training:*** Training courses run by government ministries (e.g. the Ministry of Home Affairs) that lead to a certificate and which have no previous education requirements for entry.
3. ***Formal vocational training:*** Government-run training courses (for example, five industrial training centres run by the Ministry of Industry) aimed at skilled workers in state-owned enterprises. These courses require people to have a certain level of previous education and they lead to a certificate issued by the responsible ministry.
4. ***Formal technical vocational training:*** The Ministry of Science and Technology is the certification body for this branch of TVET, offering certificates ranging from upper secondary certificates and diplomas up to PhDs. These courses have previous education entry requirements. For example, a student must have passed the basic education matriculation examination in order to study for a bachelor's degree.

Source: Ministry of Science and Technology (2013), "Union of Myanmar PowerPoint presentation", July.

At the upper-secondary level, government technical high schools (GTHS) operated by the Ministry of Science and Technology (MoST) were not open for a number of years owing to budget constraints. A small number (36) have recently re-opened, but the proportion of students attending is still very low (Figure 3.3). The GTHS follow the Ministry of Education mandated curriculum plus a choice of seven TVET courses: building technology; refrigeration and air-conditioning technology; auto mechanics technology; electronics technology; electrical technology; machining technology; metal process technology. There are no opportunities for TVET earlier than the upper secondary level.

Figure 3.3. **Secondary technical and vocational education and training (TVET) is limited in Myanmar**

Technical/vocational enrolment at the upper secondary level as % of total enrolment in upper secondary



Note: Upper secondary education corresponds to the final stage of secondary education. Data are for 2012 except for Myanmar (academic year 2013/14) and Indonesia (2011).

Source: UNESCO (2014b), *UNESCO Institute for Statistics Data Centre* (database), United Nations Educational, Scientific and Cultural Organization, *http://stats.uis.unesco.org/*, accessed 23 April 2014 and Ministry of Science and Technology (2013), "Union of Myanmar PowerPoint presentation", July.

StatLink *http://dx.doi.org/10.1787/888933134464*

At the post-secondary level, the MoST-administered technological universities, technical institutes and computer universities account for 18% of higher education enrolments (ADB, 2013a). The courses on offer in technological universities and technical institutes are: civil engineering; electronic engineering; electrical power engineering; mechanical engineering; mechatronic engineering; information technology; metallurgy engineering; mining engineering; petroleum engineering; chemical engineering; and architecture. In addition to the relatively narrow formal TVET administered by MoST, 17 line ministries provide some technical or vocational training, among them: the Ministry of Industry; the Ministry of Agriculture and Irrigation; the Ministry of Environmental Conservation and Forestry; the Ministry of Social Welfare; the Ministry of Co-operatives; the Ministry of Hotels and Tourism; the Ministry of Education; the Ministry of Border Affairs; the Ministry of Transport; the Ministry of Culture; and the Ministry of Sports. The Ministry of Labour, Employment and Social Security also offers short courses at one of their three skills development centres or in companies. In total, 459 public training institutions (as of 2013) provide TVET in Myanmar. Private TVET providers also operate, especially in the business centres of Yangon and Mandalay (for example, the Swiss-supported Centre for Vocational Training in Yangon). Some estimate that there are around 350-550 private training providers, although there are no official statistics (Kohn and Huttemeier, 2013).

TVET is also limited in terms of the range of courses on offer. The "v" for "vocational" in TVET often appears overlooked and the focus is much more on a narrow definition that emphasises technical training. Furthermore, the technical skills that are taught in the framework of the current TVET system don't seem to be linked to the real needs of the economy. The subjects taught are defined by officials who have little affiliation with the labour market and little information on the demands of the market. Neither labour market partners nor training institutions have influence in the development of curricula. Training provided by public institutions (both formal and non-formal) also appears more theory-based than practical, with poor or non-existent training materials, and rarely includes time spent in actual workplaces.

Firms in Myanmar already report a lack of skills and this situation is likely to intensify as the economy shifts towards manufacturing and services (Table 3.2). Some 57% of firms in Myanmar have experienced a shortage of skilled workers. This rises to 61% for firms in the hotel and restaurant sector and to 66% for firms in the construction sector – service sectors that will be important to Myanmar's economic transformation and development (see Chapter 2). For 41% of firms a shortage of skilled labour was either a severe or very severe obstacle to their operations, ahead of the next four obstacles cited as severe or very severe, namely access to land, factories or office space; corruption; access to capital; and lack of technology.

The lack of skills is reflected in the high wages commanded by managers in the manufacturing sector compared to many other jobs. Whereas wages in Myanmar are, for most jobs, significantly lower than in neighbouring countries, reflecting lower income per capita, the wages for managers in the manufacturing sector are much more comparable, which implies that it is difficult for firms to find workers with manager qualifications.

Firms identify computer and ICT skills as the most commonly lacking skills across almost all occupation groups; 13% of firms report skills gaps among middle and lower management and 36% of firms report such gaps among skilled workers. The second and third ranking skills gaps overall were technical skills followed by creativity and initiative. For skilled workers specifically, more than a quarter of firms reported skills gaps in computer and ICT, management and leadership, technical skills, and creativity and initiative. Firms also reported that qualified skilled workers were the most difficult to find out of all occupation groups.

The finding that creativity and initiative are lacking lends weight to the view that it is not the content of teaching alone that is important – the "what" – but also the way in which students learn – the "how" – which applies as much to general education as to TVET. There has already been some recognition of this among policy makers in Myanmar. Education reform plans include a review and update of curricula and the introduction of

Table 3.2. **Skills gaps are a serious constraint to firms in Myanmar**

	All sectors	Key sectors		
		Manufacturing	Construction	Hotels and restaurants
Lack of skilled workers is a severe or very severe obstacle to operations (% of firms)	41*	43*	34* (equal with lack of technology and corruption)	42*
Experienced shortage of skilled workers (% of firms)	57	59	66	61
Experienced technical or professional skills problems (% of firms)	44	45	55	40
Top-3 ranked skills gaps**	1. Computer and ICT 2. Technical skills 3. Creativity and initiative	1. Computer and ICT 2. Technical skills 3. Creativity and initiative	1. Computer and ICT 2. Technical skills 3. Creativity and initiative	1. Computer and ICT 2. Creativity and initiative 3. Technical skills

Notes: * top ranked of all obstacles. ** Respondents chose from a list of nine potential skills gaps: management and leadership; creativity and initiative; analytical thinking and problem solving; technical skills; finance, accounting and budgeting; computer and ICT; selling and customer service; communications, interpersonal and work ethics, teamwork; and foreign language capability.

Source: OECD, UMFCCI and UNESCAP (2014), *Myanmar Business Survey*, *www.unescap.org/sites/default/files/MBS_Questionnaire_Interactive_310114.pdf* (see chapter 2 for a detailed description).

new teaching techniques that are less based on rote-learning. The lack of creativity and initiative may also be a reflection of a "top down" culture that developed under the previous regime, whereby people were required to implement orders from above with little scope for using initiative or finding creative solutions to problems. Government officials as well as business people in Myanmar often talk about the need to change people's mindset to match the new economic and political realities today. The education and training system will play a pivotal role in fostering this change.

To meet the needs of the labour market, TVET systems require strong and consistent engagement of employers, unions and the interests of students to ensure that the organisation and the content of programmes meet the needs of business and the wider economy (OECD, 2010). The inclusion of all these different actors is vital. The engagement of industry is important so that employers can inform TVET leaders about the skills that they need and can help design curricula. Unions will aim to ensure that TVET provision does not result in an oversupply of skills (as this would drive down wages and create unemployment) and that sufficient transferable skills are developed to ensure that members can move to other related occupations. Unions can act as a good balance and complement to the influence of employers, as otherwise courses may give very occupation-specific skills and not enough generic skills (such as numeracy, literacy, team-working, communication skills, flexibility, and the capacity to learn). The government needs to protect the interests of the young as they tend to be unorganised. Effective TVET requires a set of interconnected institutions at national, regional and sector levels, with clear responsibilities for different elements in the TVET system. In Switzerland, employers and professional associations are engaged with and actively contribute to professional education and training. The system is highly responsive to labour market needs (Fazekas and Field, 2013).

In addition, TVET systems need to take full advantage of workplace learning. Most vocational programmes in OECD countries involve some element of workplace learning. Workplaces provide a strong learning environment in which to develop hard skills for working with modern equipment as well as soft skills (for example, teamwork, communication, and negotiation). Employers' willingness to provide workplace training is also a sign of labour market demand as employers will be keenest to offer opportunities in areas of skills shortages. Workplace training also facilitates recruitment by allowing employers and potential employees to get to know each other. Apprenticeships (typically two to four years in length) are one common model of workplace training but they are not the only model. Workplace learning can also take the form of work-shadowing, longer internships, informal learning and training for employees (OECD, 2010). Workplace learning schemes need to be backed by effective quality control mechanisms so that they do not simply become a source of cheap labour and so that students are not learning only narrow, firm-specific skills that may not be applicable in other contexts. Examples of quality control mechanisms include contractual arrangements, inspections, self-evaluation and effective assessment of skills acquired through training.

Currently 45% of firms in Myanmar have apprentices, interns or trainees working for their business, with the vast majority of these firms – 98% – covering the full cost (nearly half of apprentices, interns or trainees are paid) (OECD, UMFCCI and UNESCAP, 2014). Over 90% of apprentices are hired by their firms after the apprenticeship is completed. The Myanmar government could consider supporting firms to provide apprenticeships by contributing to the cost. Countries use many types of financial incentives to encourage workplace training, including direct subsidies, special tax breaks and training levies. Subsidies are generally seen to be an inefficient way of providing financial incentives. Tax breaks may not be particularly effective in providing real incentives to firms in Myanmar given the high degree of informality and low tax collection rates. Given that Myanmar plans to introduce a training levy, one option could be to assign some of this levy for apprenticeship/workplace training schemes. For example, in Hungary, employers are required to contribute 1.5% of their payroll to such schemes, which represents almost one-third of total national expenditure on school-based TVET (OECD, 2009). Other non-financial mechanisms may also encourage apprenticeships. For example, in some countries there are special bodies that aim to facilitate employer engagement in apprenticeships. They help find a match between the needs of employers and students looking for workplace training and also take care of the administrative duties involved in apprenticeship training, which can be burdensome for employers (especially small and medium enterprises).

TVET teachers and trainers also need to be familiar with the modern workplace. In Myanmar, TVET teachers have little or no industry experience. Efforts could be made, for example, to recruit teachers who teach part-time and also work part-time in industry. In some vocational schools in China, teachers are required to spend one month in industry each year, or two months every two years. In addition, many schools employ a significant number of part-time teachers who also work in industry. In Switzerland, teachers and trainers in professional colleges are well prepared both in their vocational field and in pedagogy. In general, it would help if flexible pathways of recruitment were promoted in Myanmar, as this would facilitate the entry of those with industry skills into the workforce of TVET institutions.

Finally, as with general education, any barriers to access need to be identified and addressed. Cost may be a barrier for the participation of youth in vocational training. A number of countries are providing fees and targeted public funding to facilitate participation of students. In China, upper secondary education typically requires fees, but the government is planning to introduce a number of measures, both at the national and the provincial level, to try to overcome financial barriers and to ensure that as many students stay on in school as possible. This includes a national scheme to offer a CNY 1 500 (yuan renminbi) per year subsidy to students in TVET schools, largely covering their fees and an initiative to make tuition free for upper secondary vocational school students (Kuczera and Field, 2010).

An even bigger barrier to be overcome, however, may be one of perception. In Myanmar, as in many other countries, there is a negative perception of TVET education and of manual work in general. This may change over time if people can see that a TVET education improves chances of finding decent work, which will depend on the quality of TVET education. This may not be sufficient however. In a study on skills development pathways in Asia, Martinez-Fernandez and Choi (2013) note that, despite the high unemployment rate among college graduates, vocational training is not considered as a viable alternative, and high school graduates value academic studies and target white-collar jobs unrelated to industry demands.

Some countries are taking active measures to encourage students to enrol in TVET courses by improving the public perception of skills training. China, for example, provides opportunities for vocational secondary school students to be able to pursue higher education (tertiary level); since this policy there has been an increasing number of applicants for vocational schools (Ruth and Grollman, 2009). China is also setting up a national system of honours and rewards for “skills masters”. Many countries take part in international skills competitions, such as the World Skills International (formerly the “Skill Olympics”), held every two years, in which young people from around the world compete in the skills of their various trades after being selected through regional and national skill competitions.

Limited teacher training and problems with teacher motivation jeopardise education quality

Well-trained teachers are vital. The largest source of variation in student learning is attributable to differences in what students bring to school – their abilities and attitudes and family and community background. Such factors are difficult for policy makers to influence, at least in the short-run. Of those variables which are potentially open to policy influence, factors involving teachers and teaching are the most important influences on student learning. In particular, teacher quality is the single most important school factor influencing student achievement (OECD, 2005).

Teacher training in Myanmar is limited and primary school teachers in particular are inexperienced. Teachers in Myanmar are public servants with salaries determined by the civil service wage-scale. As teachers gain experience, they are promoted from primary school to lower secondary school and finally to high school. This means that primary school teachers are almost always inexperienced as they are at the entry level in the civil service. As primary school teachers require just one year of teacher training (Box 3.4) that can be

Box 3.4. **Teacher training in Myanmar**

Myanmar has 21 teacher training colleges throughout the country, and every state and region except the Chin state has at least one teacher training college. These colleges train teachers for primary and lower secondary schools. A one-year certificate of education is required to teach at the primary level, and a two-year diploma of education is required to teach lower secondary level. Teacher training colleges fall under the responsibility of the Department for Planning and Training within the Ministry of Education. Reform plans intend to increase the duration of teacher training to four years.

A bachelor’s degree in education is required to teach at the upper secondary level. This tertiary level qualification can be obtained in the two institutes of education located in Yangon and Sagaing (either on campus or through distance learning), which come under the authority of the Department of Higher Education within the Ministry of Education. Students must already have obtained the diploma in education to enrol in the three-year BA Education Programme. High school teachers therefore have a total of five years’ teacher training prior to working in the schools.

This system of pre-service training was introduced in 1998. Prior to this, only in-service training was provided for teachers.

Separately, the Ministry of Border Affairs runs the University for the Development of National Races based in Sagaing which provides teacher training for *national youths* (young people from ethnic groups in Myanmar’s border states). The university issues certificates of education, diplomas, bachelor and master’s degrees in education, with courses ranging from one year to five years in duration. Since its establishment in 1964, over 12 000 teachers have been trained – averaging 250 per year – over half of whom obtained the Primary Assistant Teachership Certificate (a three-year course).

taken straight after matriculating from high school, they can potentially start their careers as young as 17. As part of the education reforms in Myanmar, the government is aiming for all teachers (current and future recruits) to complete a full five years of training to the BA level, with an option to do so through distance learning. There is currently no deadline for achieving this goal. The government may also wish to consider de-linking promotions from the level of schooling. The type of pedagogy suited to primary school pupils is different from that needed for older students, so arguably the skills that the teachers are required to have are also different. Experienced primary school teachers are a valuable asset, and it would help if primary school teaching was considered as a distinct career option that did not involve forgoing promotion opportunities.

Selection criteria for teacher training colleges and institutes could be used to ensure that competent and motivated candidates enter teacher training. Although no official figures are available, it has been reported that many people who train as teachers in Myanmar do not enter the profession after their studies, leading to a serious loss of investment. Students in the institutions may not have wanted to enter teacher training but their matriculation marks restricted their choice. A student's matriculation score determines which type of universities they can enter: the highest scores are demanded for medical and engineering schools while lower marks are needed for institutes of education (teacher training). This system also means that students graduating from upper secondary school with the highest marks are unlikely to ever enter the teaching profession. A less rigid university entrance system than the one based solely on matriculation pass marks could help ensure that only students who are motivated to choose teacher training do indeed pursue this study.

As well as reviewing the selection process, efforts need to be made to improve teaching's attraction as a career choice in general. In Myanmar, teaching is not perceived as an attractive career option. A number of countries face this challenge and have introduced programmes to promote the image and status of teachers (Box 3.5).

The challenge of attracting more high quality teachers is especially pressing, as the number of teachers will need to increase in line with the planned expansion of access to basic education in Myanmar. There is a risk that quality could suffer in the pursuit of quantity. In order to address the rising demand for teachers, in July 2012, 50 000 people were recruited as "daily wage" teachers to work in Basic Education schools. While they had no formal teaching qualifications, they were university graduates, and a four-month intensive training course was planned for January 2014. Their daily wage is less than the MMK 97 000 per month (approximately USD 98 at current exchange rates) that qualified primary school teachers receive. This ad hoc measure may have gone some way to meeting the demand for new teachers in the near term, but institutionalised solutions are needed. One way to increase the supply of teachers would be to make entry pathways into the teaching profession more flexible. For example, introducing the option of a two-year teacher training course for university graduates of other disciplines would open up an additional entry point into the profession.

The quality of teaching in Myanmar's border areas is jeopardised by difficulties in recruiting teachers. Recruiting teachers to border areas is particularly challenging, despite incentives that the government has put in place, such as double salaries. Time spent teaching in border areas is often required to obtain a promotion, although this has had a perverse effect of teachers being unwilling to be promoted in order to avoid moving to these remote locations where living conditions can be difficult. Other countries, such as Australia, have experimented with different ways of attracting teachers to remote areas (Box 3.6).

Box 3.5. **Improving the image and status of teachers**

In *Austria* there are extensive communications (including websites) from schools and provincial education authorities about school operations and educational "success stories"; campaigns by teachers' unions to better inform people about why teaching is important and what it really involves; and public recognition from the federal authorities for outstanding schools and teachers, through the "Education Oscars" programme.

The Land of *Brandenburg* in Germany has been proactive in taking measures to improve public appreciation of schools and the image of teachers. These measures include: public ceremonies when new teachers are appointed and when experienced teachers retire; the award of prestigious public prizes to projects in schools and in the field of social education; sponsored trips for teachers to educational fairs held in other Länder; and the public presentation of 50 projects from schools, chosen by competition, during the annual festivities of Brandenburg Day. These projects are selected to showcase student initiative and creative and socially engaged teachers, and the winning schools are awarded substantial prizes.

In *Finland* in 2002, the Trade Union of Education launched the "Finland Needs Teachers" project to raise awareness of teachers' work and its significant contribution to society. The project is aimed at conveying a more realistic and positive image of teaching to the general public.

In *Malaysia*, the achievements of teachers are publicised in national newspapers that have a separate weekly column which focuses on schools or educational institutions' achievements or initiatives. This is intended to promote excellence in education and to act as a catalyst to upgrade professional esteem.

Sources: OECD (2005), *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*, Education and Training Policy, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264018044-en;* Hazri, J. et al. (2011), "Teacher professional development in Malaysia: Issues and challenges", *CICE Africa-Asia University Dialogue for Educational Development Report of the International Experience Sharing Seminar (2): Actual Status and Issues of Teacher Professional Development.*

Activating skills supply

Developing skills is a considerable investment for any country. To realise the returns on this investment, skills policies need to ensure that skilled people do not withdraw from the labour market prematurely. When people are not working, they can quickly lose the skills they once had or, during their time not working, the types of skills demanded by the labour market can change. While the personal choice not to work will always exist (for example, people may choose to stop work to care for children or for elderly relatives), policies should aim to remove any barriers to work. Policies also need to ensure that skilled people do not withdraw from the labour market permanently because they decide to move to other countries – the so-called "brain drain" – but rather encourage "brain circulation" whereby workers can build up skills abroad and then return and contribute these skills at home.

Labour force participation rates are generally high but unemployment is a concern

Few people in Myanmar are identified as inactive. Labour participation rates are among the highest in the region and female labour force participation rates in particular are especially high (Figure 3.4). One group which does appear to face barriers to participating in the labour force, however, is people with disabilities. Less than 15% of people with

Box 3.6. **Attracting teachers to remote and rural areas in Australia**

In Australia, schools in remote and rural areas have been experiencing difficulties in attracting and retaining teachers. To encourage teachers to teach and remain in those areas beyond the minimum required service period, special incentives and teacher education programmes are offered in most states, as illustrated by those in Queensland and in New South Wales.

The Queensland Remote Area Incentive Scheme provides teachers who teach in remote and rural schools with financial benefits and support, including:

- Compensation benefits ranging from AUD 1 000 to 5 000 per year, plus an additional payment for dependants to offset the travel costs to certain districts.
- Incentive benefits ranging from AUD 2 000 to 5 000 per year to encourage teachers to remain in rural and remote schools after the designated service period.
- Induction programmes for newly appointed teachers to assist in preparing for service in rural and remote areas.
- Additional leave ranging from five to eight days to cover leave to travel to major centres to conduct urgent personal business, including medical and dental appointments.

The *New South Wales* Department of Education has developed a pre-service teacher education programme, *Beyond the (Great Dividing) Line,* to provide students with first-hand experience of living and teaching in rural areas. Students in the second, third and fourth years of their initial teacher education visit rural areas and become guests of the schools for three days. In 2002, about 400 students from eight universities participated in the programme. Nineteen participants in the 2001 programme who completed their education in 2001 accepted permanent appointments in 2002 to "Beyond the Line" schools.

Source: OECD (2005), *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*, Education and Training Policy, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264018044-en*.

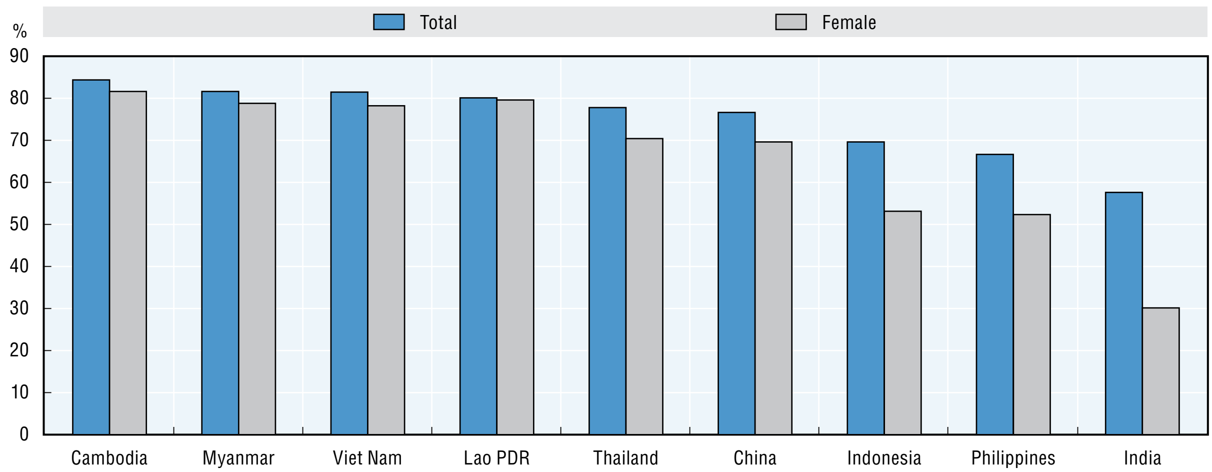
disabilities are engaged in a productive livelihood and over 50% have never had a prior livelihood (Department of Social Welfare and Leprosy International, 2009).

While labour force participation rates are high, unemployment is a concern in Myanmar, although it does not seem to be captured by official statistics. World Bank figures place the unemployment rate at just over 4% and youth unemployment at 11.5% (Figure 3.5), while the latest figures from Myanmar's Department of Labour place the overall unemployment rate at 5.4%. However, an internal survey by Myanmar's parliamentary planning and finance development committee in January 2013 revealed that the unemployment rate could be as high as 37%. Youth unemployment, in particular, is seen as a growing concern (Tate, 2012).

The challenge for Myanmar is largely one of job creation, but there is also an element of skills mismatch. Anecdotal evidence, at least from major cities, tells of university graduates unable to find jobs that meet their expectations and an unwillingness to do "non-professional" jobs. For example, about 12 000 engineering and architecture students graduate each year but vacancies are limited (ADB, 2013b). Better career advice that informs students, teachers and parents of where there are good job prospects would help to address this problem to some extent. Encouraging entrepreneurship, rather than relying on employment within existing firms, could also be a way to ensure that young people are actively contributing to the economy, and would also be an engine of job creation.

Figure 3.4. **Labour force participation is high in Myanmar**

Total labour force participation rates and female labour force participation rates, 2012



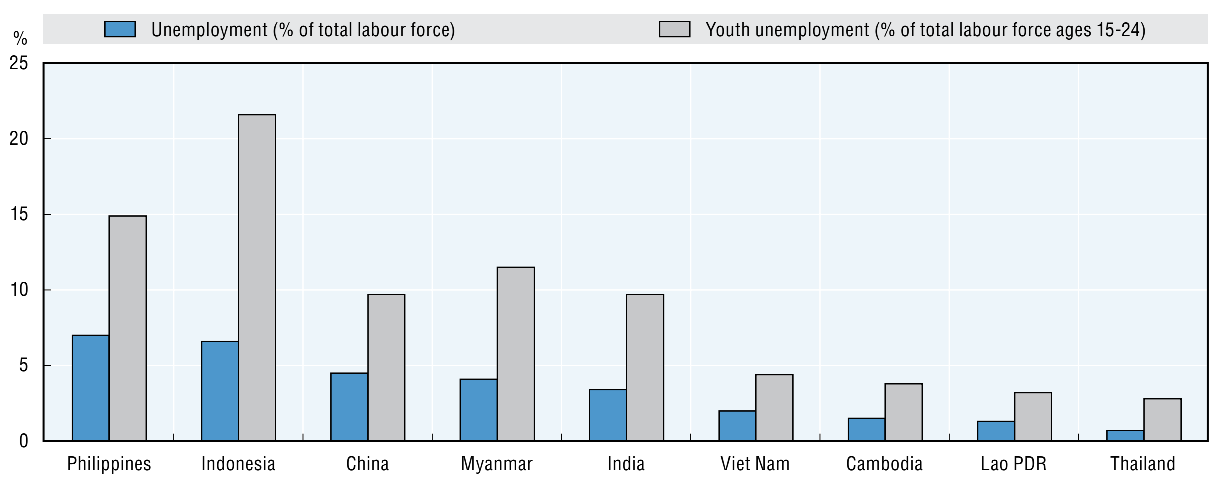
Note: Modelled ILO estimates. Total labour force participation rate is the proportion of the population ages 15-64 that is economically active: it is the sum of all people who supply labour for the production of goods and services during a specified period and those who are unemployed, i.e. actively looking for work. Female labour force participation rate is the percentage of the female population ages 15-64 that is economically active.

Source: World Bank (2014), *World Development Indicators* (database), *http://data.worldbank.org/indicator*, accessed 16 April 2014.

StatLink http://dx.doi.org/10.1787/888933134483

Figure 3.5. **Myanmar's youth unemployment appears fairly high for the region**

Overall unemployment and youth unemployment rates, 2012



Note: Modelled ILO estimates. Unemployment refers to the share of the labour force that is without work but available for and seeking employment.

Source: World Bank (2014), *World Development Indicators* (database), *http://data.worldbank.org/indicator*, accessed 16 April 2014.

StatLink http://dx.doi.org/10.1787/888933134502

Brain drain is a concern but Myanmar's diaspora could return with much-needed skills

While labour force participation rates are generally high, a large number of Myanmar nationals work abroad. To reap the full benefits of initial investments in skills, Myanmar will need policies to encourage its skilled workers to remain in the country and to contribute their skills to the economy, and to encourage those who work abroad for a period to return to Myanmar after having built up relevant skills. Effective policies will be especially important from 2015 when the ASEAN Economic Community (AEC) comes into being. Among other things, the AEC will enable the free flow of skilled labour throughout the ten ASEAN countries. Experience has shown that the best way to prevent brain drain is to provide incentives to stay, including by improving local labour-market conditions, rather than by imposing coercive measures to prevent emigration.

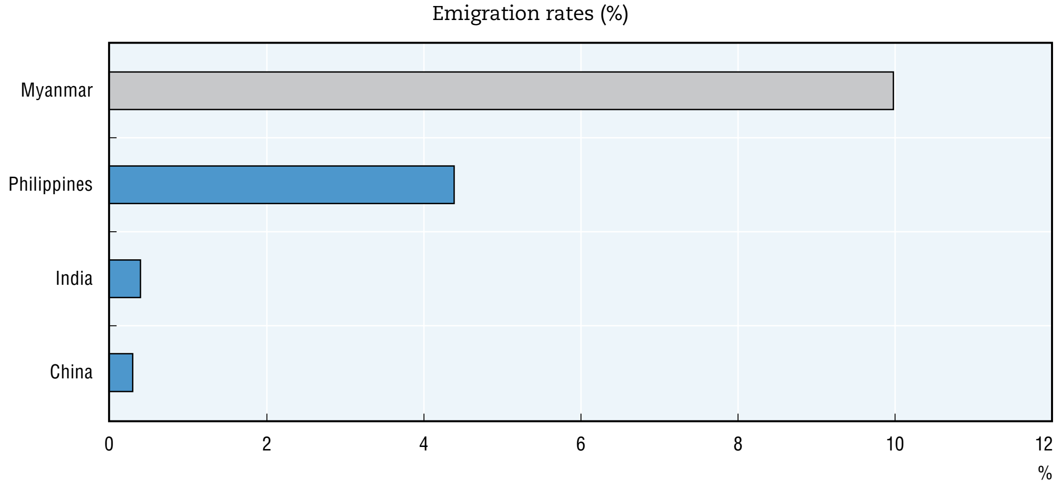
Official figures put the stock of Myanmar nationals living abroad at 514 000 (World Bank, 2011), but this does not take into account unofficial migration. Other estimates place the real number closer to 5.5 million (Mon, 2014), making Myanmar's emigration rate particularly high, even when compared with other "high emigration" countries such as the Philippines (Figure 3.6).

The focus of policy of the Ministry of Labour, Employment and Social Security (MoLESS) seems to be aimed at formalising the large unofficial flows of Myanmar nationals abroad rather than encouraging skilled workers to stay in Myanmar. Myanmar has Memoranda of Understanding with over 15 countries[11] to supply workers. Between 1990 and November 2012, about 1.3 million Myanmar workers had been legally dispatched abroad for work.[12] In 2013, Labour Exchange Offices placed 484 519 jobseekers in employment positions, 16% of which were overseas. The MoLESS runs four skill training centres (two in Yangon, one in Mandalay and one in Pathein).[13] Among other things, the training centres provide pre-departure training for Myanmar workers going abroad under the Employment Permit System. The training centres aim to improve the skill level of Myanmar workers in the sectors where they are most in demand abroad, typically general workers in construction, gardening, livestock breeding, fisheries and manufacturing industries.

Looking at the situation from the other side, Myanmar's diaspora represents a considerable pool of skilled workers who could contribute to Myanmar's economy if they return. The government is hoping that many workers will return, encouraged by the recent political and economic reforms, bringing their skills with them. A recent survey of Myanmar migrants working in Thailand (where there are an estimated 2.3 million Myanmar nationals working) suggests this could be a reasonable expectation (IOM, 2013).

Figure 3.6. **Around 10% of Myanmar's population is estimated to live abroad**

Emigration rates (%)



Note: Myanmar data based on 2009 estimates; China, India and Philippines figures refer to 2005-06.

Sources: Mon (2014), "Mobility, identity and contributions of skilled Burmese migrant workers: An exploratory study in Bangkok 45", *ABAC Journal*, Vol. 34, No. 1, Assumption University of Thailand, *www.abacjournal.au.edu/*; OECD (2012), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264177338-en*.

StatLink http://dx.doi.org/10.1787/888933134521

Some 80% of migrants surveyed said they wanted to go back to Myanmar in the future, with 30% reporting that they planned to return within three years.

While most Myanmar workers who left for Thailand had just primary education and very few had any prior vocational training, those workers will have gained skills in important sectors through their experience working abroad: over half of migrants surveyed felt they had gained useful skills while working in Thailand. Many Myanmar nationals work in construction and fisheries, two sectors which have high potential for expansion in Myanmar. Three-quarters migrated to Thailand primarily for economic reasons (i.e. higher incomes, better employment opportunities) but this may not be the driving force for their return: half reported that the acceptable minimum income in Myanmar would be what they presently earn; another 36%, however, said they would be content with a lower income than they were at present earning in Thailand.

However, the right incentives will need to be put in place so that returnees put their skills to use in the sectors where they have built up experience. Among surveyed Myanmar workers, the preferred job after returning correlates more strongly with the type of job held prior to migrating than with the job currently held in Thailand. Just 3% of migrants surveyed planned to return to big cities or where there are jobs in Myanmar; 78% wanted to return to their hometowns or villages (75% are from rural areas and 77% are from the states and regions which border Thailand), often to farm their own land. The findings suggest that people do not want to be migrants, even internally, again. Whether their desire not to become migrants again will be fulfilled in practice is difficult to say. The reality of job opportunities in Myanmar may oblige them to move to large cities and other areas of job creation. However, the preference to remain in their traditional home would argue for a focus on creating jobs in rural areas, through an agricultural value chain approach that generates linkages with complementary services and inputs (generally) in the non-agricultural sector (see Chapter 2).

Putting skills to effective use

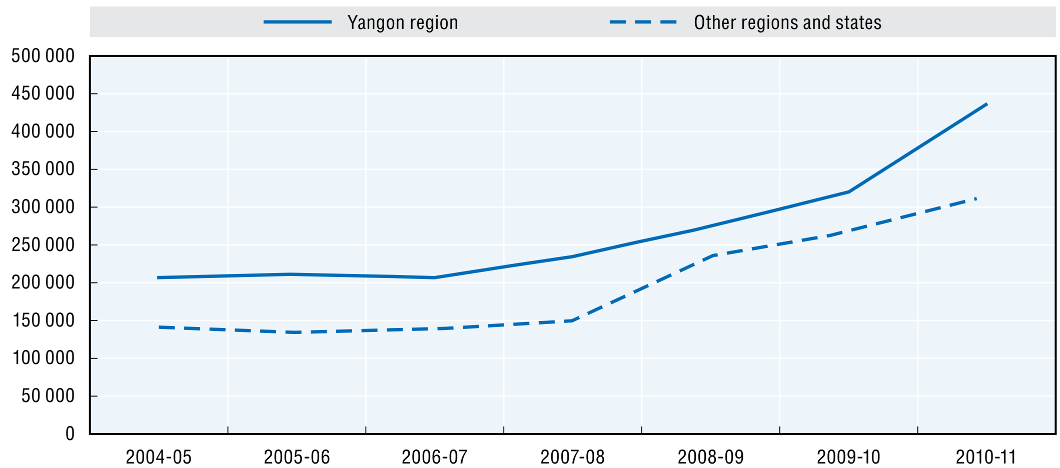
People's skills are not always used effectively in the workplace. Workers may not be well matched with their jobs, either having more skills than needed for the tasks that they are required to perform or too few skills, making them less productive. Employment services, whether public or private, are an important instrument for ensuring that skills are utilised effectively through job-matching services and also in building up the right skills in the labour force by providing training to meet employers' needs. Employers also have a role to play in investing in the skills of their workforce.

More and more jobseekers are using employment offices to find work

The extent to which employment services in Myanmar ensure that skills are put to effective use is difficult to assess owing to a lack of data. Myanmar has 91 Labour Exchange Offices (14 state/region offices and 77 local offices) under the MoLESS that are charged among other tasks with managing employment issues, both local and for overseas workers, and enhancing the skills development of workers in the workplace. The number of people seeking employment through labour exchange offices has been rising in recent years and jobseekers in the Yangon offices outnumber the rest of the country's states and regions combined (Figure 3.7). The performance of the offices in filling vacancies has improved over time (Figure 3.8). In 2013, labour exchange offices placed 484 519 jobseekers in employment. What is not known is the share of jobseekers who found a job through labour exchange offices or

Figure 3.7. **The number of jobseekers using employment offices to find work has been rising**

Number of jobseekers



Source: CSO (2012), *Myanmar Statistical Yearbook 2011*, Central Statistical Organisation, Ministry of National Planning and Economic Development, Nay Pyi Taw, Myanmar.

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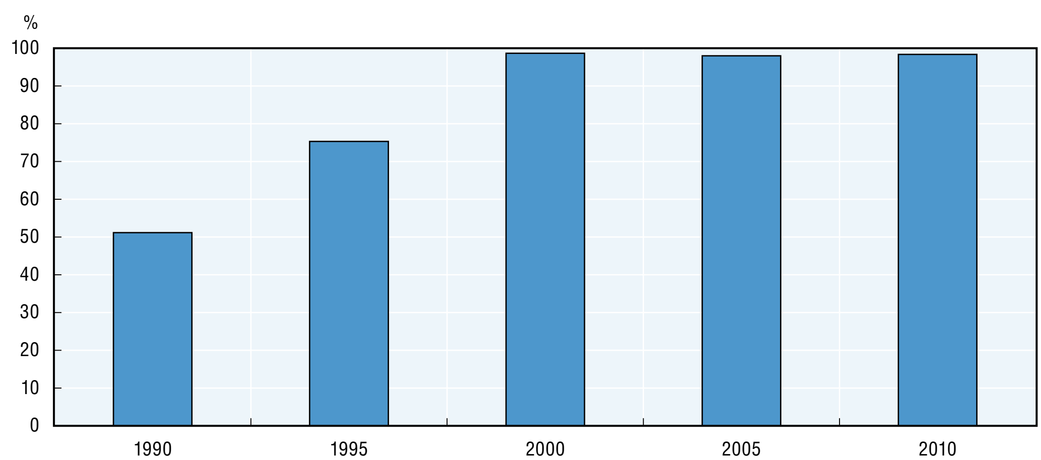
Figure 3.8. **Employment offices' performance in filling vacancies has improved**

Percentage of vacancies registered at government labour exchanges filled within the year



Source: CSO (2012), *Myanmar Statistical Yearbook 2011*, Central Statistical Organisation, Ministry of National Planning and Economic Development, Nay Pyi Taw, Myanmar.

StatLink http://dx.doi.org/10.1787/888933134559

what share of total jobs are filled through those offices. This will be an important performance indicator to establish as Myanmar develops this area. Under the new Employment and Skills Development Law passed in August 2013, employers will be obliged to inform labour exchange offices about present and forthcoming vacancies. This policy, if implemented, should ensure that the offices have an accurate picture of local demand. The new law will also allow for local private employment agencies to provide free services to jobseekers.

Continued training for workers is essential to address skills mismatches

There are signs that workers may not be well matched to jobs in terms of the skills they have compared to the skills demanded by the job. Employers' organisations and government officials report that young people are often not "work ready" by the time they complete their initial education, or even after graduation from university. Around a quarter of firms reported that it is difficult or very difficult to recruit qualified skilled workers and 20% report that it is difficult or very difficult to recruit professionals (OECD, UMFCCI and UNESCAP, 2014).[14] Recruitment problems for other occupation groups are less pronounced. Entrants into the labour market instead tend to acquire the necessary skills by learning on-the-job and through in-house training: 88% of Myanmar firms who faced a skills shortage (amounting to 38% of all firms) tried to overcome the problem through organising in-house training (OECD, UMFCCI and UNESCAP, 2014). It is estimated that for computer professionals it takes six months for a graduate to become useful and up to two years to reach a professional level; engineering graduates take two to three years to be useful and up to five years to be fully able to perform their job (ADB, 2013b).

To tackle the challenge of skills mismatches, continued training for workers is essential and employers need to be encouraged to invest in the skills of their workers. Employers know their skills needs best and are therefore in a good position to make effective decisions about training. In Myanmar, employers' investment in formal training to maintain, develop or increase workers' knowledge and skills is very limited. Over half of all firms do not spend anything on training for employees. Of the firms that did spend something on training, around 20% spent MMK 50 000-100 000 per employee per year (roughly USD 50-100) and another 20% spent MMK 10 000-500 000 per employee per year (roughly USD 100-500) (OECD, UMFCCI and UNESCAP, 2014).

However, the incentives for employers to invest in their employees may be insufficient, even if the employers benefit from such investments. For example, individual firms may be unwilling to provide training if their employees are likely to leave for a competitor, once trained. This appears to be an issue in Myanmar. The *Myanmar Business Survey* data (OECD, UMFCCI and UNESCAP, 2014) reveal that firms that report that employees leaving for other firms is a problem are less likely to spend money on training. Of 43% of firms that reported having technical or professional skills problems with the workforce; 534 firms (or 41%) reported that employees were moving away to other firms. In this subsample, firms which spent money on training are on average less likely to lose employees to other firms, regardless of firm size, firm age and ownership. The relationship is statistically significant.

Government schemes, especially for individuals with low levels of skills, are therefore often necessary to solve the problem of under-skilling in the labour force and to achieve an optimal match between workers' skills and job requirements (OECD, 2012). This suggests a role for publicly financed provision of training, especially for workers in sectors where employers may be unwilling to invest owing to a higher likelihood of employees leaving for other firms. In Myanmar, the fishing sector (48% of firms surveyed) and the hotels and restaurant sector (46%) reported problems with skilled employees leaving for other firms most frequently (Figure 3.9).

Currently public provision of training is very limited in Myanmar. For example, the MoLESS runs four skill training centres that provide training in a fairly small number of skills.[15] As mentioned previously, these skill training centres are also largely geared to training workers to work abroad under the Employment Permit System. To expand provision, the government could explore the possibilities for public-private partnerships for skills development, whereby private training providers receive public financial support to deliver training programmes identified as priorities for workforce development. Quality assurance procedures would need to be in place to ensure that the training meets required standards.

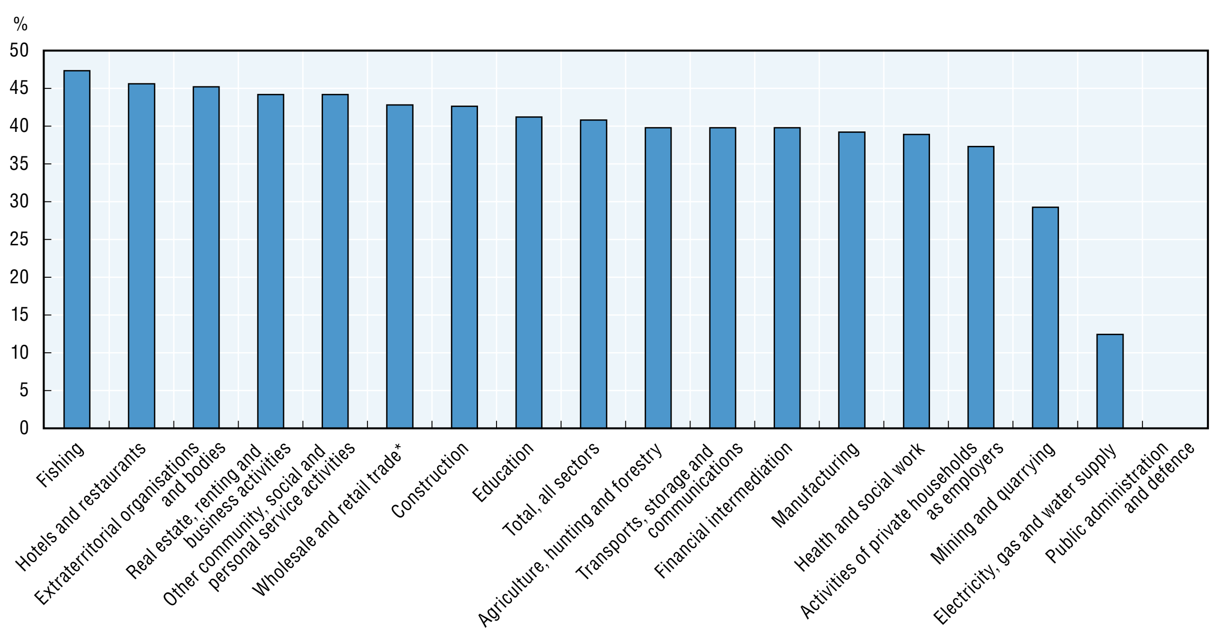
A number of OECD countries have introduced a small tax on businesses in order to finance training and a similar solution is being pursued in Myanmar. The new Employment and Skills Development Law establishes an Employee Skills Development Fund to which employers are obliged to contribute 0.5% of the total wages of their employees at the supervisor level and below. The fund will be managed by a committee made up of government, employer and employee representatives and can be used to send employees to part-time or full-time training or retraining, to establish training courses, or to give loans to employers offering training courses. The use of the fund is restricted to industrial and service sector workers, and does not cover agricultural workers. There are so far few details on how the fund will be managed. Business associations, for example in the textiles industry, can also be involved in the provision of industry-specific training, with costs covered from membership contributions. These two mechanisms could provide an incentive for the private sector to provide training, as they help to pool the costs.

Smoothing transitions from education to the workplace

Given the signs of high youth unemployment in Myanmar (see the "Activating skills" section), a focus on transitions from education to the workplace is warranted. A smooth transition from school or university to the workplace can help to ensure that skills are utilised effectively. There are very few data available on education-to-work transitions in Myanmar, making the situation difficult to assess. For example, there is no information on employment rates of graduates after their studies or whether they found a job related to their field of study. However, certain features of the system suggest that there could be impediments to this transition.

Figure 3.9. **Firms report problems of skilled employees moving to other firms**

% of firms reporting skills problems and who identified skilled employees moving to other firms as a problem



* Includes repair of motor vehicles, motorcycles and personal and household goods.

Source: OECD, UMFCCI and UNESCAP (2014), *Myanmar Business Survey*, *www.unescap.org/sites/default/files/MBS_Questionnaire_Interactive_310114.pdf*.

StatLink http://dx.doi.org/10.1787/888933134578

A major impediment in the transition to work for school leavers is the simple pass/fail system of the final matriculation exam combined with the low pass rate. Pupils take the final matriculation examination when they are 15 or 16 years old. The matriculation exam, administered by the Ministry of Education, is highly regarded by parents and students but few students pass it. In the academic year 2010/11, only 35% of the 469 852 students who sat the matriculation examination passed. As passing the matriculation exam is the only route to higher education, this means that nearly 65% of pupils are left without recourse to continue formal education after the age of 16 and so must leave the basic education system with the lower secondary education certificate as their highest qualification. Furthermore, until a recent change in legislation, the legal working age in Myanmar was 18 years old and many public skills training programmes are targeted at over-18s. School leavers aged 16-17 who did not pass their matriculation exam were therefore caught in a situation where they could neither pursue further formal education nor work legally. With few options open, young people are likely to enter the informal sector or work as unregistered workers in "formal" enterprises. The new Employment and Skill Development Law, approved in August 2013, allows employers to hire 16-year-olds (the school-leaving age) as apprentices, which should improve school to work transitions. The government could also consider other ways of giving young people the opportunity to obtain work experience before completing their initial education as another way of improving the education to work transition and achieving a more effective utilisation of skills.

Sound career advice can be another important tool in smoothing transitions from education to work, but limited information on the skills demanded by the labour market in Myanmar hampers such efforts. Students must be helped to choose the fields and levels of qualifications that are both compatible with their abilities and interests and likely to be needed in the labour market. In Myanmar, teachers and parents are the primary source of career advice for students, but they do not have accurate information on the value of technical or general skills in the labour market. Advice tends instead to be based on what is highly regarded culturally – for example, academic, university education – rather than with regard to employment and earning prospects after study.

One way to ensure a smooth transition between education, training and employment is to create strong partnerships between schools, universities, employment services and employers. These partnerships have two functions: first, they help to assure that people find work that is in line with their skills; and second, they act as a feedback mechanism to ensure that acquired skills fit the needs of business. In Myanmar, a lack of strong partnerships at local and national levels between schools, universities, employment services and employers may be hampering smooth transitions and an effective utilisation of skills. Less than 4% of firms with a shortage of skilled workers have responded to this challenge by strengthening links with schools or universities in order to secure people with the right skills. In 2006, Myanmar universities established Community Development Centres. Among other functions, these centres were intended to forge a link between universities and their local communities, including local businesses, but the Ministry of Education (Department of Higher Education) judged that the scheme was largely unsuccessful owing to a lack of engagement from the private sector. There are, however, other examples where this partnership does exist and is functioning relatively well. The Myanmar Engineering Society, for example, fosters strong links with engineering schools and employers and provides advice on curricula and other relevant matters.

A national qualifications framework would help employers to identify workers' skills

National qualifications frameworks (NQF) are an important element of a national qualifications system. An NQF serves to develop and classify qualifications according to a set of criteria applicable to specified levels of learning outcomes. This has the advantage of increasing the consistency of qualifications' definitions and also creating more transparency for individuals and employers. Ultimately, being able to identify people's skills accurately helps ensure that those skills are used effectively.

There is currently no consistent qualifications framework in Myanmar that provides transparent and reliable information about the skills that people have. There is also a lack of standardisation across courses, quality control and certification. Many different ministries run courses and issue certificates, often in the same/similar skills areas, but there is no consistency between them in terms of curricula or standards. For example, the MoLESS runs basic welding, machinist and electrical courses; the Ministry of Border Affairs oversees courses in carpentry, masonry, mechanics, iron works, mechanical repairs and maintenance, electrical and welding training, and basic electrical training. The Ministry of Industry runs courses and gives certificates in basic metal work and machine tool operation, among others. The result is that certificates have very little signalling value to employers about the skills that potential employees actually possess. Some of the courses do not lead to any certification at all.

The construction of a qualifications framework in line with ASEAN standards is underway in Myanmar, although responsibility for it is divided between ministries. While the Ministry of Education is leading the development of the NQF – co-ordinating 13 ministries – responsibility for the different skills levels are divided between ministries. The Ministry of Science and Technology is responsible for the top four skill levels (covering diplomas, bachelors, masters and doctoral degrees) whereas the MoLESS, through its National Skills Standards Authority (NSSA), is responsible for the bottom four levels (unskilled, semi-skilled, skilled and supervisor). Established in 2007, the NSSA is setting up occupational competency standards, designing curricula, establishing skills training and assessment centres, issuing certificates and organising skills competitions. The NSSA has developed skill standards for 173 occupations/jobs, of which 92 have been approved by Cabinet, and has started to apply these standards in curriculum development, for accreditation of (public and non-public) training providers and for skill/competence assessment of trainees.

Irrespective of the precise design of Myanmar's national qualifications framework, it will be important for people who have already obtained skills informally to be able to signal them to the market. There is as yet no comprehensive mechanism for recognition of skills acquired non-formally or informally.[16] The Recognition of Prior Learning (RPL) is a process for certifying learning that has come from experience and/or previous formal, non-formal and informal learning. The RPL helps ensure that learning outcomes that are not obtained in a formal context are as well recognised and as visible as those that are. An RPL programme was introduced in Malaysia in 2010 to support the government's aim to increase the size of the skilled workforce to 33% by 2015 and to 50% by 2020. The RPL will grant the Malaysian Skills Certificate to workers who do not have any formal certification but who have obtained relevant knowledge, experience and skills in the workplace based on their competency levels.

A recognition programme could help also those individuals who have never had, or who do not have, the opportunity to access formal learning (Werquin, 2010). This is especially important in Myanmar's context given the education opportunities lost by many individuals during the previous regime. As one survey respondent commented: "It is important to think of people of age 30-40 years for job opportunities. They lost education opportunities for the last 20 years while struggling for work, and they are now facing difficulties to find jobs." The RPL could be one part of the response to this challenge by allowing these workers to more easily inform potential employers about the skills they possess. RPL requires a quality assessment process to assess outcomes. This process will require evaluators (for example, professionals from the occupation corresponding to the skills) as well as some form of documentation that provides a record of an individual's knowledge, skills and competences (for example, a "competence passport" or a "learning portfolio").

Strengthening the policy framework for the skills system

As Myanmar undergoes political and economic transition, its skills system needs to adapt to the new context. Historically, ministries have had responsibility for education and training in their policy domain, often to service the skills needs of state-owned enterprises. Today, the skills system needs to support a market-based, modernising economy, so the structures and policy-making processes need to change accordingly. A whole-of-government approach is essential as a broad range of policy fields are implicated in developing, activating and effectively using skills, including education, science and technology, family affairs, employment, industrial and economic development, migration and integration, social welfare, and public finance. Creating linkages between these different policy fields is essential for ensuring efficiency and avoiding duplication of effort.

The policy-making framework is complex

The framework for policy making, both for the formal education sector and for wider skills policy, is complex. A large number of ministries have responsibility for education or training programmes (Box 3.7), and co-ordination between different ministries poses a challenge for the design of a coherent skills strategy. Limited public sector capacity compounds the problem. Resources to design and to implement skills policies, both financing and expertise, are strained. Moving forward, the government could consider consolidating operational responsibility for education and training into a smaller number of ministries.

The Basic Education Law and the University Education Law date from 1973, with amendments in 1983 and 1989 (and in 1998 for the University Education Law). The Technical, Agricultural and Vocational Education Law (1974, amended in 1989) guides the activities of the Department of Technical and Vocational Education (Ministry of Science and Technology) and relates specifically to technical and vocational education. An overarching education law is currently being drafted to replace these earlier laws, and is due to be presented to Parliament in 2014. This law will act as the "mother law" under which other education-related laws can be drafted, for example a private university law.

The National Education Committee (NEC), chaired by the Union Minister for Education, is the national level co-ordinating and decision-making body governing education in Myanmar. Another 11 ministries having responsibility for education institutions are represented in the NEC at the Deputy Minister level. Under the NEC, higher education matters are dealt with by two councils: the Universities Central Council and the Council

Box 3.7. **Responsibility for education and training is divided between many ministries**

Most of the basic education system is administered by the Ministry of Education, although other ministries have some responsibility. The Ministry of Science and Technology oversees 36 government technical high schools which provide technical and vocational education and training (TVET) at the upper secondary level. The Ministry of Religious Affairs oversees the 1 429 monastic schools in the country. There is also some non-state provision of education, including private sector provision.*

A total of 18 line ministries provide some technical or vocational training. The Ministry of Science and Technology is the focal point ministry for TVET (see previous section on TVET for more details).

Responsibility for higher education is divided between 13 ministries in Myanmar, which creates challenges for policy coherence and co-ordination. These ministries together oversee 168 universities that provide tertiary education at the diploma, bachelor, masters and doctorate degree levels. Most universities fall under either the Ministry of Education (66 universities) or the Ministry of Science and Technology (61 universities providing vocational education at the tertiary level, such as engineering). Within the Ministry of Education, the Department of Higher Education is split into Upper Myanmar (covering Mandalay University and others in the region) and Lower Myanmar (which oversees Yangon University and others in the region). There are currently no private universities in Myanmar although a planned Private University Law will enable them to operate.

* Private provision tends to cater to richer families. All private schools were nationalised in 1962, although a number operated illegally afterwards. In 2011, the government introduced a Private School Registration Law which enables private schools for grades 5 to 9 to operate legally. Private schools are obliged to follow the same curriculum at state schools, although they have the freedom to teach additional subjects as well.

of University Academic Bodies. The Universities' Central Council is responsible for policy formulation and implementation of higher education institutions.

Plans for the education sector are drawn up in the framework for the 30-year long-term education development plan – divided into six 5-year plans – which feeds into the 30-year comprehensive development plan (2001-2031). In addition, a number of processes for policy formation have been established during the reform period since the change of regime in 2011. A Comprehensive Education Sector Review (CESR), led by the Ministry of Education with the involvement of other ministries and development partners (bilateral and multi-lateral), was initiated in July 2012. The purpose of the CESR is to use accurate and up-to-date information to develop a costed, strategic education sector plan. In 2013, an Education Promotion Implementation Committee was formed under the auspices of the President's Office, composed of an Advisory Board and a Task Force. The Advisory Board is made up of representatives from business, academia and civil society in Myanmar and the Task Force is composed of representatives from the different government ministries with responsibility for education. Some 18 working groups have been formed collectively from the Board and Task Force, each co-led by an Advisory Board member and a Task Force member. The working groups, which cover all aspects of the education system, will provide recommendations to the committee that is drafting the National Education Law.

The establishment of working groups that report to a central committee is a positive step in co-ordinating and implementing holistic national education policies. However, it is important that the deliverables and performance targets of the various working groups should be clear and transparent; and the central committee should release the findings and recommendations publicly so that policy outcomes can be monitored.

The Ministry of Labour, Employment and Social Security has responsibility for broader skills policy beyond the formal education sector. A Workforce Development Plan sets the direction for developing skills in the workforce. In 2013, each region and state drafted Workforce Development Plans to feed into a national-level plan overseen by MoLESS. The NSSA under the Department of Labour also has responsibility for policy development (including drafting new laws). The new Employment and Skill Development Law that came into force in November 2013 establishes a central body for employment and skill development comprising members from ministries, local governments, industry, employers' organisations and labour organisations. A "skill development team" under the central body will have responsibility for specifying skills standards and quality assurance mechanisms (assessment and certification) as well as managing the skill development fund. This new body will replace the NSSA. The specific rules and regulations of the law are still being drafted.

Policy making would be strengthened by better information and data and the involvement of social partners

As well as institutional complexity and overlapping responsibilities, effective policy making is hindered by a lack of accurate information and data. Myanmar's public sector institutions do not systematically gather and publish data and other information about evolving skills demand needed to design policies. For example, the last labour force survey was carried out in 1990, although another is planned for 2015/16. Given this lack of information, policy naturally tends to be more supply-driven than demand-driven and so is not very responsive to the needs of the labour market.

Better data, particularly on the labour market outcomes of TVET, are vital to support the link between vocational education and training and the labour market. Better information might be provided either through surveys of TVET graduates in order to establish labour market outcomes, or by tracking cohorts of individuals through TVET into employment to map out career histories. For instance, in Korea there is a good research base on post-secondary vocational education and training (Kis and Park, 2012). The Korean Research Institute for Vocational Education and Training conducts research that supports the development and implementation of TVET policies. Various surveys are conducted that provide useful information on the transition from school to work, the outcomes of education and training programmes and the labour market.

There is also little systematic involvement of social partners (i.e. employer and employee representatives) in policy design. As well as better information, greater involvement of social partners in designing and delivering education and training programmes would be another way of ensuring that skills policies are more demand-driven and responsive to the needs of the labour market. Recently, social partners have been included in an Advisory Board to the Education Promotion Implementation Committee. This is a positive sign. Moving forward, more institutionalised arrangements to include social partners would likely lead to more effective skills policy making and implementation. Myanmar could draw on examples of institutional arrangements used in other countries, such as Denmark's Advisory Council which operates at the national level and its trade committees at the sectoral level (Box 3.8.). If Myanmar were to reduce the number of ministries with operational responsibility for education and training, such advisory bodies could also be a mechanism to include other relevant line ministries.

Box 3.8. **Institutional frameworks to involve social partners in Denmark**

In *Denmark*, the Advisory Council for Initial Vocational Education and Training advises the Ministry of Education on all matters concerning the VET system (the Ministry of Education is the overall body responsible for the VET system in Denmark having responsibility for all legal, policy and programme definition aspects). For example, the Advisory Council is responsible for monitoring labour market trends and, on this basis, recommends the establishment of new qualifications. Its members represent the social partners, school leaders and teachers' associations, and persons appointed by the Ministry of Education.

At the sectoral level employers and employees are equally represented in trade committees. They advise on specific VET qualifications relevant to their sector, ensure the relevance and quality of VET programmes in relation to the labour market, approve training places, and are responsible for the final VET examination (Journeyman's test) and for issuing certificates to VET trainees.

Source: Kuczera, M. and S. Field (2010), *OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of China 2010*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264113749-en*.

Conclusion

Building up the right skills in the workforce will be essential to support Myanmar's transition towards a modern, market-based economy. Policy makers need to focus attention on developing relevant skills, removing any barriers which prevent people from actively contributing their skills to the labour market, and ensuring that people's skills are utilised effectively, all underpinned by a strong policy framework for skills. The following priorities are identified in each of these areas:

Developing relevant skills

- It will be important to address the financial and other non-financial barriers to access to education that keep enrolment and completion rates from improving more quickly. Barriers include care or work responsibilities that children may have outside of school, the physical distance children need to travel to school (especially secondary schools), the language of instruction for children for whom Myanmar language is not their mother tongue, and inadequate provision of services for children with disabilities.
- More and better technical and vocational education would better serve the needs of Myanmar's modernising economy and would provide more useful skills to the large numbers of students who do not reach higher education. Including workplace training and ensuring that TVET teachers keep up-to-date with modern industry standards will be important quality aspects.
- As teacher quality is an important school factor influencing student achievement, increasing the quality and duration of teacher training will be an important policy goal. Selection criteria for teacher training colleges and institutes could be used to ensure that competent and motivated candidates enter teacher training; more flexible entry pathways into the teaching profession could also help. For example, introducing the option of a two-year teacher training course for university graduates of other disciplines would open up an additional entry point into the profession.

Activating skills supply

- Effective polices will be needed to encourage "brain circulation" and avoid the problem of "brain drain". The best way to prevent brain drain is to provide incentives to stay, including by improving local labour-market conditions, rather than by imposing coercive measures to prevent emigration.
- Migrants' apparent preference to return to their traditional home would argue for a focus on creating jobs in rural areas, through an agricultural value chain approach that generates linkages with complementary services and inputs (generally) in the non-agricultural sector. The government could also consider targeted services to help returning workers reintegrate into local labour markets.

Putting skills to effective use

- Myanmar could strengthen employment services, in particular by providing job-matching services and training to meet employers' needs. Government schemes, especially for individuals with low levels of skills, are necessary to solve the problem of under-skilling in the labour force and to achieve an optimal match between workers' skills and job requirements. This will be especially important in sectors where firms may be unwilling to provide training if their employees are likely to leave for a competitor, which in Myanmar is particularly the case in the fisheries sector and the hotels and tourism sector, among others.
- Facilitating school to work transitions through reform of the simple pass/fail matriculation system, evidence-based careers advice services and strong partnerships between schools, universities, employment services and employers would also help better utilisation of skills.
- Efforts should be made to fully establish the national qualifications framework (NQF) that is currently under construction as soon as possible. Myanmar could consider establishing a Recognition of Prior Learning programme which would be recognised within the NQF to help those individuals who have never had, or who do not have, the opportunity to access formal learning.

Strengthening the policy framework for the skills system

- In order to reduce complexity and enhance the coherence of policy making, the government could consider consolidating operational responsibility for education and training (both general and TVET) into a smaller number of ministries.
- Systematically gathering and publishing data and other information about evolving skills demand would support evidence-based policy making that is more responsive to labour market demand. Introducing institutionalised arrangements – such as advisory councils – to include social partners in designing and implementing skills policy would also help ensure that education and training programmes are relevant to the needs of business and the wider economy.

Notes

1. These estimates are based on United Nations (2013) World Population Prospects, assuming medium fertility rates.
2. In the 1980s and 1990s, authorities responded to large-scale student protests by closing universities for extended periods of time. For example, between 1988 and 2000, Yangon University was closed for ten years (ADB, 2013a).

3. Functional literacy is defined as a level of reading, writing and calculation skills sufficient to function in the community in which an individual lives.
4. Myanmar also provides fewer years of basic education than neighbouring countries. Myanmar's basic education system is 11 years in total, whereas most other systems in the ASEAN region tend to be 12 years in duration.
5. While spending on education is still relatively low, it should be noted that the current government has increased the budget for education significantly since it came into office in 2011.
6. Public special institutions providing educational or vocational training services for people with disabilities include a school for disabled children, two schools for the blind, one school for the deaf, one vocational training school for adult disabled persons and one care centre for the disabled, all run by the Department of Social Welfare.
7. Skills-based literacy programmes aim to improve learners' functional literacy skills based on their specific livelihoods or business activities.
8. Teachers in monastic schools did recently receive a one-off payment from central government funds.
9. As stated in Myanmar's Framework for Economic and Social Reforms 2012.
10. Foundation skills are defined as including problem solving in technology-rich environments (the ability to use technology to solve problems and to accomplish complex tasks); literacy (the ability to understand and use information from written texts in a variety of contexts to achieve goals and further develop knowledge); numeracy (the ability to use, apply, interpret and communicate mathematical information and ideas); and other reading components (including word recognition, decoding skills, vocabulary knowledge and fluency).
11. These countries include Japan, Korea, Kuwait, Malaysia, Qatar, Singapore, Thailand and the UAE among others.
12. This official number does not include Myanmar nationals working abroad illegally.
13. Training courses provided at MoLESS centres include: supervisor courses; instructional techniques courses; trade skill testing technique courses; productivity improvement courses; basic welding courses; basic machinist courses; basic electrical courses; basic pipe fitting courses.
14. In the Myanmar Business Survey, a skilled worker refers to workers with more diverse and longer experience than unskilled workers. Professionals are those workers who have higher education and/or professional certificates.
15. These courses are outside of the formal TVET system in Myanmar.
16. In this context, informal learning is learning that results from daily activities related to work, family or leisure and which is often unintentional from the learner's perspective; this learning could be referred to as "learning by experience", or simply "experience". Non-formal learning is learning which is embedded in planned activities that are not explicitly designated as learning, but is intentional from the learner's point of view, for example; a person's decision to teach themselves to use a new computer software program (OECD, 2010b).

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Chapter 4

Providing the financial resources to support development

Realisation of Myanmar's potential will depend upon how effectively the country can mobilise and allocate the financial resources to support its development needs. At present, the key institutions in the government and financial system that govern mobilisation and allocation of development financial resources are underdeveloped and hampered by a range of constraints and distortions. These include limited government capacities and underdeveloped legal and fiscal institutions, as well as limitations in the regulatory frameworks essential to the effective functioning of markets and private sector development.

Myanmar's authorities have made impressive beginnings on addressing these obstacles but the challenge will be to sustain an ongoing process of institutional reforms and capacity building. Areas of reform should cover government mechanisms for reporting, co-ordinating, and managing external funding; public financial management and revenue collection; as well financial market development. Reforms should be targeted to ensure that the provision of financial resources not only keeps up with but helps to catalyse the country's overall development.

Myanmar has great potential for rapid growth and development over the coming decades. It is currently at significantly lower income levels than most Asian countries, but the country is endowed with a wealth of assets, including fertile land, minerals, hydrocarbons, forests and hydro-resources and a relatively young population. Myanmar can also turn its advantageous location to its benefit and regain or even exceed the importance it had played as a regional hub in earlier times.

Realisation of Myanmar's potential will depend critically upon how effectively the country can mobilise and allocate the financial resources to support its development needs. This will require financial resources on a considerably larger scale than have been available during the pre-reform decades (Box 4.1). This chapter discusses the challenges Myanmar faces in mobilising and making effective use of development resources from external sources, through the government, and through the financial system. These challenges can be broadly divided into near and medium-term reforms to remove distortions and other obstacles to effective provision of development resources; and reforms over the longer-term (but which need to begin in the medium-term) to sustain the progressive development of the critical institutions as overall economic development proceeds. The discussion highlights the following priorities.

Key findings

- The regulations for foreign investment in Myanmar will need to be further clarified and refined with experience to ensure that foreign direct investment (FDI) inflows are efficiently utilised and contribute as far as possible to overall development of the private sector. Institutional arrangements for integrating overseas direct assistance (ODA) inflows into government planning and budgeting should also be strengthened.
- Overall government revenues will need to be raised substantially – mainly through reforms to the tax system and tax structure and improved tax compliance – and extensive reforms will be needed to develop more effective mechanisms for ensuring that government revenues are allocated in line with development priorities and to ensure fiscal sustainability. The present fledgling fiscal federalism institutions also need to be elaborated to allow for greater decentralisation to be achieved.
- The conditions need to be created for the development and strengthening of the capabilities of the financial system to allocate savings, provide financial instruments and services to meet the needs of the population, and support effective functioning of markets. Integration of the now fragmented components of the financial system, particularly the rural financial system, will be a critical element of this process. Relaxation of regulatory and other constraints on financial institutions and markets is critical to getting this process started and direct government interventions, such as subsidies, may be needed for a time in certain well defined areas. But the ultimate success of financial system strengthening will depend on market-driven development of financial institutions and markets.

Box 4.1. **Myanmar will need sizeable physical investment**

Over the past decades, the investment share in Myanmar has been very low in comparison with other Asian countries, leading to a significant gap in capital stocks. Investment reached around 9% of GDP in the 1990s and around 13% in the 2000s. Despite this increase in the 2000s, the investment ratio remains significantly lower compared with the more than 40% of GDP in China over the past several decades and the more than 30% of GDP for many Southeast Asian economies. Given low investment shares and low income, the capital stock per capita in Myanmar is also much lower than in other Asian countries. The capital stock per capita in Myanmar in 2012 has been estimated at around 4% of that of China.

Based on these starting points, a number of rough estimates of how much capital investment is likely to be needed are shown in Table 4.1. The investment share would need to be significantly boosted to sustain catching-up with other Asian economies. In order to sustain economic catching-up with other Asian economies, Myanmar would need to invest an average of 21-30% of GDP annually through 2035, compared with 16.7% in 2012 The scenarios imply that the investment share would have to rise substantially over time, starting below the average in the medium term and rising to at least 30% and as much as 43% of GDP by 2035.

Sources: Author's calculations, based on IMF (2013a), *World Economic Outlook* (database), International Monetary Fund, *www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx* and World Bank (2013a) *World Development Indicators* (database), *http://databank.worldbank.org/data/home.aspx*.

Mobilising funds for investments into development

Achievement of the growth targets implied by the country's development objectives (which are comparable to those attained by other developing Asian countries in the early stages of their take-off) could require capital investment averaging between 21% and 28% of gross domestic (GDP) annually over the next two decades, and rising over time to reach as much as 30-40% of GDP by 2035 (Table 4.1). Substantial additional financial resources will be needed to provide education, training and health services essential to human capital development and to support institutional reforms needed to sustain rapid and inclusive growth. Although it is difficult to estimate the size of these needs, the discussion in the remainder of this chapter suggests that they could amount to as much as an additional 5-10% of GDP on average over the next two decades.

In order to meet these funding needs, Myanmar will have to tap all available sources of financial inflows, domestic as well as external. Financial resources from external sources, mainly ODA and FDI along with a small portion of remittances from Myanmar citizens working abroad (most of which will be needed for consumption) are likely to be particularly important in the medium term. The total of FDI, ODA and official remittances in 2012 was USD 2.7 billion (about 4.5% of GDP). However, given the expected increases in ODA and FDI following the lifting of sanctions and political and economic reforms, flows from these sources and a large unofficial component of remittances could rise to as much as USD 7.3 billion over the medium term, or 13.2% of GDP. This level is comparable to some other Asian neighbours (for instance, in 2011, FDI, ODA and remittances represented 14.5% of GDP in Cambodia, 14.5% in Viet Nam and 9.7% in Lao PDR) and suggests that the figure is realistic.

Table 4.1. **Assessment of investment needs in Myanmar until 2035, based on two scenarios**

	Scenario 1	Scenario 2
	Growth in Myanmar until 2035: 6.5%	
Investment share, average over 2013-35	27.3%	21.2%
Investment share reached in 2035	37.0%	29.3%
	Growth in Myanmar until 2035: 7.5%	
Investment share, average over 2013-35	28.9%	24.5%
Investment share reached in 2035	40.0%	33.8%
	Growth in Myanmar until 2035: 8.5%	
Investment share, average over 2013-35	30.4%	27.8%
Investment share reached in 2035	43.0%	38.3%

Notes: Investment share in 2012 was around 16.7%. In both scenarios, GDP growth rates are assumed to be constant over the period 2012-35. Scenario 1 assumes a constant incremental capital to output ratio (ICOR) while scenario 2 assumes an increasing ICOR. Estimates are given for three average annual GDP growth rates of: 6.5%, 7.5% and 8.5%. In the first scenario, Myanmar reaches the capital stock per capita corresponding to the level of GDP per capita attained by China in 2003 if its GDP grows at an average annual rate of 6.5%; and reaches the capital stock per capita required to attain China's per-capita GDP in 2005 and 2007, respectively, with GDP growth of 7.5% and 8.5%, respectively.

The second scenario assumes that the ICOR, which measures the marginal amount of investment necessary for an economy to generate an additional unit of GDP in Myanmar increases progressively from 1.2 in 2004 (calculated as a ten-year moving average) to 4.5 in 2035 (closer to current levels in other Asian economies). The ICOR is currently low in Myanmar, reflecting the relative scarcity of capital, and the corresponding average return on investments is relatively high. However, the ICOR is expected to increase as capital efficiency decreases along with capital accumulation. Given the projected efficiency trends in investment and the projected output, the corresponding investment amounts are derived for each year until 2035, and the investment shares until 2035.

Sources: Author's calculations, based on IMF (2013a), *World Economic Outlook* (database), International Monetary Fund, *www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx* and World Bank (2013a) *World Development Indicators* (database), *http://databank.worldbank.org/data/home.aspx*.

This analysis indicates that external sources could provide as much as one-quarter to one-third of Myanmar's financing needs for development through at least the remainder of this decade. However, ODA and FDI flows are unlikely to be sustained at such a level indefinitely: as development proceeds and the most productive foreign investments are exhausted, the flows are likely to recede.

The bulk of the financial resources to support development will come from government revenues and domestic savings. Both sources have been depressed by excessive regulation and other legacies of the pre-reform system and will need to rise substantially. Government revenues, especially tax revenues, are exceptionally low compared to other Asian developing countries. Gross national savings (GDP less final consumption expenditure) has risen significantly since 2010, to an estimated rate of about 24.5% of GDP in 2012 from 15.8% in 2009, but is still short of the levels of 30% or more attained by Viet Nam and most other rapidly growing Association of Southeast Asian Nations (ASEAN) economies (United Nations, 2013).

As important as raising the development resources from external and domestic sources is improvement in the means by which they are allocated. Effective allocation of development resources will require strengthening of a wide range of institutions in Myanmar that are at present underdeveloped or weak. These include institutions shaping the way in which government revenues are raised and allocated; the capacities of the financial system; and, more broadly the institutional arrangements for effective functioning of markets and businesses.

The remainder of this chapter discusses the challenges Myanmar faces in mobilising and making effective use of development resources from external sources, through the government, and through the financial system. These challenges can be broadly divided into near- and medium-term reforms to remove distortions and other obstacles to effective provision of development resources; and reforms over the longer term (but which need to begin in the medium term) to sustain the progressive development of the critical institutions as overall economic development proceeds. The discussion will focus especially on regulating foreign direct investments, managing ODA, improving the mobilisation and allocation of government revenues, and on strengthening the capacities of financial institutions and markets.

The challenge of managing development assistance

In the past, international development co-operation with Myanmar was mostly limited to humanitarian assistance because of economic sanctions and general political tensions, but this situation is changing fast. Funding was channelled mostly through non-governmental organisations (NGOs) in the past, but as donors have started to re-engage, total ODA commitments have increased from USD 246 million in 2007 to USD 763 million in 2012 (actual disbursements rose from USD 192 million to USD 515 million over the same period) and further increases are expected.

The country had significant debt arrears from previous concessional loans, amounting to almost USD 1 billion to the World Bank and the Asian Development Bank (ADB). These were restructured and/or cancelled in 2013, partly through a bridge-loan from Japan. Further arrears with countries of the Paris Club, Japan and other foreign creditors were also rescheduled or otherwise settled.

Renewed co-operation is an important step towards raising external funds but also holds many challenges. Financial inflows in the form of ODA as well as FDI will be crucial to finance economic development in the presence of low savings rates. However, the increased activity related to Myanmar's role as the last development "frontier" (Rieffel and Fox, 2013) may also turn into a challenge for the country, given that the government is in the midst of political reforms and has limited capacities to efficiently manage donors and to allocate funds. Given the multitude of donors with different preferences, it will also be important to ensure local ownership and alignment of ODA projects with national priorities.

ODA is picking up after years of limited development co-operation

Prior to the political reforms in 2011, the country had accumulated a total external debt of around USD 15 billion, of which USD 6.6 billion was owed to Japan, USD 3.7 billion to various other donors of the Paris Club, USD 2.13 billion to China and around USD 1 billion to multilateral agencies. Paris Club donors have since cancelled around 60% of their outstanding debt and rescheduled the rest, but the country's opening-up will lead to new loan inflows. Myanmar's total debt is estimated to be around USD 11.7 billion for 2014/15. Resolution of existing debt arrears of Myanmar with the World Bank and the ADB was a pre-condition to renewed engagement for these development banks. A recent debt sustainability analysis suggests some vulnerabilities to export shocks and to high public sector debt, but, given the generally favourable economic outlook, Myanmar's risk for debt distress was assessed to be low (IMF, 2013b).

A multitude of donor agencies are currently active in Myanmar, including bilateral agencies, embassies, three multi-donor funds (the "Global Fund to fight AIDS", the

"Multi-Donor Education Phase II Fund" and the "Livelihoods and Food Security Trust Fund", or LIFT), a number of multilaterals and several hundred national and international NGOs (Myanmar Information Unit, as of January 2014).

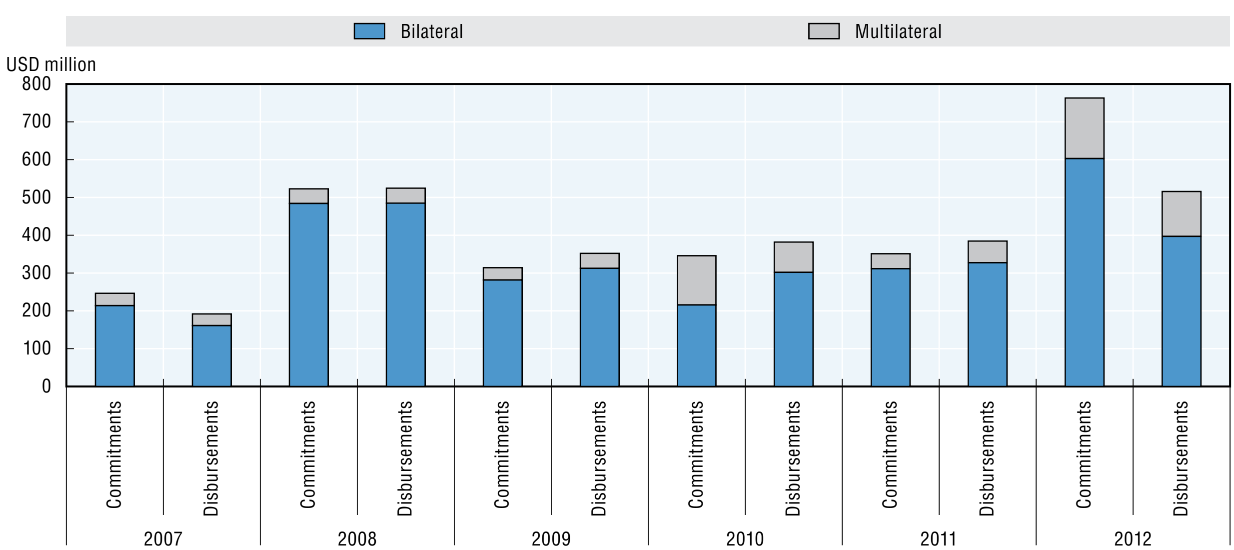
The government has no (accurate) data on current flows and no projections for future flows, but the OECD's database on Development Assistance Committee (DAC) donors allows an analysis of past commitments and disbursements for this sub-group of donors. In 2008, bilateral commitments peaked because of the emergency relief following the cyclone Nargis in 2007 (Figure 4.1). The aftermath of this catastrophe probably also accounts for the inflows in 2009-11, whereas the significant increase in 2012 was certainly due to renewed donor engagement following political reforms. Assistance from bilateral donors accounted for around 90% of total ODA assistance (as registered in the OECD Creditor Reporting System [CRS] database) until 2009, when the support through multilateral donors (mainly UN organisations and the Global Fund to fight AIDS) picked up.

Although development assistance has increased in recent years, levels are still low compared with other countries in developing Asia. ODA commitments to Myanmar amounted to only 60% of the ODA disbursed to Cambodia in 2012 (which has a much smaller population and higher income per capita than Myanmar), and only to 11% of the ODA disbursements received by Viet Nam. Per-capita levels further illustrate the potential for future ODA inflows: disbursements amounted to USD 54 per capita in Viet Nam, and USD 57 in Cambodia, but to only USD 7 in Myanmar in 2012. In relative terms, ODA disbursements to Myanmar usually were below 1% of GDP in recent years, with the exception of 2008 (the year after the cyclone). In view of the sizeable commitments by several donors in 2013, the government target of 4% of GDP was probably reached that year (pending official figures).

Even from the higher level attained in 2013, there is still significant further potential for catch-up in ODA with other countries in the region, but this also underscores the challenges of managing the incoming tide responsibly. Given the country's low level of development,

Figure 4.1. **ODA commitments to Myanmar are picking up**

ODA commitments and disbursements in USD million



Note: Several non-DAC countries, such as China and India, are not covered in the CRS database and therefore are not included.

Source: OECD (2013a), *Creditor Reporting System*, *http://stats.oecd.org/Index.aspx?datasetcode=CRS1*.

StatLink http://dx.doi.org/10.1787/888933134597

the need for funding is great but the government should take into consideration the limits of its absorptive capacity and focus on the quality and suitability of ODA allocations, rather than on the pure magnitude of inflows

A multitude of partners are (re-)engaging with Myanmar

A number of key donors, namely Australia, EU institutions, the World Bank, Japan, the United Kingdom and the United States, contributed more than USD 500 million in 2012, amounting to 50-60% of total DAC-donor commitments and have also announced sizeable commitments for the upcoming years. Following the Asian Development Bank's re-engagement, the bank also announced sizeable commitments in 2013.

Several non-DAC co-operation partners, such as India and China, are not covered in the OECD's database, which makes a comprehensive assessment difficult. China has very likely been the largest donor to Myanmar over the past several decades, but it is hard to separate direct investments from concessional loans and additional support projects.

India, another potentially important regional partner, set up its Development Partnership Administration (DPA) in 2012, but even before that actively engaged in development co-operation as a donor, mostly with neighbouring countries. Generally, India provides grants and concessional loans, often related to infrastructure projects, to its neighbouring countries. Between 2010 and 2013, India provided USD 42.7 million to Myanmar (Mullen, 2013) and for 2013/14, more than USD 70 million in grants and loans are budgeted (IDCR, 2014).

The composition of ODA is also changing, following the country's opening-up

The sector allocation of ODA by DAC donors to certain sectors and activities (relative to total ODA) varied over time, although several sectors have continuously received support during the past several years. For example, emergency response projects accounted for 30% of ODA in many years but for only 15% in 2012. Basic education and health projects as well as programmes to foster government and civil society were continuously present but fluctuated between 3% and 20% of total ODA over the years. Agricultural projects accounted for an increasing share, reaching 17% in 2011, but the share dropped in 2012 (Figure 4.2; see also the detailed list in the Annex 4.A2). It seems appropriate that the share of emergency support is falling while contributions to basic health and education projects are increasing, as human capital is one of the most binding constraints to economic growth.

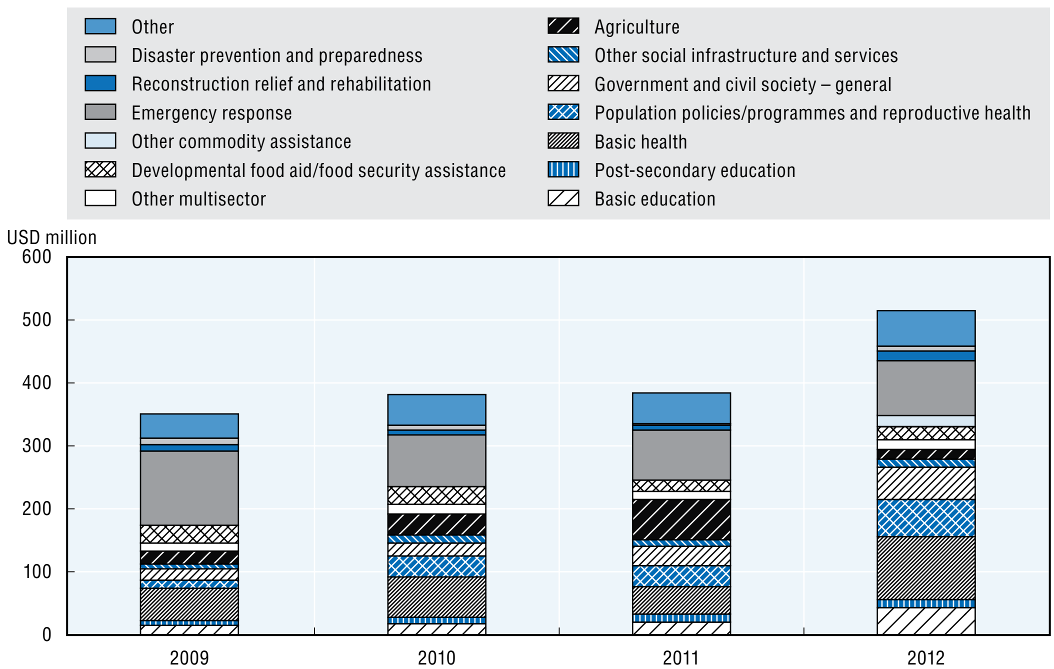
Unfortunately, no comparable disaggregated data are available for non-DAC donors such as China and India, which makes it impossible to give detailed recommendations on the sector allocation of ODA funds. The government should make an effort to combine data from all donors in order to assess the magnitude of overall ODA inflows and how to allocate funds efficiently. On the strategic level, it will be important for the government to identify those sectors or measures where ODA is most appropriate, whereas commercially viable projects should ideally be leveraged with private sector funding (for example, bonds or FDI).

ODA inflows are expected to rise in the future

It is difficult to gauge future amounts of ODA, especially given that the government's Aid Information Management System is still under construction. In 2011 and 2012, some key donors (Australia, the EU, the World Bank, Japan, the United Kingdom and the United States) accounted for 50-60% of commitments and disbursements. All of these donors have announced sizeable commitments for 2013 and subsequent years.

Figure 4.2. **ODA allocations increased but ODA composition was relatively stable over time**

ODA allocations by sector from 2009 to 2012 in USD million



Source: OECD (2013a), *Creditor Reporting System, http://stats.oecd.org/Index.aspx?datasetcode=CRS1.*

StatLink http://dx.doi.org/10.1787/888933134616

The ADB committed USD 598 million in loans for 2013 and USD 552 million for 2014-2016, plus smaller amounts of around USD 10 million in non-lending and services, for both periods. Most of the funds are support for Myanmar's "Reforms for Inclusive Growth", namely various infrastructure projects (irrigation, power transmission and transport). The World Bank committed USD 520 million for 2013 (with a grant component of USD 85 million committed prior to arrears clearance), and USD 140 million for 2014, mostly for analytical and diagnostic work as well as some microfinance-related projects through the International Finance Corporation (IFC).

Among the bilateral donors, Japan has committed more than USD one billion over the next few years, focusing on improving people's livelihoods, capacity building and infrastructure through grants, loans and technical assistance. Australia, the United Kingdom and the European Commission each committed amounts of around USD 75-100 million per year for the period 2013-15.

Reforms in managing ODA are under way but capacity constraints may become binding

The government of Myanmar is engaged in reforms of ODA data collection and procedures and the new Aid Information Management System (AIMS) is about to be operational. Myanmar line ministries manage and report their co-operation projects and associated funds, and the Foreign Economic Relations Department (FERD) within the Ministry of National Planning and Economic Development (MNPED) collects all information and provides inputs for the national budgeting process. Ideally, financial flows are registered on both sides (with donors as well as with the recipient agencies of Myanmar), and only in-kind contributions require detailed reporting from the donor to the responsible line ministry. However, some donors in Myanmar, especially small NGOs, do not comply with reporting requirements. Along similar lines, Memoranda of Understanding (MoUs) were not always signed in the past and ministries do not always report in a comprehensive and timely fashion, which adds further uncertainty to the reported amounts (World Bank, 2012b).

Acknowledging the need for donor management and co-operation, the government has started to implement a new system of donor management, incorporating improved co-operation at various levels. The Myanmar Development Co-operation Forum (MDCF) was launched in 2013 and is to be held annually. It will serve to bring together interested parties from a broad audience. At the First Myanmar Development Co-operation Forum in January 2013, donor agencies and the government signed the "Nay Pyi Taw Accord for Effective Development Co-operation", setting out objectives and commitments for all parties on how to co-ordinate in order to achieve effective co-operation and economic growth.

The government of Myanmar has also established a new, efficient framework for managing ODA, including bodies for strategic co-ordination, as well as committees with specific tasks within a streamlined process of loan and project approval (MNPED, 2013). General co-ordination at the highest level takes place through a meeting of the government (represented by the Minister of MNPED) and the heads of donor partners to review overall progress, which will take place at least twice a year.

The FERD within the MNPED is responsible for general co-ordination of aid and mobilisation of external resources. Specifically, FERD is responsible for the selection of target regions and sectors, the conceptualisation and negotiation of projects, their implementation, and monitoring and evaluation.

On the strategic level, FERD is maintaining ties with major donors through a Development Partners Working Committee (DPWC). In addition, 17 sector-specific working groups have been set up in 2013 (listed in Annex 4.A2) (Kudo, 2013). Each working group is headed by the responsible thematic Myanmar ministry and has two designated lead donor agencies (one bilateral, one multilateral). Representatives from other bodies, such as NGOs and academia, may be consulted where necessary. The working groups are mandated to meet every four to eight weeks, and tasked to co-ordinate studies, identify needs and establish annual action plans, as well as to support alignment of donors' contributions with Myanmar's priorities in the longer run and to develop sector strategies.

The approval procedures for loans and projects (Box 4.2) are very comprehensive and provide links to many different bodies, while being centralised in FERD. This set-up is designed to ensure national ownership and consistency with general national priorities.

However, the procedures may also be cumbersome and time-consuming for the involved parties, especially regarding loans and credits. For example, loans apparently pass through the president's office three times during the approval process: first by approval FAMCC, and then again before and after approval by parliament. Along similar lines, the lines of communication between the responsible line ministry, other ministries, MNPED and other bodies seem cumbersome. The many consultation and communication mechanisms may turn out to be time-consuming and arduous, thus hampering effective development co-operation.

In view of the many projects that are expected in the future, consideration should be given to revising the approval procedures (especially for loans) so that they absorb less time and resources to pass through the various bodies. It should be considered whether the function of FAMCC and FAMWC could be combined, and overall approval processes be streamlined and shortened. In addition, minimum thresholds could be set out to exempt

Box 4.2. **Development Co-operation: Approval process of loans and projects**

The proposal and approval of new projects and loans has also been streamlined in a new process involving several government levels and co-ordination bodies, some of which have been newly created for this purpose. The Foreign Aid Management Central Committee (FAMCC) is headed by the President and also includes representatives from several key line ministries, and provides high-level strategic guidance and oversight in the approval process.

On a more day-to-day basis, the Foreign Aid Management Working Committee (FAMWC) is chaired by a minister in the President's office and also includes ministers from other key ministries (such as the MNPED and the Ministry of Finance [MOF]). Finally, the National Economic and Social Advisory Council (NESAC) consists of representatives of the private sector, academia and civil society and acts as an independent advisory body. Both FAMWC and FAMCC contribute to strategic decisions and, through their role in the project process, ensure that co-operation projects are consistent with national priorities and strategies (MNPED, 2013). Loans as well as specific projects have to undergo a formal approval process.

Projects have to be negotiated first in the responsible line ministry, discussed with other relevant bodies (line ministries, MNPED) and then presented to the FAMWC and FAMCC for approval. Projects are then agreed through a Grant Agreement which is signed by the Cabinet (MNPED, 2014).

Loans are first proposed by the relevant line ministry and donor to FAMWC and FAMCC. Upon approval, the MOF is requested to submit a loan/credit proposal to the President's Office, and subsequently the Parliament. Once Parliament has approved and all parties have been notified, the credit is negotiated by the MOF and other relevant line ministries until final submission to the Cabinet, and the loan is included in the state budget.

At the sub-central level, co-ordination committees will be formed, involving the relevant sub-national level Planning Department (state, region, district and township). Local committees are encouraged to identify potential projects and approach donors, although project approval takes place at the national government level.

Source: Ministry of National Planning and Economic Development (MNPED) (2014), *Guide to International Assistance in Myanmar*; MNPED (2013), Answers to OECD-UNESCAP *Multi-dimensional Review of Myanmar,* Foreign Economics Relations Department.

small projects from the formal approval process. This would free up capacity in the concerned ministries and bodies for other tasks. Given the high expected inflows, it will be crucial to build up capacity in the administration to manage ODA and to better incorporate ODA into the national planning and budgeting process.

Beyond the planning process, monitoring and evaluation have so far received little attention but will become important to avoid rent-seeking and corruption. In the past, donor agencies channelled most funds through international or local NGOs. As money is increasingly disbursed to the government directly, monitoring mechanisms should be put in place, as well as evaluation mechanisms to learn about the impact of projects. An example of good donor co-operation evaluation is Mozambique's Programme Aid Partnership (PAP), which includes external performance reviews (Box 4.3). In Myanmar, this would include setting up participatory workflows to support capacity building, the collection of information (tracking flows and projects and collecting impact information) and linking funding with strategic objectives and outcomes. First steps in this regard have been taken, including mechanisms for project appraisal and progress reporting within MNPED, and establishment of a Project Management Unit for assessing aid effectiveness.

Box 4.3. **ODA Management in Mozambique**

The government of Mozambique established the Programme Aid Partnership (PAP) in 2004 to better co-ordinate donors and aid inflows, particularly budget support, and to support alignment with the Paris Declaration. The structure includes 19 donor agencies, several working groups (by sector), but also an economists' working group), as well as a website for improved communication and information exchange. The reference point for co-ordination is the country's Plan for the Reduction of Absolute Poverty to align aid and budget support with national strategic priorities.

An important component of PAP comprises independent external performance reviews. The reviews assess donor performance annually against a pre-defined matrix of indicators, analyse issues and present recommendations for the future. The reviews help not only to track performance, successes and issues, but also facilitate a common understanding of objectives and perceptions of efficient co-operation.

Source: IPAM (2008), *Mozambique: An Independent Analysis of Ownership and Accountability in the Development Aid System*, Paper submitted to EURODAD, Trocaire and CAFOD.

The promising outlook for foreign direct investments

FDI inflows to Myanmar were limited in the last two decades, partly because of the sanctions imposed by the European Union, Switzerland, Australia, Canada and the United States. Specific measures varied but often included bans on new direct investments in Myanmar. Public campaigns encouraging Western enterprises to divest from Myanmar added to the restrictions, although not all companies closed down their operations in the country. Consequently, most FDI during the last decade originated from neighbouring economies, namely China (33.04%), Hong Kong, China (19.81%), Thailand (28.24%) and Korea (9.44%).

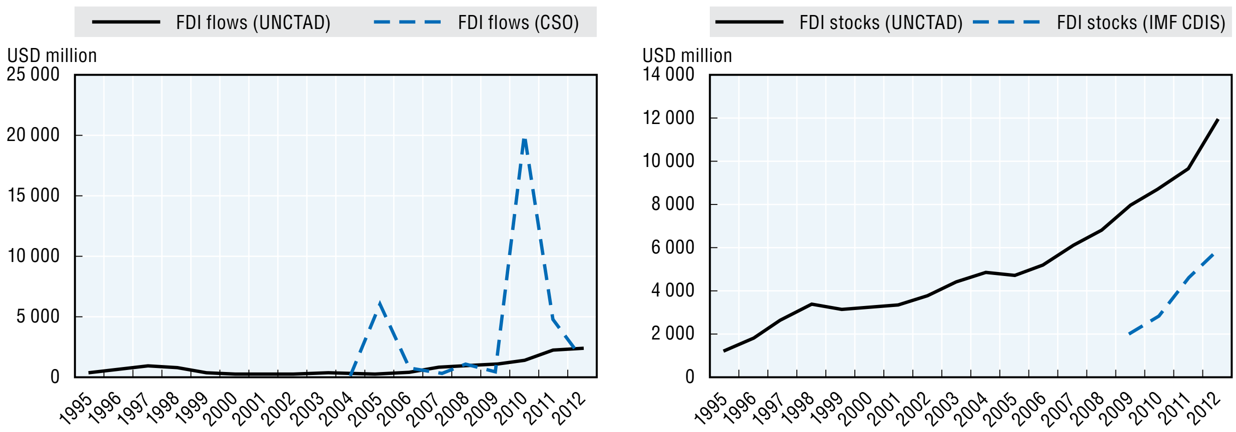
Following the government's reforms, most sanctions were lifted or suspended in 2012 and 2013 and FDI has subsequently picked up and is expected to further increase in upcoming years. The country is rich in natural resources, has a potential advantage from low labour costs, and good prospects for developing the tourism industry. In addition, given a total population of 50-60 million, domestic markets (such as in banking) also offer opportunities for investors.

FDI sources and projects are becoming more diversified

Accurate statistical data on Myanmar's FDI flows are difficult to obtain and data from different sources (national sources versus international databases) display some discrepancies, partly owing to differing definitions. The national statistics account for foreign investment projects approved by the Myanmar Investment Commission, excluding certain projects that are not officially recorded, for example, those in co-operation with Myanmar military enterprises as well as many small projects, and so includes projects that are approved but never implemented (Bissinger, 2012). International databases, in contrast, register actual inflows via the balance of payments. When comparing data from the Myanmar Central Statistics Office (CSO), which is collected by the Directorate of Investment and Company Administration (DICA), with data from the UNCTAD FDI statistics there are some differences, probably partly due to the time lag between approval and disbursement and partly due to changes in amounts disbursed by the investors (Figure 4.3).

Figure 4.3. **FDI stocks and inflows have been increasing steadily**

FDI stocks and inflows 1995-2012 (in USD million)



Note: Data from Myanmar DICA are recorded by fiscal year (April to March).

Sources: UNCTAD (2013), *Foreign Direct Investment Statistics* (database), *http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx;* IMF (2013c), *Co-ordinated Direct Investment Surveys* (database), International Monetary Fund, http://cdis.imf.org/; and Ministry of National Planning and Economic Development (2013), *Answers to OECD_UNESCAP Multi-dimensional Review of Myanmar,* Foreign Economic Relations Department.

StatLink http://dx.doi.org/10.1787/888933134635

DICA's approval data by sector and country indicate that Thailand was Myanmar's largest investor until 2010, when China took over this role. Since then, China has invested more than any other country over the last two decades, accounting for 40.5% of investments between 1990 and 2013, whereas Thailand accounts for 23.5%, followed by Hong Kong, China with 16.6%. In 2010-11, FDI reached a peak of almost USD 20 billion, driven by a number of large projects, including two hydropower projects, the oil and gas pipeline connecting the Shwe offshore gas field with the Yunnan province in China, and the development of the Letpadaung copper mine.

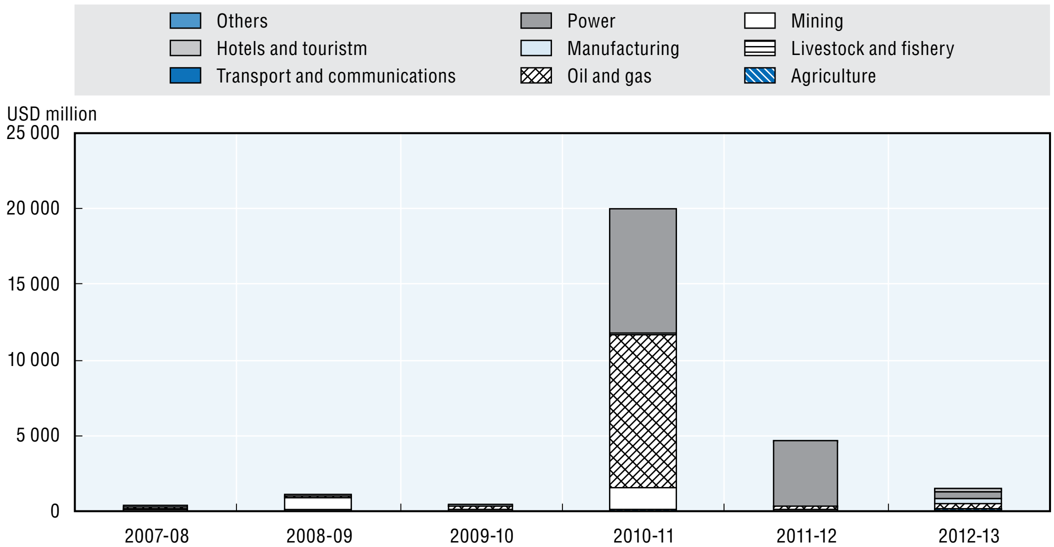
Generally, FDI approvals have become more diversified in recent years, both in terms of investors and projects. In FY 2011/12, China dominated the list of investors most clearly, providing 93.6% of all investments, whereas in FY 2012/13 its share dropped to 28.7%. In FY 2012/13, FDI inflows also became more diversified, with a higher number of projects (from 13 in FY 2011/12 to 94 projects in FY 2012/13) and a higher number of investor countries (ten countries, compared to seven countries in FY 2011/12).

During the last decade, FDI became more concentrated in large-scale projects, while the diversity in sectors receiving investments has increased in the wake of the recent reforms and economic opening (Figure 4.4). It has been shown that investments in natural resources constitute "enclave investments", which are mostly determined by the availability of resources and less by macroeconomic conditions (Walsh and Yu, 2010). In Myanmar, FDI in natural resources and power provision projects accounted for only 22.4% of total FDI in 2000/01 – but subsequently, FDI was increasingly concentrated in these sectors, accounting for more than 90% of FDI between 2010 and 2012. A deteriorating business environment within Myanmar and economic sanctions by many OECD countries probably jointly made Myanmar less attractive for non-resource investments during this period, which helps explain the high share of resource and infrastructure investments driven by the country's favourable endowments (Bissinger, 2012).

The focus on projects in natural resources and power provision also has economic implications: such projects are usually very large in size but contribute few jobs and

Figure 4.4. **FDI in the past was concentrated in natural resource and power provision projects**

FDI allocation in Myanmar by sector 2007-13 in USD million



Sources: CSO (2012), *Statistical Yearbook 2011*; Ministry of National Planning and Economic Development (2013), *Answers to OECD_UNESCAP Multi-dimensional Review of Myanmar,* Foreign Economic Relations Department.

StatLink http://dx.doi.org/10.1787/888933134654

have limited spillovers to the domestic economy. Over the period 1990-2013, an average approved FDI project in power provision amounted to USD 3.2 billion and an average project in the oil and gas sector amounted to USD 190.4 million, whereas an average project in manufacturing was only USD 6 million.

The recent diversification in project approvals (in terms of sectors, investors and size) is an important step towards more balanced FDI growth. The Myanmar authorities should try to support the realisation of these projects into actual inflows and continue with efforts to attract and cultivate diversified FDI inflows beyond natural resource sectors. For example, providing transparent and consistent information for investors and advisory measures where necessary and fostering agglomeration in industrial clusters (as in Special Economic Zones [SEZs]) can make entry easier for smaller investors, which could support sector diversification.

In terms of relative importance, FDI inflows (as measured by UNCTAD) accounted for about 4-5% of GDP in recent years, and are projected by the IMF to stay below 4% in 2014/15 (IMF, 2013b). The ratio of the accumulated FDI to GDP was around 20% in 2012, which is a lower ratio than in neighbouring countries such as Viet Nam, Cambodia, the Lao PDR and Thailand, where FDI stocks amounted to 27-50% of GDP (Kudo, 2013). Hence, there is clearly leeway for increasing FDI inflows but it is difficult to predict future developments because flows will depend on the recent and future reforms in Myanmar.

Investments in manufacturing and tourism are picking up

Some sectors will be especially attractive for foreign investors. Low labour costs may provide potential cost advantages to manufacturing enterprises, tourism is also picking up and, given their present low penetration, prospects for foreign investment in financial services are also good (for details, see the sub-section on transforming the financial system).

FDI in the manufacturing sector was very low until 2010 but picked up significantly in 2013. Myanmar has a potential advantage of very low labour costs, but is constrained by low levels of education and skills. The government has increased spending on education and as infrastructure obstacles (such as transport and electricity) improve and industrial agglomeration takes place in the SEZs, there is considerable potential for manufacturing investments. The Foreign Investment Law (FIL) has restrictions on various manufacturing activities, including activities that may be harmful for traditional cultures, public health or the environment, but also limits foreign investment in the production of many food, chemical and other products to joint ventures that have to be carried out with a local private or public partner. The list of restrictions is extensive and should be reconsidered to make entry for foreign investors easier (OECD, 2014a). The government should support upgrading of local capacity (for example, suppliers) in order to capitalise on linkages between industries, and continue to develop the planned SEZs to foster agglomeration economies.

Investments in the tourism sector are also increasingly attractive and have grown considerably with increased tourist inflows, mostly from other Asian countries. Between 2009 and 2013, the total number of tourists almost tripled, from 0.76 million to 2 million, and already exceed the lower-bound projections from the Myanmar Tourism Master Plan from 2013. Currently, 923 certified hotels are registered at the Ministry of Hotels and Tourism, and nine FDI projects are under construction or have been approved by Myanmar Investment Commission as of 2013 (Ministry of Hotels and Tourism, 2013).

Overall, the FDI approval figures for 2012-13 reflect increased investments in manufacturing and tourism, but the sustainability of this trend will depend a lot on continuous improvements in the business environment. The government should continue with its regulatory reforms to improve the business environment, in order to make investments across all sectors attractive and profitable, and to support the economy's diversification.

Natural resource investments constitute a large potential – but also entail risks

First and foremost, however, the country's riches in natural resources are expected to attract foreign interest, as well potentially commercially viable infrastructure projects, such as power provision. Myanmar has large reserves of oil and natural gas, but also produces timber, coal, copper, gold, lead, tin, tungsten, zinc, and precious stones (for example, rubies and jade). However, all mining, oil and gas projects still have to take place in joint ventures with domestic public or private partners, such as the state-owned Myanmar Oil and Gas Enterprise (Charltons, 2014). Myanmar is actively exploiting various onshore and offshore sites (following tenders to engage international firms, such as Daewoo, Petronas and Total), and geological research to identify new reserves has recently accelerated (for example, Chinese Sinopec International Petroleum discovered large reserves in the Pahtolon area in central Myanmar in 2011).

Although FDI inflows for development are generally considered desirable, Myanmar's riches in natural resources may also entail the risk that resource sectors will impede development of non-resource based activities ("Dutch Disease"). The country has known recoverable reserves of 2.3 billion barrels of oil, 79.6 trillion cubic feet of natural gas (placing it 41st in a worldwide ranking based on 2010 estimates) and 2.1 billion barrels of natural gas liquids (USGS, 2012). Production in 2011 amounted to 420 billion cubic feet of natural gas, and 20 000 barrels of crude oil per day. A total of 600 million barrels of crude oil and 1.4 trillion cubic feet of natural gas have been extracted in the past, leaving much room for further exploitation and investments (Lewis, 2013). Data on the contribution of natural resources to the government budget are scarce but the IMF estimates revenues from gas exports to contribute more than 20% to overall government revenue from 2012-13 onwards (IMF, 2013b).

The government should capitalise on the recent shift of FDI towards more diversification, but without neglecting the existing and future investment in resource sectors. The country's natural resources can constitute an important source of revenues to finance development through taxes and royalties. It will be essential to carefully manage these large-scale projects: tensions with investors (as, for example, in some Chinese projects) will hurt the country's reputation and potentially deter future investments. Although there is need for quick improvements and advances, FDI approval should seek a balance between economic interests and environmental and social impacts. Efficient and quick approval procedures are important but so is co-ordination with the local population to ensure that projects go smoothly once started.

Excessive resource dependence also constitutes a risk to domestic governance by creating incentives for rent-seeking that can foster corruption and mismanagement. The large inflows (which can be expected to rise, given the multiple new exploitation projects) in combination with the lack of transparency constitute a major risk for diversion of funds. The government has taken steps towards joining the Extractive Industries Transparency Initiative (EITI) and should continue its commitment in this regard.

Foreign investments in infrastructure will be a key to economic development

Electricity provision will also constitute an attractive sector for foreign investors, particularly given the need for sizeable investments to relieve constraints on production. Only 28% of the rural population have access to electricity and several of the large power construction projects of recent years will only have a limited impact on domestic power provision. For example, the 2010 peak of FDI was partly due to hydropower projects funded by China, but much of the generated electricity will be transferred to China. Currently, the majority of installed electricity capacity is in hydropower (76%), followed by gas-fired plants (21%), but more than one third of production is exported to neighbouring countries (OECD, 2014a). Given that electricity shortages are a major constraint to domestic production, Myanmar has made improvements in power provision a national priority, and is in the process of developing a national energy and power plan. While the potential for hydropower is large, project development and construction involve long time lags, and other (renewable) energy sources, such as wind or solar power, could help to alleviate electricity shortages in the short run (OECD, 2014a).

FDI in transport infrastructure has been lagging, although there is considerable potential for development in the future. Initial investments to secure basic infrastructure are currently undertaken by the government with foreign assistance. For example Japan supports the modernisation of railways, while India has committed loans to procure rolling stock. Eventually, however, commercially viable projects to provide improved transport could be implemented via debt obligations, such as project bonds or public-private partnerships.

Reforms to the regulatory framework are ongoing but further steps are necessary

Much of Myanmar's legal framework is currently being reformed, replacing old and outdated legal provisions with more suitable new regulations that are in line with international standards. The new Foreign Investment Law was approved on 2 November

2012 and is the cornerstone of FDI legislation, but a multitude of other new laws are relevant for FDI (including the Myanmar Citizens Investment Law, the Central Bank Law, the Minimum Wage Law and many others). The Foreign Investment Law is complemented by implementing guidelines (Notification 11/2013) and a list of permitted activities (Notification 1/2013), which were both issued in early 2013. In addition, a Special Economic Zones Law came into force in January 2014, superseding the previous laws pertaining to SEZs. The law sets out general conditions for the SEZs (currently the Kyauk Phyu SEZ, the Dawei SEZ and the Thilawa SEZ), including decision making by a SEZ committee, tax preferences, dispute settlement, labour institutions and other provisions.

While the government has made important steps toward improving the legal environment and is in the process of combining the Foreign Investment Law and the Citizens Investment Law into one framework, much remains to be done to make the regulatory framework more conducive to investments. The Foreign Investment Law is a step forward compared to the previous law, for example by allowing for a broad range of investments (through joint ventures or 100% equity investments, by allowing land leases, by giving authorising longer holidays and other provisions). However, there is still room for improvement and clarification (OECD, 2014a). For example, the clauses ensuring investor protection could be more specific, and are in some cases defined on a more limited basis than is usual in the FDI laws of other countries. Criticism has been extended to the large and discretionary role that the Myanmar Investment Commission plays for many decisions related to the approval of investments and the absence of clear criteria for decisions. This set-up has the advantage that authority is centralised in a body with high-level officials that can provide close alignment with policy priorities, but the discretionary leeway also creates uncertainty for investors and should be replaced by clear criteria and procedures in the longer run (OECD, 2014a).

The approval procedures depend on the legal form chosen by the investor, either as a joint venture with a local partner or as an entirely foreign-owned enterprise. Joint ventures imply partnership with a local enterprise (which is required for certain activities), whereas a foreign company can either be registered under the Companies Act, the FIL or as a branch office, with different conditions for registration, minimum capital requirements and incentives (such as tax holidays). In order to obtain permission for investment, investors (domestic and foreign) must submit to the Myanmar Investment Commission numerous documents, including the company's business registration and other details (and/or of its joint-venture partners), draft contracts and partnership agreements, details regarding the envisaged activities such as location, technical information, and estimated inputs and outputs (for details, see Notification 11/2013, Chapter 5). Depending on the activity, further documents to be submitted include an environmental protection and conservation scheme, land lease contracts, and other items.

Overall, the process of obtaining permission for investment is complex, with sometimes overlapping responsibilities of different bodies (for example, in some sectors, approvals from both the Myanmar Investment Commission and from line ministries are required) and considerable room for discretion of the Myanmar Investment Commission. The environment for foreign investments holds further challenges, such as a weak judiciary and complex and overlapping taxation. There are a multitude of tax preferences given to foreign firms, which may entail considerable tax revenue losses and which deserve a thorough review (for a more detailed review, see OECD, 2014a). Reforms in all these areas will be necessary, not only to attract FDI initially, but, more importantly, to sustain FDI over the long run. At the same time, the government should take care that FDI projects are implemented in a way that is responsible and sustainable. Local protests against a number of large-scale projects (such as the Myitsone hydropower dam) illustrate the dangers of losing local support, which resulted in renegotiation of contracts, delays and political tensions with the local population as well as between the involved enterprises and countries.

Improvements in the business environment will be important to attract FDI across sectors

Myanmar is also in the process of improving the overall business environment, which is a crucial factor for attracting and sustaining FDI across many sectors. The country joined the International Finance Corporation (IFC) Doing Business Indicators in 2013, and was ranked 182nd out of 189 economies in 2014. The country scores for starting a business, protecting investors, enforcing contracts and getting credit are particularly low, although all of these are crucial to promote investments (domestic as well as foreign).

Since the 2013 ratings, the country achieved some improvements in the domains of paying taxes and trading across borders, while some minor improvements in registering a business did not change its overall ranking. The cost of registering a business and required minimum capital declined somewhat between 2013 and 2014 but the number of procedures and the time required did not change; hence Myanmar remained at a low rank of 189 for this sub-indicator. Further reforms and improvements have been implemented and are expected to be reflected in the next round of the Doing Business Indicators. It will be important to target reforms at crucial aspects of the business environment, for example by focusing protecting investors and the enforcement of contracts and addressing multiple dimensions of a given issue (such as reducing the burden of procedure along with their cost). Generally, it will be essential to accelerate progress towards a more conducive business environment in order to attract and sustain high levels of foreign (and domestic) investment.

Making more effective use of remittances for development

Remittances from migrants working in foreign countries can be an important source of financing for development, especially in countries like Myanmar that have a large diaspora of migrant workers. At the macro-level, remittances constitute foreign exchange inflows and are often less volatile than other international financial flows (such as FDI). On the micro-level, remittance money directly reaches the recipient. Within households, it can be used to supplement income but also for personal investments, for example in health, education or income-generating activities.

Despite the economic importance of remittances for development, these financial flows are hard to quantify. Official migrants may use official transfer mechanisms (such as banks and money transfer services) which are accounted for in the balance of payments (BOP), but many migrants, especially informal ones, rely on informal money transfers or directly carry cash themselves or via relatives. The reasons for this are varied: without official immigration documents, access to formal banks may be restricted; in many countries there is widespread distrust in official banks; and transfer prices in informal systems often are lower than the fees for formal services. Informal remittances flows are not registered in national BOP statistics and thus are hard to quantify. The best available data are usually partly based on survey data of migrants in combination with estimates on the number of migrants. But, in the case of Myanmar, data are especially scarce.

Myanmar has a large diaspora abroad – but could use this potential more efficiently

Myanmar has a large population of migrants of various skill levels working abroad, who left the country for political and/or economic reasons during the decades of economic isolation. During this period, Myanmar maintained a very restrictive migration regime, leaving the majority of emigrants as unofficial migrants in their country of destination. This set up a barrier to using official transfer mechanisms to send money home. Major destination countries for emigrants are Thailand and other neighbouring Asian countries (notably Singapore and Korea). Some of these countries have undertaken registration schemes for immigrants in co-ordination with the Myanmar government but data are still sketchy (Hall, 2012).

Figures on the number of Myanmar migrants vary, depending on the source. According to the World Bank's *Migration Factbook 2011*, the country has an official stock of emigrants of 514 000 persons. However, other sources put the number of Myanmar emigrants in other Asian countries (Thailand, Malaysia, Singapore, Bangladesh, Japan and Korea) in the range of 2.2-4.8 million persons and exclude emigrants in many other countries (such as India and China), where no data are available (Hall, 2012). Hence, while the official stock of migrants stands at around 1% of the population, given a total population of 50-60 million, the unofficial stock may be actually closer to 10% of the population.

Official data on remittances are scarce

Formal remittances to Myanmar were estimated by the World Bank (2011) to be around USD 127 million in 2011 but this probably underestimates even the official flows. The amount only includes workers' compensation, not personal transfers, which were not reported separately in Myanmar's balance of payments. In 2005 and 2006, when personal transfers (part of secondary income in the BOP) were last reported separately, they amounted to 100-200% of workers' compensation. Accordingly, the USD 127 million figure is very likely underestimated and real (official) remittances were probably more on the order of USD 200 million or more (Table 4.2).

Table 4.2. **Official remittance amounts**

Official remittance amounts 2005-12 (in USD million)

Balance of Payments Statistics	2005	2006	2007	2008	2009	2010	2011	2012
Primary income, compensation of employees, net	43	50	81	55	54	115	127	
Secondary income, Financial and non-financial corporations, households, and non-profit institutions serving households, net	124	89	169	254	232	159	348	
World Bank Factbook								
Net inward remittance flows	111	84	81	55	54	115	127	566

Notes: Compensation of employees includes remuneration of labour by employed individuals. Secondary income comprises personal transfers (current transfers between resident and non-resident households, such as irregular transfers arising from labour, entrepreneurial or property income, and social benefits) and other current transfers. Only personal transfers are considered to be part of Net Inward Remittance Flows as measured by the World Bank, but the two sub-categories have not been stated separately since 2006, hence personal transfers are not included for Myanmar after 2006.

Sources: IMF (2013d), *Balance of Payments Statistics* (database), International Monetary Fund, *http://elibrary-data.imf.org/finddatareports.aspx?d=33061&e=170784*; World Bank (2011), *Migration and Remittances Factbook 2011*, World Bank, Washington, DC.

Myanmar's financial sector is small and there is widespread mistrust in institutions in the population. In addition, Myanmar's emigrant population is mostly informal and hence informal remittances probably by far exceed formal remittances.

Official figures very likely underestimate the magnitude of true remittance flows

In order to obtain an estimate of total remittance flows to Myanmar, information from household data was be used in combination with overall household and population data. The 2009/10 Integrated Household Living Conditions Survey includes questions on remittances for a representative sample of Myanmar households (after appropriate weighting). The survey covered both domestic and cross-border transfers and occasional and regular remittances during the rainy and the dry season. Across the entire survey period, 5.35% of surveyed households reported receiving any cross-border remittances in the course of a year. The mean transfer amount (averaging both occasional and regular transfers across both seasons) was MMK 1 031 757 (Myanmar kyat), whereas the reported median amount was MMK 600 000, which is around USD 614 converted with the black market foreign exchange rates during 2009/10. This is somewhat higher than the amounts obtained from previous surveys (around 500 USD per year, see Turnell, Vicary and Bradford [2008] or Chantanavich [2012]) but much lower than the amount that the average Asian migrant remits home (around USD 4 000).

Given the large size and representativeness of the household survey data, estimates of total remittance flows to Myanmar can be calculated. The population of around 60 million individuals and an average household size of 4.7 persons implies a total of 12.8 million households. The household data suggest that 6% of households received remittances from abroad (in line with the migration estimates varying between 1% and 10% of the total population), so that a total of 768 000 households would have received remittances in 2009/10 with a median amount per household of USD 818, which yields a total inflow of USD 628.2 million. This amount matches roughly with other estimates: for example, Turnell, Vicary and Bradford (2008) estimate total remittances from Thailand to Myanmar to be around USD 300 million, and Chantavanich (2012) suggests a total of USD 248 million through the same channel, with both studies assuming around 1 million Myanmar migrants in Thailand, probably a conservative estimate. It seems reasonable to assume that worldwide remittances to Myanmar are much higher, given that incomes and transferred amounts from migrants in other countries will also be higher.

Remittance behaviour indicates that there is room for better utilisation of its economic potential

Small sample surveys of migrant workers in Thailand provide an additional source of information on general remittance behaviour, although they are limited in their representativeness and are not entirely comparable in scope and definitions. Average remittance amounts per worker per year reported in the surveys were around USD 500 in 2007. Generally, migrant workers in Thailand seem to be primarily employed in construction, fishing, manufacturing, agriculture and some service activities. According to the migrants covered in the surveys, the majority of recipients in Myanmar spend the money on daily expenses and consumption (70-90%).[1] In one study, where multiple answers were possible, the shares of remittances going to investment-type of spending were somewhat higher (50% reported to spend remittances partly on education and 73% partly on health).

Not all migrants remit money home, but of the 50% to 70% of migrants who do, the majority preferred informal mechanisms for their transfers. In one study, 20% of migrants reported that they used banks, while in the other two surveys 2-5% reported using official channels. Costs for informal channels are reported to be around 2.5% to 10% of the remitted amount, with considerable variation in the type and amount of fees. Formal transfers are generally considered to be more expensive (around 10-20% of remittance amounts) (see Turnell, Vicary and Bradford [2008]) but a number of banks have recently started to offer remittances services at (initially) discounted rates between Myanmar and neighbouring countries.

In order to leverage the effect of remittances, the government should try to formalise remittance flows to enhance the potential benefits. Making migration legal and providing migrants with official documents could help migrant workers to obtain better-paid jobs and facilitate access to formal money transfer channels, which in turn would support higher inflows for households and foreign exchange revenues for the government. The government should consult neighbouring governments to legalise and register Myanmar migrants, and provide emigrants already working abroad with basic paperwork.

The Myanmar government is undertaking multiple reforms in the banking sector from which remittance inflows can also benefit. Greater market penetration and competition could bring down the cost of remittance transfers, but investments into payments infrastructure will be crucial as well, because better payment systems will lower the direct costs for banks, especially for small amounts. Rwanda, for example, has experienced a sizeable decline in remittance costs following reforms of its payment systems (see Box 4.4). Improving access to finance for households in remote areas can further help to achieve this goal.

As a more indirect effect, remittances transferred through the formal banking system may also pull the population into the formal banking system in general. If remittances are deposited into bank accounts, rather than received in cash, households may be more likely to save money, which would help Myanmar to finance a greater share of its necessary investments from domestic sources.

Box 4.4. **Payment System Reforms and Remittances in Rwanda**

In 2002, Rwanda embarked on a project to reform its payment settlement system. After a stock-taking exercise, the country implemented legal reforms (such as a new Payment Systems Law), established a National Switch to link all national banks and ATMs, an automated clearing house as well as a central securities depository. These steps paved the way for the Rwanda Integrated Payment Processing System (RIPPS), which went live in 2011 (National Bank of Rwanda, 2014). The RIPPS provides real-time gross settlement, the cheapest and most effective way of settling transactions between banks on a one-by-one basis, as opposed to net settlement systems.

Prior to the reforms, remittance costs in Rwanda were much higher than the world average. Between 2010 and 2012, worldwide average costs for transferring 200 USD hovered around 9% of that amount and the International Money Transfer Operators Index* of costs dropped from around 10.5% to 9%, whereas average costs in sub-Saharan Africa increased slightly (World Bank, 2013b). Over the same period, Rwanda's remittance costs dropped from 19% to 15% in 2012, partly due to the improved payment system.

* The International MTO Index is calculated based on Money Transfer Operators (MTOs) that are present in over 85% of the surveyed corridors and constitutes an alternative measure to simple global averages of all transfer providers.

Sources: National Bank of Rwanda (2014), *Payment Systems Overview*, *www.bnr.rw/index.php?id=143*; World Bank (2013b), *Remittance Prices Worldwide*, No. 8, December, World Bank, Washington, DC.

Mobilising government revenues for development

The effectiveness with which the government can mobilise and utilise revenues will be a major key to the success with which Myanmar's development goals are attained. The massive planned government infrastructure investments and the need to increase government spending on education, health, and other social needs will require considerably higher overall government revenues as well as their improved allocation. Currently, there are only 200 000 registered taxpayers in the entire country, amounting to only 0.4% of the population (World Bank, 2012b). Revenues need not only to be increased but the tax and other revenue raising mechanisms need to become more efficient to provide incentives to foster private sector development and to avoid excessive distortions and costs to the economy.

The Myanmar government faces several key challenges in mobilising the government revenues it will need for development over the medium and longer term. Most importantly, increasing tax revenues will be crucial, through changes in the tax structure and improved revenue collection. Institutional arrangements for public finance management also need to be strengthened and the fledgling fiscal federalism system will need further elaboration.

Total revenues available to meet development needs are insufficient

As discussed in the Initial Assessment of this Review (OECD, 2013b), Myanmar's government revenues have been exceptionally low in relation to GDP. Official figures give a somewhat exaggerated impression of total revenues, since they include receipts from state-owned enterprises (SOEs), most of which go to finance SOE spending. Revenues actually available (*available revenues)* for spending on development, social, and other general government purposes include taxes, a small amount of other non-tax revenues (including customs duties), and net transfers from SOEs (that is the surplus of their revenues over expenditures). These amounted to 9.1% of GDP in FY 2012 (Table 4.3).

Table 4.3. **Composition of government revenues**

Composition of government revenues (in % of GDP)

	Percentage of GDP				Est.	Proj.	Planned
	Fiscal years	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
1	Tax revenue	3.1	3.3	3.9	6.4	4.4	6.6
2	Transfers from SOEs to the Union Government	2.3	2	2.3	1.9	1.6	1.8
3	SOE receipts net of transfers to Union Government	4.9	5.1	5.5	13.8	12.1	14.2
4	Other non-tax revenue	0.5	1.1	0.4	0.7	0.6	0.7
5	Grants	0	0	0	0.1	0.2	0.2
6	Total revenues excluding gross SOE receipts but including SOE net transfers (1) + (2) + (4) + (5)	5.9	6.4	6.6	9.1	6.8	9.3
	Memoranda						
7	Revenues from gas production[1]	NA	NA	NA	3.7	4.2	4.5
8	Total non-SOE revenues plus gross revenues from natural gas (6) + (7)	NA	NA	NA	12.8	11	13.8

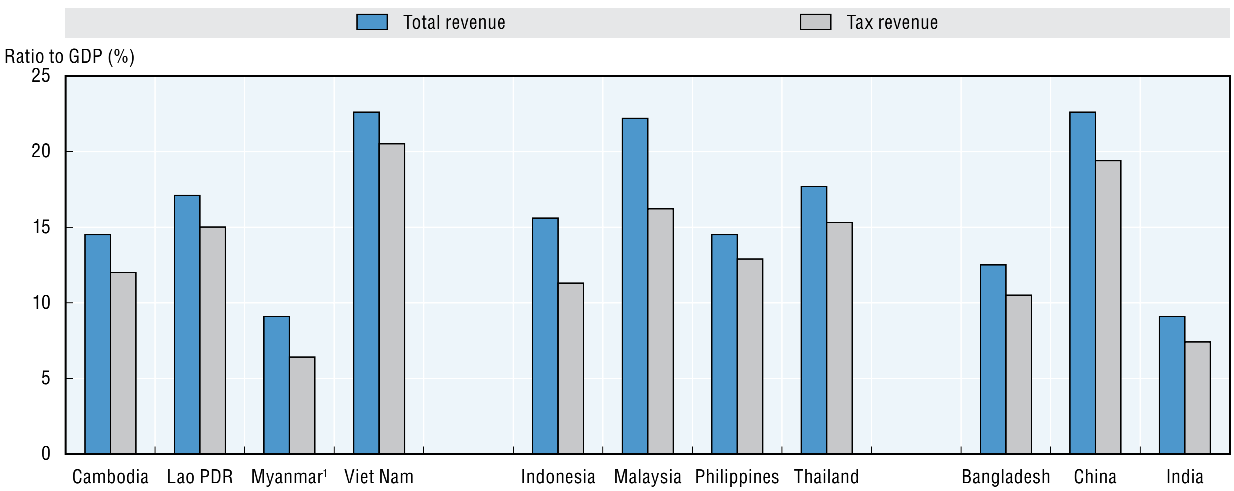
1. IMF, 2012; the *IMF Country Report* for Myanmar for 2012 puts the gas export revenues at 5-6% of GDP.

Sources: IMF (2012), "Myanmar: 2011 Article 4 consultation", *IMF Country Report 12/104,* International Monetary Fund, May; IMF (2013b), "Myanmar: staff report for the Article 4 consultation and first review under the Staff-Monitored Program", *IMF Country Report* 13/250, International Monetary Fund, August.

This represents a significant increase over FY 2011 (due in large part to the use of market exchange rates rather than the grossly overvalued official rate to value transactions and to improved collection of taxes), but it is still quite low compared to other Asian developing countries (Figure 4.5).

Figure 4.5. **Total revenues and taxes in Myanmar are comparatively low in relation to GDP**

Total revenue and tax revenue as share of GDP



1. Tax and other non-tax revenues plus transfers from SOEs.

Sources: International Monetary Fund (2012), "Myanmar: 2011 Article 4 consultation", *IMF Country Report 12/104*, International Monetary Fund, May; IMF staff estimates for Myanmar; ADB (2013a) for other countries. Figures are for 2012 (FY 2012/13 for Myanmar), *www.adb.org/publications/series/basic-statistics*.

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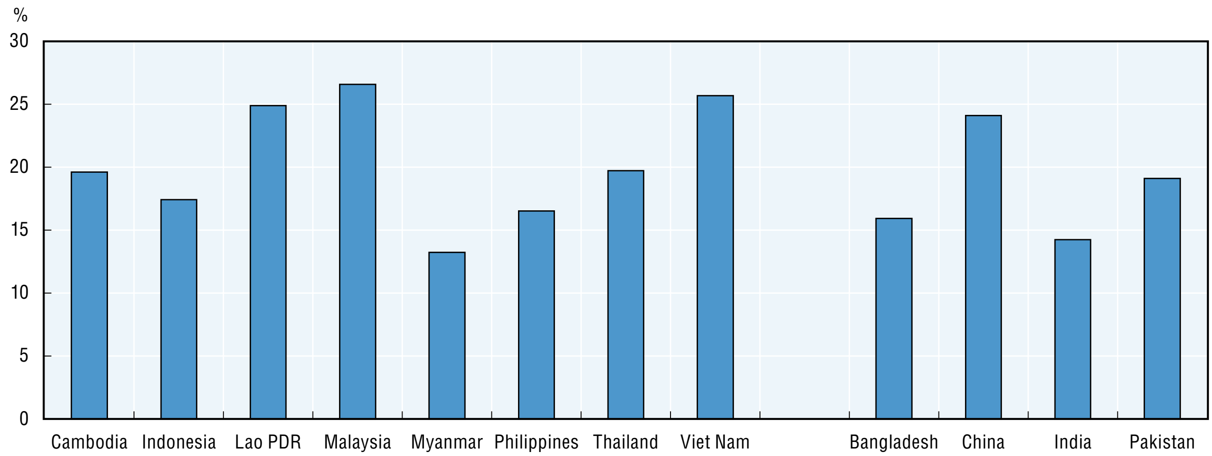
Even with the increase in FY 2012/13, the level of available government revenues is too low to support the expenditures needed to finance Myanmar's development and social and other needs for public services. Government expenditures in other ASEAN developing countries range from a low of 14% of GDP in India to nearly 25% in China and Viet Nam (Figure 4.6). Myanmar's development plans and the need to narrow the development gaps between it and other Asian developing countries are likely to require revenues in the upper portion of this range, probably at least 20% of GDP, or roughly equal to that of Cambodia and still below the ratios of the Lao PDR and Viet Nam. Even allowing for an ongoing budget deficit of 4% of GDP – in line with the current target but perhaps higher than desirable beyond the medium-term – Myanmar would be able to sustain aggregate government expenditures of only about 13% of GDP, leaving a sizeable gap with the level that is likely to be needed.

Natural resource revenues will fill part of the gap but tax revenues need to rise substantially

Revenues from natural resources are likely to fill a significant part of the gap between the current level of available government resources and those that will be needed to meet Myanmar's development and social goals. While little specific information has been made public on government receipts from natural resources, recently released figures from the Ministry of Energy indicate that the government earned about USD 3.6 billion from

Figure 4.6. **General government expenditure relative to GDP is also low**
Government expenditure as share of GDP in 2012



Note: Figure for Myanmar excludes expenditures by SOEs and are estimates from IMF (2012).
Sources: IMF (2012), "Myanmar: 2011 Article 4 consultation", *IMF Country Report 12/104,* International Monetary Fund, May; and ADB (2013b), *Key Indicators for Asia and the Pacific, www.adb.org/publications/key-indicators-asia-and-pacific-2013.*
StatLink http://dx.doi.org/10.1787/888933134692

the country's two major offshore fields in FY 2012/13, a figure that represents about 6.4% of GDP. [2] Other estimates suggest that gas export gross revenues amounted to 3.7% of GDP in FY 2012/13 and will average more than around 5-6% of GDP over the next three fiscal years (IMF, 2012; IMF, 2013b).

While some of the gross revenues from gas exports will need to be retained for maintenance and expenses, much is likely to be available to augment government revenues.[3] Revenues from other natural resources are also likely to increase. This suggests that natural resource revenues could fill in the order of half of the current gap between available government revenues and those needed.

However, if revenues from other sources do not rise further relative to GDP, Myanmar risks becoming overly dependent on natural resources to finance its government spending. The projected natural resource revenues could account for more than one-third of total available government revenues over the medium term if the ratio of revenues from taxes and SOE transfers remain at their FY 2012/13 level. Such a ratio is comparatively high for developing countries, although it is below that of a number of other ASEAN countries including Brunei and Malaysia. Natural resource revenues, particularly those from energy sources, can be highly volatile owing to fluctuations in their international prices and hence are more difficult to predict and more prone to lead to unexpected declines in overall government revenue and increases in the budget deficit. Overdependence on natural resources also tends to undermine government accountability and discipline, because spending can be effected without taxation of domestic citizens.

Overall, these considerations strongly suggest that Myanmar will need to raise tax revenues substantially over the medium term, to at least 10% of GDP (a notional target often mentioned by officials and other observers) and quite possibly even more. The increase is needed both to ensure that available government revenues are sufficient to support the government's development plans and to provide for a reasonably stable and adequately diversified revenue base.

Raising taxes will involve both changes in tax structure and in some rates and improved collection

A review of Myanmar's current tax system and the structure of its tax revenues in comparison with other Asian developing countries suggests that while there is some scope to raise revenues by increasing tax rates in some areas, much will have to come through improved collection.

Myanmar applies a range of tax instruments comparable to those used in other developing countries, including sales taxes and taxes on business and personal income. There are 18 separate taxes. The most important in terms of revenue raised are the commercial tax – essentially a sales tax on (most) goods and services produced within the country – and the income taxes on business profits and personal income (Box 4.5). These taxes are administered and collected by the Internal Revenue Department (IRD) of the Ministry of Finance (MOF),[4] which is also responsible for the stamp tax and the tax derived from the State Lottery. The taxes collected by the IRD amount to more than 90% of all tax revenues (including customs duties). The bulk of these taxes are paid by entities in urban areas, since this is where most registered businesses and individuals with incomes above the minimum taxable thresholds for the commercial and income taxes reside. There was a substantial revision of the tax code in 2012, which simplified the commercial tax and personal income tax and lowered the corporate tax rate (Box 4.5).

Box 4.5. **Summary of Myanmar's main taxes**

Commercial Tax

- Goods sold domestically or imported are taxed at variable rates up to 100% (with exemptions, that is zero rates, for some goods), according to the seven schedules appended to the Commercial Tax Law of 1990.
- Goods in schedules 2 to 5 are now subject to a 5% rate; goods in schedule 6, which includes natural gas, teak and luxury cars are subject to rates of 8% to 100% (previously 30% to 200%).
- Most major services are now subject to a commercial tax of 5% of their receipts. The covered services include: wholesale and retail trade; tourism; insurance and some other financial services; transport; and various personal and professional services.
- Exports are now exempt from the commercial tax, except for petroleum, natural gas, teak and other hardwood logs, and jade and other precious gems.

Personal Income Tax (PIT)

- Wage/salary income above the exemption threshold is subject to progressive rates of 1% to 20% (3% to 30% prior to FY 2012/13) for citizens and resident foreigners.
- The first MMK 1 440 000 of annual income (about USD 1 500; previously MMK 30 000) is exempt from the PIT.
- Personal deductions apply for the taxpayer, spouse and children and for life insurance premia and charitable donations, up to a global maximum of MMK 10 000 000 (about USD 11 000).
- Business and professional income is subject to rates varying between 2% and 30% (previously 5% to 40%) on annual income above MMK 1 200 000 (about USD 1 250); previously MMK 30 000.

Box 4.5. **Summary of Myanmar's main taxes** *(cont.)*

- Capital gains are taxed at 10% for residents and 40% for non-resident foreigners (from domestic sources).
- Non-residents' income from domestic sources subject to tax rate of 35%.

Corporate Income Tax (CIT)

- Profits of companies registered under the Companies Act or the Foreign Investment Law and branches of foreign companies entitled to special investment tax preferences (under the Foreign Investment Law) are subject to a 25% rate (before FY 2012/13, 30%).
- Profits of foreign registered companies, including branches, not entitled to special investment tax preferences are subject to a 35% rate.
- Sales/transfers of capital assets except for shares of oil or gas companies by resident or non-resident companies are subject to a capital gains tax of 10% and 40% respectively. Transfers of shares of oil and gas companies are subject to capital gains tax rates of 40 to 50% (PWC, 2014; KPMG, 2013a)
- Companies resident in Myanmar are subject to tax on their worldwide income; non-resident companies are subject to tax only on their income from domestic sources.
- Interest and royalties (but not dividends) payable to non-residents are subject to a withholding tax of 15% and 20% respectively.

Social Security Tax

- Under the 1954 Social Security Law, employers of more than 5 persons are required to pay 1.5% of a worker's wage/salary while the employee pays 2.5%. The payments are made to the IRD.

Other taxes

- Stamp tax and revenues from the national lottery (collected by IRD).
- Excise taxes on certain goods (Ministry of Home Affairs).
- Customs duties (Customs Department of the MOF).
- Tax on road transport; and various taxes on the use of natural resources.

Sources: Price Waterhouse Cooper (PWC) (2012), *Myanmar Business Guide*, August; KPMG (2013a), *Myanmar Tax Profile*, November; VDB/Loi (2012), *Myanmar Tax Update Part I: Myanmar's 2012 Tax Reform*, *www.vdb-loi.com/mlw/myanmar-tax-update-part-one-myanmars-2012-tax-reform-2/*.

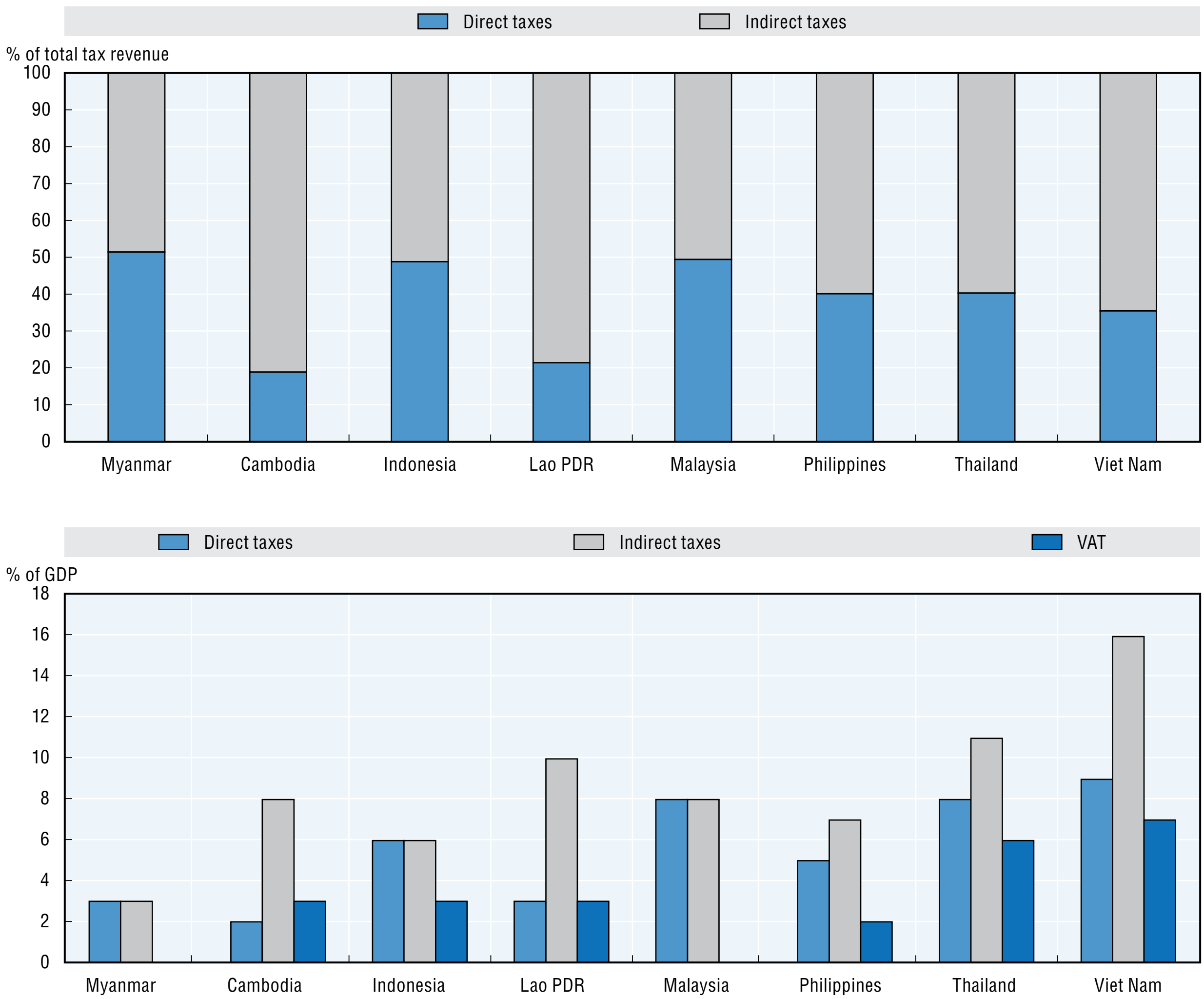
The yields from Myanmar's major taxes are significantly lower in relation to GDP than in most other ASEAN developing countries (Figure 4.7).

Myanmar's tax structure is somewhat distinctive, given its income level, in its reliance on direct versus indirect taxes. Direct taxes, from the taxes on profits and individual incomes, accounted for 52.7% of total tax revenues collected by the IRD and about 3% of GDP in FY 2012 (Figure 4.8).

This share of direct taxes is comparable to that found in a number of middle income ASEAN countries (Indonesia and the Philippines) and below that of Malaysia but it is noticeably higher than that in the other CLMV countries (Table 3.3) (Cambodia, the Lao PDR, Myanmar and Viet Nam form the CLMV group of countries). Direct taxes tend to be relatively more important for higher income countries compared to lower income developing countries, in part because of limits on the scope of personal and business income taxes imposed by the comparatively lower income levels in the latter. Although separate figures

Figure 4.7. **Myanmar relies comparatively heavily on direct taxes**

Comparison of direct and indirect tax shares of total tax revenues and their yield relative to GDP



Note: Figures for Myanmar are for FY 2012 from CSO and exclude customs duties; figures for other countries refer to 2010.

Sources: Myanmar: Official data from Myanmar IRD as reported in the CSO *Monthly Statistics*; data for other countries from CEIC Database; IMF (2013e), "Government finance statistics" (database), *http://elibrary-data.imf.org/QueryBuilder.aspx?key=19784658&s=322*; and country sources (see OECD, 2012).

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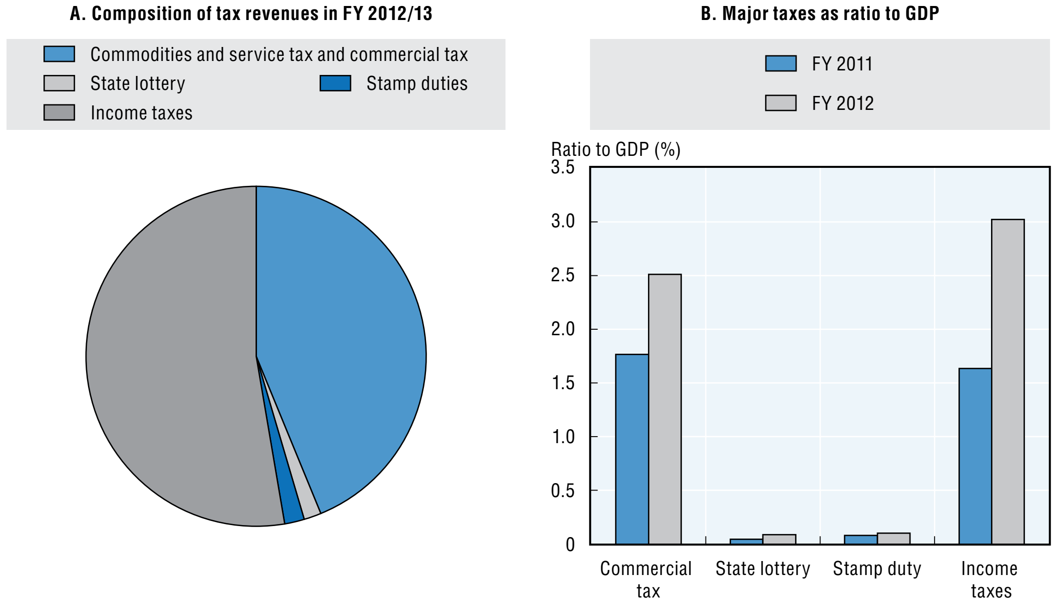
for the individual income versus the profits taxes are not published, the majority of the revenue from the direct taxes in Myanmar probably comes from the profits tax.

Somewhat more distinctive is the comparatively low level of indirect tax revenues in relation to GDP in Myanmar. Indirect tax revenues, mainly from the commercial tax, amounted to 47.3% of total tax revenues and about 2.8% of GDP in FY 2012/13. This is somewhat below the ratios found in Cambodia, the Lao PDR (as well as the Philippines and Indonesia) and well below the ratio for Viet Nam (and China and Thailand), although roughly in line with that of India and Malaysia.

Most tax rates are broadly comparable to those of other Asian developing countries

Myanmar's tax rates are mostly comparable to those of other Asian countries, although the standard commercial tax rate is rather low. The tax reforms introduced in 2012 harmonised a multitude of different commercial tax rates into a standardised rate of 5%, as a preliminary

Figure 4.8. **The commercial and income taxes account for most tax revenue (composition of tax revenues)**



Source: Ministry of National Planning and Economic Development (2013), *Answers to OECD_UNESCAP Multi-dimensional Review of Myanmar,* Foreign Economic Relations Department.

StatLink http://dx.doi.org/10.1787/888933134730

to the replacement of the commercial tax with a value-added tax in the medium term. The 5% rate is noticeably lower than that applied in most other ASEAN countries, where the rate is most commonly 10%. Raising this rate to a level closer to that prevailing in other ASEAN countries could raise overall tax revenues by as much as 1.5% of GDP.

Apart from the commercial tax, though, tax rates do not appear to be the main explanation of the low level of tax revenues in Myanmar compared to other developing ASEAN countries. Until the tax reforms that took effect in 2012, the profits tax rate was 30%, above the statutory rate of around 25% that prevails in most of the rest of the ASEAN region, although somewhat lower than in India. The reform lowered the rate to 25% starting in 2012. The range of personal income tax rates – from 3% to 30% for wage and salary incomes and 5% to 35% for property income – is also broadly comparable with that of other ASEAN countries, if a bit higher at the top rate than in several cases. However, the threshold below which no personal income tax is owed, which was raised substantially with the 2012 reform, is now relatively high compared to other lower income ASEAN countries. Myanmar's excise tax rates also do not appear to be substantially or systematically lower than those of other ASEAN countries, at least for those items where comparisons can be made (such as tobacco and gasoline, see Preece, 2012; and Nyunt, 2013 for a detailed review).

The above considerations suggest that much of the comparatively low level of Myanmar's tax revenues is due to factors that narrow the bases to which the taxes are applied combined with factors that limit revenues that are collected to less than those that are legally owed, such as tax evasion, and inefficiencies in tax registration and collection. Narrowed tax bases and limited collection are, of course, hardly unique to Myanmar.

Some recent studies of "tax effort" have suggested that a number of ASEAN developing countries collect in the order of half the taxes that could be reaped if statutory rates were applied to the full base and all taxes owed were collected (Pessino and Fanochiatti, 2010;

Table 4.4. **Comparison of key tax rates**

	Value-added tax[1]	Corporate income tax	Maximum rate	Zero tax threshold (USD)[6]	Zero tax threshold (LCU)	Official FX rate (LC per USD, 2012 average)
Myanmar[3]	5	25	20	2 248	1 440 000	640.6534
Cambodia	10	20	20	124	500 000	4 033
Laos[4]	10	24	NA			
Viet Nam	10	25	35	288	6 000 000	20 828
Indonesia	10	25	30	5	50 000	9 386.629
Malaysia	10	25	26	809	2 500	3.088801
Philippines	12	30	32	237	10 000	42.22879
Singapore	7	17	20	16 004	20 000	1.249676
Thailand	7	23	37	4 826	150 000	31.08309
Bangladesh	15	27.5	25	2 015	165 000	81.9
China	17	25	45	79	500	6.312333
India	12.5	32.45	30.9	2 994	160 000[5]	53.43723
Memoranda Average rate for low-income developing countries[2]			16.2			

1. Standard rates except where otherwise noted. Different rates may apply to some goods and services in some countries. USD values were converted from local currency using 2012 average official exchange rates.
2. IMF (2011).
3. Rates after the 2012 tax reforms. The prior corporate rate was 30% and the maximum personal tax rate was 30%.
4. Rates under the amended tax law of 2012. The previous corporate tax rate was 28%
5. Resident men; threshold for resident women is IR 190 000.

Sources: Deloitte (2013), Myanmar Highlights 2013, *http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-myanmarhighlights-2014.pdf*; KPMG (2013c), *Corporate and Indirect Tax Survey 2012, www.kpmg.com/FR/fr/IssuesAndInsights/ArticlesPublications/Documents/Corporate-and-indirect-Tax-Survey-2012.pdf*; IMF (2011), *Revenue Mobilization in Developing Countries*, International Monetary Fund, March, *www.imf.org/external/np/pp/eng/2011/030811.pdf*.; Laos: *www.dfdl.com/easyblog/entry/lao-pdr-2012-tax-planning--introduction-of-the-amended-tax-law.*

and OECD, 2012 and the references cited there). Exemptions and collection weaknesses have kept total value-added tax (VAT) revenues in some countries to as low as one-fifth of the total that would be collected if the statutory rate were applied to all consumption goods and services.

An indication, albeit very rough and tentative, of the severity of the base narrowing and collection losses across countries is provided by comparing the revenue raised from a given tax in relation to GDP with the statutory tax rate. For example, Myanmar's ratio of commercial tax revenues to GDP is about half the statutory commercial tax rate. This ratio is higher than the ratio of value added tax revenues (to GDP) to the VAT rate for Cambodia and the Lao PDR (although these two countries also raise considerably more revenue than Myanmar from excise and specific consumption taxes), but considerably lower than that of Thailand and Viet Nam.[5] Myanmar reaps noticeably fewer revenues relative to GDP from its somewhat higher statutory corporate tax rate than Viet Nam although it appears to be more on a par with Cambodia and the Lao PDR.

Tax collection and compliance are limited by weaknesses in tax administration

Responsibility in Myanmar for the collection and enforcement of the main taxes lies with the IRD of the MOF. This arrangement in which the tax administration is an integral part of the Finance Ministry is similar to that in Cambodia, Indonesia, the Lao PDR and Thailand. Several other countries in the ASEAN region, notably Malaysia, the Philippines, Singapore, and Viet Nam as well as China, used to have this arrangement but have since modified it to make the revenue function a semi-autonomous agency supervised by the Ministry of Finance, in part to better insulate it from interference from political or other undue influences (ADB, 2012a).

The IRD has a fairly well developed network of facilities for collecting taxes. The department has a large network of state/region, district and township offices distributed throughout the country. Ministries responsible for the other taxes also have extensive local offices that can be used for collection of the taxes under their responsibility.

However, despite the extensive network of offices, the effectiveness of tax collection has been seriously hampered by the heritage of limited government transparency, weaknesses in the rule of law, lack of adequate skills and training of tax administration personnel, impediments to effective control and co-ordination between agencies at the central and local levels, and other factors. The complexity of the tax laws and the limited transparency in their application has led to widespread lack of knowledge among taxpayers about their tax obligations, or how to comply with them, and an overall lack of faith in the fairness of the system (World Bank, 2012b). These weaknesses in Myanmar's tax collection are common to developing countries but in some respects are more severe. There are only 200 000 registered taxpayers in the entire country, amounting to only 0.4% of the population (World Bank, 2012b).

A comprehensive set of regulations for tax administration has yet to be fully established. This has led to limited and fragmented taxpayer registration. Until recently, for example, taxpayer identification numbers assigned at the local level were not unique nationally and often duplicated by other jurisdictions, leading to potential confusion and complicating monitoring of tax compliance. There are no centrally mandated procedures for planning of taxpayer audits and fraud investigations and actual criteria and procedures for dealing with failure to pay taxes on time can vary with the discretion of local offices (World Bank, 2012b).

The overall efficiency with which taxes are collected have been further impaired by the antiquated systems for assessing tax liabilities and the, until recently, relatively low thresholds for key taxes. Overly low tax thresholds involve high costs of collection relative to the taxes collected, and so divert tax administration resources from areas where the "return" to improved compliance is higher.

Weaknesses in tax administration not only have lowered revenues but are also costly to businesses. International surveys suggest that the cost to businesses of paying taxes in Myanmar is relatively high, although not as high as in some other ASEAN countries. Myanmar ranked 107th in the 2014 World Bank *Doing Business Survey* (World Bank/IFC, 2013) (Table 4.5). This is well below the ranks for Cambodia, Malaysia and Thailand, although more favourable than the rankings for Indonesia, the Philippines, and Viet Nam (137, 131 and 149 respectively). (Myanmar does rank somewhat more favourably in terms of the average number of hours required to comply with tax obligations; and the number of payments required per year).

Tax collection in Myanmar is organised by tax type, with separate IRD offices for each of the major taxes. International experiences have shown that this approach tends to involve higher costs and a lower rate of collection of taxes owed than more "functional" approaches focusing on key groups of taxpayers, such as large taxpayers. In particular, a growing number of developing countries have established Large Taxpayer Units (LTU)

Table 4.5. **Costs of paying taxes**

	Overall rank	Time to pay (hours)	Number of payments	Effective rate (% of profits)
Brunei	20	96	27	16.1
Cambodia	65	173	40	21.4
Indonesia	137	259	52	32.2
Lao PDR	119	362	34	26.8
Malaysia	36	133	13	36.3
Myanmar	107	155	31	48.9
Philippines	131	193	36	44.5
Singapore	5	82	5	27.1
Thailand	70	264	22	29.8
Viet Nam	149	872	32	35.2
Bangladesh	100	302	20	35
China	120	318	7	63.7
India	158	243	33	62.8
Mongolia	74	192	41	24.6

Source: World Bank/IFC (2013), *Doing Business Survey 2014*.

focusing on the largest business and individuals. This focus has proved to be generally quite cost effective since the largest taxpayers typically account for a major portion, often the majority, of taxes collected (Box 4.6).

Assessment of taxes owed is still the responsibility of the tax authorities in Myanmar. Taxes owed are calculated based on submissions by taxpayers of their income and other relevant information. This system imposes relatively high costs of collection since it effectively involves a partial "audit" of every taxpayer's return. Most developing countries have moved to tax self-assessment systems, under which the taxpayer calculates the tax owed as part of the tax filing and the tax authorities focus only on the most suspect cases for formal audit. These self-assessment systems have been found to be substantially more cost-effective than the older systems – provided tax obligations are reasonably clear and transparent and necessary tax information is effectively disseminated to the taxpaying public.

Persistently high tax arrears are one symptom of the inefficiencies in the Myanmar tax administration. Total reported tax arrears through FY 2010/11 were nearly 8% of total tax collections (about MMK 100 billion) (World Bank, 2012b). In recent years, only about 25% of commercial tax arrears outstanding at the beginning of the fiscal year (and about 52-62% of income tax arrears) have been collected during the fiscal year, and these collections have been largely offset by new arrears (Table 4.6). The persistence of high tax arrears is partly the result of the lack of systematic procedures for identifying and prioritising tax arrears collection efforts in areas of their greatest effectiveness (World Bank, 2012b).

Significant progress has been made on tax reforms but more is likely to be needed

Myanmar authorities have recognised the need both to increase the overall ratio of tax revenues to GDP and to improve the efficiency of the tax structure and the tax administration. A major tax reform took effect in FY 2012/13 that represents a good beginning toward these goals. The reforms encompass the first major overhaul of the main taxes since the 1990s and include the following components (see Box 4.5 for further details):

- Consolidation and rationalisation of the commercial tax, with the plethora of rates collapsed into a flat 5% rate for most commodities and services, and with a broadening of the commercial tax to include most services.[6] The commercial tax reforms are intended as an initial step toward the introduction of a VAT later in this decade.
- The corporate income tax has been reformed and rationalised, with the statutory rate for registered resident companies (except for those engaged in oil and gas extraction) lowered from 30% to 25%.
- Personal income tax rates were lowered; and the minimum threshold for tax liability along with the deductions for dependents were raised considerably.

Box 4.6. **The benefits of Large Taxpayers Units**

Large Taxpayer Units (LTUs) are organisations within the main revenue authority that deal with the collection, review and other aspects of all the taxes to which a country's largest taxpaying businesses and individuals are liable. They have been established in about 50, mainly developing, countries (as of 2010), including a number of Asian developing countries (notably, Thailand, India and Indonesia).

LTUs represent a partial reorganisation of tax administration from one based on separate sub-units for each main tax and function (as in Myanmar) to an organisation based on taxpayer type. LTUs provide the largest corporate and individual taxpayers with a "one-stop" facility for filing and paying of all the main taxes, direct and indirect, to which they are subject.

The main rationale for LTUs is that the largest taxpayers, constituting on the order of 1-2% of total taxpayers, account for around 60-80% of total taxes owed (ITC and GTZ, 2013). A centralised integrated approach, encompassing all the main types of taxes, is particularly appropriate for large taxpayers, whose activities tend to be carried out in multiple locations. LTUs are more likely to be able to develop the knowledge and expertise to deal with the complex financial instruments and tax minimisation strategies often employed by multinationals and other large taxpayers (Maruf, 2010). The Units also help to lower costs of complying with tax obligations for larger businesses, thereby improving the overall business climate. LTUs can also have important beneficial spillovers for the overall tax administration, by improving the professional skills of tax administrators and knowledge and by leading development of other technical capabilities.

To realise their potential benefits, however, LTUs need to have the legal and administrative authorities and capabilities to assess and enforce the liabilities of large taxpayers. The LTU needs to be able to have adequate resources to attract, retain and train highly qualified staff and to ensure that they have the resources necessary for their work. It is particularly important that the LTUs be insulated from outside political or other interference, which is likely to require a strong and ongoing commitment from senior government and political figures to ensure that independence.

Sources: ITC and GIZ (2013), *Regional Workshop on Taxation in ASEAN: Identifying Experiences and Lessons Learned in Six Countries*, International Tax Compact and Deutsche Gesellschaft fur Internationale Zussammenarbeit; Maruf (2010), "Efficiency in tax administration: A case study of large taxpayer unit in Bangladesh", *The Cost and Management*, January-February.

Table 4.6. **Tax arrears**
MMK billion

	Income tax		Commercial tax	
	FY 2009	FY 2010	FY 2009	FY 2010
Total outstanding at beginning of FY	31 929	29 056	46 736	49 019
Collected during the year	19 691	15 194	11 063	12 878
Ratio of the amount collected to amount outstanding at the beginning of the year	61.7	52.3	23.7	26.3

Source: IRD figures as reported in World Bank (2012b), *Republic of the Union of Myanmar: Public Finance Management Performance Report*, World Bank, Washington, DC, May.

Improvements in the tax administration have become a key element of Myanmar's overall fiscal reforms. To this end, the IRD has formulated a "Strategic Plan" for tax administration reform, including the following major elements (IMF, 2013b and World Bank, 2012b).

- Establishment of a large taxpayer unit (LTU), drawing on technical assistance from the IMF. A pilot project, focusing on about 60 large taxpayers, started in September 2013, and operations of the office were resumed at the beginning of FY 2014/15 (1 April). The IRD has been compiling a list of the 1 000 largest taxpayers as the focus of the LTU.
- A taxpayer self-assessment system will be introduced as part of the LTU implementation, and a system of unique taxpayer IDs will be introduced. A pilot project for self-assessment is scheduled to begin as part of the implementation of the LTU on 1 April 2014.

The authorities plan to use the LTU as a model for the ultimate establishment of offices focusing on medium-sized taxpayers and, subsequently at some point, on smaller taxpayers.

Although resource-based revenues are likely to continue to be a major source of government revenues, the situation of other Asian developing countries suggests that an objective of gradually raising tax revenues over the medium-term to at least 10% of GDP would be both realistic and appropriate. The recent reforms should help in accomplishing this target (although they were probably only partly responsible for the increase in the tax revenue ratio in FY 2012/13 (see Table 3.2) as the new arrangements take hold and are further refined.

Further increases in tax revenues are likely to be accomplished most easily and with least cost in economic efficiency by raising revenues from indirect taxes, so that their share of overall tax revenue rises to be more in line with that in other ASEAN countries. While establishment of the LTU should help to raise revenues relative to GDP for the income taxes, the scope for further increasing their tax rates is limited. The corporate income tax rate is constrained by the need to remain competitive with other Asian developing countries and by the mandates of the ASEAN Economic Community (AEC). Moreover, much evidence suggests that corporate income taxes tend to retard economic growth more than most other taxes, especially consumption taxes (OECD, 2010). The need to remain competitive in attracting and keeping professionals and other skilled workers to support development may also constrain the scope for personal tax increases.[7]

Evidence from other countries does suggest that reforms to broaden the bases and improve collection of indirect taxes can significantly raise tax revenues. A recent IMF study suggests that VAT reforms to ensure that most of the base is covered in low income developing countries could raise revenues on the order of 2% of GDP (IMF, 2011). Given the comparatively low tax rate applied under Myanmar's reformed commercial tax law, consideration should also be given to raising the rate nearer to the level in other ASEAN countries, that is, to 10%, or at least 7% as in Thailand, once a VAT is instituted.

Other taxes could be expanded or introduced and subsidies and tax preferences limited

In addition to gradually increasing commercial tax rates and improving collection of all taxes, reforms in three other areas are likely to have an important bearing on success in raising overall revenues available for development and other government objectives.

First, government revenues from natural resources will be a major component of available government revenues but only if they are effectively gathered and managed. The accounting, reporting and collection of revenues from natural resources have been notoriously opaque. Until recently, for example, revenues from gas production, which is under the control of a state-owned enterprise, do not appear to have accrued explicitly to the budget. Myanmar ranks at the bottom internationally in transparency and governance in the Resource Governance Index for oil, gas and mining (Revenue Watch, 2013). The authorities' commitment to move toward adherence to the Extractive Industry Transparency Initiative (EITI) is an important step toward improving the utilisation of natural resource revenues, which will also depend on progress in reforming the overall management of public finances (see below). Consideration should also be given to shifting from the present system of charging royalties for natural resource use (now 12.5%) toward some combination of resource royalties and rent taxes, which tend to be more effective in encouraging investment in exploration and development (OECD, 2013b).

Second, the thorough reform of the tax system in Myanmar should also help facilitate introduction or expansion of other taxes that would not only help boost revenues but also in some cases would help promote other development goals. These include property taxes and environmental taxes, which although levied to some degree, could probably be expanded. Property taxes are a potentially important avenue for augmenting revenues of the states/regions. Myanmar does apply some taxes that potentially can be used to promote environmental goals, notably the excise taxes on motor fuel and on sales of motor vehicles. Increasing these rates (particularly for those commodities where the Myanmar excise tax rates are below those of neighboring countries), even if the revenue gains are modest, would help to provide incentives to avoid the vehicle congestion and pollution from vehicles that is already a problem in Myanmar and is likely worsen with further development.

The success of reforms to increase government revenues will also require restraint and careful targeting of subsidies and tax preferences for investment and other purposes. Subsidies on fuel and basic fuel items have become large and difficult to reverse in a number of other ASEAN countries, particularly Indonesia and Malaysia. Total subsidies in the ASEAN region amount to as much as 25% of total government revenues in Malaysia and Indonesia, nearly half of which went to fuel subsidies, and were nearly 9% of GDP in India in 2008 (OECD, 2012). Such subsidies tend to get "locked in" and are difficult to reduce: several government attempts to cut fuel subsidies in Indonesia have failed in the face of stiff public and political opposition. Subsidies tend to be an inefficient method for poverty alleviation as they are very difficult to focus on the neediest households (OECD, 2013c). In Myanmar, electricity prices have been regulated with prices often set below cost, although the gap has been closing, and diesel and gasoline prices and certain fisheries activities have been subsidised (Dapice, 2012; ADB, 2013c).

Myanmar has also introduced an array of tax holidays, exemptions and other preferences to attract foreign investment. Although these preferences appear roughly comparable overall to those applied in other Asian developing economics, care will need to be taken to ensure that such preferences are carefully designed to be as cost-effective as possible. Such preferences have imposed significant losses in tax revenues in some other ASEAN countries and their net effectiveness has tended to be blunted by preferences offered by competing countries (OECD, 2012; see also OECD, 2014a for further discussion of these issues).

The budget process is being modernised to strengthen the utilisation of government revenues

The effectiveness of the processes with which government revenues are allocated and managed is as important as the mobilisation of the revenues themselves. Effective public expenditure management (PEM) is crucial to the three main objectives of overall public financial management (PFM): maintenance of fiscal stability; ensuring that expenditure allocations are in line with national development and other priorities; and achieving efficient delivery of public services (Allen and Tomassi, 2001).

A recent review by the World Bank with the Myanmar Government has identified both strengths and weaknesses in Myanmar's PEM in budget formulation, execution, and accountability (World Bank, 2012b). The strengths include formal procedures and timetables for budget formulation; organised bureaucratic structures with reasonably clear lines of authority and good control of individual transactions; and reasonably accurate budget classification and expenditure reporting systems (World Bank, 2013c).[8]

Further reforms to budgeting processes will be necessary to address weaknesses

Myanmar's pre-reform budget system was characterised by a high degree of top-down centralisation, with all major decisions made by the executive, very little transparency (almost none to the public), and extensive extra-legal interventions and interference by powerfully placed individuals and groups. As in most developing countries until recently, budgets have been prepared on a year-to-year basis without explicit regard to developments beyond that horizon. Budget execution has focused mainly on technical control of transactions and ensuring compliance with regulations and directives, with very little emphasis on the broader effectiveness and efficiency of expenditures in accomplishing their goals. Much of the budget formulation and execution was and continues to be governed by informal rules and procedures that differ somewhat across ministries, rather than a comprehensive and consistent system of formal budget rules (World Bank, 2012b). Recent reforms have established more systematic and open formal procedures for formulation, review, and discussion of the budgets of the Union and (now) the states/regions but most of the earlier underlying procedures, standards and arrangements remain.

Important weaknesses in the budget process include weak linkages between national development plan objectives and the budget process; lack of comprehensiveness and transparency in the budget; weak control of overall budget outcomes; inadequacies in rules and procedures necessary for effective public services delivery; and limited (although improving) capabilities for external audit and public scrutiny and accountability. Most of the weaknesses are common to most developing countries and are substantially a reflection of the early stage of development of their institutions.

In Myanmar, the comprehensiveness and transparency of the budget is particularly limited by the extensive use of "other accounts" (OAs). OAs are separate accounts maintained by line ministries, other government ministries, and SOEs with the Myanma Economic Bank (MEB) to deposit revenues derived from or earmarked for a wide range of activities, such as local health and education facilities. Detailed information on the activities of these accounts is not included in the formal budget documentation. Nearly 13 400 OAs were maintained at the MEB as of June 2012, of which nearly 5 000 were maintained by SOEs (World Bank, 2012b). Among government line ministries and administrative units, the largest number of accounts (a total of 427) is maintained by the Ministry of Defence and the Ministry of Health. The overall scale of the OAs is quite large, on the order of 44% and 28% of total government revenue and expenditure, respectively, and about 10% of government spending excluding that by SOEs (World Bank, 2012b). The extensive use of OAs is far from unique to Myanmar: they have been used at least as extensively in China and to some degree in many other Asian developing countries. The accounts are somewhat less opaque in Myanmar than they are in some of these other countries in that they are maintained with one institution and detailed information on their operations is reported by the MEB to the Central Bank of Myanmar (CBM) (but not to the budget department of the MOF).

The separation of the preparation of the current budget, which is prepared by the MOF, from that of the capital (or "development") budget by the MNPED in Myanmar is also common in developing countries. However separate preparation of current and capital budgets has often led to the blurring of distinctions between current and capital spending, as in practice development projects reported as capital spending tend to include a substantial portion of spending on operational items that should be reported as current expenditure (Webber, 2007). Separation of the current and capital budget preparation can also impede effective co-ordination of budget decisions as, for example, decisions about capital spending have implications for present and future current spending that may not be adequately taken into account when the budgeting of current and capital expenditure is done by separate agencies. In most developed countries, and a growing number of developing countries, current and capital budget formulation is integrated and performed in the lead budget agency.

Owing in substantial part to the weaknesses in budget formulation, budget expenditure outcomes have tended to deviate substantially from those planned in the original budget and to a lesser extent those specified in the revised budget adopted later in the fiscal year. Total actual expenditures exceeded initially budgeted expenditures by nearly 12% in FY 2009/10 and by more than 20% in FY 2010/11 (Table 4.7). The deviations would have been even larger if market exchange rates rather than the official rate were used to value budget transactions, as they have been since FY 2013/14 (World Bank, 2012b). The percentage deviations have often been much larger in absolute value for individual

Table 4.7. **Deviation of expenditure outcomes from initial budget estimate**

Total expenditures (MMK)	Fiscal year		
	2008/09	2009/10	2010/11
Originally budgeted	4 723 350	5 347 944	5 947 993
Actual expenditure	5 132 917	5 992 898	7 147 253
Deviation of actual over budget (%)	8.7	12.1	20.2

Source: World Bank (2012b), *Republic of the Union of Myanmar: Public Finance Management Performance Report*, World Bank, Washington, DC, May.

spending components. These deviations, at least in the individual components, cannot be attributed mainly to unpredicted deviations in actual revenues from those originally budgeted, which were 4% and 17.8% above the budgeted levels in FY 2009/10 and FY 2010/11, respectively.

Spending on social needs is low because the budget is not fully aligned with development priorities

Recent reforms to give the Parliament a major voice in the determination of the budget will also strengthen mechanisms for achieving the – so far limited – alignment of development priorities with the budget. Particularly, budgeting of expenditures on health, education and other social needs, has tended to be based on fixed percentage increases over the amount spent in the previous year rather than by objective measures of need, prior outcomes, or explicit targets for outcomes (UNICEF, 2013). Generally, the practice of year-to-year budgeting is also a key factor underlying the weak linkage between development objectives and budgeted expenditures. International experiences strongly suggest that development priorities are most effectively reflected in budgets when expenditures are budgeted within a medium-term framework, rather than only on a year-by-year basis (ADB, 2002) (Box 4.7).

The low level of available government revenues also contributes to the comparatively limited amount of government spending on health and education noted in the *Initial Assessment* (OECD, 2013b). Public spending on health and education by Myanmar amounted to 0.8% and 1.5% of GDP, respectively, in the FY 2012/13 budget. These ratios are well below those of most other ASEAN countries, except for the Lao PDR (health) and Cambodia (education), as well as India and China (Figure 4.9). Spending on other social needs, such as child development, poverty alleviation and resettlement is also very low, less than one-tenth of GDP (UNICEF, 2013). The limited spending on health, education and other social areas contrasts with the relatively high level of need for services. This is especially evident in indicators of health, such as life expectancy, infant mortality and per-capita expenditures on health, although Myanmar compares more favourably to other Asian developing countries on indicators of education outcomes.

The low level of spending in these areas is partly due to the fact that 40% of total government expenditure (excluding that by SOEs) in the FY 2012/13 budget went to defence. This is quite high compared to other ASEAN countries, where spending on the military typically is under 10% of central government spending.[9] The share of general government capital expenditure (excluding capital expenditures by SOEs) in total outlays, which was slightly more than one-third in FY 2011/12 and FY 2012/13, is also somewhat high compared to low income developing countries, where the ratio averages about 25% (World Bank, 2012b). In contrast, the share of Myanmar general government spending that goes to wages and salaries – about 7.5% in FY 2011/12 – is low compared to the average of nearly 19% that prevails in low income developing countries (World Bank, 2012b).

However, raising the shares of health and education spending to the average of the other three CLMV countries would only have increased their ratios to GDP to 1% and 2% of GDP respectively, still well below that in most of the rest of the ASEAN region. This suggests that the low level of available government revenues is substantially due to the low overall level of revenues (UNICEF, 2013).

Myanmar authorities recognise the need to both raise the overall level of spending on health, education and other social needs and their share in total government spending and plan to gradually increase the share of the budget devoted to these areas. The FY 2013/14

Box 4.7. **Advantages and requirements of medium-term expenditure frameworks**

Medium-term expenditure frameworks (MTEFs) encompass a range of approaches to budgeting expenditures over a multi-year period rather than simply on a year-by-year basis. The development of MTEFs has been a key element of the PFM assistance programmes of the World Bank and Asian Development Bank since the 1990s (World Bank, 2013d). Nearly all OECD countries and a majority (and growing number) of developing countries employ some form of a MTEF. MTEFs have been introduced more recently within the ASEAN region but nearly all member countries have or are developing such frameworks.

The basic elements of MTEFs include: projections of total financial resources available over the multi-year budget horizon in order to determine the aggregate limit on spending in each year ("budget envelope"), which can then be allocated to individual line ministries; and preparation of budgeted/estimated expenditures, current and capital, for each ministry, distinguishing expenditures for ongoing programmes from those for new programmes instituted during the budget cycle. MTEF budgeting is done on a rolling basis, with the estimated expenditures for the years beyond the current fiscal year serving as the baseline for the first year of the next year's medium-term budget. The most basic MTEF frameworks, which are the norm within the ASEAN region, focus on determining the budget "envelope" as a constraint on aggregate spending. More developed frameworks also integrate "bottom-up" assessments of the financial needs/priorities of line ministries and at a further stage may incorporate programme budgeting. The most developed frameworks, which are applied largely in the most advanced economies, emphasise budgeting based on measurement and evaluation of performance of expenditures against objectives, that is on the "outputs" of expenditures rather than the inputs.

MTEFs have several very important potential advantages over year-by-year budgeting in achieving the basic objectives of PFM (World Bank, 2013d; ADB, 2002). For example, they help to ensure fiscal sustainability and soundness by providing an explicit picture of the financial constraints on spending over a multi-year horizon based on projections of macroeconomic and other conditions impinging on budget outcomes. They can also help in better incorporating development objectives into the budget, and to promote greater efficiency in expenditure implementation.

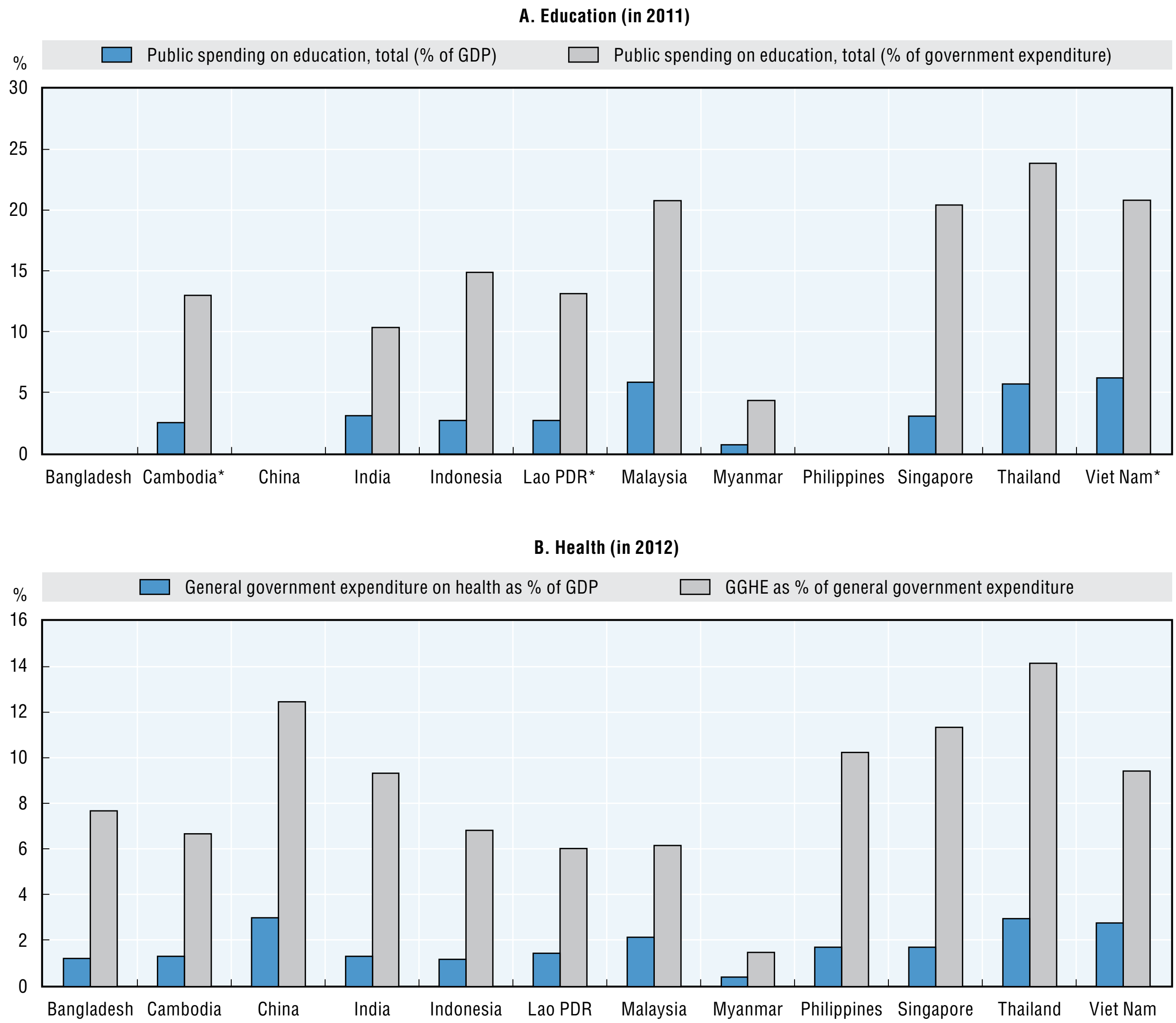
Development of MTEFs is an evolutionary process in which more sophisticated capabilities can be added as the supporting institutions develop. Countries at the beginning of PFM reforms have concentrated on the medium-term fiscal framework (MTFF), which can help greatly in supporting fiscal discipline and which prepares a foundation for the development into more advanced frameworks to improve the efficiency with which expenditures are allocated and implemented. However, realisation of the benefits from MTEFs is not automatic and requires strong political commitment to an objective and effective MTEF process (World Bank, 2013c).

Sources: World Bank (2013d), *Beyond the Annual Budget: Global Experiences with Medium-Term Expenditure Frameworks*, World Bank, Washington, DC; ADB (2002), "Linking planning and budgeting: The medium-term expenditure framework", *The Governance Brief*, Issue 2, Asian Development Bank; World Bank (2013c), *Myanmar Economic Monitor*, World Bank, Washington, DC, October.

budget projects an increase in health spending to 0.9% of GDP and in education spending to 1.8% of GDP. Substantial further increases are likely to be needed if Myanmar is to achieve its development objectives, but this is likely to depend on the extent and rate at which general government revenues, particularly tax revenues, can be raised.

Figure 4.9. **Public spending on health and education is low**

Education and health expenditure ratio to real GDP and to total expenditure (in %)



* Data are from 2010.

1. The allocation for education in FY 2012/13 budget rose to 1.5% of GDP and to 1.8% in the FY 2013/14 budget.
2. The allocation for health was raised to 0.8% of GDP in the FY 2012/13 budget and to 0.9% of GDP in the 2013/14 budget.

Source: Education: UNICEF (2013), *Towards more Child-focused Social Investments: Snapshot of Social Sector Public Budget Allocations and Spending in Myanmar, www.unicef.org/eapro/Social_Sector_Public_Budget_Allocations_and_Spending_in_Myanmar_.pdf*; World Bank (2013a), *World Development Indicators* (database), *http://databank.worldbank.org/data/home.aspx*. Health: *WHO Global Health Organisation Expenditure Database* (2013), *http://apps.who.int/nha/database/Home/Index/en*; World Bank (2013c), *Myanmar Economic Monitor*, World Bank, Washington, DC, October.

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Extensive efforts to strengthen public financial management are underway

Myanmar's government has begun an extensive programme of public financial management (PFM) reforms to improve the effectiveness with which expenditures are allocated, financed and managed. The reforms taken so far have already yielded some significant accomplishments, especially in making the budget process more transparent to the public and more accountable to its elected representatives.

Additional steps taken include implementation of key provisions of the 2008 constitution, notably the institution of a Federal Budget system covering the Union and the states/regions and the creation of the Financial Commission; and the establishment of two parliamentary committees, the Public Accounts Committees (PAC) and the Planning and Development Committee (PDC), to review the budget and its execution and the national development plan, respectively.

The constitution mandates the formation of a PAC in each of the two parliamentary chambers, which are responsible for ensuring that budgets are consistent with parliamentary laws, and for making recommendations to the Parliament on the budget. The committees also review project proposals involving foreign loans. The capacities of the PACs are constrained by the limited numbers of their own technical staff and limitations on the information they receive from the government. Notably, the committees do not yet have the technical capacity to independently review projections of government debt and its composition. Despite these limitations and their short history, the PACs already have had some significant impacts. Comments from the PAC reportedly induced the government to trim its proposed budget for FY 2012/13 in order to lower the projected deficit from 4.9% to 3.8% of GDP (World Bank, 2013c).

The creation of the Office of the Auditor General (OAG) is another important step towards improving budget accountability and transparency. Although the Office existed under the pre-reform regime, its role was significantly reformed and enhanced under the Law of the Auditor General of 2010. The OAG is only semi-autonomous since it reports through the Office of the President but its Auditor General is appointed for a five year term and its funding is provided directly from the Parliament.

In addition to these reforms, the authorities have also taken or begun several other important reforms to improve PFM. Particularly important are the initial development of the federal budget system and the beginning of the separation of SOE budgets from the general government budget. SOEs are now required to cover nearly four-fifths of their production costs from their own receipts or borrowing, although deficits (of current, capital, and financial accounts) are still covered by the State Fund Account (SFA) (World Bank, 2012b). Authorities also plan in the near-term to establish a Treasury Office in the MOF, in line with international best practices, to take on government cash and debt management functions now performed by the CBM and MEB.

These steps represent the beginning of a longer comprehensive reform programme to modernise and strengthen PFM in Myanmar. The Government (Office of the President) has established PFM Steering and Technical Committees to guide the PFM reform process and the MOF and MNPED have been jointly charged with developing the PFM reform strategy. Development of an initial medium term budget framework (presumably a medium-term fiscal framework) is a key priority for the medium term.

A number of further specific steps over the medium term to support these priorities and to enhance the reforms that have already been taken might be given consideration. Reforms to reduce the number and amounts of OAs and bring most of their activities on to the formal budget will be particularly necessary to improving budget formulation, transparency and accountability. Two other steps would help to improve the independence and integrity of key PFM elements.

- Making the IRD into a semi-autonomous revenue body under the MOF, as in several other Asian countries, would help to enhance its independence and to reduce its vulnerability to political or other undue influence.

- International best practices suggest that the OAG should be made fully independent by mandating its direct reporting to the Parliament rather than through the Office of the President.

Other steps would help to improve the capacity of the Parliament to perform its budget review functions on behalf of the public, including the following.

- Allocating sufficient resources to the PAC for technical staff to prepare independent analyses of the budget and its implications;
- And enhancing the information concerning the budget provided to the Parliament, including more details of the macroeconomic and other projections underlying the budgets.

From a broader perspective, three reform areas are particularly likely to need high priority over the medium term (World Bank, 2012b). First, strengthening mechanisms for fiscal discipline and debt management will be very important to contain the risks of fiscal decentralisation and greater SOE autonomy. Second, strengthening of systems to ensure that natural resource revenues accruing to the government are effectively mobilised and managed will be essential. Third, as discussed below, further development of effective arrangements governing fiscal relations among the Union and state/region governments probably also needs to be given high priority to ensure that all regions/states and population segments share in the benefits of development.

A fiscal federalism framework has been established

The 2008 constitution effectively set up a quasi-federal state in which the seven states and seven regions are given, through their elected parliaments and executives, explicit powers over defined economic, social, and regulatory domains, but where the Union retains certain authorities more characteristic of a unitary state (such as the power of the Union President to dismiss the chief ministers of the states/regions under certain circumstances) (Brand, 2012; OECD, 2013b). This system contains a basic framework for fiscal federalism that began to be implemented in FY 2011/12. As discussed below, the system is likely to need further elaboration through legislation and, possibly, in the new constitution now under construction.

The Financial Commission is an important and positive element component of the federal fiscal structure created by the 2008 constitution. The Commission is formally chaired by the Union President and includes the two Union Vice Presidents, the Auditor General, the Attorney General and the chief ministers of each of the states/regions. The Commission reviews the budget proposals of the Union and states/regions before they go to the Union and the state/region parliaments. It also recommends the allocations in the Union budget to cover the deficits of the states/regions. As such, the Commission serves at least potentially as an important venue for discussion, feedback, and co-ordination of fiscal proposals among the Union and the state/region governments.

Schedule Five of the 2008 constitution divides the legislative power over taxes between the Union and the states/regions, assigning to the Union government the revenues from and the authority to determine rates, tax bases and other provisions of the commercial and income and other taxes now collected by the IRD. The states/regions are assigned most of the other taxes, including excise taxes, tolls and other fees on motor transport within their jurisdiction, taxes on property owned by the state/region, and fees and taxes on local services enterprises.

The division of tax authorities is broadly consistent with fiscal federalism principles, whereby central governments should be responsible for determining taxes on tax bases that can move geographically or whose activities have national or international scope; as well as for taxes that are key to national goals for income distribution or other national objectives (Shah, 2004).

The states/regions are also given the authority to collect taxes, fees and royalties on certain natural resources within their territory, notably fisheries and most forest products except for teak and legally protected hardwoods. States/regions are not given authority over taxes or royalties over mineral, energy and other resources, which are legally owned by the Union, although there has been much discussion of allowing them to share in the revenues from these resources. Fiscal (and other) relations between the state/region level governments and lower level administrative divisions, such as the townships, are not defined in the constitution (as they typically are not in the constitutions of federal states) but are presumably left to those governments.

The taxes assigned to states/regions in Myanmar have so far accounted for less than 5% of total government revenues for the country as a whole (Table 4.8). States and regions are free to introduce taxes and define their bases and rates as long as they are in accordance with the constitution.

Table 4.8. **Split of budget between central and state/region level in Myanmar, FY 2012/13**

Item	Union	Region/State		Total
	MMK billion	MMK billion	% of total	MMK billion
Receipts	10 052	477	4.5	10 529
Current	9 260	457	4.7	9 717
Capital	35	20	36.4	55
Financial	757			757
Expenditures	11 651	832	6.7	12 483
Current	7 197	643	8.2	7 840
Capital	4 050	188	4.4	4 238
Financial	404	1	0.2	405
Balance	(1 599)	(355)	18.2	(1 954)

Note: The table includes receipts and expenditures of the State Economic Enterprises in addition to those of Ministries and Departments.
Source: Ministry of Finance (2013), Budget Department.

The constitution also includes a somewhat less specific division of responsibility for expenditures in the division of legislative authorities set out in schedules 1 and 2. The Union Parliament is given exclusive responsibility, as in other federal states, for defence, foreign affairs and other traditional national activities. However it is also made responsible in the social sector for education curricula and standards and teacher training and certification, while states/regions are confined to jurisdiction over "traditional" medicine, "social welfare works within the region or state" (sub-paragraph 7-b), and local entertainment and cultural activities. This implies considerable centralisation of education, health, and other social functions that in many other countries are substantially the responsibility of local authorities.[10]

Overall, however, constitutional provisions do not, and cannot be expected to, fully define fiscal relations among the Union and state/region governments and should allow in practice for considerable flexibility. These matters have yet to be clarified by legislation. It is also possible that the new constitution will devolve further fiscal authorities to the states/ regions.

Implementation is so far limited compared to other federal states

According to official statistics, Myanmar's states and regions together accounted for 4.7% of total government revenues and 6.7% of total expenditures in FY 2012/13 (Table 4.8). These figures include spending of SOEs at the Union and state/region level, and the state/regions' share would probably be somewhat higher if the SOEs were excluded, although data are insufficient to determine by how much.

The degree of fiscal decentralisation in Myanmar measured by these figures is well below that of most other developing countries in the Asian region, as well as that of federal countries in the OECD (Table 4.9).

Table 4.9. **Sub-national share of government revenues and expenditure**

	Revenue	Expenditure
Canada	55.3	66.5
Germany	34.9	38.7
Mexico	9.6	45.3
United States	45.4	47.3
Korea	15.7	43.3
China[1]	58.6	82.0
India[2]	49.5	41.1
Indonesia[3]	12.2	19.0
Malaysia[4]	11.4	10.8
Thailand	15.0	5.2
Myanmar[5]	4.5	6.7

1. Figures for SN Revenue and expenditure shares from OECD (2013d), *OECD Economic Surveys: China 2013*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-chn-2013-en*; figures for SN share of health and education spending from World Bank (2013e), "Fiscal decentralisation indicators for the year 2009", *http://www1.worldbank.org/publicsector/decentralization/fiscalindicators.htm*.
2. Figures for 2008.
3. Statistics Indonesia, figures for 2012 from *www.quandl.com/economics/indonesia-government-finances*.
4. Figures for 2001.
5. Myanmar CSO, data for FY 2012

Sources: See notes above.

Sub-national governments in India and Malaysia (both federal states) account for nearly 41% and 10.8% of total government expenditure respectively and expenditure shares of sub-national governments in major OECD countries with a federal structure ranges between nearly 40% and 66% of total spending.

Capital outlays by Myanmar state/region governments are modest so far, and their share of total government capital spending is lower than that of overall spending. State and region governments in Myanmar are authorised under the constitution to undertake infrastructure projects within their jurisdictions and have been encouraged by Union government authorities to seek private and foreign donor financing for such projects. Detailed figures on the composition of state and region spending are not available, but according to one report (UNICEF, 2013), none of the spending for FY 2011/12 was allocated to social sector needs. This is in sharp contrast to other federal and most non-federal countries, where local governments often account for more than half of total government spending on education and health.

As is typical in fiscal federal arrangements, the states/regions (collectively as well as individually) incur a substantial deficit. This deficit amounted to nearly one-third of total state/region expenditures in FY 2012/13, meaning that only about two-thirds of expenditure was accounted for by "own revenues". This limited financing of expenditures from own revenues is broadly in line with that of other federal states as well as most non-federal states.

State/region deficits in Myanmar are at present financed by a combination of transfers from the Union budget and borrowing from Union through the MEB. Borrowing is subject to an interest rate of 4%, well below the commercial maximum lending rate (World Bank, 2012b). Union transfers covered 88.4% of the total state/region deficit in FY 2012/13 but the fraction covered for individual governments varied considerably. There appear to be no explicit rules for determining the split between transfers and borrowing to finance the deficits. However transfers in the FY 2012/13 budget covered all of the deficits of several of the poorer states/regions (Sagaing, Rakhine, and Ayeyarwaddy) while Yangon was allocated transfers covering only about 37% of its deficit, suggesting that local needs are taken into account to some degree (World Bank, 2012b).

Direct financing from the central government budget of sub-national government deficits has a number of problematic features. Direct financing can lead to soft-budget constraints on sub-national governments and thereby complicate efforts to maintain fiscal discipline for the government as a whole. In Myanmar, this risk is accentuated by the lack of explicit criteria for determining the transfers, the low interest rate on borrowing to cover the part of the deficit that is not financed by transfers, as well as the use of supplementary budgets. State/region authorities have typically been notified of their proposed transfers from the Union very late in the budget process (close to the time the budget is supposed to be submitted to state/region parliaments), making it difficult for them to know what their aggregate resource constraint is likely to be (World Bank, 2012b). Direct financing also does not provide a very effective mechanism for the central government to better align the incentives of sub-national governments with broader national objectives, such as the preservation of the environment. Other countries that have used direct financing of sub-national government deficits in the past (for example, China) have gradually replaced this mechanism with a combination of revenue sharing and various types of unconditional and conditional transfers that are better suited to maintaining fiscal discipline and to promoting national development, social, and other objectives (Shah, 2004; World Bank, 2014).

Going forward, Myanmar faces important choices about how to further develop and elaborate the fiscal federal system.

- The overall extent of fiscal decentralisation will probably have to increase, with a much higher share of overall government spending at the local government level. Otherwise, the ambitious objectives of creating a federal state with sufficient autonomy over local affairs to support a consensus in favour of maintaining the Union are unlikely to be achieved.
- The states/regions will probably need to assume greater responsibility (although shared with the Union government) for education, health and other social welfare spending and policies, although this may require some changes in existing constitutional provisions and legislation.
- A more effective system for financing the gap between state/region expenditure responsibilities and their own revenue needs to be developed, via a combination of revenue sharing and conditional and unconditional transfers. The current constitution would seem to allow considerable scope for the introduction of revenue sharing and more conditional transfers. Several important steps could be taken in the near term,

including: the institution of an explicit aggregate ceiling on Union transfers to state/region governments; establishment of explicit and transparent criteria for allocating the transfers and the portion of state/region deficits they will cover; and raising the interest rate on state/region borrowing from the Union to the commercial bank maximum lending rate.

Transforming the financial system to support Myanmar's development

The most important determinant of Myanmar's success in mobilising the financial resources for its development will be the capabilities of the financial system. The key challenge for Myanmar authorities will be to ensure that financial system development proceeds rapidly enough to support overall economic development rather than to constrain it. Given Myanmar's early stage of development, it is not surprising that the key elements of the financial system are at present quite limited. The government has given top priority to improving the financial system and has taken an impressive number of steps since 2010 toward providing the legal and regulatory frameworks necessary to foster its development.

The country has some important advantages in pursing financial development. The currently underdeveloped state of the financial system provides an opportunity to draw on other countries' historical experiences, and hopefully to avoid policies that, in retrospect, have proved to be inadequate. Myanmar's membership in ASEAN and the approach of the ASEAN Economic Community will also provide opportunities and incentives for domestic financial institutions to improve their capabilities. However, rapid economic development will also impose growing and more sophisticated demands on the financial system and will also pose increasing risks.

As discussed in the remainder of this section, Myanmar authorities face a number of key challenges, including decisions about the basic structure of the banking system, the sequencing of liberalisation, the development of rural finance and microfinance, and the strengthening of supervisory institutions. In meeting these challenges, authorities are likely to have greatest success by concentrating on fostering a sustained process of institutional development to improve the capabilities of financial institutions and markets and the supporting legal and regulatory frameworks and infrastructure. Direct government interventions, such as loan subsidies or other preferential lending, may be appropriate in certain cases but need to be carefully targeted in scope and duration lest they interfere with the institutional development process.

Limited scope for market forces and severe fragmentation have impaired the financial system

As discussed in the earlier report (OECD, 2013b), Myanmar's financial system is at a very early stage of development, characterised by: a near-complete dominance of commercial banks, which account for nearly all the assets of the formal financial system; the near absence of formal financial markets; and a very limited array of financial instruments and services (Box 4.8; Annex 4.A4). While these features are not unique and also characterise financial systems in some other low income developing economies, Myanmar's heritage of extensive state control and the legacy of the 2003 banking crisis have accentuated them in number of important respects.

The limitations of the Myanmar financial system are manifest in an exceptionally low penetration of financial services and products into the economy. Less than one-fifth of the population has access to formal financial services (New Crossroads Asia, 2013). According

Box 4.8. **Structure of the Myanmar banking system**

Myanmar's formal financial institutions sector can be divided into four main segments: the banking system; credit co-operatives; microfinance institutions; and other non-bank financial institutions (see Annex 4.A4). The banking segment is overwhelmingly dominant, accounting for over 99% of total financial system assets. All of the banks are domestically owned, either by the government or private interests; although a growing number of foreign bank representative offices have been established since 2012 in anticipation of the future opening of the banking market. The commercial banking sector is divided into two segments, the four state-owned banks (SOBs: Myanmar Economic Bank, Myanmar Agriculture Development Bank, Myanmar Foreign Trade Bank and Myanmar Investment and Commercial Bank) and 19 private and semi-government banks (PSGBs). The semi-government banks are either owned or controlled by government ministries, military interests, or municipal authorities (Annex 4.A4). Four of these banks were created in 2010 and a fifth (Yoma Bank) regained its banking licence in 2012.

Commercial loans are largely confined to a one-year (although renewable) term, although longer-term loans for up to three years are available for certain purposes from the Myanma Agricultural Development Bank and the Myanmar Small and Medium Industrial Development Bank (SMIDB). Banks can provide hire purchase loans with the permission of the central bank. Commercial banks have not until recently been able to carry out foreign exchange transactions, which has prevented them from handling remittances sent by Myanmar workers in other countries and which are a very important source of funds for many households. Insurance products are confined to a basic array of traditional policies (except for health insurance).

Deposits at commercial banks are confined to demand deposits, savings accounts and time deposits with durations up to 12 months (with a small amount of savings certificates). Non-cash payments can be made using cheques, payment orders or credit transfers, direct debit, or (starting only very recently) payment cards. However cash is still the predominant means of payment for all but larger transactions by businesses.

Credit co-operative societies and microfinance institutions are important providers of loans and (in some cases) financial services to poorer households but their total loans are less than 1% of total financial system assets. Following the recent entry of private insurers, there are now 12 insurance institutions. However, the only non-bank financial institution of any appreciable size – the state-owned Myanma Insurance – accounts for less than 1% of total financial system assets and offers only a limited range of products.

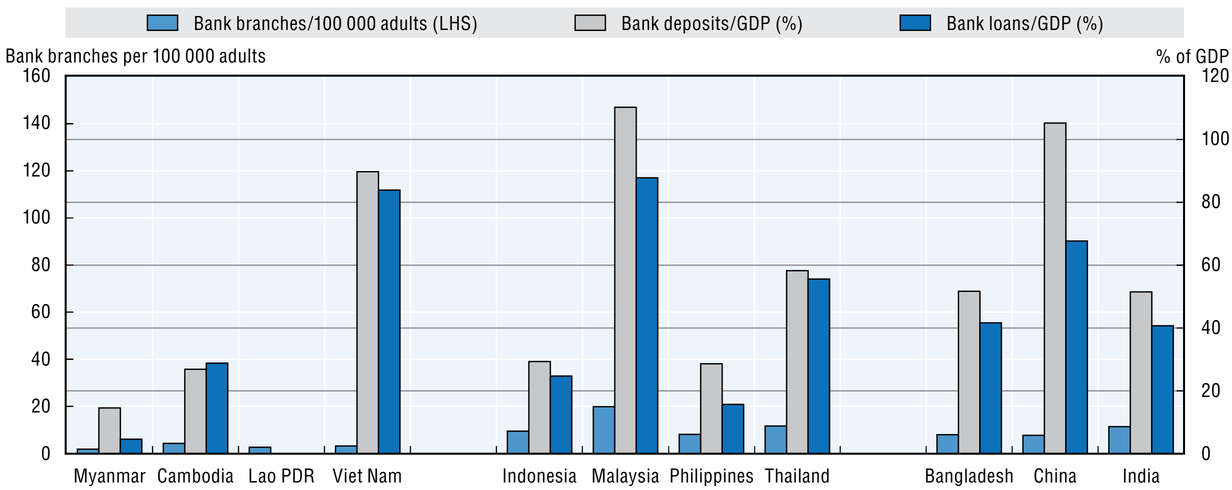
The limitations of the banking system have fostered a heavy dependence on semi-formal (mainly pawn shops and the co-operative societies discussed later in the text) and informal financial outlets. Pawn shops are semi-formal financial entities licensed by local governments and jointly supervised by the Myanmar Small Loans Enterprise. They are located primarily in heavily populated rural areas and near markets. Informal financial outlets include moneylenders and hundi bankers, the latter specialising in domestic and cross-border money transfers.

Sources: Central Bank of Myanmar (CBM) (2012), *Annual Report 2011-2012*.; Foerch, Thein and Waldschmidt (2013), "Myanmar's financial system: A challenging environment for banks", *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ), November; Duflos et al. (2013), *Microfinance in Myanmar: Sector Assessment*, January; Kloeppinger-Todd and Sandar (2013), "Rural finance in Myanmar", *Background Paper,* No. 3 prepared for the Strategic Agricultural Sector and Food Security Diagnostic for Myanmar, led by Michigan State University and in partnership with the Myanmar Development Resource Institute – Centre for Economic and Social Development (MDRI-CESD), January.

to the Myanmar Household Survey for FY 2009/10, only 6.4% of households had a bank account. A recent business survey indicates that more than half of respondent firms had inadequate access to external financing (Box 4.9). Except for a few of the larger banks, commercial banks have very limited branch networks, and there are only about 1 000 total bank branches in the entire country, nearly all of which are in urban areas (see Annex 4.A4). The number of bank branches per 100 000 of the adult population is the lowest in developing Asia and the number of commercial bank depositors per 1 000 persons is also the lowest except for China (Figure 4.10).

Figure 4.10. **Financial sector development in Myanmar is limited compared to other Asian developing economies**

Indicators for financial depth in 2012



Source: IMF (2013f), *Financial Access Survey* (database), International Monetary Fund, *http://fas.imf.org/*.

StatLink *http://dx.doi.org/10.1787/888933134768*

The ratios of commercial bank loans and deposits to GDP are well below those of nearly all other countries in the Asian developing region. Although the ratio has fallen significantly in recent years, cash still amounts to nearly 30% of the broad money stock (M2) and nearly three-quarters of the narrow money stock (M1), considerably higher than in most other ASEAN countries. Penetration of non-bank financial products is even lower. For example, only about 0.5% of the population has any insurance at all and the ratio of life insurance premia and total assets to GDP is well below the ratios found in other Asian developing economies (Foerch, Thein and Waldschmidt, 2013; World Bank, 2013f).[11] The limitations of the formal financial system are also reflected in a heavy dependence of the population on pawn shops and informal financial outlets that charge much higher interest rates than the banks (see Box 4.9).

The limited development of the banking and overall financial systems is partly the heritage of the collapse in confidence in banks following a banking crisis in 2003, which led to the shifting of much financial activity to the informal sector. Recovery in confidence in financial institutions has been impeded by a broader lack of confidence in formal government institutions. The very rapid increase in bank deposits and loans over the past several years may indicate that public confidence in the banking system is rising after the institution of a rudimentary deposit insurance scheme in 2011, but it remains fragile (Figure 4.13) (Foerch, Thein and Waldschmidt, 2013).[12]

The banking system is only partially commercially oriented, hampering development

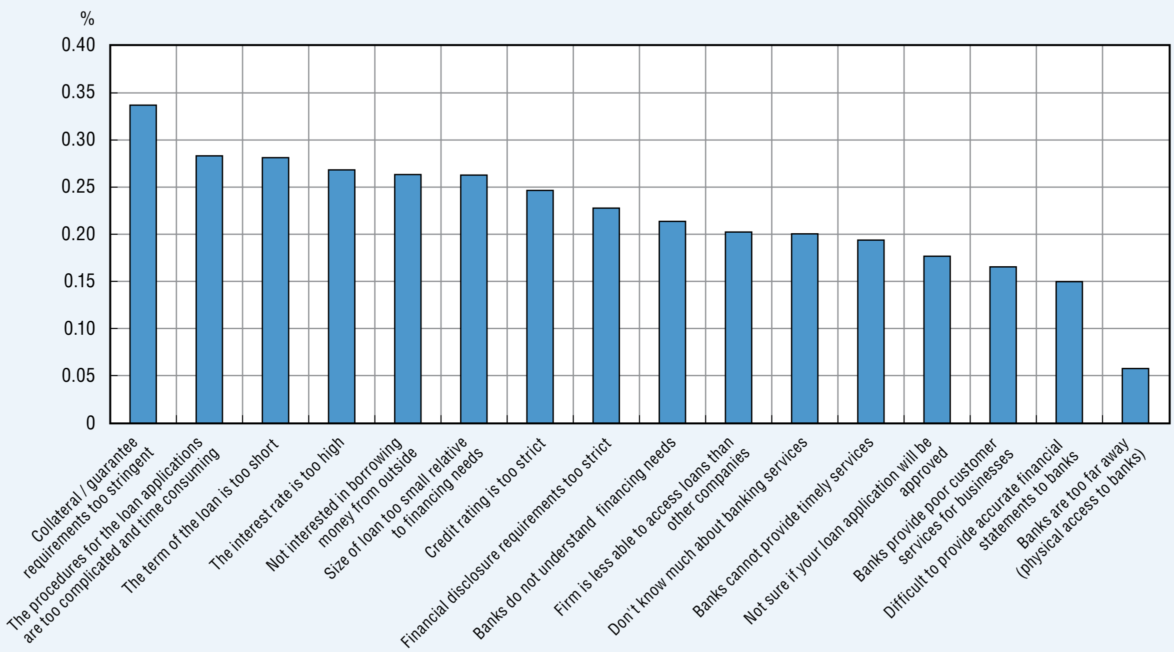
The capabilities of the banking system will be the key to the ability of the Myanmar financial system to support the country's economic development for the foreseeable future. The branch networks and other infrastructure of the SOBs and PSGBs will be an essential foundation for further expansion of the outreach of financial services. Although capital markets and non-bank financial institutions need to begin to be developed now and will become increasingly important over the longer term (in part to provide a more diverse array of financial outlets and to avoid an overconcentration of risks in the banking system),

Box 4.9. **Access to finance is an obstacle to firms in Myanmar**

In a business survey from early 2014, 3 001 firms of various sizes and in various regions were asked about their assessment of access to finance (Figure 4.11). A little more than half of the firms (52%) indicated that access to financing sources was inadequate, and even more (64%) had never borrowed from external sources (formal or informal) at all.

Figure 4.11. **Firms cite collateral and guarantees as the most important obstacle to access to finance**

Share of firms (in %) nominating obstacles to access to finance: To what extent do you think each of the following statements describes the present situation to obtain loans from external source(s)?



Source: OECD, UMFCCI and UNESCAP (2014), *Myanmar Business Survey* (database).

StatLink http://dx.doi.org/10.1787/888933134787

At the time of the survey, only 21% of firms had short-term loans outstanding, and 15% had loans of more than a year outstanding. Most loans amounted to less than 100 lakhs (MMK 10 000 000). A large majority reported personal savings to be the most important source of business funding (contributing 75% of company financing on average), followed by retained earnings and personal loans from friends and family. Among those reporting some sort of external finance, private banks ranked first as the source, followed by accounts receivable (factoring).

The business survey revealed some important differences between formal and informal finance. Almost half of the firms gave information about formal and informal finance, while 36% did not respond to specific questions about interest rates and maturities at all. This indicates that firms interested in external finance tend to use both formal and informal sources while other firms do not rely on external finance at all.

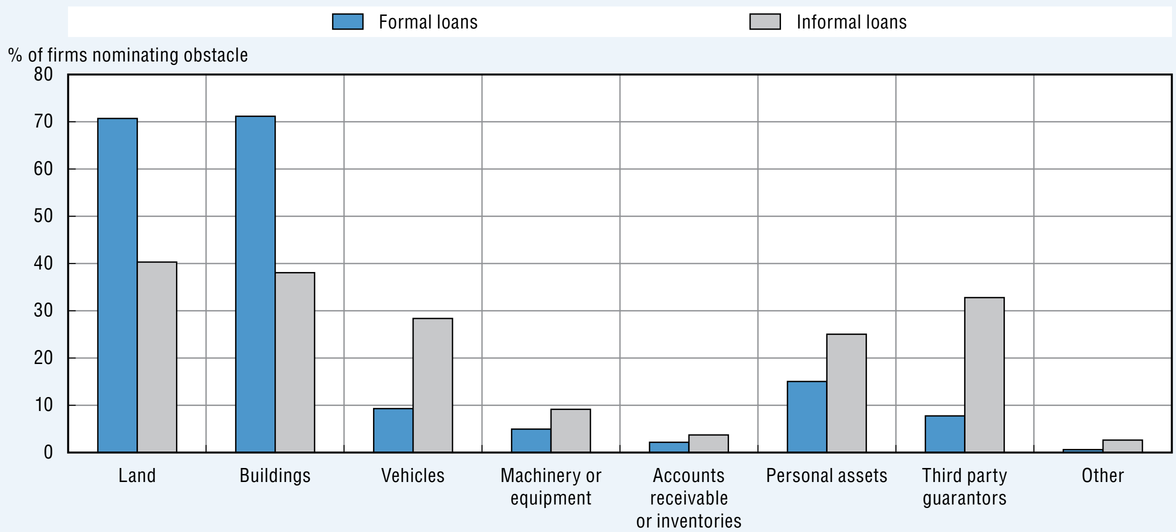
Interest rates for formal loans ranged from 2% to 60% per year, with an average of 13% per year, while informal lenders charged on average almost 9% per month, with the highest reported interest rate being 50% per month. Informal loans also have shorter maturities, of 8 months on average, whereas formal loans are on average held for 14 months.

The acceptable collateral also varies with the type of loan (Figure 4.12). Informal financing sources are more likely to accept a broader range of collateral, including vehicles, personal assets and third party guarantees, whereas formal loans are mostly collateralised with land and buildings.

Box 4.9. **Access to finance is an obstacle to firms in Myanmar** *(cont.)*

Figure 4.12. **Land and buildings are the most prevalent collateral for loans**

Share of firms (in %) answering: What kinds of collaterals or guarantees are required to get formal or informal loans? Circle all that apply



Source: OECD, UMFCCI and UNESCAP (2014), *Myanmar Business Survey* (database).

StatLink http://dx.doi.org/10.1787/888933134806

An investigation of the determinants of firms' access to finance suggests that small firms (of fewer than 20 employees) are less likely to have a loan currently, or at any time in the past, and this result is statistically significant. Older firms, in contrast, are more likely to have a loan and the same holds true for firms that report higher sales. Being foreign owned has no statistically significant effect on the probability of having a loan and there also seems to be no statistically significant effect for larger firms (of more than 100 employees).

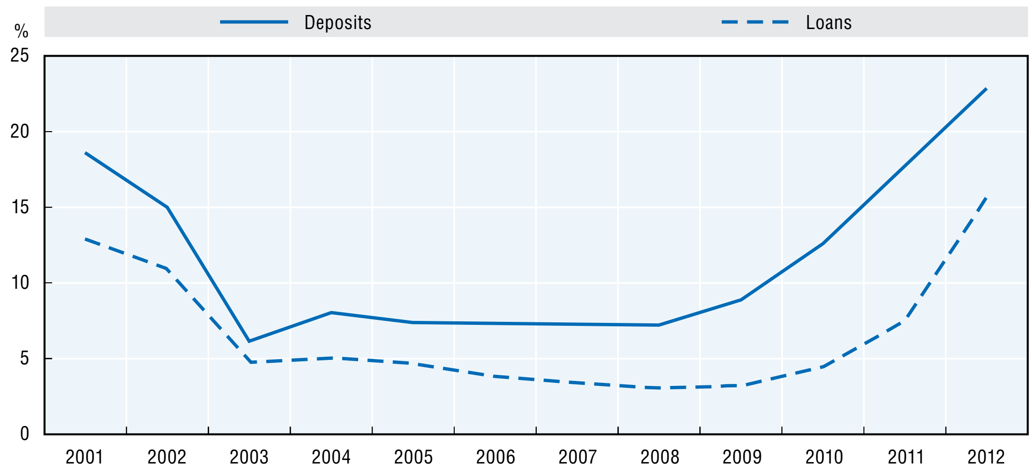
Source: OECD, UMFCCI and UNESCAP (2014), *Myanmar Business Survey* (database).

they are likely to play only a limited role in financial resource mobilisation in the early stages of development.

Several features of the banking system impair its ability to effectively gather and allocate financial resources. These include factors that limit the incentives and capabilities of state-owned and other government affiliated banks to operate as prudentially sound commercial entities; weaknesses in the structure of the PSGB segment, notably the small scale and narrow scope of many of the banks; and regulatory restrictions. Remedying these weaknesses will require choices that in some cases involve trade-offs between competing policy and other interests.

The traditional commercial banking services provided by the banking sector are comparatively limited relative to their overall asset size and in relation to the policy functions they carry out for the government. The state-owned commercial banks (SOBs) are significant providers of deposit services, accounting for about 39% of total banking system deposits and assets at the end of FY 2011/12. The Myanmar Economic Bank (MEB) and Myanmar Agriculture Development Bank (MADB) have substantial branch networks

Figure 4.13. **Bank loans and deposits have been rising rapidly in recent years**
Outstanding loans and deposits of non-financial institutions and households (% of GDP)



Source: IMF (2013f), *Financial Access Survey* (database), International Monetary Fund, *http://fas.imf.org/*.
StatLink http://dx.doi.org/10.1787/888933134825

throughout the country, but they have little penetration beyond the cities or townships.[13] Their other activities are primarily focused on policy lending and the performance of non-commercial functions for the government.

The MEB is the largest commercial lender among the SOBs, but its commercial loans to the private sector account for less than 10% of the bank's total assets. The remainder is devoted mainly to government securities and lending at subsidised rates to the MADB and a number of other banks to support their lending to farmers and other targeted groups.[14] Much of the MEB's staff and other resources are devoted to the treasury and currency maintenance functions it performs for the government.

The MADB, the second largest of the SOBs, is essentially a policy bank devoted to providing subsidised loans to farmers for a limited range of purposes, while the Myanmar Foreign Trade Bank (MFTB) focuses on international banking and has been until recently the main supplier of foreign exchange services. Only the smallest of the SOBs, the Myanmar Investment and Commercial Bank (MICB), seems to engage primarily in commercial lending, mainly to private companies and foreign joint-ventures.

The commercial orientation of the PSGB banking segment is greater overall than that of the SOB but rather mixed in character. The PSGB segment is effectively two-tiered, with the largest three banks – KBZ Bank, Myawaddy Bank, and the Co-operative Bank – making up the first tier. These three banks account for more than half of total PSGB assets and have the widest customer base. The remaining second-tier banks are much smaller and generally more specialised. Six of the second-tier banks are subject to or affiliated with government organs and were originally created to serve special economic segments (and still largely do). These banks are probably best regarded as engaged in a mix of policy and commercial functions. Of the remaining PSGBs, two are controlled by interests tied to the military and the business of a number of others is focused on activities related to the industrial holdings of their owners (New Crossroads Asia, 2013). Most of the second tier banks have fairly low capital bases, which limits their potential for expansion.

Financial regulatory responsibilities will need to be clarified

Myanmar's formal financial regulatory structure is fairly well defined but somewhat fragmented and departs in some important respects from international practices (Table 4.10). In practice, particular segments of the financial institutions sector are subject to more than one government entity and in some cases regulatory agencies also have commercial functions.

Paragraph 65 of the 2013 Central Bank Law (CBL) makes the CBM a separate public institution, responsible for issuing and withdrawing licences, inspecting, supervising, regulating and giving directions as necessary to ensure the solvency and soundness of all financial institutions defined under and covered by the Financial Institutions Law. The 2011 CBL represents an important step toward aligning Myanmar's bank regulatory structure with international practices. Provided the central bank is allowed to operate autonomously from the government, this placement will help to insulate bank regulation and oversight from interference by other government agencies and policies, as was potentially the case earlier.

In practice, conflicts could still arise from the continued ownership and influence over the policies and management of the SOBs by the MOF (for MEB, MFTB, MICB) and the Ministry of Agriculture and Irrigation (MOAI) (for MADB). Potential conflicts are also created by the ownership and/or control of government ministries over the Rural Development Bank and the Small and Medium Industrial Bank and for the two banks owned by municipal authorities. The potential for conflicts with the CBM mandate for bank soundness would be reduced if the SOBs and other government controlled banks were either privatised or their state ownership responsibilities placed with a separate state asset management company or similar entity.

The conduct of commercial operations by the insurance regulatory body and, now, by the Microfinance Supervisory Enterprise (MSE; under the MOF) in the financial segments they are charged with overseeing, is also a departure from international norms since it

Table 4.10. **Financial regulatory/supervisory bodies**

Institutions supervised	Regulator	Agency subject to	Other functions
Private commercial banks	CBM	MOF	Monetary policy
State owned banks			
MADB	CBM;MOAG	MOAG	Agricultural sector policies
MEB; MFTB; MICB	CBM; MOF	MOF	Financial and tax policies
Insurance companies	Myanmar Insurance		Insurance provision
Securities regulation	Myanmar Securities Exchange Centre		
Microfinance institutions			
Registered MFIs	Microfinance Supervisory Enterprise	MOF	Microfinance lending
Co-operatives under:			
Central Co-operative Society MFIs	MSE with Central Co-operative Society	Ministry of Co-operatives	MSE also provides MF loans
Union of Savings and Credit Federation	Central Co-operative Society		
Pawn shops	Myanmar Small Loans Enterprise (MSE) with local authorities		

Sources: Adapted from Foerch, Thein and Waldschmidt (2013), "Myanmar's financial system: A challenging environment for banks", *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ), November; Duflos et al. (2013), *Microfinance in Myanmar: Sector Assessment*, January; Kloeppinger-Todd and Sandar (2013), "Rural finance in Myanmar", *Background Paper,* No. 3 prepared for the Strategic Agricultural Sector and Food Security Diagnostic for Myanmar, led by Michigan State University and in partnership with the Myanmar Development Resource Institute – Centre for Economic and Social Development (MDRI-CESD), January.

invites conflicts between regulatory and commercial objectives. This conflict may have been less important when Myanma Insurance was the sole insurer but the separation of its regulatory and supervisory functions into separate entities is now necessitated by the recent entry of private insurers into the sector. Similarly, consideration should be given to transferring the lending functions into another entity separate from the Microfinance Supervisory Committee to allow the latter to focus solely on its regulatory and supervisory responsibilities.

Finally, as discussed further below, the creation of MSE has added to the fragmentation of oversight responsibilities for deposit-taking entities. At present, financial co-operatives are under the supervision of the Ministry of Co-operatives but the microfinance operations of the co-operatives are also subject to oversight by the MSE. Other deposit-taking MFIs are also now subject to the MSE but not to the CBM. Typically in countries with deposit insurance, all deposit-taking entities are subject to a single regulatory authority (even if this is shared with other authorities that focus on specific segments), the rationale being that deposit insurance requires regulations and oversight applied to all such institutions. Consideration should be given, therefore, to subjecting all deposit-taking financial institutions, including deposit-taking MFIs, to CBM oversight once the fledgling deposit insurance system is extended to them.

Over the longer term, the approach to the regulation of banks and (as they develop) other financial institutions will need to shift away from the present near-exclusive reliance on regulatory limits ("command approach") toward the regulatory paradigm that has developed internationally in which regulation is focused as much or more on ensuring that financial institutions have the incentives and capabilities to operate in a financially prudent manner. Under this paradigm, financial soundness depends on three key elements:

- Regulations that allow development and innovation in line with the needs of the economy *and* provide strong incentives for financial institutions to sustain financially prudent operations;
- Effective systems of internal controls within banks for assessing creditworthiness and for assessing, managing and monitoring risks;
- Effective financial supervisory oversight, focused not only on banks' conformity to specific regulatory rules but also, and increasingly as the banking system develops, on ensuring that banks' internal systems are effective and adapted as financial conditions change.

Overly restrictive bank regulations tend to undermine the second two elements by limiting banks' incentives to develop effective internal systems and inhibit the development of regulators'capabilities to assess and evaluate those systems.

Stringent regulations constrain financial sector development

Many of the provisions of Myanmar's bank regulatory system are similar to those of other developing countries in the region (Table 4.11). However some regulations are exceptionally stringent, including the officially specified rates for bank deposit and lending rates.

In accordance with legislation adopted after the 2003 banking crisis, virtually all bank loans have to be backed by collateral. Until recently, permissible collateral was confined to land and buildings, although bank deposits and other financial assets, certain agricultural goods, equipment and gold are now also permitted to be pledged. The amount of a loan

Table 4.11. **Comparative bank prudential regulations**

	Myanmar	Indonesia	Malaysia	Philippines	Thailand	China	India
Liquidity ratio	20% of total liabilities		3-5% in minimum net asset requirements	None	> = 6% (liquid assets/deposits and borrowings)	< = 75% (loans/ deposits) and > = 25% (liquid asset ratio)	> = 25% (40% max.)
Reserve requirement	10% of deposits must be held with CBM			19% as of March 2014		Around 20%	4% as of January 2013
Capital adequacy ratio (CAR)	10% risk weighted	[8% 2010]	[10% 2010]	[10% 2010]	[8.5% 2010]	8%	9%
General loan loss provisions	2% of loan value	Yes	Yes	1%-5%, depending on type of classification	Yes	Yes	Yes
Specific loan loss provisions	Yes, on value of sub-standard and doubtful loan amount above the collateral value	Yes, all related to loan classification	No	Yes, all related to loan classification	Yes, all related to loan classification	Yes, all related to loan classification	Yes, all related to loan classification
Loan classifications	Three: Substandard; doubtful; loss	Four: Special mention; substandard; doubtful; loss	One: "Non-performing" if more than 90 days past due	Four: Special mention; substandard; doubtful; loss	Four: Special mention; substandard; doubtful; loss	Four: Special mention; substandard; doubtful; loss	Three: Substandard; doubtful; loss
Time required for classification (days)	180; 360; 720	90;120;180		61; 181; 361	90; 180		90; 365; 0
Lending to a single individual	20%	20%	25%	25%	25%		15%

Sources: World Bank (2012a), *Bank Regulation and Supervision Survey* (database), *http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTGLOBALFINREPORT/0,,contentMDK:23267421~pagePK:64168182~piPK:64168060~theSitePK:8816097,00.html*; various country sources.

is closely linked to the market value of the collateral and industry standards imply a minimum ratio of collateral market value to the loan of nearly 2½ times.[15] Both this ratio and the portion of loans that are collateralised (nearly 100%) are higher than in most other developing countries in the region (Table 4.12). Apart from checking that a borrowing business is properly registered and in conformity with the law, little weight apparently is given to the borrower's income, cash-flow or business prospects.

The conservative lending practices have resulted in a fairly low rate of loan default. According to official figures, the non-performing loan ratio of the PSGBs is below 2% (as of March 2012) and has remained below 3% since 2007.[16] However, the practices have also contributed to the limited access to formal credit by much of the private sector. Loans and advances accounted for only about 38% of total PSGB assets in March 2012, a figure that is low compared to most other ASEAN banking systems, while holdings of cash and government securities accounted for more than half of total assets (Figure 4.14).[17] The reliance on collateral has also led to severe underdevelopment of effective systems for assessing creditworthiness that are basic to commercial banking in other countries.[18]

Regulations have also sharply constrained the ability of banks to extend their services more broadly into the economy. The PSGBs have not been permitted to lend directly to farmers and, except for Global Treasure Bank and the Rural Development Bank, seem to have made little lending to the rural sector generally. Until recently, the PSGBs were also forbidden to offer foreign exchange services and so were prevented from handling the transfer of the substantial amount of remittances from Myanmar citizens working in other countries; remittances have largely been transferred through the informal sector and,

Table 4.12. **Collateral use in other Asian countries**

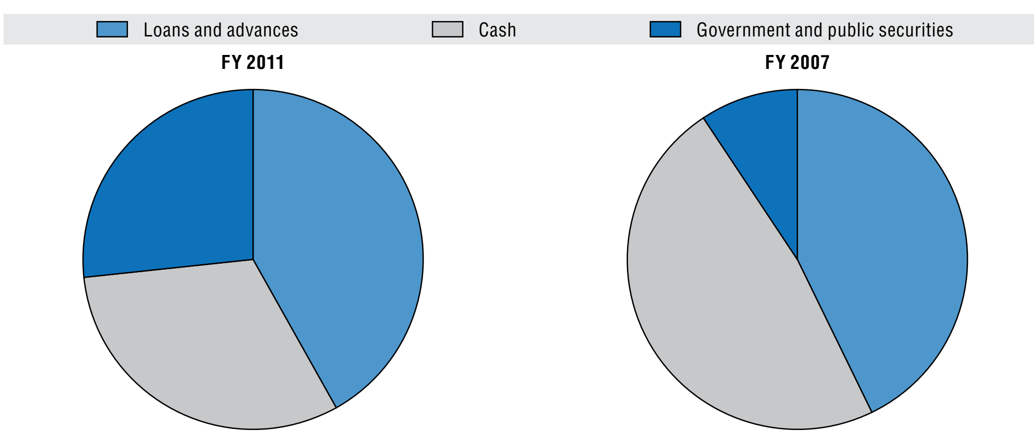
	Survey year	Proportion of loans requiring collateral (%)	Ratio of collateral value to loan amount (%)
Cambodia	2007	89.9	173.7
Lao PDR	2012	89.4	n.a.
Viet Nam	2009	96.8	271.7
Indonesia	2009	83.9	0.1
Malaysia	2007	60.4	64.6
Philippines	2009	64.1	238.4
Thailand	2006	89.4	131.1
Bangladesh	2013	84.4	271.1
China	2012	77.6	197
India	2006	74.3	126

Notes: Results based on surveys of enterprises conducted at various dates. Comparable figures for Myanmar are not available in the database. Figures derived from discussions with officials of several Myanmar banks indicate that virtually 100% of loans are collateralised and that the ratio of the market value of collateral to loan amount is in the order of 250%.
Source: World Bank (2013g), *Enterprise Surveys* (database), *www.enterprisesurveys.org*.

more recently, Western Union offices in the country. High capital requirements have made it unprofitable for the PSGBs to expand their branch networks and the regulatory ceiling on the ratio of deposits to capital that has applied until very recently has further limited their ability to take deposits.

Figure 4.14. **Cash and government securities make up more than half of PSGB assets**

Composition of PSGB assets in % of total



Source: Central Bank of Myanmar (2012), *Annual Report 2011-2012*.

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The interaction between the structural limitations of the banking system and restrictive regulation has impaired the banking system's effectiveness in meeting the financial needs of the population in several ways. First, access to bank loans relative to the size of the various segments of the economy is uneven. Although there are very few available data on the distribution of bank lending, scattered figures suggest that a disproportionate share goes to wholesale and retail trade and services, and a disproportionately low share to manufacturing, at least for the upper tier banks. Within these segments, only borrowers with substantial collateral are able to get loans. As in other countries, small and medium-sized enterprises (SMEs) (at least those not connected to the industrial groups related to some of the PSGBs) have at best limited access to bank loans (although they do account for about 18% of the total lending of the Co-operative Bank). The Myanmar Industrial Development Bank (MIDB), which was created to service SMEs, lends only to manufacturing firms and in any case accounts for only about 1.4% of total banking system assets. Newer businesses with little or no collateral are likely to become increasingly important to the economy over time and their limited access to bank credit, if it persists, could therefore pose an obstacle to development.

Second, prospects for the commercial sustainability of the state-owned commercial banks (SOBs) and at least some portion of the PSGBs, over the medium to longer term are at least clouded. Policy burdens and regulatory restrictions on the SOBs have resulted in low to negative profitability, at least for the largest two. The MEB reportedly has incurred losses for most of the past 20 years (Foerch, Thein and Waldschmidt, 2013). Profits of the MADB have amounted to less than 1% of assets and are due largely to contributions from the government. The PSGB segment as a whole has earned positive profits, amounting to 2% of equity and 18% of assets in FY 2012/13, but the profit situation varies considerably among the banks (CBM, 2012). Further expansion and increased competition, which is now severely restrained by interest rate and other regulations, could erode the profits of many of the PSGBs, especially the smaller and more specialised institutions.

Third, regulatory restrictions on interest rates and other provisions have severely limited competition and the scope for market forces in allocating credit in the banking system. Banks, at least those in the PSGB segment, have incentives to limit costs but very little incentive to innovate, since the services and products they can offer (and the prices at which they can be offered) are strictly regulated. The ceiling on lending rates limits banks' incentives to lend to borrowers with high prospective returns but also high risks.

Regulations should be relaxed to allow the banking system to support development

Improvement of the effectiveness of the banking system will require significant relaxation of bank regulations in certain areas in the near term as well as the beginning of reforms to convert the SOBs into more effective commercial entities. As competition increases, the PSGB sector may also need to undergo some restructuring; and authorities also face important choices about the pace and scope of opening to foreign bank participation in the domestic market.

The authorities have recently taken some important steps to relax some of the more onerous regulatory restrictions on the banking system. The ceiling on the ratio of deposits to capital was raised to 25 in March 2011 and abolished in 2012 (IMF, 2012). The regulations on deposit and lending interest rates have been modified to allow banks some flexibility: the deposit rate is now set at a *minimum* of 8% while the loan rate is fixed at a *maximum* of 13%. The permissible range of collateral has been broadened to include financial assets, gold, and agricultural goods, and capital requirements for new branches have been relaxed (sparking the establishment of a sizeable number of new bank branches over the past several years). Authorities also plan to develop a credit bureau to provide information on borrowers in order to improve access to bank credit.

Bank services have been broadened with the introduction of ATMs (in the two major cities) and bank (debit) cards. The authorisation given to many of the PSGB banks to provide some foreign exchange services has allowed them to enter the lucrative remittance transfer business. Income from this business has already become an important new source of bank income (for example, nearly one-third of total income for the Co-operative Bank). The establishment of a rudimentary deposit insurance scheme through Myanma Insurance should help to bolster confidence in the banking system.[19] Steps are also being taken to directly improve credit available to SMEs and to develop lending to the housing sector through the creation of a new Housing and Development Bank under the Ministry of Construction (Foerch, Thein and Waldschmidt, 2013).[20] These steps will provide some near-term relief from credit constraints on SMEs, although, over the longer-term, improvements in the capabilities of the commercial banks are likely to be the key to improving financing access by this segment.

With these measures taken, the authorities face choices about the next steps in regulatory and other reforms to the banking system, some of which pose potentially difficult issues. Banks should be allowed (and the stronger ones encouraged) to make longer-term loans. Consideration should be given to making the necessary changes in the legal, regulatory and industry standards to allow banks to make unsecured loans, and to allow a much higher ratio of loan to collateral value for collateralised loans. Breaking the rigid link between loans and collateral is an essential first step in moving away from over-reliance on collateral, towards lending based on cash flow and other standard credit-worthiness criteria. The Financial Institutions Law of 1990 in fact authorised both unsecured and secured lending by banks, but the requirement that loans be collateralised was imposed after the 2003 banking crisis (OECD, 2013b). Hopefully the new Financial Institutions Law now being considered will also allow for unsecured lending.

A strong case also can be made for either abolishing the ceiling on loan interest rates or at least allowing banks to charge higher rates under certain circumstances. Although banks are now allowed to charge lending rates below the maximum ceiling, in practice they have little incentive to do so since the current limit on the spread of loans over deposits is barely enough to cover their costs of lending to their existing customer base (Duflos et al., 2013). The banks are likely to need the freedom to charge higher loan relative to deposit rates if they are to have the incentive to expand their lending to now less served and more risky customers. The minimum deposit interest rate, and any ceiling on loan rates that remains, should also be tied to a market determined interest rate, such as the rate on treasury bills or the interbank rate once the relevant markets are established. This would help in allowing deposit and loan rates to adjust to inflation and so prevent deposit rates from becoming very low or even negative in real terms, as has happened at times in the past and which has helped to undermine savers' confidence in the banking system.

State ownership in the banking sector should be reduced over time

The future of the SOBs and other government controlled banks is another key but more difficult question that probably will need to at least begin to be addressed in the near term. The SOBs will need to be reformed into viable commercial entities with the incentives and capabilities to operate as viable profit-maximising entities if they are to effectively support Myanmar's economic development. These incentives and capabilities are particularly important in the provision of lending and other services to smaller borrowers, whose creditworthiness is more difficult to evaluate compared to the largest corporate firms. Based on experiences in other countries with large SOB sectors, notably China, establishment of these banks as commercial entities will require reforms in three areas: first, the separation of the non-commercial policy functions now performed by the

SOBs from their commercial banking activities; second, the establishment of a level legal and regulatory playing field for SOBs and PSGBs; and third, an increase in private ownership (or full privatisation at some point) of government-controlled banks.

The first two steps should be possible to achieve within the medium term. The third step is likely to take longer for the SOBs, but ownership diversification (and even privatisation) should be feasible sooner for the PGSBs that are now formally or effectively government controlled.

The Myanmar authorities have announced their intention to transfer the government treasury functions now performed by the MEB to the MOF at some future date but beyond this step, plans for the state-controlled banks have not yet been announced.[21] There are a number of possible options for strengthening the commercial orientation of the state-controlled banks but some appear more likely than the alternatives to be effective under the conditions prevailing in Myanmar.

There are two options for dealing with the policy lending and other non-commercial functions now performed by state-controlled banks. The first is to remove these functions from the banks to allow them to focus exclusively on commercial banking and to transfer the functions to separate non-commercial development institutions or government departments. For example, the MADB might be divided into a commercial bank and a development bank, with the latter carrying out its subsidised lending with the loan subsidies provided, say, by the MOAI and financed by borrowing at market rates from other banks. The currency functions performed by the MEB could be transferred to the central bank or a department of the MOF (as in many other countries).

Alternatively, the central government could leave the subsidised lending and other policy functions with the state-controlled banks but compensate them for these services. Under this model, the MADB would continue to administer the loan programmes for farmers under criteria set by the government. This would require the government to provide explicit loan subsidies (from the budget) to the MADB equal to the difference between the commercial interest rate and subsidised rate, and to similarly pay the market cost plus a profit margin for currency and other policy services. This option involves less restructuring of existing institutions than the first but it could divert resources and focus from the bank's commercial banking. Overall, the experience in other countries, notably China, suggests that the first option is likely to be the more effective.

Legal and regulatory establishment of the SOBs and other effectively government-controlled banks as commercial entities also involves a number of options. The first step toward this goal in most countries, including China (and planned in Viet Nam) has been to incorporate SOBs and to require them to operate as profit-making commercial entities ("corporatisation") with governance structures and other features required of private banks. The idea in principle is that state banks and private banks should operate as far as possible on a level legal and regulatory playing field. Currently, several SOBs are not fully corporate in the same sense as are the truly private banks and are not on exactly the same legal playing field.[22]

International experiences are more varied concerning the second step, after state banks have been corporatised. SOBs had substantial presences in a number of OECD countries through the 1960s but were subsequently devolved to private ownership and control. China and several other Asian countries have so far chosen to retain state-controlling interests in their SOBs.

Retention of state control poses some challenges in ensuring that the banks operate effectively as commercial entities. A shift toward a "credit culture" internally in which loans are assessed according to objective criteria can be more difficult to achieve when state control is retained; and the risks of continued government interference in lending and other decisions are also likely to be higher. International best practices for state-owned enterprises mandate that at the least, ownership needs to be strictly separated from government regulation if SOBs (and state-owned enterprises generally) are to operate effectively as commercial entities (OECD, 2005). In a number of countries, including China, this separation has been effected through the creation of separate asset management companies to exercise the state's ownership function, but the effectiveness of these companies in exercising oversight has been uneven.

While the choice between privatisation, state control or something in between is unlikely to have to be made in Myanmar for some time, formulation of a strategic plan for the SOBs and other state-controlled banks in the near term would help to underpin the development plan for the financial sector as a whole and to reduce uncertainty among banks about the future banking environment. It would also be useful if the new Financial Institutions Law and/or the subsequent regulations implementing it, were to provide a foundation for eventual divestment and privatisation of at least the smaller state-controlled banks.

Several of the larger PSGBs are already preparing for the more competitive banking environment that is likely to evolve in the near to medium term as the regulatory environment is liberalised and once foreign banks are allowed to begin domestic operations. This competition may well put pressure on the smaller and less diversified PSGB banks, which may find it difficult to remain commercially viable. There may need to be significant consolidation and rationalisation of the PSGB segment, resulting in a smaller number of financially stronger (domestic) institutions. Skilful regulatory and supervisory oversight will be needed to facilitate consolidation in the PSGB segment, to ensure that insolvency cases and breaches of compliance are promptly dealt with, and to prevent banks from engaging in excessively risky activities in order to survive under increased competition.[23]

Gradual opening to foreign banks could bring significant benefits

The intention of Myanmar authorities to allow foreign banks to begin commercial operations domestically within the next several years could, if carried out, mark a relatively early (given the early stage of reforms) and potentially more extensive opening to foreign banks in the developing Asian region (Box 4.10). The push to bring foreign banks in is being driven within Myanmar by the need to ensure that needs of foreign companies and other companies with international operations are met, to accelerate the development of the overall banking sector, and to prepare for the integration of ASEAN banking under the AEC.[24] Myanmar is potentially a highly attractive "new frontier" for foreign banks given the currently underdeveloped state of the market and the prospects for rapid economic growth.

In Myanmar, the terms under which foreign banks will be allowed to enter the market and to operate have been announced only in general terms and will need to be clarified further. Authorities have indicated that entry likely will be carried out in three stages,[25] but further details (such as maximum shares or limitations on the range of businesses a foreign bank will be permitted to engage in) have not yet been revealed.

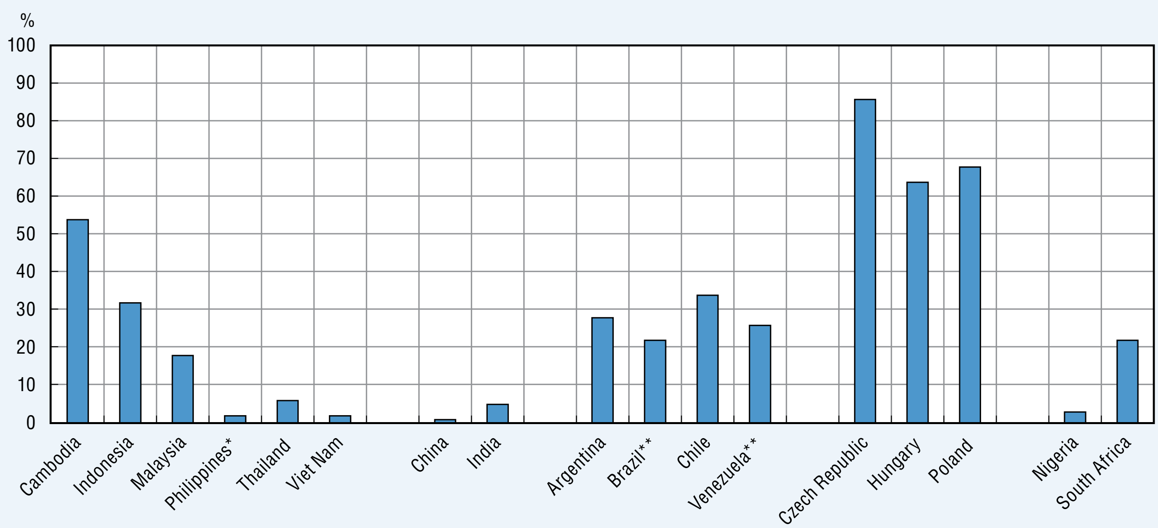
Box 4.10. **Foreign bank participation in other emerging market countries**

The extent of foreign bank involvement in the markets of emerging economies varies widely (Figure 4.15). Foreign banks dominate the banking sector (in terms of their share of total banking system assets) in many Eastern European countries and account for between one-quarter and one-third of the banking markets in major Latin American emerging economies. Except for Cambodia and Indonesia, foreign bank participation in most Asian developing countries (as well as many Asian advanced economies) has long been lower than in other regions. Banks from Asian countries outside of ASEAN, such as Japan and Korea, along with in some cases banks from the United States and Europe, account for the bulk of foreign bank assets in ASEAN countries. Cross-border activities of ASEAN banks are still relatively limited, although they are expected to increase rapidly as the ASEAN Financial Integration project proceeds (ADB, 2013b).

The scope of foreign bank activities in emerging markets also varies considerably. Traditionally, foreign banks have initially concentrated on servicing foreign companies (particularly those from their home country) and large multinational domestic firms and in providing foreign exchange and other specialised services in which domestic banks tend to be less capable. Foreign banks in China and a number of other Asian developing countries have been active in credit card businesses, generally through joint-ventures with domestic banks. Foreign banks in most developing countries tend to be either largely uninvolved or involved to a very limited degree in domestic deposit taking, branching and lending to domestic companies (except for the very largest or multinationals). However they are more involved in these activities in those developing countries where their presence is comparatively quite large, such as the Eastern European countries, and, in the ASEAN region, in Cambodia (Claessens and van Horen, 2012).

Figure 4.15. **Foreign bank participation in emerging markets varies widely**

Foreign bank assets as a share of total banking system assets



Notes: Figures are for 2009 unless otherwise indicated. * 2006; ** 2008.

Sources: World Bank (2013f), *Global Financial Development Database, http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTGLOBALFINREPORT/0,,contentMDK:23492070~pagePK:64168182~piPK:64168060~theSitePK:8816097,00.html*; Claessens and van Horen (2012), "Foreign banks: Trends, impact, and stability", *IMF Working Paper*, 12/10, January.

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Sources: ADB (2013d), *Country Operations Business Plan, Myanmar 2014-2016*, Asian Development Bank; Claessens and van Horen (2012), "Foreign banks: Trends, impact, and stability", *IMF Working Paper*, 12/10, January.

In determining the pace and extent of opening to foreign banks, Myanmar authorities will need to balance the potential benefits against a number of considerations. Foreign bank entry potentially can bring substantial benefits for the process of financial development. Foreign banks are able to provide sophisticated financial services that are likely to be in increasing demand as the domestic economy develops but which are either not available or available only with substantial limitations from domestic banks. Foreign bank participation is likely to help increase competition in the banking sector and could help facilitate rationalisation of the banking sector by providing potential buyers of weak or unviable domestic banks. Foreign banks can also provide business expertise to local banks and help in training local workers and professionals.

The degree to which these benefits are realised, however, is likely to depend on the scope afforded to foreign banks in the domestic market and the terms on which they are permitted to participate. For example, foreign banks (and foreign multinationals generally) often prefer to have controlling interests in joint ventures they operate in emerging economies. Confining foreign banks to a low, non-controlling share, of joint ventures in the first stage of their entry into Myanmar may limit their focus to foreign exchange and specialised ("boutique") services with limited spillover benefits to domestic banks. Foreign banks are only likely to participate extensively in domestic lending or in setting up branch networks if they are able to have reasonable access to domestic currency facilities, such as the interbank money market.

There have been concerns that permitting too great a presence of foreign banks will undermine the control of domestic monetary and domestic financial regulatory authorities. The greater sophistication and their ties to home country parents of foreign banks may make it more difficult for domestic financial supervisor authorities to oversee their operations compared to those of domestic banks.[26] This does underscore the need to ensure that financial supervisory capabilities improve as the opening to foreign banks occurs.

Another specific concern is that foreign banks can increase an emerging market economy's vulnerability to external financial shocks, by cutting back on lending in the host country in response to shocks to their external funding or capital. For example, foreign banks on the whole tended to cut back lending in emerging market host countries more than did domestic banks during the global financial crisis of 2009. However there is evidence that foreign banks did not cut back lending more than domestic banks in countries where foreign banks were dominant in the banking system, and/or where domestic deposits were the main financing source for their lending (Claessens and van Horen, 2012).

Overall, these considerations suggest that the benefits of a more rapid versus a very gradual approach to opening to foreign banks, with a view to allowing them to assume a major role in the banking system over time, are likely to outweigh the potential drawbacks. Foreign banks from other ASEAN countries are likely to be the most numerous entrants and are probably best positioned to engage in alliances and joint ventures with local banks that benefit the overall process of banking system development. Relations among banking supervisory agencies through ASEAN fora can also help to contain risks that arise from the opening to foreign banks. Consideration therefore should be given to allowing foreign banks to take controlling shares of joint-ventures in the first stage of the opening and to beginning the second stage in which wholly owned subsidiaries are permitted within a few years after the onset of the first stage.

Financial and capital market development needs to focus first on interbank and bond markets

The very early stage of financial market development in Myanmar is not surprising given that there were virtually no formal financial markets prior to 2011. There is still no domestic currency interbank or other short-term money market; no secondary market for government securities (and until very recently only a very limited primary market); and no primary or secondary corporate bond markets. The formal stock exchange – the Myanmar Securities Exchange Center (MSEC) – is largely a structure with almost no actual participation. Only two public companies of the total of 86 public companies registered with DICA are listed on the exchange. Their shares are traded only to a limited degree (Foerch, Thein and Waldschmidt, 2013), although the MSEC also now serves as a venue for sales of government securities.

The Myanmar authorities, drawing on technical support from outside expert agencies, have taken some important steps to develop the initial foundations for financial market development. A key step was the establishment of the interbank foreign exchange market beginning in October 2013, a move enabled by the prior authorisation given to PSGBs in 2011 to engage in foreign exchange business and the ending of restrictions on current account foreign exchange transactions. These reforms were instrumental in unifying the foreign exchange rate regime and paving the way toward a managed floating exchange rate regime as one pillar for monetary policy. Development of the payments system, another key infrastructure component for financial markets, is well underway (Box 4.11).

The interbank foreign exchange market should pave the way for re-establishment of an interbank domestic currency market for bank reserves (which existed prior to 2003 but was closed after the banking crisis) and of a secondary market for government securities. Institution of these markets in the near-term needs to be a high priority since they are essential to the establishment of market-based interest rates and an efficient reserve targeting regime for monetary policy, which the authorities are committed to achieve (IMF, 2013b). The CBM has been carrying out auctions of central bank deposits and credit, which could be regarded as a precursor to development of short-term money markets. There has been only limited participation by banks in the auctions since the interest rate paid on deposits (1.5% per annum) is too low to be attractive and given the high level of liquidity of the banks (Maung, 2013). High liquidity could also be a potential near-term impediment to development of an active interbank market, but this obstacle is likely to ease as competition to expand lending intensifies.

Myanmar authorities have been developing a roadmap for capital market development since 2008, with technical assistance from outside expert organisations. The timing of capital market development is supposed to be in accord with the timetable for the ASEAN Integrated Capital Market. The most notable tangible result of the roadmap so far is the Securities and Exchange Law of 2013, which provides the legal framework for a stock exchange and securities markets, including the activities permitted to securities companies and rudimentary requirements for listing. The authorities have set an ambitious timetable for implementing the law, including: the establishment of a Securities Exchange Commission and Office; and the institution of the new stock exchange and entry of securities companies by 2015. An extensive effort is underway to develop the infrastructure to support the securities exchange.[27]

The authorities face important choices in determining the priorities to be given to the development of the stock versus bond markets. Development of corporate bond markets has generally lagged that of stock and government bond markets in other Asian developing

Box 4.11. **The payments system in Myanmar**

The CBM maintains the facilities for non-cash payment transfers among the banks. Since 2011, large value transfers among the banks have been made through three clearing houses located in Yangon, Mandalay and Nay Pyi Taw. Payments among the members are settled through the clearing house, using the accounts of their bank at the CBM, while payments with non-members are settled through one of the members acting as a correspondent.

Although electronic facilities are developing, much of the clearing and settlement process still uses manual means. Checks are presented each day by receiving banks to the banks they are drawn on at a daily meeting at the clearing house. Banks with a net debtor position have their account with the CBM debited on the next business day. Banks whose balance with the CBM is insufficient to cover their debit position can borrow the difference either by rediscounting securities or through a collateralised loan of no longer than 92 days.

The CBM has been making strong efforts to modernise the payments system. Automated Clearing House and Real Time Gross Settlement Systems are being developed with technical support from the Japan International Co-operative Agency and the International Monetary Fund. These systems are expected to become operational by 2014-2015.

Sources: Maw (2012), "Development of payment and settlement system", *Economic Reforms in Myanmar: Pathways and Prospects*; H. Lim and Y. Yamada (eds.), *BRC Research Report* No. 10, Bangkok Research Center, IDEJETRO, Bangkok, Thailand; Central Bank of Myanmar (CBM) (2012), *Annual Report 2011-2012*.

countries, due in part to restrictive regulations (OECD, 2012). Development of government bond markets is essential at an early stage to ensure that government deficits can be financed without monetisation and at reasonable cost and to help in the development of market-based interest rate determination. Authorities in other countries have sought to develop stock markets in order to provide financing for newly listing companies, to help diversify corporate ownership, to provide a wider array of financial instruments to investors, and to provide market discipline for effective corporate governance. Stock market development in China and Viet Nam has also been seen as part of the process of converting state-owned enterprises into corporate entities and in broadening their ownership to include private interests.

Stock markets, however, need to be fairly well developed and supported by extensive infrastructure and strong regulatory/supervisory capabilities if their benefits are to be realised. Evidence also suggests that stock markets need to attain a larger scale than is feasible in smaller countries to be fully efficient (Eichengreen and Luengnaruemitchai, 2004). Establishment of stock markets has sometimes had disappointing results. Notably, the markets in Cambodia and the Lao PDR that were established in 2011 have barely begun to function, with only a few companies listed so far.[28] These experiences suggest that stock market development in Myanmar needs to be linked to that of the ASEAN region to overcome domestic limits to market scale and should be regarded as a longer-term project whose benefits will be manifest gradually.

Development of arrangements for issuance and marketing of corporate bonds by non-financial corporations (financial corporations are now prohibited by law from bond issuance) could have significant benefits for Myanmar's financial system development even at a fairly early stage. Allowing corporations to issue corporate bonds would help to increase competition in the financial system as a whole and to provide for longer-term funding for investment projects. Over time, corporate bond market development will help to reduce the concentration of financial risks on the banking system, which is widely seen as one of the key needs that emerged after the 1997 Asian Financial Crisis and a key rationale for the Asian Bond Market Initiative. Development of the bond markets, including the corporate segment, in Myanmar will be helped by the initiatives being taken under the ASEAN Financial Integration and Asian Bond Market initiatives. As with the stock markets, the development of the corporate and government bond markets will take some time and will require development of supporting institutional infrastructure such as securities companies, auditing firms and credit rating agencies.

Development of the rural financial system is critical

Of all the segments of the Myanmar economy, the rural sector is the most underserved by the formal financial system.[29] Only about 2.5% of total loans go to the rural sector, even though it accounts for 30% of GDP and two-thirds of employment. The rural population has considerably less access to formal financial services than the population in urban areas and some segments, such as landless farmers, are effectively cut off from such services.

The rural financial system in Myanmar faces obstacles common to most developing countries, notably the low level of incomes in rural areas, which means that loans tend to be of small scale, and the location of much of the population in remote and difficult to access areas. It has also been disadvantaged by the conservative regulation of the financial system as a whole, the loss of confidence in banks stemming from the 2003 financial crisis, and more recently by the devastation to the rural economy wreaked by the Cyclone Nargis (Turnell, 2009).

Improvement of the outreach and capabilities of the rural financial system beginning in the near-term, and thorough redevelopment over the longer term, are likely to be critical for the achievement of sustained and inclusive development of the overall economy. The current rural financial system is unlikely to be able to support the broader development of the rural economy, particularly the improvements in productivity and the creation of non-farm job opportunities, that will be necessary to allow the rural population to share in rising living standards and to avoid a disruptive exodus from rural to urban areas.

Experiences in developing countries over the past several decades have highlighted a number of insights into the ingredients needed for the development of effective rural financial systems. The rural economy requires a wide range of financial services if it is to develop (Vogel, 2006; Fukui and Llanto, 2003; Kloeppinger-Todd and Sandar, 2013) (Table 4.13).

The demands on the rural financial system include credit mechanisms to provide short- and medium-term lending for agricultural inputs and equipment as well as loans to support rural SMEs and other businesses (Vogel, 2006). Rural financial systems also need to provide efficient facilities to foster savings for consumption smoothing and old age; for transferring funds from migrants to their families at home; as well as insurance products, such as health and casualty insurance and crop insurance. Remittance services are particularly important to Myanmar's rural sector, given that an estimated 2-5 million of its citizens are working in other (mainly ASEAN) countries and annually send a substantial (although not precisely known) amount of funds back to their families.

No single type of financial institution is capable of efficiently providing the full range of financial products and services required by the rural economy. Microfinance, for example, can help to meet the short-term needs of farmers and other low income residents and help to finance microbusinesses but it is not so suitable for larger businesses or for the accumulation of capital and innovations to raise productivity (Turnell, 2009). Accordingly, effective rural financial systems encompass a variety of institutions, including commercial

Table 4.13. **Financing needs for the rural economy**

Financing need and type of client, based on international experience	Types of financial services required	Situation in Myanmar	Suitable financial institutions or other providers based on international experience	In Myanmar
Purchase of inputs	Short-term working capital credit	Not sufficiently available in Myanmar at affordable interest rates	Rural banks, financial co-operatives, input providers financed by commercial banks, some MFIs	MADB, some commercial banks for larger loans to input suppliers, some MFIs having the capability to do rural lending, informal lenders, a few surviving ADCs
Post-harvest consumption needs (in order to avoid having to sell products right at harvest time)	Warehouse receipt financing, inventory credit	Difficult in Myanmar since there are few village-based storage opportunities, no legal framework for warehouse receipt financing	Commercial banks, specialised agricultural banks, some MFIs with special knowledge	Not available
Micro-entrepreneurs	Short-term credit, savings, money transfer	Informal credit at very high rates available, no savings or money transfer services	MFI, village-based savings and credit groups, financial co-operatives	MFIs provide some credit, no savings or money transfer services
SMEs	Working capital and investment credit, money transfer	No money transfer services and little investment credit available, credit lines available for traders and brokers	Commercial banks	Commercial banks
Purchase of agricultural equipment (some scale irrigation, tractors, etc.)	Medium-term credit	Available to any significant extent for movable equipment, not available for small-scale irrigation needs	Commercial banks and leasing companies, equipment dealers	Some commercial banks and equipment dealers
Purchase of food and other consumption needs	Savings in order to manage household budgets, credit only if there is the ability to repay, transfers from government or other services	Savings not available, informal lenders provide credit at very high costs. No government transfer services could be observed	MFIs, village-based savings and credit institutions, financial co-operatives	Some MFIs, informal lenders
Savings gathering	Financial institution deposits, including interest bearing for non-demand accounts	Limited by limited bank branch networks and lack of confidence in formal financial institutions	Commercial banks; deposit taking MFIs; credit co-operatives	MADB; some MFIs and co-operatives
Payments services	Demand deposits and money transfer services	Limited by limited bank branch networks; lack of confidence in formal financial institutions; limited payments infrastructure	Commercial banks; international payment companies; some MFIs and co-operatives	MADB; some MFIs and co-operatives
Insurance services	Crop insurance; casualty and medical insurance	Limited by restricted scope of main insurer and lack of private insurers specialising in rural sector	Life and non-life insurance companies	Myanmar Insurance; new private insurers

Source: Adapted from Kloeppinger-Todd and Sandar (2013), "Rural finance in Myanmar", *Background Paper,* No. 3 prepared for the Strategic Agricultural Sector and Food Security Diagnostic for Myanmar, led by Michigan State University and in partnership with the Myanmar Development Resource Institute – Centre for Economic and Social Development (MDRI-CESD), January.

banks, development finance institutions, microfinance facilities, and specialised financial services such as leasing and finance companies.

Historical experiences have helped to clarify how governments can most effectively promote development of rural financial systems and the types of government interventions that are likely to be most productive versus those that are likely to be less productive or counter-productive. The chief role of government is to provide the enabling conditions for financial development, including stable macroeconomic policies and effective legal and regulatory frameworks that promote development of the financial system and the private sector. Historical experiences particularly underscore the need for the rural financial system to be self-sustaining, that is capable of operating and developing based on its own resources without prolonged dependence on government subsidies or other outside concessional aid. To be sustainable, rural financial institutions ultimately need to be able to operate as commercially viable business entities. Direct government interventions to provide financial services that bypass or override market forces have generally proved to be either comparatively ineffective or counter-productive. Notably, maintenance of sound and efficient lending by state-owned financial institutions has proved to be very difficult to achieve, given their limited incentives to operate as profit-making institutions and their vulnerability to political interference. While there are a few examples of effective state-controlled rural financial institutions in developing economies, they have not been the majority (World Bank, 2005; Seibel, 2007).

Myanmar's formal rural financial system is very limited in extent and scope

On paper the structure of Myanmar's rural financial system is comparable to that of other developing countries, with banks, co-operatives, and microfinance companies playing the key roles (Table 4.14). However, the extent of participation in each of these segments is comparatively limited and restricted, leading to key weaknesses that impair the system's overall effectiveness and future development.

Table 4.14. **Microfinance providers**

		Number of branches	Number of borrowers (thousands)	Outstanding loans MMK millions	Number of deposit accounts (thousands)	Total deposits MMK millions
State-owned banks	MADB[1]	205	1 420	84 000	1 720	86 891 840
	MSLE[2]	145	209	33 341	n.a.	n.a.
PSGBs	Global Treasure Bank[2]	53				
NGOS	PACT-UNDP[3]	106	365.4	52 701	420.1	10 930
	PACT MFI[3]	16	57.1	4 234	n.a.	
	GRET MFI[4]	4	6.2	840	Non-Dep	
	Save The Children[5]		7.7	367	7.7	26
	World Vision[6]	12	13.2	1 910	n.a.	
	Proximity Design[7]	8	16.6	3 113	n.a.	
	AMDA[8]		1.5	55	n.a.	
Co-operatives	Central Co-operative Society[9]	46	32.8	1 125	32.8	340
	Financial Co-operatives under the Union of Savings and Credit Foundations[9]	1 625	476.6	16 500	476.6	24 200
Specialised agricultural companies	Rice Companies[10]	38	57.5	20 092	n.a.	
	Other Specialised Companies[10]	22	140	20 000	n.a.	
Women's union[11]		16	4.8	48	n.a.	
Union solidarity based organisations[12]					n.a.	
Community based organisations[12]					n.a.	
Total		2 793	2 809			

Notes: It should be noted that overall data availability and accuracy is low, so the above figures should be read with some caution. 1. Data as of March 2012 provided by MADB. 2. Data as of March 2011 from CBM. 3. Data as of September 2012 from UNDP for PACT UNDP and as of end October 2012 from PACT for PACT MFI. 4. Data as of October 2012 from GRET. 5. Data as of October from Save the Children, Saving are from members only. 6. Data from World Vision MFI, 9 November 2012. 7. Data from Proximity Design, October 2012. 8. Data as of end-September 2009 from ACTED and Banking with the Poor Network (2009). 9. Data as of May 2012 from CCS. Data for Microcredit Co-operatives as of September 2011. 10. Data as of September 2011 from the Myanmar Rice Association. 11. Estimates provided during interview with MADB, June 2012. 12. No data available.

Source: Adapted from Duflos et al. (2013), *Microfinance in Myanmar: Sector Assessment*, January.

Participation by the commercial banking segments in the rural financial system is quite limited. The MADB and the Global Treasure Bank (GTB, formally known as the Myanmar Livestock and Fisheries Development Bank) are the only commercial banks that directly provide loans to the rural economy and they operate in largely non-overlapping segments. The MADB, the largest provider of loans to the rural economy, focuses on farmers, primarily rice farmers in the wet zones, while lending by the GTB is confined to livestock and fisheries activities (which are off limits for MADB lending). While PSGBs are allowed in principle to lend to rural-based businesses (including agricultural processing and marketing companies), in practice this lending (except for that by the Rural Development Bank) seems to be quite small. Moreover, since the PSGB branches are confined to the cities, they have no significant role in providing deposit services to rural clients.

Owing to the tight government regulation, the range of bank lending products to the rural sector is quite limited. Seasonal loans, mainly for rice cultivation, make up nearly 90% of the loans by the MADB. The loans have been subject to a maximum ceiling per acre (and up to a maximum of ten acres), which, until recently, was sufficient to cover only 25-50% of the total cost of cultivation, leaving the remainder to be covered by borrowing from the rural co-operative societies and informal sources (Kloeppinger-Todd and Sandal, 2013) (Box 4.12).[30]

Only about 10% of MADB lending goes to term loans (up to three years, and in certain circumstances four years), which are confined to agricultural equipment and certain agricultural activities involving longer-term investments for production, such as tea, coffee and palm oil. The split between seasonal and term loans, the activities they can go to, as well

Box 4.12. **Rural co-operative societies**

The rural co-operative societies are part of a larger network of co-operative societies organised under the Central Co-operative Society (CCS) that is responsible to the Ministry of Co-operatives (MOCO). They are a major component of the broader microfinance system that also includes the NGO sponsored MFIs. There are a range of co-operative society types, including those supporting small scale vendors ("bazaar" co-operatives); societies for workers and for consumers; as well as, in rural areas, societies for livestock breeding and for agricultural producers (farmers). As of September 2013, there were 20 628 co-operative societies, three-quarters of which were in rural areas, with total loans of MMK 173 billion, of which MMK 48 billion were disbursed by the agricultural producers' co-operatives.

Each co-operative society is composed of a small group of individuals (minimum of five) who deposit savings (with a minimum deposit of MMK 5 000) that are held with the MADB and which earn interest. These funds, along with a limited amount of borrowing from the co-operative network and some other government sources and secured loans from outside moneylenders, can be drawn as loans by the co-operative society members (only). Loans are short-term (under one year), with a maximum per-member of MMK 20 000 per acre up to two acres for the agricultural production co-operatives, and MMK 50 000 per member for livestock breeding co-operatives.

The MOCO plans to expand the network of co-operative societies to the entire country by 2015 and to raise the ceiling on the maximum loan per-household to MMK 500 000. For further details, see Chapter 2.

Sources: Ministry of Co-operatives (2013), "The functions of Ministry of Co-operatives", Presentation given by the Ministry of Co-operatives in December 2013. See also Livelihoods and Food Security Trust Fund (2013), *Consultancy on Co-operative Systems in Myanmar*, September, *http://lift-fund.org/Publications/Consultancy-on-Cooperative-Systems.pdf*.

as the interest rates and maturities are determined by government authorities. Determining eligibility for the loans is largely a matter of verifying the land rights used as collateral and that the borrowers are qualified for the loans.[31] Loans made by the microfinance and co-operative segments are primarily very small scale, although extended at more flexible, market-based rates, which are as high as 30% per annum on the informal market.

Apart from the basic loan products, other financial products and services have been quite limited. There are no licensed leasing companies operating in rural areas. Until very recently (see below), foreign exchange conversions and other transactions were largely reserved to the MFTB and prohibited to the PSGBs. This, together with the lack of facilities for transferring funds from foreign countries, largely prevented formal financial institutions from effecting the transfer of remittances from Myanmar nationals working abroad, leaving them to be handled largely by businesses in the informal sector.

Only a fairly limited portion of rural savings are placed in the formal rural financial system. The MADB reported an aggregate amount of savings in the accounts of about MMK 14 billion (about 13.52 million dollars) in October 2013, or about 1.3% of its total assets (Myanmar Agriculture Development Bank [MADB], 2013).[32] A number of the microfinance providers, including the largest (PACT-UNDP) and the co-operatives also have significant numbers of deposit accounts and the co-operative societies organised under the Ministry of Co-operatives also serve to gather savings. However, the overall coverage relative to the number of rural savers and the total amount of deposits are modest. Most rural savings are held in cash or with informal financial outlets. The limited amount of savings gathered by the formal financial system, particularly the banks, is partly a reflection of the lack of confidence in banks engendered by the 2003 crisis and further contributed to by the heritage of government intervention and corruption. However it also reflects the limited reach of the branch networks of the banks and the regulation of interest rates, which has led to low real interest rates on deposits during upticks in inflation.

The overall consequence of these limitations is that the rural financial system is seriously impaired in its functioning in key areas.

- Formal financing covers only a moderate portion of overall rural financing needs. One indication is that that total unmet demand for microfinance, the bulk of which probably comes from the rural sector, is estimated at around USD 1 billion, nearly four times the total now being provided (Duflos et al., 2013). Very little formal financing is available to support the private investments in agriculture or rural enterprises that will be critical to rural development.
- The limited array of financial instruments impairs the ability of rural residents and businesses to insure against risks, provide for old-age and other key needs.
- Market forces have limited scope in the system. Competition among formal providers is very limited and the incentives and capacity for financial innovation are restricted by the heavy regulation and by the fact that many of the leading providers are not commercially oriented.
- The rural financial system is largely segmented from the rest of the financial system, owing in part to the restrictions on banks and other financial actors and in part to the lack of national financial markets that would allow funds to flow between urban and rural sectors.
- The ability of the rural financial system to be self-sustaining, that is commercially viable and funded by private domestic sources, is very limited at this point. The system

is heavily dependent on government subsidies and other support and donor aid. The system will need to be able to gather a much higher proportion of savings and be better integrated with the overall financial system if it is to become self-sustaining.

Authorities have begun the process of reforming the rural financial system

The Myanmar government has made development of the rural sector a top priority in its overall development plans and recognises that reform of the rural financial system will be critical to that development. A number of important steps have been taken since 2011 to improve both the overall supply of rural credit and to provide a stronger legal and regulatory framework for rural financial development. MADB funds available for lending have been increased nearly five-fold since FY 2010/11, although the amount available for equipment and other longer-term investments continues to be a small fraction of the total. The maximum amount that can be lent per acre for rice cultivation has been increased to MMK 100 000 for FY 2014/15 and the maximum for other crops has been doubled to MMK 20 000. The broadening of the range of collateral for loans to include agricultural products and equipment is also a useful step toward making loans more accessible to rural customers. As discussed in Chapter 2, the Farm Land Law of 2012 should also improve access to formal finance by providing for Land Use Certificates that can be pledged as collateral.

The adoption of a new Microfinance Law (MFL) in November 2011 and the accompanying implementation rules represent a very important step toward ensuring that the microfinance sector can develop on a sustainable and more commercially oriented basis (Box 4.13). The law provides for the licensing and operation of both domestic and foreign-controlled microfinance providers, deposit taking and non-deposit taking, on an equal basis and has provided legal sanction for a number of microfinance providers who had been operating without formal legal recognition owing to the gaps in existing laws and regulations. The law also establishes explicit prudential and other requirements for the entry and operation of MFIs and for their supervision by the Microfinance Supervisory Enterprise. The adoption of the law has been followed by an influx of domestic and foreign microfinance businesses, with 116 licensed institutions in operation by the last quarter of 2013. Licensed MFIs are presently confined to microlending and deposit taking but could potentially be allowed to broaden their activities (for example to mobile banking) as the sector develops (UNDP and MBSC, 2013).

Box 4.13. **The Microfinance Law**

The new Microfinance Law provides for the licensing of private microfinance institutions subject to the following conditions:

- Minimum capital of MMK 15 000 for non-deposit and MMK 30 000 for deposit-taking MFIs.
- MFIs are allowed to charge a maximum rate of 2.5%/month interest on loans and pay a minimum rate of 1.25%/month on deposits.
- All MFIs are subject to the oversight of the MSE and required to submit regular reports on their financial conditions and activities.

Source: Republic of the Union of Myanmar (2011), Microfinance Law, November.

While the MFL represents an essential and promising step toward developing a more effective microfinance sector for the rural as well as urban economies, further reforms will be needed to fully incorporate international norms and best practices (Foerch, Thein and Waldschmidt, 2013; Kloeppinger-Todd and Sandar, 2013; Duflos et al., 2013). A number of issues concerning the new law will also need further consideration. Maximum loan rates and minimum deposit rates are subject to regulation, although the rates allowed are greater and the spread between loan and deposit rates larger than is allowed to commercial banks. Capital requirements for the establishment of the MFIs, which are about USD 16 000 and USD 32 000 for non-deposit and deposit-taking institutions, respectively, are comparatively low and may be encouraging entry of institutions that are unlikely to prove viable. By comparison, minimum capital requirements for MFIs in Cambodia are about USD 70 000 and USD 2.3 million for non-deposit and deposit-taking institutions, respectively.

Further reforms will be needed in several areas

The steps that have been taken represent a good beginning but further and more comprehensive reforms are likely to be needed to ensure that rural system financial capabilities can keep up with the needs of the developing economy. Many of the steps discussed earlier to improve the capabilities of the overall financial system will also be needed to improve the rural financial system. Some steps that could be taken over the next several years could provide a significant immediate boost to the rural financial system while others are likely to have to be implemented more gradually in line with the development of the financial system as a whole.

Reforms to liberalise the commercial banking system are critical to improving the rural financial system. Raising or (preferably) eliminating the ceiling on bank lending rates, which does not at present allow banks to recover the costs of lending to smaller and other underserved segments, is likely to be critical to improving access to credit and to giving banks the incentives to extend their reach into the rural economy over time.

The restructuring of the MADB into a commercially oriented entity focused on a broader range of rural lending over the medium-term could have a substantial positive impact on the availability, range and quality of financial services available to rural economy and serve as a catalyst for the development of the overall rural financial system. To be effective as a commercial entity, the MADB will need to have management autonomy in its business decisions, including its lending, even if the state continues to have a controlling interest in its ownership.[33] Subsidised lending by the MADB, to the extent it continues, should be covered directly by outlays from the government. Substantial reduction in the near term of interest rate subsidies on MADB lending followed by their gradual phasing out should also be considered.

To fully realise its potential benefits, the range of products and services offered by the micro-finance sector will need to be broadened over time to be more in line with those available in more advanced microfinance systems in other Asian developing countries. However, such broadening will probably need to proceed gradually as the industry matures and the experience level and skills of the MFIs and the supervisory authorities increase. Consideration could be given to phasing in higher capital requirements for MFIs, especially those that take to deposits, to levels that are more in line with other countries in the region. The supervisory responsibilities for MFIs may also need to be modified or clarified in certain areas. As noted earlier, the CBM needs to be involved in oversight of deposit-taking MFIs and arrangements for co-ordinating supervision among the MSE, the co-operatives supervisors, and the CBM may also need to be strengthened. The information MFIs are required to provide to the supervisors may also need to be augmented to ensure that it includes adequate information relevant to assessment of their prudential soundness (Duflos et al., 2013).

A number of other steps now underway or being considered to broaden the range of financial products and services available to rural customers have potentially significant benefits. The development of a leasing industry would help to boost productivity in the agricultural sector as well as the development of rural small enterprises by improving access to credit for machinery purchases. The introduction of crop insurance, preparations for which are now underway, will help significantly in allowing farmers to hedge against the considerable weather and other risks they face. The entry of private companies into the insurance business provides opportunities for the extension of existing insurance products to the rural sector and the development of new products suited to its distinctive needs. However, this will require an insurance regulatory environment that permits such activities and is capable of providing oversight to ensure that they are carried out in accordance with sound prudential principles.

Development of key components of the financial infrastructure will be necessary to ensure the feasibility and ultimate effectiveness of reforms to develop the rural financial system. Particularly important are the pending establishment of an inter-bank market, which is essential to integrating rural financial institutions into the overall financial system, and the planned institution of a credit bureau. Consideration might also be given to extending the fledgling deposit insurance system instituted in 2011 to all deposit-taking entities, including deposit-taking MFIs, once the system itself is better developed. Such extension is likely to be necessary at some point to ensure a level playing field among the segments of the deposit-taking financial institutions.

Conclusion

Myanmar's ambitious development plans will require a substantial increase in financial resources compared to the pre-reform period to support rapid physical and human capital accumulation and improvements in the quality of those productive factors. Inflows from external sources – mainly ODA and FDI – are expected to surge in response to the lifting of sanctions and are likely to be especially important in financing development through the remainder of this decade. However domestic sources, from government revenues and private savings, will have to supply the bulk of development finance, and they will need to increase significantly over time, particularly as the initial surge from external sources recedes.

Improvement in the effectiveness with which development resources are allocated will be as important as success in increasing their mobilisation. At present, the key institutions in the government and financial system that are mainly responsible for allocating as well as mobilising development financial resources are underdeveloped and hampered by a range of constraints and distortions. These include the legacy of restrictive regulations, underdeveloped government fiscal and regulatory institutions and limitations in the legal and regulatory frameworks essential to the effective functioning of markets and for private sector development. Remedying these weaknesses will require a longer-term sustained process of institutional development of the government's fiscal capacities and of effective financial institutions and markets together with supporting legal, regulatory and other institutional infrastructure. While carefully targeted and limited direct government interventions to overcome these weaknesses, such as subsidised lending to now underserved sectors, may be appropriate for a limited time in certain cases, care needs to be taken that they are not maintained for too long, which could interfere with the necessary institutional development.

This chapter has highlighted a number of the challenges facing Myanmar in developing the institutional capacities for ensuring the financial resources for its development. Key priorities include the following:

- Improving the mobilisation and allocation of external development finance sources through strengthening of government mechanisms for reporting, co-ordinating and managing ODA inflows; and further reforms to improve the investment climate for FDI and to facilitate transfers of remittance flows from Myanmar citizens working abroad.
- Increasing tax revenues through reforms to the tax structure and measures to improve tax compliance and the efficiency of tax administration. These need to be accompanied by an ongoing evolutionary process of public financial management reform to improve government capabilities to ensure that revenues are allocated in line with development and other priorities, that public services are delivered efficiently, and that fiscal soundness and stability are maintained.
- Strengthening and developing the capabilities of the formal financial system to better extend its outreach into the economy, to improve the efficiency with which domestic savings are allocated, and to provide a wider range of products and services to serve the needs of the population. This will require a longer-term process of institutional development of financial institutions, financial markets, and in financial regulation and supervision. However, liberalisation of the banking sector and substantial improvement in its capabilities and the broadening of facilities to provide financial services to the rural sector within the medium term are particularly urgent as they are likely to be important keys to the success of Myanmar's overall development plans.

Myanmar's authorities have made impressive beginnings on achieving these priorities. The challenge now is to sustain an ongoing process of reforms to ensure that the provision of financial resources not only keeps up with but helps to catalyse the country's overall development.

Notes

1. In 2007 and 2012, three different survey studies were conducted on Myanmar emigrants in Thailand, with sample sizes varying between 120 and 1 000 individuals. The monthly income in these surveys varied between less than THB 1 000 (Thai baht) and more than THB 10 000 in one study, although most migrants were in the bracket of more than THB 5 000; in another study the median income was THB 2 500 per month. The median remittance amounts per year were around THB 15 000 (USD 435) for the two studies from 2007 (in the third study from 2012, 66.7% of migrants reported to remit at least THB 10 000 per year).
2. See "Myanmar reveals gas revenue for first time", *The Nation,* 18 July 2012, *www.nationmultimedia.com/aec/Ministry-reveals-gas-revenue-for-first-time-30186368.html*. The total government receipts from fiscal year 2006 to 2011 were reported to be about 16 billion USD.
3. Until recently, revenues from energy sources apparently did not accrue to the government but the surpluses from these activities now are being brought on-budget (see ADB, 2012b).
4. The former Ministry of Finance and Revenue was recently renamed the Ministry of Finance and will be cited as such throughout this report.

5. The commercial tax has been subject to a threshold of MMK 10 million, or about USD 1 000, with businesses with revenues below this level being exempt from commercial tax filing or payment (OECD, 2013b).

6. The 2012 reforms added brokering, landscaping and renovation and building design services, advertising and filming services and legal and auditing services.

7. Experiences in OECD countries suggest that corporate income followed by personal income taxes tend to have the greatest costs to aggregate growth, while property taxes followed by consumption taxes have the least (OECD, 2010).

8. However, the budget classification is not consistent with the international system used in most countries.

9. For example, in India and Pakistan military spending is under 20% of government outlays (World Bank, *World Development Indicators*, 2013), although other defence expenditures, such as military pensions, would add to the figures for military spending somewhat.

10. UNICEF (2013) lists the ministries that receive budget allocations from the central government and those that receive allocations from the state/region budgets. The former includes the Ministry of Health and the Ministry of Education while these two ministries are excluded from the latter list.

11. Projections by KPMG (2013b) indicate that under relatively optimistic assumptions, it could take nearly 10 years for Myanmar to achieve the insurance penetration rate (ratio of premiums collected to GDP) that presently prevails in Viet Nam, where penetration rate is the lowest among all other ASEAN countries.

12. However, the near-run on the largest private bank in early October 2012 also indicates that public confidence in the banking system is still at least fragile.

13. The MADB did have an extensive network of about 11 200 small-scale offices in village tracts but these were withdrawn in 2007, leaving only the offices in townships (Koeppengir-Todd and Sandar, 2013).

14. MEB loans to MADB are made at 4% while subsidised loans to the SMIDB are made at 8.25%.

15. The maximum loan is determined as a ratio of the estimated market value of the collateral discounted by a factor, typically 20%, to allow for loss in case of a forced sale. Discussions with officials at several of the banks indicate that typically the amount lent ranges from 20% to 50% of the discounted value of the collateral.

16. Official figures also show very little rise in the non-performing loan ratio since 2011 despite a very rapid increase in loans. These figures need to be regarded with some caution, given that the bank systems for evaluating loan quality only take into account whether the loan payments have been made to date. Banks in some other countries have been known to roll over loans of companies that are unable to pay them back in order to prevent the loan from being classified as non-performing.

17. These ratios have changed very little since 2007. The concentration of assets in "safe" cash and government securities, which receive zero risk weight, has resulted in an exceptionally high capital adequacy ratio (CAR). The CAR for FY 2011 (March 2012) was nearly 28%, compared to the prudential minimum of 10%.

18. Discussions with officials at some of the banks indicate that income and cash flow prospects can affect the maximum amount of a loan granted for a given discounted collateral value to a limited degree. It is not clear whether this is true for all banks, however.

19. However, as is true in all countries, deposit insurance can also create risks that financial supervisory authorities need to monitor. Deposit insurance can make it easier for financially weaker and less prudent banks to gain deposit funds to fund speculative activities, since the depositors do not have to worry that they will lose their savings in the event the bank fails.

20. In 2014, Myanmar authorities unveiled a joint programme of the CBM and the SMIDB to allocate an additional MMK 20 billion for lending to SMEs. The SMIDB also plans to extend its branch network to the entire nation. In addition, the Co-operative Bank, the MADB, and SMIDB have announced plans to provide SME loans at a concessional rate of 7.5%. See "Path cleared for SMEs' to access loans", *New Myanmar Times*, 26 January 2014; *www.mmtimes.com/index.php/business/9375-japan-myanmar-partner-to-offer-new-loan-program-to-smes-banking-officials-push-regional-agenda-to-promote-smes-with-new-k20-billion-aid-program.html#*.

21. The chapter on the financial system in the current Comprehensive Development Plan hardly mentions the SOBs. It focuses on the need to raise confidence in the banking system, to reform the central bank to eliminate monetisation of fiscal deficits, the development of the interbank market

and payments and settlement systems, and on means to finance infrastructure spending. The latter topic makes up nearly half of the chapter.

22. The MEB, the MFTB and the Myanmar Investment and Commercial Bank (MICB) are organised in corporate form with boards of directors. However, while banks and other financial institutions with less than 50% government ownership are defined as limited companies subject to the Companies Act, the SOB and those PSGBs with majority government ownership are exempt from the Companies Act. Under Article 72 of the Financial Institutions of Myanmar Law, the chief executive of banks with 50% or greater government ownership is appointed by the government, rather than by the board of directors as for the other financial institutions.

23. Chapter 10 of the new *Central Bank Law,* which specifies the authorities of the CBM to regulate and supervise financial institutions, allows the CBM to withdraw as well as grant licences for the operation of financial institutions.

24. Under the AEC, ASEAN banks will begin to be able to establish cross-border operations within the region, subject to certain conditions, as early as 2015. However countries with less developed banking markets will be allowed to delay their participation in the integration and continue to limit entry of banks from other members until they are prepared.

25. In the first phase, authorisation will be given to foreign banks to set up joint-ventures with domestic banks; followed by entry of foreign bank wholly owned subsidiaries; and finally by establishment of foreign bank branches.

26. This may be the reason why authorities plan to allow banks to enter via branches only in the third stage. The advantage to foreign banks of organising their host country operations through branches is that branches typically are required to hold less of their own capital in relation to assets than subsidiaries, since they are backed by their foreign parent.

27. This infrastructure development includes upgrading of IT facilities; development of a Modular Data Centre to serve the stock exchange and the CBM; and development of an ACH and Gross Settlement Payments systems to facilitate efficient payments.

28. See *International Business Times*, "Lao and Cambodian stock-exchanges stagnant after two years with a combined three companies listed", 25 June 2013, *www.ibtimes.com/lao-cambodian-stock-exchanges-stagnant-after-two-years-combined-three-companies-listed-1320809*. The lagging development is attributed to domestic companies' reluctance to reveal financial information, unfavourable rules and regulations, and limited understanding by potential investors.

29. Further discussion of financing for the agricultural sector is provided in Chapter 2.

30. The MADB loan ceiling per acre for rice production was MMK 40 000 in FY 2011/12 and MMK 100 000 in FY 2013/14, versus an average production cost of about MMK 200 000 per acre. Borrowing from rural co-operative societies is limited to about 50 000 per acre (up to two acres), leaving a substantial gap to be filled by informal finance. The global amount of loans available for each year is allocated by region, based on estimated needs, with at best limited scope for transferring funds from areas that have surplus funds to those with greater needs.

31. MADB loans are typically made to small groups of around five farmers who are mutually liable for repayment.

32. Between FY 2011/12 and FY 2012/13, the volume of savings deposits dropped from MMK 86 billion to MMK 14 billion.

33. For example, the restructuring of Bank Raykyat of Indonesia, Khan Bank in Mongolia and the Bank for Agriculture and Agricultural Co-operatives (BAAC) in Thailand may provide insights for the reform of the MADB (Kloeppinger-Todd and Sandar, 2013).

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ANNEX 4.A1

Technical notes on growth projections for Myanmar

In order to assess the future investment needs of Myanmar until 2035, two scenarios have been used. These scenarios define a target in terms of capital stock per capita for Myanmar in 2035, or assumed trends in ICOR for Myanmar until 2035:

- In both scenarios, GDP growth rates are assumed to be constant over 2012-35. Three annual GDP growth rates are successively assumed: 6.5%, 7.5% and 8.5%. To convert data in kyats to US dollars (in constant 2005 prices), the informal exchange rate is used for 2005. Population forecasts are based on the medium variant of the UN projections until 2050. The depreciation rate of capital is assumed to be 4%.
- In the first scenario, Myanmar is assumed to attain a per-capita GDP level in 2035 equal in real terms to that of China in 2003 if its GDP grows at a 6.5% annual rate and a per-capita GDP equal to that of China in 2005 and 2007, respectively, if at an annual GDP growth rate of 7.5% and 8.5%, respectively. UN population forecasts are used for the projections. Investment needs corresponding to each assumed GDP growth rate are calculated based on the assumption of a constant ICOR and that Myanmar will attain a per-capita capital stock in 2035 equal to that of China in 2003, 2005 and 2007, respectively. Finally, the annual investment share that would lead to this catching-up in capital stock per capita in 2035 is calculated by assuming that investment share would linearly increase from current levels (around 14.9% in 2011) to the needed higher levels in 2035.
- The second scenario makes the same assumptions about GDP growth but Myanmar's ICOR is expected to linearly increase, from 1.2 in 2004 to 4.5 in 2035. Based on the three growth assumptions, the investment shares that are compatible with the assumed growth patterns and evolution in ICOR are calculated. By construction, investment as a percentage of GDP increases linearly until 2035. In order to assess the consistency with scenario 1, the capital stock per capita in Myanmar in 2035 is then determined, as well as the year when China first reached this level of capital stock per capita.

The main results of the two scenarios are as follows (see also table in the main text):

- Based on the GDP growth assumption of 6.5% per year until 2035, Myanmar would have to progressively boost its investment share of GDP to levels which are comparable with the level in many Southeast Asian economies, to between 29% and 37%. In this case, Myanmar may reach the GDP per capita and the capital stock per capita that China had at the beginning of the 2000s.

- Based on the GDP growth assumption of 7.5% per year until 2035, Myanmar would have to progressively boost the investment share to higher levels than in many Southeast Asian economies, to between 34% and 40%. In this case, Myanmar would reach the GDP per capita and the capital stock per capita that China had in the mid-2000s.
- Based on the GDP growth assumption of 8.5% per year until 2035, Myanmar would have to boost its investment share to levels which are closer to those of China, and significantly higher than in many Southeast Asian economies, to between 38% and 43%. In this case, Myanmar would reach the GDP per capita and the capital stock per capita that China had in 2007.
- Regarding the consistency between the two scenarios, with the assumption that the ICOR will reach 4.5 in 2035, scenario 2 appears to be consistent with scenario 1 for each of the three growth assumptions. Indeed, the year when China reached the level of capital stock per capita attained in the scenario by Myanmar in 2035 is close to the year when China reached the GDP per capita that Myanmar would reach in 2035 in scenario 1:
  - with the annual GDP growth assumption of 6.5%, the calculated year in the scenario 2 is 2001 (compared with 2003 in the Scenario 1);
  - with the annual GDP growth assumption of 7.5%, the calculated year in the scenario 2 is 2004 (compared with 2005 in the Scenario 1);
  - with the annual GDP growth assumption of 8.5%, the calculated year in the scenario 2 is 2007 (the same as in the Scenario 1).
- Sensitivity analyses of the results were done, including a higher depreciation rate of capital (up to 8%), as well as, for scenario 2, an ICOR in 2035 that would reach 4 rather than 4.5. Doubling the depreciation rate from 4% to 8% does not change estimates under scenario 2 but in scenario 1 raises the investment share by around 2 to 3 percentage points. If the ICOR reaches 4 in 2035, rather than 4.5, results remain unaffected under the scenario 1. For scenario 2, the investment shares needed to sustain growth are somewhat lower (by around 3-4%). At the same time, Myanmar's capital stock per capita would reach lower levels than if the ICOR reached 4.5 in 2035.

ANNEX 4.A2

Supplementary information on aid and aid management in Myanmar

Table 4.A2.1. **Sectoral Working Groups**

	Sector Working Group	Government of Myanmar Lead	Lead donors	
1	Education	Ministry of Education	UNICEF	Australia
2	Cultural conservation	Ministry of Culture	UNESCO	Italy
3	Agriculture and rural development	Ministry of Agriculture and Irrigation	FAO	USAID
4	Environmental conservation	Ministry of Environment Conservation and Forestry	UN-HABITAT	Norway
5	Employment opportunity	Ministry of Labour, Employment and Social Security	ILO	Germany
6	Electric power	Ministry of Electricity	ADB	JICA/Japan
7	Health and water supply	Ministry of Health	WHO	USAID
8	Communication and information technology	Ministry of Communications and Information Technology	WB	TBD
9	Transportation	Ministry of Transportation	ADB	JICA/Japan
10	Social protection and disaster risk reduction	Ministry of Social Welfare and Relief and Resettlement	UNICEF	TBD
11	Public administration and reform process	President's Office	UNDP	EU
11.1	Public financial management (subgroup)	Ministry of Finance	WB	JICA/Japan
12	Gender equality and women's empowerment	Ministry of Social Welfare and Relief and Resettlement	UNFPA	France
13	Media	Ministry of Information	UNESCO	France
14	Hotels and tourism	Ministry of Hotel and Tourism	ADB	TBD
15	Statistical quality development	Ministry of National Planning and Economic Development	UNFPA	EU
16	Trade	Ministry of Commerce	WB	EU
	Informal Working Groups			
17	Financial sector TA	Central Bank of Myanmar	TBD	TBD
18	Water resources management	TBD	WB	Netherlands

Sources: Ministry of National Planning and Economic Development (MNPED) (2014), *Guide to International Assistance in Myanmar*; Kudo (2013), *Foreign Aid Management of GOM*, Presentation given on 2 December 2013, Ministry of National Planning and Economic Development.

Table 4.A2.2. **Commitments (in millions of USD) by sector 2011-12**

Sector name	Disbursements 2011	Share	Disbursements 2012	Share
I.1.a. Education, level unspecified	4.72	1.23%	2.17	0.42%
I.1.b. Basic education	22.24	5.79%	44.31	8.59%
I.1.c. Secondary education	2.88	0.75%	4.68	0.91%
I.1.d. Post-secondary education	11.07	2.88%	12.97	2.52%
I.2.a. Health, general	4.98	1.29%	2.58	0.50%
I.2.b. Basic health	44.72	11.63%	101.11	19.60%
I.3. Population pol./Progr. and reproductive health	32.70	8.50%	57.18	11.09%
I.4. Water supply and sanitation	4.23	1.10%	8.50	1.65%
I.5.a. Government and civil society-general	31.46	8.18%	53.09	10.29%
I.5.b. Conflict, peace and security	4.44	1.15%	8.88	1.72%
I.6. Other social infrastructure and services	8.77	2.28%	10.44	2.02%
II.1. Transport and storage	1.44	0.37%	3.99	0.77%
II.2. Communications	2.97	0.77%	4.02	0.78%
II.3. Energy	0.02	0.01%	1.56	0.30%
II.4. Banking and financial services	8.66	2.25%	4.61	0.89%
II.5. Business and other services	0.01	0.00%	0.23	0.05%
III.1.a. Agriculture	63.96	16.63%	15.36	2.98%
III.1.b. Forestry	3.17	0.82%	2.09	0.41%
III.1.c. Fishing	0.96	0.25%	0.74	0.14%
III.2.a. Industry	1.57	0.41%	1.17	0.23%
III.2.b. Mineral resources and mining	0.02	0.01%	0.03	0.01%
III.2.c. Construction		0.00%	0.05	0.01%
III.3.a. Trade policies and regulations	1.13	0.29%	1.67	0.32%
III.3.b. Tourism	0.02	0.00%	0.30	0.06%
IV.1. General environment protection	1.83	0.48%	2.04	0.39%
IV.2. Other multisector	13.48	3.51%	17.04	3.30%
VI.2. Dev. food aid/Food security ass.	18.90	4.92%	19.00	3.68%
VI.3. Other commodity ass.		0.00%	20.05	3.89%
VII. Action relating to debt	2.91	0.76%	2.63	0.51%
VIII.1. Emergency response	78.93	20.53%	85.18	16.51%
VIII.2. Reconstruction relief and rehabilitation	8.37	2.18%	17.48	3.39%
VIII.3. Disaster prevention and preparedness	1.83	0.48%	6.81	1.32%
Administrative costs of donors	0.40	0.10%	0.50	0.10%
Refugees in donor countries	0.35	0.09%	0.39	0.08%
IX. Unallocated / unspecified	1.39	0.36%	2.98	0.58%
Total	**384.52**	**1**	**515.82**	**1**

Source: OECD (2014), *Creditor Reporting System* (database), *http://dx.doi.org/10.1787/dev-data-en*.

ANNEX 4.A3

Myanmar's budget cycle

	Union	States/Regions
Calendar year: -1		
September	Preparation by line ministries, SAOs and SOEs of projected revenues and expenditures for the upcoming fiscal year and submission of their proposals to BD-MOF for compilation	Preparation by state/region departments and organisations of proposed budgets and submission to state/region BD
October	MOF and MNPED receive the compiled Union and state/region budgets; review and consult with line departments on revisions; submit draft Union budget to Union finance minister	State/region BD submits compiled state/region budget proposal to state/region finance minister and to Union BD-MOF
November	Review of draft Union and state/region budgets by Union Ministers of Finance and of MNPED; followed by review by Union Vice President	Review of state/region budgets by state/region finance ministers and executive offices; followed by submission for review to the state/region parliament; followed by submission to the Vice-President
December	Financial Commission reviews proposed Union and state/region budgets and submits them with recommendations for final review to the Office of the Union President and the Offices of the Chief Minister of the state/region governments; Union budget and law submitted to Union Parliament	Vice-President forwards state/region budget proposals to the Financial Commission
Calendar year: 0		
January-March	Union Parliament debate and revision; followed by final passage around end-March	State/region draft budget submitted by Chief Minister to state/region parliament for review, revision and final passage
April-July	Execution of budget	Execution of budget
July	Report to Union Parliament by OAG	
August	Preparations begin for revised budget for current fiscal year	

Source: Provided by the Ministry of Finance.

ANNEX 4.A4

Structure of Myanmar's financial system

Type of institutions	Number of entities	Assets (billion kyats)**	Description	Regulatory and supervisory authority	Legal framework
State-owned banks	4	3 222	Myanmar Foreign Trade Bank Myanmar Economic Bank Myanmar Investment and Commercial Bank (to be renamed to Small and Medium Industrial Development Bank) Myanmar Agriculture and Rural Development Bank	Central Bank of Myanmar and respective line ministries	Central Bank of Myanmar Law (1990); Financial Institutions of Myanmar Law (1990); Saving Bank Law (1992); Myanmar Companies Act (1914) (*); Myanmar Agricultural and Rural Development Law (1990)
Private and semi-government banks	19	5 126	Private commercial banks	Central Bank of Myanmar	Central Bank of Myanmar Law (1990); Financial Institutions of Myanmar Law (1990); Saving Bank Law (1992); Myanmar Companies Act (1914) (8)
Other financial institutions	5	1	Myanmar Orient Leasing Company Ltd. Myanmar Insurance Myanmar Securities Exchange Centre Company Co., Ltd Security and Printing Works Myanmar Microfinance Supervisory Enterprise (former Myanmar Small Loan Enterprise)	Ministry of Finance and Ministry of Defence (for security and printing works) Insurance Business Supervisory Board, Ministry of Finance	Central Bank of Myanmar Law (1990); Financial Institutions of Myanmar Law (1990); Myanmar Insurance Law (1993); Microfinance Law (2011); Microfinance Notification and Directives (2011); Myanmar Companies Act (1914) (*)
Representative offices of foreign banks	28	0	Foreign banks mainly from South-East and North-East Asia	Central Bank of Myanmar	Central Bank of Myanmar Law (1990); Financial Institutions of Myanmar Law (1990); Myanmar Companies Act (1914) (*)
Micro finance projects	1 755	95	Microfinance institutions (MFIs) Informal and semi-formal sector Co-operatives NGOs (e.g. PACT) Specialised agricultural development companies Village revolving funds Community based organisations	Ministry of Finance, Ministry of Co-operatives and Ministry of Agriculture and Irrigation	Microfinance Law (2011); Microfinance Notification and Directives (2011); Myanmar Agricultural and Rural Development Law (1990); Co-operative Society Law (1992); Law relating to Forming of Organisations – NGO Law (1988); Myanmar Companies Act (1914) (*)

Type of institutions	Number of entities	Assets (billion kyats)**	Description	Regulatory and supervisory authority	Legal framework
Other licensed financial institutions			Pawn shops	Myanmar small loans enterprise and local authorities	
Informal financial outlets			Moneylenders; Hundis		

Notes: *The subsection of the Myanmar Companies Act (1914) covers the provision of bankruptcy; thus, the banking and financial sector has to rely on this law for the cases of loan defaults caused by insolvency. ** Assets at end FY 2012/13 (31 March 2012).

Sources: PWC (2012), *Myanmar Business Guide*, August; Pricewaterhouse/Coopers LLP, Singapore, *www.pwc.com/sg/en/assets/document/myanmar_business_guide.pdf*; Aung and Khin (2011), "Small and medium enterprises in Myanmar", a presentation at the Asia–Pacific Financial Inclusion Forum, Tokyo, Japan, 6-8 September, Ministry of Finance and Revenue, Government of Myanmar; and Duflos et al. (2013), *Microfinance in Myanmar: Sector Assessment*, January, International Financial Corporation, World Bank, Washington, DC.

Table 4.A4.1. **Structure of the Myanmar banking system**

Figures for 31 March 2013 unless otherwise indicated

	Number of offices/ branches	Total assets (MMK billion) (31 March 2012)	Share of banking system assets	Main owner	Main activities and remarks
State-owned banks	n.a.	3 226	38.6		
Myanma Economic Bank (MEB)[1]	324	4 532	54.3	State	Deposit-taking and commercial lending; provision of working capital loans to SMEs; rural finance; govt functions of treasury mgt and currency services
Myanmar Foreign Trade Bank	n.a.	n.a.	n.a.	State	Foreign exchange transactions
Myanmar Agricultural Development Bank[1]	206	989	11.8	State	Deposit-taking and commercial lending; policy lending to rural farmers
Myanmar Investment and Commercial Bank	n.a.	n.a.	n.a.	State	
Private and semi-government banks	485	5 126	61.4		
Kanbawza Bank Ltd.	122	1 774	21.2	KBZ Group	
Myawaddy Bank Ltd.[2]	26	733	8.8	Union of Myanmar Economic Holdings*	
Co-operative Bank Ltd.	47	563	6.7	Ministry of Co-operatives	
Myanmar Apex Bank Ltd.	20	276	3.3	Eden Group of construction companies	
Myanma Global Treasure Bank[2, 3]	60	397	4.8	Ministry of Livestock and Fisheries	
Ayeyarwaddy Bank Ltd.	32	197	2.4	Max Myanmar Group	
Asia Green Development Bank Ltd.	28	209	2.5	HTOO Company Group	
Innwa Bank Ltd.[2]	33	245	2.9	Myanmar Economic Corporation*	
United Amara Bank Ltd.	14	n.a.	3.2[4]	IGE Company Group	
Rural Development Bank Ltd.[2]			2.8[4]	Ministry of Border Areas	
Small and Medium Industrial Development Bank Ltd.[2]	11	118	1.4	Ministry of Industry	SME lending to industry, based in part on subsidised loans from MEB
Myanmar Oriental Bank Ltd.	17	n.a.	2.2[4]	25 shareholders with Kyi Kyi Than major sharehold	
Yoma Bank Ltd.	50	n.a.	2.2[4]	FMI Group	Commercial banking since reinstatement of full licence in 2012

Table 4.A4.1. **Structure of the Myanmar banking system** *(cont.)*

	Number of offices/ branches	Total assets (MMK billion) (31 March 2012)	Share of banking system assets	Main owner	Main activities and remarks
First Private Bank Ltd.		n.a.	1.7[4]	Public Limited Company	
Myanmar Citizens Bank Ltd.	7	n.a.	1.0[4]	Ministry of Commerce	
Tun Foundation Bank Ltd.	12	n.a.	1.0[4]	MGS Beverages Co. Ltd	
Yangon City Bank Ltd.[2]	2	n.a.	0.6[4]	Yangon City Development Committee	
Yadanabon Bank Ltd.[2]	2	n.a.	0.1[4]	Mandalay City Government Authority	
Asian Yangon Bank Ltd.	1	n.a.	0.1[4]	U Myo Paing	

* Affiliated with Ministry of Defence.
1. 31 March 2013 for MEB; October 2013 for MADB.
2. Semi-government bank.
3. Formerly named Myanma Livestock and Fisheries Bank.
4. Figures for FY 2012 from Foerch, Thein and Waldschmidt (2013).

Sources: CBM (2012), *Annual Report 2011-2012*; Foerch, Thein and Waldschmidt (2013), “Myanmar’s financial system: A challenging environment for banks”, *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ), November; Myanma Economic Bank; Myanmar Agriculture Bank; staff estimates.

Table 4.A4.2. **Financial products in Myanmar**

Product/instrument	Term	Interest rate (%)	Fees	Conditions
Banks				
Current deposits – MMK	Demand	0		Minimum balance 1000K
Current deposits – Foreign currency	Demand	0		
Savings deposits		8 maximum		Minimum balance of 1000K
Time deposits	3, 6, 9, 12 months	8.5, 9.0, 9.5, 10		
Lending rate	1 year	13 maximum	1% service charge; 1% commitment fee	Loan amount < [ ] of discounted market value (about 20%) of collateral; acceptable collateral: land and buildings; machinery; goods; gold; bank deposits; govt securities
Capital market				
Treasury bill	3 months	4		
Treasury bonds	2 years	8.75		
	3 years	9		
	5 years	9		
Agricultural loans (to farmers) (MADB)				
Paddy loans	[up to 1 year]	8.00		Land collateral; group guarantee
Equipment loans		8.50		Equipment
Microfinance institutions				
Savings rate		1.25/month		
Lending rate		2.5/month		
Insurance products	**Types of insurances**			
Authorised for all insurers	Life-individual, fire, fidelity, life-group			
	Motor vehicle, snake-bite, cash-in-safe, cash-in-transit			
Reserved to Myanmar Insurance	Marine, travel, oil and gas, bodily injury			
	Aviation, engineering, third party liability			

Sources: CBM; KPMG (2013); Foerch, Thein and Waldschmidt (2013).

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