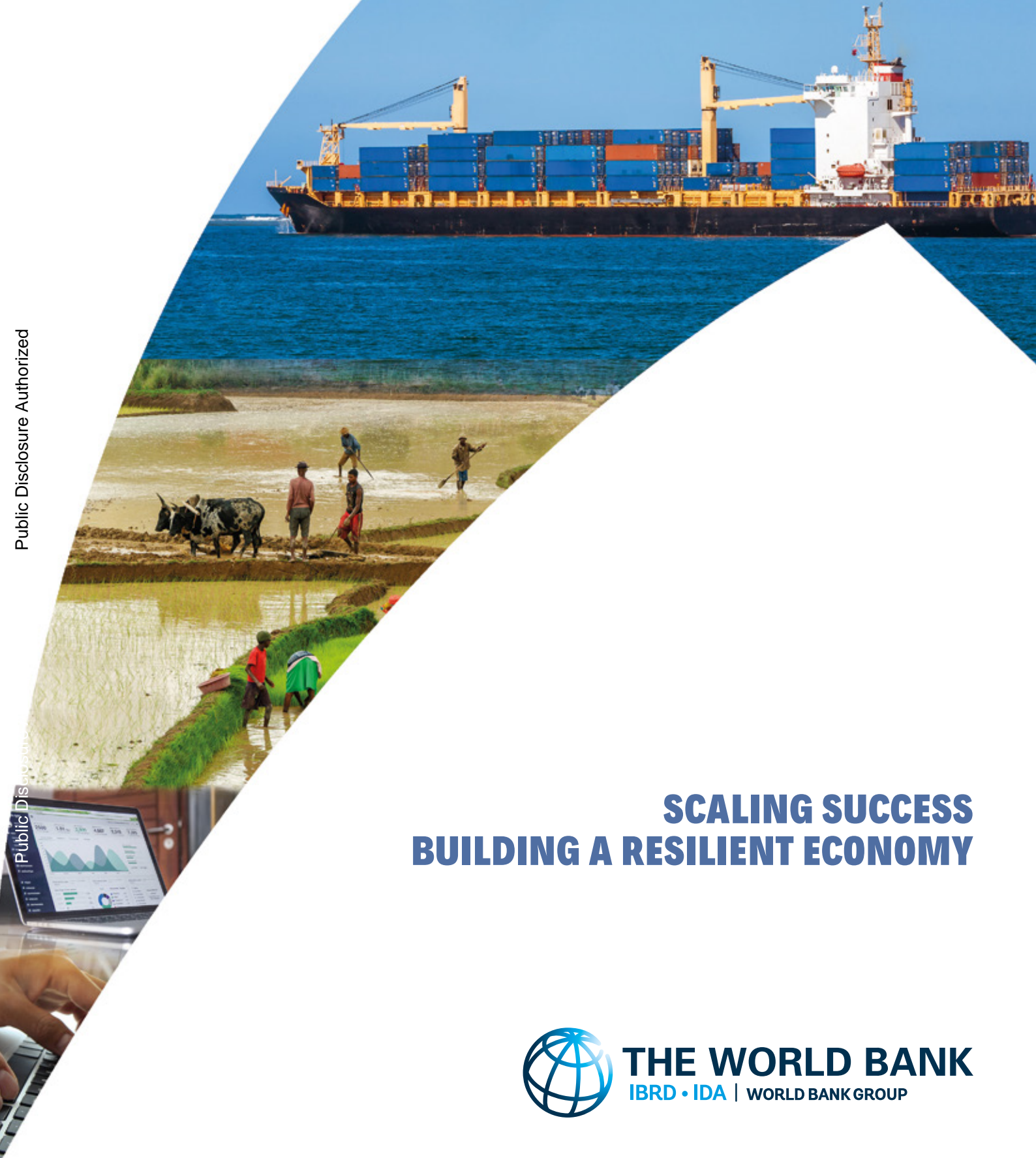


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MADAGASCAR

COUNTRY ECONOMIC MEMORANDUM

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SCALING SUCCESS
BUILDING A RESILIENT ECONOMY



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Valuable inputs were provided by the broader country team including: Eneida Fernandes (Senior Private Sector Specialist, EA1F2), Tiago Peixoto (Senior Public Sector Specialist, EA1G2), Noro Aina Andriamihaja (Senior Financial Sector Specialist, EA1F2), Djibrilla Adamou Issa (Lead Financial Sector Specialist, EMNF1), Justine White (Senior Private Sector Specialist, EA1F2), Giuseppe Fantozzi (Senior Agricultural Specialist, SAFA2), Tom Bundervoet (Senior Economist, EA1PV), Laura Rawlings (Lead Social Protection Specialist, HAFS1), Maud Juquois (Senior Health Economist, HAFH1), Voahirana Hanitriniala Rajoela (Senior Health Specialist, HAFH1), Peter Holland (Program Leader, HAFE3), Atsushi Iimi (Senior Economist, IAFT2), Erik Reed (Natural Resources Management Specialist, SAFE3), Martin Luis Alton (Financial Sector Specialist, EFNRF), Joern Huenteler (Energy Specialist, IAFE1), and Raymond Bordeaux (Program Leader, AFCS2), as well as Noro Hajalalaina Rasoloarimanana Andriamihaja (Team Assistant, AFMMG), Todimalala Volaso Razafarimbola (Temporary, AFMMG) and Rondro Malanto Rajaobelison (Program Assistant, AFMMG) for their administrative support.

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CONTENTS

ACKNOWLEDGEMENTS i

EXECUTIVE SUMMARY viii

- A. Steady economic expansion and increased political stability provides a solid context for realizing the twin goals of ending extreme poverty and boosting shared prosperity ix
- B. Export-oriented sectors which include the 'bright spots' of the economy are making important contributions to growth ix
- C. Scaling success requires addressing constraints related to connectivity, human capital and the business environment, while incentivizing the uptake of improved technologies to enable other sectors, such as agriculture, to realize their potential xi
 - (i) Accelerating pipeline infrastructures and enhancing the competitiveness of service provision xi
 - (ii) Reversing the decline in human capital so that the labor force is ready to meet the needs of an evolving private sector xiii
 - (iii) Leveling the playing field and enhancing the institutions important for doing business xiv
 - (iv) Incentivizing the uptake of improved technologies through addressing inefficiencies in the domestic market so that other sectors, such as agriculture, can realize their potential xv
- D. Conclusion and reform priorities xvii

ABBREVIATIONS & ACRONYMS xxii

1 INTRODUCTION - SETTING THE STAGE 1

- A. Context: declining incomes and shocks 2
- B. An Economic Rebound but only Nascent Structural Transformation 5
- C. Leveraging Trade and Investment to Engage in Sectors of Higher Productivity 8
- D. Promoting the Productivity of the Agriculture Sector 9
- E. The Importance of Levelling the Playing Field to Sustain Growth and Promote Productivity 11
- F. The Madagascar Country Economic Memorandum Framework – Current Performance and Future Opportunities 11
- G. Organization of the CEM and Methodology 12

2 THE LONG-TERM DETERMINANTS OF GROWTH IN MADAGASCAR: LABOR, CAPITAL AND PRODUCTIVITY 15

- A. Introduction 16
- B. The long-term drivers of growth: reliance on inputs (labor and capital) outstrips productivity gains 16
 - (i) Labor 17
 - (ii) Investment 26

(iii) Productivity and innovation	34
C. The sustainability of growth	36
D. Conclusion	37
3 LEVERAGING TRADE AND INVESTMENT IN MADAGASCAR - A DEEP-DIVE INTO THREE HIGH-PERFORMING SECTORS	39
A. Introduction	40
B. Madagascar's Trade Performance – Dominance of High-Performing Sectors	42
C. High-Performing Sectors: Explaining Growth and Leveraging Opportunities	48
(i) Focus Sector: Agribusiness	50
(ii) Focus Sector: Textiles and Apparel	54
(iii) Focus Sector: IT-BPO	57
D. Lessons Learned and Policy Recommendations	60
4 SEIZING THE OPPORTUNITIES FOR INCLUSIVE AGRICULTURE GROWTH	63
A. Introduction	64
B. Crop Production	65
C. Crop marketing and storage	66
(i) The farm level – the start of long and uncompetitive marketing chains	66
(ii) The national market level – slightly more competitive but still inefficient	67
(iii) Access to storage – a means for farmers to capture a higher share of the total value from rice, but reforms are needed	70
(iv) Contract farming can further help drive smallholder market participation and crop improvements	72
D. Crop transport and processing	74
(i) Transport costs contribute to higher overall costs and reduces competitiveness	74
E. Trade policies	76
(i) For domestic rice to compete with imported rice, efficiency improvements are needed	76
(ii) The uneven application of an export ban on rice is counterproductive	76
(iii) The ability to export ordinary rice depends on efficiency improvements	77
F. Market information	79
G. Policy and Investment Priorities for a More Inclusive Agriculture Growth Trajectory	80
5 ADDRESSING ANTI-COMPETITIVE PRACTICES	82
A. Introduction	83
B. Market Concentration and Anti-competitive Business Practices	83
C. Barriers to Competition in Key Sectors – Deep Dive Analysis	85
(i) Focus sector: Telecommunications	86
(ii) Focus sector: Petroleum	89
(iii) Focus sector: Lychee	93
(iv) Focus sector: Vanilla	95
D. Policy options and reforms to address anti-competitive behaviors	97
(i) Sector-specific reforms	97
(ii) Economy-wide reforms	98

6 SUMMARY OF REFORMS 100

- A. Introduction 101
- B. Pathways for Enhancing Inclusive Growth 101

BIBLIOGRAPHY 110

LIST OF FIGURES v

- Figure 1: The growth of the economy has lagged that of the population since 1960... 3
- Figure 2: GDP per capita is on an overall declining trend (in constant 2011 PPP USD) 3
- Figure 3: MDG one of few countries in the world with lower GDP p.c. now than in 1960 3
- Figure 4: Relative to the average for SSA, GDP per capita is declining (in constant 2010 USD) 3
- Figure 5: Periods of solid economic growth have been punctuated by deep downturns... 4
- Figure 6: ...the latest of which (2009 political crisis) generated large forgone output losses 4
- Figure 7: Export-oriented sectors and services are important contributors to growth 5
- Figure 8: Agriculture has absorbed the large majority of new workers... 8
- Figure 9: ...but other sectors have contributed much more to output growth while value-added in the agriculture sector has almost stagnated 8
- Figure 10: Since 2014, net exports and investment are key contributors to gradual aggregate demand growth 9
- Figure 11: The agriculture sector has a declining share in value added and volatile growth rates 10
- Figure 12: Paddy production is closely linked with agricultural growth 10
- Figure 13: Since 2000, growth has relied more on inputs (labor and capital) than productivity growth 17
- Figure 14: Madagascar has a relatively high labor force participation rate 18
- Figure 15: Pervasive informality and underemployment means that peers have higher levels of productivity compared with Madagascar 18
- Figure 16: Madagascar has one of the lowest levels of remuneration levels compared with peers which both attracts investors and disincentivizes talent to stay 18
- Figure 17: Madagascar has one of the lowest level of remuneration even when considering the level of productivity 19
- Figure 18: Formal employment generation is led by few sectors 19
- Figure 19: Sectors contributing to growth also have the fastest rate of job creation 19
- Figure 20: Nightlights in 2012 20
- Figure 21: Nightlights in 2018 20
- Figure 22: Major changes to Madagascar's nightlights between 2012 to 2018 and formal jobs created 21
- Figure 23: Madagascar's human capital index is amongst the lowest in the world 22
- Figure 24: For Madagascar's level of income, stunting is amongst the highest in the world 22
- Figure 25: Total expenditures on health are amongst the lowest in the world 22
- Figure 26: Total expenditures on education are also amongst the lowest in the world 22
- Figure 27: Madagascar's population is youthful 25
- Figure 28: A declining dependency ratio indicates an opportunity to reap demographic dividend 25
- Figure 29: Firms that have a female in a top position have higher labor productivity 26
- Figure 30: Annual employment and labor productivity growth is also higher with females in top positions (%) 26
- Figure 31: The volatility in public investment financing mirrors net official development assistance 26
- Figure 32: Investment financing mirrors net official development assistance 26
- Figure 33: Firms in Madagascar have amongst the highest percentage of sales lost due to outages (%) 28

- Figure 34: 70 percent of paved roads are in good condition while 70 percent of unpaved roads are in poor condition 30
- Figure 35: Madagascar's Rural Access Index shows that only 11.4 percent of the population have access to a good road network 30
- Figure 36: Madagascar has one of the lowest ranking scores for transport infrastructure 33
- Figure 37: The perception of governance effectiveness is amongst the lowest compared with peers 4
- Figure 38: Large firms have greater employment growth 35
- Figure 39: Financially connected firms have higher employment growth 35
- Figure 40: Madagascar's ranking in the Global Innovation Index is on the higher end compared with peer countries 36
- Figure 41: Madagascar has one of the highest rates of export growth and largest export sectors 41
- Figure 42: Malagasy exports have a higher chance of survival compared with peers 41
- Figure 43: Merchandise exports are under expansion, with agribusiness and apparel performing particularly well 43
- Figure 44: Exports of telecommunications related services are rising at a rapid pace 43
- Figure 45: FDI inflows are relatively high and are increasing 44
- Figure 46: Apparel and various agribusinesses are experiencing export surges (2017) 46
- Figure 47: Madagascar has a revealed comparative advantage in textiles and apparel and agribusinesses 46
- Figure 48: Before 2009, Malagasy exports were largely destined to the EU and the US 48
- Figure 49: Since 2009, other destination markets in Asia are gaining importance, although the EU and US still dominate 48
- Figure 50: Madagascar has a challenging business climate 49
- Figure 51: Getting electricity and construction permits are particularly challenging 49
- Figure 52: FDI has been attracted by the availability of Madagascar's unique inputs 51
- Figure 53: But further growth is limited by poor access to electricity and governance constraints 51
- Figure 54: Madagascar has one of the highest levels of participation in global value chain exports compared with SSA, but performance falls behind aspirational peers in Asia 55
- Figure 55: Sources of comparative strength in the textiles sector include reduced labor costs and access to preferential markets 56
- Figure 56: However, further growth is limited by political instability and high electricity costs 56
- Figure 57: FDI has been attracted by the availability of affordable labor and access to broadband 58
- Figure 58: But further growth is limited by high costs and labor with the right expertise 58
- Figure 59: Indicative price formation of milled System of Intensive Rice sold in Antananarivo after five months of rural storage paid by collector 68
- Figure 60: Average transport prices on long distance routes in Madagascar and comparator countries (US cents per ton per kilometer) 75
- Figure 61: Relative to comparators, the intensity of local competition is perceived to be weak... 84
- Figure 62: ...and markets in Madagascar are perceived to be dominated by few businesses 84
- Figure 63: The price of fixed broadband internet is relatively high in Madagascar 87
- Figure 64: ...while penetration and access of cellular and internet services are relatively low 87
- Figure 65: Telma is present in all segments of Madagascar's broadband value chain 87
- Figure 66: The price of jet fuel oil is higher in Madagascar and is amongst the highest in Africa and other major destinations 90
- Figure 67: The combined costs of transportation and storage and distribution and margins were until recently the highest in Madagascar compared with benchmark countries 90

- Figure 68: Petroleum market structure 92
Figure 69: Graphical representation of the value chain for lychee export 93
Figure 70: Value chain of export vanilla 96

LIST OF TABLES vii

- Table 1: Summary of Key Issues and Proposed Reforms xviii
Table 2: Structural transformation in Madagascar is nascent, with increasing shares of workers outside of the agriculture sector 7
Table 3: Madagascar Selected economic and financial indicators:2008-2019 32
Table 4: Financial costs and returns from rice sold immediately after harvest 66
Table 5: Indicative value-added costs, profits, and rates of return from milled SRI rice sold in Antananarivo after five months of rural storage paid by collector during assembly (MGA per kilo milled rice) 69
Table 6: Share of total available profits from smallholder rice captured at each stage of the value chain in Madagascar and comparator countries 69
Table 7: Indicative value-added costs, profits, and rates of return from milled System of Intensive Rice sold in Antananarivo after five months of rural storage paid by farmers (MGA per kilo milled rice) 71
Table 8: Indicative regional parity calculations for ordinary Madagascar and Pakistan rice in regional export markets (US\$ per ton) 78
Table 9: Summary of Key Reforms and Expected Impacts 105

LIST OF BOXES vii

- Box 1: Not all FDIs are the same 44
Box 2: Good practice in agribusiness: the Consortium of Cocoa Actors 53
Box 3: Boosting Investor confidence through Alternative Means of Dispute Resolution (ADR) 61
Box 4: Learning from other Country Experiences - How Senegal and Vietnam were able to realize success in domestic rice markets 73



EXECUTIVE SUMMARY

A. Steady economic expansion and increased political stability provides a solid context for realizing the twin goals of ending extreme poverty and boosting shared prosperity

1. Madagascar is characterized by an expanding economy and a peaceful transition of power, providing a solid basis for achieving a more productive, inclusive and sustainable growth trajectory. With its *Plan d'Emergence*, the government has a bold vision for developing a more prosperous and inclusive Madagascar. The economy has been expanding for six consecutive years, with growth estimated at over 5 percent in 2018 and 2019. The peaceful transition of power after the 2019 Presidential elections indicates that Madagascar has turned a corner in its political history, providing a basis for addressing deep-rooted governance challenges.

2. Given the vast opportunities, but also substantial challenges, the objective of the Madagascar Country Economic Memorandum (CEM) is to inform the policy dialogue on how the country's inclusive growth potential can be harnessed. Madagascar is one of the only countries in the world to have experienced a long-term decline in incomes whereby the country is 41 percent poorer today than it was at independence in 1960. Unacceptably, an estimated 77.6 percent of the population live below the US\$1.90 poverty line, at purchasing power parity. With high levels of informality¹ and pervasive underemployment,

subsistence agriculture dominates, absorbing an estimated 75 percent of the workforce, who have limited opportunities to compete in the market. Such a situation constrains the possibility of sustainably raising incomes and escaping poverty. Against this backdrop, the Country Economic Memorandum takes an evidence-based approach to informing policy on how opportunities for achieving productive, inclusive and sustainable growth can be realized.²

B. Export-oriented sectors which include the 'bright spots' of the economy are making important contributions to growth

3. The Malagasy economy is under transition, but the formal sector needs to further expand. Comparing Madagascar today with the country in 2012, geographical areas outside of the three largest cities have developed. The regions of Antsiranana, Mahajanga, Toamasina, Antananarivo, Fianarantsoa and Toliara have been growing and jobs are being created. While these developments are encouraging, the formal economy remains small. At the current pace, just under one in twelve new entrants to the labor market will find a job.³ Furthermore, large swathes of the country, particularly in the south-east remain disconnected with limited access to electricity and other basic infrastructures.

4. Labor force participation in both the formal and informal sectors is high, with strong levels of female engagement. The level of

¹ Estimated at 93 percent in 2012, which is likely to have reduced given recent economic developments

² The report draws upon secondary data sources such as nightlights, formal employment data, the Enterprise Survey and other World Bank analytical products such as the Systematic Country Diagnostic. Primary data was collected through the administration of a survey deployed amongst high performing firms, a political economy analysis and a new competition assessment of key sectors in the economy. The scope of the work was determined through a Data Scan and consultations with various stakeholders. A benchmarking exercise was undertaken with a range of peer countries: worse-performing, structural and aspirational.

³ Data availed by the private pension body

labor force participation in the formal and informal economy is high compared to peer countries which have similar characteristics, in terms of level of education and income. Female labor force participation rates are high, where 86 percent of females are actively engaged in the labor market compared with 90 percent of males. While there are fewer firms that have females in top positions compared with males, private enterprises that do have women in management roles stand out by having greater labor productivity, as well as higher annual employment and labor productivity growth.

5. Madagascar also has relatively high levels of entrepreneurship and innovation. An estimated 22 percent of the working population are engaged in entrepreneurial activity, with the country ranking seventh out of 54, second only to Vietnam in the lower income group.⁴ Madagascar also has relatively high levels of innovation compared with peer countries. As the country continues to make advances in the use of more sophisticated technologies, as well as the utilization of digital financial services, there is further potential to harness entrepreneurship and innovation.

6. Accelerating the current pace of growth requires further expanding the 'bright spots' of the economy, which are focused on exports and investment related activities. Despite Madagascar facing challenges to trade as a large island economy with constrained logistics, exports are performing well. Madagascar's export-to-GDP ratio increased from 27 percent on average over the period 2010 to 2013 to 33 percent over the period 2014 to 2017, one of the highest in the region. Export-oriented sectors such

as agribusinesses, telecommunications, the extractive industries and activities in export processing zones are estimated to explain a third of GDP growth over the 2014-2018 period. In addition, export-oriented sectors have spurred growth through linkages with the domestic economy, including services to companies and the transportation of goods, which are both under expansion.⁵

7. Foreign direct investment (FDI) has also been increasing and is targeted towards a range of high-performing sectors in the economy. Sectors such as agribusiness, textiles and apparel, and Information Technology-Business Process Outsourcing (IT-BPO) exemplify Madagascar's value proposition. Key characteristics in the Malagasy economy include the availability of unique and high-quality natural resources (attracting natural resource seeking FDI), affordable labor (which is French-speaking, can absorb on-the-job training, has in some cases advanced skills such as software engineers), and an exceptionally fast download speed featuring in the global top-25 (attracting efficiency seeking FDI). Such performance underscores how goods and services made in Madagascar are in high demand globally, contributing to one of the highest rates of export growth compared with peer countries. Moreover, experience of previous episodes of shocks highlights how certain Malagasy exports have a higher chance of survival compared with similar products in other countries.

8. These 'bright spots' are creating jobs at the fastest pace, are resilient to shocks and have linkages with other sectors of the economy. Agribusinesses, export processing zones (which includes textiles) and IT-BPOs are

⁴ Global Entrepreneurship Monitor's surveyed a sample of 24,000 individuals in 2017

⁵ Backward linkages of services to support exports is estimated at 24.8 percent while transport to support exports is estimated at 8.9 percent, UNCTAD, 2011

the fastest creators of formal jobs, employing people in rural areas, women, and youth as well as offering flexible working practices. These sectors have also demonstrated resilience to domestic shocks in the economy (such as textiles and agribusinesses), whereby they either diversified their products or markets during the political transition period or have recently established as economic operators (such as the IT-BPO industry). Furthermore, these sectors have strong linkages with other elements of the economy, where for example domestic agribusinesses are helping to serve the growing urban consumer demand through supplying supermarket chains. Such developments are encouraging for other sectors such as tourism that have considerable potential to further contribute to growth and create jobs.⁶

C. Scaling success requires addressing constraints related to connectivity, human capital and the business environment, while incentivizing the uptake of improved technologies to enable other sectors, such as agriculture, to realize their potential

(i) Accelerating pipeline infrastructures and enhancing the competitiveness of service provision

9. Improving connectivity by accelerating pipeline projects and improving the enabling policy environment could give a substantial boost to the business environment. Despite Madagascar being a large island nation with poor levels of connectivity, integration with

global markets is strong, as demonstrated by one of highest levels of participation in global value chains in Africa, comparable to those of Indonesia and India. Pipeline infrastructure is expected to strengthen connectivity and therefore enhance the potential for further trade. For example, substantial external financing for road rehabilitation is planned, which will connect agricultural corridors throughout the country. Priority should be given to improving processes for executing externally-financed public investments according to indicative timelines need to be improved. Supporting logistics infrastructure should also be planned for, including in ports that will be accessible through the newly constructed roads, which may present a good case for public-private partnerships. Going further, operations and maintenance for critical roads should also be planned for, particularly given exposure to climate-related damages, which may include reviewing the sources of financing for road maintenance. In addition, a medium-term endeavor could consider the restructuring of the railway concession, which was at one time a less expensive and profitable way of transporting goods, as well as improving public transportation to facilitate movement in urban areas.

10. Reviewing competition-related arrangements in the air transport sector could result in lowering costs and enhancing the transportation of people and cargo. The renewal of the partial open skies agreement could lead to agreement of new routes and airlines to fly in Madagascar's airspace.⁷ The policy framework for domestic airspace could

⁶ An in-depth study of tourism and mining was beyond the scope of this study. This study considered sectors which are already contributing to growth and have demonstrated resilience. Tourism will be studied in the Country Private Sector Diagnostic, planned for FY2020 and mining has already been studied in-depth in a separate analytical program which concluded that further improvements to governance are required to develop the sector.

⁷ Partial Open Skies agreement refers to the limited protection measures supporting Air Madagascar as part of the restructuring initiative where the airline went from being a bankrupt state-owned-enterprise to being part privatized with a financial recovery plan



also be modernized, which would support the transportation of local produce to urban consumer markets as well as develop tourism. These measures would require supporting infrastructure in the form of domestic airports and logistics, which could also be developed through Public Private Partnerships (PPPs). High costs of jet fuel, which are over one-third more expensive in Madagascar compared with Mauritius for example, are contributing to relatively elevated fares for cargo and passenger transport. Addressing this situation would require opening the jet fuel market to competition, allowing both international and domestic firms to supply fuel. These efforts could provide a significant boost to export-oriented companies which use air cargo but currently prefer routes that go via Mauritius in view of lower costs and increased frequency of flights.

11. High costs of broadband and low levels of penetration can be addressed through pro-competitive practices, which starts with updating the policy framework. The momentum from the new government to reform broadband connectivity to reduce costs and enhance connectivity, including in rural areas should continue. High prices for broadband are an important contributor to low penetration and access rates in Madagascar,

which is a significant opportunity cost for the economy. Achieving these objectives requires promoting competitive practices, such as: (i) the regulatory agency identifying actors with significant market power; (ii) ensuring access to bottleneck facilities by third parties; (iii) ending the prohibition of investing in backbone infrastructure in areas that could compete with the incumbent; (iv) reducing the costs of licenses; (v) the competitive assignment of spectrum; (vi) ensuring the Universal Services Fund is objectively used to deliver investments in rural areas; (vii) considering possible asymmetric regulation of interconnection rates; and (viii) improving the functionality and independence of the regulatory agency. These reforms could result in lower prices of broadband and higher levels of penetration, which could contribute to growth and support industries such as IT-BPOs and the financial sector.

12. Given the low electrification rate and poor financial health of the utilities state-owned enterprise, substantial reforms are ongoing, which require continued momentum. The cost, quality and access to electricity is a major impediment to growth in Madagascar. Three out of four households have no access to electricity—one of the lowest rates in the world. Electricity is supplied by the national state-owned utility, JIRAMA, whose operating costs

of power generation are amongst the highest in Africa, reaching over US\$0.30/kWh in 2017, which is an estimated 230 percent above the regional weighted average, largely because of poor procurement decisions and a slower than expected transition to renewable energy. While there have been some improvements, the reliability of electricity supply remains poor, contributing to an estimated 13 percent loss of sales, which is at the higher end compared with peer countries. Hydro and solar energy projects are in the pipeline, which will greatly increase renewable energy supply. However, the challenge is to ensure that these projects are selected on a least-cost basis in line with demand and ability to pay, supported by financial, social and environmental feasibility studies. Continuing efforts to move towards financial recovery of JIRAMA, including through greater transparency of the arrears clearance process to suppliers, would also improve the credibility of the company as an off-taker for private sector investments.

(ii) Reversing the decline in human capital so that the labor force is ready to meet the needs of an evolving private sector

13. Human capital in Madagascar is on a declining trend, where a Malagasy today is 37 percent as productive as she could be if access to full health and education was enjoyed. Over the last 20 years, the contribution that labor has made to growth has been constant. Any gains from a more skilled and educated workforce to growth have been superseded by the population growth rate, resulting in this 'steady state' contribution of labor to growth. Furthermore, while there are high levels of labor force participation rates, pervasive informality and underemployment means that the

population is engaged in poor quality jobs with low levels of productivity and one of the lowest remuneration rates in the world.

14. As the formal sector grows, investing in human capital should be prioritized if the labor force is to be able to access quality jobs to escape poverty.

The private sector is willing to invest in vocational training, but for this to be meaningful, basic education and health outcomes must prevail. Teachers need to be selectively recruited according to their skills, which requires accelerating efforts to develop a holistic approach to teacher training and career management. Although the elimination of public-school fees in the early 2000s contributed to a doubling of school completion rates to 73.9 percent in 2009, learning outcomes remain poor, as teachers are not well-equipped. Notably, only 0.1 percent of teachers assessed under the Service Delivery Indicators (SDI)⁸ have the minimum knowledge to teach, compared with an average of 14.6 percent in comparator countries.⁹ Improving the health system requires investing in health workers as well as enhancing monitoring and management. Such improvements to health services could also help to address Madagascar's high level of stunting, while in parallel improving access to water and sanitation services and promoting positive parenting practices such as improved nutrition. Currently, expenditures on education and health in Madagascar are amongst the lowest in the world, placing a strain on out-of-pocket costs. By improving absorptive capacity and strengthening financial management systems, a strong case could be made to increase expenditures in critical human development sectors.

15. Investing in human capital and female

⁸ Education Service Delivery in Madagascar, World Bank, 2016.

⁹ Comparator countries include Tanzania, Kenya, Mozambique, Nigeria, Togo and Uganda.

leadership could further strengthen the possibility of Madagascar realizing a 'demographic dividend.'¹⁰ Madagascar's demographics are in its favor with a young country (41.6 percent of the population is below 15 years old) and declining fertility rates, which are lower than the average for sub-Saharan Africa (SSA). Taking further steps to reduce fertility rates could consider multiple approaches. While informed parenthood is certainly important, increasing female labor force participation in quality jobs should also be prioritized. Building on the demonstrated success of women in leadership (where firms have higher levels of labor productivity and employment growth) further encouraging females to assume top positions can have a role modelling effect for the next generation. In turn, greater female engagement and empowerment in the workforce may provide incentives for reducing fertility rates, which can be harnessed as the formal sector expands.

(iii) Leveling the playing field and enhancing the institutions important for doing business

16. Madagascar has a challenging business environment, marked by the lack of a level playing field. Madagascar scores 161 out of 190 in the Doing Business index, falling behind most structural peer countries. Perceptions of the intensity of local competition is weak with a few firms dominating markets. These perceptions indices reflect broader societal dynamics, where economic and political elites are closely intertwined, similar to many other countries in the region. The post-independence period was followed by a wave of nationalization, ensued thereafter by privatization with the state becoming less involved in business. Nevertheless, a group of elites have still maintained dominance of key

sectors of the economy. A recent challenge to this landscape has come in the form of new entrepreneurs who have been able to navigate the business environment. However, more profitable markets are concentrated among a few economic operators. Encouraging new investors could involve enforcement of the Trade Facilitation Agreement, identifying and eliminating discriminatory procedures and supporting investor aftercare programs.

17. The political economy context has compromised productivity dynamics as well as inclusive and sustainable growth. Given the weak institutional environment, firms find alternative ways of doing business, including through manipulating rules and regulations, rather than realizing success through enhancing productivity. This strategy can be considered as a coping mechanism for firms attempting to adapt to the business environment, as well as a predatory approach by incumbent firms seeking to hold on to their market dominance. As a result, the regulatory and non-regulatory barriers to entry are high. Such a situation can also compromise the sustainability of growth, whereby the 'outsiders' who do not have access to political elites to gain access to markets can do business because they are engaged in a new sector which does not threaten incumbents (such as the IT-BPO industry), if they pay a high price, or if they use violence, force and intimidation.¹¹

18. Anti-competitive behaviors vary by sector, where risks could be mitigated by an effective regulatory framework. In certain high-end agribusinesses such as lychees, the exporters association dominates market dynamics and sets prices. In contrast, for other exports such as vegetables and livestock, markets are relatively more contestable

¹⁰ Refers to growth in the economy as a result of a change in the age structure of its population.

¹¹ Political economy background paper prepared for the Country Economic Memorandum, 2019.

than in other countries. In cases where value chains have developed in a more inclusive way, private associations with public interest have been important, suggesting that this approach could be further supported with an overarching regulatory framework. In addition, the Competition Law could be further strengthened to explicitly prohibit cartels and to rule against price fixing. Successful implementation of economy wide and sector specific laws requires having an effective Competition Council and regulatory agencies in place that can coordinate actions, which are sufficiently independent from central government ministries and the influence of private operators.

19. Improvements to the business and justice environment are also likely to support the lowering of interest rates, which may facilitate access to finance. Amongst the characteristics of firms with higher levels of labor productivity are those that are connected to the financial system, meaning that they have at one stage applied for a loan, which only applies to 14.5 percent of firms. However, the majority 81.1percent of firms either self-finance their operations or are discouraged from applying for a loan, where one of the principal reasons includes the high costs of finance. Reducing risks in the business environment should in turn help to lower interest rates, where key measures could include making the credit registry available, adopting a law on movable collateral to allow assets-based lending, and improving the legal infrastructure and efficiency of the judiciary system, such as credit and bankruptcy proceedings.

(iv) Incentivizing the uptake of improved technologies through addressing inefficiencies in the domestic market so that other sectors, such as agriculture, can realize their potential

20. Despite Madagascar being a rice-producing and rice-eating country, the country has not been able to produce enough rice domestically to meet its consumption needs, and increasingly relies on imports.

Rice is a staple consumed during every meal in Madagascar. Although there are seemingly favorable climatic and irrigation conditions, the country has not been able to produce enough rice for domestic consumption and has instead relied increasingly on imports to fill the gap. It is estimated that nationwide only about 20 percent of rice grown in Madagascar is marketed for cash, with the rest for domestic household consumption. This dominance of rice in dietary habits is also reflected in the government's agriculture policies, which are also focused on the rice sub-sector.

21. There has been low uptake of improved practices to enhance the yields of rice crops, as farmers need to be sure they will get a fair rate of return to justify higher investment costs which is not currently the case. The use of inputs like fertilizers and seeds, as well as better use of irrigation, strengthened land tenure security, access to credit and extension services have all been promoted to improve the yields of crops. The utilization of these improved technologies and practices can contribute to a higher net rate of return



for farmers, at an estimated 48 percent for high-intensity irrigated rice compared with 19 percent for high-intensity upland rice. Given these benefits, the System of Intensive Rice (SRI) is widespread in many rice-producing countries. However, in Madagascar, SRI barely covers 0.2 percent of irrigated land. Even if SRI is utilized at the farm production stage, the rate of return is the lowest (at 43 percent) compared with all other stages, such as the collection (48 percent), milling and wholesale (73 percent), and retail (280 percent). In comparison, in other rice-producing countries, the rate of return at the farm production stage is much higher. Given these low rates of return, under current market conditions, pursuing a low cost, subsistence strategy can make good economic sense for farmers.

22. Connectivity challenges have contributed to long marketing chains and inefficiencies in the domestic market. Numerous actors operate along the rice value chain, from farmers, to sub-collectors, to town-based collectors, to wholesalers and onward to retailers. The poor state of rural roads adds to transportation costs and exacerbates the remoteness of farmers, whereby they have limited negotiating power. In addition, transportation costs are raised by a lack of regional rice mills. Considering that the outturn for milled rice from paddy is 67 percent, even without investments in roads, establishment of regional rice mills could provide 33 percent savings in the per ton costs of long-distance transport for rice. Compared with major agricultural corridors in selected peer countries, where data is available, Madagascar has the highest transport costs for long-distance routes. Efforts to improve physical connectivity (for example through investing in rural feeder roads) could be complemented by bringing farmers figuratively closer to market, through the warehouse receipt system. Such a system would allow farmers to produce

and sell when market prices are higher, and for traders to position their stock around the country until physically needed. Cross-country experience suggests that warehouse receipt systems are effective when underpinned by improved farmer organization, for example through cooperatives, which is not currently the case in Madagascar.

23. Efforts to address market inefficiencies through access to information. Even in areas close to main national roads, farmers and sub-collectors have little knowledge of crop prices, buyer preferences, or market opportunities outside their immediate area of operation and so have little to no way of making informed production decisions and negotiating competitive prices. Policymakers also lack information on market dynamics at district level, since this is not monitored by the Rice Observatory. Investments in even very simple information systems for rice and other crops would be a good way to improve market efficiencies, for example through radio bulletins, which was previously implemented, but came to an end once donor financing stopped. Going further, investments in remote sensing systems that help gauge crop yields in different parts of the country enable traders to know where surpluses exist and help policymakers decide on infrastructure investments.

24. Improving the efficiency of domestic markets could enhance competitiveness with imported rice. Madagascar allows for imported rice to have customs duties and Value Added Taxes (VAT) waived, and similarly, domestic rice is not subject to VAT. While imported rice has been subject to misdeclaration at customs, this policy of tax expenditures is part of a broader food assistance strategy, since all income groups purchase imported rice. Domestic producers enjoy a strong comparative advantage with imported rice at the farm level. However, by the

time domestic rice moves through the collector system to reach an urban wholesaler, this comparative advantage is largely diminished, and imports can easily compete with domestic supply on price.

25. Better functioning domestic rice markets could also support Madagascar's vision of becoming a rice exporter, if combined with improved certainty regarding export policy. Once Madagascar is rice sufficient, the agriculture policy envisages the country becoming an exporter of rice, largely serving regional markets in the Indian Ocean. Presently there are niche varieties of rice, such as Dista rice which serves markets in the US, and is currently subject to an export ban,¹² unless exceptions are granted to specific private operators. Reversing this policy stance on the export ban could encourage this niche variety of rice to develop and provide greater predictability in the operating environment. In order for ordinary white Malagasy rice to be competitive in regional markets (Indian Ocean, SADC and COMESA), tariff preferences are not enough; the same underlying improvements that effect the competitiveness of domestic rice markets are also needed.

26. With better market access, farmer demand for improved seeds, fertilizers, and willingness to pay for maintenance of irrigation could all be expected to improve. Thus far, contract farming has been the

main way of linking farmers with markets and improving access to inputs. Continued support for contract farming arrangements is important but it is also necessary to look for broader solutions that reach beyond the specific crops and localized production areas contract operators are most interested in. Madagascar has enjoyed many successes in exporting high-value commodities and there is still scope for these to grow. With more secure and remunerative market access, smallholder production of rice and other crops such as maize, soybeans, cassava that are important to food security, livestock production, and agri-processing could also be expected to grow.

D. Conclusion and reform priorities

27. Unlocking opportunities for Madagascar requires encouraging competitive practices. Strengthening competition could help to reduce costs, enhance productivity and promote quality. Promoting opportunities to compete in the market through having a better prepared labor force and bringing farmers closer to markets will also contribute to more inclusive growth. A summary of key constraints and proposed reforms are outlined below, summarized as the following themes: (i) connectivity; (ii) investing in human capital; (iii) levelling the playing field; and (iv) enhancing agricultural productivity. Reforms that are already ongoing are also indicated.



¹² The export ban was introduced in the wake of the 2008 food price hike as part of efforts for Madagascar to reach self-sufficiency in food production, but was not reversed once prices normalized.

Table 1: Summary of Key Issues and Proposed Reforms

	Key Issue	Proposed reforms
Strengthening connectivity	There is a pipeline of national roads (largely externally financed) but implementation has not followed the expected pace	<ul style="list-style-type: none"> • Strengthen systems to support the execution of externally financed investment projects (<i>ongoing</i>) • Consider new financing sources for O&M (such as parking, vehicle registration and inspection fees) (<i>new</i>) • Improve the public transportation system to facilitate access to jobs (<i>ongoing</i>)
	Air transportation is important for the transportation of cargo and passengers, but fares are high, and routes are restricted	<ul style="list-style-type: none"> • Review the partial Open Skies policy (post-2020) to increase routes to Madagascar (<i>partially ongoing</i>) • Open the jet fuel market to competition to reduce costs of air passenger fares and cargo (<i>new</i>)
	Broadband speed is fast, but costs are high and rural connectivity is limited	<p>Reduce regulatory and non-regulatory barriers (<i>there is momentum to reform the sector, but reforms are new</i>)</p> <ul style="list-style-type: none"> • The regulatory agency to identify actors with significant market power; • Ensure access to bottleneck facilities by third parties; • End the prohibition of investing in backbone infrastructure in areas that could compete with the incumbent; • Review the costs of licenses; • Promote the competitive assignment of spectrum; • Ensure the Universal Services Fund is fairly and objectively considered for all operators; • Consider possible asymmetric regulation of interconnection rates to give smaller operators a better chance; and • Improve the functionality and independence of the regulatory agency, including through greater collaboration with the Competition Council

	Key Issue	Proposed reforms
	Electrification rates are low and energy supply is unreliable	<ul style="list-style-type: none"> Select hydropower projects on a least cost basis supported by financial, social and environmental feasibility studies (<i>ongoing</i>) Continue improvements to JIRAMA, to move towards financial recovery (<i>ongoing</i>) <ul style="list-style-type: none"> Improve revenue collection Reduce non-technical losses Promote greater transparency in the renegotiation of arrears Apply a well-defined tariff policy (under preparation)
Investing in human capital	The vocational training curricula does not meet the needs of the private sector	<ul style="list-style-type: none"> Public sector to promote coordinated inputs to the vocational training curricula to avoid ad-hoc and fragmented inputs (<i>new</i>)
	Placing women in leadership positions is correlated with firms having greater labor productivity and employment growth	<ul style="list-style-type: none"> Promote women in roles of increasing responsibility and encourage female role models (<i>new</i>)
	Teachers lack the skills and qualifications to improve the learning outcomes of the next generation	<ul style="list-style-type: none"> Develop a holistic approach to teacher training and career management (<i>ongoing</i>)
	Strengthen the quality of health service delivery	<ul style="list-style-type: none"> Improve the training of community and nutrition health workers (<i>ongoing in selected areas</i>) Increase uptake of antenatal care in the first three months of pregnancy (<i>ongoing in selected areas</i>) Enhance the monitoring and management of the health system (<i>certain interventions ongoing in selected areas such as monitoring if primary care facilities have tracer medications in stock</i>)
	Reduce stunting so that citizens are healthy and productive	<ul style="list-style-type: none"> Increase access to water and sanitation services (<i>ongoing</i>) Promote positive parenting practices (such as breastfeeding) including nutrition (<i>ongoing</i>)

	Key Issue	Proposed reforms
Levelling the playing field	Rules and regulations are manipulated to access and maintain access to markets resulting in unfair business practices	<ul style="list-style-type: none"> Strengthen commercial justice, including use of the Center of Arbitrage and Mediation (<i>ongoing but stalled momentum</i>) Continue to strengthen customs controls (<i>ongoing</i>) Avoid ad hoc and discretionary fiscal practices through restrained use of tax expenditures including publishing the criteria for award (<i>reforms started but tax expenditures increasing</i>) Support e-procurement processes and open contracting standards (<i>reform momentum but relatively new</i>) Greater transparency in the recruitment of Board members for regulatory agencies and state-owned enterprises (<i>uneven implementation</i>) Strengthen the Competition Law to prohibit cartelistic behaviors and to eliminate price controls (<i>new</i>) Support a framework for Private Associations of Public Interest (drawing upon the cocoa example) (<i>new</i>)
	Accessing finance is important for firm's labor productivity but interest rates are high	<ul style="list-style-type: none"> Improve the credit infrastructure, including the availability of a credit registry (<i>ongoing</i>) Allow asset-based lending by adopting the law on movable collateral (<i>ongoing</i>) Improve the legal infrastructure and efficiency of the judiciary system to reduce risks which are passed through to consumers in the form of higher interest rates (<i>ongoing but uneven implementation</i>)
	Investors face complicated procedures and onerous non-tariff barriers	<ul style="list-style-type: none"> Enforce the Trade Facilitation Agreement with supporting measures including greater transparency of non-tariff barriers, streamlined procedures for investors, and a comprehensive review of existing tax and regulatory incentives (<i>ongoing but uneven implementation</i>) Identify and eliminate discriminatory

	Key Issue	Proposed reforms
		requirements and streamline procedures for investors, including visas and expatriate work permits, as well as develop investor after-care programs <i>(ongoing but uneven implementation)</i>
Enhancing agricultural productivity	Smallholder farmers are disconnected from critical infrastructures such as feeder roads and transport mechanisms	<ul style="list-style-type: none"> • Develop feeder roles (including through decentralized financing mechanisms) <i>(new)</i> • Develop regional rice mills which will reduce transportation costs and bring farmers closer to markets <i>(stalled momentum)</i> • Reform the warehouse receipt system to provide more flexibility in withdrawal periods and trade between crops <i>(new)</i>
	Farmers and policy-makers do not have access to information that could support better decision making	<ul style="list-style-type: none"> • To enable farmers to have a greater say in negotiating prices, support greater access to information on prices for rice and other crops <i>(new)</i> • Invest in remote sensing systems to help gauge crop yields across the country <i>(new)</i>
	Uneven application of the export ban provides uncertainty to exporters and discourages the development of niche, high-end rice	<ul style="list-style-type: none"> • Reverse the export ban for niche, high-end Dista rice <i>(new)</i>

ABBREVIATIONS & ACRONYMS

ADR	Alternative Dispute Resolution
AGOA	African Growth and Opportunities Act
ARTEC	Authority for Communication Technologies for Madagascar (<i>Autorité de Régulation des Technologies de Communication Regulatory</i>)
BIANCO	Anti-Corruption Agency (<i>Bureau Indépendant Anti-Corruption</i>)
CNaPS	Private Social Security Institution (<i>Caisse Nationale de Prévoyance Sociale</i>)
CEM	Country Economic Memorandum
COMESA	Common Market for Eastern and Southern Africa
CPIA	Country Policy and Institutional Assessment
EAC	East Africa Community
FDI	Foreign direct investment
GDP	Gross Domestic Product
GEL	Exporters Group for Litchi (<i>Groupement de Exportateurs de Litchi</i>)
GPM	Petroleum Group of Madagascar (<i>Groupement Pétrolier de Madagascar</i>)
GVC	Global Value Chains
HCI	Human Capital Index
ICCO	International Cocoa Organization
ICT	Information and Communication Technology
IFC	International Finance Corporation
ILO	International Labour Organisation
IRRI	International Rice Research Institute
INSTAT	National Statistics Office (<i>Institut National des Statistiques</i>)
IT-BPO	Information Technology-Business Process Outsourcing
JIRAMA	State-owned utilities company (<i>Jiro sy rano Malagasy</i>)
OMH	Office of Madagascar Hydrocarbons
PPPs	Public Private Partnerships
ODA	Official Development Assistance
OdR	Rice Observatory (<i>Observatoire du Riz</i>)
SADC	Southern African Development Community
SAMIFIN	Malagasy Financial Intelligence unit (<i>Service de renseignement Financier Madagascar</i>)
SDI	Service Delivery Indicators
SIRM	Systemic Investor Response Mechanism
SMP	Significant Market Power
SOE	State-Owned Enterprise
SRI	System of Intensive Rice
SSA	Sub-Saharan Africa
TFP	Total Factor Productivity
VAT	Value Added Tax
WDI	World Development Indicators



Introduction – Setting the Stage

◀◀ *The sustained rebound of economic growth over the last six years, coupled with the constitutional transfer of power following the 2018/19 Presidential elections, sets a solid basis for reversing an historical economic decline in terms of reduced GDP per capita and stagnating poverty levels, which has thus far set Madagascar apart from its peers.* ▶▶

A. Context: declining incomes and shocks

1. Madagascar is a large Indian Ocean island, whose people and natural wealth are characterized by their uniqueness.

Madagascar has a population of approximately 25.5 million of which more than two thirds is less than 25 years of age. The country has rich natural wealth in the form of unparalleled biodiversity, a pristine coastline, precious minerals, metals and rare species, as well as untapped assets. Madagascar's history and traditions are unique, with diverse ethnicities and cultures. However, multiple challenges including declining human capital,¹³ poor infrastructure and connectivity, high levels of subsistence-based agriculture, governance failures and insularity arising from the country's geographic isolation has undermined the prospects for productive, inclusive and sustained growth.

2. Since independence in 1960, Madagascar's economy has been growing, but the pace has not been fast enough to keep up with population growth. The population has approximately multiplied five-fold whereas real

economic output has only tripled (Figure 1). Real GDP per capita has progressively fallen since independence, where the average Malagasy is 41 percent poorer today than in 1961. A lack of long-term robust growth has resulted in limited progress in reducing poverty: the national poverty rate was estimated at 77.6 percent in 2012, nearly the same rate as 2001. Staff estimates suggest that in 2019 approximately 75 percent of the population live on less than US\$1.90 a day at purchasing power parity.

3. The decline in income per capita sets Madagascar apart from trends in the region and globally.

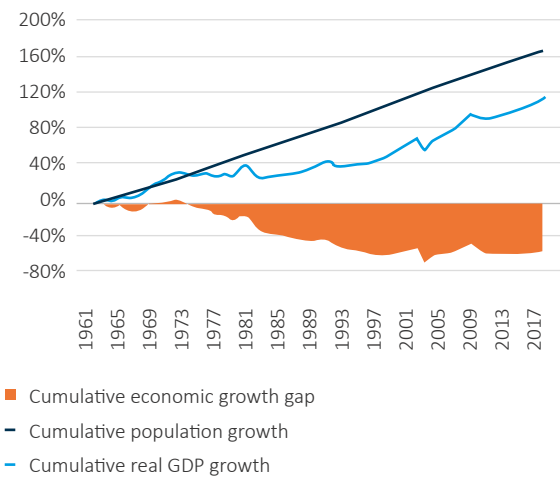
Madagascar is one of only seven countries, out of 138 for which there are data, where real per capita incomes are lower today than they were around 1960, and one of the only countries to have experienced declining incomes in the absence of conflict (Figure 2, Figure 3).¹⁴ Compared with the rest of sub-Saharan Africa, Madagascar's income per capita is on a declining trend (Figure 4). Hence, not only have poverty levels stagnated, but considering the international US\$1.90 poverty line, Madagascar is among the poorest countries in the world.¹⁵

¹³ Madagascar's human capital index declined from 0.39 to 0.37 between 2012 to 2017. The indicators where the country lags the most include learning outcomes and stunting [the latest data – ending in 2012 – indicates that stunting is declining; although more recent data is unavailable.

¹⁴ Most of the others are conflict-affected: Burundi, DRC, Liberia and Niger. Two are small, oil-rich high-income states (Brunei Darussalam and the United Arab Emirates). And two are small-island states: Kiribati and Comoros.

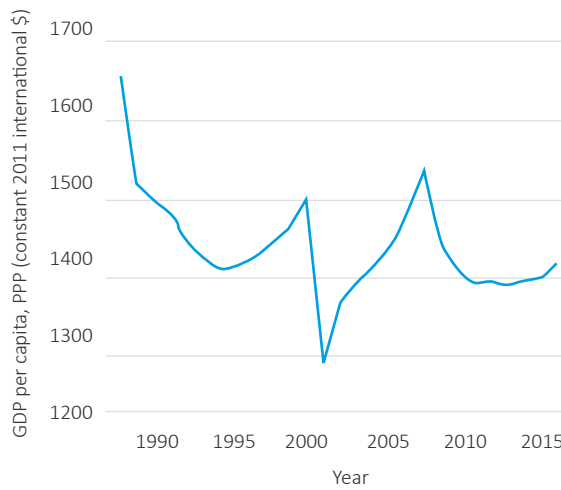
¹⁵ When using the international poverty line of US\$1.90 per capita per day (in 2011 PPP), poverty is estimated at 77.6 percent in 2012.

Figure 1: The growth of the economy has lagged that of the population since 1960...



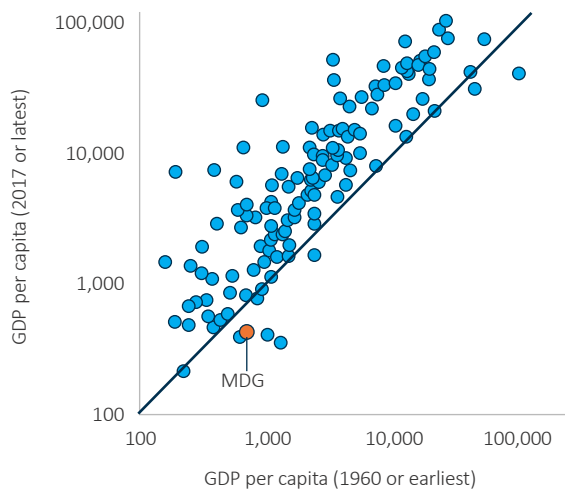
Source: Staff calculation based on the World Development Indicators (WDI) data

Figure 2: GDP per capita is on an overall declining trend (in constant 2011 PPP USD)



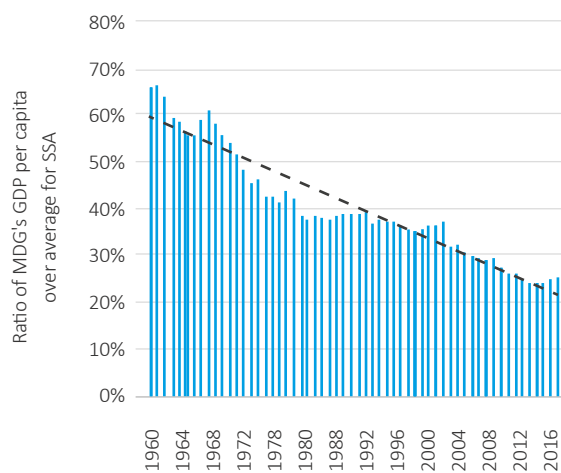
Sources: Staff calculations based on WDI data

Figure 3: MDG one of few countries in the world with lower GDP p.c. now than in 1960



Notes: Sample of all countries with WDI data; GDP per capita in constant 2010 USD, scales logged to the base 10 (GDP p.c. increases 10x with each equal-spaced interval).
 Sources: Staff calculations based on WDI data

Figure 4: Relative to the average for SSA, GDP per capita is declining (in constant 2010 USD)



Sources: Staff calculations based on WDI data

4. Growth in Madagascar has been volatile, where historically the country has thrived during periods of political stability. Since independence, there have been several periods of economic growth, each offering hope of improved livelihoods and poverty reduction. During politically stable times, a

relatively diverse and dynamic private sector can perform well, where certain sectors have realized success despite a relatively challenging business environment. However, periods of growth have been interrupted by political crises. These reversals have been so deep that subsequent accelerations have

been insufficient to make up the lost ground before the next dip.

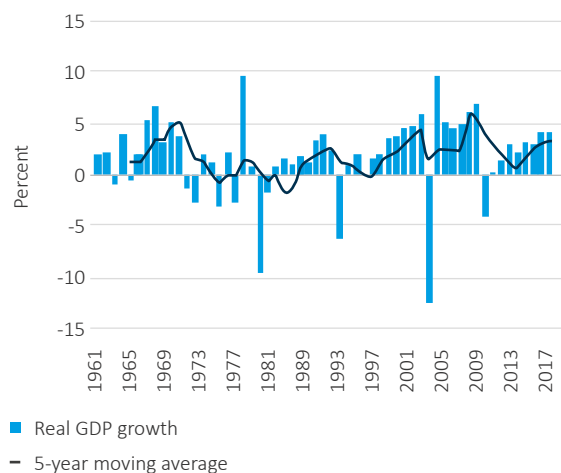
5. The stop-start nature of growth underscores the vulnerability of the economy to domestic shocks, where political crises are particularly destabilizing. The principal domestic shock is related to political fragility, where unconstitutional regime changes and the risks of future crises contribute to investor uncertainty and short-termism in economic policy making. The post-independence period has been marked by four political crises, in 1972, 1991, 2001-02 and 2009-13. In each case, a period of strong economic growth has been interrupted by a political crisis, highlighting the importance of political economy dynamics for Madagascar's growth trajectory.

6. Economic performance has also been vulnerable to exogenous shocks, which largely stem from climate change including natural disasters and a cessation of access to special trade agreements following political instability. The experience from previous episodes of unconstitutional regime changes highlights the costs related to economic

isolation, for example, through the withdrawal of grant and concessional financing, and a revoke of privileges related to special trade agreements such as the African Growth and Opportunities Act. Madagascar's climatic vulnerability can also expose the economy to shocks; on average natural disasters are estimated to cost the economy 1 percent of GDP each year, which is particularly devastating for rural and agricultural based activities.

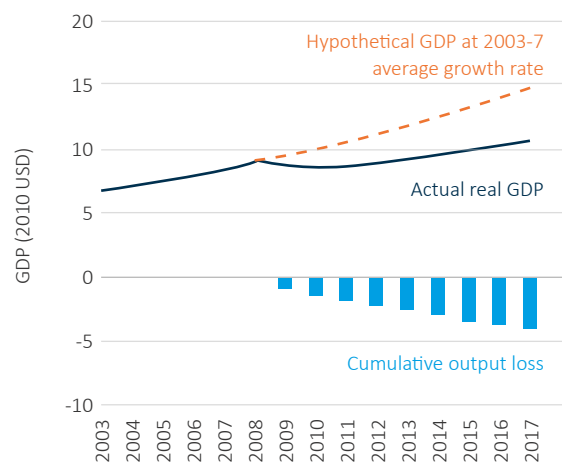
7. The most recent political crisis, from 2009 to 2013, highlights the devastating effects of shocks arising from political instability. The unconstitutional change of regime in 2009 was associated with a 4 percent contraction in GDP and slow subsequent recovery in growth. Had the economy instead continued to grow at its average rate of 5.6 percent in the five years preceding the 2009 political crisis, it would have been larger than the actual post-crisis economy by 37 percent by 2017. This is an enormous loss in terms of plausible forgone output: approximately \$4bn in 2010 US dollars, or \$160 per year for every Malagasy (compared with annual average income in 2010-dollar terms of \$421).

Figure 5: Periods of solid economic growth have been punctuated by deep downturns...



Sources: Staff calculations based on WDI data

Figure 6: ...the latest of which (2009 political crisis) generated large forgone output losses



Sources: Staff calculations based on WDI data

B. An Economic Rebound but only Nascent Structural Transformation

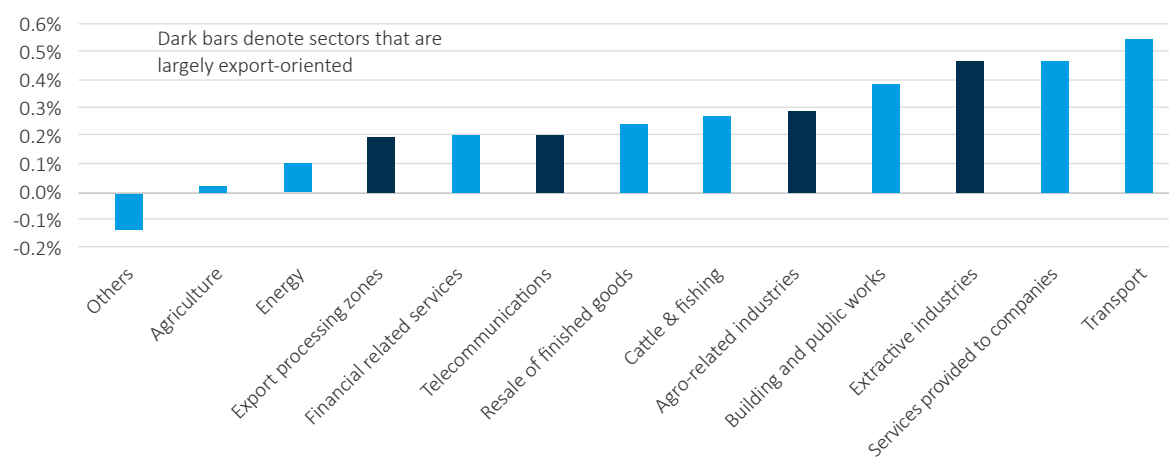
8. The return to constitutional order in 2014 has seen a rebound in economic growth, once again showing that the economy can thrive during periods of political stability.

The economy has progressively gained momentum, with growth picking up from 2.3 percent in 2013 to an estimated 5.1 percent in 2018, a trend which is expected to continue over the medium-term. While some of this acceleration is a rebound associated with a normalization of the political situation, the recent trend of positive per capita growth is encouraging. The economy is growing at its fastest pace in over ten years, and in the absence of dominant megaprojects. Since 2000, the only other time the economy had comparable growth rates coincided with the development of two major mining sites, which are currently in the extraction phase.

9. However, this impressive growth has not been broad-based, and the informal

economy remains large. Industries that support the export of Malagasy goods and services, such as agribusinesses, extractive industries, telecommunications and activities within export processing zones have been important contributors to Madagascar's growth performance (Figure 7). The expansion of these export-related activities has supported the development of the services industry, with a growth in services provided to companies and the transportation of goods. In contrast to the niche agribusinesses that are performing well, the agriculture sector is broadly characterized by subsistence farming. Off-farm income is largely generated from non-formal enterprises, where compensation is in-kind or through self-employment.¹⁶ Available data indicates that the percentage of the population engaged in the informal sector increased from 72 percent in 2001 to an estimated 93 percent in 2012, partly due to a decline in manufacturing jobs as access to preferential trade agreements were waived during the political transition period.¹⁷ The majority of informal establishments operate at a subsistence level.¹⁸

Figure 7: Export-oriented sectors and services are important contributors to growth



Source: National Statistics Office (INSTAT) and WB staff calculations

¹⁶ Madagascar Employment and Poverty Analysis, World Bank, 2016

¹⁷ Madagascar Employment and Poverty Analysis, World Bank, 2016

¹⁸ National Survey on Employment and the Informal Sector, Instat, November 2013

10. The lack of broad-based growth reflects several structural challenges in the economy, whereby the majority of Malagasies living in rural areas do not have access to basic infrastructure or services, which exacerbates remoteness. Deteriorating physical infrastructure has affected market integration and the returns and endowments of poor households, as well as contributed to higher transport costs. For example, on average, over the period 2005 and 2010 the cost of transporting goods to the nearest urban center increased by between 36 and 80 during the rainy season.¹⁹ It is estimated that half of secondary roads and two thirds of tertiary roads are classified as being in bad condition. The rural electrification rate is at 6 percent, reflecting a low national rate of 13 percent, one of the lowest in the world. And while access to financial services has been improving through the introduction of mobile banking services, an estimated 41 percent of the population have no access to a financial institution, underscoring large levels of informality.

11. Considering a longer-term horizon, available data for the period 1992 to 2015 indicates that there are large productivity gaps across different sectors. In the agriculture sector, output per worker declined by 33 percent, which is of concern given that the sector engages approximately 75 percent of the working population. Meanwhile, although the manufacturing sector only engages a far more modest 2.5 percent of the population, the proportion of labor engaged in manufacturing rose by close to 400 percent. Not only has output per worker in the manufacturing sector increased by 24 percent, but the productivity ratio is 13.5 times higher compared to the average worker in the agriculture sector. While some caveats are needed in comparing productivity levels between sectors (related to the measurement of hours, different capital intensity, skills and preferences) across all non-agricultural sectors, average output per worker is multiples higher than in agriculture, and this gap has remained persistently high since the early 1990s when the data begin.



¹⁹ Madagascar Employment and Poverty Analysis, World Bank, 2016

Table 2: Structural transformation in Madagascar is nascent, with increasing shares of workers outside of the agriculture sector

	Annual output, constant 2010 US\$bn (share of total)			Workers, million (share of total)			Output per worker, constant 2010 US\$			Output per worker as a ratio to that in agriculture		
	1992	2015	% Change	1992	2015	% Change	1992	2015	% Change	1992	2015	Δ Ratio
Agriculture	1.99 (31%)	2.79 (25%)	40%	4.28 (78%)	8.95 (75%)	109%	465	312	-33%	--	--	--
Industry (ex. Manufacturing)	0.71 (11%)	1.36 (12%)	92%	0.25 (5%)	0.79 (7%)	216%	2,845	1,724	-39%	6.1	5.5	-0.6
Manufacturing	0.21 (3%)	1.28 (11%)	517%	0.06 (1%)	0.3 (3%)	398%	3,410	4,223	24%	7.3	13.5	6.2
Market services	1.75 (27%)	3.00 (27%)	71%	0.42 (8%)	1.17 (10%)	175%	4,125	2,565	-38%	8.9	8.2	-0.7
Non-market services	1.80 (28%)	2.79 (25%)	56%	0.45 (8%)	0.8 (7%)	76%	3,955	3,488	-12%	8.5	11.2	2.7
WHOLE ECONOMY	6.45 (100%)	11.23 (100%)	74%	5.47 (100%)	12.02 (100%)	120%	1,180	936	-21%	8.1	8.8	0.7

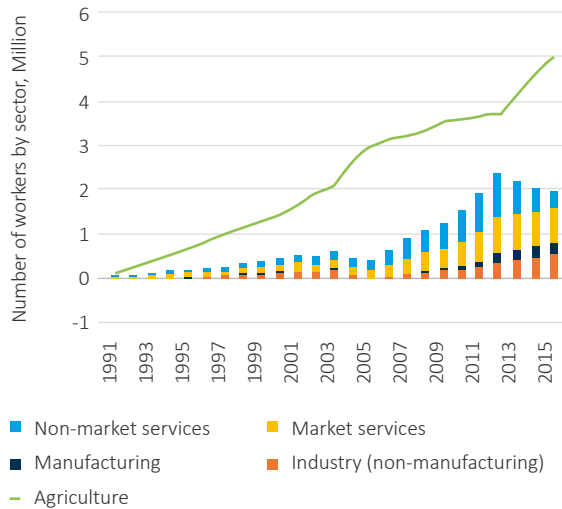
Sources: WB staff calculations based on data from Africa's Pulse, Office of the Chief Economist for the Africa Region, The World Bank, October 2018.

12. Madagascar's opportunity and challenge going forward will be to make growth more inclusive by enabling its people, to be engaged in sectors characterized by higher productivity. The current trend suggests that structural transformation – the large-scale shifting of labor resources from subsistence agriculture into more productive sectors (including agricultural activities which are more productive) – is only nascent. Since 1990, agriculture has absorbed by far the majority of additional workers available to

the economy (Figure 8), but other sectors have contributed much more to the increase in annual output (Figure 9). That is, annual output in the non-agricultural sectors has increased by almost 4.5x as much as annual output in agriculture, with the addition of less than a third of all the new workers available to Madagascar since 1990. This accords with the almost 9-fold difference between average output per worker in agriculture vs. non-agriculture as of 2015 (Table 2).

Figure 8: Agriculture has absorbed the large majority of new workers...

(cumulative net new workers since 1990, millions)



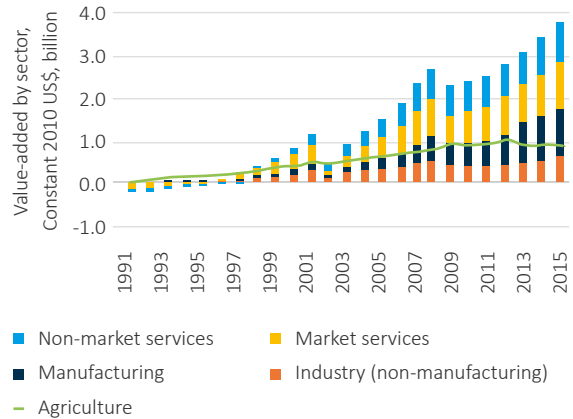
Sources: Staff calculations based on WDI data

C. Leveraging Trade and Investment to Engage in Sectors of Higher Productivity

13. International trade has historically played an important role in Madagascar's economy. Madagascar is a large island nation, historically engaged in trade, being strategically placed between mainland Africa and Asia. These old trading connections are reflected in Madagascar's unique make-up of ethnic and cultural diversity, where old Malagasy noble families, a history of colonial ties with France, and over the last century a mix of Indian and Chinese firms have together come to dominate the spectrum of large and influential firms. Government policies to encourage exports, for example through *Export Processing Zones*, and access to preferential trade arrangements, such as the African Growth and Opportunities Act and the European Union's Everything but

Figure 9: ...but other sectors have contributed much more to output growth while value-added in the agriculture sector has almost stagnated

(cumulative increase in annual real output since 1990, constant 2010 US\$bn)

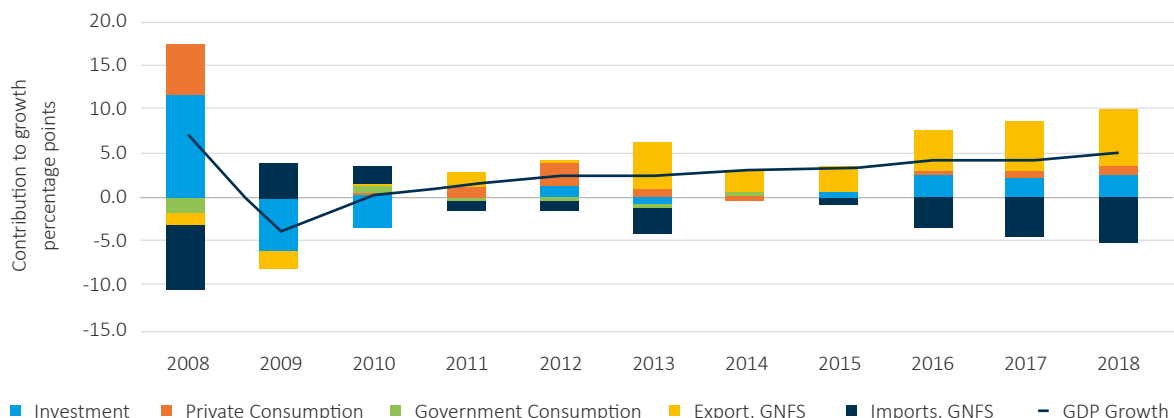


Sources: Staff calculations based on WDI data

Arms Agreement, have also contributed to the importance of trade in the economy.

14. Improved export performance and emerging islands of success provide opportunities for engaging the workforce in sectors of higher productivity. Since 2014, Madagascar's export performance has improved. Madagascar's export-to-GDP ratio has increased from 27 percent on average over the period 2010 to 2013 to 33 percent over the period 2014 to 2017, outshining the performance of the SSA. Consequently, net export demand is a key source of aggregate demand growth (Figure 10). Further growth of these outward-oriented sectors, which are already performing well, could present opportunities to create employment and promote productivity. Imports have been rising since 2016 largely to support the scale-up of public investment.

Figure 10: Since 2014, net exports and investment are key contributors to gradual aggregate demand growth



Source: INSTAT, WDI and WB staff calculations

15. Foreign direct investment (FDI) has also played an important role in the domestic economy and for trade.

Foreign-owned firms are prominently present in each of the fast-growing sectors in Madagascar, supporting exposure to new technologies and workforce practices. In the mid-2000s, FDI was largely characterized as natural resource-seeking investment related to the mining megaprojects, to support the extraction of nickel, cobalt and other minerals. More recently, natural resource FDI is targeted towards the development of niche agribusinesses. Efficiency-seeking FDI is also of increasing importance, particularly in the IT-BPO and textiles sector, which is important for enhancing exports. The more recent inflows of FDI contribute to job creation with foreign-owned firms having higher sales and employment growth.²⁰ Enhanced communication around Madagascar's value proposition is critical for attracting and sustaining efficiency-seeking FDI.

D. Promoting the Productivity of the Agriculture Sector

16. Moving towards a more inclusive growth model requires moving the population away from subsistence agriculture.

The agriculture sector is dominated by subsistence farming, with a declining share in value-added of national output and growth rates that have been highly volatile. Nevertheless, the sector is important for livelihoods as the largest employer of the rural and poor population. Agriculture is also important for food security and nutrition, which has a direct bearing on worker's productivity and health.

17. Extensive analytical work undertaken in the past years has underscored how the low uptake of improved technologies and practices has contributed to low agricultural yields.

While practices to improve yields are well-known such as the utilization of seeds

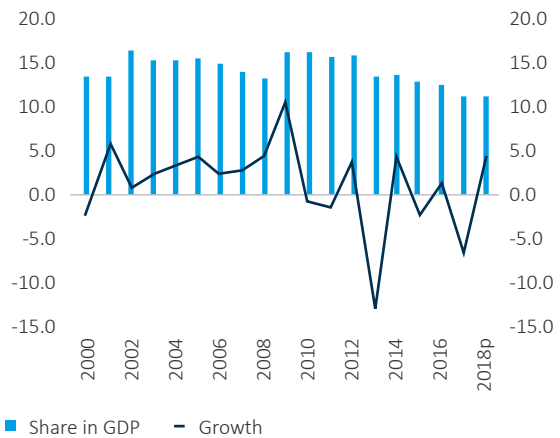
²⁰ WB Staff analysis using the Enterprise Survey, 2013

and fertilizers and increased use of irrigation facilitated by improved water management, uptake has been low. Some commercialized agricultural activities have been successful, wide-scale contract farming has not been implemented, which in other countries has been associated with rising incomes for farmers. These factors are intensified by low levels of human capital, high levels of financial exclusion, poor quality of the road network (particularly feeder roads) which constrains access to markets and enhances exposure to climatic effects.

18. The rice sub-sector is particularly important, where despite seemingly favorable

agro-climatic conditions, market demand continues to be unmet. The performance of the agriculture sector and paddy production are closely interlinked. Rice is of important cultural significance and forms a key part of the diet, where Madagascar has one of the highest rice consumption-per-capita rates in the world. However, the productivity of rice is low and smallholder farmers continue to operate at subsistence level. Market intermediaries capture an estimated half of the final retail price, particularly as high transportation costs continue to reflect poor connectivity.²¹ The low price received by smallholder farmers does not motivate an increase in production levels.

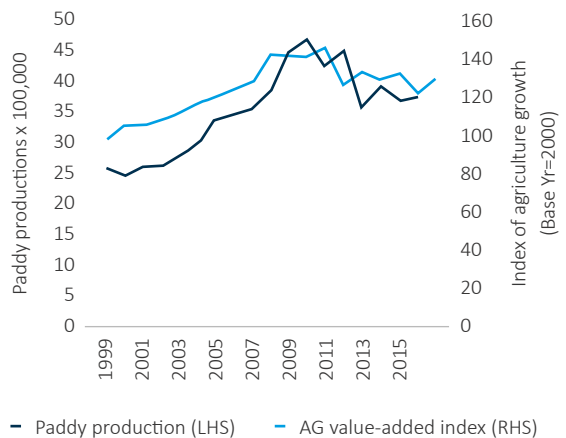
Figure 11: The agriculture sector has a declining share in value added and volatile growth rates



Source: WB staff calculations based on INSTAT and WDI

19. Despite the low levels of rice productivity, and Madagascar being a net importer of rice, the country's policy vision is to become a rice exporter over the medium-term. During the lean season, the amount of domestically produced rice is insufficient to

Figure 12: Paddy production is closely linked with agricultural growth



Source: WB staff calculations based on INSTAT and WDI

meet consumption needs. Rice imports and domestically produced rice are both subject to VAT exemptions. For domestically produced rice to be able to compete with imported rice, it is important to address inefficiencies in domestic markets, which contribute to

²¹ 'Madagascar: Scaling up Smallholder Inclusion in Agri-Food Value Chains; Insights from the Rice and Dairy Sectors,' 2018, World Bank: Washington DC.

long marketing chains. Rice production is constrained by several factors including: connectivity challenges which exacerbate the remoteness of farmers and market failures whereby farmers have very limited information on prices and produce, which could help inform their market participation decisions. Efforts to address these challenges in the rice sector would also benefit other crops, particularly staples, that are subject to long marketing chains, with potentially far-reaching benefits for farmer's incomes.

E. The Importance of Levelling the Playing Field to Sustain Growth and Promote Productivity

20. The lack of a level playing field through regulatory and non-regulatory barriers has been a contributing factor to Madagascar's history of stop-start growth. Madagascar has a complex political economy; whereby certain firms have been able to gain advantages through by-passing formal institutions through the manipulation of regulatory and non-regulatory barriers. Such dynamics can result in poor contestability of markets as economic operators seek to maintain their advantage, which hinders productivity growth, and undermines a long-term approach to policy making and investment planning.

21. The lack of competition has adverse consequences for the economy. An assessment of markets, such as telecommunications and petroleum which serve the domestic market, and export products such as lychee and vanilla, reveal that growth of these key sectors has taken place in a vacuum of pro-competition regulation. In the case of lychee and vanilla, the lack of contestable markets can contribute to lower productivity and innovation, restricted exports, and depressed farmers income. For the case of telecommunications, excessive

market concentration has resulted in relatively high prices for consumers, raised costs for downstream firms that use upstream goods and services, and restricted connectivity particularly in rural areas. In the petroleum market, high market concentration has contributed to relatively high prices and constrained access by new market entrants.

F. The Madagascar Country Economic Memorandum Framework – Current Performance and Future Opportunities

22. Madagascar's current growth model represents a paradox, where highly dynamic and innovative economic activity co-exists with a persistent subsistence-oriented agriculture sector. Madagascar ranks relatively well compared to peer countries in terms of innovation, such as innovation absorption by firms and output creativity (cf. Figure 40). In recent years, Information and Communication Technology (ICT)-based activities are increasingly important for economic growth and job creation. On the other hand, the majority of the population remain engaged in agriculture, which is dominated by traditional cropping methodologies rather than improved technologies that could generate higher yields. Therefore, a key challenge for Madagascar going forward is to design policies that can encourage the movement of the country's extensive labor force from low to higher value activities.

23. While the economy is growing, the challenge of promoting an inclusive growth model remains fundamental, to deliver on the twin goals of poverty reduction and shared prosperity. The sectors that are driving the economy are concentrated, generating important, yet limited formal employment opportunities. Meanwhile, the agriculture sector, which engages the majority of the

poor, has failed to deliver quality jobs. These lack of formal opportunities for structural transformation is reflected in a large informal economy and high levels of poverty. Moreover, as poverty runs deep with the average Malagasy consuming 32 percent less than a person living directly at the national poverty line, the risk of falling into poverty is high, particularly if shocks prevail such as natural disasters or political instability.

24. With the right policy and investment mix, the current growth model can be oriented to deliver productive, inclusive and sustainable growth. Policy interventions can support measures to promote the movement of labor from less to more productive firms, provided that the demand for such output exists through the continued expansion of the economy. Demographic patterns suggest that population growth will give rise to new labor market entrants, but to enable Malagasies to become productive citizens, it is essential to invest in quality education and health services. If physical infrastructure is in place to support connectivity by improving access to domestic markets (particularly through road and air transport) as well as the ports, in a climate-resilient way, transport costs may reduce, and the movement of goods and people will be facilitated. Recent advances in digital technologies provide further opportunities to reap productivity gains, through diverse ways, such as potentially improving the efficiency of public administration, encouraging the further creation of jobs in the IT-outsourcing sector and promoting the use of electronic payments as a means of increasing financial inclusion.

25. While Madagascar has considerable challenges ahead, the signals are positive and encouraging. Sustained growth over the last six years, the constitutional transfer

of power following the 2018/19 Presidential elections, and a solid implementation of reforms (as demonstrated by a gradual increase in the Country Policy and Institutional Assessment - CPIA - score²²) suggest that there is an important opportunity on the horizon for realizing the twin goals. The final objective of the CEM is to arrive at a set of policy measures that are *productivity enhancing*, promote *broad-based growth* through formal job opportunities and promote *sustainable growth* through de-risking shocks that have contributed to Madagascar's stop-start growth model.

G. Organization of the CEM and Methodology

26. The scope of the CEM was determined through a consultative approach, with inputs from the government, World Bank staff, International Finance Corporation (IFC), and development partners. The CEM commenced with a data scan exercise where 20 standard macro and micro questions were explored for Madagascar. The data scan helped to determine areas of strengths and weaknesses in Madagascar's growth, and was used as the basis for discussion with the government and other counterparts on the key priorities related to pursuing a more productive, inclusive and sustainable growth trajectory. All vice-presidencies in the World Bank Group and the IFC have contributed to this CEM, including through participating in the initial consultations, participating in missions, and reviewing draft reports.

27. The remainder of the CEM is organized in five chapters. Chapter 2 presents the long-term determinants of growth – labor, capital and productivity. Chapter 3 presents an analysis of trade and investment through

²² The CPIA increased from 3.0 in 2013 to 3.2 in 2018.

a deep-dive analysis of growth-enabling sectors. Chapter 4 discusses how the agriculture sector can support inclusive growth. Chapter 5 assesses competition. Chapter 6 summarizes the recommendations with a proposed prioritization of reforms. A background report was also prepared on Madagascar's political economy environment, which has informed each chapter.

28. This CEM uses a benchmarking approach whereby Madagascar is compared with aspirational peers, structural peers, and worst performing peers. The aspirational peers are countries whose performance Madagascar could strive to achieve over the next five years, and include Rwanda, Senegal and Cote d'Ivoire, also considered as other African countries that underwent a period of 'emergence' like the ambitions of the current government. In the longer-term, other aspirational peers are also considered such as Indonesia, Cambodia, and Mauritius as countries that have undergone sizeable structural transformation. Structural peers are those which share characteristics with Madagascar in terms of size, income, and previous growth performance which includes Burkina Faso, Zimbabwe, Burundi, Tanzania, Uganda and Nepal. Worst performing comparators are the lowest category in the low-income group. As political stability has been broadly maintained since 2014, this report does not consider Madagascar's challenges from a fragility lens, but rather as a low-income country which is on the pathway to pursuing its development objectives and requires long-term institutional reform.

29. This CEM uses new primary and secondary data. In chapter 2, data on employment is

sourced from the private social security institution (CNaPs), and nightlights data is used to estimate regional growth trends. In chapter 3, a survey was deployed amongst domestic and foreign firms in the high-performing sectors to obtain data on how they were able to grow and obtain evidence on linkages, spillovers, value addition and diversification. The findings from this data collection exercise were validated with industry leaders through focus group discussions and the policy recommendations were discussed with the government. To support the analysis in chapter 4, primary data on domestic trade challenges were collected through monitoring transactions and interviewing operators along the four main rice corridors; in addition to field missions and interviews with all stakeholders in the rice value chain. A formal competition assessment was undertaken for the sectors of telecommunications, lychee and vanilla value chains in chapter 5. The analysis of the jet fuel market benefited from new data collected by Airport and National Airline Surveys.²³ Additionally, chapter 5 uses the Exporters Dynamic Database to determine trends in concentration of major exports and compares this with available benchmarking countries.

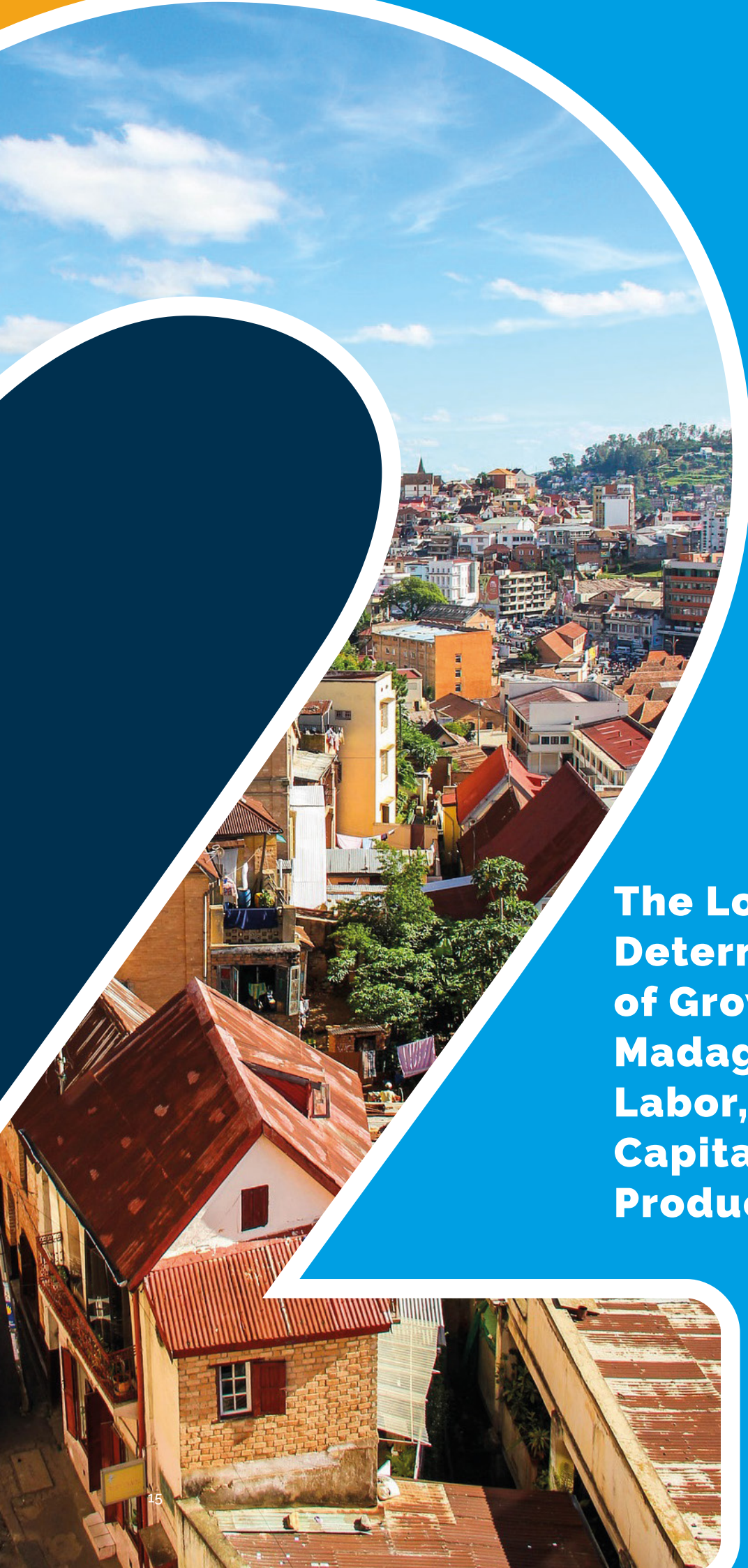
30. However, there are knowledge gaps, and areas where the analysis mostly relied on secondary data. Analysis of services and logistics to support trade was not studied in-depth, where high levels of concentration in the banking sector and possibly the trucking industry could be a further area of research. The underlying drivers behind declining human capital was also not studied extensively as part of this workstream, since analytical work had been carried out to support the Multiphase Programmatic Approach project to enhance

²³ The chapter on competition also includes the analysis from an earlier report prepared by Beicip-Franlab on the downstream petroleum sector, as part of the reforms to the fuel subsidy, which have been supported by the Energy Sector Management Assistance Program.



nutrition outcomes, which has been used to support the analysis in this report.²⁴ Finally, the analysis in the CEM has focused on those sectors that contribute to growth and jobs, are resilient to shocks and have substantial potential to grow. An in-depth study of the mining sector was not included, because while there is the potential to further contribute to

growth, such an eventuality is constrained by poor governance practices, which were identified in separate analytical work. The tourism sector also shows substantial potential but has thus far not demonstrated its resilience to domestic shocks. Opportunities for further business development will be assessed in the forthcoming Country Private Sector Diagnostic.

²⁴ Project P160848 was prepared in FY2017 and benefited from extensive analytical work including on the underlying causes including: (i) inadequate food and care; (ii) inadequate water, sanitation and hygiene; (iii) and inadequate health services.



**The Long-Term
Determinants
of Growth in
Madagascar:
Labor,
Capital and
Productivity**


The economic recovery is having a positive effect on growth and job creation, including in regions outside of the capital. Being able to fully capitalize on these emerging opportunities requires having a labor force ready to meet the demands of an evolving private sector by reversing the decline in human capital. Further expanding formal employment opportunities requires investing in infrastructure (much of which is in the pipeline) and moreover, improving the quality of its institutions and governance environment to enable the private sector to not only grow, but to also thrive.


A. Introduction

1. As Madagascar's economy continues to expand, this chapter takes stock of the long-term drivers of growth and emerging trends, to assess potential transformative economic opportunities. Long-term economic growth can be decomposed to estimate the contributions of labor, capital, and total factor productivity (TFP), a residual which captures all other drivers of growth. A more inclusive growth trajectory is characterized by salaried employment outside of subsistence agriculture, with greater opportunities in regions aside from the capital. Growing formal sector employment opportunities requires expanding private-sector led growth, which in turn depends on firms having access to enabling infrastructure and a business environment that offers predictability and certainty.

2. This chapter considers four issues. Firstly, the labor contribution to growth is assessed, alongside current developments in job creation and unlocking further potential through investing in human capital. Secondly, the current status of physical capital is presented with consideration of future developments in the pipeline. Thirdly, indications of firm

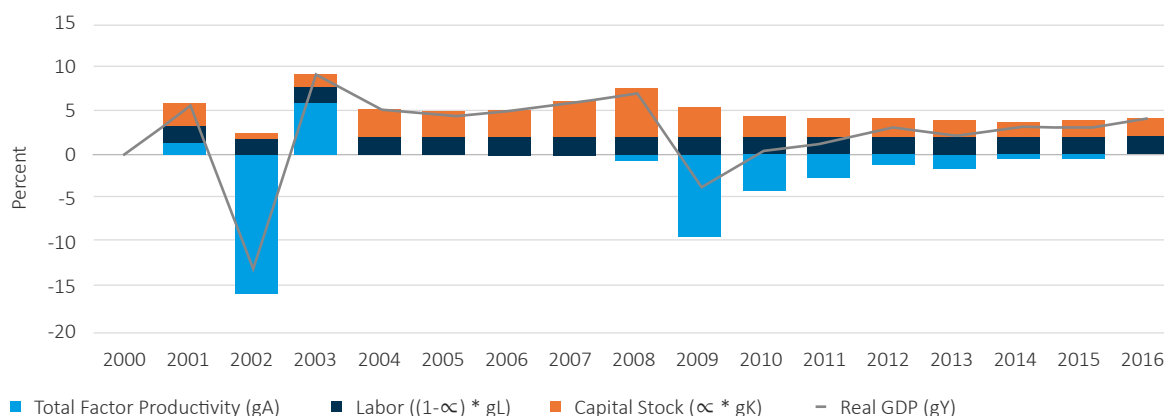
productivity are assessed as well as possibilities for enhancing innovation given the recent developments in digital technology. And finally, prospects for sustaining growth are presented through enhancing the quality of business-related institutions.

B. The long-term drivers of growth: reliance on inputs (labor and capital) outstrips productivity gains

3. Long-term growth has relied more on inputs (labor and capital) than productivity growth. Labor has made the most consistent contribution to growth (Figure 13). The contribution of capital accumulation to growth has been positive but quite low, except for the period 2004-8, which coincided with large mining investments. On the other hand, TFP has been generally zero or negative. This means that Madagascar has not reaped any sustained growth dividend from increases in the efficiency with which existing inputs (capital and labor) have been used to generate output. The remainder of this section will present an assessment of the labor, capital and productivity contributions to growth, considering firm dynamics and institutions.

Figure 13: Since 2000, growth has relied more on inputs (labor and capital) than productivity growth

Annual GDP growth and percentage points contribution to GDP growth



Source: WDI and WB staff calculations

(i) Labor

4. Madagascar has one of the highest labor force participation rates in the world.

While Madagascar's labor force participation rate is not as strong as certain aspirational peers such as Rwanda and Malaysia, it is higher than other peers that have similar characteristics in terms of level of income and education (Figure 14). Overall, 90 percent of males and 86 percent of females are actively engaged in the labor market.

5. However, the contribution that Madagascar's labor force makes to growth has remained relatively constant over time, due to the low quality of jobs and population growth.

The 'steady state' contribution of labor to growth reflects high levels of informality in the economy, whereby 68 percent of employment is in the agriculture sector and 75 percent of non-farm jobs are informal. Non-farm jobs are mostly self-employment in micro-enterprises. There is also prevalent underemployment, whereby in 2012, 44.8 percent of workers

reported being paid below the minimum hourly wage and 39.5 percent reported working below 35 hours per week.²⁵ Moreover, any gains to growth from labor have not kept up with the population growth rate, whereby over the period 2000 to 2016, the population grew on average by 2.9 percent, outstripping an average growth rate of 2.6 percent.

6. As the labor force is largely engaged in low quality jobs, the value added per worker also pales in comparison with peer countries.

The average worker in SSA contributed 3.8 percent more value added than a worker in Madagascar. Rather than this finding reflecting inherently low levels of productivity in Madagascar, it is due to engagement in economic activities which are of low value added since approximately 75 percent of the labor force is engaged in subsistence agriculture. Salaries in Madagascar are also on the lower end compared with peer countries, which acts as a disincentive for those who are well trained and educated to stay in Madagascar but also encourages

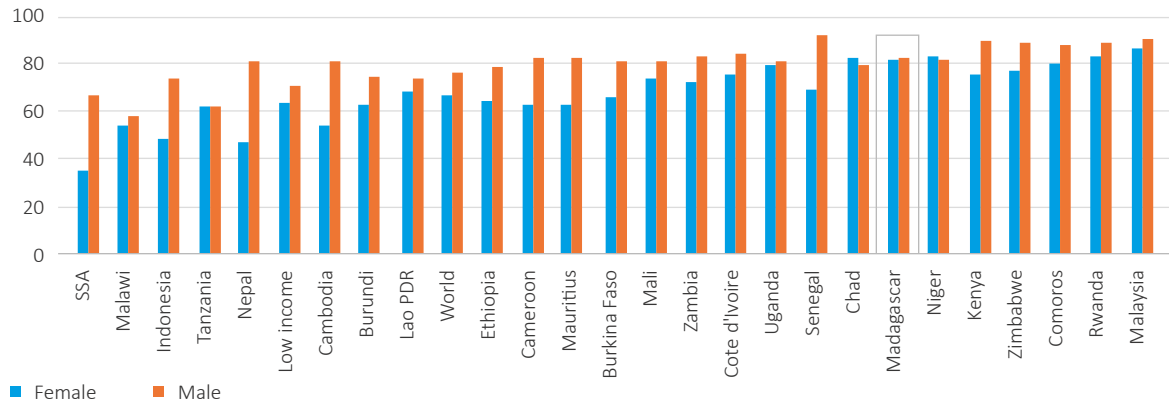
²⁵ Instat, MDG survey (2012)

investors to the country (Figure 16) (see chapter 3 on Madagascar's value proposition and brain drain in the IT-BPO sector). Salaries

in Madagascar are low even when compared with peer countries that have similar levels of productivity.²⁶

Figure 14: Madagascar has a relatively high labor force participation rate

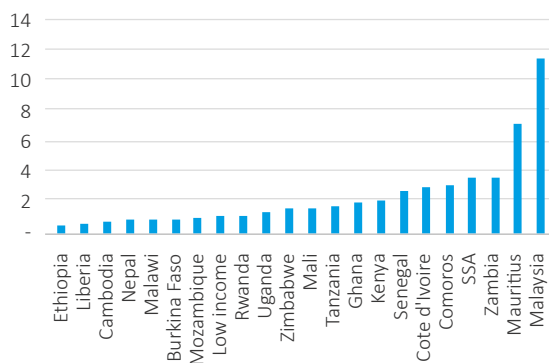
Labor force participation rate (% of population aged 15-64 for each gender, avg 2000/2018)



Source : WDI, International Labour Organization (ILO) statistics, and WB staff calculation

Figure 15: Pervasive informality and underemployment means that peers have higher levels of productivity compared with Madagascar

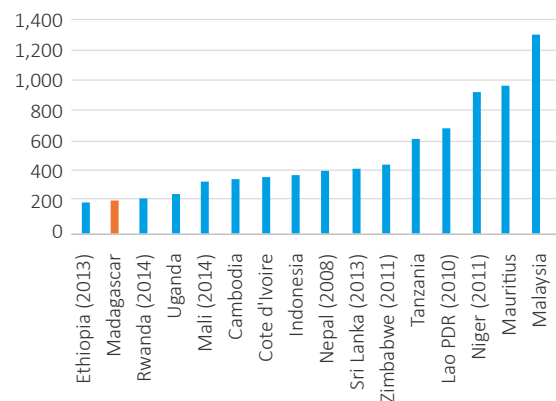
Ratio of productivity in Madagascar over productivity in peers (%)



Source: WDI, ILO statistics and WB staff calculations

Figure 16: Madagascar has one of the lowest levels of remuneration levels compared with peers which both attracts investors and disincentivizes talent to stay

Average monthly earnings of employees in 2012 (otherwise indicated), constant 2011 PPP²⁷

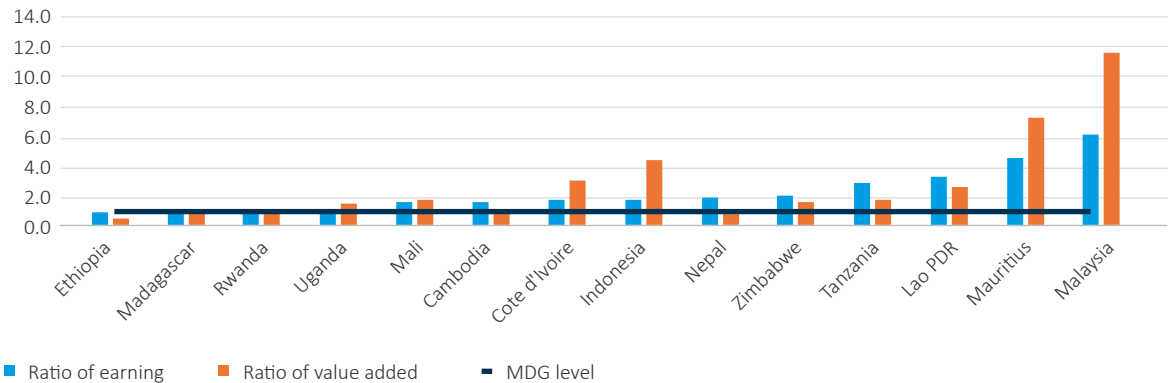


Source: WDI, ILO statistics and WB staff calculations

²⁶ Productivity is measured as the value added in Madagascar as a ratio of value added in peer countries.

²⁷ The level of remuneration is measured by the Average monthly earnings of employees in 2012, expressed in constant 2011 Purchasing Power Parity, latest data available for Ethiopia (2013), Rwanda and Mali (2014), Nepal (2008), Lao PDR (2010), and Zimbabwe (2011).

Figure 17: Madagascar has one of the lowest level of remuneration even when considering the level of productivity



Source: WDI, ILO statistics and WB staff calculations

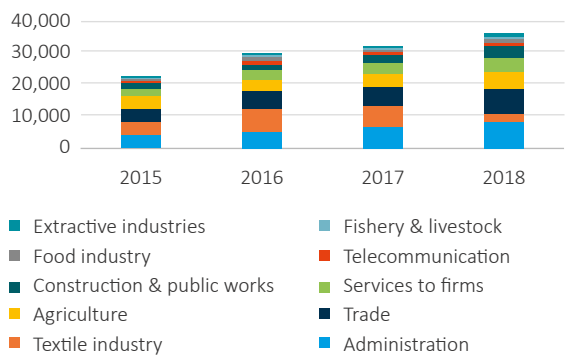
7. The economic recovery after the return to constitutional order in 2014 is providing formal sector employment opportunities.

Between 2014 and 2018, on average an estimated 38,200 formal jobs were created each year compared to the estimated 480,000 youth entering the labor market annually.²⁸ The tertiary sector has been the most important source of employment generation (52 percent – mainly in trade and the teaching profession), followed by the secondary sector (35 percent

– with a high proportion in textiles) and the primary sector (13 percent) (Figure 18). Notably, the fast-growing sectors that are contributing to aggregate growth, such as agribusinesses, firms in the export processing zones and the IT-BPO sectors (see chapter 3) also have the fast pace of job creation (Figure 19). However, the challenge is to continue growing these sectors to create enough jobs to absorb the new entrants to the labor market, as well as the existing workforce currently underemployed.

Figure 18: Formal employment generation is led by few sectors

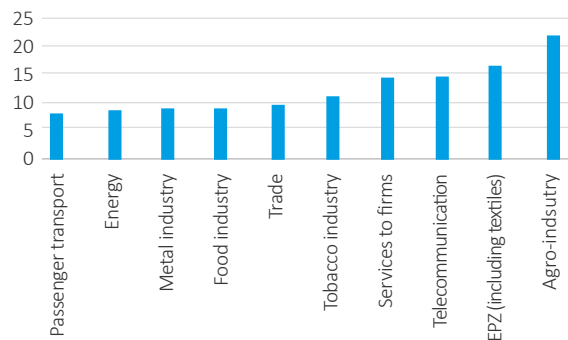
New formal employment by sector



Source: CNaPS data

Figure 19: Sectors contributing to growth also have the fastest rate of job creation

Employment by sector, average annual percent change, 2014-2018



Source: CNaPS data

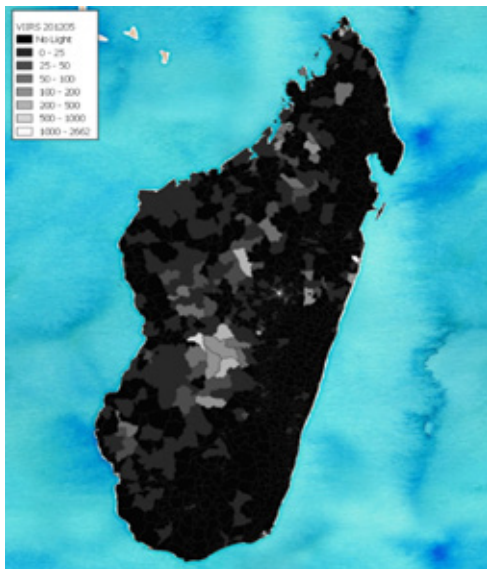
²⁸ Data availed by the private social security institution.

8. Increasingly, jobs are being created in cities outside of the capital, Antananarivo.

Economic activities have traditionally been concentrated in large cities, where the capital is an economic hub and home to over two million people. Since 2012, geographical areas outside of the three largest cities, Antananarivo, Toamasina and Antsirabe have a brightening of night lights,²⁹ indicating an expansion of growth (Figure 20, Figure 21). The regions of Antsiranana (with tourism activities), Mahajanga (agribusiness and tourism), Toamasina (port, mining and agribusiness), Antananarivo (commercial activities),

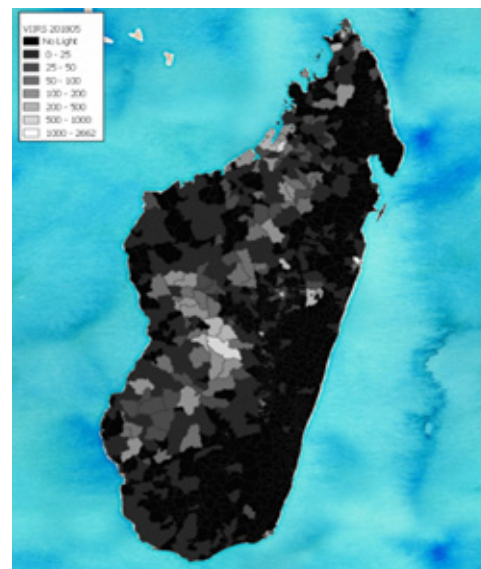
Fianarantsoa (commerce, agribusiness), and Toliara (agribusiness and tourism) have been growing. These developments are creating jobs at the regional level (Figure 22). In the East, economic activity is most likely underestimated through the nightlights data as agricultural activities may not be detected, such as cash crops in the Sava region, suggesting that regional growth may be higher than currently captured. There also remains a large part of the economy which is disconnected, particularly in the south east of the country (addressing challenges in lagging areas is discussed in chapter 4).

Figure 20: Nightlights in 2012



Source: Maps generated by the WBG Geospatial Operational Support Team using nighttime lights data from NOAA's VIIRS satellite

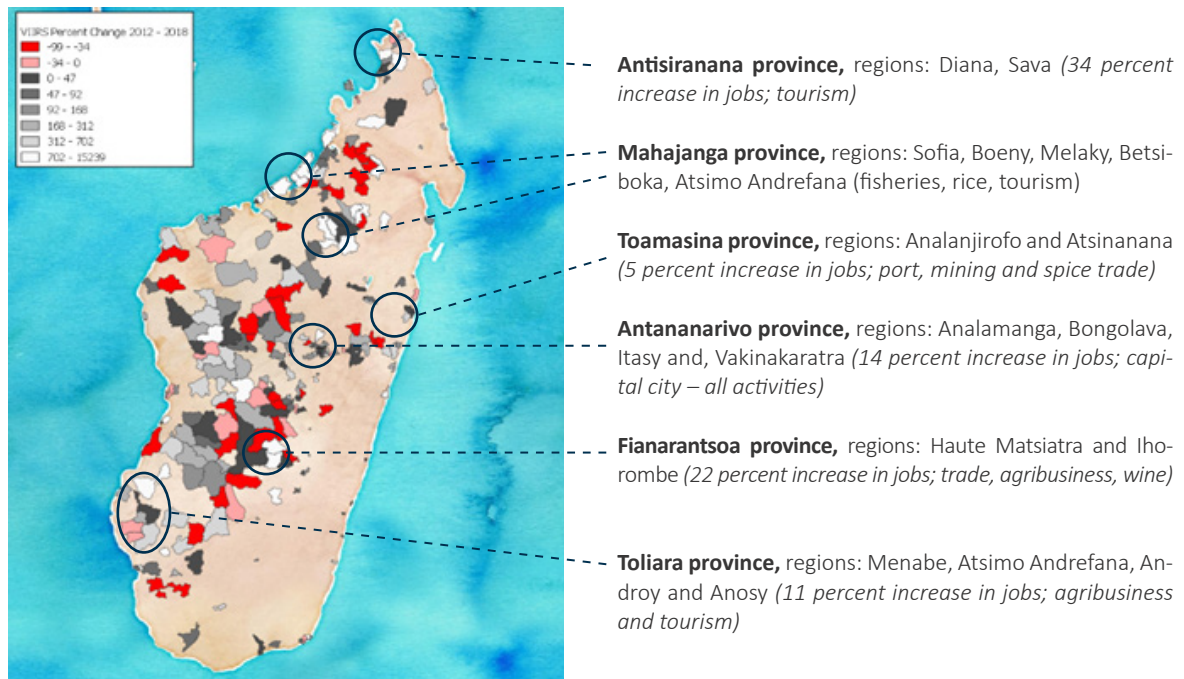
Figure 21: Nightlights in 2018



Source: Maps generated by the WBG Geospatial Operational Support Team using nighttime lights data from NOAA's VIIRS satellite

²⁹ To address the lack of subnational economic data, nightlights (which is satellite imagery from outer space) was used as a proxy for estimating economic activities at the regional level. Electrification is also the most powerful predictor of welfare than any other indicator of spatial advantage or economic density (see *Shifting Fortunes and Enduring Poverty in Madagascar, Recent Findings*, World Bank, 2016)

Figure 22: Major changes to Madagascar's nightlights between 2012 to 2018 and formal jobs created³⁰



Source: Maps generated by the WBG Geospatial Operational Support Team using nighttime lights data from NOAA's VIIRS satellite

9. Being able to capitalize on the emerging employment opportunities from an expanding economy requires having an educated and healthy labor force in place. Human capital is a key determinant of labor productivity and plays an essential role in determining a country's long-term development path.³¹ From 2012 to 2017, Madagascar's Human Capital Index (HCI) declined from 0.39 to 0.37. The components of the HCI where the country scores worst include stunting (where 49 out of 100 children are stunted) and poor learning outcomes (students score 351, compared with

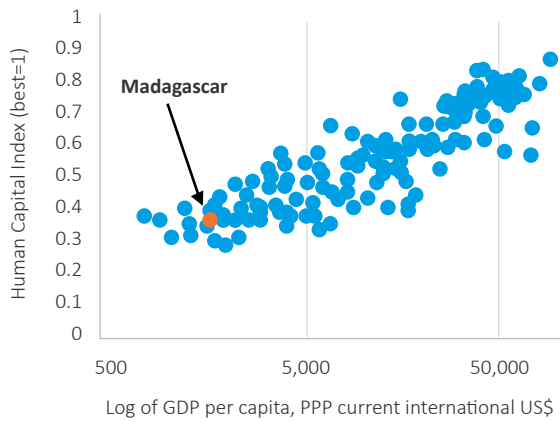
625 representing advanced attainment and 300 minimum attainment).³² Stunted children are more likely to do poorly in school, whereby each 10 percent increase in the national rate of stunting reduces the proportion of children reaching the final grade of primary school by 7.9 percent resulting in a reduction of the cognitive and productive capacity of citizens. Thus, not only is a child born today only 37 percent as productive when she grows up as she could be if she enjoyed complete education and full health, but human capital is declining.

³⁰ The jobs created refers to the period 2012 to 2016. Reliable jobs data for Mahajanga are unavailable.

³¹ Human capital is comprised of six components: survival to age 5, expected years of school, harmonized test scores, learning-adjusted years of school, adult survival rate, and not stunted rate.

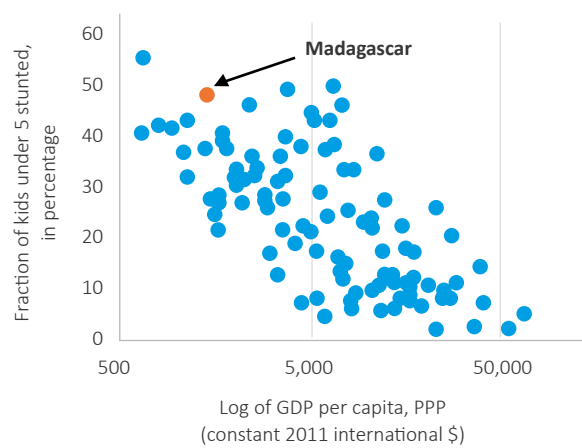
³² The latest data available shows that while stunting is high it slightly decreased between 1997 and 2012.

Figure 23: Madagascar's human capital index is amongst the lowest in the world



Source: WDI, JME (UNICEF, World Bank, WHO)

Figure 24: For Madagascar's level of income, stunting is amongst the highest in the world

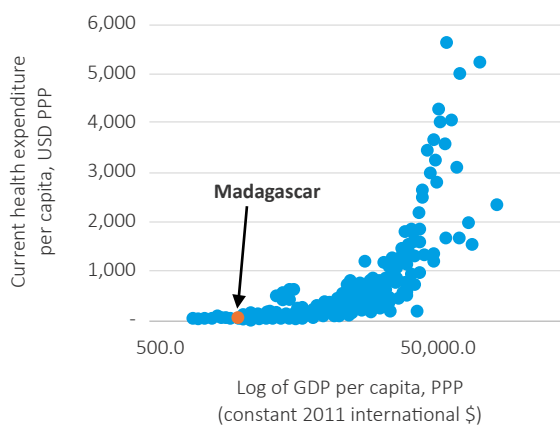


Source: WDI, JME (UNICEF, World Bank, WHO)

10. Not only is human capital declining but total expenditures on education and health are amongst the lowest in the world. For Madagascar's level of income, both public and externally financed expenditures are low, which places a strain on out-of-pocket costs for social services. While this finding suggests that investments in human capital are relatively under-financed in Madagascar,

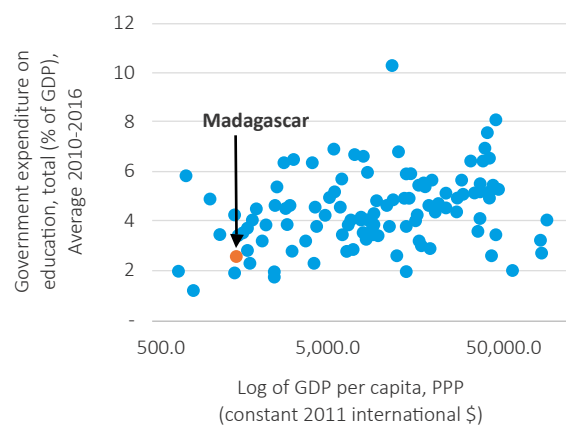
it also highlights that available resources should be well-utilized, through ensuring that professionals in the sector are well-qualified to provide quality services and that resources reach frontline service delivery units. As further progress is made to improve the efficacy of expenditures, there will be an even more compelling case for increasing resources to these key social sectors.

Figure 25: Total expenditures on health are amongst the lowest in the world



Source: World Health Organization and WDI

Figure 26: Total expenditures on education are also amongst the lowest in the world



Source: World Health Organization and WDI

11. Reversing the decline in human capital will require a relentless focus on learning by the government, starting with revamping the teaching workforce. About 30 percent of the labor force has not received any education. Following the elimination of public-school fees in the early 2000s, school completion rates leapt from 36.7 percent in 2000 to 73.9 percent in 2009. However, learning outcomes remain poor, as teachers are not well-equipped, whereby only 0.1 percent of teachers assessed under the Service Delivery Indicators (SDI),³³ have the minimum knowledge to teach, compared with 14.6 percent as the average in other countries where an SDI has been conducted in recent years.³⁴ Since 2009, progress in school completion rates halted, due to high levels of out-of-pocket costs, challenges in accessing education facilities due to poor connectivity, and the absence of career management for teachers; factors which were all intensified during the political transition period when the government stopped paying salaries.³⁵ To address the lack of public teachers in rural areas, communities often make in-kind payments for teachers who have not received formal training. Thus, the quality of teaching is poor, requiring an intensification of ongoing efforts to improve the quality of teachers.

12. Improving learning requires measurement of learning, and clear signals throughout the system that the primary function of the education system in the lower grades is to develop basic skills, such as reading, writing, and math. Though Malagasy children spend about 7.5 years in school by age 18, this is reduced to 4.2 years when adjusted for the

quality of learning. Currently, neither teachers, school principals, district supervisors, nor education system managers know the status of learning in Malagasy classrooms. Occasional regional assessments (PASEC), conducted every few years on a sample basis, reveal that the level is low, and declining. But these don't help diagnose which students nor which schools are in particular need of support. A properly functioning education system is one where learning is regularly monitored, in a robust way, such that teachers and school principals better understand what the system expects of their students. Perhaps most importantly, this data is crucial for teachers to then diagnose what parts of the curricula students are struggling with, a pre-condition to instill the basic skills that Madagascar needs.

13. While a university education makes higher incomes more likely, tertiary education is not focused to deliver skills demanded by the job market. Having a university education makes it more likely to have better incomes, particularly in urban areas.³⁶ However, the Global Competitiveness Index ranks the inadequacy of an educated labor force as the seventh most problematic constraint (Madagascar is at 123 out of 137 countries). While there are some vocational training activities, these are not well-targeted to the needs of the private sector, leaving firms to invest in their own training activities (see chapter 3).

14. There have been some improvements to health outcomes, but large disparities remain between urban and rural areas.

³³ World Bank. 2016. Education Service Delivery in Madagascar.

³⁴ Comparator countries include Tanzania, Kenya, Mozambique, Nigeria, Togo and Uganda.

³⁵ WB Poverty Assessment, 2016

³⁶ WB Poverty Assessment, 2016

Access to quality health prevention and promotion services are critical for improving labor productivity. Since 2000, notably progress has been made in reducing life expectancy at birth and under-5 mortality rates. However, there are significant disparities between urban and rural areas. In 2012, infant and child mortality rates were at 39 per live births in urban area compared with 64 in rural areas, and vaccination coverage reached 77.6 percent in urban areas compared to 46.6 percent in rural areas.³⁷ The coverage of health services is also lower in rural areas with only 48.6 percent of the total health workforce and 36.5 percent of doctors serving in rural areas where 68 percent of the population lives. Public financing of the health sector is also low, where for example, the public sector finances only 1 percent of products for family planning and the remainder is covered by donors.³⁸ Finally, the outbreak of epidemics such as measles (in 2019) and the plague (in 2018) underscore the weakness of the overall health system.

15. A multi-sectoral approach is required to address stunting. Addressing Madagascar's high level of stunting requires better access to primary health services (maternal and child), water and sanitation services, as well as promoting positive parenting practices,

including nutrition. Expanding cash transfers, tied with conditionalities to increase school attendance and promoting positive parenting practices, could also have spillovers for improving nutrition.³⁹ All of these interventions are currently underway in selected areas. Low coverage of cash transfers reflects limited domestic financing. Efforts to scale up cash transfer could be further complemented with increased dietary diversification linked to improved farming practices.

16. Investing in human capital should help to leverage Madagascar's declining dependency ratio to reap a demographic dividend. Madagascar's population is estimated at 25.5 million and is remarkably young with 41.6 percent of the population below 15 years old (Figure 27). Since the 1980s, Madagascar has had a declining dependency ratio, which means that the working-age population is getting larger relative to the non-working (below and above working age) population. This decrease is projected to continue, at least over the next three decades to a projected 58.2 in 2055 (Figure 28).⁴⁰ As such, the country is well-poised to reap a demographic dividend, as the number of people generating output and income increases relative to the number who depend on workers' incomes.

³⁷ Ensomd 2012.

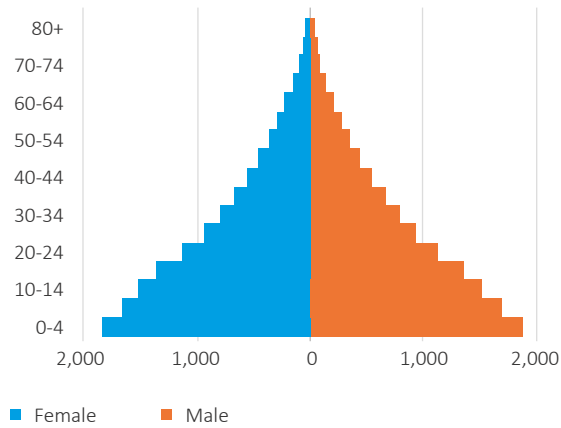
³⁸ Budgeted National Action Plan for Family Planning in Madagascar 2016-2020

³⁹ The Human Development Cash Transfer has proven to be effective in increasing school attendance and parenting and early childhood development activities.

⁴⁰ Under three scenarios of the UN Population Division (High, medium, and low fertility variant), the dependency ratio is projected to decline in the next three decades and start stagnating in 2055 under medium and low.

Figure 27: Madagascar's population is youthful

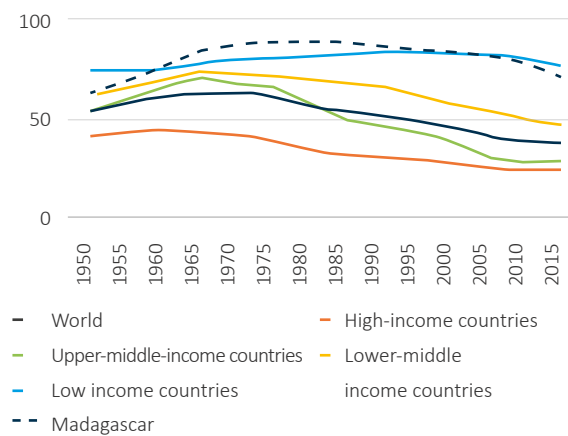
Age distribution by gender



Source: UN Population data

Figure 28: A declining dependency ratio indicates an opportunity to reap demographic dividend

Child dependency ratio (%)



Source: UN Population data

17. Crucially, the size of the demographic dividend depends on labor market dynamics amongst other factors. The quantity and quality of jobs which the economy is able to generate for the rising share of working age people, as well as the speed with which the total fertility rate declines over time will influence the possibility of achieving a demographic dividend. Policies can also play a role to address early child-bearing through informed parenthood, which will also likely improve with higher incomes through

enhanced formal sector job creation.⁴¹ Such measures should be complemented with efforts to increase female employment in leadership positions, which stands at 28 percent.⁴² Firms with women in top positions have greater labor productivity, as well as annual employment and labor productivity growth. As women take on more responsibility there is the chance of positively influencing the next generation through female role models to encourage labor force participation in quality jobs.

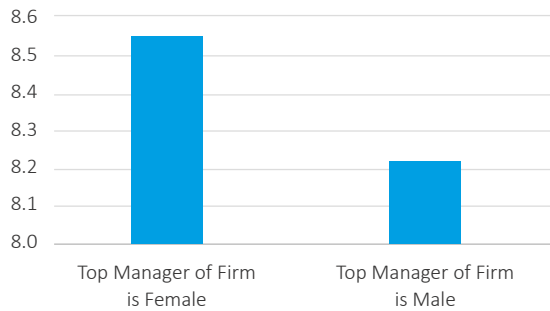


⁴¹ In Madagascar, the total fertility rate declined from 6.1 live births per women in the early 90s to 4.4 in 2015, which implies that the fertility transition has initiated, but early childbearing remains prevalent for the poorest quintile.

⁴² Enterprise Survey, 2013

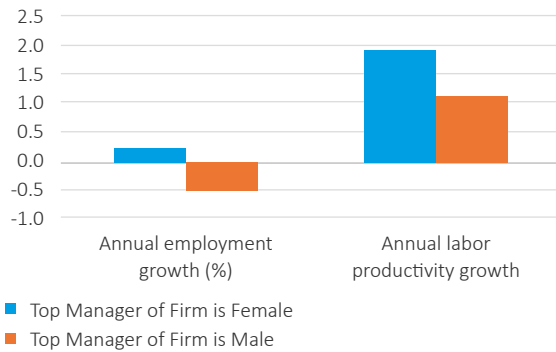
Figure 29: Firms that have a female in a top position have higher labor productivity

(logs, deflated US\$)



Source: Enterprise Survey, 2013

Figure 30: Annual employment and labor productivity growth is also higher with females in top positions (%)



Source: Enterprise Survey, 2013

(ii) Investment

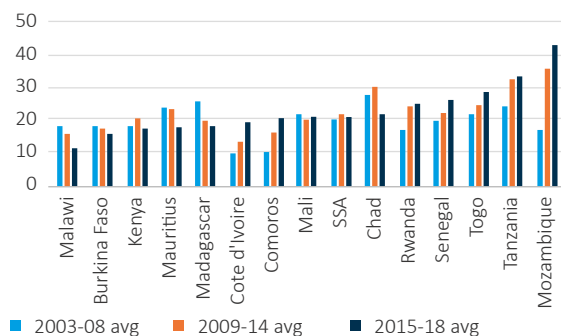
18. The contribution that capital has made to growth has varied over time, depending on the major investment projects ongoing.

From 2004 to 2008, the contribution that capital stock made to growth increased. This movement reflected an increase in private capital investment flows to support two mining operations to extract nickel, cobalt, ilmenite and other minerals. This period of increased capital

flows for mining, was also accompanied by an increase in public investments, supported by greater access to external financing. However, as mining operations entered their exploitation phase in 2009 and 2012,⁴³ and the onset of the political crisis in 2009 led to a reduction in support from the international community, the contribution of capital to growth also declined. The implementation of new public investments, as well as operations and maintenance of existing projects, largely stalled.

Figure 31: The volatility in public investment financing mirrors net official development assistance

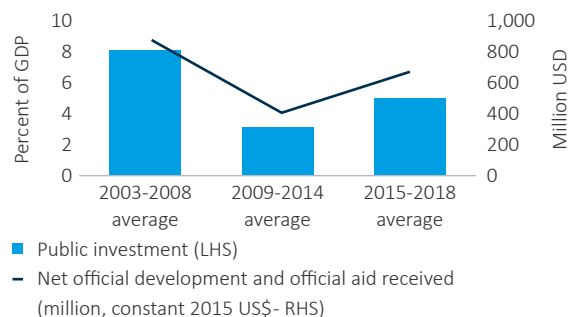
Total investment as % of GDP



Source: WDI

Figure 32: Investment financing mirrors net official development assistance

Public investment as percent of GDP and ODA flows (millions)



Source: WDI

⁴³ QIT Madagascar Minerals is an ilmenite, rutile and zircon mine in Tolagnaro, in the south-east of Madagascar, which was launched in 2009. The Ambatovy Project produces nickel, cobalt and sulphate of ammonia from a mine near Moramanga, and a processing plant in Toamasina, in the east of Madagascar. The project was launched at the end of 2012.

19. Notable deficits in infrastructure are a constraint to private sector investment and growth, partly reflecting low levels of investment.

Results from the Enterprise Survey, 2013, which were later corroborated through consultations with the private sector, suggest that the major constraints to physical capital contributing to growth and supporting private sector development are related to (in priority order) electricity, followed by transport and port infrastructure. The lack of infrastructure reflects low levels of financing for public investments. Compared with aspirational peer countries such as Cote d'Ivoire, Senegal and Rwanda, total investment financing over the period 2015-18 has been relatively low. In Madagascar, periods of scaling-up public investment have largely been financed by development partners (official development assistance -ODA- flow to Madagascar are among the lowest in the world). However, in line with political turbulences, external support has also been stop-start in nature.⁴⁴ This finding underscores the need for the government to continue enhancing fiscal space through greater domestic revenue mobilization to finance investments and to crowd-in the private sector.

Electricity – access, costs and reliability

20. Three out of four households in Madagascar have no access to electricity—one of the lowest rates in the world—which keeps them from participating in the modern and increasingly digital economy.

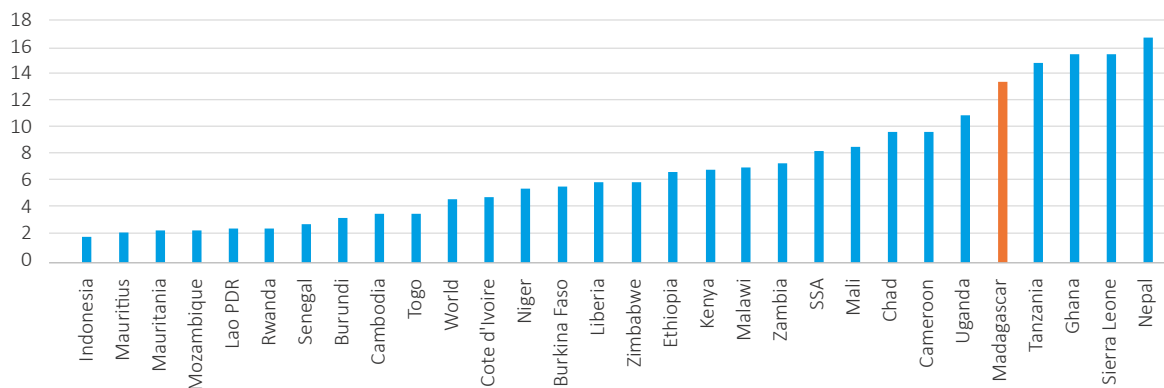
An estimated 26 percent of Malagasy have access to electricity (12.4 percent grid and 13.6 percent off-grid). To achieve universal access to electricity, as envisaged under the Sustainable Development Goals, an estimated 400,000 new connections would be required each year. Madagascar's new Energy Policy, approved in 2015, has the target of increasing electrification rates from the current 26 percent to 70 percent by 2030, which requires 260,000 households to be connected each year. Increasing access to electricity is important for improving access to economic opportunities to those who are currently off the grid.

21. The cost and quality of electricity supply is a major impediment to growth in Madagascar.

Electricity is supplied by the national state-owned utility, JIRAMA. The operating costs of power generation are amongst the highest in Africa, reaching over US\$0.30/kWh in 2017, which is an estimated 230 percent above the regional weighted average, largely because of poor procurement decisions and a slower than expected transition to renewable energy. The full operating costs are not passed on to consumers as the cost of electricity is subsidized, which also contributes to JIRAMA's rising quasi-fiscal deficit, where the company's liabilities to suppliers are estimated at 3.1 percent of GDP in 2018. Finally, while there have been some improvements, the reliability of electricity supply remains poor, contributing to an estimated 13 percent loss of sales, which is at the higher end compared with peer countries (Figure 33).

⁴⁴ Over the period 2003-08, public investments peaked at an average of 8.4 percent of GDP, largely financed by ODA flows. The onset of the political transition period over 2009-14 saw public investments decline to 3.2 percent of GDP, in line with a reduction in external financing. The post-2014 period is marked by reengagement with the international community and an increase in ODA.

Figure 33: Firms in Madagascar have amongst the highest percentage of sales lost due to outages (%)



Source: World Bank Enterprise Survey and Doing Business

22. Looking ahead, Madagascar is poised to make improvements to renewable energy supply. Unlike other island countries, Madagascar is well-endowed in renewable energy sources, particularly hydropower. The development of two major hydropower projects are in the pipeline, in Sahofika and Volobe. Undertaking these investment projects has entailed securing substantial private investments. Being able to secure private investments on competitive terms requires addressing the elevated risks which arise from JIRAMA's precarious financial situation and currently undermine its credibility as an off-taker. This situation emphasizes the importance of all investments being procured on a least-cost basis in line with demand and capacity to pay, also to be supported by economic, social and environmental feasibility assessments.

Transport and logistics infrastructure

23. Primary roads, which connect with Antananarivo, and the efficiency of mobility in the capital are deteriorating. Madagascar owns a road network of 31,640 km. While 70 percent of paved roads are in good or fair condition (e.g., RN2, 4, 6, 7, 34 and 35),

about 70 percent of unpaved roads are in poor condition. The priority is to keep the primary road network well maintained, which supports the country's backbone connectivity, particularly to Antananarivo, the primary market in Madagascar. However, the efficiency of mobility in the capital has been deteriorating due to fragmented land management and poorly managed transportation systems dominated by loosely regulated informal minibuses. The development of integrated transport systems with sustainable and resilient land management and local business developments could help to alleviate some of these pressures.

24. Poor levels of rural accessibility limits farmers access to markets and is a general drag on connectivity. The latest road condition data translates into an accessibility of 11.4 percent (Figure 35), whereby 17 million rural people (or 68 percent of the total population) are disconnected and face high costs to access markets and this exacerbates their remoteness. There is significant heterogeneity across areas. While rural accessibility is relatively high along the RNP (for example in Toamasina, Antsiranana, Mahajanga, Sainte Marie, Toliary – the cities which have shown

a brightening of nightlights and job creation), other areas have minimal accessibility, for example in the North (Sofia, Analanjirofo Regions), West (Bongolava, Melaky), East, and South (Androy, Anosy). The disconnected areas in the south have higher levels of poverty where accessibility is also compromised because of climate conditions. Poorly maintained unpaved roads are particularly susceptible to heavy precipitation.

25. Improvements to certain major road networks are expected, which would help to unlock connectivity constraints. The RN44 from Moramanga (between the capital and the east coast) to Vohidiala (113 km) will be



rehabilitated between the end of 2019 and early 2023 to improve accessibility to the rice producing region, and therefore improving food security.⁴⁵ Furthermore, the rehabilitation of a road connecting to Fort Dauphin, which is also home to a port, is ongoing.⁴⁶ This road is critical for opening up access to parts of the country which are currently unconnected, thereby potentially unlocking new growth corridors and facilitating access to a port outside of Toamasina.⁴⁷ In the north of the country, the RN6 from Ambanja to Diégo will be rehabilitated, which is important for tourism, rice and cash crop exports such as cocoa, spices, essential oils and cashew.⁴⁸ Furthermore, the road from the north-east to the north-west (from Ambilobe to Vohemar) will be rehabilitated, unlocking the potential to transport cash crops and rice.⁴⁹ In the east of the country, the RN5 Soanierana Ivongo will be rehabilitated which is important for cloves and other spices, as well as access to the main port.⁵⁰ In the center of the country, key markets will be connected between Faratsiho and Sambaina unlocking the potential for food crops (rice, maize), and vegetables production and marketing.⁵¹ And in the south of the country, Analamisampy – Dabaraha (mainly rice and dry beans production regions), will be rehabilitated.⁵² In Antananarivo, several roads will be rehabilitated, which could greatly improve access and connectivity.⁵³

⁴⁵ With support from the World Bank

⁴⁶ The EU and the AfDB are rehabilitating 50km of road at present. The WB contribution is expected to start in 2020 and be completed in 2022.

⁴⁷ RN12A will be rehabilitated with cofinancing from AfDB and EU. RN13 Ambovombe - Taolagnaro / 114km / European Investment Bank and EU. RN12A Fort Dauphin – Vangaindrano / 236km/ EU – AfDB- World Bank

⁴⁸ With support from the European Investment Bank and EU

⁴⁹ RN5A Ambilobe – Vohémar / 151km / Chinese Government

⁵⁰ With support from the Saudi Fund for Development - Kuwait Fund for Arab Economic Development - Abu Dhabi – BADEA- OFID.

⁵¹ RNS43 / 51km / BADEA and Saudi Fund for Development

⁵² With support from the AfDB

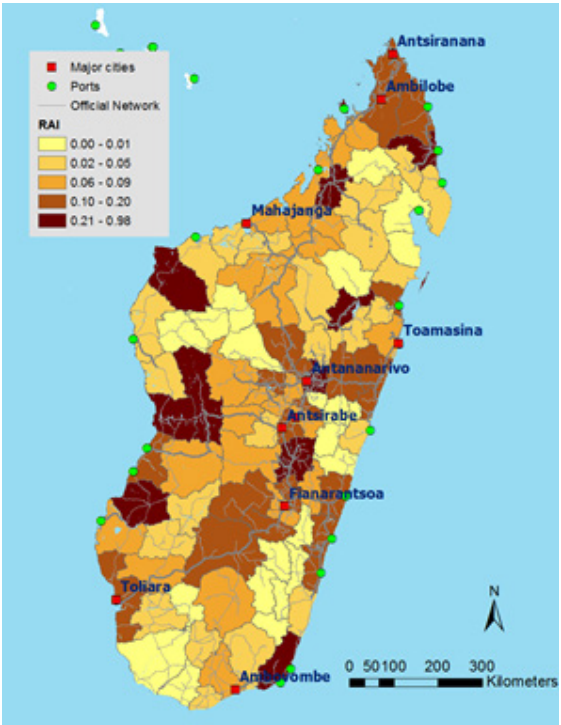
⁵³ RN at Antananarivo exit (RN1, RN2, RN3, RN4, RN7)/ 47km / EIB and Gov. Malagasy; North-east ring road between Marais Masay and Tokyo boulevard / 7.2km/ AFD – IEB – EU – Gov. Malagasy; Road Between Ambohitrimanjaka and Ambohitrarimo/ Chinese Government

Figure 34: 70 percent of paved roads are in good condition while 70 percent of unpaved roads are in poor condition



Source: Madagascar Spatial Analysis of Transport Connectivity and Growth Potential, World Bank

Figure 35: Madagascar's Rural Access Index shows that only 11.4 percent of the population have access to a good road network



Source: Madagascar Spatial Analysis of Transport Connectivity and Growth Potential, World Bank

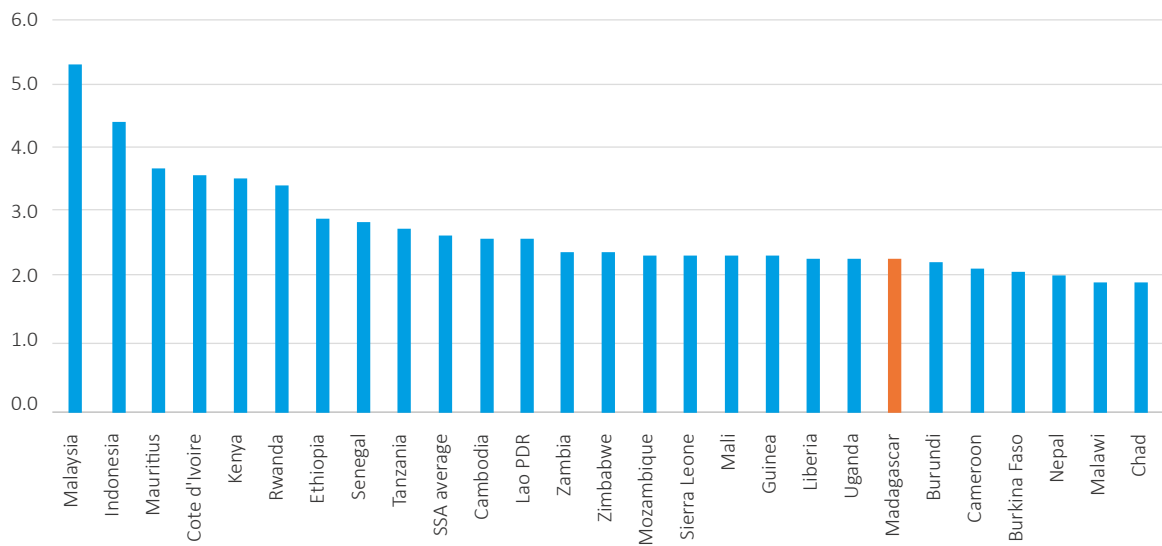
26. Ports and airports are important gateways to regional and global markets, but current operations are suboptimal.

While Madagascar has 17 seaports, activities are concentrated in the Port of Toamasina, which handles 65 percent of general cargo and 85 percent of containerized cargo. The current congestion of the port should be alleviated through the Toamasina port expansion project, which should be partly completed by 2021, and fully completed by 2026. Furthermore, the planned construction of the road to the Port of Fort Dauphin has

the potential to unlock access to the port, which would enable export-oriented firms to capitalize on additional shipping routes. There are currently 55 airports, of which Antananarivo and Nosy Be (in the north, a major tourist destination) are primary airports. Air cargo is one of the preferred methods of transporting merchandise. However, high costs of air cargo and passenger fares, which are associated with a limited number of routes and elevated jet fuel costs are a constraint to competitiveness (discussed further in chapters 3 and 5).

Figure 36: Madagascar has one of the lowest ranking scores for transport infrastructure

Global Competitiveness Index - Transport Infrastructure (best score = 7)



Source: Global Competitiveness Index Dataset 2007-2017, World Economic Forum

Addressing the investment gap

27. To address the poor quality of infrastructure, the government has been taking steps to increase domestic sources of fiscal space. Coming out of the political transition period in 2014, Madagascar had one of the lowest tax-to-GDP ratios in SSA at 9.9 percent, which was insufficient to cover current expenditures at 10.8 percent of GDP. Furthermore, there was great scope to improve the quality of public expenditures, whereby nearly one third of current expenditures were channeled to regressive areas of expenditures, such as transfers to inefficient state-owned enterprises. Seeking to remedy this situation, the government embarked on a successive series of reforms, whereby projections for 2019 indicate that the tax-to-GDP ratio should increase to 12.2 percent of GDP, regressive transfers will reduce, and capital expenditures will increase from 3.5 percent in 2015 to 6.6 percent of GDP. Therefore, steady progress is being made to increase revenues and improve the composition of expenditures to

finance investments. (See Table 3 for selected economic and financial indicators from 2008 to 2018.)

28. These domestic sources of financing are being complemented by debt financing, largely on concessional terms. As reengagement with the international community in 2014 paved the way for the government to access financing on concessional terms, debt financing for infrastructure has risen. The public and publicly guaranteed debt-to-GDP ratio has increased from 24.4 percent in 2014 to a projected 35.7 percent in 2019, of which close to 96 percent is on concessional terms. Bilateral partners currently provide only limited financing, which may be both on concessional and grant terms. PPPs are increasingly being explored, in sectors such as transport (Antananarivo airport), roads, energy, e-government and finance. However, the institutional capacity for managing PPPs is still weak, and so this option should be treated with caution.

Table 3: Madagascar Selected economic and financial indicators:2008-2019

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Actual										Est.	Proj.
Real sector												
GDP (billions of Ariary)	16,081	16,726	18,245	20,034	21,774	23,397	25,775	28,585	31,634	35,729	40,032	44,241
Real GDP (annual % change)	7.2	-4.7	0.3	1.5	3	2.3	3.3	3.1	4.2	4.3	5.1	4.7
GDP per capita (current USD)	472	417	424	467	455	473	463	412	409	459	467	477
Real GDP per capita (annual % change)	4.4	-7.5	-2.5	-1.3	0.2	-0.5	0.5	0.4	1.4	1.5	2.3	2.0
Public Finance (%GDP)												
Total revenue and grants	15.9	11.5	13.2	11.7	10.8	10.9	12.4	11.8	14.8	14.8	14.6	15.0
o/w: Tax	11.8	9.4	9.8	9.5	9.1	9.3	9.9	10.1	11.0	11.5	11.8	12.2
Revenues	17.9	14.1	14	14.1	13.4	14.9	14.7	15.1	16.1	17.2	17.1	17.5
Total spending (commitment basis)												
o/w: Capital spending	7.7	4.9	5	4.2	2.7	3.1	3.9	3.5	5.2	5.5	6.1	6.6
Overall balance (commitment basis)	-2.2	-2.5	-1.1	-1.6	-1.4	-2	-2.4	-3.3	-1.3	-2.4	-2.5	-2.5
Total public debt	31.5	33.7	31.7	32.2	33	33.9	34.7	41.3	47.1	46.0	45.7	45.9
o/w: External	24.2	26	24.1	24	23.5	22.8	24.4	28.4	29.6	29.5	30.5	31.7
External sector (%GDP)												
Exports of goods, f.o.b.	14	12.4	13.4	14.9	15.3	18.1	20.6	21	21.7	24.4	25.0	25.5
Imports of goods c.i.f	40.1	37.4	28.9	29.4	31.2	30.7	30.2	28.7	28.7	31.5	28.9	29.6
Current account balance	-18.9	-21.1	-10.2	-7	-7.6	-5.9	-0.3	-1.9	0.6	-0.5	0.8	-0.8
Foreign Direct Investment	6.9	8.1	3.9	7.8	7.8	5.2	2.9	4.5	4.5	3.1	4.1	3.2
Foreign Reserves (months of imports)	2.5	2.9	2.9	3.7	3.3	2.2	2.5	2.9	3.9	4	4.3	...
Terms of Trade (percent change)	-8.8	0.8	10	-0.4	-6.5	-0.3	-0.9	-0.9	0.1	22.3	-1.2	-0.8
Exchange Rate LCU/USD(average)	1,708.4	1,956.2	2,090.0	2,025.1	2,195.0	2,206.9	2,414.8	2,933.5	3,176.5	3,116.1	3,333.6	

Source: Malagasy authorities and WB staff calculations, October 2019. Figures and ratio use the 1984-based national accounts

29. To capitalize on the opportunities for increased infrastructure financing, the government has been taking steps to improve the institutional framework for public investment management, but capacity remains weak. For example, a new Public Investment Strategy has been

developed, there is a new legal framework for Public-Private Partnerships (PPP), and the transparency of public investments and the sources of financing have improved, for example through publishing information on loans with medium-term debt projections. However, despite these efforts, the ability of

the government to effectively plan, select, sequence, execute and monitor public investments remains very weak. Therefore, increasing public resources for investments should continue in parallel with efforts to improve public investment management capacity. Furthermore, efforts are needed to improve the execution of externally financed investment projects, by addressing key bottlenecks on the side of the government to ensure timely delivery.

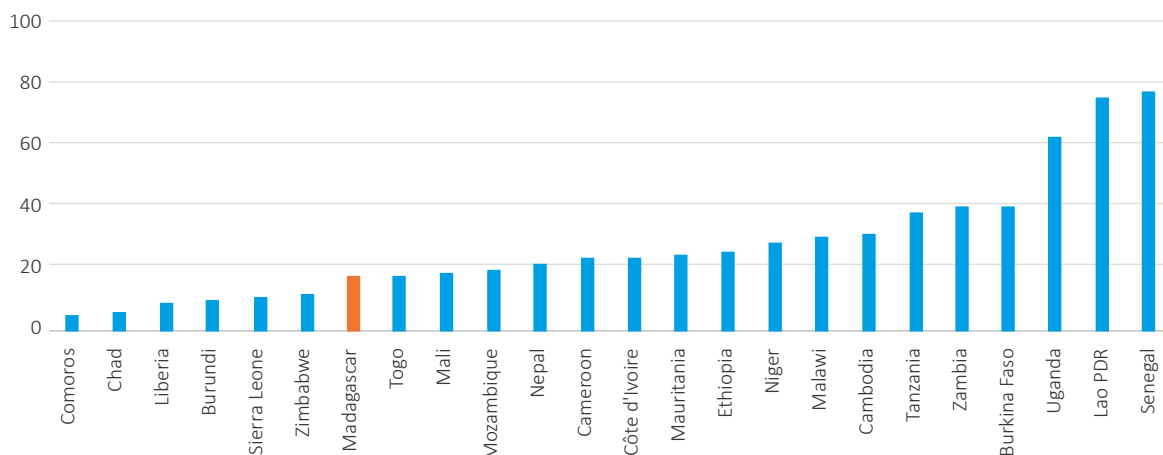
30. As part of a long-term strategy, it is critical to continue crowding-in investments from the private sector, which requires strengthening the business environment. Certain elements of the private sector have already demonstrated commitment to investing in Madagascar, comprising of both domestic and foreign investors. For example, during the Donors and Investors Conference in 2016, the private sector confirmed investments of US\$1.9 billion in sectors such as energy, infrastructure, agribusiness and the financial sector. To further leverage long-term investments from the private sector, it is critical to improve the

business environment, which would help to increase predictability and reduce risks. These long-term reforms in the business environment would not only help to encourage private sector investment but would also help to build the resilience of the economy to move towards a more sustainable growth path.

31. The business environment in Madagascar is characterized by key weaknesses related to the perception of governance effectiveness and rule of law. The quality of governance serves to undermine investor confidence in public administration, as well as the ease of doing business. This situation reflects the domination of the economic and political spheres by a small elite, some of which have used their influence to exclude new players and opponents. This modus operandi is a legacy of the pre and post-independence period, when the economy was controlled by a handful of well-connected and influential families. Today the composition of the private sector has evolved, and the economy is more open and accessible than in the years following independence, allowing some measures of upward mobility.

Figure 37: The perception of governance effectiveness is amongst the lowest compared with peers

Percentile rank among all countries (ranges from 0 (lowest) to 100 (highest) rank)



Source: World Governance Indicators, 2017

32. Given the weaknesses in institutions, private operators have relied upon political connections to protect their business.

Reliance on connections and alliances has diminished incentives to strengthen governance, transparency, and accountability and oversight mechanisms. Breaking the elite capture system requires a strong public sector reform program and strengthened rule of law to improve investor confidence. However, the incentives for strengthening institutions will need to address potential resistance to reform. Firms that have been able to grow, and moreover survive the turbulences resulting from the political crises, have maintained privileged access to the factors of production, such as land (which is prohibited for non-Malagasies) and the ability to negotiate credit on more favorable terms (including access to supplier credit). These findings suggest the importance of promoting a more level playing (discussed in chapter 5) as well as encouraging and protecting investors (chapter 3).

33. The more recent arrival of new economic operators, in emerging sectors such as IT-BPOs for example, demonstrates that connections are not always a prerequisite for doing business in Madagascar.

New economic entrants – either domestic or foreign – can be accommodated in niche and emerging sectors that are relatively open and unprotected, or in sectors where established companies do not have a prior claim or interest. While these examples are limited, they demonstrate that newcomers can effectively do business in Madagascar, and moreover in sectors that generate employment. These examples further indicate that if the barriers to doing business were alleviated, prospects for further

investment could be exponential (discussed further in chapter 3).

(iii) Productivity and innovation

34. Firms with higher levels of labor productivity share the characteristics of:

(i) being connected within the financial system; and (ii) having greater exposure to international know-how.⁵⁴

Firms which are connected to the financial system, for example through accessing a bank loan, are likely to have higher levels of labor productivity (measured as sales per worker growth), which only accounts for 20 percent of firms, as reliance on self-financing is more common. Firms that have access to financial resources that enable them to hire external talent also have higher levels of labor productivity. Medium-sized firms have the highest level of labor productivity growth, but employment growth is higher for large firms. On the other hand, small-sized firms (which accounts for employment of 60 percent of the non-agricultural sector) are characterized by negligible employment growth and low annual labor productivity growth.

35. There have been recent improvements to financial inclusion which are encouraging.

At the household level, there have been some improvements to financial inclusion, where for example, between 2011 and 2017, the percentage of Malagasies with a financial institution account increased from 6 percent to 10 percent. While this increase marks good progress, it still falls far behind the average for SSA at 33 percent.⁵⁵ Lending to the private sector is on the upside, but credits are largely short-term in nature, limiting opportunities to

⁵⁴ Findings based on analysis from the Madagascar Enterprise Survey, World Bank, 2013

⁵⁵ The improvements to financial inclusion have been supported by legislative improvements to the financial sector, including the formalization of electronic money payments and the private credit bureaus, which can be used to enhance the assessment of a potential creditor's risks.

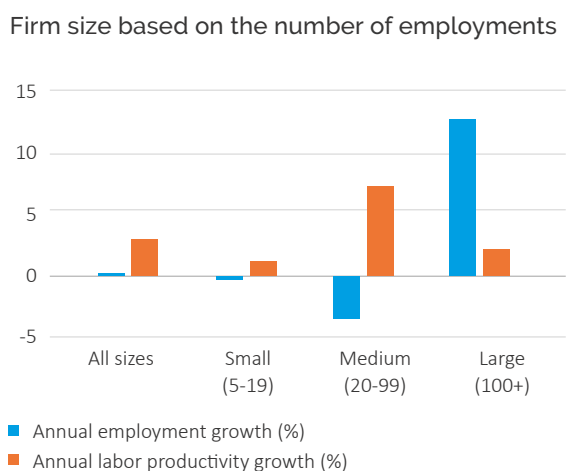
commit to long-term investments.

36. However, further progress is required to address weak financial intermediation.

The Malagasy banking sector is overall profitable, and the system is liquid. However, credit costs are high due to portfolio risks associated with overall institutional weaknesses which are being transferred to consumers. Madagascar also has one of the highest interest rate spreads

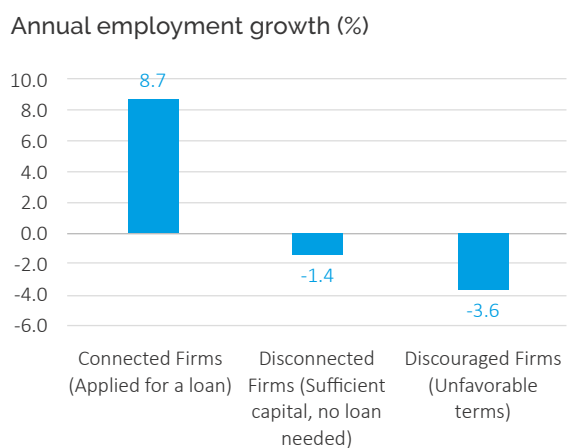
in the region, at 43 percent in 2018.⁵⁶ Broader improvements to the business environment, again through improving commercial justice, as well as through increased use of land certificates as collateral for accessing credit could help to reduce risks, and in turn lower interest rates. In addition, there has been limited regulation in fees for financial services, which is a further area of reform to be pursued by the regulatory agency.

Figure 38: Large firms have greater employment growth



Source: Enterprise Survey, 2013

Figure 39: Financially connected firms have higher employment growth



Source: Enterprise Survey, 2013

37. Enhancing access to finance is particularly important for encouraging entrepreneurial activity, which is currently concentrated in the informal sector.

An estimated 22 percent of the working population is engaged in entrepreneurial activity, with the country ranking seventh out of 54, second only to Vietnam in the lower income group.⁵⁷ Entrepreneurship

is viewed as a good career choice but is largely concentrated in the informal sector, dominated by small-sized firms. Further developing formal entrepreneurship activity requires facilitating access to finance, for example through soft loans and leasing, as well as providing training; initiatives which have all started under the new government's program.⁵⁸

⁵⁶ Interest rate spreads are explained by four main factors. 1) Cost of resources: the interest rate paid on deposits and the ability of banks to list on the stock market and expected returns from equity investments. 2) Risk pricing; 3) Intermediation costs which are driven by the efficiency of banks; 4) Profit margins that banks make which depends on competition in the financial sector.

⁵⁷ Global Entrepreneurship Monitor's surveyed a sample of 24,000 individuals in 2017

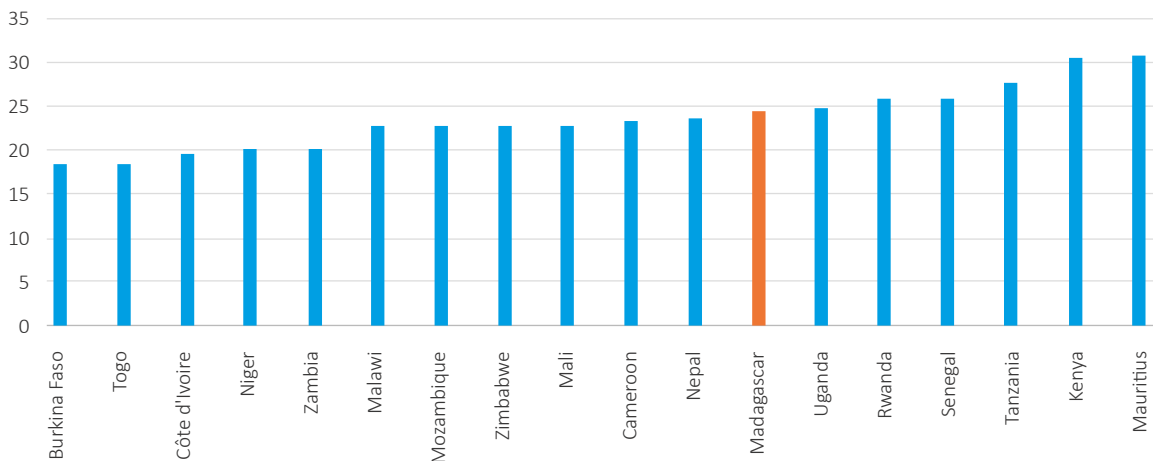
⁵⁸ The government has established a new entrepreneurship program, Fihariana to provide technical and financial support to entrepreneurship

38. Recent advances in technology suggest that there may be other avenues for enhancing innovation. Investments in digital technologies have resulted in Madagascar having the fastest download speed in Africa and featuring in the global top-25.⁵⁹ These technological developments are being leveraged by the private sector to further business development, where for example, more advanced software development

activities are ongoing, which could spur innovation over the long term. Compared with other countries, Madagascar has relatively high levels of innovation, greater than certain aspirational peer countries such as Cote d'Ivoire, but falling behind others such as Rwanda and Senegal. Such developments could also help to improve productivity over the medium to long-term and could help to improve long-term productivity.

Figure 40: Madagascar's ranking in the Global Innovation Index is on the higher end compared with peer countries

Global innovation index overall score - 2018



Source: World Intellectual Property Organization and WDI

C. The sustainability of growth

39. Encouraging the growth momentum to continue while de-risking shocks, requires restoring confidence in the formal institutions for doing business. The risks to political stability are related to the country's political economy dynamics, whereby weak institutions have in some cases contributed to firms bypassing formal mechanisms. Addressing this situation will require long-term reforms to restore confidence in the formal mechanisms

for doing business through clear, consistent, and predictable implementation of relevant regulation. Reforms to commercial justice are required. In the short-term, the utilization of the recently established arbitration center could be encouraged. Over the long-term, reforms are needed to assure private operators of a free and fair trial, through for example, ensuring that cases are not pre-assigned to judges and that undue delays are avoided. The same recommendations apply to the penal justice to reverse the increasing prevalence of crime

and theft observed over the past decade that undermines the business environment.⁶⁰

40. Checks and balances related to government effectiveness should also be strengthened. For example, the anti-corruption agency, BIANCO, and the anti-money laundering institution, SAMIFIN, could be strengthened to provide greater incentives to prevent wrongdoing. Concretely, the adoption of the law related to the recovery of illicit assets would strengthen the anti-corruption framework and result in Madagascar not being gray-listed by the Financial Action Task Force; which would also be an important signaling mechanism for new investors that the environment for doing business is improving.

41. Climate change and natural disaster-related shocks also pose a risk to the economic sustainability and particularly affects the poorest. The unmitigated impacts of climate change affect the security of rural livelihoods due to high dependence on rain-fed agriculture, chronic food insecurity, physical isolation and the lack of access to social safety nets. Addressing these risks could involve strengthening early intervention in case of disasters, improving mitigating measures, as well as reforming social safety nets so that they are further expanded and can be used more flexibly in times of emergency, for example through cash for works. Given the impact that climate related shocks have on physical infrastructure, mitigating measures could include regular maintenance of infrastructure. The loss of livelihoods in climate affected areas can place pressure on migration to areas less affected by climate related shocks or changes, which

may not have the necessary infrastructure in place and requires measures to address resettlements in areas prone to flooding and / or landslides. Climate-related disasters are estimated to cost on average, 1 percent of GDP per year, which is a substantial contingent liability. Planning for future costs could involve implementing a contingency fund (regulation already in place), as well as contingent credit and sovereign insurance.

D. Conclusion

42. While progress has already started in bringing growth outside of the three major cities, which is accompanied by job creation, further efforts are needed to invest in the quality of human capital. For Madagascar to reap the benefits from expanding job creation opportunities, it is critical to continue reforms to accelerate improvements in human capital. In the education sector, this involves implementing a holistic teacher reform process, with strong political leadership from the highest level. Efforts have already begun in earnest to address high levels of stunting, including through increasing the uptake of health services and promoting positive parenting practices. In health, there is scope to improve the quality of service delivery through developing in-service training tools, improving the pre-service training of qualified health workers to match the needs of the health system (some of which is already ongoing), and to strengthen monitoring and management of the health system, to avoid epidemics. While progress has started on these fronts, tangible results which will be possible over the medium to long-term, would provide a solid argument for also increasing

⁶⁰ Security in Madagascar has been rated 4.06 (on a scale of 1 to 7) in the 2008-2009 Global Competitiveness Index and 3.65 in the 2017-2018 edition, ranking Madagascar at 118 over 137 countries. Crime and theft is cited as the 6th most problematic factors for doing business in the GCR 2017-2018.



the level of resources allocated to the social sectors, which should be complemented with improved accountability mechanisms. Ensuring that there is a strong foundation in human capital, will enable the labor force to be market ready to respond to the emerging opportunities from higher growth.



43. Pipeline developments suggest that physical road infrastructure will improve over the next five year, but to be fully leveraged, this needs to be accompanied by reliable electricity supply, access to ports, and complemented with alternative methods of transport. There are important infrastructure developments in the pipeline, which will help to unlock connectivity to strategic areas with economic potential. Ensuring these projects are implemented on time and according to plan is a priority through the strengthening the overall public investment management system, and specifically procedures involving external financing. Continuing these infrastructure improvements should involve brining access to both on and off-grid electricity. Again, there are pipeline developments, with two large hydro-power dams in the pipeline. For these developments to have positive economic gains, projects must be well selected and procured on a least-cost basis in line with demand and capacity to pay. Improving the governance of JIRAMA, the national utilities company, which is undergoing financial restructuring will help to improve the credibility of the company as a viable off-taker for investments by the

private sector. Going further, infrastructure improvements should consider access to ports and airports, including rehabilitation where necessary, which may also be strategically supported with PPPs.

44. Improving firm productivity, innovation and growth of the private sector requires improving access to credit and the business climate. Indicators of productivity suggest that firms that are connected to the financial system, seeking loans instead of financial services have higher sales per worker growth. However, the level of financial intermediation is low, with firms largely accessing short-term credit, rather than long-term sources needed to invest. Furthermore, high levels of interest rates deter firms from seeking financing to expand their operations. Addressing these challenges requires improving the business environment, and specifically commercial justice, so that high levels of risk are not inadvertently passed to consumers. Efforts to enhance competition in the business climate could encourage firms to innovate and increase productivity rather than the current practice of manipulating legislation to gain an edge over rivals. Strengthening checks and balances in the institutional environment could help in this regard, as well as approving the law on illicit assets recovery, which would send a strong signal that there is commitment at the highest level to wide-reaching improvements to the financial and business environment.



**Leveraging Trade
and Investment
in Madagascar
– A Deep-Dive
into Three High-
Performing Sectors**


Madagascar's trade and investment recovery since the return of constitutional order in 2014 has been driven by a strong value proposition and clear comparative advantages, despite an unfavorable business climate, high trade costs, and deficient infrastructures. Madagascar's competitiveness mainly stems from the affordability and quality of labor, unique natural resources, high-end branding in some niche markets, and fast internet connection. As a result, sectors such as agribusiness, textiles and apparel, and business processing outsourcing are expanding rapidly, creating jobs, developing regions outside of the capital, and fostering positive spillovers to the rest of the economy. The continuation of these trends could support the diversification of products in goods or services of higher value-added, and expansion into new markets, including those within the region. This would contribute to income generation to boost domestic demand and move Madagascar towards a more inclusive and sustainable development path. Realizing these opportunities requires addressing cross-cutting constraints related to trade and investment policies, a lack of connectivity, skills, energy, and effective dispute resolution system. These must be complemented by sector-specific initiatives, including better structured and more competitive value chains, improved quality controls, R&D and training activities.


A. Introduction

1. Despite Madagascar being a large island nation with logistical challenges to trade, the country's integration in the global economy has been pivotal to its economic revival in recent years. Madagascar's trade performance is strong, with exports increasing from 22 percent of GDP in 2009 to 35 percent of GDP in 2017, which is superior to most peer countries (Figure 41).⁶¹ Reengagement with the international community in 2014 supported increased access to markets (including special trade agreements such as

the African Growth and Opportunities Act - AGOA), a shift towards higher value-added goods and services exports, as well as a rise in foreign direct investment (FDI).

2. Trade and foreign direct investment flows are driven by a limited number of high-performing sectors, which can be leveraged to foster more productive, sustainable and inclusive growth. Key export-oriented sectors such as textiles and agribusiness have shown elements of resilience to economic shocks (for example during the 2009 to 2013 downturn) and recovered strongly during periods of

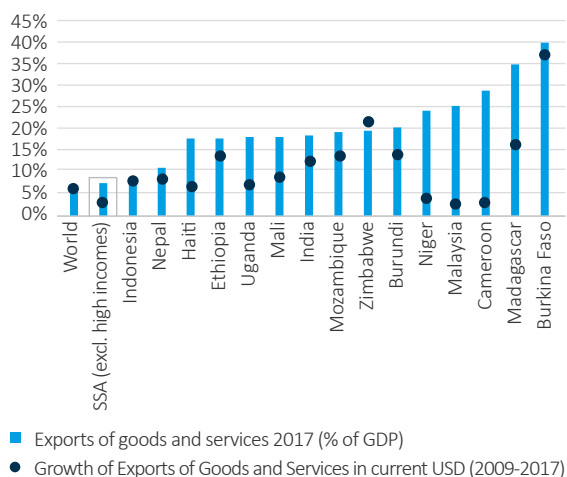
⁶¹ Considering possible distortions that may arise from the vanilla price spike initiated in 2012, Madagascar's export performance against its benchmark was also evaluated in constant prices. Based on GDP and total export values expressed in constant 2010 USD sourced from WDI, Madagascar's share of exports in GDP jumped from 24 percent in 2009 to 40 percent in 2016 (the latest year with available data), which is higher than equivalent shares for the World (30 percent), SSA excl. high income countries (29 percent) and all structural and aspirational peers except for Malaysia (71 percent) – no comparable data is available for Burkina Faso and Ethiopia. Malagasy exports also maintain high dynamism when expressed in constant prices, growing by 10% annually since 2009, which is faster than annual growth of exports by the World (5 percent) and Sub-Saharan Africa excluding high income countries (3 percent), as well as growth by all structural and aspirational peers except Zimbabwe (who grew at 14% annually in the same period).

economic and political stability.⁶² Exports of metals have seen a large expansion since the coming on stream of nickel, cobalt, titanium and zirconium, with their share jumping to 19 percent of total merchandise exports in 2013 from less than 2 percent in all preceding years, thus making an important contribution to the country's export revenues in recent years.⁶³ Malagasy exports have shown a higher rate of survival than most peer countries (Figure 42); and therefore continued (albeit

at a slower pace) even during the political transition period, outshining the performance of most peer countries, SSA and global averages. Such performance demonstrates a strong value proposition associated with affordable labor and unique agriculture and natural resources. The emergence of newer sectors like IT-BPO (Information Technology and Business Process Outsourcing) also illustrates the benefit of past investments in broadband internet.

Figure 41: Madagascar has one of the highest rates of export growth and largest export sectors

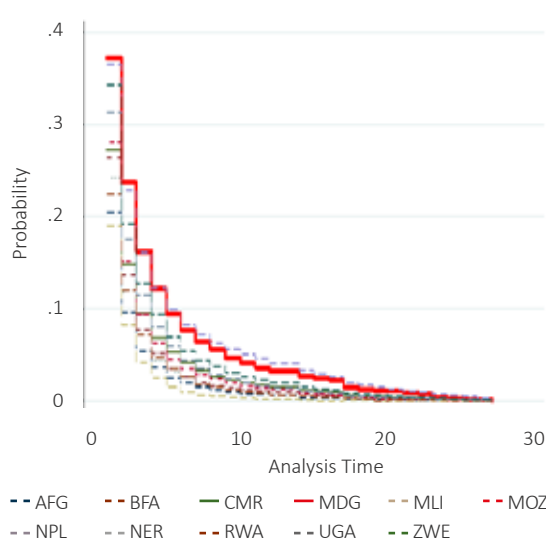
Exports of goods and services (% of GDP) and growth of exports (US\$)



Source: WB staff calculations based on UN Comtrade data

Figure 42: Malagasy exports have a higher chance of survival compared with peers⁶⁴

Probability of survival (0-1) over time (years)



Source: WB staff calculations based on UN Comtrade data

⁶² Even after deflating the export values of vanilla to exclude any distortions that may arise from rapidly increasing prices since 2012, agribusiness still accounts for the largest or second largest share of total merchandise exports throughout the whole period of analysis, in alternance with textiles and apparel, except in 2015 when it comes third with a share of 26 percent after metals (29 percent) and textiles and apparel (28 percent). In particular, agribusiness accounts the largest share in overall merchandise exports to the World between 2011 and 2014 as well as in 2017, and the sector's exports still increased by 5.8% yearly between 2014 and 2017, faster than any other product category, even when taking vanilla in constant 2012 prices and despite the decrease observed in export volumes of such commodity, indicating that this result is not driven by the price spike in vanilla, but rather other agribusiness are growing strongly.

⁶³ Metals exports continued to grow in 2014 and 2015, accounting for 24 and 26 percent of overall merchandise exports, respectively (the shares rise to 26 and 29 percent when vanilla exports are expressed in constant 2012 prices). Metals exports were moderately lower in the last two years of the analysis, bringing their share in overall merchandise exports down to 15 percent in 2017 (21 percent when vanilla exports are expressed in constant 2012 prices).

⁶⁴ Every passing year some export flows die, but at different rates for the different countries in the comparators group. Most export flows end soon after they start, and the longer they survive, the higher their chance to keep surviving. At every point in time, Malagasy exports have a higher survival probability than exports by nearly all structural peers. Rwanda and Comoros were excluded for lack of comparable data.



3. This chapter focuses on resilient and fast-growing sectors and their potential to foster higher and more inclusive growth.

Resilience to shocks, a strong export growth, and job creation were among the key criteria for the selection of high performing sectors. These were identified as agribusiness, textiles and apparel and IT-BPO. Two other sectors that show potential but were not included in the scope of the analysis are: (i) tourism which has shown less resilience to shocks and has not fully recovered from the political transition period; and (ii) mining, which has already been studied in-depth through a separate analytical workstream, where further growth of the sector is subject to improved governance, with progress thus far being limited.⁶⁵ The chapter is organized in four sections. First, the country's overall trade and investment performance is presented, including a description of key export-oriented sectors. Second, the chapter reviews the factors that have enabled success of those sectors despite the country's challenging business environment. Third, opportunities for leveraging further growth, job creation, linkages, and value addition are presented. This analysis is based on a deep-dive survey that was administered among the selected

sectors. Fourth, cross-cutting as well as sector-specific policy recommendations are presented.

B. Madagascar's Trade Performance – Dominance of High-Performing Sectors

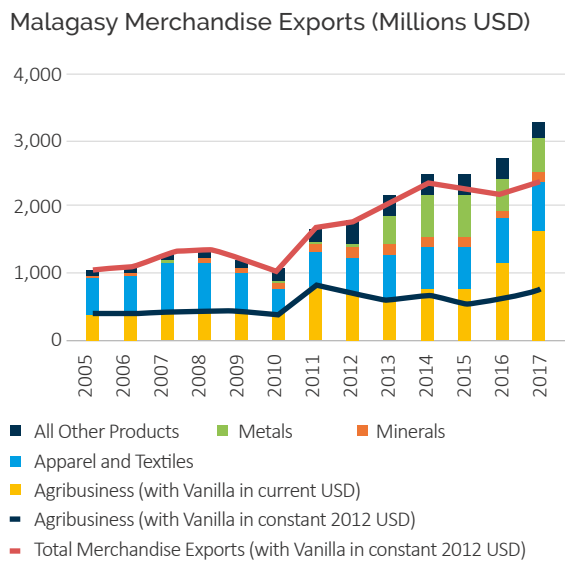
4. Madagascar's economic recovery has been associated with an increase in both merchandise and services exports, which were supported by a few dynamic sectors, including agribusiness, textiles, metals and IT-BPO.

Merchandise exports have demonstrated rapid growth, increasing by 75 percent in nominal values from the period 2009-13 to 2014-18. This performance has been dominated by agribusiness, textiles and metals, including nickel and cobalt. In particular, the average share of Agribusiness exports (38 percent on average in 2005-17) is considerably larger than that of most structural peers, with only Zimbabwe and Rwanda matching it, and Uganda exceeding it.⁶⁶ Even though travel and transport account for the largest share of services exports, IT-BPO are the fastest growing services exports, expanding by 73 percent over the period 2014-17.

⁶⁵ Tourism has an average share in total exports of goods and services of about 20 percent and mining of metals and minerals (HS chapters 25-27 and 72-83) of about 10 percent over the period 2005-2017.

⁶⁶ Cameroon 22 percent, Nepal 21 percent, Mozambique 17 percent, Burkina Faso 11 percent, Niger 10 percent, Mali 8 percent.

Figure 43: Merchandise exports are under expansion, with agribusiness and apparel performing particularly well⁶⁷

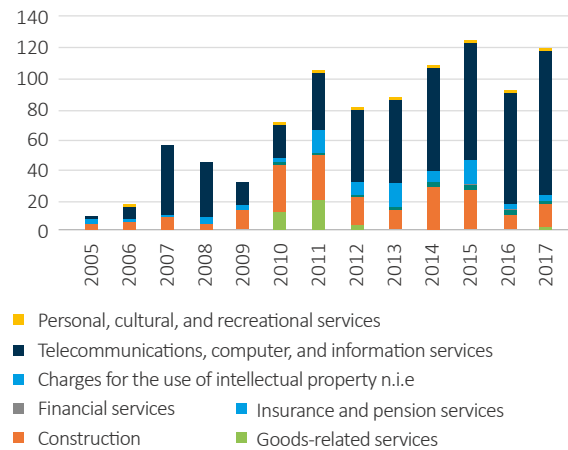


Source: WB staff calculations based on data from UN Comtrade on WITS and UNCTAD.

5. The development of these fast-growing sectors has been supported by foreign direct investment. Understanding their drivers is important for maintaining and encouraging future FDIs (see Box 1). Madagascar's natural resources such as nickel, cobalt and other minerals, as well as a breadth of agribusinesses such as vanilla, cloves, seafood and other products, have attracted natural resource-seeking FDI to export products that in many instances do not exist elsewhere. Contrary to the experience in most developing countries, resource-driven FDI in Madagascar is concentrated

Figure 44: Exports of telecommunications related services are rising at a rapid pace

Malagasy Exports of Commercial Services excl. Travel & Transport and other business services (Millions USD)



Source: WB staff calculations based on data from UN Comtrade on WITS and UNCTAD.

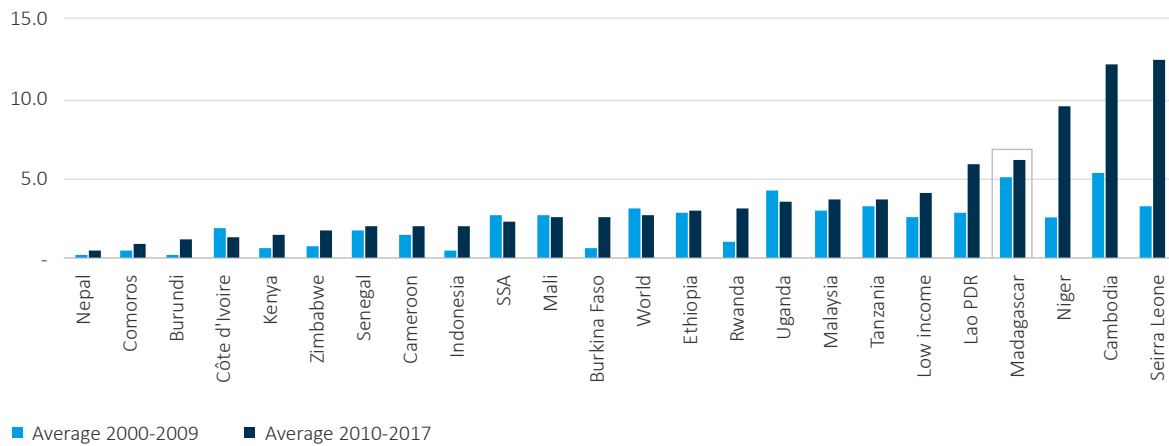
in niche higher value-added foodstuffs. The textiles industry and IT-BPOs have attracted efficiency-seeking FDI, underscoring Madagascar's competitiveness based on the availability of relatively affordable labor, which is French speaking and receptive to on-the-job training. Thus, despite substantial constraints to Madagascar's business environment, the country remains attractive to foreign investment, which is relatively high compared with other non-natural resource peer countries. The top investor to the country is France, which is trailed by other countries such as India and Mauritius.⁶⁸

⁶⁷ The agribusiness products include HS chapters 01 to 24 comprising animal and vegetable products and foodstuffs. Apparel and Textiles comprise HS chapters 50 to 63. Minerals and Metals comprise HS chapters 25 to 27 and 72 to 83.

⁶⁸ Financial Times fDi Markets, data extracted November 2018

Figure 45: FDI inflows are relatively high and are increasing

Foreign direct investment, net inflows (% of GDP)



Source: WDI

Box 1: Not all FDIs are the same

Developing countries tend to attract three different types of FDI, each one rooted in different characteristics of the host country acting as "pull" factors for investors. Each type of FDI has different impacts on trade patterns and varying socio-economic and environmental effects:

- **Resource-seeking FDI** is motivated by the quantity and quality of agricultural and natural resources with which the host country is endowed. This type of FDI generates exports of raw materials, such as mining and foodstuffs. While this can lead to sizable government revenues and, in the case of agriculture, contractual and income-generating employment, the resulting exports are typically of relatively low 'sophistication'. In Madagascar, resource-seeking FDI has been associated with the extraction of nickel and minerals, certain key products such as vanilla and lychees and increasingly new niche-agribusiness and seafood products.
- **Domestic Market-seeking FDI** is motivated by the size and potential growth of the host country's domestic market. This type of FDI does not generate exports, as investors seek to serve the domestic market, but be associated with better and cheaper availability of goods and services consumed by the population or used as inputs by other firms. Given the limited purchasing power of the Malagasy population, market-seeking FDI is not widespread, being dominated in certain services sectors such as banking, telecommunications and wholesale.
- **Efficiency-seeking FDI** is attracted by the capacity of host countries to enable foreign firms to compete in international markets. It is the main vehicle for countries to join Global Value Chains (GVCs) and off-shoring of certain production stages to the host

country. These are greenfield FDI that generate exports and are net job creators. This type of FDI is often seen as a means of technological leapfrogging that can lead to the creation of more productive jobs and more sophisticated exports. In Madagascar, efficiency-seeking FDI has been directed to the textile industry and more recently, to IT-BPOs.

Madagascar has a good mix of FDI types, which has contributed to islands of successes and resilience in recent years. Besides, FDI in agribusinesses tend to mobilize local actors more than the traditional resource seeking investments (for example in mining), supporting producers, middlemen, transport providers, and light manufacturers along the value chain. In the case of efficiency seeking FDI, even though some of the most successful export products have also pursued a niche strategy based on high-quality labor inputs (such as cashmere sweaters, high-quality niche within IT-BPO), as the country has low labor costs combined with preferential market access. Assuming labor costs may rise over the medium term, maintaining profitability will require skills upgrade and the development of opportunities for domestic market-seeking FDI.

6. The selected sectors driving Madagascar's trade performance are experiencing 'export surges' or 'hits', which underscore the country's competitiveness. Merchandise that experienced export surges (defined as significant increases in export growth sustained over several years, beyond what can be attributed to trend, in products accounting for a relatively large

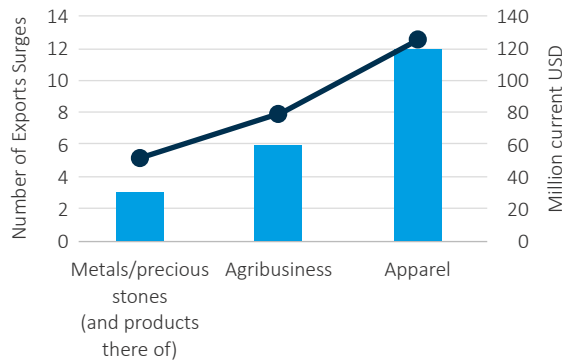
share of the country's total exports in the latest year) include apparel/textiles, agribusinesses (broadly defined to comprise cash crops, vegetable and animal products including fishing, and food preparations), and metals/precious stones (Figure 46).⁶⁹ Madagascar has revealed comparative advantage in these products, meaning that the country exports

⁶⁹ Building on the work of Freund and Pierola (2012) and Cadot et al (2015), exports surges are characterized by: (a) a product that has experienced average export growth higher than 6 percent yearly between 2014 and 2017 ("the take-off phase"), (b) this rate is at least 30 percent higher than average export growth between 2010 and 2013 (growth acceleration), (c) export value in 2017 is in the top decile, averaged over 2015-2017 (significant size), (d) the minimum export value during 2015-2017 is at least as large as the maximum export value during 2011-2013 (stability), and (e) average growth between 2014 and 2017, excluding the strongest year of growth, is greater than average growth between 2010 and 2013 (exclusion of single-year spurts). The application of criteria (a)-(e) yields a total of 21 products that have undergone an export surge (products are aggregated in broader categories for ease of interpretation of results). Given the pronounced spike in vanilla prices starting in 2012, going from 18.4 USD per kg in that year to 425.9 USD per kg in 2017 (a more than 23-fold increase), the export surge analysis is performed with the export value of vanilla expressed in 2012 constant USD to avoid capturing a purely price-driven surge. When following this approach, vanilla is not found among the Malagasy products undergoing export surges in 2017. A caveat must also be acknowledged in the case of apparel products, as part of the observed surge in exports in that sector was associated with renewed access to U.S. markets after the reinstatement of the AGOA in December of 2014. However, most of the apparel products undergoing surges experienced positive average growth during the AGOA suspension from January 2010 to December 2014, and half of them also had positive growth between 2010 and 2013 (before the decision to reinstate the AGOA was made), which confirms evidence obtained from interviews and surveys suggesting that firms began to target new export markets during that period, and these exports have continued to grow rapidly after preferential access to the U.S. market was regained.

them more intensively than the world (Figure 47).⁷⁰ The three sectors with highest revealed comparative advantage together account for 73 percent of the country's total merchandise exports on average over the period 2014-17, and new "emerging champions", products in which Madagascar did not have a comparative advantage ten years ago but does at present, have recently appeared in textiles (woven

fabrics) and agribusiness (jams and cooked fruit), as well as fertilizers (both mineral and organic) and several metals.⁷¹ While IT-BPOs do not yet show comparative advantage, they are nevertheless a high growth sector, and the fastest growing services exports. Indeed, FDIs tend to transform the export structure of host countries and can reshape comparative advantages in developing countries.⁷²

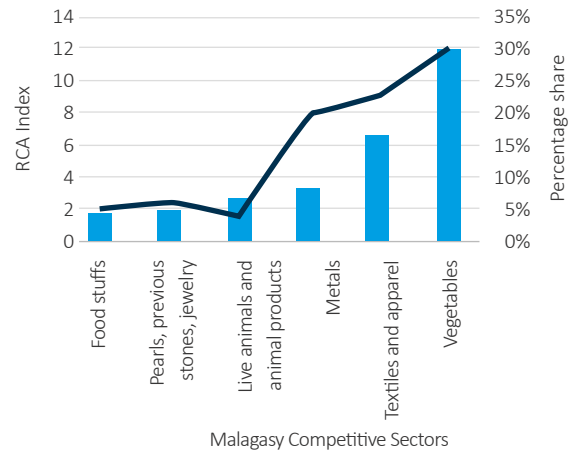
Figure 46: Apparel and various agribusinesses are experiencing export surges (2017)



- Number of products characterized by "Export Surges" within Broad Containing Category
- Total Export Value in 2017 of products undergoing "export surges" within Broad Containing Category

Source: WB staff calculations based on mirror data from UN Comtrade on WITS.

Figure 47: Madagascar has a revealed comparative advantage in textiles and apparel and agribusinesses



- RCAI, avg. 2014-2017
- % of Malagasy Total Merchandise Exports, avg. 2014-2017

Source: WB staff calculations based on mirror data from UN Comtrade on WITS.

7. Malagasy exports have gained market shares and are expanding to new destinations, including towards emerging markets. Prior

to 2009, Malagasy exports were largely destined to France and the USA, where the latter was supported by the African Growth

⁷⁰ Revealed comparative advantage indices (RCA) use the trade pattern to identify the sectors in which an economy has a comparative advantage, by comparing the country of interests' trade profile with the world average. The RCA index is defined as the ratio of two shares. The numerator is the share of a country's total exports of the commodity of interest in its total exports. The denominator is share of world exports of the same commodity in total world exports. The RCA index takes a value between 0 and +∞, and a country is said to have a revealed comparative advantage if the value exceeds unity.

⁷¹ The identification of products with traditional and emerging comparative advantage is based on the product space methodology developed by Hidalgo et al. (2007).

⁷² Freund and Moran, 2017, "Multinational Investors as Export Superstars: How Emerging-Market Governments Can Reshape Comparative Advantage," Peterson Institute for International Economics (PIIE), Washington D.C.

and Opportunity Act (AGOA).⁷³ As access to AGOA was interrupted from 2010 to 2014 due to political instability, firms particularly in the textiles industry, adapted to the new environment by expanding to new export destinations such as South Africa, India and Japan. Exports to China, another non-traditional destination show continued growth since the early 2000s, outpacing world exports to the same destination.

8. The selected high-performing sectors are also characterized by significant value-chain linkages with the rest of the economy, particularly agribusiness. The latter, which includes both primary and food processing activities, contributes the most to value-added generation embedded in exports.⁷⁴ Agribusiness exports are also important for job creation, both directly and indirectly. Indeed,

agricultural, forestry and fishing exports account for the largest share of direct labor value added (24.1 percent), whereas food processing has the highest share of indirect labor value-added in overall exports (21.3 percent).⁷⁵ Relatively high contributions to export value-added generation are also found in textiles and apparel, as well as in ICT and other business services (which comprises IT-BPO), but less pronounced than in agribusiness.⁷⁶ These sectors' exports also embody relatively large shares of domestic value added generated economy-wide.⁷⁷ Agribusiness has the highest forward linkages to domestic value-added generation in economy-wide production, contributing more than 50 percent when considering primary activities, food processing, as well as beverages and tobacco.⁷⁸ ICT and other business services, as well as textile and apparel both contribute less than 5 percent each.⁷⁹

⁷³ AGOA was enacted in 2000 with the objective of expanding U.S. trade and investment with Sub-Saharan Africa, to stimulate economic growth. AGOA allows duty-free access to the U.S. market for over 1,800 products, in addition to the more than 5,000 products that are eligible for duty-free access under the Generalized System of Preferences (GSP) program. For Madagascar, AGOA provides duty-free market access for apparel and textiles products, which are not included under the GSP program, provided adherence with the rules of origin. In Madagascar's case, fabrics can be sourced from anywhere in the world and still qualify for duty-free treatment in the US. AGOA has been renewed several times since its inception and it is currently set to expire in 2025.

⁷⁴ According to WB EVAD data for 2011, agribusiness contributes the largest value-added to Malagasy exports, jointly accounting for 30.5 percent of domestic value-added in exports based on forward linkages (16.7 percent from agricultural, 10.8 percent from non-agricultural exploitations, and 3 percent from food processing).

⁷⁵ Based on backward linkages using 2011 data from WB LACEX database. Direct labor value added is computed as the total wages paid directly to produce a sector's exports, whereas indirect value added is calculated as the wages paid indirectly via the production of economy-wide inputs for the sector's exports.

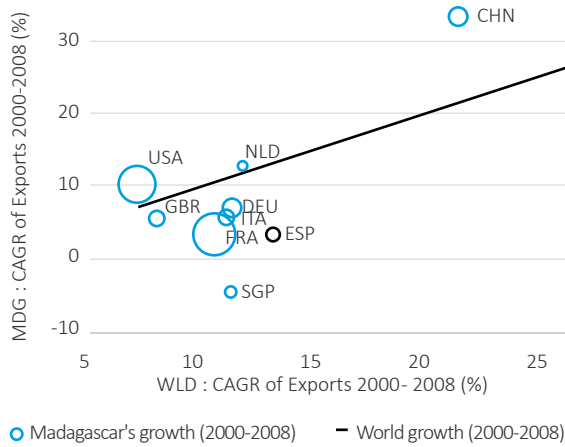
⁷⁶ Textiles and clothing together account for 8.2 percent of value addition to exports, whereas ICT and other business services account for 5.5 percent.

⁷⁷ Wearing apparel and textiles embody 15.1 percent of all domestic value-added that Madagascar exports, and other private services, which includes IT-BPO, embodies 11.6 percent.

⁷⁸ Based on WB EVAD data for 2011, primary and food processing activities contributes to 45.3 percent of value-added generation in economy-wide domestic production. 6.4 additional percentage points are accounted for by beverages and tobacco.

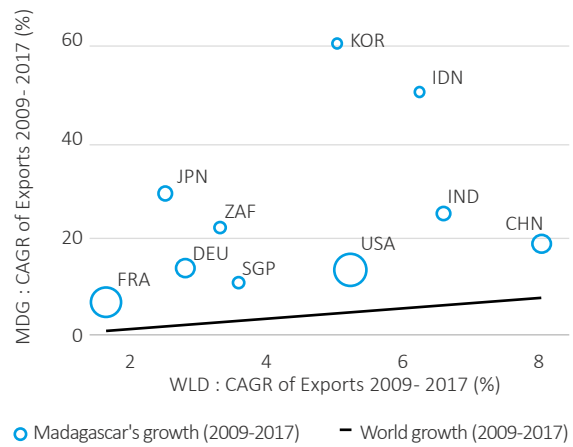
⁷⁹ ICT and other business services contribute 3.6 percent to value-added generation in economy-wide domestic production. Textiles and apparel jointly account for 2.1 percent of overall domestic production value added based on forward linkages, and 3.3 percent based on backward linkages, but these low percentages are largely explained by intra-sectoral value addition, whereas linkages with other sectors of the domestic economy are relatively low in both directions.

Figure 48: Before 2009, Malagasy exports were largely destined to the EU and the US



Source: WB staff calculations based on mirror data from UN Comtrade on WITS.

Figure 49: Since 2009, other destination markets in Asia are gaining importance, although the EU and US still dominate



Source: WB staff calculations based on mirror data from UN Comtrade on WITS.

C. High-Performing Sectors: Explaining Growth and Leveraging Opportunities

9. Madagascar has a challenging business environment, characterized by recurring political instability and governance problems. The country ranked 161th out of 190 countries in the World Bank's 2019 Doing Business, behind most comparator countries in SADC and only ahead of Comoros (164th), Angola (174th), and the Democratic Republic of Congo (184th) (Figure 50). Madagascar ranks below the average of countries in SSA in each area of the Doing Business index, except for starting a business (rank 81) and trading across borders (rank 138). It performs particularly poorly in terms of getting electricity (185) and construction permits (rank 183) in which the country is ranked in the bottom 5 per cent of all countries assessed (Figure 51).

10. While Madagascar is open to foreign investment, in practice, the lack of a strong institutional environment acts as a serious barrier. Officially there is no mandatory screening of foreign investment, with no discrimination

against foreign investors through special tax treatment, access to licenses or approvals. However, foreign investors are not permitted to own land, which has been overcome in sectors such as agribusiness through contract farming and the use of intermediaries who can source produce. Overall, the weak legal and judicial environments, as well as the lack of transparency which are subject to political corruption, are major barriers to investment. In fact, Madagascar ranks towards the bottom of World Bank governance indicators, including in perception of corruption, government effectiveness, and rule of law. The poor environment for commercial justice has been particularly problematic for encouraging new investment, with low levels of confidence in the current system. The recent peaceful outcome of the Presidential elections is likely to bode well for investor sentiment, particularly since the President has also been actively promoting Madagascar as an investment destination, including from nearby Mauritius, which is home to many foreign investors into the country.

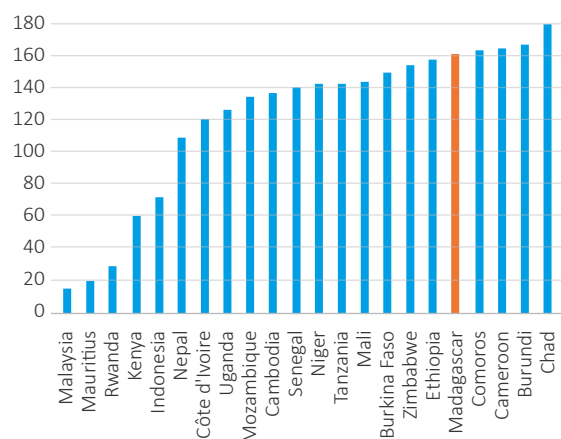
11. High trade costs and deteriorating logistics performance are hampering

competitiveness. High average tariffs (12.2 percent in 2018) and the prevalence of elevated non-tariff barriers have resulted in stubbornly high trade costs in Madagascar, contrasting with trend declines among key competitors (including Cambodia, Bangladesh, and Vietnam in the textile and apparel sector). These high trade costs reduce access to imported intermediate inputs at competitive prices, increase domestic firms' production costs, and negatively affect competitiveness in export markets.

Improved trade facilitation and simplification of administrative requirements remain key priorities to boost export competitiveness in Madagascar. However, poor domestic connectivity seems to account for the bulk of trade costs in the country,⁸⁰ with logistics performance on a downward trend over the last decade.⁸¹ Policies that reduce high "within the border" trade costs and improve logistics performance could generate significant opportunities to increase trade and attract new investments.

Figure 50: Madagascar has a challenging business climate

Ease of Doing Business ranking, 2019 (best = 1)

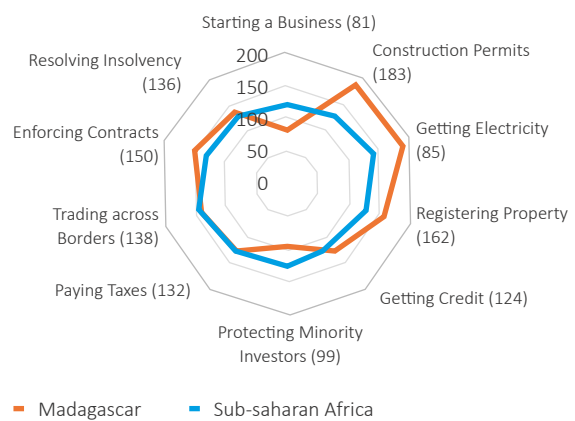


Source: Doing Business 2019.

12. Despite binding constraints to trade, certain exports continue to grow and perform well, in part supported by preferential trade agreements and other policies. In the 2000s, the government actively sought to promote exports by creating Export Processing Zones, to attract foreign investors. Furthermore, Madagascar benefits from preferential access

Figure 51: Getting electricity and construction permits are particularly challenging

Doing Business Classification in Madagascar, 2019 (best = 1)



Source: Doing Business 2019.

to the US through AGOA, and to the European Union market through the Cotonou agreement and the Economic Partnership Agreement since 2007. These policy initiatives encouraged an initial wave of investors to Madagascar, who in many instances continued to operate despite the challenges related to the business environment and the suspension of AGOA,

⁸⁰ Ali and Milner (2016).

⁸¹ Most components of the Logistics Performance Index (LPI) worsened with several components (customs performance, infrastructure, and international shipments) dropping more than ten spots in rankings between 2007 and 2018. Only two of the main components, logistics competence and the ability to track and trace consignments, improved over this period.

since they have long-term investments in the country.⁸² However, the importance of incentives pales compared with other aspects of the country's competitiveness such as the availability of affordable labor, unique agriculture products, and fast internet speed.

13. To distill the opportunities for further leveraging growth from high-performing sectors, the following section will present the results of a deep-dive analysis of the three selected sectors. The results are based on a survey that was administered amongst domestic and foreign firms to understand the motivations behind investment, how linkages could be fostered, the types of jobs that are currently being created and how employment and value added generation can be further supported.⁸³ The results of the survey were validated through focus group discussions, where policy recommendations were discussed with both private and public sectors.

(i) Focus Sector: Agribusiness

14. Madagascar's agribusiness sector is diverse and has developed around key niche markets. Four different sub-sectors of agribusiness have been identified, each with its own dynamics: (i) "Traditional" agribusiness with significant levels of resilience and potential, but with high degree of concentration and risks of cartelization; that is the case of the vanilla and lychees sectors; (ii) "New" high value agribusiness niches using Madagascar-origin as a source

of market differentiations, with a high potential for territorial inclusiveness and the development of contract farming; such as the case of cacao, special honeys, and essential oils, (iii) Other niche-high quality exports such as crustaceans and exotic tropical fruits, which are based in specific regions and require specialized logistics related to the cold chain; and (iv) Emerging domestic market oriented agribusiness, such as poultry, beef and domestic rice, which are relatively more contestable and therefore open to investors.

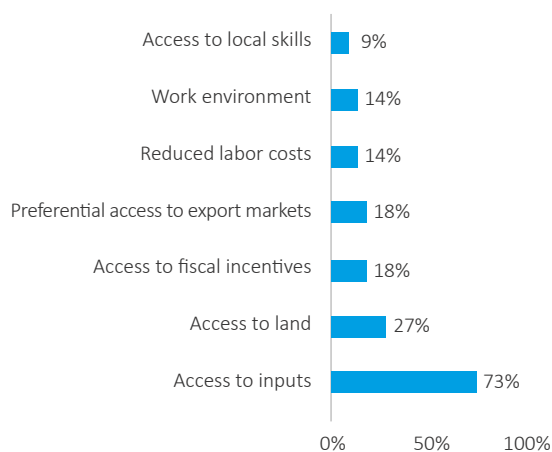
15. The main driver for agribusiness investors is Madagascar's unique agriculture resources, high-quality branding, and competitive costs. Malagasy products, particularly in the premium market segment, such as vanilla, cocoa and certain types of exotic honeys, are part of the country's unique value proposition and crucial for attracting resource-seeking FDI. The availability of distinctive agricultural inputs and competitive labor costs have allowed sufficiently high margins in these markets to cover for challenging business conditions, deficient infrastructures, and poor governance. Firms have exploited the potential from these products by developing a high-quality marketing strategy, supported by labelling such as "organic," ISO certification, "fair trade" and denomination of origin quality label such as the classification as 100 percent fine cocoa for Madagascar exports, which has been the first agricultural product of Africa to be granted denomination or origin recognition since 2016 (see Box 2).

⁸² Consultations with business leaders undertaken for the Madagascar CEM in May 2019.

⁸³ Findings based on survey administered amongst 24 IT-BPO companies (out of 37 reachable companies) 22 textiles firms (out of 55 reachable companies) and 22 agribusiness firms out of 47 reachable companies. The survey was based on a methodology used by Farole and Winkler for the book 'Making FDI work for SSA,' World Bank.

Figure 52: FDI has been attracted by the availability of Madagascar's unique inputs

Percent of firms citing factor as reason to begin operation in Madagascar



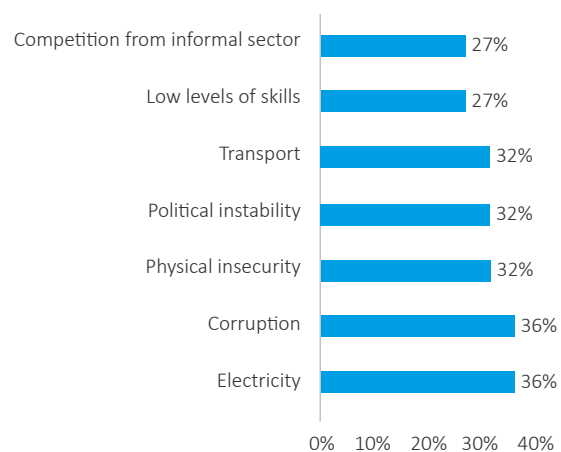
Source: Deep-dive surveys.

16. The continued expansion of the agribusiness sector has the potential to support inclusive growth largely through job creation. Over the period 2014-18, formal employment generation in the agribusiness sector increased by 17 percent.⁸⁴ Firms benefiting from FDI have more than double the number of employees as non-FDI firms, both permanent and seasonal. However, income and margins of smallholder farmers are compressed by low productivity, poor logistics, limited access to finance and fertilizers, and high margins of intermediaries (see chapter 5). When foreign investors are allowed to enter markets, they can help overcome these constraints and contribute to improved practices, labor standards, and quality controls in some cases.⁸⁵

17. Agribusiness can also support the development of regions that are lagging, particularly as planned infrastructure

Figure 53: But further growth is limited by poor access to electricity and governance constraints

Obstacles to firm's development, % of firms affected



Source: Deep-dive surveys.

develops. The agribusiness sector has the potential to develop in a number of regions depending on specific endowments and climate conditions and can therefore help reinforce territorial cohesion. Planned infrastructure improvements, including to Fort Dauphin which also has a port in the south-east of the country (see chapter 2), could open new agribusiness corridors including sugarcane, livestock (which has already started to develop in the south of Madagascar) and pepper. The potential for further investment in these sectors, which have high levels of market contestability, could make inroads in developing lagging regions (including the south-east) and offer employment opportunities of higher value for the rural population.

18. Agribusinesses are also important for creating linkages within the domestic economy. Both domestic and foreign-owned

⁸⁴ Compound annual growth rate of job creation based on data from CNaPs, the private pension body.

⁸⁵ Close to 60 percent of agribusiness firms surveyed received a technical audit from a client and over 40 percent received requests to make subsequent improvements.

agribusinesses help to develop backward linkages, for example through the purchase of seeds, fertilizers, chemicals and other inputs. Because many rural farmers do not have their own transport means, someone must deliver advanced inputs, and go and pick up their produce. The presence of agribusinesses, especially those that are input suppliers, i.e. collectors, processors and exporters, has been shown to stimulate agricultural production more broadly (Limi et al. (2017). Moreover, the rise in domestic demand is supporting the creation of forward linkages and indirect job creation. Over two-thirds of domestic Malagasy firms already sell in both the domestic and export market, using a variety of distribution channels such as retailers, wholesalers and supermarkets. With the economy under expansion, and urban demand for good quality produce increasing, there has been a rising number of international and domestic supermarket stores opening in Madagascar, as another example of market-seeking FDI. Firms currently benefiting from FDI are pursuing export-oriented strategy (applies to close to 75 percent of firms), but this could gradually change over time.

19. Key constraints to further developing agribusinesses include the capacity of local producers and the ability to meet quality control standards. The largest obstacle to local sourcing is the capacity of local producers, to which agrobusiness firms respond to by providing financial and technical assistance, inputs and equipment.⁸⁶ The lack of well-designed training facilities for agricultural workers exacerbates the challenge of low productive capacity, where

there is a preference for in-house training activities. Another challenge is the difficulty of responding to stringent health, security, environmental or social norms for niche exports to high-end markets. To address this challenge, firms are seeking to increase their own production or source directly from local producers, instead of using intermediaries, which could contribute to higher incomes and margins for producers.

20. Common challenges experienced by agribusinesses include access to land (particularly for new entrants) and physical capital. Since foreign ownership of land is prohibited, investors engaged in agribusiness are pursuing contract farming. However, successful contract farming depends on contractual procedures related to land leasing being followed. In the absence of appropriate governance procedures, new investors usually work with local intermediaries, which can raise the cost of doing business. New market entrants also face challenges related to the organization of the supply chain. Agribusiness firms also report common challenges to doing business related to physical infrastructure and are willing to use the “ristournes” system to earmark funding for local infrastructure.⁸⁷

21. The way a value chain is organized can present both opportunities and constraints, depending on the niche market. In certain cases, the organization of firms operating in a particular supply chain as private associations with public interest has facilitated coordinated engagement with both suppliers and importers, while improving their branding.

⁸⁶ A similar finding in Limi, Atsushi; You, Liangzhi; Wood-Sichra, Ulrike. 2018. Crop production, transport infrastructure, and agrobusiness nexus: evidence from Madagascar (English). Policy Research working paper; no. WPS 8486. Washington, D.C.: World Bank Group.

⁸⁷ *Ristournes* are levies collected by municipalities on selected products for the domestic market and exports, including agricultural produce

For instance, the creation of consortium of stakeholders in the cocoa value chain and subsequent increase in the share of cocoa production meeting international quality standards led to a surge in exports and foreign investments in the sector in recent years. However, there is a risk that qualified

agribusinesses may be excluded (see the case of lychees in chapter 5). Therefore, the creation of private associations which could promote collective quality control, marketing, R&D and technical support for small farmers may offer great opportunities but should also be carefully monitored to avoid risks of cartelization.

Box 2: Good practice in agribusiness: the Consortium of Cocoa Actors

In the past, the cocoa value chain presented several weaknesses, including ageing orchards, low yields, multiplication of inefficient varieties, and a lack of coordination of key value chain players. With the aim of better structuring the sector, the government, private sector and financial and technical partners started coming together in 2015 within the framework of a public-private dialogue. This resulted in the creation of the Consortium of Cocoa Actors (GACM) in April 2015, which comprised producers, chocolate makers and operators/exporters. Madagascar also joined the International Cocoa Organization (ICCO) in 2016. Shortly after, its production was labeled 100 percent fine cocoa.

Since then, with support from the World Bank-financed Integrated Growth Poles and Corridor project, several activities have been undertaken to improve quality, traceability and standards for sustainability in the sector. Around 5,000 producers and 200 cocoa preparators have received training and support, a modern facility has been developed in Ambanja, the capital of cocoa, to produce certified plants, while R&D activities have been coordinated between the private and public sectors to improve quality and productivity. Between 2015 and 2018, export volume increased by almost 60 percent to reach nearly 12,000MT, with more than 90 percent of the production meeting international standards (from 14 percent in 2014). National standards - more stringent than international ones - have been established and an independent analysis and control center for export products was also established in Ambanja. The sector is attracting new investments in cocoa processing units and the country is currently presiding the ICCO. The National Cocoa Plan validated in 2018 is now guiding all activities targeting value chain sustainability.

For several other high-value products such as vanilla, lychee, spices, cloves or essential oils, similar initiatives to structure production value chains and develop tight quality controls could also have positive effects in terms of market openings, export volumes, and opportunities to raise income and profitability for smallholder farmers. However, in contrast to the geographically concentrated production of Cocoa, many of these other export-oriented value chains have plantations spread throughout the country, complicating dialogue between stakeholders and the identification of common priorities. For instance, lychee or spice producers can face different agronomic conditions, logistic challenges, and market opportunities across various regions. An additional complication in the lychee value chain is the fact that harvests last at most two weeks for export markets. Cash-constrained

and poorly equipped producers have no other option than selling their products as quickly as possible to avoid rots, reducing their bargaining power and limiting their role in value chains. Common initiatives could be taken to improve production processes, overcome export limitations, and increase the bargaining power of smallholder producers.

The public sector can also help unleashing the potential of high-value export markets in the agribusiness. In addition to its prerogatives in industry regulation, the public sector can support the private sector through investments in public and semi-public goods, including R&D or agrolistics, that meet the upstream and downstream needs of these markets.

Source: World Bank staff

22. Looking ahead, there may be opportunities to attract resource-seeking FDI to develop agribusiness products of higher value within Madagascar and increase trade within the region. For products such as essential oils and juices, the first stage of product transformation is done in Madagascar (for example fruit to puree), which is then often exported to be transformed outside of Madagascar. Transforming these products domestically would enable greater profit retention in the country but would require changes to the distribution value chain, which is unlikely to happen over the short-term. Under current market conditions, firms that supply the domestic market with processed goods are more likely to grow their operations and expand to other products. The emergence of products such as special honeys which are currently exported to Mauritius for marketing and branding, and then sold to other high-end markets also offers growth potential. Other Malagasy exports that could serve the markets of Mauritius and the Seychelles include pulses such as pigeon peas and

dry beans, and high-value seafood such as lobster and prawns, providing other avenues for enhanced regional integration.⁸⁸

(ii) Focus Sector: Textiles and Apparel

23. The Malagasy textiles and apparel sector has different niches. Madagascar has a niche in exporting high-value apparel such as cashmere and wool knitted garments. Smaller niche sectors are also developing in the fast-fashion sector, encouraging new efficiency-seeking FDI from Mauritius. The competitive edge of the latter relies on just-on-time competitive delivery of branded garments to wholesalers and retailers managing low inventories, as well as low labor costs. They are interested in agglomeration in industrial parks where predictability of operation of the value chain can be ensured.

24. Madagascar's textile and apparel industry is well-integrated in global value chains (GVCs).⁸⁹ Indeed, Madagascar has one of the highest levels of participation in GVCs

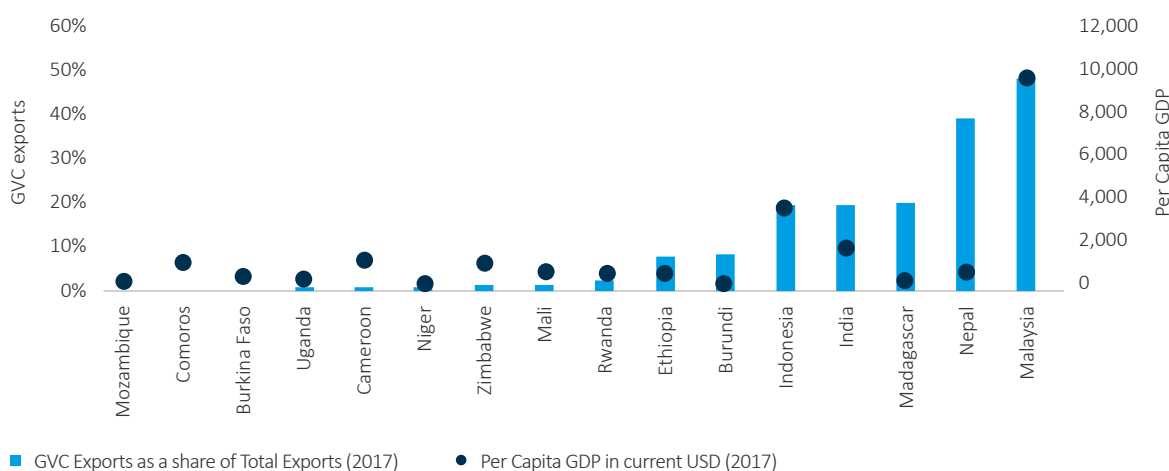
⁸⁸ Mauritius: Strengthening Regional Agriculture Imports of Mauritius and Seychelles from APEI Countries, draft report, World Bank, 2019

⁸⁹ Participation in a GVC means that a country, sector, or firm produces (at least) one stage in a global value chain. Madagascar's participation is both backward (meaning that inputs from other countries are imported to produce goods and services) and forward (through exports to other countries).

in SSA, comparable to those of Indonesia and India.⁹⁰ For example, Madagascar accounts for almost 15 percent of global imports of cashmere wool, which sources almost entirely from China, while its production of cashmere knitted garments meet around 5 percent of global demand, and up to 25

percent of demand in Germany (its main destination market). This participation in GVCs is encouraging as it contributes to income generation, and related spillovers in the domestic market, but still falls significantly short of aspirational peers in Asia such as Nepal and Malaysia.⁹¹

Figure 54: Madagascar has one of the highest levels of participation in global value chain exports compared with SSA, but performance falls behind aspirational peers in Asia⁹²



Source: WB staff calculations based on MC-GVC database on WITS

25. The textiles and apparel sector has attracted efficiency-seeking FDI, reflecting the country's key competitive advantages such as the availability of affordable labor and access to preferential markets. Over time, the fiscal incentives offered through the Export Processing Zones have become

less important, compared with other factors such as the availability of affordable labor and preferential access to markets. The recent political stability is encouraging new investors to consider Madagascar as an investment destination. For example, Mauritian textiles and apparel firms are increasingly investing in

⁹⁰ With GVC exports accounting for only 5.3 percent of total regional exports in 2017, Sub-Saharan Africa is the world region with the lowest integration into global value chains, even without excluding high-income countries (South Africa accounted for 78% of the region's total GVC exports in the same year).

⁹¹ World Development Report 2020, Global Value Chains: Trading for Development, World Bank.

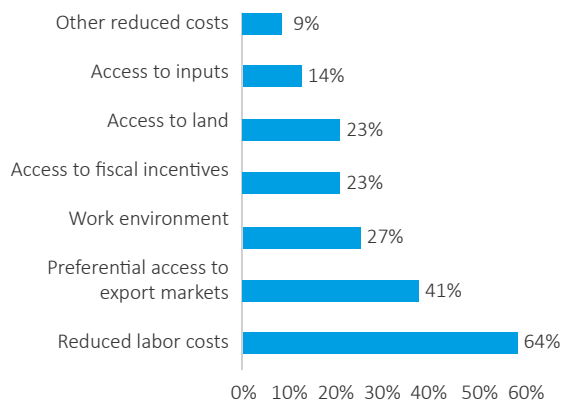
⁹² The source dataset (WB MC-GVC) covers four "classic" or "archetypal" GVCs which are characterized by a lead-firm network structure and have been much studied: apparel/textile, footwear, electronics and motor vehicles (Ferrantino and Schmidt, 2018). Since the underlying data source is UN Comtrade merchandise trade statistics, country coverage is very good, especially among developing countries. The similarities and differences in the organization of these four distinct GVCs are a useful entry point into an understanding of GVC trade and been used to analyze the response of developing-country GVC participants in the crisis of 2008-2009 (Cattaneo, Gereffi, and Staritz 2010). The share of total global merchandise exports accounted for by these four GVCs has fluctuated between around 14 percent and 36 percent since 1990, with the weight of classic GVC trade in total merchandise trade tending to be higher when the price of oil is low, and vice versa.

the 'fast fashion' niche where the availability of affordable labor is a strong incentive. A strong relationship already exists between Malagasy and Mauritian textile and apparel firms, whereby

intermediaries bundle large orders from global buyers and then source them from Madagascar among other countries, thus linking smaller and often domestically owned firms to GVCs.

Figure 55: Sources of comparative strength in the textiles sector include reduced labor costs and access to preferential markets

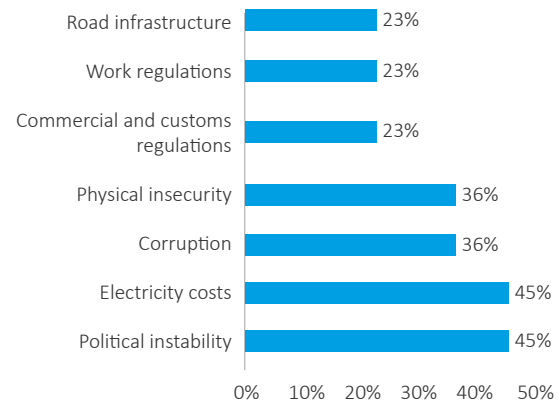
Percent of firms citing each factor as comparative strength



Source: Deep dive survey results

Figure 56: However, further growth is limited by political instability and high electricity costs

Obstacles to firm's development, % of firms affected



Source: Deep dive survey results

26. The textiles and apparel sector is important for the creation of jobs, particularly for females. On average, an estimated 70 percent of the workforce is made up of female recruits. Therefore, from an inclusion angle, the textiles and apparel sector is an important creator of female employment, with opportunities opening up in other parts of the country. Plans are underway to develop a second industrial zone in Moramanga,⁹³ which could help foster employment opportunities outside of the current zones (in the capital and Antsirabe). However, there is resistance from certain incumbent firms to group together in special economic zones due to concerns

related to the availability of social services and the possibility of unionization of employees. On the other hand, other investors, for example those who are currently based in Mauritius would welcome the possibility of investing in a new special economic zone, if concerns related to political instability are addressed and there are improvements to transport logistics, such as more competitively priced air cargo fees, which is an important means of transportation and seen as a feasible alternative to shipping. Addressing infrastructure gaps, improving investment protection and governance would help reduce the need for ad hoc tax incentives to attract foreign investors.

⁹³ The government has recently approved a Special Economic Zone law to support a new Textile City project, to be located on the future highway connecting Antananarivo and the Toamasina port. The site is planned to be built on an area of 100 to 600 hectares and able to accommodate more than 100 production plants in a totally integrated zone that will offer all logistic administrative customs, banks, a single window for investors, as well as residential and commercial infrastructure. It is expected that the electrical connectivity will be good as the energy source is just close to this area.

27. The integration of Madagascar's textiles and apparel sector in GVCs has encouraged suppliers to demand higher standards, which has positive spillover effects in the domestic economy.

More than half of all firms received an audit from a client firm, with requests to make improvements related to product quality, labor standards, timing and volume of production. In turn, nearly a third of foreign-owned firms provide assistance to Malagasy firms through technical support to enhance quality as well as financial support. In general, foreign-owned firms work well with Malagasy firms, where motivations for collaboration include undertaking research and development activities jointly. Backward linkages have been developed with firms specializing in packaging but otherwise there is limited use of inputs from domestic suppliers. Looking ahead, the creation of the textiles industrial park could foster forward linkages through the development of public services and infrastructure.

28. Overall firms in the textiles and apparel sector have a positive view for the development of the sector, including developing products of higher value added, if certain key constraints could be lifted.

The most important deterrent for foreign investors in textiles and apparel is related to poor governance and infrastructure. Challenges related to electricity services provision, including high costs and poor reliability are also key constraints. Many firms are developing local solutions to these challenges including the installation of standalone solar panel systems, where there is scope to work with the national utilities company, JIRAMA, to develop storage solutions and sell excess energy back to the grid. A further challenge is related to skills development, particularly

for higher-value products and managerial positions. While local training centers do exist, there is a mismatch between the curriculum content and sector demands, with most firms preferring to provide training in house. In addition, an overall constraint is related to trade and transport infrastructure and logistics, for example at the port, related to air transportation, customs and trade facilitation. Finally, with destinations such as China and Mauritius continuing to grow, there is significant scope for Madagascar to meet the demands from the textiles and apparel industry, in light of its competitive advantage in affordable labor.

(iii) Focus Sector: IT-BPO

29. Over the last decade, a robust IT-BPO sector has emerged.

While IT-BPO activities are to a large extent focused on lower value-added services such as call centers and back-office activities, in recent years a small higher value-added niche focused on IT, software development and artificial intelligence has started to develop, with well-qualified local software developers.⁹⁴ Activities in the IT-BPO sector are largely oriented towards the export of service sales, where France is the main destination, capturing 75 percent of firms' sales, followed by the US, Switzerland, and Belgium. The organization of the sector is being consolidated through the establishment of an industry association, where collaboration efforts include obtaining better input prices and conducting joint training for employees.

30. Madagascar's IT-BPO sector continues to attract efficiency-seeking FDI, reflecting the country's unique value proposition.

Investments in the sector are being driven by the low cost of labor in combination with

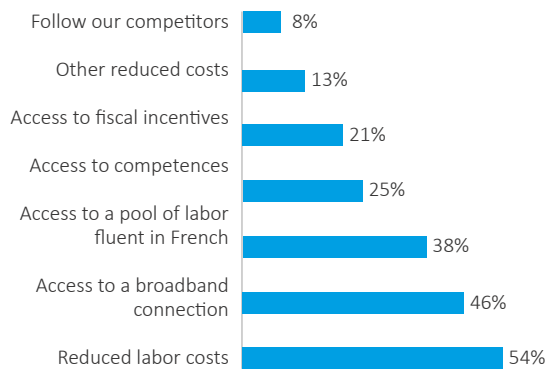
⁹⁴ Digital Moonshot, World Bank, forthcoming, 2019

fast broadband internet availability, a French speaking population perceived as having a clear accent, and a convenient time zone for the operation of call centers servicing the Francophone market in Europe.⁹⁵ Although Madagascar does not have the largest IT-BPO

sector on the continent, the country has a unique value proposition due to comparatively low labor costs and fast broadband speed, making the sector not only fast growing but also more competitive compared with other francophone countries such as Morocco, Tunisia and Senegal.

Figure 57: FDI has been attracted by the availability of affordable labor and access to broadband

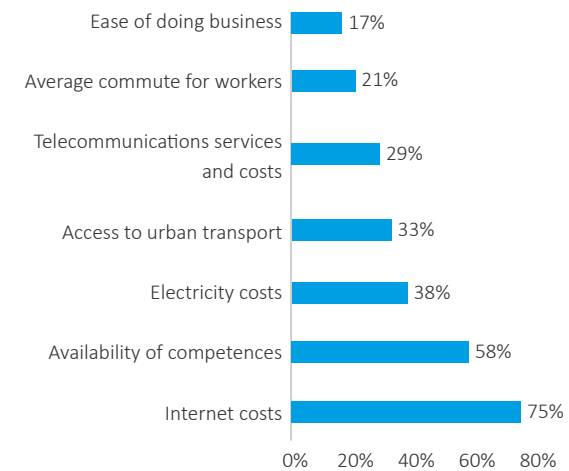
Key reasons for investing in Madagascar, % of firms citing each factor as attraction



Source: WB estimates based on deep-dive survey results

Figure 58: But further growth is limited by high costs and labor with the right expertise

Key constraints to further growth, % of firms affected



Source: WB estimates based on deep-dive survey results

31. The expansion of the IT-BPO sector continues to offer opportunities to support inclusive growth, through employment generation (including for female workers and the youth) and expansion in areas outside of the capital. Over the period 2014-18, jobs increased by 11.4 percent in the IT-BPO sector.⁹⁶ Female workers occupy close to 50 percent of entry level jobs and nearly 40 percent of management positions. Furthermore, the sector is expanding to allow individuals to be

based at home, offering greater flexibility, which is also encouraging new female recruits.⁹⁷ Industry leaders have started expansion of activities, particularly call centers, outside of Antananarivo in areas such as Tamatave, Morandava and Diego, where benefits include reduced overheads and improved logistics for employees. However, the further development of regional call centers would depend on the successful expansion of internet connectivity throughout the country.

⁹⁵ According to the EDBM, 200 IT-BPO companies were created in Madagascar between the period of 2005-2017. A growth spurt is observed since 2010, coinciding with the arrival of fiber optic cables connecting the Island to fast broadband, where Madagascar has both the East African Submarine System (EASSy), an undersea fiber optic cable that stretches from Sudan to South Africa and the Lower Indian Ocean Network (LION).

⁹⁶ Compound Annual Growth Rate using data obtained from CNaPS.

⁹⁷ Interviews with the IT-BPOs business leaders indicated that they view the flexible, home-based work as an area of further growth. Individuals would be hired on a consultancy basis and will be provided with a data stick to work from home.

32. While the activities of the IT-BPO sector are oriented towards external markets, linkages with domestic firms are evident, and client relationships are contributing to capability building and upgrading. In addition to the use of internet services provided by Malagasy firms, two-thirds of firms report using other goods and services acquired from Malagasy suppliers, such as equipment and machinery, business services, and technical services amongst others. These linkages have developed due to the quality of products and their proximity allowing firms to establish a better relationship with their supplier. There are emerging knowledge transfers and spillover effects through working with local suppliers, through for example providing quality assurance or training of workers. Furthermore, close to 60 percent of firms have been requested by the firm that has outsourced its services (the Client) to make improvements, such as investments in new equipment or technology, improving product quality, and training employees, with nearly 40 percent of firms receiving assistance for this upgrading.

33. While there is great potential for further growth in the sector, particularly in the higher-end value market, a lack of available and relevant skills is a key constraint. In the call center segment, there are concerns related to the deterioration of the French speaking capacity of the newer generations, which is the result of low pedagogical capacity of teachers associated with a poor approach for the introduction of French language in classrooms. The risks of automation replacing core business activities in the call center segment were considered as

negligible. In the higher value-added segment, there is an increasing risk of “brain drain,” to countries such as France⁹⁸ and Canada. Across both niches, there are challenges in filling managerial positions, mainly related to a lack of competencies. While training facilities do exist, these are used by only an estimated 20 percent of firms, largely because the curricula do not reflect the needs of the job market, with a preference to undertake internal training. As the IT-BPO industry body strengthens, joint training activities are increasing (currently close to 40 percent of firms, which is set to grow). Based on an emerging talent pool in Madagascar, industry leaders expressed that further skills development, for which they are willing to contribute, should help to support the diversification of the sector into other niches, such as Artificial Intelligence and applications development.

34. Constraints related to physical capital, including fast but expensive internet and unreliable electricity also affect growth prospects. While Madagascar has a fast download speed, featuring amongst the global top-25, costs are still relatively high compared with competitors such as Morocco and Mauritius. The poor quality of electricity service provision means that alternative sources of energy need to be in place, such as generators. Maintaining quality services has resulted in firms paying multiple operators for both broadband and electricity services, which increases costs (see chapter 5 for a discussion of competition in the telecommunications sector). Addressing these constraints is critical for expansion of the sector, and particularly so in cities outside of the capital.

⁹⁸ For example, there is a new French tech Visa that fast-tracks the recruitment of international digital talent for French companies, which holds regular recruitment initiatives in Madagascar.

D. Lessons Learned and Policy Recommendations

35. The business value proposition of the “bright spots” is strong enough to offset domestic constraints. Most of the success stories are found in export products that are of premium quality and/or niche in terms of market penetration strategy, thus avoiding engaging in direct competition with leading world players and overcoming the virtual non-existence of a domestic market for these products/services to serve as an anchor. If existing constraints could be lifted or reduced, the threshold for profitability would become lower thus enabling more activities willing to pursue a similar strategy to emerge, as well as higher growth to expand the current successful niches. Measures encouraging the development of an incipient domestic market for some of these products would also help support their development.

36. The adaptability of exporting firms and historical relations with destination markets were key factors of success. The adaptability of firms operating in the “bright spots” is evidenced by the textiles sector response to suspension of AGOA in 2010-14 and by the capacity to seize market opportunities as they emerge (IT-BPO, fast fashion and some agribusiness such as cocoa and honey). Longtime established relationships with foreign investors and markets arising from geography, historical events and cultural links also appear as a key factor in all successful sectors.

37. Foreign investors in “bright spots” brought capital, but also know-how and market access. Common factors that contributed to success stories were the benefit of foreign direct investments, not only in terms of physical capital and technological improvements, but also know-how (both technical and marketing) and links with destination markets (established

presence and distribution channels). Policies geared toward improving consistency and dependability through the development of skills, strategic infrastructure, such as the cold chain and signaling capacity, such as quality compliance accreditation, could help attract FDI to other sectors with latent potential and expand possible exposure to critical factors of success.

38. Policies that could help release the untapped potential from high-performing sectors would also benefit the rest of the economy. Key policy priorities include progress in trade and investment facilitation, measures to improve dispute resolution mechanisms, connectivity, access to skills and energy.

- **Ambitious trade and investment facilitation package.** Trade facilitation solutions need to be enhanced through greater transparency of non-tariff barriers, streamlined procedures for investors, and a comprehensive review of existing tax and regulatory incentives. As a first step, the existing Trade Facilitation Agreement should be fully enforced, and the role of National Trade Facilitation Committee should be strengthened. Over time, the coordination of government agencies operating at the border should be reinforced and fees and charges should be consolidated and reduced. The investment promotion agency EBDM could help identify and eliminate discriminatory requirements and streamline procedures for investors, including visas and expatriate work permits. This agency can also help develop aftercare and linkages programs to fully leverage positive externalities from FDI. In order to better leverage existing free trade agreements and the benefit of the upcoming African Continental Free Trade Agreement, private sector advisors could provide counsel the government on trade and investment policies.

- Improved business climate and dispute resolution.** The predictability of the business environment for private investors could be improved through strengthening the commercial justice system (including through reducing costs related to judicial fees) and ensuring that final awards can in practice be swiftly enforced. Encouraging arbitration mechanisms and alternative means of dispute resolution could be important first steps (see Box 3). The establishment of a Systemic Investment Response Mechanism (SIRM) with direct links to the Prime Minister's office could be another important initiative. Over the long run, the justice system and its administration will need to be reformed and modernized.

Box 3: Boosting Investor confidence through Alternative Means of Dispute Resolution (ADR)

As strengthening the Court System may be a long-term endeavor, given the importance that improving investors' confidence entails for development, many countries have opted to promote Alternative Dispute Resolution (ADR) mechanisms, which may be deployed to address this challenge in shorter time frames.

Countries have enacted legislation enabling the use of ADR techniques to resolve disputes arising not only among private subjects but also between private investors and public authorities. ADR techniques include arbitration, mediation, early neutral evaluation and fact finding among others. A key point is that in the case of arbitration, for this ADR to be effective, it is critical that the arbitration decision is final, without appeal before domestic courts. Further, to ensure the use of ADR, many countries set up diffusion and capacity building programs to make private and public sector users alike become familiar with these types of procedures, as often they are not well known in many countries.

Another alternative to foster investors' confidence, beyond using arbitration and other legal means, has been to establish informal conflict management systems, that can enable governments to identify, track, and manage grievances arising between investors and public agencies as early as possible, well before the aggrieved investor considers or even submits a legal claim. An early warning and tracking mechanism to identify and resolve complaints and issues that arise from government conduct could help fill this gap, ultimately preventing legal disputes and facilitating harmonious relations between investors and governments. This mechanism, called a Systemic Investor Response Mechanism (SIRM) and initiated by the WBG, enables countries to collect data and helps identify patterns in government-generated grievances affecting investments. Furthermore, SIRM quantifies investment retained or expanded as a consequence of addressing grievances, as well as investment lost as a consequence of not addressing them. SIRMs have been already recommended as part of the G20 Compact with Africa and have been successfully piloted in many countries, and Madagascar could be one where this tool could be deployed.

- **Better connectivity.** Road transport should be enhanced, as currently planned, in order to improve connectivity between populated rural areas, major urban areas, and ports (see Chapter 2). Given that the road to Fort Dauphin will soon be constructed, efforts could already start to negotiate access to its port, which could accommodate larger cargo ships and is closer to major shipping lanes than Tamatave. Reforms to air connectivity have started through the Open Skies Policy, which will be revisited in 2020, and could consider reducing air cargo fees.⁹⁹ An overhaul of the domestic market segment, for example through the rationalization of security procedures and equipment of air caravans would support the transportation of goods, and there would be positive spillovers to the tourism industry. This should go hand in hand with increased competition in the jet fuel market (see Chapter 5). Finally, constraints related to high internet costs could be addressed through encouraging competition and incentivizing investments in connectivity, including for rural areas (see in chapter 5).
- **Better alignment of skills' supply and demand.** Improved provision of basic education and vocational training is considered by the private sector to be one the most important priorities to boost both external competitiveness and domestic growth opportunities in Madagascar. Regarding basic education, improved teacher qualification, selection, and promotion criteria are particularly important. Regarding vocational training, firms invest individually but coordination at sector-wide level or vertically along value chains is limited. This represents a missed opportunity to scale up skills availability with positive spillover effects for other actors in the sector and at economy-wide level. This justifies effective public policies to support vocational training. To respond to market demands, curricula in vocational centers should be developed by, or in collaboration with, the private sector.
- **Enhanced access to affordable and reliable energy.** Beyond plans to reform the energy sector and increase power generation capabilities (see chapter 2), approving a new regulatory framework to support off-grid renewable energy generation and storage by the private sector could be a quick win.¹⁰⁰ This measure could potentially alleviate supply constraints and further encourage the private sector to invest in alternative means of energy supply, including solar.
- **Better organized value chains.** Regulatory measures could be taken to institutionalize private associations of public interest between small producers in order to foster quality enhancement, R&D, training, and global market positioning. The recently established Consortium of Cocoa actors is a good example of successful coordination. For other high-value agribusinesses, such as lychee and vanilla, a denomination of origin could help increase market opportunities, if labels are credibly managed and enforced. At the same time, risks of cartelization need to be addressed, enforcing market rules to promote competitive neutrality and ensuring balanced relationships between producers, collectors, and exporters (See Chapter 5 on the lychee example).

⁹⁹ This reform was included in the Diagnostic Trade Integration Study (DTIS), 2016.

¹⁰⁰ Such a measure would have to follow the PPP framework for Independent Power Producers, as indicated in the DTIS.

Seizing the opportunities for inclusive agriculture growth



◀◀ *While selected cash crops perform well for export markets, the production of staple crops, particularly rice, for the domestic market has failed to meet local demand. The efficiency of rice value chains is compromised by farmers' remoteness, which contributes to the existence of numerous intermediaries, as well as high transport costs from the farm area to a main road. Improving the competitiveness of the rice value chain requires: (i) investing rural connectivity; (ii) increasing access to information on price and demand for produce; (iii) promoting commercialization of the warehouse receipt system; (iv) encouraging farmers to adopt collective behaviors; (v) investing in regional rice mills; and (vi) reversing the ban on rice exports.* ▶▶

A. Introduction

1. The agriculture sector, dominated by subsistence activities, supports the livelihoods of an estimated 75 percent of the population. While Madagascar is a large exporter of various high-value agriculture commodities,¹⁰¹ most rural households are engaged in low-income subsistence production with household food security being a consistent concern. Poverty is concentrated in rural areas, where 85 percent of the rural population are poor, compared with 40 percent in urban areas.¹⁰² Rice is the main staple food, but production has not kept pace with population growth. Nationwide, only about 20 percent of the rice grown in Madagascar is marketed for cash and, even in Toamasina, the "rice granary," just 15 percent of rice is marketed commercially.¹⁰³ This situation is leading to rising food imports and declining levels of national food self-sufficiency.

2. This chapter explores the constraints to competitiveness in the rice value chain.

The chapter focuses on rice, since this crop is the focus of government policy¹⁰⁴ and dominates domestic production and consumption. Addressing the constraints in the rice value chain would also benefit other staple crops such as maize, soybeans, and various bulk commodities that are traded through similar collector networks as rice and are important to the growth of livestock production and food processing. The analysis is structured according to how the value chain is built up: (i) crop production; (ii) crop marketing and storage; and (iii) transport and processing. There is then a discussion of trade policies and the role of market information. The analysis in this chapter is based on a survey of available literature and fieldwork that was conducted in March 2019 in the central highlands around Vakinankaratra and Itasy which are large rice-growing areas.¹⁰⁵

¹⁰¹ For example, bourbon vanilla, cloves, lychee, spices, gourmet honey, fresh vegetables, farmed prawns, dried beans and other shelled legumes, which are discussed in-depth in chapter 3. Between 2012 and 2017, agribusinesses accounted for 38 percent of merchandise export, with an annual average value of US\$982.3 million.

¹⁰² Calculations estimated using the international poverty line using the 2012 poverty line.

¹⁰³ INSTAT, 2013

¹⁰⁴ NDR, 2016; Ministry of Agriculture and Livestock, and Fisheries, 2017

¹⁰⁵ Meetings were held with public institutions, technical and financial partners, large and small commodity collectors, individual smallholder farmers, and groups of smallholder farmers. Additionally, primary data on transport costs were collected through a survey of vehicle operators along four major corridors that are important to rice and other major commodities: Alaotra-Antananarivo, Alaotra-Toamasina, Itasy-Antananarivo, and Mahajanga-Marovoay-Antananarivo.

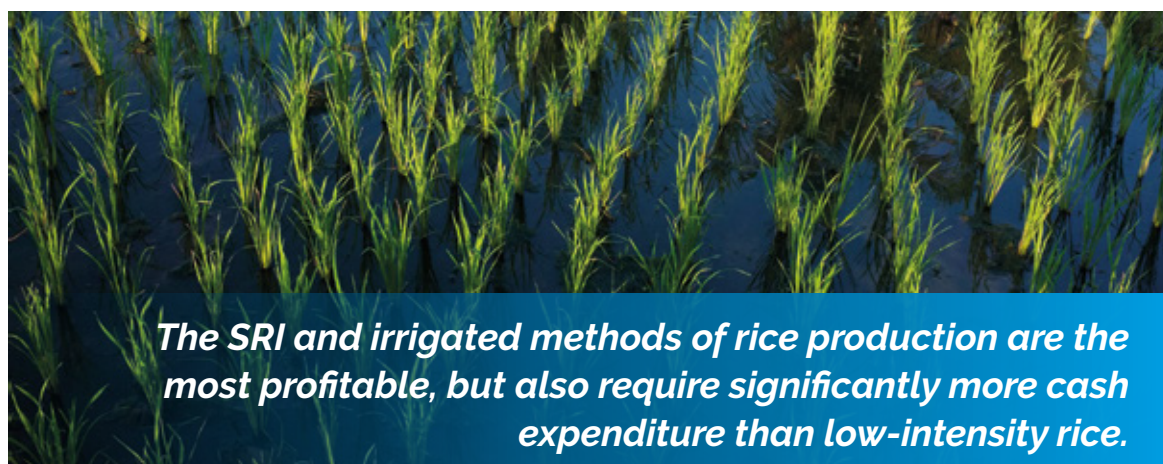
B. Crop Production

3. There are many well-known opportunities to improve crop yields through production techniques.

The National Center for Applied Research in Rural Development (FOFIFA/CENRADERU), for instance, has shown that the adoption of improved seeds could enhance rice yields from two to four tons per hectare for irrigated rice and from one to three tons per hectare for upland rice.¹⁰⁶ Recent analysis suggests that agricultural growth can be enhanced through: (i) greater use of improved inputs, including fertilizers; (ii) improving land tenure security to increase incentives for agricultural investment and access to credit; and (iii) fostering linkages between agricultural production and nutrition to improve the health status and productivity of agricultural labor.¹⁰⁷

4. However, farmers face a lack of market certainty that rice surplus can be sold at a remunerative price to justify use of a

higher-yield system. Despite long-standing efforts to promote the *System of Intensive Rice Cultivation* (SRI) in Madagascar,¹⁰⁸ such practices cover barely 0.2 percent of irrigated land, compared with widespread use in over 50 other rice-producing countries.¹⁰⁹ Farmers who had been introduced to SRI practices through development projects later switched back to conventional techniques when the project came to an end because of the high costs of the SRI system and uncertain market prospects for surplus rice.¹¹⁰ As shown in Table 4, the SRI and irrigated methods of rice production are the most profitable, but also require significantly more cash expenditure than low-intensity rice. Moreover, estimates of household consumption needs indicate that farmers can rely on the low-intensity upland rice which is the least expensive system.¹¹¹ Therefore, SRI practices will only be attractive if farmers can be sure to sell their surplus at an adequate price to cover costs and the risk of investing to produce at that level.



¹⁰⁶ Razakamiaramanana and Rakotoson, 2014.

¹⁰⁷ World Bank, 2016

¹⁰⁸ Almost 40 years ago, FOFIFA/CENRADERU (an innovation platform for facilitating the adoption of new technologies) developed a set of recommendations for introducing SRI which is a system of low water, labor-intensive rice to improve yields.

¹⁰⁹ World Bank, 2016; Ministry of Agriculture, Livestock and Fisheries, 2006

¹¹⁰ Interviews with farmers during the field mission.

¹¹¹ Estimations assume that an illustrative family of five only needs to produce around 880 kilos of paddy annually which can be done by cultivating just 0.44 hectares of low-intensity upland rice which is the least expensive system.

Table 4: Financial costs and returns from rice sold immediately after harvest

	Yield (paddy)	Farmer's price (paddy)	Gross Revenue	Purchased Inputs (cash costs)	Family labor & other non-cash costs	Total Costs	Cash costs as % total	Cash costs per kg	Total costs per kg	Net profit (gross revenue - total costs)		Net rate of return
	(Kg/ha)	(MGA/kg)	(MGA/ha)	(MGA/ha)	(MGA/ha)	(MGA/ha)		(MGA/kg)	(MGA/kg)	(MGA/ha)	(US\$/ha)	
Upland rice												
Low-intensity	2,000	550	1,100,000	390,900	564,400	955,300	41%	195	478	144,700	43.85	0.15
High-intensity	3,000	550	1,650,000	822,100	564,400	1,386,500	59%	274	462	263,500	79.85	0.19
Irrigated												
Low-intensity	3,000	550	1,650,000	619,100	564,400	1,183,500	52%	206	395	466,500	141.36	0.39
High-intensity (SRI)	4,500	550	2,475,000	1,104,100	564,400	1,668,500	66%	245	371	806,500	244.39	0.48

Notes: 1mt paddy = 670kg polished rice. Assume 20% of labor is hired for cash. Net rate of return = net profit/total costs.

Source: Author's calculations based on data from Gergely and Kanatiah, 2017.

C. Crop marketing and storage

(i) The farm level – the start of long and uncompetitive marketing chains

5. Most farmers engage the market through a village-based sub-collector. Sub-collectors are typically residents of the farm area with social ties to the community, and work directly under a larger, town-based collector who sets the price he or she is willing to pay for crops delivered to their warehouse or other assembly point. Town-based collectors often provide sub-collectors cash to buy from farmers and have several sub-collectors working under them in different locations. Sometimes the collector provides transport from the farm area and pays a commission to the sub-collector for the crops they buy while others leave it to the sub-collector to arrange transport and make their profits entirely from whatever price they negotiate with the producer. Both farmers and sub-collectors have limited negotiating power, facing fixed prices by town-based collectors, largely based on historical price trends. Further, due to a lack of market information systems, both farmers

and sub-collectors have little knowledge of prices in other villages or towns even 20-40 kilometers away.

6. The most competitive market outlet is on market days when town-based collectors and/or sub-collectors venture into neighboring villages. This is most common in irrigated areas or other locations near a national road where collectors believe that sizable volumes of rice or other crops will be available for sale. In these circumstances, outside collectors may arrive in the market with a small truck, tractor, or cart. Because they do not live in the immediate village, farmers report that prices sometimes rise by 20 percent or more by the end of day as the buyer seeks to secure a full load. Therefore, finding ways to bring farmers closer to regional collectors and otherwise facilitate competition at the farm gate level could be a direct way to incentivize the uptake of improved technologies to enhance yields. Even if sub-collectors cannot be fully bypassed, producers would benefit from greater competition at the farm gate and improved access to market information.

(ii) The national market level – slightly more competitive but still inefficient

7. Collectors in district towns and regional centers are slightly more competitive, having access to capital, warehouse storage facilities, and transport. Most collectors have access to capital from other businesses to finance the purchase of farm commodities. Certain collectors have warehouses to store rice and other non-perishable crops until prices peak. In some cases, community warehouses are also used for storage to deposit rice and obtain a bankable warehouse receipt to finance further purchases. Well established collectors often operate a small fleet of trucks for long-distance and local transport. They may operate small milling businesses to serve the local market and/or sell paddy to other nearby mills.

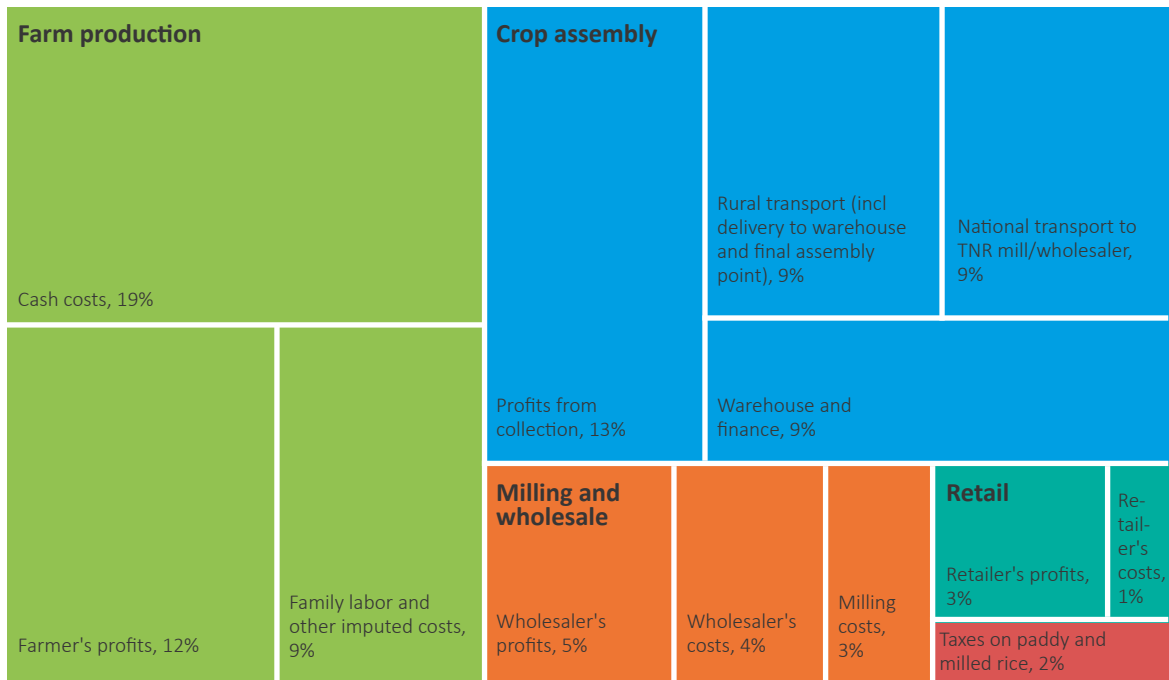
8. Regional collectors are in a better negotiating position, with access to wholesalers who provide market information, although the payment and transportation processes are inefficient. With access to several large wholesalers, regional collectors obtain information on prices and selling opportunities. Prices are agreed through negotiation between the collector who travels to the urban market outlet with the load, and the wholesaler, who pays in cash. Due to poor road conditions, a truck can carry only ten tons, and so the journey must be repeated several times, implying not only additional transportation costs but also security-related concerns due to travelling with large amounts of cash; an issue which could be addressed through electronic money payments. Furthermore, since modern, high-

capacity mills are not available in the main rice growing areas, the collector has to transport paddy rather than milled rice. As the milling outturn for rice is around 67 percent, an additional 33 percent of weight and volume is transported around the country in the form of husk and bran adding substantially to costs.¹¹² Investments in good quality industrial mills in the main rice growing areas, therefore, could greatly improve the competitiveness of domestic rice with imports and provide new value to be shared up and down the chain.

9. Given these value chain dynamics, the farmer receives a small share of total value in the rice chain. Figure 59 shows the indicative price build-up for SRI practices (since this is the model Madagascar is recommended to follow) based on the typical arrangements whereby the farmer sells soon after harvest and the collector stores for several months. All values have been converted to milled rice equivalent with crop storage paid by collectors and milling done in Antananarivo. Because the division of responsibilities between sub-collectors and collectors vary, costs and profits at this stage in the chain have been merged to one stage called crop assembly. This approach has the further advantage of allowing for a comparison of the value chain costs in Madagascar with other countries where similar analysis of the price build up for rice has been carried out (see below). In Figure 59, the percentages are a share of the final retail price. When other variations of rice are considered, such as low-intensity upland rice and low-input irrigated rice, farmer profits as a share of the final traded value are much smaller, at an estimated 4 percent and 11 percent respectively.

¹¹² There is only one modern mill in the Lake Alaotra which has recently opened for business and there are no modern mills in Itasy. More specifically, about 28 percent husk and 5 percent bran.

Figure 59: Indicative price formation of milled System of Intensive Rice sold in Antananarivo after five months of rural storage paid by collector



Notes: Based on costs for the 2018/19 season and final retail price of MGA 2,000/kg in Antananarivo and six months of storage paid by collector. Standard definitions of value chain stages were applied to allow comparison with data for other countries. Source: Authors' calculations based key informant interviews in Vakinankaratra and Itasy plus Gergely and Kanatiah 2017, and World Bank 2018a.

10. An assessment of value-added costs (defined as new costs that arise at each stage excluding the cost of crop purchases) shows that farmers have the lowest rate of return and that collection is an expensive stage. Farmers bear the highest total costs and receive the lowest rate of return in per kilo terms (Table 4). Moreover, farmers mostly produce just a few tons per year as opposed to collectors who handle several hundred tons and wholesalers who handle several thousand tons. For farmers to earn a living wage, therefore, profits from each

kilo are more critical than for others further along in the chain. The current assessment of value-added costs thus shows how a low-input subsistence strategy can make good economic sense. Value added costs at the assembly stage include costs related to finance, rural transport, storage, and transport to Antananarivo. Reducing these costs through improved market efficiencies, therefore, could also be of major benefit to improving Madagascar's overall competitiveness in crop production and market-based agriculture more generally.

Table 5: Indicative value-added costs, profits, and rates of return from milled SRI rice sold in Antananarivo after five months of rural storage paid by collector during assembly (MGA per kilo milled rice)

Value chain stage	Value added costs	Profits	Rate of return
Farm production	573	247	43%
Crop assembly	541	259	48%
Milling & wholesale	145	105	73%
Retail	25	70	280%

Source: Authors' calculations from data in Figure 59.

11. Comparison with value chain data for other countries shows that farmers in Madagascar receive a much lower share of the total profits, while collectors at the assembly stage receive a much higher share (Table 6). This is particularly so when the results for Madagascar are compared to Thailand which is a world leader in rice. When farmers in Madagascar store their crop before selling, the share of total profits captured by

producers improves from 36 to 45 percent but still compares poorly with Madagascar's international competitors. At the assembly stage, the data equally show that crop collectors in Madagascar capture from 31 to 38 percent of total available profits compared with just five to 18 percent in the comparator countries. These findings further underscore the need to improve financial incentives for farmers to engage in market participation.

Table 6: Share of total available profits from smallholder rice captured at each stage of the value chain in Madagascar and comparator countries

	Farm Production	Crop Assembly	Milling & Wholesale	Distribution & Retail
Madagascar (sell immediately)	36%	38%	15%	10%
Madagascar (farmer stores mos.)	45%	31%	13%	9%
Malawi	66%	8%	11%	15%
Mozambique	47%	17%	16%	20%
Nigeria	71%	18%	7%	5%
Zambia	57%	11%	17%	15%
Thailand	89%	5%	4%	2%

Source: Authors' calculations from data in Tables 4 and 5 for Madagascar; Tchale and Keyser, 2010 for Malawi; and World Bank 2007 for Mozambique, Nigeria, Zambia, and Thailand.

(iii) Access to storage – a means for farmers to capture a higher share of the total value from rice, but reforms are needed

12. With large seasonal price cycles for most crops, the ability to store is a major determinant of who benefits from crop marketing. In rural areas, paddy prices in the same location were reported to range from MGA 550 per kilo (US\$0.16) immediately after harvest to MGA 800 per kilo (US\$0.22) or more five or six months later. For onions, farmers said prices can swing from MGA 500 per kilo (US\$0.14) at harvest to MGA 1,000 (US\$0.28) when supplies are scarce. For soybeans, prices went from MGA 750/kg (US\$0.21) at harvest to MGA 3,000/kg (US\$0.83) or more just four months later.

13. However, smallholders face multiple pressures to sell immediately after harvest. Physical access to safe and dry storage space at current production levels is only one part of the problem. For many households, the amount of surplus rice available for cash sale presently may be no more than 200 kilos which can easily be stored at home. Rather, the main problem is that farmers face multiple pressures to sell immediately after harvest both for family needs and to raise cash for the next production cycle. Improving the returns from market participation therefore requires a combination of changes that promote competition and provide flexible opportunities for farmers to monetize their crops as prices rise.

14. To help farmers with immediate cash needs benefit from seasonal price cycles,

community granaries and other storage places have become a place for individuals to collateralize crops for obtaining seasonal finance. Micro-finance institutions (MFIs) such as CECAM¹¹³ (*Caisses d'Épargne et de Crédit Agricole Mutuels*), OTIV (*Société Coopérative d'épargne et de crédit*), and others have taken on joint "key rights" to the village warehouses alongside community organizers. In this arrangement, community organizers and a representative of the MFI sign a storage receipt that the depositor can use to obtain a loan for up to 75 percent of the crop's market value at the time of deposit. Under the CECAM program, depositors are charged three percent monthly interest for a minimum of five months. To withdraw the crop from storage, the loan must be repaid in full. If the crop is withdrawn before the minimum storage period, five months of interest is still due. The crop must be withdrawn at the end of the tenth month. Storage receipts are non-transferrable and non-divisible meaning a depositor must be physically present to make a withdrawal and can only withdraw the full amount at one time. Upon withdrawal, the depositor is meant to receive the same grain bags they put into storage minus any losses that may have occurred to their specific grain due to pest infestation, water damage, or other cause.

15. Table 5 provides results of a hypothetical value chain analysis in which the farmer sells six months after harvest using CECAM storage. As shown, storage can be highly beneficial as way for both farmers and traders to earn higher rates of return and thereby minimize the risks of market participation.

¹¹³ CECAM is the leading micro-finance institution in Madagascar with 223 branches and over 210,000 members. It is privately owned and has a 60 percent share in the rural credit market (<http://www.cecama.mg/>).

Table 7: Indicative value-added costs, profits, and rates of return from milled System of Intensive Rice sold in Antananarivo after five months of rural storage paid by farmers (MGA per kilo milled rice)

Value chain stage	Value added costs	Profits	Rate of return
Farm production & storage	741	340	46%
Crop assembly	301	238	79%
Milling & wholesale	145	105	73%
Retail	25	70	280%

Source: Authors' calculations from data used for Figure 59 with farmer's paying storage.

16. Presently, however, community warehouses are seldom used by farmers, due to high interest charges and penalties for early withdrawal. Rather large farmers and collectors are the main users of the warehouse credit system. As one collector explained his operating strategy, the aim is to buy, deposit, get a loan, and buy even more.¹¹⁴ Small farmers, on the other hand, face significant obstacles in obtaining credit through community warehouses including risk of storage losses, impossibility of withdrawing small amounts when needed, and having to pay interest for a minimum of five months. With limited cash reserves and no market information, small farmers said they feared if they did take a loan, they would have to go to a sub-collector for an advance payment to settle the credit and get the crop out from storage thus opening a route to long-term indebtedness.

17. To avoid this outcome, certain community leaders are advocating for farmers to deposit their rice in the community store without taking a loan.¹¹⁵ Sales of deposited commodities they said would be group based

and negotiated by the leaders when prices are high. Individual depositors would not be allowed withdraw early or to use the crop as collateral. While this approach would remove the problem of high interest and risk of long-term indebtedness, it would not address the need for seasonal credit or risk of tying up the farmer's commodity in case it is needed for an emergency.

18. Relevant experiences in East Africa and southeast Asia suggest that reforming the warehouse receipt system on commercial lines would benefit both farmers and collectors. In Madagascar, credit terms are unfavorable to small farmers, and the warehouse receipt system lacks flexibility as it is only negotiable as collateral, rather than being used for onward trade. In contrast, the warehouse receipt system being developed in East Africa by the East Africa Grain Council together with governments and regional traders, allows warehouse receipts to be fully tradable as collateral or selling to a trader. While work is still ongoing to get this system off the ground, the vision is for traders to assemble commodities virtually without taking

¹¹⁴ Field interviews with CECAM loan officers and others in Itasy and Vakinankaratra

¹¹⁵ These preferences were expressed by community leaders participating in the "village rice platform."

physical delivery until they are needed for use. Already there are digital platforms in East Africa that provide traders and farmers real time information on the quantity and type of stocks being held in patriating warehouses. To ensure the receipts are genuine and that the grain meets the buyer's quality expectations, warehouse receipts must be issued by warehouses that meet minimum criteria for storage and grading capacity. Similarly, in southeast Asia, medium-size warehouses managed by trader associations have become a type of small wholesale market where farmers observe demand and price trends. These practices for warehouse receipting in East Africa and southeast Asia are playing a direct role in improving market linkages.

(iv) Contract farming can further help drive smallholder market participation and crop improvements

19. Contract farming has been successful in Madagascar for promoting non-food cash crops. Details of contracts vary, but smallholders involved with these programs are generally provided with inputs such as seeds, fertilizer, agri-chemicals, and extension advice needed to grow the target commodity in exchange for a promise to sell the crop back to the firm after harvest. Contracts may specify minimum quality requirements and specify upper limits on the amount of product the firm is willing to buy. There are many large and small firms involved with contract farming in different parts of Madagascar with most firms targeting crops used for agri-processing and for export. Several processors targeting the international market such as Lecofruit (export vegetables), Bionexx (artemisia), and Sopral (fruits, spices, and essential oils) were established under the free export processing zone system and use contracts to secure the

raw material they need.¹¹⁶

20. There are some emerging successes of contract farming for crops related to food security, including rice.

In recent years Groupe SOCOTA (originally a cotton company that has diversified into many other areas of export agriculture) and STOI Trading (another commodity exporter) have been contracting small farmers to produce blackeye peas, white kidney beans, and other pulses for export and domestic sale. Through contract farming, STOI has been improved the quality and uniformity of the beans that it trades making the product more competitive in domestic and international markets. STOI is also providing farmers with uniform rice seed to improve rice crop yields and milling outturn while also reducing the share of broken grain. Under these contract farming arrangements, the repayment of crop loans for beans is 97 percent, largely due to close monitoring of producers by extension agents and the attractiveness to producers of continuing with the program. While the rice program is just one year old, STOI says initial results are promising with excellent repayment rates. Buying prices match local prices at harvest time so the program does not provide a way to benefit from seasonal price cycles but does at least ensure market access together with input and extension support.

21. While support for expansion of contract farming to new areas and new crops could make an important contribution to agriculture growth in Madagascar, this model also has inherent limitations.

According to Randrianarison and others (2009) and World Bank (2016), households involved with contract farming tend to be the best equipped in terms of production factors. Because of management requirements, contract programs also tend to

¹¹⁶ World Bank, 2016

be highly localized and concentrated on areas near an all-weather road. On the other hand, recent successes demonstrate that contract farming can be used to build market linkages for staple foods not just high-value exports. Efforts to forge new productive alliances for rice, beans, cassava, as well as for maize and soybeans that are demanded for stock feed could therefore make a strong contribution to sector growth.

22. While the cooperative model based on groups could also allow producers to be better integrated into domestic markets, experience so far has not been successful.

Agricultural producers' experience with cooperatives in Madagascar was marked by the wave of politicization of agricultural cooperatives in the 1970s and 1980s, where they were used by successive governments to dominate or even exploit rural households, contributing to a reluctance of households to participate in such entities.¹¹⁷ As a result,

today few cooperatives are operating in the rice sector. In the 2000s, the most active ones operated in the niche of specialty rice by exporting a distinct pink variety. The National Rice Development Strategy 2017 states that the evolution of the Water Users Associations and Federations into Rice Cooperatives will be decisive for the future of the sector. Furthermore, the recently adopted National Cooperative Development Strategy (SNDCoop 2019-2028) provides a framework for reviving the cooperative model in Madagascar. Therefore, while there may be some emerging leadership to move towards cooperative farming, further efforts will be needed to demonstrate that the new wave of cooperative farming is different to the last one. Nevertheless, if efforts were to be successful, experiences in other rice-producing countries such as Senegal and Vietnam suggest improved farmer organization is a critical factor in strengthening yields, food security and agricultural growth (see Box).

Box 4: Learning from other Country Experiences – How Senegal and Vietnam were able to realize success in domestic rice markets

As part of its Emerging Senegal Plan adopted in 2012, the Senegalese government vowed to modernize its agricultural sector with the aim of increasing food security and boosting job creation. Investments in rural roads, irrigation, and promotion of farmer cooperatives led to a significant transformation of the rice sector, with a near doubling of rice production since 2014, to reach 1.2 million tons in 2018. Prior to reform efforts, the most important hurdles to modern farming in Senegal were a shortage of irrigated lands, poor road connectivity, disorganized supply chains, limited access to credit, and an archaic land administration system. Key to improving the organization of supply chains is the emergence of large cooperatives that serve smallholder farmer interests through input procurement, milling and storage, and quality control. Private-sector-led initiatives helped the development of thriving agribusinesses and job creation along the value chain. Access to credit has improved through new financing facilities and local lending to smallholders. The outstanding amount of loans contracted by rice farmers nearly doubled since 2012 while default rates declined with better farming practices, better irrigation, and increased rice quality. Like Madagascar, Senegal is a net rice importer.

¹¹⁷ WorldBank, 2011

large net exporter of rice) where small landowners have come together to form large-scale production units under the leadership of rice marketing companies. Under these systems, participating farmers pool their land into a consolidated (large-scale) field in exchange for mechanization services, extension support, and a pre-negotiated price from the marketing company. Through forward negotiations with rice buyers, these companies pay higher prices to farmers who, in turn, enjoy better economies of scale and produce more yield per hectare as a result of the timely delivery of inputs and extension support provided by the company. These systems are important for promoting quality upgrades and the introduction of aromatic varieties for export. In cases where farmers are not linked to an outgrower company, it has been very difficult to persuade farmers to organize themselves in groups merely for the supposed benefits of improved economies of scale.

D. Crop transport and processing

(i) Transport costs contribute to higher overall costs and reduces competitiveness

23. At the next stage of the value chain, transport costs represent a major block in the price formation for rice and have a major impact on producer margins. In Itasy and Vakinankaratra transport costs from the production area to a town-based assembly point were reported to range from MGA 1,260 to MGA 2,280 per ton per kilometer (US\$ 0.35 to \$0.80) in the dry season. Over a relatively modest distance of just 40km, therefore, rural transport can amount to MGA 50.40 to 115.20 per kilogram or nearly 10 to 20 percent of the farm gate price. In more remote areas, transport costs will of course be higher and farm gate prices lower. On the input side, the price of moving fertilizer and other bulky inputs to the farm area can easily be the same or even more if transport is done after the start of the rains. In the rainy season, transport prices were said to double.

24. Investments in rural connectivity could therefore have a major impact on the incentives for small farmers to produce

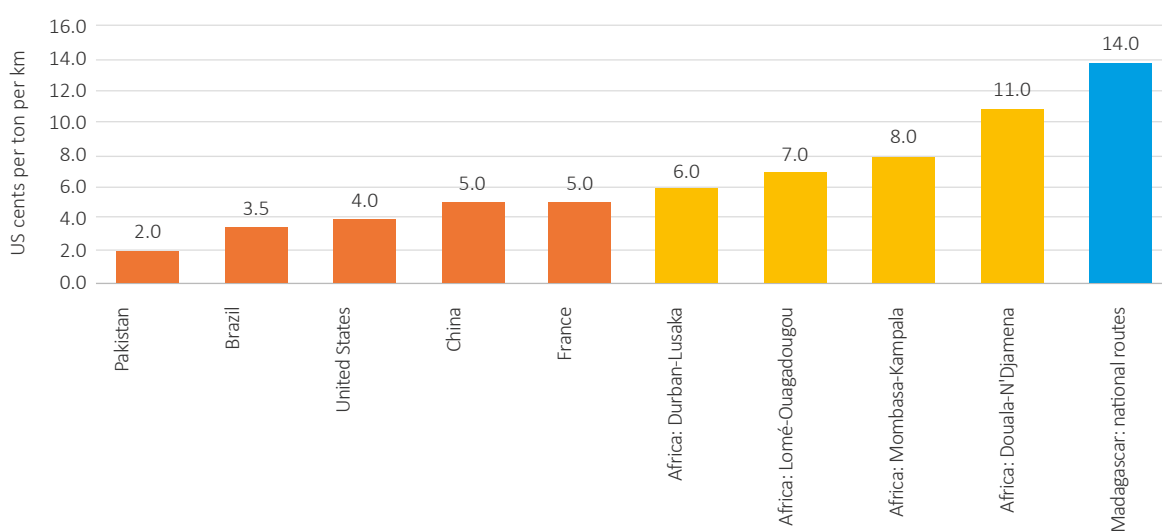
surplus rice for market sale. More commodities travel along national roads than small feeder roads but initial transport from the farm area to town accounts for a greater share of final value compared to long-distance transport from town to the urban wholesale market. Improving rural feeder roads is important but expensive and other measures that enhance rural connectivity can also lead to greater competition between collectors and sub-collectors and incentivize farmers to produce surplus crops for market sale. Even in very distant areas investments in market information systems that work by text messaging or by radio as well as the establishment of publicly available warehouse registries, and eventually, tradeable warehouse receipts, could significantly improve negotiating power of small farmers and competitiveness of the rice sector overall.

25. The cost of long-distance transport along national corridors are far higher in Madagascar compared with other countries. While transport conditions were said to be highly competitive in Madagascar with many independent operators and larger transport companies vying for business, most national highways tend to be little

more than narrow, windy roads and the trucks involved in agriculture transport are usually small with a maximum load of just 10 to 15 tons at most. Because of these poor conditions, transporters say they budget up to 10 percent of their trip costs for repairs and helping hands when trucks get stuck along the way. Poor security on national routes was also identified as a problem with trucks

increasingly being the subject of banditry when they get stuck. Since most sales in urban areas are transacted in cash, collectors said that they are especially vulnerable when returning from the city. Long-distance transport costs in Madagascar therefore tend to be much higher compared with other countries, particularly Pakistan which is a large rice exporter to East Africa.

Figure 60: Average transport prices on long distance routes in Madagascar and comparator countries (US cents per ton per kilometer)¹¹⁸



Source: Authors' calculations from transport survey for Madagascar;¹¹⁹ Teravaninthorn and Raballand, 2009 for all others.

26. Further savings on transport costs could be realized through investments in regional rice mills. Un-milled paddy is about 33 percent husk yet apart from some industrial mills in regional centers such as Amparafaravola around Lake Alaotra, most commercial milling is done in urban and peri-urban locations far from the main rice growing areas. Imerintsiatosika, on

the western outskirts of Antananarivo, for instance, was identified as a major wholesale and milling center for rice from many parts of Madagascar. Further developing regional rice mills in major producing areas therefore could provide an immediate 33 percent saving in the per ton costs of long-distance transport making domestic rice much more competitive with imports.

¹¹⁸ The data is from the latest available year in each country.

¹¹⁹ Primary data on transport costs were collected along four major corridors that are important to rice and other major commodities: Alaotra-Antananarivo, Alaotra-Toamasina, Itasy-Antananarivo, and Mahajanga-Marovoay-Antananarivo.

E. Trade policies

(i) For domestic rice to compete with imported rice, efficiency improvements are needed

27. Imported rice, similar to domestic rice, is not subject to duties or value added tax. Since the international food price crisis of 2008, imported rice has not been taxed as part of efforts to enhance food security. Previously, imports were taxed on the order of 32-38 percent. Imports have been growing and now account for about 40 percent of all commercially traded rice in the country.¹²⁰ On balance, Madagascar likely produces around 92 percent of its total requirements, but only 15 to 20 percent of this rice is marketed commercially leaving a large deficit in towns and urban areas.¹²¹

28. In principle, tax-free imports should encourage efficiency in domestic markets; but this requires addressing bottlenecks in farm level marketing, warehousing, and rural connectivity. Domestic producers enjoy a strong comparative advantage with imported rice at the farm level.¹²² By the time domestic rice moves through the collector system to reach an urban wholesaler, however, this comparative advantage is largely diminished to the point where imports can often compete with domestic supply on price. In the illustrative value chain analysis for milled SRI rice sold through a typical collector arrangement (Figure 59 and Table 4), total value-added costs excluding

profit margins to the wholesale level in Antananarivo are MGA1,259 per kilo (US\$0.35) which compares favorably with the estimated import parity price for Pakistani rice delivered to an Antananarivo wholesaler of MGA 1,738 per kilo (US\$ 0.48).¹²³ However, once farmer and collector profits are taken into account, the warehouse price of domestic rice jumps to MGA1,870 per kilo (US\$0.52), motivating large wholesalers to trade in imported rice at certain times of the year.

(ii) The uneven application of an export ban on rice is counterproductive

29. Around the same time that import duties and VAT were abolished on imports, government also instituted a ban on rice exports ostensibly to protect food security. Until that time, Madagascar had done very well in exporting small amounts of a specialty variety of pink rice, known as “Dista rice” to the United States and other developed country markets.¹²⁴ Exporters have sometimes been able negotiate ad hoc exceptions to the ban on grounds that Dista rice is not the type of rice needed for domestic food security.

30. These exceptions aside, the ban has created great uncertainty for exporters and given rise to many negative consequences for the rice sector. From 2005 to 2007, for example, Madagascar exported an average of 766 tons of Dista rice annually. In 2008, however, exports dropped to just 51 tons and has since averaged only 29 tons per year from

¹²⁰ Authors' extrapolations from five-year production estimates reported by Ministry of Agriculture and Livestock allowing for 15 percent post-harvest losses, INSTAT estimates of the share of national production marketed commercially, and import figures reported by Ministry of Agriculture and Livestock and Ministry of Trade.

¹²¹ INSTAT, 2013.

¹²² Gergely and Kanatiah, 2017

¹²³ Based on US\$360/ton fob Karachi plus US\$58/ton freight, insurance, and port/clearing charges to Toamasina and US\$65/ton road transport to Antananarivo. Freight charges are from: https://www.freightos.com/freight-tools/freight-rate-calculator-free-tool/?utm_expid=z9z58OKARtawg2XYtNF_KQ.1&utm_referrer=

¹²⁴ Dista rice, named for the farmer who discovered the variety, is cultivated mainly in Toamasina province near Lake Alaotra. The rice has a pale pink color and a natural scent of cinnamon, cloves, and nutmeg.

2009 to 2015 with exports in some years being as low as just four tons.¹²⁵ Like many other agri-food exports from Madagascar, Dista rice is a very high-value specialty product largely irrelevant to national food security. More than harm niche exports, export bans adversely impact the functioning of market-based mechanisms needed to promote food security including the development of warehouse receipts systems and contract farming arrangements. Ultimately, food security requires encouraging more trade, including through adopting a more open trade regime; avoiding the use of export restrictions; promoting more effective regional integration; and improving logistics.

(iii) The ability to export ordinary rice depends on efficiency improvements

31. In the long-term, the stated objective for the Government is to become a regional rice exporter. According to government policy, as soon as the country is self-sufficient in rice, neighboring Indian Ocean and African countries represent the first target for rice exports.¹²⁶ Exporting a bulk commodity on the global market, however, is a very different business from niche sales of high-value specialty foods that Madagascar mostly exports at present. Export bans on rice notwithstanding, Madagascar's ability to supply global or even regional markets at competitive prices depends on overcoming the same challenges that currently undermine the competitiveness with imports in domestic markets.

32. Buyer requirements in neighboring Indian Ocean countries are very high. Mauritius, imports around 36,000 tons of milled rice

annually and Seychelles imports around 6,000 tons but these imports are of high-value aromatic varieties with a low share of broken grain so is not the type of bulk rice produced in Madagascar. According to Mauritius Customs data, the average landed price in Port Louis is over US\$1,000 per ton indicating that substantial investments in high quality seed of select varieties and modern milling infrastructure would be needed to meet buyer requirements. Similarly, despite prices being highly attractive in Reunion Island, the value chain in Madagascar is not sufficiently developed in terms of seed supply, processing, or certification capacity to meet buyer demands.¹²⁷

33. While Madagascar would enjoy tariff preferences for bulk exports of ordinary rice to neighboring countries in mainland Africa, inefficiencies undermining competitiveness in domestic markets remain an issue. As a member of the Common Market for Eastern and Southern Africa (COMESA) and the Southern Africa Development Community (SADC), Madagascar benefits from tariff preferences against other global suppliers in mainland African markets. While quality specifications may not be as high in mainland Africa as in Mauritius, Seychelles, or Reunion Island, price in mainland markets is critical. With Madagascar barely able to compete with imports in its own domestic market, therefore, tariff preferences are unlikely to be enough to ensure a competitive place in mainland Africa without efficiency improvements at home.

34. To illustrate this point, Table 7 summarizes a set of regional parity price calculations for deliveries to Kenya and Mozambique which

¹²⁵ Ministry of Agriculture, Livestock, and Fisheries, 2017

¹²⁶ Ministry of Agriculture, Livestock, and Fisheries, 2017

¹²⁷ IFAD; and Gloanec, Cazal, and Prophyre, 2011

are large rice importers. In this analysis, the fob price of US\$470 per ton for Madagascar rice is derived from the value chain data discussed above (Figure 59 and Table 4) up to the wholesale level, which in this case is assumed to be Toamasina rather than Antananarivo. The analysis further assumes that exports are done immediately after harvest so exclude the costs of storage.¹²⁸ Kenya is part of the East Africa

Community (EAC) which imposes a 75 percent common external tariff on rice imports but has negotiated a preferential 35 percent tariff with Pakistan which is a longstanding and major rice supplier to Kenya. As a member of COMESA, Madagascar could supply to Kenya duty free. Similarly, Mozambique levies 7.5 percent duty on imported rice, but as a member of SADC, rice from Madagascar would have zero duty.

Table 8: Indicative regional parity calculations for ordinary Madagascar and Pakistan rice in regional export markets (US\$ per ton)

	Madagascar supply		Pakistan supply	
Kenya Imports				
Milled rice, fob		470		360
Freight and insurance		85		55
cif Mombassa		555		415
Duty	0%	-	35%	145
Total landed price		555		560
Mozambique imports				
Milled rice, fob		470		360
Freight and insurance		80		60
cif Maputo		550		420
Duty	0%	-	7.5%	32
Total landed price		550		452

Source: Authors' calculations from data used for Figure 59 and Table 4 excluding storage costs for Madagascar. Pakistan price information from hasrice.com (<http://www.hasrice.com/pakistan-rice-prices/>). International shipping costs from freightos.com https://www.freightos.com/freight-tools/freight-rate-calculator-free-tool/?utm_expid=.z9z58OKARtaw92XYtNF_KQ.1&utm_referrer=).

35. Even with regional tariff preferences, these calculations show that ordinary rice from Madagascar would not be price competitive in regional markets. Even with substantial tariff protection Madagascar could barely land rice in Mombasa for less than Pakistan. In Mozambique, where tariff protection is 7.5 percent, Malagasy rice would cost about 18 percent more than rice from Pakistan.

36. These results underscore the importance of improving the efficiency of domestic value chains. Increasing farm level production to the point of having a surplus is likely not sufficient for Madagascar to be a competitive rice exporter. Rather, investments in rural connectivity, storage, and seed supply, together with reforms around warehouse receipt and other aspects of crop marketing

¹²⁸ Total value-added costs and profits up to the wholesale level excluding storage converted to US\$ per ton. With storage costs, the fob price would be higher.

that bring farmers closer to the market both literally with improved roads and figuratively through improved trading systems are needed to ensure a competitive place in the global market.

F. Market information

37. To improve the efficiency of value chain processes and quality of policy decisions, public and private stakeholders need better market information. Even in areas close to main national roads, farmers and sub-collectors have little knowledge of crop prices, buyer preferences, or market opportunities outside their immediate area of operation, constraining the ability to make informed production decisions and negotiate competitive prices. Although collectors make it their business to monitor production and market opportunities through their network of sub-collectors and wholesalers these agents also have little information beyond their individual sphere of influence. Apart from contract farming, therefore, most agriculture transactions are based entirely on spot market conditions with little or no account of underlying trends and future opportunities.

38. Policymakers are also left to cope with a lack of reliable information on which to base major policy and investment decisions. The Rice Observatory (*Observatoire du Riz* or OdR) is mandated as the rice sector market information system, yet its coverage of the value chain is limited. Set up in 2005, the OdR collects price data from 110 districts for paddy, milled and imported rice, and for maize, cassava, and sweet potato, although full data collection is not always done. The activity of the Rice Observatory has been heavily dependent on financing

by donors, which explains the fluctuating performance in data collection, analysis, and dissemination. In addition, by focusing on markets at district level, OdR is missing important information on market dynamics between producers and their immediate buyers. At the national level, OdR provides decisionmakers with a descriptive overview of price information but the analytical content is limited. Dissemination activities are also limited and not geared to a wide public audience. Furthermore, the outdated agricultural census (2005/05) also constrains effective decision making.

39. Investments in even very simple information systems for rice and other crops would be a good way to improve market efficiencies. Authorities in one part of Itasy, said that there used to be weekly radio bulletins with price announcements and extension advice. Although they claimed that farmers and collectors responded well, the activity was donor financed and came to an end when the project stopped. Resurrecting, and even expanding such systems in partnership with OdR could be one very practical way to improve market conditions.

40. Investments in remote sensing systems that help gauge crop yields in different parts of the country could also be of significant benefit to policymakers and private investors. The International Rice Research Institute (IRRI), for example, has been testing various technologies for remote monitoring of more than 15 million hectares of rice fields in Thailand, India, Vietnam, Cambodia, Indonesia, and the Philippines. Through its RIICE Project, IRRI and its partners have shown that remote sensing data and smartphone-based surveys can be used to map estimated planting dates,

crop areas, crop rice yields, and even how natural disasters are likely to impact yield.¹²⁹ Access to this type of information would enable traders to know where surpluses exist and help policymakers decide on infrastructure investments and trade policies to enhance market efficiencies.

G. Policy and Investment Priorities for a More Inclusive Agriculture Growth Trajectory

41. Inefficiencies and unpredictability in domestic agricultural markets important for food security is a major disincentive to improving production, whereby farmers get a small share of the profits. With limited competition at the farm gate and multiple intermediaries who stand between the farmer and the final market, producers receive only a small share of the available profits from commercial agriculture so have little incentive to produce beyond the subsistence level. These factors are a drag to domestic rice markets and other crops that are important for food security.

42. Reforming the current situation requires bringing farmers closer to markets, both physically and figuratively. To reduce long marketing chains, investments in rural connectivity are important. In physical terms, feeder roads are mostly in a dilapidated state and have received little investments over the recent years. Upgrading of rural roads is therefore an obvious, and critical, area for investment. Linking all rice areas with decent roads, however, is major undertaking that will require considerable time and financial resources to complete and maintain. Investing in feeder roads will also require planners to make hard choices on which areas to service first.

43. The analysis shows there are other ways to improve rural connectivity and provide farmers the incentives they need to produce marketable surpluses of rice and other staple crop even in hard to reach areas. A market information system that broadcasts current prices in different parts of the country would be relatively inexpensive to set up and operate yet would enable farmers and collectors everywhere to make better informed decisions about what to sell and what to plant or trade. Short messaging services (SMS) are widely used in other developing countries and radio bulletins, that have been successful in Madagascar in the past, could also be revived. Similarly, creation of a publicly available registry of deposits in community warehouses would be a good way to improve market efficiencies and promote group marketing of surplus commodities. With smart phones and other modern technology, it would be relatively easy to build a system for warehouse operators to create a real-time record of current deposits that could then be transmitted nationally.

44. Efforts to reform the warehouse receipt system are also important. An immediate first step would be to allow more flexible credit terms that permit farmers to withdraw their crop whenever needed and to settle their debt without the burden of five months minimum interest. Longer-term investments that help Madagascar transition to a system where warehouse receipts are fully tradable would also be of major strategic benefit. Work to formulate practical standards for product grading and warehouse certification, for example, would provide Madagascar a roadmap for the commercialization of rice trade. Developing such a system, as the EAC has been working to do, will take time but would be of significant benefit by allowing

¹²⁹ Remote-sensing Information and Insurance for Crops in Emerging Economies (RIICE): <http://www.riice.org/>

traders to position stocks around the country and only take physical delivery when needed. This would greatly reduce the dependence on rural feeder roads in difficult times of the year.

45. Addressing market inefficiencies further requires encouraging cooperative behavior and opportunities for contract farming. Given small plot sizes for rice, efforts to encourage group marketing and other types of cooperative behavior are needed to support development of the warehouse receipt system and commercial market development more generally. Given that cooperative behaviors are currently not the societal norm outside of family networks, particularly for food crops, a more feasible option in the near-term could be to leverage the initial successes of the STOI model of contract farming, for rice and other staple crops to see how it can be replicated further. Going further, investments in regional rice mills could reduce the overall cost of transporting rice by up to a third so would significantly enhance the competitiveness of local farmers in domestic and potential export market.



46. Improving efficiencies in domestic markets could help give locally produced

rice a competitive edge over imported rice, and eventually enhance prospects for exports to neighboring markets. The country's vision is to become a rice exporter once domestic food self-sufficiency needs have been met. Achieving such a goal requires inefficiencies in domestic markets to be addressed by reducing the long marketing chain and lowering costs, particularly those related to transport. The uneven application of the export ban on specialty niche rice should be lifted to provide a broader signaling effect of enhanced market certainty.

47. Ultimately, with better market access, farmer demand for improved seeds, fertilizers, willingness to pay for maintenance of irrigation, and demand for farmers extension services could all be expected to improve. Madagascar has enjoyed many successes in exporting high-value commodities and there is still scope for these to grow. With more secure and remunerative market access, smallholder production of rice and other crops such as maize, soybeans, cassava that are important to food security, livestock production, and agri-processing could also develop, to move towards a more sustainable growth trajectory.

A close-up photograph of two green gas pumps. The pumps have a textured green handle and a white nozzle. The letters 'Z/A' are embossed on the green handle of each pump. The background is a blurred green field. The image is framed by a white border that follows the shape of the pumps and the text box.

Addressing Anti-Competitive Practices

 *A lack of market competition in key sectors of the economy is a major constraint to productive, inclusive and sustainable growth in Madagascar. This chapter presents an overview of regulatory and non-regulatory barriers to competition, including business practices that can exclude some firms from the market or create a level playing field, and ways of overcoming them, with a focus on four specific sectors. Telecommunications and petroleum sectors, which are tightly interconnected with the rest of the economy, illustrate the pervasive effects of insufficient competition in key input markets. The case of lychee and vanilla shows how limited competition in key export markets can concentrate gains in the hands of a few actors and reduce opportunities for smallholder farmers. The chapter presents both market-specific and economy-wide recommendations to open markets, improve competition policies and strengthen their enforcement.*


A. Introduction

1. Market competition is a key driver of productivity and innovation.¹³⁰ Empirical evidence suggests that competition promotes a reallocation of resources from low to high productivity firms,¹³¹ helps upgrade quality,¹³² boosts export competitiveness, and stimulates innovation. Welfare gains for consumers can be significant, as they benefit from lower prices and opportunities for more and better paying jobs. However, in Madagascar, markets are characterized by a high level of concentration and low levels of competition in key sectors. This reflects regulations and policies that restrict access to markets, preferential treatment of incumbent companies, and lack of enforcement of competition policies.

2. This chapter assesses the competitive landscape in Madagascar by considering three key issues. The first section provides

an overview of competition in Madagascar, and some of the features of market conditions that have resulted in uncompetitive business practices. The second section presents the four case studies of telecommunications, petroleum, lychee and vanilla, where the de jure, de facto and enforcement challenges are considered. The third section considers cross-cutting solutions related to improving policy frameworks, including pro-competition regulations, measures to promote a level playing field between incumbents and new entrants, and better enforcement of competition laws.

B. Market Concentration and Anti-competitive Business Practices

3. Overall, the intensity of local competition is perceived to be weak with markets dominated by a few businesses. A wave of privatization

¹³⁰ Arnold et al., 2011

¹³¹ As an example of this channel, Carlin et al. (2004) show, using a dataset of about 4,000 firms in 24 transition countries, that firms facing between one and three competitors saw real sales grow by almost 11 percent on average over three years, while monopolists suffered from a 1 percent decline in real sales. Similarly, Nickell (1996) found that a 10 percent increase in price markups resulted on average in a 1.3–1.6 percent loss in total factor productivity growth.

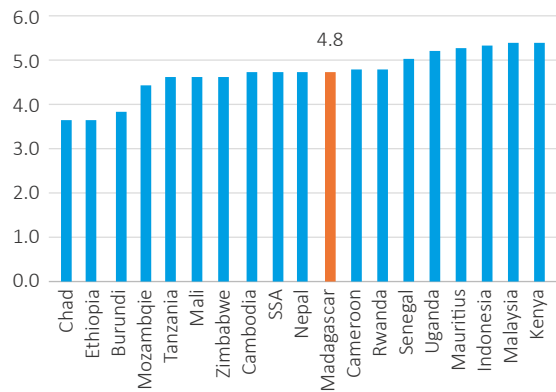
¹³² Barone and Cingano (2011) show that in OECD countries, pro-competition reforms in input services sectors (telecommunication, transport, energy and professional services) increase value added, productivity and export growth of downstream service-intensive sectors.

reforms took place in the 1980s and 1990s, reversing an earlier wave of nationalization. During the privatization period, state-led monopolies and oligopolies were replaced with privately-owned companies.¹³³ However, these private actors were broadly drawn from the political elite and families close to them, with economic power largely concentrated in the hands of a few, the *Grandes Familles*. Over time, a new wave of entrepreneurs has been able to successfully do business in Madagascar, as they have been able to navigate and, in some cases,

exploit the weak institutional environment. Once firms have successfully penetrated markets, particularly in highly profitable sectors, incumbents seek to maintain a first or second mover advantage by supporting anti-competitive behaviors. Key sectors in the economy such as telecommunications, petroleum, banking, mining, real estate, and high-end agribusinesses are concentrated, and firms often develop vertically integrated or conglomerate structures which can further entrench market power.¹³⁴

Figure 61: Relative to comparators, the intensity of local competition is perceived to be weak...

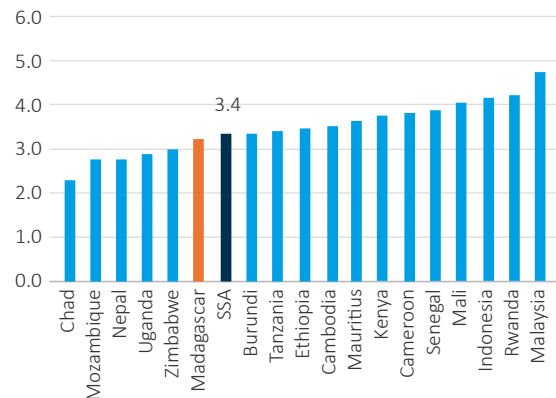
Intensity of Local Competition (best rank = 7)



Source: WEF GCR 2017/18. Note: Values from 1 (competition not intense at all) to 7 (competition extremely intense)

Figure 62: ...and markets in Madagascar are perceived to be dominated by few businesses

Extent of Market Dominance (best rank = 7)



Source: WEF GCR 2017/18. Note: Values from 1 (market dominated by few business groups) to 7 (market power spread among many firms)

4. Rather than firms growing through productivity improvements, upgrading and diversification, economic operators seek to gain a competitive edge through manipulating rules and regulations. Examples of such practices include the arbitrary use of commercial lawsuits, avoiding customs duties, the imposition of fiscal penalties and poorly

justified tax expenditures, unfair practices related to procurement, preferential treatment in the award of licenses, control of state-owned enterprises (such as JIRAMA through Board appointments or supplier contracts which gives firms significant leverage) and holding political power to benefit from immunity. Going further, in

¹³³ Jütersonke and Kartas 2010.

¹³⁴ See for example, Gerschenkron (1962) and Grossman and Hart (1986) for global evidence. A background paper on Madagascar’s Political Economy for the CEM, undertaken in February 2019 provides evidence for Madagascar.

some cases, firms have operated in concert through the potential establishment of cartels to secure and maintain their market power.

5. These anti-competitive behaviors place high non-regulatory barriers to accessing markets, undermining both the inclusiveness and sustainability of growth.¹³⁵

Newcomers may enter markets if they do not encroach on the business practices of incumbents (such as the IT-BPO sector), they pay a high price in areas where operators already exist, or violence and intimidation is used, which has in the past contributed to political instability thereby compromising the sustainability of growth. Furthermore, these types of non-regulatory barriers undermine the inclusiveness of growth, whereby rules and regulations are manipulated through connections and alliances between economic and political operators, a domain which is inaccessible to outsiders, unless intermediaries are used, which raises the cost of doing business.

6. Nevertheless, it is important to note that levels of market concentration vary by sector.

Using export data as a proxy for estimating market concentration and contestability, highly specialized export sectors such as mining which are usually characterized by high levels of concentration, bear this trend to a greater extent in Madagascar compared with peer countries. However, for less premium markets such as animal products, vegetable products and pharma/medical products, export concentration levels are relatively low. The implication is that certain sectors such as vegetables and livestock, which

have substantial potential to be developed in Madagascar based on calculations of relative comparative advantage, have been easier to penetrate outsiders. Taking further steps to improve the business climate and levelling the playing field, as already signaled by the current administration can make substantial inroads in encouraging new investment to the country.

C. Barriers to Competition in Key Sectors – Deep Dive Analysis

7. This section presents a comprehensive review of barriers to market entry and competition in four major sectors of the Malagasy economy.¹³⁶

Two of those, telecommunications and petroleum, supply key inputs to the rest of economy. More competition in these tightly integrated input sectors could generate large welfare gains by reducing costs for other sectors, optimizing the use of existing infrastructures, and stimulating new investments in the economy. At the time of preparing this study, discussions were ongoing at the highest level of government to initiate reforms to both the telecommunications and petroleum sectors, which includes minimizing regulatory and non-regulatory barriers to enter these markets. The other two sectors, vanilla and lychee, are export-oriented agribusinesses that generate significant export revenues and have a large potential for greater productivity along the value chain and income gains for smallholder farmers if barriers to competition can be addressed. Moreover, analyzing how anti-competitive behaviors prevail in these high-

¹³⁵ Information drawn from a Political Economy assessment prepared as a background paper for the Country Economic Memorandum, 2019

¹³⁶ The assessment is based on the Markets and Competition Policy Assessment Toolkit (MCPAT). The MCPAT methodology allows for the identification of market characteristics that shape dynamics and government interventions that restrict competition by: i) restricting entry; ii) facilitating collusion; or iii) creating an unlevel playing field), and consideration of solutions that can achieve policy objectives and address market failures while minimizing market distortions.

end agribusinesses can help to inform policy-making for other value chains, particularly as pipeline road infrastructures will help unlock access to important commodities over the next three to five years.

(i) Focus sector: Telecommunications

8. The telecommunications sector plays a key role in the services industry. Investments in the submarine fiber optic cables LION¹³⁷ and EASSy in 2009 and 2010 ended the country's dependence on satellites for international connections, improving access and reducing the cost of international bandwidth. More recently, Telma (Telecom Malagasy),¹³⁸ has been laying a national fiber backbone connecting major cities contributing to the availability of relatively high-speed internet across urban areas. Madagascar has now one of the fastest download speeds in sub-Saharan Africa. This has helped the emergence of new

high-performing sectors, including the IT-BPO industry, as well as retail, banking, and services to enterprises.

9. Despite improvements in the sector, prices remain high and penetration is low. The cost of fixed broadband internet services is higher than peer countries (Figure 63).¹³⁹ Penetration rates are also well below those of comparators (Figure 64), with a significant proportion of the population still unconnected to mobile network (65.9 percent). High prices are an important contributor to low penetration and access rates in Madagascar, which is a significant opportunity cost for the economy. If fixed broadband subscriptions were to rise to levels of peers in Rwanda and Cameroon (i.e. from 10 percent currently, to 18 percent), growth could be raised by more than 1 percentage point.¹⁴⁰ Over time, it could also stimulate new investments and accelerate the digitalization of the economy.



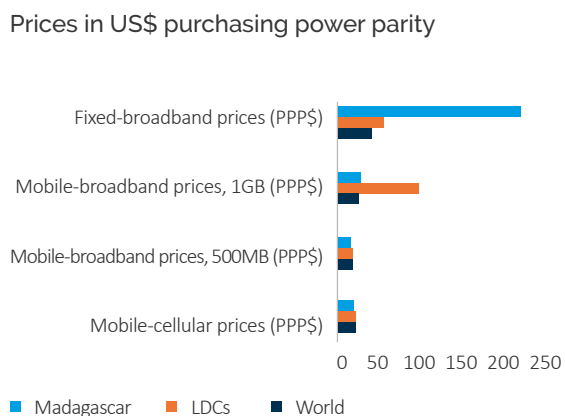
¹³⁷ The Eastern Africa Submarine Cable System (EASSy), an undersea fibre optic cable system connecting countries in Eastern Africa to the rest of the world. Lower Indian Ocean Network (LION) is a submarine communications cable network that connects Madagascar, Réunion, and Mauritius.

¹³⁸ Telecom Malagasy (Telma) is a former state-owned enterprise. During the privatization phase, Telma was acquired by the Axian Group, with the government maintaining a 19 percent share.

¹³⁹ The ITU defines a mobile-cellular basket as consisting of 51 minutes of mobile voice call and 100 SMS

¹⁴⁰ This calculation is based on the assumption that in low income countries, an increase of broadband subscriptions by 10 percentage points can lead to up to 1.4 percentage point increase in growth rates, which is the finding of the report: World Development Report (2016), Exploring the relations between the broadband and economic growth, <http://pubdocs.worldbank.org/en/391452529895999/WDR16-BP-Exploring-the-Relationship-between-Broadband-and-Economic-Growth-Minges.pdf>

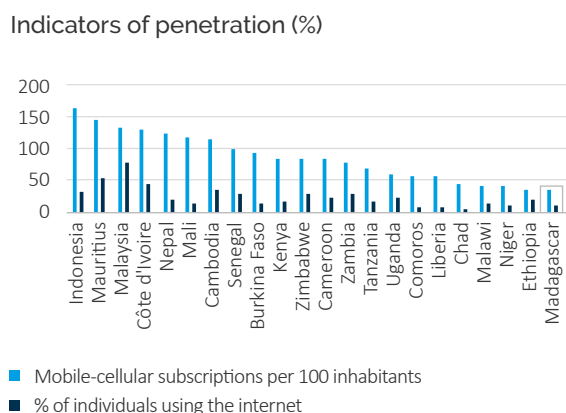
Figure 63: The price of fixed broadband internet is relatively high in Madagascar



Source: ITU, accessed at <https://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2017.aspx>

10. Investments in the telecommunications sector by new and existing operators has been limited by both regulatory and non-regulatory barriers. There are four major operators in the telecommunications market: Telma, Orange, Airtel and Gulfsat (Blueline). The incumbent firm, Telma has made significant investments in backbone infrastructure in the past, including during the political transition period when other operators largely shied away from making long-term investments, although this was partly financed by the Universal Services Fund. The government currently maintains shareholdings

Figure 64: ...while penetration and access of cellular and internet services are relatively low



Source: ITU, accessed at <https://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2017.aspx>

in Telma, at 19.9 percent. Discussions are ongoing to allow other operators to invest in areas where Telma already has infrastructure in place, which is currently prohibited, but if opened up, would allow for greater price competition.¹⁴¹ Currently, the cost of access to international bandwidth is more than three times higher than in other African countries, limiting penetration. Foreign investment in telecommunication companies is also restricted to two thirds of a company's shares, with the further requirement for at least one of the directors to reside in Madagascar,¹⁴² which limits opportunities for further development.

Figure 65: Telma is present in all segments of Madagascar's broadband value chain

International connectivity	Core network	Middle mile	Access network		
	National backbone	Backhaul	Last mile		
EASSy: Telma LION: Orange	Fiber optic: Telma Copper lines: Telma		Fixed services: Fixed wireline (ADSL and fiber): Telma Fixed wireless (WiMAX, WiFi): Telma, Gulfast (Blueline), other ISPs Mobile services: Market shares as at 2019		
				Share of 3G	Share of 4G
			Airtel	16.9%	5.7%
			Orange	19.6%	5.4%
			Telma	63.5%	12.2%
			Gulfsat (Blueline)	-	76.7%

Source: Authors' own elaboration. Market shares only available for mobile services, GSMA 2019

¹⁴¹ Decree No 2014-1652. Discussions ongoing in May and June 2019.

¹⁴² Madagascar Investment Law 2007 -036

11. Regulation currently in place does not support access to shared infrastructure or manage interconnection charges in a way that could gradually reduce tariffs.¹⁴³

Regulation of the telecommunications sector should strive to balance the incentives for incumbents to continue investing over time, while also encouraging new players to invest, which is currently not the case in Madagascar. Regulatory lapses include the lack of an enforceable obligation for the Regulatory Authority for Communication Technologies for Madagascar (ARTEC) to determine whether operators have Significant Market Power (SMP). The failure to publish a list of operators considered to have significant influence in the market has persisted despite this requirement being included in its founding statute (Law 2005-023) nearly 15 years ago. Unlike other countries, the regulatory agency has not determined interconnection charges, while in countries like Kenya, Rwanda and Tanzania, regulators have introduced glide paths¹⁴⁴ for the reduction of such charges, with positive impacts on final tariffs.¹⁴⁵

12. Investments in rural areas (last mile infrastructure) are also being constrained by both regulatory and non-regulatory barriers.

In areas without existing backbone, the cost of a license to lay such infrastructure has been reported to be prohibitive, hindering investment in last mile services and access

of remote areas.¹⁴⁶ A Universal Access Fund has been created to finance such network extensions, where investments would otherwise be unviable, but the mode of administration has been opaque. To support a level playing field, a Universal Access Fund should have clear selection criteria on which projects should be financed as well as competitive neutrality principles to ensure the operators have been justifiably selected. In practice, it appears that the incumbent has benefited from the Fund to recoup part of the costs for the deployment of the national backbone network, where the process followed by ARTEC and the Ministry of Telecommunications for disbursement is unclear.

13. Allocative efficiency of available spectrum is also being compromised by current practices related to spectrum assignment.

Spectrum allocation has so far been assigned on a first come first served basis, rather than through a competitive and transparent basis. In addition, it appears that the incumbent has been granted some advantages in its assignment of spectrum, through access to a contiguous block of frequencies while rivals have scattered blocks, allowing the incumbent to operate at a lower cost.¹⁴⁷ Addressing this situation requires developing a modern spectrum assignment policy, including competitive and transparent assignment mechanisms.

¹⁴³ There are no provisions to implement an essential facilities doctrine. OECD specifies the 'Essential facilities doctrine' as when the owner(s) of an "essential" or "bottleneck" facility must provide access to that facility, at a reasonable price. <http://www.oecd.org/competition/abuse/1920021.pdf>.

¹⁴⁴ A glide path is a prescribed price path over time, so companies are given proper signals for future cost containment and investments.

¹⁴⁵ World Bank. 2015. *Unlocking growth potential in Kenya: dismantling regulatory obstacles to competition (English)*. Washington, D.C. : World Bank Group. <http://documents.worldbank.org/curated/en/946191481707622675/Unlocking-growth-potential-in-Kenya-dismantling-regulatory-obstacles-to-competition> pg. 42

¹⁴⁶ Mission findings revealed that mobile operators other than the incumbent were not able to put up their own fiber infrastructure under their current license arrangements. Acquiring permission to construct infrastructure requires obtaining a new license, where costs are relatively high.

¹⁴⁷ Aide Memoire: "Mission d'étude de l'environnement réglementaire et de la concurrence du secteur des TICs à Madagascar", 18-22 February 2019

14. Enforcement of competition laws and policies is also weak due to governance challenges.

Anticompetitive practices by firms (such as abuse of dominance and cartelization) can be prosecuted ex post under the sector-specific regulation and under the competition law.¹⁴⁸ However, ARTEC has not exercised these provisions and the activities of Madagascar's Competition Council have been limited to date. As the activities of the Competition Council grow, it will also be important to manage the concurrency of powers between ARTEC and the Competition Council to maximize the benefits of ex post competition enforcement. This could involve incorporating a collaboration framework between the two bodies to facilitate case referrals, investigations, and sanctions. Finally, the governance structure of ARTEC, including selection of board members and accountability, does not ensure sufficient independence and decision-making ability. While individuals appointed to the board cannot be employees of an entity licensed by ARTEC, their affiliation can sometimes hinder their independence. Furthermore, ARTEC is accountable to two ministers, the Minister for Telecommunications and ITC and the Minister of Economy and Finance, and its independence may be limited by the unusually prominent role that these ministers play with regards to ARTEC's strategy and workplan, which both require approval from both ministers, contrary to good practices observed in other countries.¹⁴⁹

15. There is a risk of exclusionary behavior by dominant telecoms players in adjacent

markets. The incumbent is part of a larger conglomerate which is active in sectors that utilize ICT services, such as financial services. Telma's significant market position in segments such as fixed internet services which are key inputs for firms in downstream sectors, raises the risk of exclusionary behavior through refusal to deal with its parent company's downstream competitors. Such behavior could be dealt with through proper enforcement of abuse of dominance provisions in the competition law.

(ii) Focus sector: Petroleum

16. The petroleum sector plays a key role in access to electricity and related goods and services, but low levels of purchasing power means that consumption is limited to the better off.

Fuel is used as an input for producing a range of goods, such as processed foods, and services such as electricity and transportation; a situation which is likely to continue in the short-term as the transition to renewable energy supply is underway. However, the price of fuel is currently inaccessible for the majority of the population. Only the wealthiest 20 percent consume gasoline and diesel, and account for 85 percent of electricity consumption. The richest 40 percent account for close to 90 percent of public transport utilization, and the wealthiest 60 percent consume over 80 percent of processed foods. Low levels of consumption by the majority of the population reflect limited purchasing power. For the specific case of jet fuel, the price is higher in Madagascar than other comparator destinations, which is passed through to consumers in the form of fares for passenger tickets and cargo.

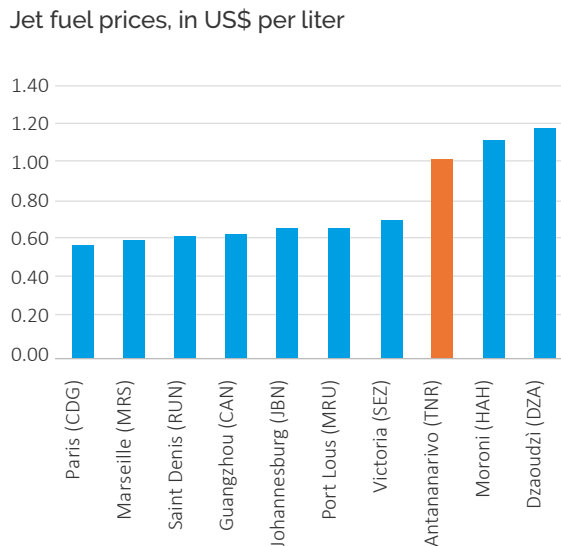
¹⁴⁸ The new Madagascan Competition Law No. 2018 – 020 on the recasting of the Competition Law (repeals the Competition Law No. 2005 – 020 of October 17th, 2005) lays out the establishment, functions, and institutional arrangement of the Competition Council. The Competition Council was fully constituted in 2015 but has not been very active in regulation competition, investigating and sanctioning anticompetitive practices. Article 37 of the Act provides for collaboration between the Ministry of Trade, which also has a competition mandate, and other specialized agencies

¹⁴⁹ Law 2005 – 023 and Decree 2006 -213, articles 13 and 30

17. Prior to recent reforms, the fixed cost elements of the final price of fuel in Madagascar have been higher than other countries. Changes in global oil prices as well as costs related to importing fuel to the country, storage and transportation of fuel within Madagascar and taxes all contribute to the final retail price of fuel. These different elements of fuel prices should be calculated using a formula. However, in practice, prices have been changed on an ad-hoc basis, as the government has hesitated in passing through changes to global oil prices to consumers. An assessment of the formula for determining the final price of fuel revealed that the margins maintained by petroleum companies related to storage and distribution were higher in Madagascar than in comparator countries, thereby contributing to an elevated final price.¹⁵⁰

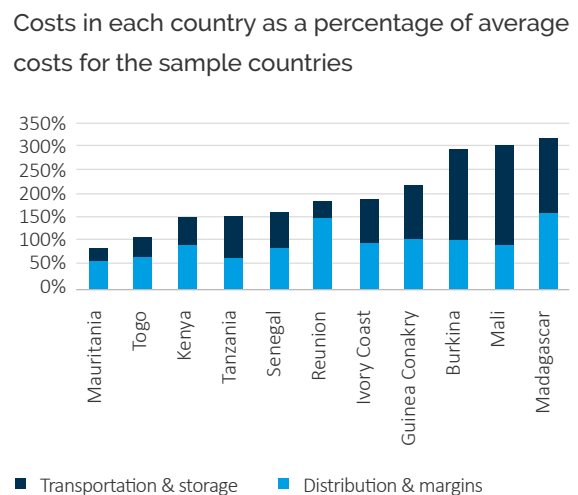
18. To reduce the final retail price of fuel, without reverting to a universal price subsidy, the government started negotiations with petroleum companies in January 2018. Following several rounds of negotiations, petroleum companies agreed, in June 2019, to reduce the price per liter of fuel and decrease the maritime freight cost.¹⁵¹ Furthermore, companies agreed for these measures to be applied retroactively starting on January 1, 2019, allowing the government to use the cost savings over the first six months of the year to pay off the accumulated arrears due to petroleum companies. Such an outcome demonstrates that the government has the capacity to determine policies even in concentrated markets, as well as marking a more permanent solution to reducing the price of fuel without reverting to a regressive universal price subsidy.

Figure 66: The price of jet fuel oil is higher in Madagascar and is amongst the highest in Africa and other major destinations



Source: Airline data obtained by Airport and National Airline surveys (2018)

Figure 67: The combined costs of transportation and storage and distribution and margins were until recently the highest in Madagascar compared with benchmark countries



Source: Beicip-Franlab Industry Assessment

¹⁵⁰ Study of the reference calculated price undertaken between November 2016 to May 2017 by Beicip-Franlab and financed by the Energy Sector Management Assistance Program of the World Bank.

¹⁵¹ The cost of fuel per litre decreased by 100 Ariary for gasoline (2.4%), 150 Ariary for diesel (4.2%) and 500 Ariary (19%) for kerosene. The maritime freight cost decreased from 65\$/metric ton to 40\$/metric ton.

19. The organizational set up of the petroleum and jet fuel markets result in the private sector having significant market power.

There are four major players in the import and distribution of petroleum,¹⁵² two companies involved in the storage and transportation of petroleum,¹⁵³ and only one in the case of the jet fuel market. As such, the petroleum fuel market is characterized by a high degree of concentration,¹⁵⁴ while the jet fuel market operates as a monopoly. Furthermore, links between these companies are strong and they appear to act in concert with each other on strategic matters, such as price, through the industry association, Groupement Pétrolier de Madagascar (GPM) which is highly influential in the regulation of the sector.¹⁵⁵ Another example of coordinated behavior includes joint shipment to minimize marine transport costs and realize economies of scale given the relatively small market. While this can lead to efficiency gains it can also facilitate collusion. The sector's market structure, with common ownership and vertical integration of storage and transport facilities means

that the petroleum companies maintain significant market power.

20. Furthermore, the state maintains a dual role of being a shareholder in petroleum companies and seeking to regulate the sector, which are arguably incompatible.

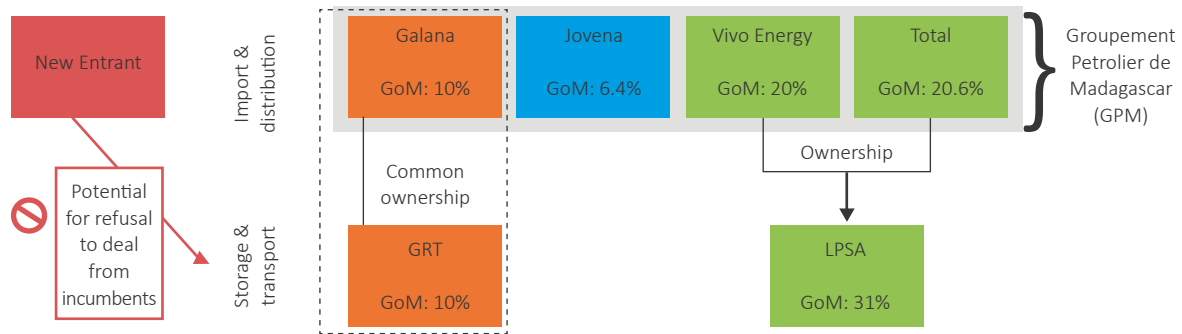
As a shareholder, the state has the objective of increasing the profitability of the petroleum sector. Even though the state sold its majority shareholding during the privatization wave in the 2000s, shareholding rights are maintained, which the government views as being important for accessing information on the sector and having Board representation. However, in practice, the government has not been able to leverage this opportunity and has limited access to information. At the same time, the regulatory authority, the Office of Madagascar Hydrocarbons (OMH) is tasked with ensuring that fixed costs are reasonable as per industry standards; a role which it has not been able to effectively play thus far. The OMH also relies on technical and financial information from the industry body (GPM) which may lead to risks of capture or conflict of interest.

¹⁵² Jovena (a subsidiary of Axian Group, also the majority owned of Telma) having the largest market share); Galana (part of the Rubis group); Vivo Energy; Total Madagascar.

¹⁵³ Galana Refinery in Tamatave (GRT) owned by Rubis; Petroleum Logistics Company (LPSA), owned by Total and Vivo (see Figure 68 for an illustration of market structure).

¹⁵⁴ Market concentration can be measured through the Herfindahl-Hirschman index (HHI), which considers the number of firms and the market share they account for. Madagascar's petroleum sector has an HHI of 0.27. A market with an HHI above 0.18 is generally considered concentrated, while less than 0.1 is generally considered unconcentrated. Kojima, M., Matthews, W., & Sexsmith, F. (2010). 'Petroleum Markets in Sub-Saharan Africa'. Washington DC: World Bank.

¹⁵⁵ Madagascar Economic Update (Spring 2019) 'Managing Fuel Pricing'

Figure 68: Petroleum market structure

Source: Beicip-Franlab Industry Assessment; Madagascar Economic Update Spring 2019; Note: % shows government shareholding in each company. Government of Madagascar holdings in each of the companies is shown in yellow.

21. Currently, there is no price competition for petroleum products. As per the law, the price of petroleum must be the same in all regions of the country. However, there is no price competition between firms, despite their operating costs being different. Prior to the political transition period, one petroleum company did lower prices in order to increase market share. However, this company was not able to successfully procure fuel afterwards, given the joint transportation and storage arrangements, which was one of the contributing factors behind its transition out of the Malagasy market. To date, the regulatory authority has made minimal attempts to encourage price competition amongst petroleum companies. Allowing companies to access common infrastructures regardless of whether they compete in price should be encouraged through the Competition Law and promoted by the Competition Council as well as the regulatory agency. For the case of jet fuel, the price is determined by the supplier who has the monopoly of the market. Due to higher prices of jet fuel in Madagascar compared with other destinations, international airline companies aim to refuel elsewhere while domestic airlines have no other choice, which compromises their overall competitiveness.

22. The fixing of petroleum prices has taken advantage of a provision in the Competition Law but has not been accompanied by collaboration between OMH and the Competition Council to assess the economic basis for the fixed price. The Competition Law contains a provision for price fixing in certain strategic sectors, contrary to the principles of competition. However, the fixing of prices has not evolved in consultation with the Competition Council, where there has been no full assessment of whether the conditions that justify price controls are present, as would be required under the law.

23. There are both regulatory and non-regulatory barriers for new players to access the petroleum market. While the Law 2004-003 on the liberalization of the downstream petroleum sector includes the objective to encourage new entry, in practice there has been limited penetration by new actors. To the contrary, legal provisions such as requiring new firms to have a minimum coverage in all eight petroleum zones, including in geographical areas where markets are small with limited profitability, requires significant investment costs and is a deterrent for new operators.¹⁵⁶ High

¹⁵⁶ Law No 99-010 of 17 April 1999, revised by Law No2004-003 of 24 June 2004 and Decree No2004-669.

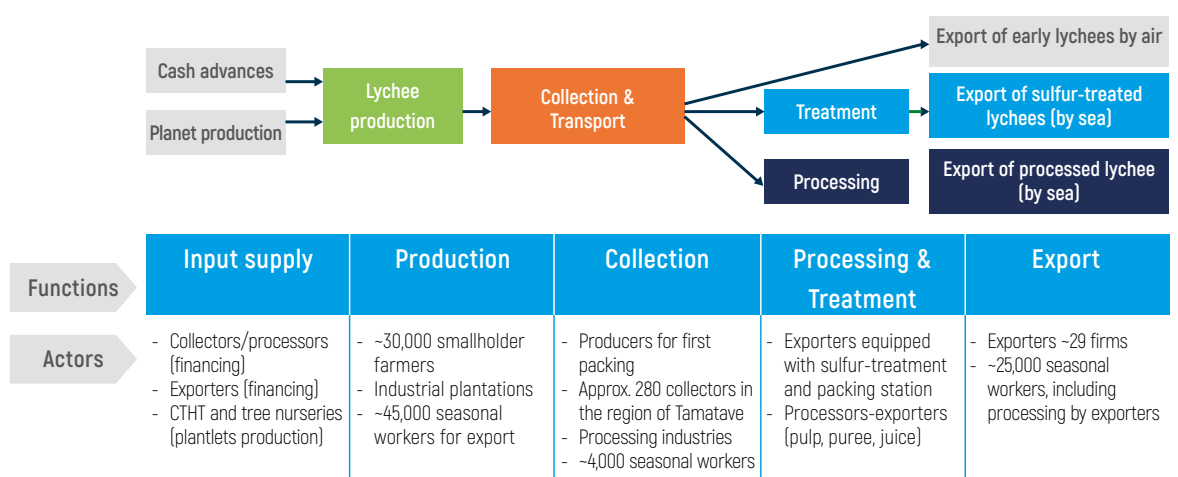
costs to obtain and comply with licensing procedures have also restricted entry into various sections of the petroleum value chain resulting in concentration and increased costs. While new entry is unlikely to solve all issues in the sector, it is important to encourage an environment where entry is possible to allow for some market contestability and prevent potential cartelistic behavior. In the case of the jet fuel market, only one company has the license to supply the market, which has been justified on the grounds of the high initial investment costs. Such a situation where there are limited options for new players to enter the market and fix prices contributes to market dominance by a limited number of companies and limits incentives to improve quality and innovate to gain market share.

(iii) Focus sector: Lychee

24. Lychees are an important source of

export revenues and income for smallholder farmers. Lychees are a source of income for more than 100,000 farmers and seasonal workers in Madagascar with most of the potential of the sector stemming from export markets.¹⁵⁷ Production of lychees is primarily done by smallholder farmers, bought at farmgate by collectors, and sold to exporters who operate sulfur treatment plants (Malagasy lychees are generally sulfur-treated for preservation during transport) or other processing facilities (see Figure 69). Exporters are also responsible for the packing, storing and transport of lychees to the airplane or boat. Export revenues are estimated to account for more than 80 percent of all revenues from sales of fresh and processed lychees in Madagascar.¹⁵⁸ Around 90 per cent of Malagasy lychees are exported to Europe, although other export destinations include Russia, the Middle East, and East Asia.

Figure 69: Graphical representation of the value chain for lychee export



Source: WBG Markets and Competition Policy Team. Given the central role of exports, this diagram and analysis in this section focuses on the value chain for exports of fresh and processed lychees.

¹⁵⁷ Lychees are grown by 30,000 smallholders in the Tamatave, Manajary, Manakara and Forth Dauphin regions along the east coast of Madagascar. In addition, 75,000 seasonal workers are involved in the harvesting, collection, processing and packing of lychees. See ILO (2017) Chaîne d’approvisionnement du litchi de Madagascar: Facteurs incitatifs et contraintes pour l’amélioration de la sécurité et de la santé au travail.

¹⁵⁸ Assuming a domestic retail price of 500 Ariary per kilogram, an export price of 2000 Ariary per kilogram, and equal sales volume in domestic and international markets.

25. Despite Madagascar's privileged position in dominating the European market over winter, less than half of the harvest is commercialized resulting in a missed opportunity to raise incomes for farmers and create jobs. Madagascar dominates the international market for lychees between December and February in Europe, representing approximately 80 percent of produce during this period.¹⁵⁹ However, this position is not maximized, whereby of the 70,000-100,000 tons of lychees harvested in Madagascar only 30,000-40,000 tons are typically commercialized. Market participants estimate that about half of the sold produce reaches international consumers and the other half domestic consumers.¹⁶⁰ Such a situation results in missed opportunities to create better jobs for farmers and to increase export revenues.

26. Decisions over the quantities to be sold are determined by the exporters' association, which works with importers and the government, to set export quotas. The exporters' association, Groupement de Exportateurs de Litchi (GEL), exports over 90 percent of Madagascar's lychees (by volume) to two European importers, who are meant to be selected by the government in a tendering procedure every two years. However, in practice, a new call for proposals among European importers has not been initiated since 2013, which prevents competition among importers and therefore the potential to boost export opportunities. The export volume is agreed between GEL and the two importers, Greenyard Group and Novagrim (currently capped at 17,500 tonnes), which is

divided between GEL members. One of the functions of GEL is to maintain their exclusive relationship with the two European importers, which is facilitated through enforcing the quota on lychee exports. Part of the explanation behind the organizational practices of GEL and its relationship with the two importers is related to challenges in maritime transport, which is expensive and requires advance financing by the importers.

27. In cases where new investors may wish to enter the lychee market and collaborate with other importers, access is limited by high barriers to entry. Regulatory barriers include the need for exporters to have a sulphur treatment plant that meets minimum standards. However, this restriction prevents entry by exporters who do not need to engage in sulfarization, and moreover, the regulations do not state the minimum standards, leaving substantial room for the discretionary granting of licenses. Members who are not part of the GEL, or members that have attempted to exceed their official quotas have reportedly been blocked from shipping at the port. Furthermore, a lack of competition enforcement means that risks of potentially collusive behavior (in the market for buying lychees and in export) are not monitored.

28. In addition to the exports of lychee being restricted, farmers also have limited options to negotiate prices. Lychees are highly perishable, which means that sales from the farm are constrained to local markets. In many lychee growing areas, farmers do not have access to roads, which reduces their negotiating power with collectors who

¹⁵⁹ Background report by Henri Michael Tsimisanda. Madagascar's production is estimated at 70,000-100,000 tons p.a. See also Houbin, Chen, Xuming Hang (2012). Overview of litchi production in the world. 4th International Symposium on Lychee, Longan and other Sapindaceae Fruits. White River, South Africa. Acta Horticulturae, International Society for Horticultural Science.

¹⁶⁰ Interviews with lychee exporters in March 2019.

have the transportation means to reach the farmgate. Furthermore, smallholders have limited access to information about prices in other locations, which constrains their decisions on where and when to sell lychees. Farmer's weak bargaining power related to poor connectivity is exacerbated by low levels of access to credit and limited yields per farm due to small plot size, which is cross-cutting for other value chains, such as rice (see chapter 4). These factors combined contribute to farmers being disconnected from markets and have limited negotiating power.

29. Going further along the value chain, collectors of lychees face fixed prices, restricting competition in buying markets. In turn, the collectors of lychees generally work exclusively for one exporter, where a set price is agreed in advance. All exporters agree the same price for lychees from the collectors. The collective fixing of buying prices among exporters is likely to restrict competition in buying markets and therefore is to be detrimental to farmer incomes. In addition, for the small portion of lychees that are exported outside of EU markets, the GEL has the autonomy to set reference prices, thereby also limiting price competition, without a substantial socio-economic justification.

(iv) Focus sector: Vanilla

30. Vanilla is experiencing a global price surge, and Madagascar is the leading exporter. Low labor costs and a well-suited climate have allowed Madagascar to develop a dominant position in the international vanilla market, accounting for more than half of

global exports since 2014.¹⁶¹ Vanilla exports accounted for 26 percent of Madagascar's export revenue in 2017¹⁶² and contributed around 6.8 percent to national GDP. The sector supports more than 80,000 farmer households and over 6,000 intermediaries. Along with seasonal employment, vanilla generates around 200,000 direct jobs, mainly in the Sava region (North East coast), which produces 85-90 percent of Malagasy vanilla.¹⁶³ Increasing vanilla exports, mainly by improving quality, has been a key aim of the government.

31. However, smallholder farmers are not taking the bulk share of the final price.

Vanilla farmers typically sell their beans to intermediaries before any processing. Unprocessed or green vanilla cannot be stored without deterioration in its quality and therefore must be sold shortly after harvest. While most sales occur on an informal spot market, mostly at farm gate or the street, official local wholesale markets are also used for sales. In the case of green vanilla, collectors (who are often hired and financed by preparators or exporters) buy vanilla from different farmers or from smaller collectors. Figure 70 gives an overview of functions, activities and actors along the chain. While reports suggest that some farmers have been able to benefit from recent high prices,¹⁶⁴ most farmers are not involved in value-adding activities downstream, such as curing, which could significantly increase farmers' selling power by allowing them to store the dried, non-perishable product. Barriers to curing by farmers include technical know-how, space and labor constraints, cash needs at the beginning of the season, as well as minimum capacity requirements for curing.

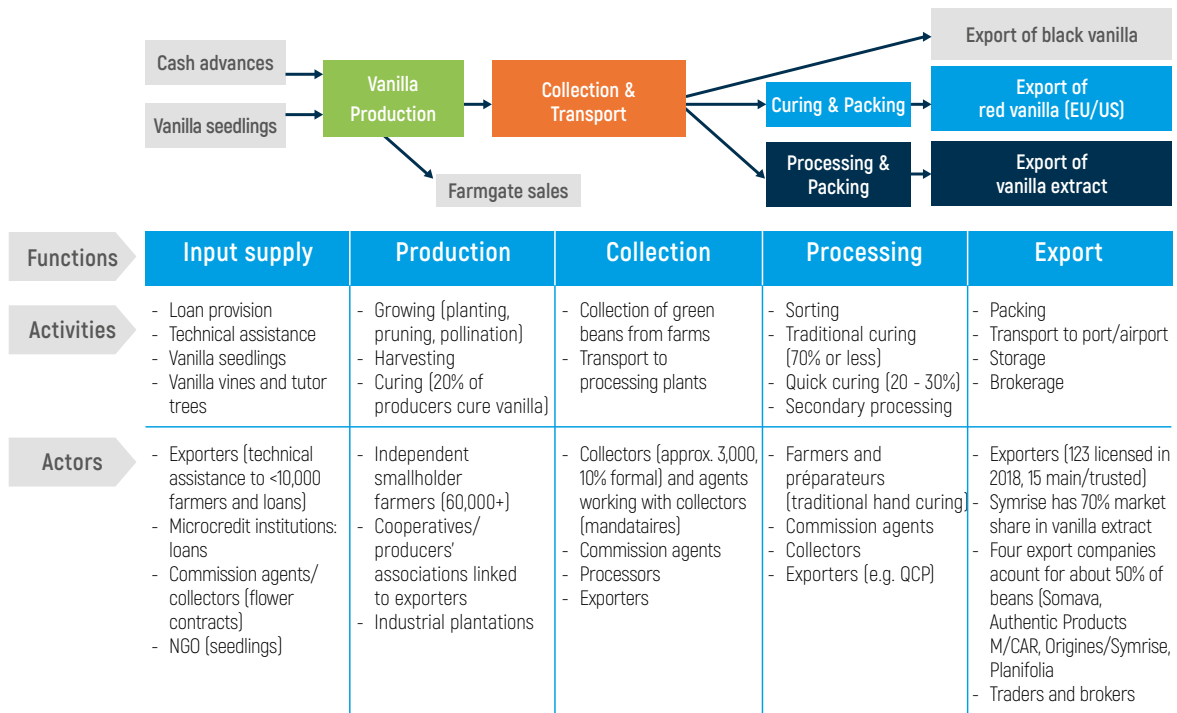
¹⁶¹ FAOStat, 2018.

¹⁶² Observatory of Economic Complexity, 2017, <https://atlas.media.mit.edu/en/profile/country/mdg/>

¹⁶³ International Labor Organization, 2011.

¹⁶⁴ Interview (2019)

Figure 70: Value chain of export vanilla



Source: Prepared by the Markets and Competition Policy Team of the WBG

32. The vanilla chain is highly controlled and regulated, protecting vested interests and limiting entry and growth of collectors, processors and exporters. There are requirements on the minimum and maximum size of operations and other restrictive entry rules. For instance, preparators wishing to buy or sell green vanilla in official markets are required to demonstrate the capacity to cure at least five tons of produce. Collectors are not allowed to employ more than five agents. Exporters are required to renew their license on an annual basis. All buyers and sellers in official markets for green vanilla need to be registered. According to regulation, the Regional Directorate for Trade provides an opinion on the registration of collectors, preparators and exporters, while the Regional Directorate for Rural Development opines on registration of planters. Meanwhile, the

registration process is managed by an industry board that is composed, among others, of representatives of incumbents (including collectors, preparators, exporters and farmers) raising a possible conflict of interest that may hinder the entry of new operators.

33. Government interventions in the sector have also resulted in limiting options of producers. The government requires sales of green vanilla in official markets (marchés contrôlés) to maintain quality control, protect farmers and limit incentives for theft – but these markets may also hinder alternative commercialization options for farmers (such as contract farming). Government prohibited vacuum packaging in 2016 (agreed by the Ministry of Commerce in collaboration with the National Vanilla Platform which represents the main exporters) to safeguard against

reputational risks given issues with buyers assessing the quality of vacuum-packed vanilla on purchase,¹⁶⁵ as well as to limit premature harvests. However, the ban can limit selling options by encouraging players to sell produce immediately to avoid product deterioration and may prevent volumes from responding to price signals. Overall, the market regulations have reduced the price elasticity of supply, which can exacerbate price volatility.

34. Facilitating the entry of new players into the local vanilla market could help Madagascar preserve its global market position while benefiting a greater share of the population. With vanilla prices high, more farmers are likely to enter the market in Madagascar as well as competitor destinations, which should in the medium-term help to bring prices down. Madagascar currently holds 80 percent of the world market for vanilla. Vanilla is a very labor-intensive commodity, because it requires that vanilla plants are pollinated manually. However, at a price that represents five times the price three years ago, Madagascar' comparative advantage of low labor costs is getting eroded as other countries with higher labor costs like Uganda are now able to invest in the vanilla production.¹⁶⁶ Similarly, the current price makes investments in better synthetic alternatives attractive.¹⁶⁷ These new players will ultimately drive prices down and will result in Madagascar losing market share. A strategy that would promote domestic competition would also result in lower prices but would not lead to a loss in export revenues and would promote employment in Madagascar rather than abroad.

D. Policy options and reforms to address anti-competitive behaviors

(i) Sector-specific reforms

35. In the telecommunications market, reforms could result in lower prices of broadband and higher levels of penetration, which would also contribute to growth and support industries such as IT-BPOs and the financial sector. Key reforms include: (i) the regulatory agency identifying actors with significant market power; (ii) ensuring access to bottleneck facilities by third parties; (iii) ending the prohibition of investing in backbone infrastructure in areas that could compete with the incumbent; (iv) reducing the costs of licenses; (v) the competitive assignment of spectrum; (vi) ensuring the Universal Services Fund is objectively used to deliver investments in rural areas; (vii) considering possible asymmetric regulation of interconnection rates; and (viii) improving the functionality and independence of the regulatory agency.

36. In the petroleum market, addressing anti-competitive practices could result in increased price competition and a reduction in jet fuel prices. Key reforms include: (i) enforcing the requirement for OMH to obtain greater access to firm's operating information including details on actual costs; (ii) encouraging price competition for retail fuel prices through the monitoring of price fixing / market division by the Competition Council; (iii) reducing barriers to entry for new firms including access to transport and

¹⁶⁵ Potentially due to failure to enforce original regulation of vanillin and moisture content of vacuum-packed vanilla.

¹⁶⁶ <https://www.bloomberg.com/news/articles/2018-03-07/vanilla-production-in-uganda-surges-as-farmers-battle-thieves>

¹⁶⁷ <https://www.ft.com/content/f16d8766-ee13-11e6-930f-061b01e23655>

storage infrastructure; (iv) applying gradual asymmetric regulation on the minimum coverage requirement; (v) allow other firms in the jet fuel market to access licenses; and (vi) encourage consumer groups to monitor prices and engage in advocacy-related activities.

37. In the lychee market, reforms to open the export market could result in higher market demand for farmer's produce, which could create jobs and encourage further production. Key reforms include: (i) remove the export quota; (ii) streamline requirements for licenses including removing the requirement to own a sulphur treatment plant and clarifying minimum standards to avoid discretion in interpretation; (iii) review the role of GEL, under a new framework for private associations with public interest; and (iv) build coalitions between international organisations, NGOs, civil society and governments to encourage buyers/importers to undertake value chain audits in line with Corporate Social Responsibility requirements.

38. In the vanilla market, reducing barriers to entry and government regulation could result in more farmers being able to participate in the value chain. Key reforms include: (i) removing an arbitrary ban on vacuum packing in favour of better labelling, traceability and stronger enforcement; (ii) lifting restrictive regulatory barriers such as the cap on the number of agents that can work with a supplier; (iii) the Competition Council to monitor examples of price setting and other collusive behaviors; (iv) similar to

the lychee example, for international firms to undertake audits of the value chain; and (v) for the government to limit interference in markets and allow for contract farming or other forms of value chain organization such as Public Associations with Private Interest.

(ii) Economy-wide reforms

39. Institutional reforms should help to address economy-wide anti-competitive practices, building on what is already working and expanding, or leveraging experiences from other countries in similar situations. In the case of commercial justice, some cases could benefit from alternative mediation which could be set up building on experiences in other countries.¹⁶⁸ To avoid the manipulation of fiscal administration, well-designed performance-based measures should continue which have had proven success in the area of customs.¹⁶⁹ While Madagascar took a first step in publishing tax expenditure statements, further progress can be made through making transparent the criteria used to justify the award, to enhance public scrutiny.¹⁷⁰ Similarly, open contracting principles could be gradually applied to procurement and the award of licenses.¹⁷¹

40. The institutional basis for competition should be strengthened by improving the content of the competition law. Recent amendments to strengthen the law include clarifying considerations in determining dominance, amending the provision on monopolies such that the abuse of monopoly

¹⁶⁸ <http://pubdocs.worldbank.org/en/952171510251453291/IPP-Tools-booklet.pdf>. Examples include: Bosnia & Herzegovina, Dominican Republic and Georgia, as well as more recent pilots in Albania, Colombia, Kyrgyz Republic and Mongolia

¹⁶⁹ <http://documents.worldbank.org/curated/en/714611506078407127/Customs-reform-and-performance-contracts-early-results-from-Madagascar>

¹⁷⁰ <http://documents.worldbank.org/curated/en/970941498201633115/pdf/116658-PUB-Date-6-16-2017-PUBLIC.pdf>

¹⁷¹ <https://openprocurement.io/en/cases/prozorro>. See for example: Ukrainian ProZorro system – used open contracting standards

power is prohibited, including penalties for most anticompetitive practices, and strengthening the financial and administrative framework for the Competition Council. However, there is further scope to improve the law, to include the *per se* prohibition of hardcore cartels. Furthermore, the competition law also provides for price controls, which may build on requests from private operators for sectors characterized by a monopoly or “difficulty in supply”, thus not limiting the use of price controls to cases where there is a clear market failure. Addressing these shortcomings in the law may merit the approval of secondary legislation.

41. Weaknesses in the Competition Council are amongst the constraints to the effective implementation of the competition law since 2005. Across all the sectors reviewed in this chapter, there is ample scope for the Competition Council to increase monitoring and sanctioning of anticompetitive behavior, to estimate quantitative impacts of a lack of competition, and to communicate the results to the public and policy-makers. However, these activities are not being undertaken to a significant degree. To enhance the deterrence effect of the law on anticompetitive behavior, the Council needs to build a credible threat of enforcement action with sufficient penalties. Developing a framework for settlements will also help increase efficiency of enforcement.

In addition, in other countries, a leniency program¹⁷² has been developed, to encourage firms to come forward and provide evidence of cartels. Ensuring the effectiveness of the Competition Council requires implementing safeguards for its independence, particularly in sectors which are dominated by politically connected operators. Going forward, the Council should be provided with sufficient resources, to enable the institution to undertake independent inquiries and investigations. In addition, the Council should collaborate with regulatory agencies on sector specific issues to interpret the application of the Competition Law to sector specific practices.

42. For regulatory agencies to enhance their effectiveness, it is important to improve appointment procedures to enhance independence. For example, in the case of the telecommunications regulatory agency, while individuals appointed to the board cannot be employees of an entity licensed by ARTEC, their affiliation can sometimes hinder their independence. Learning from other countries, Board members could be hired following an open and competitive hiring process, and in some cases, international expertise could also be sought, particularly in the early phase of a regulatory agency undergoing reform to provide practical guidance on effective regulation.

¹⁷² Leniency can be described as a system of immunity and reduction of fines and sanctions that would otherwise be applicable to a cartel participant in exchange for reporting on illegal anticompetitive activities and supplying information or evidence. More than 50 jurisdictions have adopted a leniency program including: Australia, Brazil, China, Germany, India, Korea, Malaysia, Mexico, Russia, Singapore, South Africa, UK and USA; and the EU.

A hand holding a bundle of vanilla beans against a blue background with a white curved border. The text "Summary of Reforms" is centered in the blue area.

Summary of Reforms

◀◀ *This chapter summarizes key reforms from the **Madagascar Country Economic Memorandum: Scaling Success: Building a Resilient Economy**. The reforms consider how improvements could be made to connectivity, labor productivity and human capital, doing business institutions, as well as incentives to encourage the use of improved technologies in the agriculture sector.* ▶▶

A. Introduction

1. This chapter presents the priority reforms identified from previous chapters, to facilitate productive, inclusive and sustainable growth in Madagascar.

The recommendations of the CEM build on the successes of the sectors that have driven growth over the past six years, to distill the lessons learned and alleviate constraints that could help to realize exponential growth. Three types of reforms can be identified: (i) areas reforms and investment plans are ongoing; (ii) areas where there is emerging momentum for reform; and (iii) areas where progress has been much more limited. The priority areas in the General Policy of the Government, were also carefully considered, where there is close alignment with the themes in this report, such as promoting decent employment for all, enhancing human capital through health and education services and improving physical infrastructure.

B. Pathways for Enhancing Inclusive Growth

2. The priority reforms are grouped by the pathways most important for enhancing inclusive growth including: strengthening connectivity, developing human capital, levelling the playing field, and enhancing agricultural productivity (Table 9).

3. Strengthening connectivity

- **Improve execution of pipeline road transport projects.** While there are several pipeline infrastructure projects in

place, timely execution is undermined by the poor public investment management practices, particularly for projects that are externally financed. Addressing these constraints could help to unlock infrastructure that could facilitate trade along major agricultural corridors within the country, and also further support integration with major trading partners. Efforts to develop new infrastructure should be considered alongside planning for operations and maintenance of the existing infrastructure stock.

- **Extend the open skies agreement and reform the domestic air transportation segment.** While Madagascar has started the process of moving towards an open skies agreement, there is scope to much further through the opening of new routes and allowing new airlines to fly into the country's airspace. The domestic air transportation sector could also be strengthened, which would require both policy reforms and new infrastructure, including enhanced competition in the jet fuel market.
- **Strengthen competitiveness of the telecommunications industry.** Substantial investments in the telecommunications sector have resulted in Madagascar having exceptionally fast broadband speed, although high costs relative to incomes means that penetration rates are low. The momentum to strengthen competition

of the telecommunications sector could be concretized by strengthening the role of the regulatory agency to: (i) identify actors with significant market power; (ii) to determine the objective allocation of the Universal Services Fund; (iii) to allow for the competitive assignment of spectrum; and (iv) to consider possible asymmetric regulation of interconnection rates). Access to critical infrastructure could also facilitate competition, for example by allowing access to bottleneck facilities by third parties and by ending the prohibition of investing in backbone infrastructure in areas that could compete with the incumbent.

- **Enhance access to electricity from renewable energy sources by implementing the least-cost development plan and reforming JIRAMA.** Substantial reforms have commenced to address low electrification rates and the poor financial health of the state-owned utilities company, which requires continued momentum. Key reforms include ensuring that pipeline renewable energy projects are implemented according to plan, and that these new investments are selected on a least-cost basis in line with demand and capacity to pay, supported by financial, social and environmental feasibility studies. Critical to the endeavor

of making renewable energy affordable is reforming the state-owned utilities company, JIRAMA, so that it is a credible off-taker for privately financed projects.

4. Human capital and labor

- **Strengthen basic public services through multi-faceted interventions.** A reform momentum has already started, particularly in the education sector, but efforts need to be accelerated if Madagascar is to improve learning outcomes and reduce unacceptably high levels of stunting. A holistic approach to teacher training and career management is required, as well as ensuring that teachers are competitively recruited according to their skills. Addressing stunting requires strengthening the health system (such as investing in health workers, and enhancing monitoring and management), improving access to water and sanitation services, as well as promoting positive parenting practices such as nutrition.
- **Increase resources for human capital related expenditures to be supported by improved financial management systems and procedures.** Expenditures on education and health in Madagascar are amongst the lowest in the world. However, to make the case for increasing public spending, reforms would need to continue



A holistic approach to teacher training and career management is required,

to improve financial management practices to reduce the possibility of leakages.

- **Encourage female leadership to help enhance productivity and the possibility of Madagascar realizing a demographic dividend.** Female labor force participation in Madagascar is high, but the quality of employment is low, given the large prevalence of informality and subsistence agriculture. Firms that employ females in positions of leaderships have been shown to have higher levels of labor and productivity growth. Madagascar's fertility rates are declining, and the country is characterized by its youthful population (41.6 percent of the population are below 15 years old). Encouraging females in leadership positions can have a role-modelling effect for the next generation, which may provide further incentives for reducing fertility rates, particularly as the formal sector expands.

5. Levelling the playing field

- **Strengthen the institutional framework for competitive behavior to promote productivity and the sustainability of growth.** Weaknesses in the investment climate have resulted in firms finding alternative ways of doing business, including through the manipulation of rules and regulations. Addressing these challenges requires a multi-faceted approach. In certain agribusinesses such as cocoa, private associations with public interest have been important for ensuring the benefits of exports are felt more inclusively, which could be further promoted under an overarching regulatory framework. The Competition Law could be further strengthened to specifically prohibit the use of cartels, which could be supported by an effective Competition Council. These measures could be further

enhanced by tackling the non-regulatory barriers to entry which give certain firms advantages such as discretionary procurement and fiscal practices.

- **Encourage new investors to Madagascar could involve the enforcement of the Trade Facilitation Agreement.** Such measures would involve identifying and eliminating discretionary procedures and supporting Investor Aftercare Programs. Going further, improvements to commercial justice and arbitration could also help to encourage investment by promoting fairer access to markets.
- **The business environment could further be enhanced through the lowering of interest rates, which would require reducing risks.** Recommendations to reduce risks include making the credit registry available, adopting a law on movable collateral to allow assets-based lending, and improving the legal infrastructure and efficiency of the judiciary system, such as credit and bankruptcy proceedings.

6. Incentivizing the uptake of improved technologies, particularly in the agriculture sector

- **Bring farmers closer to markets by improving connectivity.** Improvements to rural roads can bring farmers physically closer to markets. These efforts can be complemented by bringing farmers figuratively closer to markets, for example through a warehouse receipt system, which would allow farmers to produce and sell when prices are higher, and for traders to position their stock around the country until physically needed. However, for the warehouse receipt system to be effective, farmer organization would have to improve, for example through

cooperatives. Establishing regional rice mills would also reduce the cost of transporting rice across long-distances and improve the competitiveness of domestic farmers.

- **Promote access to information to help address market inefficiencies.** Investments in even very simple information systems for rice and other crops would be a good way to improve market efficiencies, for example through radio bulletins, which was previously implemented, but came to an end once donor financing stopped. These efforts
- **The reversal of arbitrary bans on the exportation of rice and other commodities could also help to incentivize the exports of agricultural goods.** Specialty rice that serve niche markets have been subject to exports bans which are unevenly applied. Reversing these ad hoc bans could help to improve the predictability of the business environment.

could be complemented by investments in remote sensing systems that help to gauge crop yields to determine where surpluses exist across the country.

Table 9: Summary of Key Reforms and Expected Impacts

	Key Issue	Proposed reforms	Link between the CEM and the Government's General Policy
Strengthening connectivity	<p>There is a pipeline of national roads (largely externally financed) but implementation has not followed the expected pace</p> <p>Air transportation is important for the transportation of cargo and passengers, but fares are high, and routes are restricted</p>	<ul style="list-style-type: none"> Strengthen systems to support the execution of externally financed investment projects (<i>ongoing</i>) Consider new financing sources for O&M (such as parking, vehicle registration and inspection fees) (<i>new</i>) Improve the public transportation system to facilitate access to jobs (<i>ongoing</i>) Review the partial Open Skies policy (post-2020) to increase routes to Madagascar (<i>partially ongoing</i>) Open the jet fuel market to competition to reduce costs of air passenger fares and cargo (<i>new</i>) 	<ul style="list-style-type: none"> Inclusion (Chapter 2): improvement of road networks will unlock connectivity constraints to major agricultural production zones. Pillar 11 of government's program on infrastructure Inclusion and productivity (Chapters 2 and 3): availability of air transport at reasonable cost will reduce connectivity constraints and production cost Pillar 8 of the government's program on tourism.
	<p>Broadband speed is fast, but costs are high and rural connectivity is limited</p>	<p>Reduce regulatory and non-regulatory barriers (<i>there is momentum to reform the sector, but reforms are new</i>)</p> <ul style="list-style-type: none"> The regulatory agency to identify actors with significant market power; Ensure access to bottleneck facilities by third parties; End the prohibition of investing in backbone infrastructure in areas that could compete with the incumbent; Review the costs of licenses; Promote the competitive assignment of spectrum; Ensure the Universal Services Fund is fairly and objectively considered for all operators; 	<ul style="list-style-type: none"> Inclusion and productivity (Chapters 3 and 5): equal treatment of operators contributes to sustainability while opening the market to competition will reduce operating cost, increased access will unleash the potential for formal job creation While there is not a specific digital pillar in the government's program, it is a reform priority with some reform momentum.

	Key Issue	Proposed reforms	Link between the CEM and the Government's General Policy
Investing in human capital		<ul style="list-style-type: none"> Consider possible asymmetric regulation of interconnection rates to give smaller operators a better chance; and Improve the functionality and independence of the regulatory agency, including through greater collaboration with the Competition Council 	
	Electrification rates are low and energy supply is unreliable	<ul style="list-style-type: none"> Select hydropower projects on a least cost basis supported by financial, social and environmental feasibility studies (ongoing) <p>Continue improvements to JIRAMA, to move towards financial recovery (ongoing)</p> <ul style="list-style-type: none"> Improve revenue collection Reduce non-technical losses Promote greater transparency in the renegotiation of arrears Apply a well-defined tariff policy (under preparation) 	<ul style="list-style-type: none"> Productivity and sustainability (Chapters 2 and 3): reforms to the energy sector will remove one of the most binding constraints to business, which is the quality and cost of energy, and relieve the burden of subsidies on public finances Government's program - pillar 2 on energy.
	The vocational training curricula does not meet the needs of the private sector	<ul style="list-style-type: none"> Public sector to promote coordinated inputs to the vocational training curricula to avoid ad-hoc and fragmented inputs (<i>new</i>) 	<ul style="list-style-type: none"> Inclusion and productivity (Chapters 2 and 3): a better organized vocational training will supply growing sectors the labor input needed for efficiency and their development while opening opportunities for the labor force to access jobs
	Placing women in leadership positions is correlated with firms having greater labor productivity and employment growth	<ul style="list-style-type: none"> Promote women in roles of increasing responsibility and encourage female role models (<i>new</i>) 	<ul style="list-style-type: none"> Inclusion and productivity (Chapters 2 and 3): access of women to managerial position will increase firm's productivity
	Teachers lack the skills and qualifications to improve the learning outcomes of the next generation	<ul style="list-style-type: none"> Develop a holistic approach to teacher training and career management (<i>ongoing</i>) 	<ul style="list-style-type: none"> Inclusion and productivity (Chapters 2 and 4): having the basic skills will boost the

	Key Issue	Proposed reforms	Link between the CEM and the Government's General Policy
			<p>ability to learn at higher education level and to access jobs</p> <ul style="list-style-type: none"> Government's program – pillar 4 education for all.
	<p>Strengthen the quality of health service delivery</p>	<ul style="list-style-type: none"> Improve the training of community and nutrition health workers (<i>ongoing in selected areas</i>) Increase uptake of antenatal care in the first three months of pregnancy (<i>ongoing in selected areas</i>) Enhance the monitoring and management of the health system (<i>certain interventions ongoing in selected areas such as monitoring if primary care facilities have tracer medications in stock</i>) 	<ul style="list-style-type: none"> Inclusion and productivity (Chapters 2 and 4): improved health service delivery in rural area will reduce the gap between urban and rural area and boost productivity of the labor force
	<p>Reduce stunting so that citizens are healthy and productive</p>	<ul style="list-style-type: none"> Increase access to water and sanitation services (<i>ongoing</i>) Promote positive parenting practices (such as breastfeeding) including nutrition (<i>ongoing</i>) 	<ul style="list-style-type: none"> Inclusion and productivity (Chapter 2): reducing stunting will enhance learning outcomes and productivity
<p>Levelling the playing field</p>	<p>Rules and regulations are manipulated to access and maintain access to markets resulting in unfair business practices</p>	<ul style="list-style-type: none"> Strengthen commercial justice, including use of the Center of Arbitrage and Mediation (<i>ongoing but stalled momentum</i>) Continue to strengthen customs controls (<i>ongoing</i>) Avoid ad hoc and discretionary fiscal practices through restrained use of tax expenditures including publishing the criteria for award (<i>reforms started but tax expenditures increasing</i>) Support e-procurement processes and open 	<ul style="list-style-type: none"> Inclusion and sustainability (Chapter 5): leveling the playing field eases the entry of new players on the market, reduces undue costs for businesses and consumers, and attenuates one of the factors of political instability. Government's program – pillar 3 on the fight against corruption.

	Key Issue	Proposed reforms	Link between the CEM and the Government's General Policy
Enhancing agricultural productivity		<ul style="list-style-type: none"> contracting standards (<i>reform momentum but relatively new</i>) Greater transparency in the recruitment of Board members for regulatory agencies and state-owned enterprises (<i>uneven implementation</i>) Strengthen the Competition Law to prohibit cartelistic behaviors and to eliminate price controls (<i>new</i>) Support a framework for Private Associations of Public Interest (drawing upon the cocoa example) (<i>new</i>) 	<ul style="list-style-type: none"> Inclusion and productivity (Chapter 2): reforms to ease access to finance will enhance firm's productivity
	Accessing finance is important for firm's labor productivity but interest rates are high	<ul style="list-style-type: none"> Improve the credit infrastructure, including the availability of a credit registry (<i>ongoing</i>) Allow asset-based lending by adopting the law on movable collateral (<i>ongoing</i>) Improve the legal infrastructure and efficiency of the judiciary system to reduce risks which are passed through to consumers in the form of higher interest rates (<i>ongoing but uneven implementation</i>) 	
	Investors face complicated procedures and onerous non-tariff barriers	<ul style="list-style-type: none"> Enforce the Trade Facilitation Agreement with supporting measures including greater transparency of non-tariff barriers, streamlined procedures for investors, and a comprehensive review of existing tax and regulatory incentives (<i>ongoing but uneven implementation</i>) Identify and eliminate discriminatory requirements and streamline procedures for investors, including visas and expatriate work permits, as well as develop investor 	<ul style="list-style-type: none"> Inclusion and sustainability (Chapters 3 and 5): clear and transparent procedures will support the entry of new investors and allow for equal treatment of all operators

	Key Issue	Proposed reforms	Link between the CEM and the Government's General Policy
<p>Enhancing agricultural productivity</p>	<p>Smallholder farmers are disconnected from critical infrastructures such as feeder roads and transport mechanisms</p>	<ul style="list-style-type: none"> • after-care programs (<i>ongoing but uneven implementation</i>) • Develop feeder roles (including through decentralized financing mechanisms) (<i>new</i>) • Develop regional rice mills which will reduce transportation costs and bring farmers closer to markets (<i>stalled momentum</i>) • Reform the warehouse receipt system to provide more flexibility in withdrawal periods and trade between crops (<i>new</i>) 	<ul style="list-style-type: none"> • Inclusion and productivity (Chapters 2 and 4): addressing rural infrastructures constraint will improve rural farmers income and therefore incentivize production above subsistence level
	<p>Farmers and policy-makers do not have access to information that could support better decision making</p>	<ul style="list-style-type: none"> • To enable farmers to have a greater say in negotiating prices, support greater access to information on prices for rice and other crops (<i>new</i>) • Invest in remote sensing systems to help gauge crop yields across the country (<i>new</i>) 	<ul style="list-style-type: none"> • Inclusion and productivity (Chapter 4): availability of market information, combined with the ability to decide on the timing of sale, will improve rural farmers income and therefore incentivize production above subsistence level
	<p>Uneven application of the export ban provides uncertainty to exporters and discourages the development of niche, high-end rice</p>	<ul style="list-style-type: none"> • Reverse the export ban for niche, high-end Dista rice (<i>new</i>) 	<ul style="list-style-type: none"> • Sustainability and productivity (Chapter 4): the opportunity to export rice will diversify farmer's sources of income and incentivize production

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