REALITY CHECK

Industrial Policy for Economic Transformation in Uganda

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Centre for Development Alternatives

Konrad Adenauer Stiftung

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Executive Summary

Effective industrial policy has been at the core of virtually every economic transformation success story around the world. After three decades of neoliberal economic management, and faced with stalled transformation, the Government of Uganda (GoU) now demonstrates a renewed interest and confidence in proactive industrial policy. While its efforts to date have lacked focus and depth, there is now a clear sense of reflection on the next phase of industrialisation strategies: a National Industrial Policy has been drafted, and an Industrialisation Masterplan commissioned.

The prospect of industrial policy success hangs in the balance: it can kickstart the deeper transformation so sorely needed to provide decent jobs and incomes to Uganda's bulging youth population, but can just as easily become an extractive tool for patronage politics that stifles economic progress.

This in-depth study aims to help shape the next phase of industrial policy in Uganda by injecting rigorous analysis and fresh ideas into the discourse. It brings together valuable lessons from Uganda's own past and from the rich global literature on the politics, delivery, and content of industrial policy.

Executive Summary

Analytic Framework

Economic transformation - the movement of labour and other resources from low- to high-productivity economic activities – is necessary for sustained growth in output, decent jobs, incomes, and social development. Economic transformation relies on the acquisition of new productive capabilities in higher value-added economic activities. Traditionally, there have been two phases of structural change driving across-sector economic transformation: from agriculture to manufacturing and then to services. Today, certain services as well as high-value agricultural products have become key drivers of economic transformation even for early-stage developing countries. Recent empirical evidence demonstrates that manufacturing is still a key engine for economic transformation in both developing and developed economies. Ultimately, what matters for economic transformation is moving towards higher-value-added activities with spill-overs and linkages that are able to absorb a large portion of an economy's productive resources, especially labour.

Industrial policy is broadly understood to refer to a range of government interventions aimed at altering productive structures toward higher-productivity sectors and activities by changing the incentives, constraints, and resources available to economic actors. There are many well-documented cases of industrial policy success and failure, but virtually no cases of economic transformation success without effective industrial policy. Success cases exist on every continent, and many governments of the most advanced economies are still employing industrial policy in order to maintain their competitiveness. There are also compelling theoretical arguments for industrial policy, particularly based on the notion of market failure. This is the idea that, if left alone, competitive markets will not yield the best result for society. The most important market failures that would justify government intervention arise because of the presence of: i) economies of scale, ii) externalities, or iii) market imperfections. Beyond fixing market failures, industrial policy can actively provide a vision that helps markets shift resources into high-value-added activities in the long-run, and foster firm- and system-level capability development. While not all efforts of industrial policy have been successful, the evidence suggests that under the right circumstances, it has been instrumental to economic transformation episodes.

The success or failure of industrial policy is influenced by a range of factors, the most profound of which is the political economy. The political forces shaping industrial policy outcomes in a given country are driven by its underlying political settlement - the balance of power within and beyond the ruling coalition. Industrial policy has the best chance of success when cohesive coalitions and conducive power dynamics exist between the political elite, the state bureaucracy, and the capitalists.

Second, industrial policy effectiveness is dependent on the ability to galvanise and organise key interests around a shared transformation agenda. In successful industrialisers, this has generally been achieved through a powerful central coordination body that is technically and financially empowered and politically insulated from particularistic interests. Effective sector development and specialised agencies have also played a key role in many cases.

Third, it is driven by the choice of economic sectors, actors, and activities to be promoted by industrial policy. Successful industrialisers have tended to concentrate scarce resources on a narrow set of target industrial sectors or activities. A growing literature proposes various methods for evidence-based sector- or activity-selection for industrial policy.

Finally, industrial policy outcomes are shaped by the choice (and thus suitability) of the policy instrument mix, and how well this is adapted based on success, failure, and changing contextual factors. Countries with successful economic transformation outcomes have deployed a rich 'toolbox' of industrial policy instruments to shift the incentives and capabilities of economic actors towards higher-value-added activities. Crucial to the success of these instruments is the combination of supporting and disciplining the private sector – including domestic and foreign investors – in a way that compels them to shift resources away from short-term rent seeking and towards continuous investment in new productive capabilities. This has required ongoing public sector capabilities to learn from and adapt policies and incentives.

History

Important lessons can be drawn from Uganda's history of political economy, industrial policy, and economic transformation. Uganda's political settlement was highly volatile from independence through to the ascent to power of the National Resistance Army in 1986. After short-lived industrial policy efforts in the 1960s, Uganda's economic policy was disrupted by political instability and war for two decades. Some modest but interrupted economic transformation took place in this period.

From 1986 to the mid 2000s, the National Resistance Movement's (NRM) largely stable ruling coalition was able to usher in a consolidation of national security together with macroeconomic stability. This unlocked Uganda's first episode of sustained high GDP growth, which was coupled with promising signs of early economic transformation, including strong export growth and diversification. This growth was driven by post-conflict reconstruction, large donor funding inflows, investment by previously exiled industrialists encouraged to return by the NRM, and the global commodity boom of the 2000s.

However, progress against each economic transformation metric eventually stalled. First, there was an accelerating shift of labour from agriculture into manufacturing and services, which however halted abruptly in the mid 2000s. Second, Uganda's export basket diversified significantly from 1995 until in the late 2000s. Third, manufacturing growth also seems to have stalled, both as a proportion of total output and in terms of absolute export growth. Moreover, the growth witnessed in this period was accompanied by increasing inequality and underemployment as well as stagnant agricultural productivity, and employment. In the 2010s, even GDP per capita growth has oscillated around a much lower average than that seen in the 1990s and 2000s.

The shallow and then stalled economic transformation of the past decades has translated into "jobless" growth as well as stagnating incomes for most people. Low-productivity sectors such as agriculture and traditional sectors are still much larger than higher-productivity sectors including manufacturing. Roughly 8 million working people are stuck in a poverty trap of low-productivity subsistence farming. While underemployment and

vulnerable employment in the informal sector are widespread, occupying the majority of the labour force. Unemployment in Kampala is above 20% (and above 9% nationwide) (Kiranda et al., 2017; Walter, 2019). The absolute number of people living below the national poverty line has grown from 7.7 million in 2009 to 9.1 million in 2018 (The World Factbook, 2020).

Several stakeholders attribute these economic transformation shortfalls to an economic liberalisation agenda that went too far. The policy rubric of the last three decades has largely followed the neoliberal Washington Consensus prescriptions to the letter, with deep liberalisation, privatisation, and deregulation occurring through several reform programmes financed by the World Bank and International Monetary Fund. That policy framework precluded any meaningful industrial policy.

Since the 2000s, active industrial policy is clearly coming into favour among the political elite. This is visible through recent policies and strategies (notably Vision 2040, the 2008 National Industrial Policy, and the 2015 and 2020 National Development Plans) that name industrialisation as a principal priority and explicitly recognise the central role of the state in driving economic transformation. It is also evidenced by an increasing focus on power and transport infrastructure as well as the emerging targeted industrial policy efforts discussed below.

This policy shift towards greater state involvement is at least in part a response to the realisation that the private sector, left to its own devices, is unlikely to make long-term coordinated investments in the technology and capabilities needed for new higher-value-added economic activities. It can also be argued that the NRM leadership, particularly the president, has in fact been a believer in state-driven industrialisation all along, and that the shift of western development financiers away from their earlier staunch neoliberal views as well as the new availability of Chinese development finance now allow the president to be more assertive in that long-held conviction.

Present

Recent nascent industrial policy efforts have begun to move beyond generic infrastructure provision and started targeting specific sectors and activities, but this targeting has thus far been too broad, inconsistent, and poorly evidenced to be effective. Import substitution is currently being promoted without sufficient attention to the longer-term goals of reaching international competitiveness and boosting exports. Similarly, the focus on value addition and agricultural linkages could be complemented with other efforts, for example, towards becoming the regional supplier of strategic inputs including iron and steel and simple manufacturing products such as food and wood products. Further, each planning document lists different priority sectors, the discussion of policy instruments and delivery channels is convoluted, and the evidence base for policy decisions is unclear.

Further, Uganda has only just begun to tap into the industrial policy "toolbox" of instruments that successful industrialisers have employed in transforming their economies, and its efforts to-date have lacked coherence and focus. Crucially, it has not made sufficient use of the combination of both supporting and disciplining the private sector, which has been central to industrial policy effectiveness elsewhere.

The emerging industrial policy tools in use are clustered around the following areas:

1. Electricity infrastructure development through large new hydroelectric power stations, coupled with cross-subsidisation to allow low power tariffs for large industries;

2. Transport infrastructure development, particularly through expanding the paved road network, as well as early-stage or planned efforts to upgrade the port, airport, and railway infrastructure;

3. Targeted tax holidays, exemptions, and rebates for a range of large investors, notably those located in industrial parks and free zones, mostly negotiated on a case-by-case basis;

4. Export levies on a few selected raw materials (notably fish, hides and skins, timber, and iron ore), with, at best, patchy success in stimulating domestic value addition;

5. Free or subsidised land in a handful of now active industrial parks, but also provided to individual selected firms outside parks;

6. Protective import tariffs on a range of value-added products, though often targeted at already well-established industries rather than new activities and sectors;

7. Public investment and subsidised credit into pioneer firms through the recently reconstituted Uganda Development Bank and Uganda Development Corporation, who have however received little government capital to-date; and

8. The promotion of local content through ad-hoc efforts under the Buy Uganda Build Uganda policy, two Acts targeting the oil and gas sector, and prospectively through the National Local Content Bill, 2019, passed in parliament in June 2020.

Future

With one of the fastest-growing working age populations in the world and a median age of 16 years, the magnitude of Uganda's employment challenge, and the political discontent it risks causing are set to grow exponentially in the coming decades. Faced with a bulging, urbanising and increasingly educated youth population that has no living memory of the painful liberation struggle that brought the ruling party to power in 1986, the political legitimacy of Uganda's leadership will increasingly depend not only on peace and stability, but also on the promise of decent work and incomes for all. The latter will require the creation of decent jobs at scale through growth in labour-intensive higher-value-added activities with continuous upgrading.

Even though Uganda faces several challenges as a small, landlocked country, it has untapped opportunities to reinvigorate economic transformation. To realise this objective, the country's natural resources (including its agricultural potential), abundant labour force, and strategic regional location will need to be leveraged as part of a long-term economic transformation strategy. Uganda has the potential to leverage both its imminent demographic dividend (a low dependency ratio driven by a youth bulge entering the workforce) and its strategic geographic location to become a production and logistics hub serving its own growing consumer population as well as neighbouring economies (AEC, 2019a). Stability in South Sudan and the Democratic Republic of Congo will, however, be a strong pre-requisite. Uganda may also produce more high-value goods and services for growing global consumer markets, including those in Asia.

Any stakeholder genuinely interested in effectively formulating and implementing industrial policy in Uganda - including the President - has an uphill political struggle to fight, but there is cause for hope. Efforts to promote productivity growth are constrained by the short-termist and extractive pressures of patronage politics and vested interests that have gained sway in a fragmenting political settlement. But, despite a generally weak and politicised state bureaucracy, the political elite has been able to use the little "disposable" political capital it possesses to carve out "pockets of efficiency" in certain periods. Examples include the Ministry of Finance, Planning and Economic Development (MoFPED), the Dairy Development Authority (DDA) and the National Water and Sewerage Corporation (NWSC). However, in general, Uganda's bureaucracy has struggled to maintain the insulation from special interests that is crucial for industrial policy to work.

Going forward, industrial policy effectiveness will require:

1. The creation and protection of one or more pockets of efficiency within the government dedicated to driving, coordinating, and monitoring industrial policy formulation and delivery;

2. A carefully focused, prioritised, and risk-adjusted portfolio of target sectors and activities;

3. A smarter and more comprehensive use of industrial policy instruments that:

   a. Provides support and protection exclusively to these priority areas;

   b. Deepens that support to meaningfully enable the development of new productive capabilities;

   c. Couples that support with requirements, performance pressure, and culling of losers to shift the private sector's incentives; and

   d. Takes a more regional approach to industrial development.

First, if pockets of efficiency that drive economic transformation are to be created and maintained, industrial policy must become a top priority for the political elite and its supporters, and innovative delivery channels that navigate the prevalent political economy conditions must be devised.

Given the scarcity of political, financial, and technical capital available for industrial policy in Uganda, its champions must find and protect narrow spaces for progress. We explore three ways to do so:

	Advantages	Disadvantages
A "super-ministry" of Industry, Trade, and Investment (MoITI)	– All key functions housed under one entity with strong mandate to drive industrialisation agenda – Single point of engagement for private sector – Overcome "mandate wars" with MoFPED – Opportunity to build a lasting institution and mainstream Uganda's industrialisation agenda into GoU formal institutional framework	– Indirect reporting line to President, via Cabinet as well as MoFPED, which allocates budget resources – Subject to civil service rigidities and politics, making performance-based personnel management and capacity building difficult – Would require politically costly process of removing entire functions from other ministries
An Industrial Policy Delivery Unit	– Direct line of command from President – High concentration of political, financial, and human resources on priority initiatives – Outside of civil service rigidities and politics	– Must work with/through other Ministries, Departments and Agencies (MDAs) to deliver effectively – Requires significant shake-up of existing formal institutional framework
Sector Development Authorities	– Enables greater technical specialisation and closer "embeddedness" of bureaucrats in each target sector – Can be targeted at sectors where existence of mutual interests is more likely – Can have direct line to President – Can be outside of civil service rigidities and politics	– Risks diluting the political, financial and technical resources that would otherwise be concentrated in a single delivery unit – Does not provide cross-sectoral coordination

Second, Uganda needs a carefully focused, prioritised, and risk-adjusted industrial policy, with clearly defined principles for identifying the most suitable economic sectors and activities to promote.

These principles include:

1. Applying a combination of selection tools to identify a set of priority industrial sectors and activities that is coherent and consistent across all government policies and strategies;

2. Developing a long-term vision, both economy-wide and within priority sectors, and a phased and iterative approach that builds on previous successes and learns from failures;

3. Taking into account contextual factors and longer-term risks and opportunities;

4. Using both quantitative and qualitative measures to score potential target activities according to both strategic value and feasibility; and

5. Using both quantitative and qualitative measures to score potential target activities according to both strategic value and feasibility; and

6. Selecting a mix of lower-risk and higher-risk priority industrial sectors and activities.

Finally, with reference to success cases from around the world, we explore several ways in which the Government of Uganda could make use of industrial policy instruments to achieve genuine economic transformation. These can be grouped under four headings:

Focus support and protection exclusively on priority industrial sectors and activities	— Reserve the most generous industrial policy support and protection exclusively for specific top priority industrial sectors and activities to incentivise the private sector to move towards these areas. — Shift private sector incentives towards upgrading within sectors by making tax incentives, land allocations, power subsidies, public procurement contracts, and other government support conditional upon investing in value-adding activities. — Reform the trade regime to favour domestic industrialists and value addition by shifting protection from import trade and primary production towards targeted higher-value-added activities.
Provide deeper support to priority industrial sectors and activities	— Prioritise additional resources towards providing dedicated infrastructure and services in industrial parks and free zones, including warehouse shells, dedicated utilities infrastructure, industrial waste and wastewater treatment services, expedited customs clearance, and emergency response services, amongst others. — Assess the possibilities of exercising more state control over capital markets with a view to increasing the flow of low-cost finance into priority industrial sector and activities. — Elevate investment attraction and facilitation to a higher level of priority within GoU, empowering Uganda Investment Authority (UIA) to build an international presence, actively target investors for priority sectors, target the types of investors who demonstrate the willingness and capability to invest for the long-term in value adding industries with a focus on labour productivity and creating "good jobs". — Fully leverage public procurement to support industrial development by requiring MDAs to procure domestically and using policy tools to ensure that Uganda's urbanisation spurs domestic production of construction materials. — Foster strong technical leadership in industrial ventures by facilitating joint ventures, access to international expertise, and international secondments for Ugandan managers, engineers, and technicians; build a collaborative framework between government, public research units, universities, specialised training institutes, and industries for targeted skills development, building appropriate training offerings and incentivising on-the-job upskilling.

Couple industrial policy support with requirements, performance pressure, and culling losers

- Couple Foreign Direct Investment (FDI) attraction and facilitation with smart conditionality to ensure that FDI serves industrial development objectives, including local content, investment in local value-addition.
- Ensure that FDI targets the binding constraints in high-potential sectors - such as a shortage of capital, skills, technology, or international market linkages - through incentives or requirements on foreign investors.
- Maximise the positive spillover effects of FDI by facilitating the flow of business deals, knowledge, technology, skills, and capital between foreign and domestic firms, including through joint ventures.
- Consider (1) exposing multiple pioneer firms in target sectors/activities to some credible domestic competition from the start, and (2) demonstrating an ability and willingness to "cull losers" in order to fully incentivise each firm to rapidly build production capabilities and competitiveness.

Take a more regional approach to industrial development

- Prioritise efforts towards building regional value chains to become a regional leader in the production or provision of key products, components, and services, leveraging Uganda strategic geographic position and its captive inland markets
- Invest in regionally linked transport and trade infrastructure, broker bilateral and regional deals to unlock progress on large-scale industrial ventures such as ironmaking, and push for regional collaboration on industrial policy, peace, stability, and mutual trust.
- Step up efforts to push for more regional collaboration on transport infrastructure and lobby for the quicker resolution of intra-East African Community (EAC) trade barriers.
- Lobby for smarter regional collaboration on import tariff policy, leveraging the Common External Tariff to protect East African infant industries and catalyse regional value chains.
- Consider replacing the strict requirement for park and zone firms to export 80% of their production with smarter export requirements that foster regional trade, such as gradually increasing export targets in direct negotiation with pioneer firms, exempting a proportion of export revenues from taxation without imposing a strict minimum, or using export subsidies and export loans.
- Upgrade production standards in priority agro-based industries to ensure regional and global market access and incentivise firms to upgrade their technologies, skills, and production processes.

Abbreviations

ACET	African Center for Economic Transformation
AEC	Atlas of Economic Complexity
AfCFTA	African Continental Free Trade Agreement
AfDB	African Development Bank
AGOA	African Growth and Opportunity Act
AGOA	African Growth and Opportunity Act
ASYCUDA	Automated System for Customs Data
B2B	Business to Business
BOU	Bank of Uganda
BTVET	Business, Technical and Vocational Education and Training
BUBU	Buy Uganda Build Uganda
CDA	Centre for Development Alternatives
CDO	Cotton Development Organisation
CEO	Chief Executive Officer
CET	Common External Tariff
CIDCA	China International Cooperation Development Agency
COMESA	Common Market for Eastern and Southern Africa
DC	Dairy Corporation
DDA	Dairy Development Authority
DFID	UK Government Department for International Development
DIE	Deutsches Institut für Entwicklungspolitik
DDRC	Democratic Republic of Congo
EAC	East African Community
EACCU	East African Community Customs Union
EASD	Expanded Africa Sector Database
EIC	Ethiopian Investment Commission
EPA	Economic Partnership Agreement
EPB	Economic Planning Board
EPRC	Economic Policy Research Center
EU	European Union
FDI	Foreign Direct Investment
FMCG	Fast-moving consumer good
FOB	Freight On Board

GATT	General Agreement for Tariffs and Trade
GDP	Gross Domestic Product
GIFF	Growth Identification and Facilitation Framework
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GOPDA	Ghana Oil Palm Development Association
GoU	Government of Uganda
GSP	Generalized System of Preferences
GVCs	Global Value Chains
ICT	Information and communications technology
IMF	International Monetary Fund
IPTT	Industrial Policy Targeting Tool
ISI	Import Substitution Industrialisation
ISO	International Organization for Standardization
JECC	Japan Electronic Computer Corporation
JICA	Japan International Cooperation Agency
KHTL	Kigezi Highland Tea Ltd
KIS	Kalangala Infrastructure Services Ltd
KOICA	Korea International Cooperation Agency
KPA	Kenya Ports Authority
kWh	Kilowatt-hour
LCU	Local Content Unit
LDC	Least Developed Country
LPI	Logistics Performance Index
MDA	Ministries, departments and agencies
MITI	Ministry of Trade and Industry
MNC	Multi-National Corporation
MoAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MoEMD	Ministry of Energy and Mineral Development
MoFPED	Ministry of Finance, Planning and Economic Development
MOII	Ministry of Industry and Investment
MoLHUD	Ministry of Lands, Housing & Urban Development
MoTIC	Ministry of Trade, Industry and Cooperatives
MoWT	Ministry of Works and Transport

MP	Member of Parliament
MSC	Microfinance Support Centre
MSME	Micro, Small and Medium Enterprise
MSTI	Ministry of Science, Technology and Innovation
MTAC	Management Training and Advisory Centre
NAADS	National Agricultural Advisory Services
NARO	National Agricultural Research Organisation
NDP	National Development Plan
NIDS	National Industrial Development Strategy
NIE	Newly industrialising economy
NIP	National Industrial Policy
NPA	National Planning Authority
NRA	National Resistance Army
NRM	National Resistance Movement
NSI	National Sugar Institute
NTBs	Non-Tariff Barriers
NWSC	National Water and Sewerage Corporation
OAG	Office of the Auditor General
ODA	Official Development Assistance
ODI	Overseas Development Institute
OP	Office of the President
OPEC	Organization of the Petroleum Exporting Countries
OSC	One Stop Services Centre
PEAP	Poverty Eradication Action Plan
PEPD	Petroleum Exploration and Production Department
PFI	Private Finance Initiatives
PPDA	Public Procurement and a Disposal of Public Assets
PRSPs	Poverty Reduction Strategy Papers
R&D	Research and Development
RCA	Revealed comparative advantage
SACCO	Savings and Credit Co-Operative Society
SME	Small and Medium Enterprise
SOCOMOT	Soil conditions monitoring technology

SOE	State-owned enterprise
SPS	Sanitary and Phytosanitary
SSA	Sub-Saharan Africa
TBT	Technical Barriers to Trade
TICAF	Tororo Industrial Chemicals & Fertilizers Ltd
TIGA	Trade and Investment Framework Agreement
TUFMAC	Uganda Fish Marketing Corporation Limited
TUMPECO	The Uganda Metal Products and Enameling Company Limited
TVET	Technical and vocational education and training
UCDA	Uganda Coffee Development Authority
UDB	Uganda Development Bank
UDC	Uganda Development Corporation
UEPB	Uganda Export Promotion Board
UEPB	Uganda Export Promotion Board
UFZA	Uganda Free Zones Authority
UFZA	Uganda Free Zones Authority
UGX	Ugandan Shillings
UIRI	Uganda Industrial Research Institute
ULA	Ugandan Land Commission
UN	United Nations
UNBS	Uganda National Bureau of Standards
UNCST	Uganda National Council of Science and Technology
UNCST	Uganda National Council for Science and Technology
UNCTAD	United Nations Conference on Trade and Development
UNECA	United Nations Economic Commission for Africa
UNIDO	United Nations Industrial Development Organisation
UNRA	Uganda National Roads Authority
UPC	Uganda People's Congress
URA	Uganda Revenue Authority
USA	United States of America
USD	United States Dollar
USDP	Uganda Skills Development Project
WTO	World Trade Organization

Introduction

This study is the first attempt to apply a comprehensive analytical framework drawing from the rich economic transformation, political economy, and industrial policy literature to the case of Uganda. It explores the past, present, and potential future of industrial policy for economic transformation in Uganda.

This analysis is based, in part, on the first detailed mapping of policy tools actually in use in Uganda against a comprehensive taxonomy of industrial policy instruments.

Photo credit: Jjumba Martin

Objectives

The study's overarching objective is to foster a more evidence-based and goal-oriented public discourse on industrial policy and economic transformation in Uganda and similar low-income countries.

It is hoped that Government of Uganda (GoU) policymakers and policy advisors find relevant policy and delivery options to further explore. Uganda's international development partners, too, may find new ideas for supporting GoU in the design and delivery of industrial policy, adopting some of the principles of industrial policy in their private sector development programming, and drawing lessons and applying this framework to inform their other country engagements.

Further, the recommendations and options presented may be used or adapted by Ugandan civil society groups, including business associations, in their policy advocacy efforts. Finally, it is hoped that the empirical insights and lessons learnt from applying these analytical tools are useful for researchers on economic transformation, industrial policy, and political economy in Uganda and beyond.

Methodology

The study employed a mixed-method and iterative diagnostic methodology. Table 1 outlines the sources of information consulted:

Table 1: Data Sources

Academic, technical, and journalistic literature	Over 200 journal articles, working papers, "grey" literature studies, government speeches, statements, strategies, and policies, books, and journalistic articles covering theoretical and empirical aspects of economic transformation, industrial policy, and political and economic context in Uganda, comparator countries, success cases, and globally.
Quantitative data	Trade and economic data from sources including ComTrade, World Development Indicators, Atlas of Economic Complexity, and Uganda Bureau of Statistics. Government budget and spending data from sources including World Bank BOOST, GoU, Uganda Bureau of Statistics, and Bank of Uganda.
Key Stakeholder Interviews and Focus Group Discussions	Key stakeholder interviews with a total of 55 policymakers, bureaucrats, private companies, private sector associations, political economy and industrial policy experts and country economists. The interviews were semi-structured and each interview had a tailored set of guiding questions depending on the stakeholder's areas of focus, expertise, and knowledge, and on the specific issues on which the team needed further information.

Structure

The study is organised into four chapters:

1

Analytic framework:
This chapter constructs a framework to analyse the history, present status, and possible future pathways of industrial policy for economic transformation in Uganda.

2

History:
This chapter traces Uganda's postcolonial history of political settlements, industrial policy, economic growth, and economic transformation.

3

Present:
This chapter assesses the current status of industrial policy in Uganda through four lenses: political settlements, state delivery, policy targeting, and policy instruments.

4

Future:
This chapter sets out potential economic transformation pathways, considers options for designing effective industrial policy delivery mechanisms, proposes principles for the targeting of industrial policy, and makes recommendations for a more effective use of the industrial policy toolbox.

Annex 1:
Presents a detailed mapping of current industrial policy tools used in Uganda.

Analytical Framework

Analytical Framework

This chapter constructs a framework to analyse the history, present status, and possible future pathways of industrial policy for economic transformation in Uganda. It draws on the theoretical and empirical contributions of a rich literature on economic transformation, political settlements, and industrial policy. The first section defines **economic transformation**, examines how it occurs, and discusses why - and in what forms - it is important for inclusive development. The second discusses what **industrial policy** is and why it is central to economic transformation.

The third explores how **political dynamics**, and the fourth how **state delivery mechanisms**, shape industrial policy success or failure. The fifth section reviews different approaches to the **selection of target sectors and activities** of industrial policy and the sixth provides a taxonomy and overview of the relevant **industrial policy instruments** available to developing country governments. Throughout this chapter, reference is made to the experiences of successfully industrialising countries around the world and how the politics, delivery, targeting, and content of industrial policy has contributed to their success.

Figure 1:
Analytic Framework

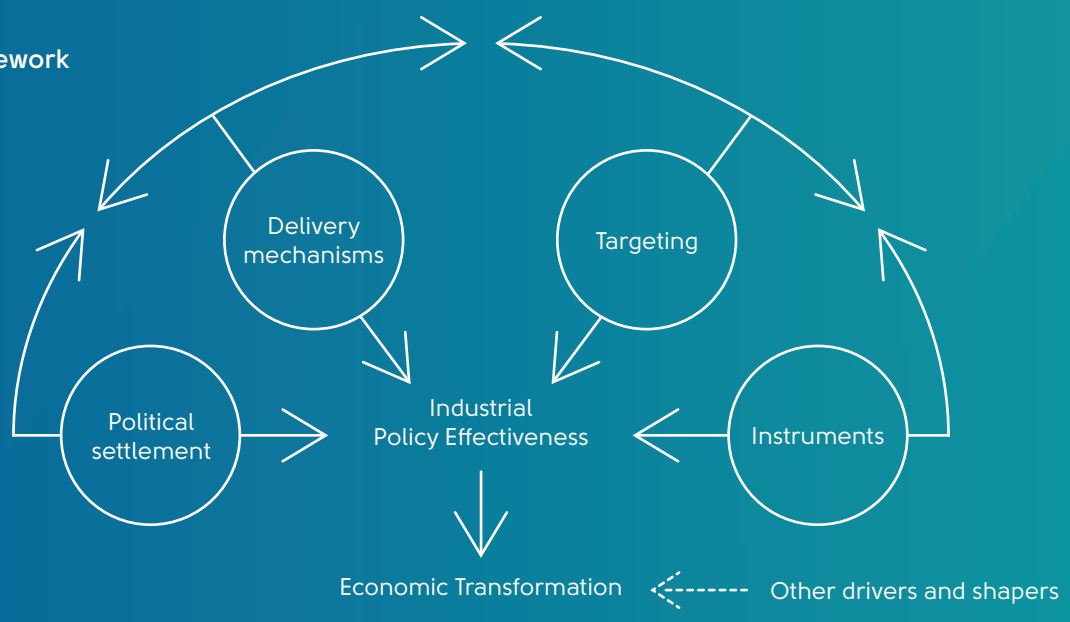


Photo credit: Jjumba Martin

Economic Transformation

The term economic transformation refers to the movement of labour and other resources from low- to high-productivity activities, either within or across sectors (Worrall et al., 2015). Empirical analysis has demonstrated that economic transformation is an essential component of long-term growth in developing countries (Clark, 1940; Kuznets, 1966; Kaldor, 1966; UN, 1970; Cornwall, 1977; Nuvolari and Russo, 2019). But economic transformation goes well beyond growth. Whereas GDP growth simply requires the overall economic output of a country to increase, no matter how broadly shared or sustainable this is, economic transformation entails the shift of labour into higher-value-added activities, and thus involves large segments of society increasing their skills, incomes, and further career development opportunities. Upgrading the entire structure of an economy's production also makes it more resilient to shocks. Finally, economic transformation holds the potential to induce broader social transformations and human development, for instance through inducing urbanisation and demographic transition (Kuznets, 1966; Nuvolari & Russo, 2019).

Photo credit: Ed Ram

Economic transformation relies on the acquisition of new productive capabilities in higher value-added economic activities. Productive capabilities are the combination of skills, experience, linkages, management practices, and technologies that enable firms to competitively produce a product or service. Building productive capabilities is not the task of firms alone, but requires an entire ecosystem that includes education, business services, finance, and research organisations, and relies on strong government support (Lundvall, 1992; Nelson, 1993; Kim & Nelson, 2001).

Traditionally, there have been two phases of economic transformation: from agriculture to manufacturing and then to services. In the first shift, productivity advances within agriculture allowed surplus farm labour to move to higher-productivity and better paid jobs in manufacturing (Lewis, 1955). As industrial countries became richer, their manufacturing sectors required fewer workers. This led to a second phase of economic transformation, known as (mature) deindustrialisation, where excess labour moved from manufacturing into high-productivity (modern) services, such as ICT-based, financial, marketing, design, and a range of other creative and innovation-driven business services. However, much of that excess labour has also moved into low-skill precarious service jobs, for instance in hospitality and logistics.

Today, certain services have become key drivers of economic transformation even for early-stage developing countries (Dasgupta & Singh, 2006, 2005; Timmer & de Vries, 2008; Ghani & O'Connell, 2014). Services growth has indeed outpaced manufacturing growth in many parts of the world and many developing countries, including across sub-Saharan Africa (SSA), are transitioning directly from agrarian to service-based economies (Szirmai, 2012). However, this shift of productive resources from agriculture directly into services is associated with slower rates of economic growth (UNCTAD, 2003; Tregenna, 2013; Felipe et al., 2014; Palma, 2014; Rodrik, 2016). The services that developing countries have easier access to are generally labour intensive but low-productivity and non-tradable services such as retail and wholesale trade, restaurants, and hotels, which also offer limited opportunities for productivity enhancements (Newman et al., 2016; Page & Tarp, 2017; Rodrik, 2014). In the absence of a previous transition into manufacturing, workers in the agriculture sector face skills obstacles to move into tradable services sectors (Rodrik, 2014). Nevertheless, several studies have emphasised the transformative power of non-manufacturing activities, including modern, tradable services, resource-based industries, and high-value agricultural production (UNECA, 2013; Newfarmer et al., 2018; Perez, 2008; Perez et al. 2014; Lebdioui, 2019a, 2019b; Morris et al., 2012; Gopal, 2001). Newfarmer et al. (2018) have coined the term "industries without smokestacks" to refer to certain modern services (e.g. business process outsourcing), and some agro-industries (e.g. horticulture) which can be high-value-added, technologically sophisticated, and labour intensive. Across East Africa, many industries without smokestacks have risen to prominence, highlighting the role they might play in addressing the region's future jobs demand (Horizon East Africa, 2019). And the higher-value-added, higher productivity services that have grown the most (e.g. banking and telecommunications) and that may provide workers with more learning opportunities (Rodrik, 2014; Lavopa & Szirmai, 2012) are not able to directly absorb labour from agriculture at scale.

Recent empirical evidence demonstrates that manufacturing is still a key engine for economic transformation in both developing and developed economies (Szirmai & Verspagen, 2015; Cantore et al., 2017; Coad & Vezzani, 2019; Jia et al., 2020). Manufacturing generates increasing returns to scale (due to opportunities for learning by doing as well as a positive income elasticity of demand*1), generates high degrees of cross-sectoral linkages, and generally offers higher tradability than agriculture and service sectors. As a result, manufacturing tends to be more productive than other sectors. Indeed, in Africa, labour productivity in manufacturing is on average more than twice that in agriculture (McMillan & Rodrik, 2011; Page, 2012)*2.

The proliferation of global value chains means that the development of specific activities within and across sectors*3 may be more relevant than that of sectors as a whole. Outsourcing and new forms of production, organised around Global Value Chains (GVC), have led countries to specialise in different steps of the production process, such as final assembly or component manufacture. While this has opened new opportunities for integration in global production networks, upgrading within GVC is imperative for developing countries aiming to achieve sustained transformation.

Ultimately, what matters for economic transformation is moving towards higher-value-added activities with spill-overs and linkages that are able to absorb a large portion of an economy's productive resources, especially labour.

*1 As their incomes rise, consumers tend to spend a larger portion of their income on manufactured products in contrast to agricultural products (Prebisch, 1950). This, in turn, stimulates demand for the intermediate and capital goods required to produce those manufactured products. When this demand cannot be satisfied domestically, countries must import these manufactured goods, which can create shortages of foreign exchange and balance of payment problems.

*2 For a more detailed review of the factors that allow manufacturing to produce more rapid economic development, see UNCTAD, 2016.

*3 By "across sectors" we mean activities like assembly, which have more similarities across sectors (assembly of cars, garments, appliances) than with other activities within the same sector (e.g. component manufacture; design; marketing).

Industrial Policy

Industrial policy can refer to a broad set of government interventions aimed at altering productive structures toward higher-productivity activities, by changing the incentives, constraints, and resources available to market actors. Various definitions have been proposed, as summarised in Box 1 below. Some are broader, encompassing horizontal industrial policies (which affect all economic sectors without targeting any one in particular) and selective industrial policies (which target and benefit specific sectors, economic activities, or firms). Other definitions are narrower, restricting the realm of industrial policies to vertical interventions in favour of industries within certain sectors, usually in favour of manufacturing activities. The lack of consensus around what industrial policy is reflects controversies around what industrial policy should do (UNCTAD, 2016).

Photo credit: Jjumba Martin

Box 1: Some definitions of industrial policy

Broad definitions

"any type of intervention or government policy that attempts to improve the business environment or to alter the structure of economic activity toward sectors, technologies or tasks that are expected to offer better prospects for economic growth or societal welfare than would occur in the absence of such intervention" [emphasis by the original author]. (Warwick, 2013: 16)

"Government promotion of structural transformation through support of economic activities that are perceived to be socially beneficial" (EQuIP website)

Narrow definitions

"any type of selective intervention or government policy that attempts to alter the structure of production toward sectors that are expected to offer better prospects for economic growth than would occur in the absence of such intervention, i.e., in the market equilibrium" [emphasis added]. (Pack & Saggi, 2006: 2)

"Industrial policy should mean policy that affects industry, in the same way in which agricultural policy means policy that affects agriculture and monetary policy means policy that affects monetary variables. (...) a policy that deliberately favours particular industries over others, against market signals, usually (but not necessarily) to enhance efficiency and promote productivity growth." (Chang, 2009: 2).

Source: Authors

The most widely accepted argument in favour of industrial policy is based on the notion of market failure. This is the idea that, if left alone, competitive markets will not yield the best result for society (Pack & Saggi, 2006). According to Grossman (1990), the most important market failures that would justify government intervention arise because of the presence of: i) economies of scale, ii) externalities, or iii) market imperfections (for a more detailed discussion, see UNCTAD, 2016). These are discussed in turn:

1

Economies of scale

Modern economic activities, especially in manufacturing, are characterised by large fixed entry costs, and competitiveness depends on realising efficiencies through large-scale production. Where this is the case, private firms are likely to be reluctant to invest, and government subsidies can reduce initial costs and stimulate firm productivity. Economies of scale also emerge from the cost savings associated with the accumulation of production experience, or learning by doing. In this regard, government incentives might support firms as they go through this initial phase of learning. Some industries that show particularly high economies of scale are also often considered strategic. Examples include steel and aerospace, which have often benefited from large subsidies and major support programmes, from South Korea to Brazil and India.

2

Positive externalities

Government intervention is also justified where the benefits of acquiring certain production capabilities are higher for society-as-a-whole than for the individual firm investing in them. This is the case when a private firm has to invest in basic research, new knowledge and innovation, new infrastructure, or staff training. The benefits of these investments are likely to accrue not just to the firm investing, but to the entire sector and wider economy. In these scenarios, the market mechanism fails because it allocates too few resources to these important activities or goods, hence the need for intervention. Externalities also arise when certain economic activities are strongly linked to each other (such as cut flower production, cold storage, and air cargo), and coordination failures might lead to underinvestment.

3

Information asymmetries (especially in capital markets).

Innovative projects tend to be high-risk investments as they inherently entail high uncertainty. When firms seek external finance for these projects, information asymmetries between borrowers and lenders (related to the technical characteristics, risk level, and chances of success) might increase the costs of borrowing for these projects, leading to underinvestment in certain strategic or innovative projects. In these instances, public policy initiatives can take various forms, from more to less interventionist, to restore the socially optimal level of investment in the economy.

Some justifications of industrial policy go beyond the notion of market failures. Beyond fixing market failures, industrial policy can actively provide a vision that helps markets shift resources into industries that are more productive and socially beneficial in the long-run. Global markets favour those that already have the know-how to produce at high productivity: catching up with the global productivity frontier requires large amounts of firm-level and system-level learning, and a wide variety of capabilities. This learning and accumulation of knowledge does not happen automatically however, and industrial policy can stimulate it by providing incentives and a conducive environment (Andreoni & Chang, 2019; Cramer & Meisel, 2016).

These arguments can justify different degrees of interventionism in industrial policy. It can be aimed at broader factors that can stimulate investments or productivity growth (e.g. infrastructure investments) or at measures that specifically set the direction of structural change that the country is taking (e.g. direct subsidies to specific industries).

While not all efforts of industrial targeting have been successful, evidence suggests that under the right circumstances - including the right balance of discipline and support, selective industrial policy can trigger profound changes in productivity and production structures (Cramer & Meisel, 2016). For example, in East Asian economies including Japan, South Korea, and Taiwan, a variety of selective industrial policy tools created entirely new industries, making them world market leaders (Amsden, 1989; Wade, 1990). Even governments in the U.S. or Chile, which are often cited as successful examples of how free markets work, have used industrial policies much more than is widely acknowledged (Block & Keller, 2011; Wade, 2015; Lebdioui, 2019a). Indeed, many governments of the most advanced economies are still employing industrial policy in order to maintain their competitiveness. For example, the UK and Germany both have Industrial Strategies that focus on innovation in sectors such as artificial intelligence, autonomous vehicles, and renewable energy (HM Government, 2017; Federal Ministry of Economic Affairs and Energy, 2019). In all these cases, industrial policy, and especially selective industrial policy, has oriented investments towards the accumulation of capabilities, stimulated within-sector and across-sector shifts towards higher-productivity activities, catalysed lucrative new industries.

However, industrial policy has historically encountered great resistance. In particular, the idea that government failures are likely to be more damaging than market failures has prevailed throughout the last four decades. Corruption, lack of information (for example on markets, new technologies, and the private sector in general), and low state capacity to design and implement complex industrial strategies have been cited as obstacles to the success of industrial policies (see UNCTAD, 2016 for a detailed discussion). Identifying the most promising firms, sectors, and activities is not a trivial exercise, and selective industrial policies require a higher level of institutional capacity compared to horizontal policies (Peres & Primi, 2009). Similarly, corruption and political capture often get in the way of industrial policy efficacy.

Still, none of these objections should motivate any government to dismiss industrial policy altogether. Firstly, no policy can be said to be truly and purely horizontal (Aiginger & Sieber, 2006). For example, when a government decides to build a road (an intervention that many would consider horizontal), that road will benefit the firms and economic activities located in its vicinity more than those located farther away. Even for more complex policy instruments, such as tax incentives, established firms or firms in mature industries are likely to get a proportionally higher benefit, even if the policy is designed in a horizontal way. Secondly, similar counter-arguments can be made for other areas of public policy including education, health, infrastructure, or macroeconomics where a lack of information, state capabilities, and political capture are also pervasive (Rodrik, 2019). Once the potential risks of industrial policy (as with any other policy domain) are acknowledged, the relevant question for industrial policy is not whether to do it, but how to do it (Rodrik, 2004; 2008; 2019).

The Political Conditions for Effective Industrial Policy

Economists too often conclude that industrialisation efforts in many countries - and specifically in Uganda - have so far failed due to a "lack of political will". Politics is frequently discussed as an add-on to economic policy issues. This study prioritises the analysis of the political economy of industrial policy before examining questions around the technical policy content, recognising that politics is the most fundamental driver and shaper of industrialisation success or failure. We broadly define political economy as the study of how political forces affect the choice of economic policies, especially with regard to distributional conflicts and political institutions (Alesina, 2007). The political economy of industrial policy, then, is about opening the black box of "political will" and understanding how political forces affect industrial policy choices and outcomes.

Photo credit: Jjumba Martin

Political Settlements

The political drivers and shapers of industrial policy outcomes are assessed through several analytical lenses, with the political settlement approach providing the overarching analytical framework. Political settlement theory analyses the socioeconomic factors that result in the domestic distribution of power and institutions and the resulting social and political outcomes. The distribution of power shapes relations between a country's ruling elites, state bureaucracy, and capitalist firms and farms. These relationships in turn give rise to, or prevent the emergence of, three conditions for successful industrial policy: **mutual interests** between ruling elites and capitalists, **pockets of efficiency** between ruling elites and bureaucrats, and **"learning for productivity"** between bureaucrats and capitalists. Each of these conditioning factors are discussed below. In addition to these political settlement considerations, we explore how international forces constrain a country's **policy space** for carrying out industrial policy. Finally, we examine how industrial policy can be **delivered** by the state while navigating and managing these complex political forces in the pursuit of economic transformation.

A political settlement is defined as "an interdependent combination of structures of power and institutions at the level of a society that is mutually compatible and also sustainable in terms of economic and political viability" (Khan, 2010). Khan's (2010) political settlement framework assesses the distribution of power across two dimensions: horizontal power distribution between the ruling coalition and those outside it, and vertical power distribution between the ruling coalition's higher and lower factions.

The stability of the political settlement depends on the distribution of resources and benefits to powerful groups. If groups that hold power do not receive proportionally high levels of benefits or rents due to an institution, they will seek to change that institution. The resulting level of contestation - horizontal or vertical - in turn affects the overall stability of the political settlement. Hence, patronage-based politics is seen as a rational feature of political settlements because it serves to maintain a certain distribution of power. Patronage refers to a political elite's practice of distributing state-sanctioned privileges or benefits so as to "reward their political supporters and punish their foes" (Grabowski, 2014). This allows the political elite to construct and maintain a ruling coalition based on the co-optation of powerful groups, rather than on class interest or party manifestos (Grabowski, 2014; Whitfield et al., 2015b). Greater vertical and horizontal contestation to existing or new institutions imply greater costs to maintaining the political status-quo, as the ruling coalition will need more financial and political resources to co-opt potential political threats.

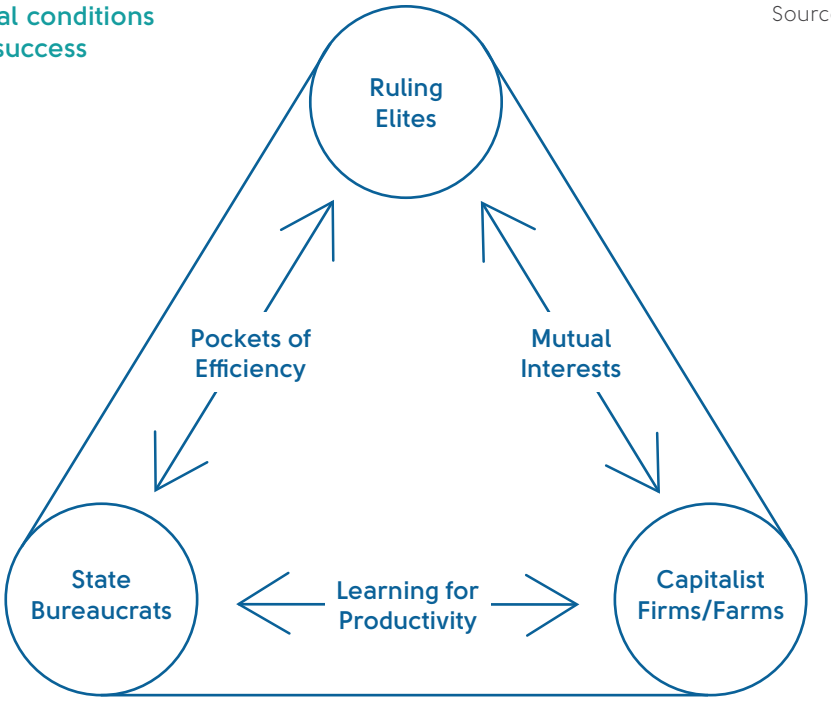
The introduction and enforcement of new institutions - such as those of industrial policy - inevitably shift the distribution of benefits away from the status quo and create new rents and benefits. With every policy change, different interest groups stand to gain or lose. The extent to which a policy shift can be introduced and enforced thus depends on the relative power of those affected, and whether the proposed distribution of benefits aligns with the existing power distribution of the political settlement.

A "developmental state" committed to economic development arguably requires (1) a political settlement with highly centralised power and low levels of contestation (see e.g. Leftwich, 1994) and (2) at the centre of that settlement, "a political elite... for whom economic growth is a [more] fundamental goal" than "the enhancement... of its own elite privileges" (Johnson, 1982). A developmental state can therefore be democratic or autocratic. More important than its form of government are the ruling coalition's holding power (i.e. can it get things done?) and the nature of its members' interests (i.e. is economic development its top priority?).

Whitfield et al. (2015b) apply the political settlements theory to industrial policy through an analytical framework that examines power relations between the ruling elites, state bureaucrats, and capitalists. The authors posit that the political economy conditions are most conducive to successful industrial policy when these three relationships exhibit the characteristics illustrated in Figure XX. We discuss these three conditions - mutual interests, pockets of efficiency, and "learning for productivity" - in turn.

Figure 2: The political conditions for industrial policy success

Source: Whitfield et al. (2015)



Mutual Interests

A mutual interest in effective industrial policy can emerge (e.g. in a given sector) when both the political elite and the capitalist elite see sustained productivity growth as their best strategy for political and economic gain, or indeed survival. Capitalists typically seek to increase their profits while political elites seek to strengthen and maintain their hold on power. Capitalists are thus assumed to be interested in sustained productivity growth if that is their surest route to profits, whereas the opposite is true if they see short-term rent extraction as the most profitable endeavour. Short-term rent collection may be perceived as more profitable than economic transformation in an environment of political instability or when sufficient rents are gained from the existing political settlement. The political elite can benefit from sustained productivity growth in the form of direct personal profit (if they are personally invested in the sector), kickbacks from productivity-enhancing investments in the sector, increased electoral support from a constituency affected by industrial policies, increased campaign funding from the affected capitalists, or weakening rival factions.

There may be specific sectors in which both capitalists and the ruling elite stand to gain - politically or economically - from economic transformation. The position of sector actors vis-a-vis the ruling coalition is key to understanding mutual interests at the sector-level: are sector actors inside or outside the ruling coalition, are they important factions in the ruling coalition or not, can the ruling elite do without their support, do they contribute financially (through taxes or informal strategic payments) to the ruling coalition? It also matters whether or not sector actors are organised. If not, their demands may be on an individual basis benefitting only one producer, which can lead to suboptimal production and policy measures that do not foster broader sectoral productivity growth.

The emergence of mutual interests depends not only on the initial interests of both groups, but also on each group's relative power. When the ruling elites require the support of capitalists in a certain sector for their ruling coalition's survival, those capitalists hold sway over the state and are likely able to shape policy in a direction that benefits their sector. An imbalance of power between the state and capitalists is usually detrimental for cooperation in the long term. If the ruling elite gains more from a relationship and becomes more powerful, the relationship can become predatory, with the state extorting the capitalists for rent or kickbacks, or vice versa.

Pockets of Efficiency

Beyond mutual interests between the political and capitalist elites, the bureaucracy must also be both technically able to formulate and implement industrial policy and politically able to "work in relative autonomy from particularistic demands within the ruling coalition" (Whitfield et al., 2015b). However, it is neither possible nor necessary for the entire bureaucracy of a developing country's government to possess these characteristics: instead, **pockets of efficiency** "can exist in a sea of inefficient and corrupt bureaucracy" (Whitfield et al., 2015b).

The technical capability needed for a pocket of efficiency is often achieved through meritocratic processes of recruiting and rewarding staff, as well as salaries and other staff benefits that are greater than those prevalent in the rest of the civil service (Roll, 2014; Wade, 2015). Political prioritisation of the pocket of efficiency is crucial for securing the financial resources required to attract, retain, and motivate a highly capable staff, and the political insulation needed for meritocratic human resource management. Further, technical capability often requires a "managerial" approach to public administration whereby the agency leaders have significant autonomy to make professional decisions (see UNIDO & GIZ, 2017). At the same time, the political elite - insofar as it is interested in industrialisation - must be able to discipline the lower levels of the bureaucracy into implementing its agenda rather than extracting short-term rents (e.g. in the form of bribes). Its ability to do so is affected by the level of vertical contestation.

A pocket of efficiency also requires insulation from political influences from factions within and outside the ruling coalition who may attempt to block certain policy changes that threaten their existing allocation of benefits. Giving any agency protection from powerful interests - especially one tasked with changing the productive structure of an economy - is politically costly. It must therefore be a top priority for the ruling elite, and its leadership must have strong relationships with influential political groups, in order to mediate between changing factional interests and influences within the ruling coalition (Wade, 2015; Roll, 2014). The ruling elite's ability to insulate an agency from particularistic interests is shaped by the level of horizontal contestation.

Learning for productivity

The goal of bureaucrats implementing industrial policy should be to foster learning for productivity in the targeted industries. Learning for productivity occurs when the new rents created by industrial policy are contingent on increases in productivity and on industrial upgrading in a sector. In order to bring this about, state bureaucrats need to be able to (1) discover the growth opportunities and productivity constraints facing an industry and its firms, (2) translate those needs into effective industrial policy through mediating the political objectives of ruling elites and the economic needs of the industry (see also Wade, 2018), and (3) enforce rules and institutions linked to productivity rises, without the private sector using its political connections and influence to undermine those efforts.

Embedded autonomy (Evans, 1995; Perkins, 1995) **is the condition under which state bureaucrats can carry out these functions.** Embeddedness is usually achieved when bureaucrats have strong relations with industry actors, which can be formal or informal, and which benefit from industry actors being self-organised (which lowers transaction costs) and from regular movement of individuals from industry into the bureaucracy and vice-versa. Autonomy is ensured when the political elite and the prevalent institutions are able to insulate bureaucrats from the particularistic interests of the industries they are dealing with.

Box 2: Sugar in Mozambique - mutual interests, a pocket of efficiency, and learning for productivity

The sugar industry in Mozambique is a good example of the alignment of interests between the state and foreign capitalists, and the creation of a pocket of efficiency, which resulted in effective industrial policy formulation and implementation. Foreign direct investment led to the growth of industrial sugar production, exports, and employment.

Mutual interests: the ruling coalition – the Frelimo party – had clear political benefits to focus on the sugar industry. Most sugar plantations were located in constituencies where Frelimo's opposition had a stronghold and thus posed a threat to the ruling coalition. It was in Frelimo's interest to gain and build its vertical support there by creating employment and export opportunities. The involvement of foreign rather than domestic firms ensured that opposition elites did not benefit from investment in the sugar sector, but also had the positive effect of bringing in foreign expertise, finance, and machinery. This aligned with the foreign firms' interests to expand their regional production and presence, and earn rents from producing and selling in the country.

Pocket of efficiency: Once a mutual interest between the state and foreign sugar companies was forged, it was important to be able to carry out the relevant reforms through a capable body. This was done through the National Sugar Institute (NSI). The body was given the political elite's strong backing in order to carry out the required budgetary shifts and import tariffs, and manage the various political factions that would be affected by such changes. The NSI had sufficient managerial autonomy through the presence of many former ruling party members within it, which fostered trust and support from the ruling coalition.

Embedded autonomy: Leveraging these win-win opportunities, the Government of Mozambique managed to negotiate investment deals whereby foreign firms received preferential export markets and government financing, while being required to provide subsidised sugar to the domestic market, create jobs, transfer skills to rural areas, and provide infrastructure. In doing so, the government was clearly insulated from the interests of domestic opposition-owned firms. The NSI's political protection and strong relationships with players in major political factions as well as the sugar industry enabled it to effectively implement import tariffs without interference, despite certain factions being opposed to this.

Summarised from Whitfield et al. (2015b)

Policy space

Developing countries today arguably have less "space" to pursue industrial policies than earlier industrialisers. Policy space refers to the room for manoeuvre that policymakers have to pursue industrial policy. This can be de jure - "the formal authority of national policymakers over policy goals and instruments" - and de facto - "the ability of national policymakers to set priorities, influence specific targets, and weigh possible tradeoffs" (UNCTAD, 2014). It is widely argued that many of the instruments that were central to the industrialisation of early industrialisers and East Asian countries - such as import controls, preferential taxes favouring domestic goods, production and export subsidies linked to performance requirements, import restrictions, local content requirements, and technology transfer through imitation - are now illegal, limited, or open to retaliatory measures under the World Trade Organisation (WTO) and its associated agreements . This has greatly reduced the size of the industrial policy toolkit for developing countries today (e.g. Rodrik, 2004; DiCaprio & Gallagher, 2006; UNCTAD, 2006). However, the WTO still affords Least Developed Countries (LDCs) with special and differential treatment, and many of the measures available previously under the General Agreement for Tariffs and Trade (GATT) are also available under WTO (UNCTAD, 2016). Moreover, instruments that are not formally allowed by treaties and agreements, such as subsidies, can in practice still be used until they are challenged or countervailed.

Regional, multilateral and bilateral agreements are typically even more restrictive on industrial policy space than WTO rules. In particular, the U.S. pushes for tighter restrictions on investment regulations, intellectual property protection, and capital account management whenever it negotiates a free-trade agreement with a developing country (UNCTAD, 2017). Sector-specific trade agreements also typically impose limits on production or on the range of policy tools that can be applied. In addition, International Monetary Fund (IMF) conditionality often goes beyond narrow monetary and fiscal matters to prescribe policies on trade and industrial policy (economic conditionality). While the IMF's official rhetoric has gradually moved away from economic conditionality since the 2000s, IMF programmes usually still contain many detailed requirements limiting trade and industrial policies.

*4 Relevant WTO agreements include: the Agreement on Trade-related Investment Measures (TRIMs), the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS), the General Agreement on Trade in Services (GATS), and the Agreement on Subsidies and Countervailing Measures (ASCM).

The Delivery of Industrial Policy

Just as political will is often treated as a black box, industrial policy observers in many countries – and particularly in Uganda – often conclude that policies have failed due to "weak implementation". This section explores the factors that drive effective delivery of industrial policy, compiling lessons learnt from successful industrialisers.

Photo credit: Jjumba Martin

Industrial policy cannot succeed without effective implementation mechanisms. First, **industrial policy entails a multitude of state functions that must be effectively coordinated,** including trade, infrastructure, enterprise development, investment, export, customs, taxation, science and technology, education, and more policy areas. Effective industrial policy typically entails a "package" of mutually reinforcing and complementary policies across these domains, necessitating significant planning, decision making, and information flow across government. Second, an industrial strategy must evolve dynamically so as to respond to success or failure, political, capacity, or contextual changes, as well as remaining appropriate to the different stages in a country's development trajectory. Third, the introduction of new institutions as well as shifts in capabilities inevitably give rise to changes in the distribution of rents and power configurations. It is therefore crucial for the state to manage the various winners and losers of industrial policies and their outcomes in a way that maintains vital constituencies' alignment with the state's overall strategic vision in the least costly manner.

As a result, the most successful industrial policies have historically been coordinated and spearheaded by one high-level government body. This organ could take the form of a unit, ministry, commission, agency, or other organisational type. In successfully industrialising countries, these bodies have typically been placed high in the hierarchy of ministries, departments, and agencies (MDAs). The most famous case of a "super-ministry" in charge of industrial policy is the **Japanese Ministry of International Trade and Industry** (MITI) in the post-World War II period (Johnson, 1982; Evans, 1995; Ohno, 2013; UNIDO, 2020). Until the early 1970s, MITI had authority over visions and strategic documents and on all spheres of industrial policy including policies for individual sectors and technologies, trade negotiations, quality standards, intellectual property rights, competition policy, SMEs development, energy and environment and so on (Ohno, 2013). In the 1950s, MITI was able to "combine export discipline with culling losers" precisely because it had "extraordinary controls over both industrial policy and trade policy" (Studwell, 2013). So central was its role that, according to some observers at the time commented that Japanese "industrial policy is what MITI says it is" (Johnson, 1982). MITI worked closely with the Economic Planning Agency (EPA) and the Ministry of Finance (MOF). These three agencies together formulated and executed medium- and long-term visions and economic plans. Numerous specialised bureaus and organisations depended on MITI: the International Trade Policy Bureau, Industrial Policy Bureau, Machinery and Information Industries Bureau, the Patent Office, the SME Agency, and the Agency of Industrial Science and Technology, amongst others. Similarly, in **Taiwan**, the **Ministry of Economic Affairs** (MoEA) was fully in charge of the formulation and implementation of industrial policy, though the exact division of responsibilities and power relations between different ministries, bureaus, commissions, and government-created think tanks was more complex (Wade, 1990). In **Korea** during the 1960s and 1970s, the **Economic Planning Board** (EPB) dictated the policy measures to be implemented by the Ministry of Commerce and Industry and had control over the government budget (Evans, 1995; Chang et al., 2013).

Another key characteristic of these bodies is that they have typically been directly mandated by the highest levels of government. This can be the Head of State, vice president, deputy prime minister, or someone close to a top leader. Political backing from a top leader is key to ensure that the consensus building process that these councils aim at achieving is shared across the various ministries and agencies involved in the process, and nobody feels that they do not "own" the policy (UNIDO, 2020). The Korean EPB was chaired by the Deputy Prime Minister and was considered the supporting arm of the President (Amsden, 1989; Chang, 1993; Ohno, 2013; Chang et al., 2013; Andreoni & Chang, 2019). In India, the Planning Commission was in charge of industrial policy making from 1950 to 2014. Chaired by the Prime Minister, its main functions included the development of long-term strategic visions for the country and detailed sectoral investment plans. It also had an important role in giving stability to industrial policy in the country as all political parties accepted its role in formulating industrial policy and guiding economic transformation in India (Singh, 2008).

Like all pockets of efficiency, these bodies have typically been staffed by highly competent people who were empowered to act on their own judgment. Studwell (2013) notes that the failure to empower key bureaucrats was one of the weaknesses of Prime Minister Mahathir's industrialisation push in Malaysia: according to one leading bureaucrat, "it became very difficult to put your view forward". Studwell (2013) further observes that "no successful developmental leader in Japan, Korea, Taiwan (or China) circumvented the national bureaucracy to the extent that Mahathir did. He wanted to convey the strategy, do the due diligence and cut the deals all on his own." Another case comes from Taiwan where from the 1970s to the 1980s, the Industrial Development Bureau (IDB) was responsible for sectoral work plans and the management of key industrial policy measures (e.g. importing items in the "approval" list, beneficiaries of government-backed loan programmes, proposals for foreign investment, and export subsidies) (Wade, 1990). The IDB was part of the gigantic MoEA and notably employed mainly engineers (starting with 70 and expanding to roughly 130). Very few financial and marketing experts were present, and no more than six economists were in the Bureau in the same period (with not a single one until 1981) (Wade, 1990). IDB was the point of contact between the business and the bureaucratic world: staff would also spend several days a month visiting firms. Technical knowledge was essential to gauge production capabilities of firms in priority sectors and screen proposals and applications to the various incentive schemes.

In some cases, members of industrial policy councils also include business representatives, scholars, retired officials, labour union representatives, and so on (Ohno, 2013; UNIDO, 2020). In recent times, the involvement of the private sector in industrial policy making is considered a powerful way to reduce the information requirements on government officials, identify emerging business opportunities, and make industrial policy processes more participatory. Several examples of multi-actor commissions and councils come from Latin American economies such as Brazil, Mexico, Chile, Colombia, Peru, and Costa Rica (Devlin & Pietrobelli, 2016; Schneider, 2015; Devlin & Moguillansky, 2011). While often considered a modern element of "new industrial policies", the involvement of the private sector has been a key ingredient of industrial policy making in East Asia as well. In Japan, while apparently top-

down, industrial policy making greatly benefited from discussions and consultations with businesses, experts, and academics through deliberation councils coordinated by MITI (Ohno, 2013). The **Industrial Structure Council** was particularly important for industrial policy making, drafting development visions for key industries (e.g. heavy and chemical industry in the 1960s, knowledge-intensive industries in the 1970s, and creativity and knowledge-based industries in the 1980s) (Ohno, 2013).

In the highest priority sectors, dedicated pocket-of-efficiency sector development agencies have played a key role in designing and delivering industrial policy:

- The **Japan Electronic Computer Corporation** (JECC), established as a quasi-private company co-owned by computer producers and managed by former MITI officials, raised demand for domestic computers, and ensured that major players in the sector did not engage in price-wars (Evans, 1995). Initially, it channelled funds from Japan Development Bank to buy up computers from producers and rent them to users, with the result of reducing up-front costs for the latter while improving cash-flow for the former. This eventually stimulated productivity in an otherwise highly challenging computer industry, to the extent that competition rose so much that JECC had to monitor market players to prevent price wars between competitors.

- The **Ethiopian Horticulture Development Agency** (EHDA) has been a major enabling factor for the development of the cut-flowers industry in Ethiopia, offering capacity building, investment support, and market promotion (Oqubay, 2015). Several factors allowed it to carry out its mandate. First, it directly answered to the Export Committee led by the Prime Minister, in order to improve accountability and effectiveness (Altenburg, 2010). Second, the body received regular budget allocations and was staffed with capable officials, whose recruitment rules did not follow the general government regulations. These factors enabled the body to remain flexible, respond to sector-specific needs in a timely manner, attract staff that was well-embedded in the horticultural sector, and remove the many "layers of bureaucracy" that existed in the rest of government (Altenburg, 2010).

- The **Malaysian Palm Oil Board** and the **Malaysian Agricultural Research and Development Institute** have similarly played a key role in promoting technology upgrading in the palm oil sector, while the **Malaysia Rubber Board** has played has been central in identifying and expanding new export markets for Malaysian rubber products and become a major centre for applied research on rubber-based manufacturing (Lebdioui, 2019b).

A somewhat different way of tackling sectoral development is through specialised institutes. In Thailand, several specialised institutes were created to design and implement master plans for priority sectors, but also to manage information and consultation with the private sector, and to conduct research, training, and testing of new products and innovations. These institutes were asked to be financially independent from government budgets within five years of establishment (Ohno, 2013). While not all of them were successful, some, such as the **Thailand Automotive Institute** (TAI), have become policy making and implementation hubs,

which brought together government, business representatives, and other experts (Ohno, 2013). Beyond the tasks listed above, TAI also promoted export and clustering of auto-parts manufacturers (Ohno, 2013). Its automotive testing laboratory, as well as trainings for factory engineers and other workers and research and information services (also in cooperation with ten local universities), greatly benefited local producers. The success of the TAI has inspired other new industrialisers to follow the same approach, including **Ethiopia** with its **Leather Industry Development Institute** (UNIDO, 2020; Lenhardt et al., 2015; Oqubay, 2015).

This quick survey of the lead ministries and government bodies in successful industrialisers and emerging success stories shows how various organisational structures can be put in place to design and implement industrial policies. The different models and organisational structures should not be seen as mutually exclusive alternatives. For example, despite relying heavily on a powerful super-ministry (MITI), Japan also counted on several deliberation councils. The Thai system involves a central planning body **(Thailand's National Economic and Social Development Board, NESDB)**, as well as a system of ten specialised institutes focused on sectors (e.g. auto, food, textile) and broader issues (SME development, training, productivity) (Ohno, 2013). Some of these bodies have been so successful that today some developing countries are putting in place similar organisational structures and bodies. Examples include the **Ethiopian Investment Commission** (Sen & Logan, 2016) and the **Rwanda Development Board** (Booth, et al., 2018).

Industrial Policy Targeting

This section explores how the choice of target economic activities and sectors affects industrial policy success and failure. It briefly discusses the benefits and risks of narrow versus broad industrial policy targeting before laying out the numerous different targeting approaches proposed by the literature.

Photo credit: Jjumba Martin

Because state resources in developing countries are very scarce, many academics and practitioners have argued that governments should not attempt targeted industrial policy in order to avoid "government failure". This argument is based on three premises. First, a state with limited institutional and bureaucratic capacity is more likely to make mistakes in selecting, supporting, and disciplining its targets. Second, investing all resources into a few targets that could turn out to be bad bets might be perceived as a waste of public resources that could have been used to provide basic goods and services for the whole society. Third, in a context of weak institutions for state accountability, targeted industrial policy can be captured as an additional patronage tool. This view would support channelling industrial policy towards so-called "framework conditions" such as the provision of infrastructure and education (including basic, higher, and vocational), the withdrawal of the state by cutting red tape, and improved regulations of competition, standards, and other relevant issues. It is argued that "getting the basics right" would allow firms and sectors to increase their competitiveness.

An opposing argument has been that, because of the significant coordination challenge of designing and delivering effective industrial policy, a narrow focus towards which the state can channel its scarce resources is advantageous. While the former approach may be less risky and apparently fairer, it should be noted that no intervention can be said to be fully neutral (Rodrik, 2008; Salazar-Xirinachs et al., 2014): a road will benefit the firms closer to that road more than other firms; a certain type of education will benefit certain sectors more than others. This view would call for a carefully focused, prioritised, and risk-adjusted industrial policy. Albeit risky, the historical evidence discussed in this paper suggests that if designed and implemented well, selective industrial policy has tremendous effects on the economy, kickstarting economic transformation, creating new areas of competitive advantage and new sets of skills and capabilities.

A narrowed focus comes with the inherent risks of "making bets" on certain outcomes, but the kind of selective industrial policy that has been at the heart of virtually all industrialisation success stories is impossible without taking such risks. Highly targeted industrial policy may thus be a risky, but ultimately necessary, bet to take for any government pursuing rapid and sustained economic transformation. Indeed, one of the justifications for industrial policy is that some potentially transformational sectors and activities are too risky for the private sector under "free market conditions" and that the government should therefore reduce that risk to levels acceptable to the private sector. Even a small portfolio of priority sectors and activities can be risk-adjusted by including some higher-risk and some lower-risk bets. Moreover, what is much more important than "picking winners" or the "right" sectors are the government's will and ability to "cull losers" - to withdraw support from sectors and firms that fail to perform (Studwell, 2013). In other words, government - like any actor that enters risky ventures - must be willing and able to take an entrepreneurial approach to industrial policy.

A multitude of authors have proposed different methodologies for identifying target sectors or activities for industrial policy. For example, Justin Lin - through his **Growth Identification and Facilitation Framework (GIFF)** - proposes that a country look at the product range wealthier countries with similar endowment structures have successfully exported in the past, at the point at which the comparator country had a real income per capita no more than double that of the country concerned (Lin & Monga, 2010). Hausmann and Klinger's (2007) **product space** approach can be used to score potential activities according to their proximity to a country's existing export basket, their complexity, or their proximity to other products, and thus the opportunities for further diversification they espouse. The leading industrial policy scholars continue to debate whether it is most beneficial to employ comparative-advantage-**conforming** or comparative-advantage-**defying** policies (Lin & Chang, 2009) and whether industrial policy should "lead the market" or "follow the market" (Hausmann & Rodrik, 2002).

While these theories highlight several factors that are key to economic transformation, none is without weaknesses. For instance, Chang and Andreoni (2019) argue that the product space and GIFF methodologies both fail to capture the potential impact of intersectoral spill-overs such as the general development of an industrial workforce, managerial skills, and export experience. They also argue that the GIFF's recommendation of emulating countries at no more than double the GDP per capita does not reflect the experience of past success stories, pointing out that when Korea embarked on steel manufacturing in the 1960s, it was emulating the United States, whose GDP was 2000% of Korea's (Chang & Andreoni, 2019).

In practice, industrial policy targeting has been done in a more ad-hoc fashion, with imitation of more advanced countries being the major discernible approach. For example, Chang (2013) describes how Japan during the Meiji restoration sought to emulate Germany's earlier industrialisation success, which had itself borrowed heavily from England's experience. Amsden (1989) documents how Korea imitated Japan's success in building a domestic steel industry. Ethiopia's industrial plans, too, have been inspired by the East Asian models of industrialisation, for example by consulting with Korean and Japanese advisors for inputs into various industrial plans and through exchange visits to Singapore and China (Oqubay, 2018).

Despite being a central topic for industrial policy making, there is a dearth of actionable tools available for industrial policy selection. There is little consensus regarding the successful models of industrial policy targeting in practice. In most cases, it appears that specific methodologies and selection criteria are developed by each government or by the consultants commissioned to carry out targeting studies (interviews). In recognition of the fact that each approach from the academic literature has shortcomings, Altenburg et al. (2017) proposed an integrated approach that combines several methods, but this was presented in high-level terms and has not been operationalised to the authors' knowledge.

Table 2 provides an overview of some of the major industrial policy targeting approaches found in the literature.

Table 2: Industrial Policy Targeting Approaches

Method	Reference	Theory/Rationale	Pros	Cons
Import Substitution	Early economists (e.g. Lewis, 1950; Prebisch, 1950)	Identify key imported products that can be replaced with domestically produced goods	— Provides a clear focus as to which sectors can be targeted and provides guarantee that there is local demand for a given product	— May in fact lead to increased imports of parts and components not locally available — Domestic demand may not suffice to allow for increased productivity through economies of scale — Puts relatively less emphasis on export promotion
Parsimonious growth (based on product space "proximity" measure)	Hausmann & Klinger, 2007	Identify new sectors close to the economy's existing capabilities but with higher sophistication, thus making diversification faster and less risky	— Provides a blueprint for diversifying into sectors that countries with a similar export matrix have diversified into and identifies lower-risk sectors due to proximity to existing capabilities	— Ignores demand dynamics and benefits of producing unique products — Only looks at similarities between products rather than production processes, and may thus miss important spillover opportunities (Andreoni & Chang, 2019) — May downplay importance of defying comparative advantage and leapfrogging in historical success cases (Lin & Chang, 2009)
Strategic bets (based on product space "opportunity gain" measure)	Hausmann & Klinger, 2007; Chang, 2013; Cimoli et al., 2009	Identify more sophisticated new sectors that would open up new opportunities for further diversification, even if they lie at significantly greater distance from current capabilities	— Enables economic transformation towards potentially high value added and technologically complex goods even in developing countries with little pre-existing related capabilities	— Underestimates issues of feasibility, and involves a higher risk of failure than parsimonious growth — Ignores demand dynamics and benefits of product uniqueness
Growth Identification and Facilitation Framework (GIFF)	Lin & Monga, 2010	Use the country's latent comparative advantage and factor endowments to identify areas for development, mimicking the production sets and industrialisation pathways of countries at a moderately higher GDP/capita (around 100% higher) and with similar endowment structures or other comparable parameters	— The policy implications and approach are clear for the imitating country, as well as the required coordination capabilities that must be considered	— It is unclear what aspects of endowment structure of other comparable parameters should be analysed — The focus on comparator countries with a 100% greater GDP/capita is arbitrary and may not reflect success story experience (Andreoni & Chang, 2019) — Ignores differences in country contexts, capabilities, and industrial structures — Ignores demand dynamics and product uniqueness
Develop upstream and downstream linkages in existing commodity sectors	Hirschman, 1981; Mackintosh, 1923; Maloney, 2002; Morris et al., 2012; Ovadia, 2016.	Based on the idea that the production linkages from natural resources to industry are more likely to lead to economic diversification through upgrading in a commodity chain	— Enables pursuit of value addition in sectors with supposedly lower entry barriers or where a given country has more leverage to attract investments — More suitable to the context of resource-rich developing countries because: (i) the policy space for import substituting industrialisation has reduced, and (ii) there is rising competition in manufacturing sectors (Morris et al., 2012)	— There can be considerable market barriers to commodity value addition (Tordo et al., 2013), which is why looking downstream from existing production can be a poor guide to identifying high-potential export sectors (Hausmann et al., 2010) — Increases industrial dependence on commodity sectors and the consequent vulnerability to commodity price swings — The desirability of building linkages around a commodity depends on the exhaustibility of reserves

Method	Reference	Theory/Rationale	Pros	Cons
Following the market / Self-discovery	Wade, 1990; Hausmann & Rodrik, 2003; Altenburg & Melia, 2014	Rather than "picking winners", follow the private sector's lead in identifying high-potential industries and build industrial policy on existing emerging progress	— Building on emerging success is low-risk and willingness of the private sector to invest is already established, so fewer incentives likely needed — Leaves complex challenge of identifying high-potential industries to the private sector	— Assumes private sector's willingness to invest in the most strategic industries for economic transformation — Assumes private sector's ability and willingness to make risky investments — Ignores fact that market failures are likely to prevent private sector from investing in key industrial sectors (the justification for industrial policy in the first place)
Value chain analysis	Gereffi & Fernandez-Stark (2016)	Identify potential entry points and upgrading possibilities in global value chains (GVCs), with emphasis on value chain tasks that are close to existing capabilities (analogous to distance) or that present opportunities for further upgrading/ diversification (analogous to opportunity gain). Based on analysis of GVC governance patterns.	— Recognises importance of trade relations and globalised nature of production — Highlights opportunities to upgrade economic activities/ tasks rather than just products — Focus on activities/tasks recognises cross-sector spillover opportunities	— No practical and clear operationalisation of GVC analysis-based targeting — Requires high state capacity to anticipate current and future global opportunities — Less useful for identifying opportunities not integrated into GVCs (e.g. domestic/regional construction and food sectors)
Windows of opportunity / Technological cycles / Technological foresight	Perez, 1983; Freeman & Perez, 1988; Lee & Malerba, 2017; Lee, 2019; Sainsbury, 2020	Identify windows of opportunity based on ongoing or predicted shifts in demand, technology, production capabilities, and/ or institutions.	— Recognises importance of changes in contextual factors including demand — Emphasises importance of emerging technologies and exponential growth opportunities these present — Takes longer-term view of future industrialisation opportunities	— Not operationalised and highly qualitative, not based on measurable criteria — Only useful if used in conjunction with other approaches
Integrated approach	Altenburg et al., 2016	Sequentially apply several layers of analysis, starting with latent comparative advantage against comparator countries (GIFF), and broader capabilities and potential for spillovers (product space), creating an evidence-based menu of options for further narrowing down through GVC power relations analysis, long-term sustained growth potential and anticipation of future technology trends.	— Acknowledges different levels of analysis and the need for a balanced approach	— Not operationalised — Requires high state capabilities

Industry Policy Instruments

This section explores the industrial policy "toolbox": the array of policy instruments that can and have been employed, with a focus on lower-income countries. It highlights how the choice of policy instruments drives industrial policy effectiveness and presents a broad selection of policy tools via a comprehensive taxonomy.

Photo credit: Jjumba Martin

Industrial policy is successful when it effectively incentivises the private sector to build new, higher-value-added productive capabilities. This often occurs through the emergence and growth of pioneer firms that achieve economies of scale, discover opportunities, generate positive spill-overs, and create new competitive advantages through capability building. But pioneer firms are rarely commercially interesting for private investors because they (i) have high upfront costs, (ii) come with high risk because – by definition - they enter uncharted territory, and, crucially (iii) create value that cannot be exclusively captured by their owners (positive externalities). These externalities include new technologies, skills, and methods that gradually spread to other market actors via imitation, employee churn, acquisition, or value chain relationships.

To catalyse productive capability development, industrial policy must effectively support and discipline the private sector, particularly pioneer firms (Studwell, 2013). There is a steep learning curve involved in entering the production of new, higher-value products or services, and pushing productivity to globally competitive levels (Chang, 2007). This necessitates **learning for productivity**, which has been discussed above in political terms. As a result, successful industrialisers have, almost without fail, protected and supported their pioneer industries - often referred to as infant industry protection - through a variety of measures (Chang, 2007). This first part of the industrial policy equation - **support** - can entail a vast range of policy instruments (covered in detail in Table 3 and Figure 4 below) that:

1. Directly provide state-sponsored goods and services that boost productivity in key sectors;
2. Compensate pioneer firms for the positive externalities they create through subsidies or other forms of support;
3. Enable pioneer firms to achieve economies of scale; or
4. Facilitate the maximisation of positive spill-over effects into the rest of the economy through support to SMEs.

Support to target firms and sectors, however, is only effective if it is tied to "discipline" in the form of performance standards and the credible threat of support being withdrawn in the case of non-performance.[*5] Discipline is the second part of the industrial policy equation.

*5 AfDB (2014) makes this argument specifically for Uganda's case.

First, effective industrial policy targeting is a form of discipline that pushes capitalists to invest in certain types of economic activities or sectors. Industrial policy often fails when it is not targeted specifically at pioneer firms (Rodrik, 2008) or high-value-added activities (Studwell, 2013). Successful industrialisers offered a range of incentives to banks or investors providing capital to target industries as well as to entrepreneurs for pursuing priority industrial sectors and activities. It is only when these incentives are reserved exclusively for the target sectors and activities that they are able to induce the private sector to focus its entrepreneurial efforts towards transformative pursuits.

1. Forcing the private sector to invest in productivity-enhancing technology and skills;
2. Making rent creation conditional on improvements in competitiveness; and
3. Pushing pioneer firms to maximise positive spill-overs (e.g. through local content requirements).

Second, the crudest type of disciplining is coercion: forcing banks or leading entrepreneurs to invest in certain activities. Korea in the 1960s - 1980s provides the starkest example of this. Faced with very scarce capital in the 1960s, the Korean government kept the financial sector on a "short leash" in order to channel scarce domestic and foreign savings into priority sectors and firms, nationalising banks for greater control and directing how private banks lent their funds (Studwell, 2013; Lee, 2017). This allowed the government to ensure that concessional credit - with real interest rates close to zero and long maturities of up to 10 years - flowed to priority sectors (Lee, 2017). The government also made it mandatory for every commercial bank to buy the domestic bonds it issued to raise wholesale finance for the Korean Development Bank, which funded priority sectors (Kim, 1991). More broadly, General Park's military dictatorship gave Korea's leading entrepreneurs little choice but to pursue the regime's favoured industrial projects (Studwell, 2013). A similar approach was followed in China where commercial banks are required, by law, to lend in line with policy priorities (Andreoni, 2016). In Japan, firms that did not collaborate were not allocated any foreign exchange to buy raw materials and equipment (Studwell, 2013).

A third form of this discipline is making support conditional upon beneficiary firms' fulfilment of production, investment, training, employment, local content, or export requirements. These have been extensively sused by East Asia's developmental states (Wade, 2018; Lee, 2017; Studwell, 2013; Amsden, 2001). Export performance is the best and simplest indicator of a firm's competitiveness (Studwell, 2013). Pioneer firms require significant protection and support for the acquisition of skills, technologies, linkages, market knowledge, and credibility before they can reach international competitiveness. But because "firms that can make money at home in a protected environment are always reluctant to compete globally" (Studwell, 2013), the most successful industrialisers have typically made protection and support conditional upon meeting gradually escalating export targets. Similarly, Shepherd (2016), with reference to Uganda, argues that time-bound subsidies can also help drive firm capability upgrading, but only if the "time path really is binding", as "lower productivity firms that receive the subsidies have little incentive

to upgrade if they believe the government will not follow through on its commitment to repeal the subsidies at a particular time". In Japan, the size of effective tax breaks extended to firms was determined by their exports; in Korea, firms' export performance determined their access to concessional bank credit and to other forms of support (Amsden, 1989; Studwell, 2013). Hauge (2019) recounts an example of Taiwan's use of a package of incentives and requirements to attract FDI and ensure that it serves the country's industrialisation goals:

> A good example of the balancing act that Taiwan mastered between welcoming foreign investors and bargaining with them is the polyethylene plant built in the early 1960s by the National Distiller and Chemical Corporation (a US based firm). To attract the company, the Taiwanese government offered a five-year tax holiday, restrictions on imports of polyethylene for three years from start-up, guaranteed supplies of ethylene (an input that goes into making polyethylene) and unlimited repatriation of profits. The Taiwanese government, in return, required that National Distiller should export any surpluses over domestic needs, not establish production facilities in downstream sectors and transfer 50% of shares to Chinese nationals after five years, to make it a 50–50 joint venture.

A fourth type of disciplining strategy is the conditional granting of market or investment access to foreign firms. Countries can sometimes use the prospect of profits from the production of goods for domestic or international markets to entice foreign firms. The government can then allow foreign firms to sell to the domestic market only if they set up some value addition activities, such as final assembly, in the country. For foreign investors wishing to set up production for export markets in the country in question, for example because of its cheap labour and preferential market access due to LDC status, the government can make these firms' investment licences conditional upon the fulfilment of certain requirements such as local purchase of inputs, local hire, local training, or technology licencing. Bangladesh's efforts to catalyse the garments industry are one example (Balchin & Calabrese, 2019):

> In 1979, when there were virtually no garment exporters in the country, the Bangladeshi government negotiated a joint venture between the Bangladeshi Desh Garments and the Korean conglomerate Daewoo. Daewoo invested in the organisational learning process by hosting around 130 Bangladeshi managers who were seconded to its factory in Busan for several months. When the seconded managers returned to Bangladesh, they applied Korean managerial practices and organisational principles to ensure that Desh exports grew at close to 100% per year. Within a few years, 115 of the 130 managers had set up their own garment factories, some supplying Desh and others competing with Desh. The value of the large human capital investment undertaken by Daewoo was clearly not exclusively captured by Daewoo-Desh, but rather by the entire emerging Bangladeshi garments sector. As a result, Daewoo would not have made the investment had the Bangladeshi government-brokered deal not assured them supernormal profits for the first several years of operation. Daewoo later repeated this approach in Myanmar (Gelb et al., 2017).

Fifth, potential pioneer firms can be exposed to managed domestic competition. Some rents can be ensured by limiting the number of players in a given sector (to reward pioneer firms for the positive externalities they are creating). At the same time, protection and support can be extended to a handful of potential pioneer firms vying for market leadership, as many successful industrialisers have done (Studwell, 2013). Korea successfully applied this principle in its automobile sector amongst other sectors, where it supported a handful of firms and, over time, allowed the weaker firms to drop out of the race or be bought up or forced them to merge with others, as the market leaders etched closer to international competitiveness (Studwell, 2013). In the end, one global market leader, Hyundai, emerged (Studwell, 2013). In other instances, it placed restrictions on the number of firms that were allowed to operate in a sector, in order to ensure rents were earned by the existing players (Lee, 2017). The competitive pressures strengthened the incentives for learning and upgrading while entry barriers allowed firms to realise economies of scale and grow. More broadly, Korea used industrial licences in the 1960s and 1970s to "determine what, when, and how much to produce in milestone investment decisions" (Amsden, 1989: 17). While creating "market-dominating enterprises", the government also set price controls to curb monopoly power and designated industries for small and medium-sized firms (Amsden, 1989). Similarly, in Japan, credit rationing and other mechanisms to coordinate capacity expansion generated profits above free-market levels and avoided "investment races" (many firms investing in the same sectors at the same time) (Akyüz & Gore, 1996). Studwell (2013) documents how Malaysia squandered the opportunity to cull losers by making one-off investments in new industries through State-owned Enterprise (SOE) and not licencing more entrants in sectors like car manufacturing. The only recourse for the government upon non-performance of SOEs was to change their management, and it could not afford to let them go bankrupt.

Sixth, discipline, through incentives and restrictions, can also be used to ensure that economic rents (created also thanks to industrial policy incentives) are reinvested in productive activities. In the literature, this has been referred to as the profit-investment nexus (Akyüz & Gore, 1996; Akyüz et al., 1998; UNCTAD, 1994, 1997, 2003). In East Asian industrialisers, various industrial policy fiscal incentives, such as tax breaks and special depreciation allowances, were used to generate profits above free-market levels, boost corporate savings and provide firms with financial resources to be invested for example to improve productivity or enlarge capacity. For example, in Japan, restrictions on imports and consumer credits, high taxes on luxury items, and restrictions on capital outflows guaranteed that profits would not be diverted towards unproductive uses (UNCTAD, 1997; Chang, 1998). A similar policy mix was present in Korea (Amsden, 1989; UNCTAD, 1997; Chang, 1998) and Taiwan (Wade, 1990). In Korea, industrial licences for lucrative sectors were granted to business conglomerates on the condition that they also enter particularly risky industries (Amsden, 1989).

Seventh, the private sector can be disciplined by the credible threat of what Studwell (2013) calls "culling losers". Industrialisation is an inherently risky venture, and many of the firms that receive industrial policy protection and support are likely

to fail. Indeed, the high risk involved is part of the very rationale for state intervention. However, industrial policy often fails when it continues to prop up firms that are not progressing towards international competitiveness. Successful industrial policy involves recognising those firms (for example through export performance) and "weeding them out" (Studwell, 2013). In the cases of Japan, Korea, Taiwan, and China, this took the form of "a forced merger with a more successful firm, the withdrawal of capital by a state-directed financial system, withholding - or threatening to withhold - production licences, or even the ultimate capitalist sanction, bankruptcy". In Korea, six car manufacturers were established in the 1970s and 1980s with the help of direct and indirect state subsidies; over the following 30 years, most of these were "culled", and today Hyundai (one of the initial six) remains as the only purely Korean car maker (with Kia as a major subsidiary), but it has grown into the third largest car manufacturer in the world (Amsden, 1989; Studwell, 2013).

Finally, industrial policy is most effective if delivered as a package that coordinates the various government interventions that affect firms and sectors to ensure that the economy as a whole faces a coherent set of incentives that reinforce rather than offset one another. The sources of the incentives facing a sector can be mapped in terms of support and discipline. For example, a single firm may receive support through (a) protection from competing imports through tariffs and import restrictions, (e.g. Korea - see Amsden, 1989; Japan - see Evans, 1995) (b) access to industrial park land (e.g. Ethiopia - see Oqubay, 2015), (c) various tax incentives (e.g. Japan - see Evans, 1995), (d) training grants and sponsorships (e.g. Japan - see Evans, 1995), and (e) concessional finance (e.g. Korea - see Lee, 2015). The same firm may face disciplining measures in the form of (1) export targets, (e.g. Korea - see Amsden, 1989), (2) the requirement to manufacture, and (3) competition with other firms receiving similar support (e.g. Japan - see Evans, 1995; Korea - see Amsden, 1989). Each of these disciplining measures may be directly or indirectly linked to one or more of the support schemes. Industrial policy will be most effective when firms face a clear set of incentives deriving from a coherent set of supporting and disciplining measures, that are tailored to the changing needs of the industry over time.

The industrial policy toolbox covers instruments that enable the state to intervene in every aspect of the economy in multiple ways, each with both intended and unintended consequences, costs and trade-offs, each creating winners and losers, and each requiring certain technical capabilities for effective execution. Table 3 presents a taxonomy of these instruments and discusses their varying functions and powers. The aim is to illustrate the deep toolbox of industrial policy instruments that a developing country like Uganda might draw from. Weiss' (2015b) typology helps elucidate how industrial policy intervenes in one or more markets to overcome market failures. There are five markets in which industrial policy can intervene: the market for products, land, labour, capital, and technology. Because different policy tools are appropriate for different stages of an industrialisation journey (Weiss, 2015a; 2015b), the present discussion is limited to those most relevant for low-income countries near the start of the industrialisation journey.

Table 3: Industrial Policy Intervention Areas

Area of Intervention	Description and Examples
Product Market	– Industrial policy can increase the relative profitability of targeted activities by affecting the prices received or paid (e.g. through subsidies) or incentivise economic actors to move into targeted activities through regulations (e.g. import tariffs on competing goods). – Preferential treatment of domestic firms in public procurement can provide a ready market for infant industries. Public procurement of goods and services accounts for more than 10% of GDP in many African countries, meaning that governments are an important source of demand (Hoekman & Sanfilippo, 2018). – The active management of competition can create a balance of sufficient rents and sufficient upward pressures on productivity. For example, Korea put controls on the number of firms that could enter sectors to ensure rents were available to incentivise pioneer firms to invest (and compensate them for the positive externalities they produced), but also subjected them to limited international competition through export targets (Lee, 2017; Studwell, 2013) – High import tariffs on goods produced by the target industries give them an advantage in serving the domestic market - this serves as an important basis for firm learning before being exposed to open competition on the international market (Studwell, 2013). These are often combined with tariff exemptions on inputs imported for the production of goods or services in target sectors (Wade, 2018). When trade liberalisation was imposed on developing countries, several including Korea and Taiwan used covert trade controls to achieve the same ends as open protectionism (Luedde-Neurath, 1986).
Land Market	– Governments often offer publicly-owned land to firms at below-market rates to encourage new activity. – Some policies can induce clustering, which creates agglomeration economies arising from proximity to a pool of skilled labour, a set of specialist suppliers, good infrastructure, a dynamic business environment, or shared equipment or services. Industrial policy can also ensure clustering is as efficient as possible through the provision of infrastructure, information, training and other support services. Public inputs can help coordinate and facilitate firm clustering by providing access to land or factory space in special zones with quality infrastructure in combination with some of the product market incentives discussed above. – Firms in special zones are often exempted from national tax rules on import duties or corporation tax, for example, and firms located there will have special tax status. In some instances, typically with donor support, cluster policies have moved beyond the provision of physical facilities and tax incentives for locations in a geographical area by funding schemes to encourage cooperation between firms in areas like marketing, training and technology development. Government-funded business incubators are often set up in special zones designed to overcome problems faced by individual firms when starting up, be it in terms of business advice, mentoring or physical facilities.
Labour Market	– Low cost labour is typically a key resource available in low income economies. However, labour productivity is equally, and increasingly, important for competitive manufacturing so some form of training is always required. Education is an especially important part of industrial policy now that automation is increasing the demand for skilled labour and technical progress is thus increasingly 'skill-biased' (Te Velde, 2001; Banga & Te Velde, 2018). – Training is a clear example of positive externalities and thus often requires policy intervention in order to be supplied sufficiently. At the early stages of industrialisation, industrial policy can support on-the-job training through tax credits for training expenditure and training grants. – Industrial policy can also directly encourage employment by making other forms of support conditional upon firms meeting job creation targets. This is typically applied in the case of foreign investors as part of the package of incentives they are offered. More general wage subsidies that offset a proportion of the payroll cost against tax can also be used where employment is a key objective. – Governments can directly supply training through technical and vocational institutes for industry-specific skills. These are often co-designed with the private sector, including apprenticeships in firms and skills councils representing industry by either participating in the design and delivery of training or providing partial funding. These efforts are often financed through training levies imposed on the payroll costs of firms.

Source: adapted from Weiss (2015b)

Area of Intervention	Description and Examples
Capital Market	– New industrial activities require significant upfront capital investments and are typically very risky. As such, private banks or investors usually prefer low-risk activities in line with an economy's existing comparative advantage (e.g. retail, telecommunications, or real estate in Uganda). Industrial policy can shift the incentives of private capital - or indeed control the flow of capital by force - towards new industrial activities. – Directed credit - whereby the state imposes requirements on private financial institutions - is one tool that has often been used. Public sector loan guarantees can support private lending to target sectors or firms by buying down the risk of those loans. Public sector development banks can fund higher risk activities where commercial bank funding is unavailable, or provide concessional credit (e.g. at below-market interest rates or longer maturities) to target sectors, activities or firms. This is particularly relevant for low income economies where commercial banks are unwilling to lend long-term or where it is difficult for borrowers to establish adequate collateral. They are potentially important for pioneer firms engaged in activities or products new to an economy. – Capital markets also affect the overall macroeconomic environment and industrial policy can intervene to control interest rates or currency exchange rates. Korea, for instance, maintained tight capital controls in the earlier phases of its industrialisation to ensure the currency did not appreciate so much to make exports uncompetitively expensive.
Technology Market	– At the early stages of industrialisation, the most important capability is to master the adoption, adaptation, and imitation of technologies and production processes developed overseas. It is this capability that technology policy in low-income contexts should focus on. – One approach is to attract FDI to set up local production using the international parent firm's technology and product design. Industrial policy often goes one step further to induce foreign investors to transfer technology through licencing agreements or local content requirements attached to FDI-related incentives. The latter is particularly useful for catalysing the mastery of new technologies by local firms, managers, and technicians. – Direct government inputs in the technology domain include the facilitation of investment agreements and technology licencing contracts with foreign firms, with public investment promotion agencies assisting in the initial search for partners or in the subsequent negotiations. Technology extension programmes may also provide training and advisory services, particularly to SMEs, in relation to the application of technologies. – It is often argued that incentives for research and development (R&D), particularly in manufacturing, are mostly premature until an economy or sector approaches the international technological frontier. However, R&D has played a key role in unlocking growth in high-value agriculture in many developing countries, particularly in the development of improved seed varieties and animal breeds. More generally, specific local conditions sometimes call for R&D to tailor production processes and technologies. This produces positive externalities, and can be compensated through subsidies, grants, tax incentives, or direct public provision.

Table 4 expands our framework for mapping the industrial policy toolbox by introducing a second dimension covering four types of policy instrument (GIZ & UNIDO, 2017) which can be mapped across the five intervention areas from Table 3 above (Weiss, 2015b). These four types of instrument are: regulation, incentives/disincentives, information, and direct provision of goods and services. The resulting matrix in Table 4 allows us to map the full industrial policy toolbox. It lists several examples of industrial policy instruments in each box, focusing on those most appropriate for a low-income country at the early stages of industrialisation.

Table 4: An Overview of the Industrial Policy Toolbox

Area of Intervention	Type of Instrument: Regulation	Incentives / Disincentives	Information	Direct Provision of Goods & Services
	Rules and directives that require economic actors to act in certain ways	The handing out or taking away of material resources to encourage certain behaviours by economic actors	The collection and dissemination of information to promote particular economic activities	Government's establishment of enterprises and or direct supply or purchase of particular goods and services
Product Market	— Import tariffs to protect domestic infant industries — Local content or ownership requirements for foreign firms in the country — Import quotas or bans on competing goods — Requirements restricting entry of firms into a sector to retain rents — Trade agreements securing duty-free access to foreign markets — Regulation of product standards to induce innovation / improve national brand	— Tariff exemptions on certain goods that are inputs for target sectors — Export subsidies for target products/services — Tax credits for investments in target industries — Tax holidays for investment in target industries — Production targets of higher-value goods for beneficiary firms — Export requirements or targets for beneficiary firms to induce competition and productivity upgrading	— Feasibility studies on target industries — Supplier exhibitions for networking — Linkage programmes to foster new supplier or other market relationships — Investment/industry fairs for foreign firms and investors — Exposure visits for businesses to firms and operations in other countries — Cost share of technical advice from product, market, or business experts	— Transport and storage infrastructure and warehouses — Public procurement of domestically produced products/services — State-owned enterprises
Land Market	— Land laws earmarking plots for industrial use — Legislation and regulatory structures for industrial parks, special zones, and other industrial land — Land transfer legislation and regulations — Public-private partnerships and leasing mechanisms (e.g. forestry concessions)	— Tax incentives for industrial land use — Tax incentives for firms located in industrial parks / special zones to encourage clustering	— Industrial land use database and guidelines	— Provision of dedicated infrastructure or services in specific locations (e.g. parks, zones, production corridors) to encourage firm agglomeration — Provision of public land for target industries

Area of Intervention	Type of Instrument			
Labour Market	— Local hire and/or training requirements for foreign firms — Regulation of educational curricula to ensure they meet standards — Minimum wages to ensure local workers are not exploited — Work permit rules that incentivise time-bound entry of skilled labour	— Grants/subsidies/tax incentives/deductions for firms providing staff training	— Publication of labour statistics — Management/ facilitation of diaspora networks for employment, investment, and supplier linkages	— Recruitment services provision to firms in target industries — Provision of vocational and technical training through public institutes, subsidies, and scholarships — Local hire and/or training in SOEs — Public works programmes
Capital Market	— Rules stipulating to which sectors commercial banks may lend on which terms	— Insurance for exporters facing risk of default from foreign buyers — Incentives (e.g. subsidies, guarantees, tax credits) to banks or investors providing capital to target industries — Capital controls to prevent capital flight and/or currency fluctuation — Central bank rediscounts for commercial banks' lending to target industries		— Trade agreements securing bilateral investment concessions and benefits — Direct equity or debt to target industries (through public banks or investment vehicles) — Preferential lending to target industries (through public banks or investment vehicles)
Technology Market	— Bans on use of outdated technologies to encourage upgrading — Standards to induce technological upgrading — Requirements on foreign investors to transfer technology or sell it at reduced prices in return for local market access	— Incentives (e.g. grants, subsidies, tax credits, prizes) for investment in, uptake or development of, upgraded technologies — Incentives for foreign firms bringing new technology into market		— Public venture funds for technology start-ups — Facilitation of investment agreements & technology licencing contracts with foreign firms — Technology extension programmes to support domestic firms with mastery of new technology — R&D through public institutes or support to private institutes — Collective bargaining with foreign technology suppliers

Uganda: A Brief History of Political Settlements, Industrial Policy and Economic Transformation

Uganda: A Brief History of Political Settlements, Industrial Policy and Economic Transformation

This chapter traces Uganda's postcolonial history of political settlements, industrial policy, and economic transformation. From independence in 1962 to the mid 1980s, industrial policy and economic transformation were continuously disrupted by weak political settlements leading to political survivalism, instability, and civil war. The sustained economic and political stability ushered in by the present regime in the late 1980s finally enabled three decades of moderate to high GDP growth rates. But Uganda's progress in export diversification, manufacturing growth, and labour shifts towards higher-productivity activities seems to have stalled and even begun to reverse in the last decade. Overall, this growth – in the context of a neoliberal economic regime - has led to only limited transformation, with the majority of resources shifting from agriculture towards low value-added services, manufacturing value added never surpassing 10% of total output, and within-sector (particularly agricultural) productivity stagnating. This pattern of economic transformation puts heavy constraints on income and productivity growth. The government's recent reassertion of the state's role in driving industrialisation is in large part based on a recognition that the neoliberal policy framework failed to bring about deeper economic transformation.

Photo credit: Jjumba Martin

Figure 3: Political settlements and growth in Uganda (1960 - 2015)

Source: Bukenya & Hickey (2018)

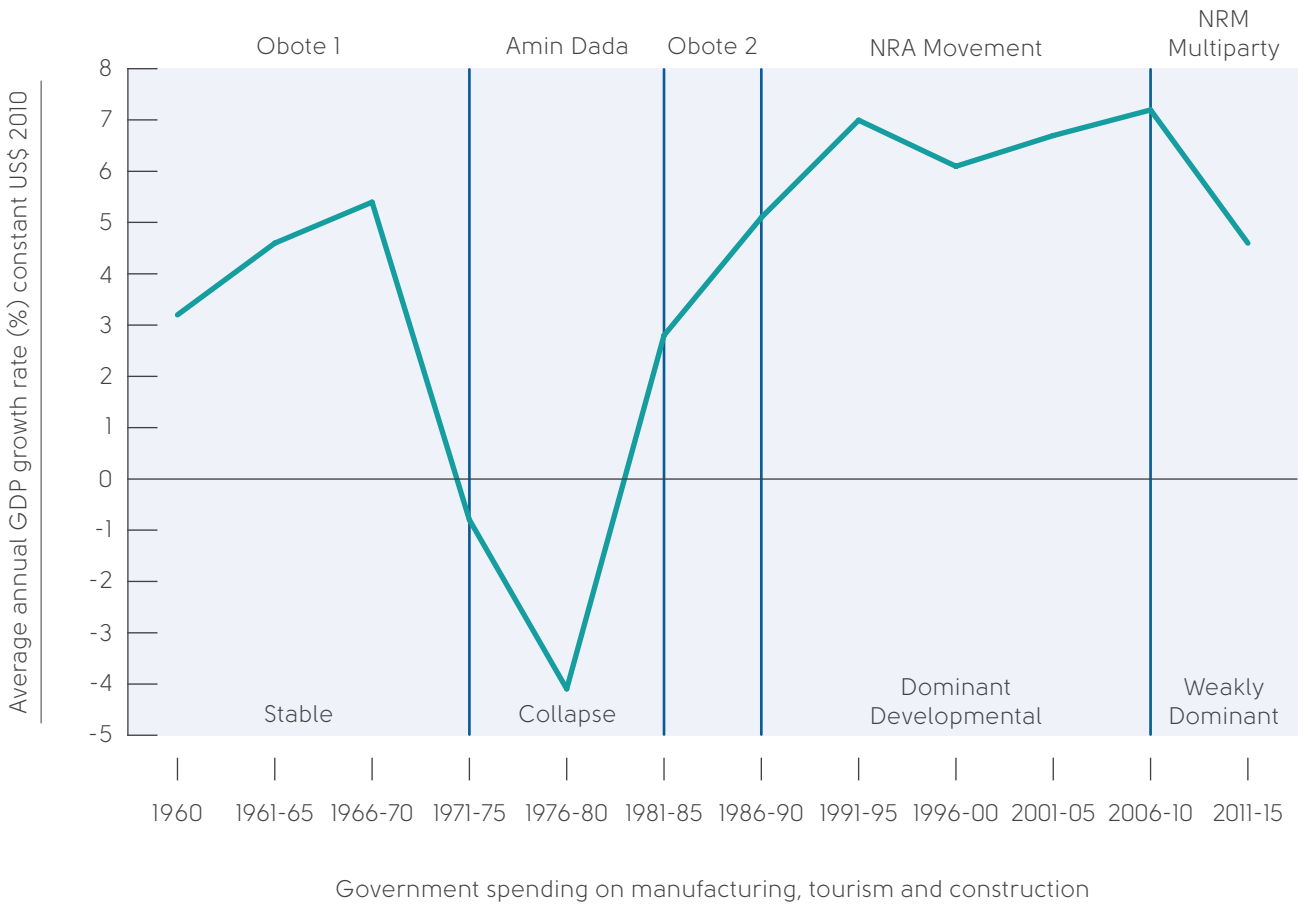
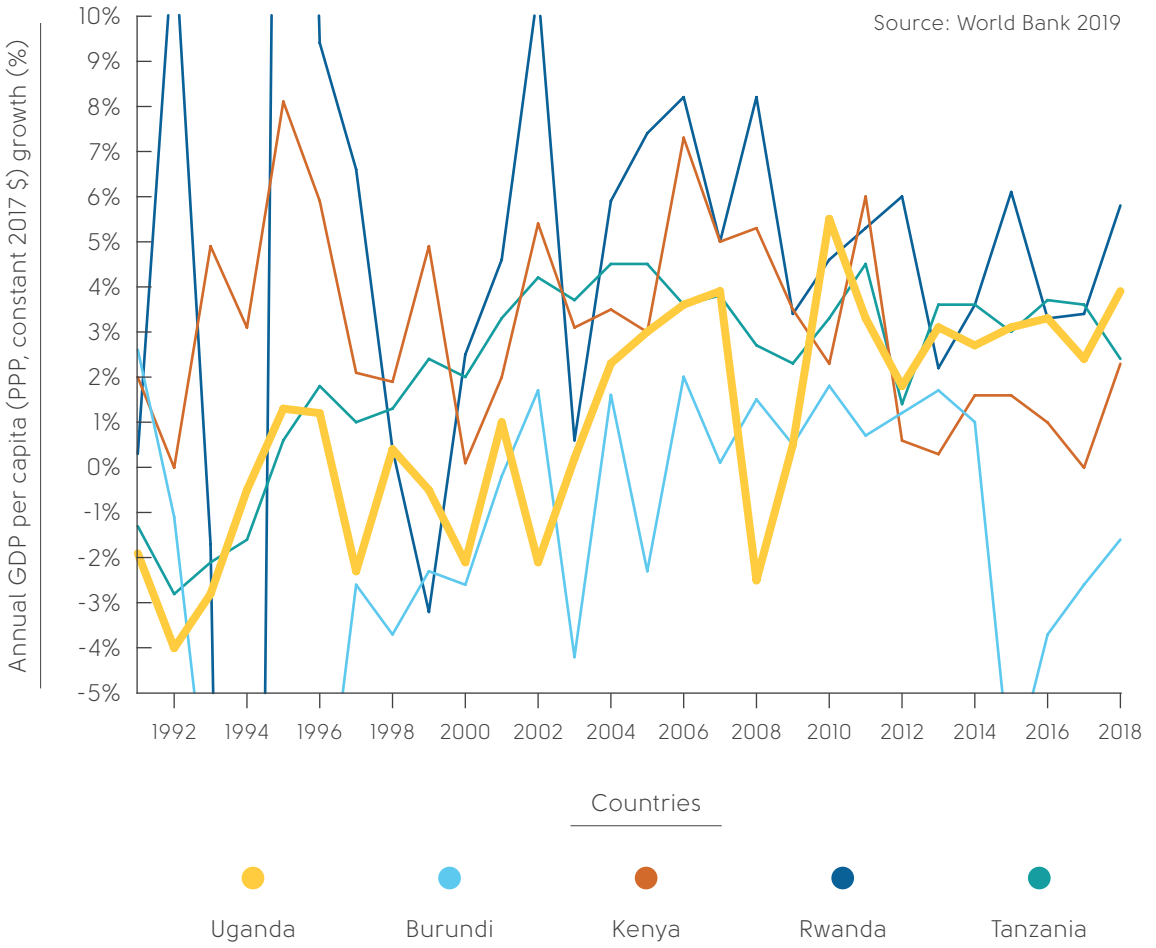


Table 5: Phases of economic policy in post-colonial Uganda

Sources: Authors based on Wiegratz et al., 2019; Grabowski, 2014; Ggoobi et al., 2017; Bukenya & Muhumuza, 2017; Okuku, 2006; Wood & Jordan, 2000; Jaimovich & Kamuganga, 2010; interviews.

Obote I (1962 – 1970):	Amin (1970 – 1980)	Obote II (1980 – 1986)	Museveni – no-party system (1986 - 2000s)	Museveni – multiparty system (mid 2000s – present)
State-driven industrialisation	Suffocation of private sector, instability and economic collapse	The failed attempts at liberalisation	Neoliberal non-interventionism	A new dawn for industrial policy?
– Currency overvaluation with foreign exchange rationing for input imports – Managed interest rates – Heavy import duties & tight quotas on manufactured goods that competed with local production – Levies on primary exports – High government ownership of enterprises – Government Marketing Boards (e.g. coffee & lint) – Concessional loans and equity to key industries	– Large-scale nationalisation under Obote I – Looting of private sector by military – Expulsion of Asian business elite under Amin – Capital flight due to political instability, conflict, and state expropriation of private property	– Ineffective liberalisation programme under Obote II – Continued capital flight	– Liberalisation of foreign exchange markets, interest rates, capital accounts, investment, import and export licencing & profit expatriation – Marketing boards replaced by sector development authorities – Deregulation of consumer and producer prices – Business-friendly corporate tax regime – Privatisation of most SOEs and parastatals – Trade liberalisation, including reduction, simplification and regional harmonisation of import tariffs; removal of quantitative restrictions and raw material export bans and levies	– Focus on productive infrastructure – Revival of UDB and UDC (but undercapitalised) – Establishment of first industrial parks (with limited effect) – Push for local content (with limited effect) – Economic governance still largely neoliberal at its core

Figure 4: Uganda's annual GDP per capita growth compared to East African Community (EAC) neighbours, 1990-2018



1962 – 1986

Constructing and maintaining a stable political settlement in Uganda has always been a particularly challenging task. Uganda is one of the most ethno-linguistically diverse countries in the world, making the consolidation and projection of power across the national territory inherently difficult. The colonial method of divide-and-rule, as in many other post-colonial countries, further entrenched ethno-regional and religious divides, leaving the country highly fragmented (Bukenya & Hickey, 2018; Branch, 2017). Colonial rule also left the indigenous bureaucracy in a weak state. In 1961, the year before independence, the higher levels of the bureaucracy were still dominated by colonial officers, with Africans and Asians only holding mid- and lower-level posts. The indigenous bureaucrats lacked the capabilities to carry out effective industrial policy formulation or implementation. In this context, the first postcolonial government forged a highly vulnerable political settlement. Prime Minister Milton Obote came to power in 1962 through a coalition between his Uganda People's Congress (UPC) and the Buganda Kingdom's Kabaka Yekka party. In its first years, the Obote administration was able to maintain a relatively stable ruling coalition by appeasing both the Buganda traditionalists and rival tribes through patronage (Bukenya & Hickey, 2018; Kjaer & Katusiimeh, 2012).

Obote's first government espoused an ambition to industrialise and diversify Uganda's economy from a very low base using a continuation of the state-led industrial policy that had been introduced by the colonial government in the 1950s as well as import substitution industrialisation (ISI) (Ggoobi et al., 2017). At independence, Uganda was still largely agrarian, accounting for 50% of GDP and 93% of employment (Okuku, 2008). Half of the agricultural output was accounted for by subsistence farmers, and the other half dominated by exports of unprocessed coffee and cotton (Okuku, 2008).

During the 1960s, the state exercised extensive direct control over the economy with the goal of accumulating savings and channelling these into financing Import Substitution Industrialisation (ISI). It held on to key economic functions in the production and marketing of targeted exports through the coffee and lint marketing boards (Bukenya & Muhumuza, 2017; Grabowski, 2014; Okuku, 2006). Originally established in 1952 under colonial rule to "promote British manufacturing enterprise by having the state guarantee initial risk capital", the role of the state-owned Uganda Development Corporation (UDC) post-independence became central to industrialisation, providing investment capital for the private sector (Okuku, 2006). UDC was endowed with GBP 5 million "to entice 'reluctant' foreign companies to venture into the Ugandan economy" (Okuku, 2006) and reportedly turned a profit for each year from 1952 until the early 1970s (UDC, 2019). In 1968, 10% of Uganda's 3,600 registered commercial and industrial enterprises were publicly owned, 13% were foreign owned and the rest were privately owned, although the government also owned large shares in numerous private enterprises. The most dominant ones were state owned and controlled. By 1970, UDC had 38 subsidiaries and 19 associated companies*6. By some estimates, UDC companies contributed about one third of Uganda's total revenue (UDC, 2019).

*6 These included: Lira Spinning Mills, Uganda Hotels, Nyanza Textiles, Uganda Garment Industry, Agricultural Enterprises, Kilembe Mines, Uganda Meat Packers, The Uganda Fish Marketing Corporation (1969) Limited (TUFMAC), Tororo Industrial Chemicals & Fertilizers Ltd (TICAF), The Uganda Metal Products and Enameling Company Limited (TUMPECO), Uganda Consolidated Properties, Tororo Industrial Chemicals and Fertilizers, and Uganda Cement Industry.

Beyond this direct control, the first postcolonial government employed several interventionist policies to drive industrial development. The Central Bank channelled finance to key private sector capitalists including the Mehta and Madhvani group. An overvalued currency that "discriminated against imported finished goods" (Ggoobi et al., 2017; Grabowski, 2014) was combined with "quotas allowing access to foreign exchange for imported inputs and remittances at subsidized official rates" (Ggoobi et al, 2017; Grabowski, 2014). Interest rates were influenced by government intervention to help spur domestic investment. Heavy import duties and tight quotas were imposed on goods which directly competed with locally made products, to protect domestic production (Ggoobi et al., 2017; Grabowski, 2014). Manufacturing exports were promoted and primary exports taxed (Wood & Jordan, 2000).

But these early industrial policy efforts were plagued by several weaknesses: first, they were slow to crystallise and lacked a clear sector focus, arguably as a result of a weak bureaucracy and an almost complete absence of productive indigenous capitalists. The First Five-Year Development Plan (1961/62 - 1965/66) was largely based on World Bank recommendations for agricultural development. Only in the second Development Plan was there mention of a targeted reduction in Uganda's dependence on agriculture and the ambition to grow "miscellaneous manufacturing at twice the rate of growth of total GDP". "Miscellaneous manufacturing" included metal, chemical, and mineral products, but this label suggests that there was no clear strategy for the growth of particular industries (Okuku, 2006).

Second, when Obote's fragile alliance with Buganda collapsed in 1966 (in large part as a result of failed attempts at land reform), the political crisis incentivised his regime to shift its focus from industrialisation to political survival. The ruling elite increasingly relied on the military for protection, necessitating the practice of rewarding soldiers who remained loyal to Obote. They obtained resources through extortion of the private sector to fund this patronage, and the implementation of deals between the state and private sector became highly unpredictable and exclusive to known Uganda People's Congress (UPC) supporters (Bukenya & Hickey, 2018).

As a result, as soon as a coherent industrial policy approach had begun to crystallise, it was jeopardised by growing extractive state interests. After the 1966 crisis, Obote's ruling UPC attempted to increase its control over the country's economic surplus so that it could reward its supporters. The private sector was increasingly suffocated by the state and deprived of the modest productive capabilities it had built up. Several decrees launched under Obote's "Move to the Left" socialist manifesto tightened the state's control of the economy. A 1969 decree led to the state owning at least a 60% share in the 80 largest private firms and banks (Okuku, 2006), and in 1970 additional decrees nationalised 85 private enterprises. This led to major capital flight and created a government-owned monopoly of commodity processing and trade. Aside from this official state policy, the private sector was regularly looted by soldiers whose salaries had not been paid due to economic scarcity (Jaimovich & Kamuganga, 2010).

This shift from developmental to survivalist policy is correlated with economic growth: GDP per capita growth increased to over 5% per year in the mid-1960s, driven mainly by agricultural exports, but fell thereafter (Bukenya & Hickey, 2018). The UDC's investment in pioneer firms helped create firm and employment growth in the manufacturing sector (employment in manufacturing grew at 8% annually in the 1960s), but it remained very small in proportion to total output. Little reliable data is available on within-sector productivity.

In 1971, Idi Amin's military coup overthrew Obote, and the new political settlement was weakened by conflict with powerful factions within the ruling coalition and with opposition groups. As a consequence, policies and government investments focused on maintaining the status quo rather than pursuing meaningful socio-economic development. Consequently, no meaningful industrial policy was introduced by the cabinet during this period. Rents in the form of confiscated assets were allocated to Amin's loyalists and the military in an attempt to cement the ruling coalition's hold on power (Kjaer & Katusiimeh, 2012).

Idi Amin was even more radical than Obote in clamping down on the private sector. The Indian capitalists who had established most of Uganda's leading industrial enterprises in the early 1960s had already begun fleeing towards the late 1960s when faced with the UPC's nationalisation drive. Under Amin they were deprived of all their capital and expelled from the country. The entire economy contracted, light manufacturing and other higher-value-added industries declined with it, and government revenues fell as a result (Shinyekwa et al., 2016; Bukenya & Hickey, 2018; Jaimovich & Kamuganga, 2010). The expulsion of the Indians led to a severe shortage of industrial capabilities and by the end of the 1970s virtually all of the industries established with government support in the 1950s and 1960s had collapsed (Okuku, 2008). All exports were negatively affected due to the tight control and rationing of the exchange rate. Coffee remained the largest export, though much of it was smuggled out by a small number of actors (Bukenya & Hickey, 2018).

Obote regained power in 1980 but soon faced the threat of armed factions, most notably the guerilla war waged by Museveni's National Resistance Army (NRA), which took to the bush as a reaction to Obote's allegedly rigged election win (Pike, 2019). The intensification of the guerrilla war from 1984 and the rise of revenge politics by Obote's regime rendered most economic governance efforts earlier initiatied by the government, including the IMF-financed Economic Recovery Programme (ERP), untenable and ineffective (Bukenya & Hickey, 2018).

1986 – present

After seizing power in 1986, President Museveni's National Resistance Army was able to usher in the first sustained period of political and economic stability since the mid-1960s, held together by a relatively stable and inclusive political settlement with low horizontal and vertical contestation from within and outside the ruling coalition (Bukenya & Hickey, 2019). The president and his government distributed economic resources to key interest groups to bolster the inclusive political settlement. For instance, the new ERP launched in 1987 under pressure from the World Bank and the IMF was

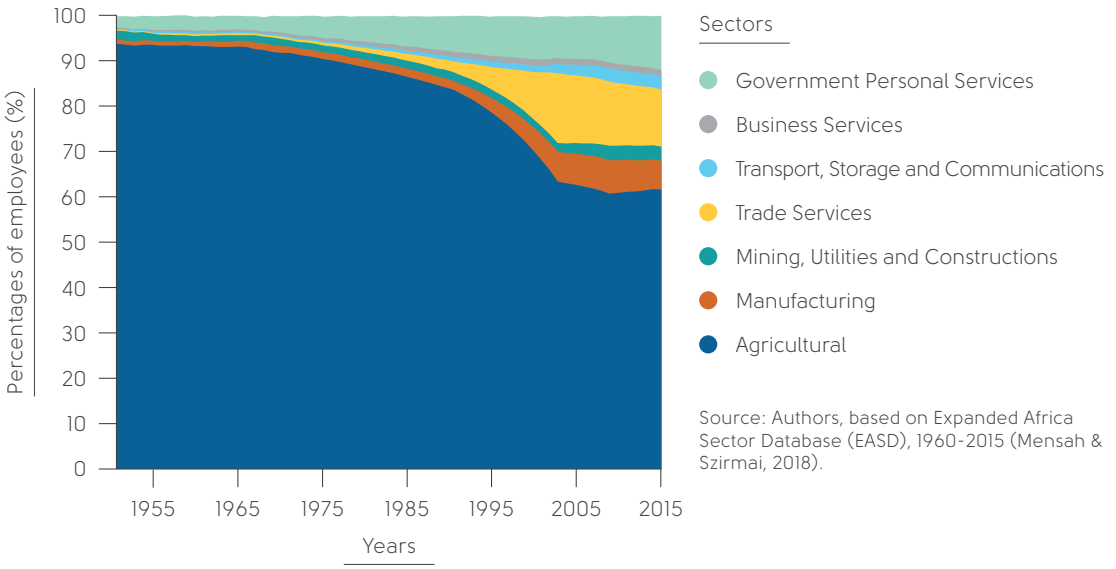
used to liberalise coffee markets, which helped the ruling coalition gain the support of small-scale coffee farmers who were now able to fetch market prices for their produce (the previous Coffee Marketing Board had kept prices artificially low) (Bukenya & Hickey, 2018). Second, the privatisation of government-owned firms was an opportunity to distribute rents to key political supporters. Third, the encouragement of previously expelled Asian capitalists, return of their property and extensive incentives, was conditioned on their financial and political support to the president and his NRM party (Bukenya & Hickey, 2018).

While the NRM had initially attempted to pursue state-led ISI (Jaimovich & Kamuganga, 2010), economic and trade deterioration compelled it to instead accept the World Bank and IMF's conditional financial assistance and debt relief and implement their neoliberal policy prescriptions. The ERP enforced reform in areas including revenue collection, through the creation of the semi-autonomous Uganda Revenue Authority (URA), and currency devaluation and a unified exchange rate in order to reduce the anti-export bias (Grabowski, 2014). Several other liberalisation reforms followed under the Poverty Eradication Action Plan, the Poverty Reduction Strategy Papers and the Heavily Indebted Poor Countries Initiative. Broad-based reforms removed state intervention in the economy, trade, interest rates, capital accounts and the currency were liberalised, price controls were removed, and SOEs were privatised (Shinyekwa et al., 2016; Jaimovich & Kamuganga, 2010). By the late 1990s, Uganda's average import tariff had fallen to less than 10% (Grabowski, 2014; Ggoobi et al., 2017). The earlier pivotal UDC was wound up in 1998 after all of its holdings had been privatised (Okuku, 2008). The exceptions to the general non-interventionist approach were targeted tax breaks and some government financial support provided to a variety of sectors including tourism, hides and skins, textiles, palm oil, and micro-finance, though without a clear sector focus strategy (Selassie, 2008).

In the context of the newfound political and economic stability brought in after decades of economic suppression, expropriation, policy incoherence, and instability, the private sector was finally able to grow in relative security. The NRM's policy of encouraging the return of exiled Indian entrepreneurs, and the return of major industrial and agricultural properties to them, provided a powerful kickstart to the economy's productive capabilities.

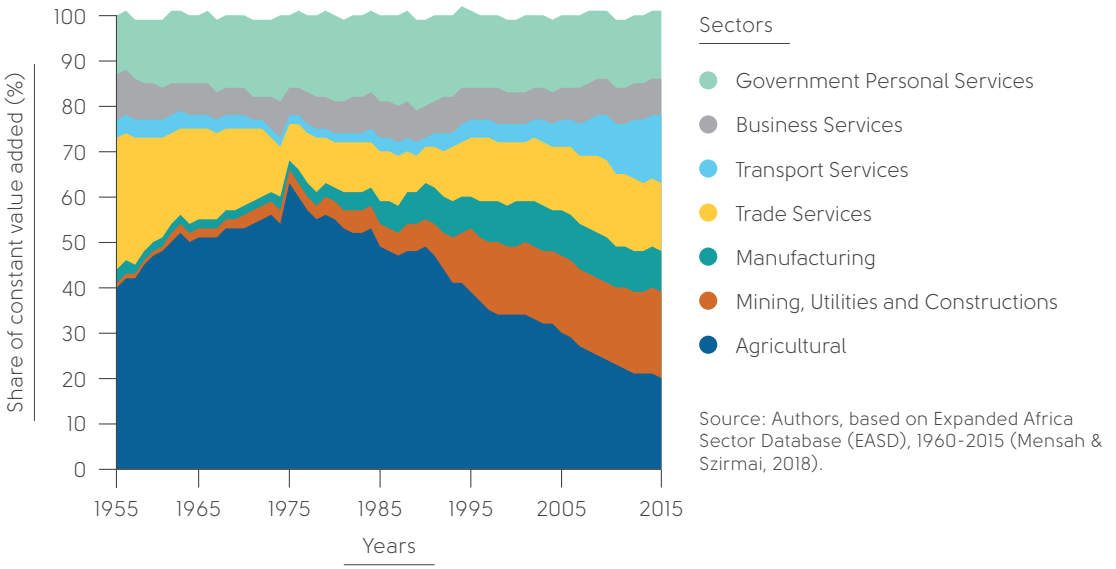
This period also saw an initial kick-off of economic transformation, by several measures, but each metric eventually stalled: first, as shown in Figure 5, there was an accelerating shift of labour from agriculture into manufacturing and services, which however halted abruptly in the mid 2000s. Agriculture's share of total employment has actually increased again in recent years. This reflects slower labour demand growth in services and manufacturing that has not kept up with rapid growth in the working age population.

Figure 5: Employment composition by sector



Source: Authors, based on Expanded Africa Sector Database (EASD), 1960-2015 (Mensah & Szirmai, 2018).

Figure 6: GDP composition by sector



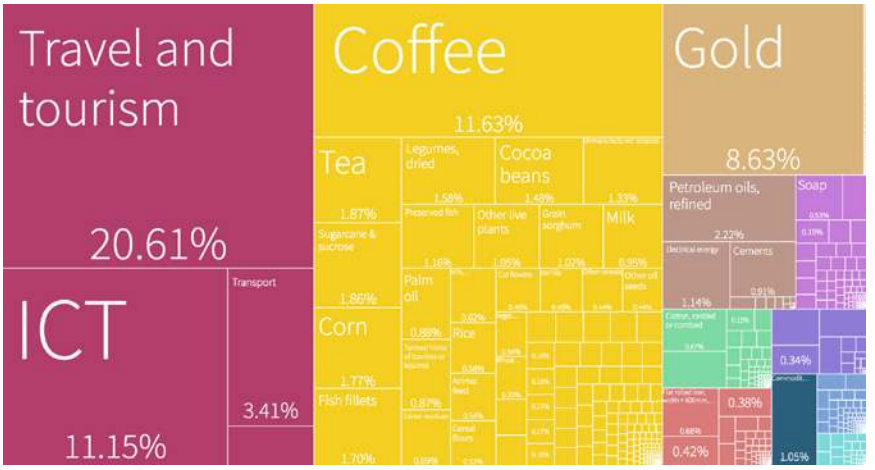
Source: Authors, based on Expanded Africa Sector Database (EASD), 1960-2015 (Mensah & Szirmai, 2018).

Second, Uganda's export basket diversified significantly from 1995 (Figure 7) until stalling in the late 2000s. Figure 7 below shows that Uganda's level of export concentration declined rapidly from the mid 1990s to the late 2000s, leaving Rwanda behind and catching up with Kenya and Tanzania. This indicates that Uganda's exports became increasingly diverse - a strong foundation for further industrial development. But the positive trend stalled in the early 2010s and reversed from 2015 onwards, as clearly seen in Figure 7. It has also been noted that the products that have been added to the export basket often present few opportunities for further diversification into complex products (Hausmann et al., 2014). The continued dominance of primary products in the export basket makes the country vulnerable to fluctuations in world prices (Hausmann et al., 2014). Figures 8-10 provide further evidence: the export basket in 2007 looks significantly more diverse than that in 1997, with the dominant share of coffee having dropped from over 53% to under 15%. However, by 2017, no further diversification can be noted, with a few products and services dominating. It should be noted that it is unclear what specific services are dominant under travel, tourism, and ICT, as these categories are not further broken down in the data..

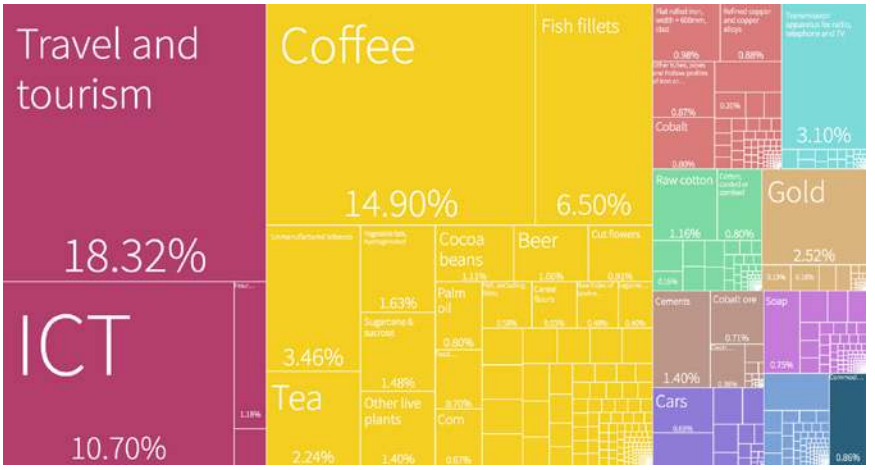
Since 2007, gold has become another important export for the country. It should be noted that while this is useful for earning foreign exchange reserves, mining in general may not be the impetus for more

Figure 7: Hirschman-Herfindahl Export Product Concentration Index, 1995 - 2018

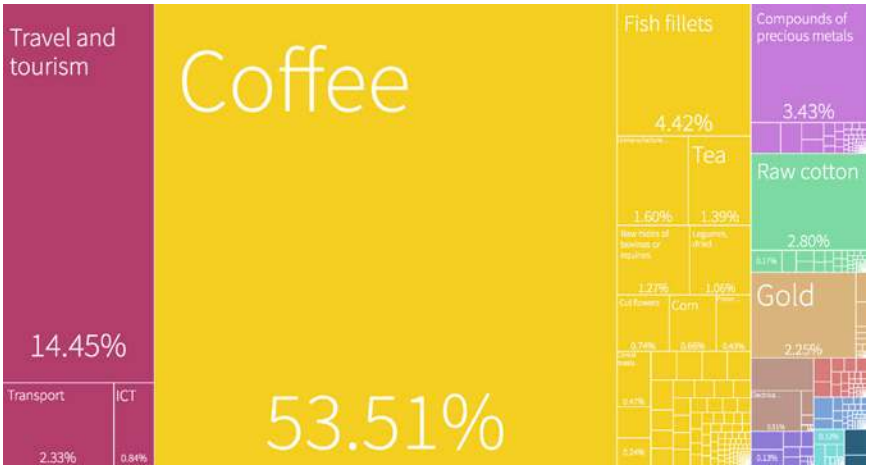
Figures 8-10: Uganda's Export Baskets (1997-2017)



Total exports 2017: $4.55B



Total exports 2007: $2.17B

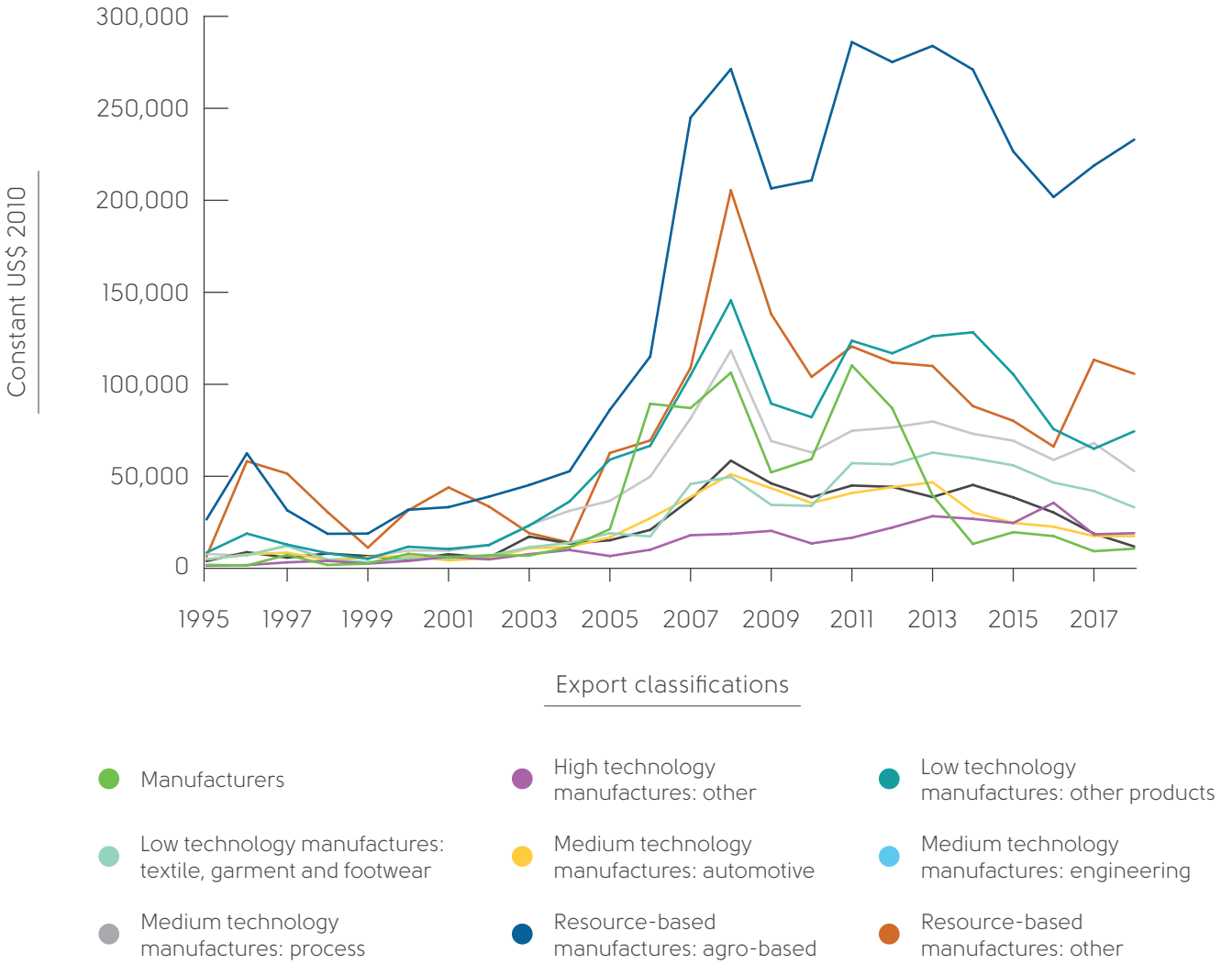


Total exports 1997: $0.93B

Third, manufacturing also seems to have stalled, both as a proportion of total output and in terms of absolute export growth. As seen in Figure 7, the share of manufacturing in total output grew to about 10% but stalled at that level in the late 1990s and has never surpassed it, even declining slightly in the 2010s. Figure 8 shows that there was exponential growth in the value of agro-based manufactured exports from the late 1990s to 2010, with other resource-based manufactures and low-tech manufactures also increasing. However, again, this growth stalled, with all categories of manufactured exports flattening or falling from around 2008 - 2012 and not recovering since.

Figure 11: Manufacturing exports (Lall classification)

Source: Authors, based on UNCTADStat (2020) Product concentration and diversification indices of exports and imports, 1995 - 2018.



Moreover, the growth witnessed in this period was accompanied by increasing inequality and underemployment as well as stagnant agricultural productivity, and employment. Critics of Uganda's neoliberal economic approach have argued that the high GDP growth of the 1990s and 2000s was primarily due to aid inflows and government expenditures rather than any deeper process of structural change (Selassie, 2008; Wiegratz et al., 2019). Moreover, aid inflows, which were up to 10% of GDP and sometimes half of the government budget, resulted in an overvalued currency, which made exports more expensive, and thus led to a shift from tradables to non-tradables (Selassie, 2008; Wiegratz et al., 2019; van Waeyenberge & Bargawi, 2018).

Several key stakeholders today attribute these economic transformation shortfalls to an economic liberalisation agenda that went too far. While providing a stable macroeconomic environment, the neoliberal framework resulted in a corrosion of state capacity and a further entrenchment of corruption and patronage networks within the government. The reform programmes led to the reduction of the civil service "from 320,000 employees to 160,000 during the early 1990s" (Grabowski, 2014). While this was "aimed at reducing the civil service to a small, well-trained and remunerated, motivated workforce" (Grabowski, 2014), given the already low levels of technical capacity and low wages in the civil service, this retrenchment made bureaucrats' career prospects more uncertain and in turn increased their incentive to extract for personal gain in the short-term (Okuku, 2008). Moreover, several supporting institutions, such as credit rating agencies, efficient financial systems, and high spreads between lending and policy rates, were absent (Selassie, 2008; interviews). Perhaps most crucially, active industrial policy was all but absent.

Since the 2000s, partly as a result of the introduction of competitive elections, the ruling coalition has faced increasing horizontal and vertical contestation to its power (Bukenya & Hickey, 2018; Whitfield et al., 2015a). This has changed the political settlement from a largely cohesive (1986 to 2000) to an increasingly fragmented ruling coalition. According to several scholars, this fragmentation is demonstrated by the President's reluctance to appoint a successor as well as several high-level defections from the NRM, some of whom have gone on to create or join rival political organisations (most notably former senior military officer, Minister of State, and presidential confidant Kiiza Besigye, and former Prime Minister Amama Mbabazi) and raised a credible threat to the NRM's power (Kjaer & Katusiimeh, 2012; Bukenya & Hickey, 2018). Kjaer (2015) argues that another piece of evidence for the increasing threat to the ruling elite's hold on power is the growing resource allocation to the military, whose support is paramount for a weakening ruling elite in order to stay in power. Indeed, government expenditure on defence and security services rose from USD 77 million in 1988 to around USD 315 million - or more than 2 percent of GDP - in 2009 (Kjaer & Katusiimeh, 2012).

Some commentators have observed that the MoFPED - Uganda's stalwart of efficiency and guarantor of economic stability during the neoliberal era - has gradually become politicised and its role as guarantor of economic stability somewhat diluted (interviews). For example, Barkan (2011) traced the use of supplementary budgets at an average of 10.2% (well above the legal limit of 3%) for each year from 2002 until 2011. Several political observers have argued that the weakening coherence of the ruling coalition has led to "inflationary patronage" - the ruling coalition's need for increasing amounts of financial resources to distribute to different social

groups in return for the political support needed to sustain its hold on power (Barkan, 2011; Bukenya & Hickey, 2019).

Two policy shifts since the mid-2000s signal that active industrial policy is coming into favour in GoU. A first shift took place when the policy (and expenditure) focus shifted from macroeconomic stability, healthcare, and education (as prescribed by the World Bank and IMF) in the 1990s and early 2000s towards infrastructure (mainly roads and electricity) starting in the mid 2000s. A second shift has begun but is still in its infancy: from a horizontal policy approach towards a targeted, vertical approach that promotes industrialisation through key priority sectors.

The key message to the public found in recent government policies and strategies is that industrialisation is a priority. Approved in 2007, Vision 2040 is the main policy paper steering the government's plans to transform Uganda into a competitive upper-middle income country. To achieve this, the government developed complementary implementing strategies including the National Develop Plans (NDP) I and II, the NIP 2008 and 2018 (the latter is currently in draft form), and the National Exports Development Strategy 2015/16-2019/20, among others. The Vision 2040 document considers industrialisation as the path to reach middle-income status and sets a target to increase the labour share of industry from 7.6% in 2010 to 26% in 2040. In terms of exports, Vision 2040 envisions increasing the share of manufacturing exports from 4.2% in 2010 to 50% in 2040. This goal is also echoed in the NPD II strategic document with a target to increase exports share to 19% by 2020. The president declared 2017 "the year of mass industrialisation" (UNECA, 2017) and has been consistent and explicit about the role of industrialisation in driving Uganda's economic transformation from then on (Kasaija, 2019).

GoU now explicitly recognises the important role the state must play in driving industrialisation beyond ensuring macroeconomic stability. GoU's economic development strategy is shifting towards a more interventionist one, with the state taking a more active role in promoting industrialisation. Since 2018, the focus of government strategic documents has shifted away from infrastructure investments, to incorporate ambitions for industrialisation and value addition. This is explicit in the budgets for the 2018/19 and 2019/20 financial years and the latest budget speech, "Industrialisation for Job Creation and Shared Prosperity" (Kasaija, 2019). The third National Development Plan 2020/21 - 2024/25 (NPA, 2020) has as one of its five key objectives to "strengthen the role of the state in guiding and facilitating development". This is a fundamental shift away from simply "getting prices right" and maintaining a stable macroeconomic environment, as was prescribed by the IMF and World Bank and implemented in Uganda during the economic adjustment era.

Some concrete initial steps have been taken in this direction. The effort to build 22 industrial parks around the country has made some progress, albeit with many challenges and delays; Uganda Development Bank (UDB) and UDC have been resuscitated to provide growth capital to industrial pioneer firms; ambitious investments have been made in electricity generation (and tariffs cross-subsidised to favour large industries), the road network has been upgraded, and efforts have been made to ramp up local content in public (and in some private) procurement. However, beyond

general-purpose infrastructure, actual expenditure on industrial development remains very small. As recognised in the National Development Plan (NDP) III Strategic Direction paper, the alignment of priorities set out in the strategic plans with actual budget allocations has not been automatic: for example, the government spent UGX 4.5 trillion below the NDP II recommended expenditure in 2016/17 (NPA, 2020). Government spending in tourism, trade and industry has historically been very low, and continues to hover below 1% of total spending. In the 2019/2020 budget, a total of only UGX 622 billion is allocated to tourism, trade and industry (Kasaija, 2019). Further, no targets have been set for the growth of specific industrial sectors, especially within manufacturing (Fowler & Rauschendorfer, 2019; Shinyekwa & Ntale, 2018).

As with previous periods, it is difficult to draw causal inferences from the correlations between political settlement, policy, and economic shifts, but we can see three possible explanations, which are by no means mutually exclusive. First, from the rhetoric of government documents and speeches as well as the views of key stakeholders (interviews), it is clear that the shift towards greater state involvement is at least in part a response to the realisation that the private sector, left to its own devices, is unlikely to make long-term coordinated investments in the technology and capabilities needed for new higher-value-added economic activities. As such, it has been informed by the experience of two to three decades of neoliberal policy. Second, it can be argued that the NRM leadership, particularly the president, has in fact been a believer in state-driven industrialisation all along, but was persuaded to side-line these ambitions by the IFIs who provided his regime with crucial financing over the decades, for instance favouring primary education over roads due to pressure from the World Bank (Chappell, 1997). In recent years, two shifts have taken place that are likely to have allowed the president to become more assertive in pushing for state intervention in the economy (for instance, he apparently now refuses to accept any loan not destined for hard infrastructure (interviews)): the World Bank and other western development financiers have moved away from the staunch neoliberal views they espoused in the 1990s to a more moderate position, and the Chinese government has availed vast sums of development lending to Uganda for infrastructure projects, notably dams. Third, it could be inferred – especially remembering the policy shifts following the 1966 crisis – that greater state involvement is used as a way to appropriate economic resources in order to maintain a stable ruling coalition through patronage, in the context of increasing threats to that stability (interviews).

Uganda: The Present Picture

Uganda: The Present Picture

This chapter applies the analytical framework laid out in the previous chapter to analyse the current status of industrial policy in Uganda through four lenses: political settlements, state delivery, policy targeting, and policy instruments.

Photo credit: Ed Ram

The Political Conditions for Effective Industrial Policy

Economic development policy continues to compete with the formidable challenge of creating and maintaining a stable ruling coalition in Uganda, as it has throughout the country's postcolonial history. The current situation presents a clear challenge for industrial policy: the political elite's "dispensable" political capital is extremely scarce. The consensus among experts interviewed is that industrialisation is second in the list of the political elite's priorities, behind the basic need to maintain their hold on power (interviews). There is thus an almost irrepressible temptation to use opportunities for rent creation to reward political supporters rather than shift the structure of the economy, and a rational reluctance to withhold or remove benefits from powerful capitalists who do not support the regime. Industrial policy can only succeed either if a significant re-consolidation of legitimacy takes place, or in select sectors where the political conditions defy the norm.

Photo credit: Jjumba Martin

However, while the literature on Uganda's political economy is largely pessimistic with regards to the country's industrialisation prospects (Booth et al., 2014; Ggoobi et al., 2017; Bukenya & Muhumuza, 2012; Golooba-Mutebi & Hickey, 2013), **the kind of political conditions needed for industrial policy success have existed in parts of Uganda's public sector for certain periods of time.** This is sufficient proof that - though the political costs are high - it is possible for the right political conditions to emerge or be created. This is a crucial finding for the present discussion: without it, any technical recommendations for a more effective industrial policy would carry little practical relevance.

Mutual Interests

Political commentators argue that the President may well be genuinely committed to industrialisation, but that in order to remain in power, is forced to relegate industrialisation to the more pressing need to strengthen his hold on power in an increasingly fragile ruling coalition (interviews). This may preclude the emergence of broad mutual interests for industrial policy, but it does not mean that narrow, sector-specific mutual interests cannot emerge (though it poses a serious threat to these too).

On the side of the private sector, many of the country's leading capitalists are investing heavily in less productive sectors such as real estate and trade, while fiercely protecting the short-term rents they collect from established basic manufacturing (interviews). Rather few powerful capitalists are actively pursuing new industrial development projects and seeking state support for this. Chinese manufacturers entering Uganda - for instance through Chinese-run industrial parks in Mbale, Kaweweta, and Tororo - may be changing this dynamic, but it has been noted that many of these firms are concentrating on basic manufacturing that competes with established local firms rather than venturing into new activities (interviews).

Within some economic sectors, mutual interests have existed. In the dairy sector, effective policy for value addition played into the hands of cattle farmers and dairy processors and the ruling elite, who were personally invested in the sector through family connections and saw the cattle producers in the southwest of Uganda as a key political constituency (Kjaer, 2015). As a result, with funding and technical support from Danida and the African Development Bank (AfDB) and the subsequent creation of the Dairy Corporation (DC), the sector was effectively turned into a key industry that made Uganda a net exporter of dairy products.

The fisheries sector is an example of short-lived mutual interests that fell apart. According to Kjaer (2015), the ruling elite's interests aligned only briefly with the growing fisheries processing industry despite the latter's considerable power, due to the clash of their developmental interests with extractive interests in the military. Initial reforms in hygiene and standards were effectively implemented to upgrade the sector due to their low implementation costs, and processing of fisheries products was incentivised by an export ban on unprocessed fish. This led to numerous factories being established along Lake Victoria and overall growth of fisheries exports in the 1990s. But the next binding constraint could not be overcome. A group of strong and financially capable industrialists were losing out from the problem of overfishing. Simultaneously, however, the military had begun to benefit from

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kickbacks received from fishermen smuggling fish to neighbouring countries. Informal fishermen were a key part of the NRM voter base. The ruling elite's need to maintain military support (and to a lesser extent from the affected fishermen) meant that the political costs of implementing overfishing regulations became too high (Kjaer, 2015). As a result, the creation of the Fisheries Authority also remained a bill that was never passed, and the Department of Fisheries Resources remained weak and underfunded (Kjaer, 2015). This can also be seen as a failure to effectively manage the winners and losers of policy changes.

To the extent that Uganda's political elite is genuinely interested in industrialisation, it currently lacks both the financial resources and the "disposable" political capital to exercise sufficient power over leading capitalists who are more concerned with short-term rent extraction. That means that even if the political elite approached the country's leading conglomerates to strike long-term industrial development deals - as Korea's General Park did, for example (see Studwell, 2013) – it would still be difficult to mobilise sufficient financial resources to offer enticing subsidies and other support to those business magnates to motivate them. Those financial resources would need to be withdrawn from elsewhere, which would risk upsetting the power balance.

On the other hand, if there are capitalists that are genuinely interested in long-term industrial upgrading, they would need to exercise power over the political elite to align their interests. Such a scenario is rare. One of the key arguments for industrial policy is that the private sector is unlikely to embark upon risky, new, long-term industrial projects without extensive state support (UNCTAD, 2017; Studwell, 2013). Uganda Manufacturers Association has lobbied GoU - with considerable success - for lower electricity tariffs, enforcement of local content requirements in public procurement, increased import tariffs on several manufactured products, and other measures that would drive domestic manufacturing (interviews). The success of some of these lobbying efforts can be seen as having induced mutual interests between a group of capitalists and the political elite, at least in the promotion of lower-risk manufacturing activities.

At the same time, the political elite, swayed by the demands of its patronage network, may actually thwart industrialists' developmental efforts. Some political scientists argue that the political elite, in its quest to centrally manage the collection and distribution of rents arising from investment, seeks to actively suppress any potential threats from stronger players in the private sector that may arise outside of their patronage network (Bukenya & Hickey, 2019). This is likely to have limited the emergence of mutual interests to a select number of players and sectors.

A broader conflict of interests that will need to be carefully managed is that between traders, who seek to import cheap products to sell domestically, and industrialists, who may require protection from cheap imports in order to develop new capabilities. Further, many industrialists prefer to import intermediate goods despite domestic alternatives being available, due to imports being less expensive and of the appropriate standards. Managing these competing interests and their demands will require careful mediation and measures to compensate or manage those who stand to lose from industrial policy for economic transformation.

Pockets of efficiency

The past existence of some pockets of efficiency within the Ugandan state is cause for hope that similar arrangements can emerge for industrial policy. The ecosystem of government bodies involved in promoting industrialisation in Uganda exhibits very little evidence of pockets of efficiency. However, political analysts have identified some qualified examples of pockets of efficiency within GoU, including MoFPED, NWSC, and the Petroleum Directorate in the Ministry of Energy and Mineral Development. While this section discusses only these cases, other reportedly autonomous and effective bodies that may be described as pockets of efficiency to some extent include the Bank of Uganda (BOU) and parts of Uganda Revenue Authority (URA) (Bukenya & Hickey, 2019). These bodies have been characterised by minimal intervention by the ruling elite in their functions, and they are generally given the autonomy to carry out their work independently. Using the pockets of efficiency criteria, these agencies have reportedly consisted of skilled officials, recruitment is generally meritocratic and standardised, and their leaders maintained strong relationships with the ruling elite.

Pockets of efficiency in the promotion of manufacturing have been largely absent. Lack of autonomy from competing political interests has been the key factor behind this. For example, stakeholder interviews revealed that tax incentives given to investors in industrial parks are not applied in a standardised way but rather negotiated on a case-by-case basis between investors and government delegations or individuals at ministerial level or above. This demonstrates that Uganda Investment Authority (UIA) or Uganda Free Zones Authority (UFZA) have not been empowered to operate autonomously from the political elite. Similarly, Ggoobi (2019), through interviews with many heads of relevant MDAs, found that frequent and interfering presidential directives have left these bureaucrats disempowered in their duties of promoting manufacturing.

Beyond the realm of industrialisation, Uganda's political elite has managed to create and sustain - for a time - several pockets of efficiency in the state bureaucracy, as listed earlier. These agencies have, in every case, enjoyed strong support and protection from the political elite and been subject to largely meritocratic appointment. As a result, they were able to operate with a high degree of autonomy and technical capacity, albeit for a limited period. For each of these cases, political economists have observed an eventual weakening of the pocket of efficiency due to increasing interference by the ruling elites, driven in turn by the elites' need to selectively distribute benefits to political supporters. These declines of the pockets of efficiency align - both chronologically and logically - with the narrative of "inflationary patronage" (Barkan, 2011) caused by a weakening coherence in the ruling coalition from the 2000s onwards. Nevertheless, their role - although imperfect and temporary - proves that the emergence or creation of pockets of efficiency is possible in Uganda's political context.

Several stakeholders have observed that President Museveni has been able to create pockets of efficiencies within GoU whenever he (i) considers it a top political priority, (ii) appoints a loyal and competent political insider to lead the MDA, (iii) gives them political protection (e.g. from Parliament, the Auditor General, lobby groups), and (iv) ensures the MDA is generously financed (interviews).

The Ministry of Finance, Planning and Economic Development

Bukenya & Hickey (2019) observe that MoFPED emerged as a pocket of efficiency in the 1990s following the merger of two ministries - Finance and Economic Planning - in a move aimed at securing Uganda's economic stability and development. It must be noted that their analysis assesses MoFPED based on its capability to effectively manage macroeconomic fundamentals in line with the neoliberal doctrine, not its capability for effective industrial policy. According to Bukenya & Hickey (2019), MoFPED registered a noticeable period of reform and strong performance from 1992 to the early 2000s, which they suggest followed a firm presidential decision to grant the ministry's leadership (the finance minister and permanent secretary) political space and protection to operate. Convinced that bringing spiralling inflation under control required strong commitment akin to military discipline, the President tasked MoFPED to use all means possible to address the challenge and implement the broader ERP. There was mutual trust and a close working relationship between the President and his senior technocrats. The government and donors invested heavily into building MoFPED's human capacity and meritocratic structures for career growth during this period. This produced an esprit de corps among workers unrivalled in any other government ministry. Therefore, MoFPED fitted well the pocket of efficiency criteria, including having strong meritocratic-based rather than patronage-based appointments save for the top positions, high operational autonomy, and support and protection of the ruling elite.

The National Water and Sewerage Corporation (NWSC)

From its inception in 1972 to the mid-1990s, NWSC had a poor service delivery record characterised by decayed systems, sewer leakages, and intermittent water supply - so much so that GoU considered privatising it in 1998 - but NWSC reversed its fortunes and by the mid-2000s had become one of the best performing public water utilities in Africa (van den Berg & Danilenko, 2017). Political economy factors, particularly the changing character of the ruling coalition, explain NWSC's remarkable turnaround and the persistence of its good performance. The dominance of the ruling coalition in the 1990s enabled the president to allow NWSC to experiment with different institutional delivery arrangements including the use of public-private-partnerships and corporatisation without fearing electoral backlash – a key concern that affected similar reforms in other countries.

With increased fragmentation of the ruling coalition in the 2000s, elite preoccupation turned to maintaining power, but even this dynamic worked in favour of NWSC. The elite viewed NWSC as central to their strategy of securing political support in urban areas particularly through its water projects, which are highly visible compared to sewerage services. Political interest in NWSC increased following the appointment of the current Chief Executive Officer (CEO) in 2013. Soon after his appointment via a process that involved the president's personal intervention, the new CEO struck a deal with the president in which NWSC management promised rapid water extension to help the ruling party fulfil its manifesto pledge of "water for all" (Bukenya & Hickey, 2019). In return, the president promised prompt payments from government agencies

and political protection for the utility. The deal has secured resources enabling NWSC to rapidly extend water coverage from serving 3.84 million people in 2013 to 16.8 million in 2019.

Besides the direct political benefits, NWSC is considered important to President Museveni's vision of industrialisation. The President believes that an effective NWSC is needed to reduce the cost of production for industries through provision of cheap and reliable water. His insistence on cheap water compelled NWSC to create a special "industrial tariff" that is heavily subsidised. Another key feature in the NWSC story regards the long tenure of its CEOs. Since 1986 only three people have occupied this office. Long tenures for CEOs facilitate institution-building and reflect the willingness of Uganda's ruling elite to support this process within the water utility.

The Petroleum Directorate

The Petroleum Directorate in the Ministry of Energy and Mineral Development is another recognised pocket of efficiency in Uganda.
Following NRM's capture of power in 1986, the new leaders cancelled all negotiations with international oil companies, particularly with Shell and Exxon, that had been started by their predecessors in the early 1980s. It is understood that the President wanted to first work on the country's capacity to manage the sector before moving ahead with exploration. A 'desk' with a mandate to establish and promote the country's petroleum potential was created in the Ministry of Energy. Its staff received systematic capacity building in the form of specialised oil-related training overseas, sanctioned by President Museveni (Bukenya & Nakaiza, 2020). As its capacity grew, it was elevated into a petroleum unit within the Geological Survey and Mines Department in 1990 and re-organised a year later into the Petroleum Exploration and Production Department (PEPD). In 2016, PEPD was further elevated into the Petroleum Directorate. Hickey et al. (2015) argue that the highly trained and knowledgeable staff of this directorate, who operate with Presidential backing, enabled the government to negotiate deals considered as favourable to Uganda with highly-experienced and powerful international oil companies.

Learning for productivity

The relationship between bureaucrats and private capitalists in Uganda can be described, in broad terms, as exhibiting some (albeit limited) "embeddedness" and very little "autonomy". As a result, the state is able to provide some helpful support to industrialists, but is largely unable to discipline them. This missing link has precluded the development of significant and sustained learning for productivity. This is illustrated by the fisheries sector mentioned above, and Golooba-Mutebi and Hickey (2013) posit that similar dynamics have rendered largely ineffective the government's attempts to promote exports through the Strategic Exports Initiative and to acquire land for sugar plantations.

Key agencies exhibit some embeddedness, though this is limited by resource constraints and weak coordination. Private sector associations such as Uganda Manufacturers' Association report to have strong access to government to relay information about the constraints and opportunities in their sectors (interviews). Key agencies such as UIA, UFZA, and UDC, the key Ministry of Trade, Industry and Cooperatives (MoTIC), and sector development agencies Cotton Development Organisation (CDO),

Uganda Coffee Development Authority (UCDA) and Dairy Development Authority (DDA), exhibit a significant understanding of the opportunities and constraints faced by the private sector (interviews). However, their technical capacity is limited by resource constraints (Ggoobi, 2019; Calabrese et al., 2020; interviews). Kadoma et al. (2016) find inefficient information exchange between relevant agencies and private sector players, and a lack of significant feedback mechanisms to guide the implementation of the NIP over time. With a lack of strong feedback mechanisms, it will be challenging to monitor, reward and discipline the private sector.

There is some evidence of the government disciplining the private sector, but these examples are scarce. Examples include UDB support being withdrawn due to underperformance and tax exemptions being removed from foreign investors who did not deliver on job creation promises (interviews). Namanve Industrial Park demonstrates some evidence of the government's ability to provide conditional support to industrialists. UIA has sold land in the park to manufacturing firms at discounted rates on the condition that the firm uses the land productively. After UIA initially allocated most of the park's land but failed to hold beneficiary firms accountable, several firms have now had land taken away from them after several years of failing to develop their plots. One firm interviewed had constructed a warehouse on their land and was now under pressure from the investment authority to develop actual production units, as warehouses are not considered sufficiently productive use of the land (interviews). The challenge thus far has been to do this sustainably, in targeted sectors and firms, and to link it to investment into productivity, while managing the various conflicting interests of factions and industrialists.

Uganda Industrial Research Institute (UIRI) is another example of the failure to discipline industrial policy beneficiaries. UIRI provides a range of physical incubation services for SMEs, mostly in agro-processing. These include training entrepreneurs, business advice, mentoring, logistical inputs such as internet and facilities, and technological capabilities transfers. UIRI's selection of clients and potential SMEs is said to be rigorous, based on a list of requirements that the client must meet, with a view to spur "poverty reduction, wealth creation, and economic transformation" (World Bank, 2014). This entails meeting extensive eligibility criteria, presenting a business plan, and regular monitoring through updated financial reports. But the institute seems to have, so far, failed to produce a single graduate - that is, a firm that is self-sustaining and sufficiently competitive to move out of UIRI and forego extensive physical and non-physical support (World Bank, 2015; ANDE, 2018; Golooba-Mutebi, forthcoming). The institute seemingly supports entrepreneurs with meaningful inputs, but does not link such support to productivity increases or achieving scale for commercialisation.

Policy space

Uganda's policy space for industrial policy is limited by WTO rules, bilateral and regional trade and investment agreements, and donor influence. In terms of trade agreements, Uganda's policy space is constrained by (1) WTO treaties and agreements, (2) the African Growth and Opportunity Act (AGOA), (3) Everything But Arms, and (4) the EAC.

The **WTO** has been committed to trade liberalisation since its establishment in 1994. It imposes restrictions on the use of industrial policy tools. However, for some

treaties and agreements, special provisions apply to the group of Least Developed Countries (LDCs), which still includes Uganda (United Nations, 2018). For example, LDCs and other developing countries with a GNP per capita of less than USD 1,000 per annum (see Annex VII of the Agreement on Subsidies and Countervailing Measures, ASCM) are allowed to use subsidies under certain circumstances. This includes subsidies conditional upon the fulfilment of production, investment, training, local content, or export requirements and other targets which would otherwise be prohibited, based on ASCM. LDCs can also use a transition period to comply with the Agreement on Trade-Related Investment Measures (TRIMS) which regulates, for example, the use of local content requirements (on this, see also UNIDO, 2020 and Andreoni et al., 2019). Regarding these two agreements, for example, Uganda seems to be under-utilising export subsidies, due to lack of funds, and is still not fully compliant with the TRIMS (UN, n.d.; WTO, 2018). While a detailed assessment of Uganda's policy space is beyond the scope of this study, it is important to recognise that some of the policy options available to Uganda today will not be feasible after Uganda graduates from the LDC group. **AGOA** offers opportunities for developing countries to export their goods to the United States. However, the eligibility criteria of this act remain subjective and each country's membership status is reviewed yearly by the President of the United States. The eligibility criteria include "continual progress toward establishing a market-based economy; removal of barriers to U.S. trade and investment… protection of intellectual property rights…" and states that "countries cannot engage in activities that undermine U.S. national security or foreign policy interests" (Trade and Development Act of 2000). These broad formulations allowed a group of U.S.-based second-hand clothing exporters to lobby the U.S. Trade Representative to threaten Uganda with an out-of-cycle review of its AGOA eligibility status when Uganda announced that it would introduce a ban on the importation of second-hand clothing. Under pressure from the U.S., Uganda backtracked from this policy announcement (Wolff, 2019).

Everything but Arms (EBA) places no limits on policy, and is automatically applied to countries that are classified as LDCs. The **EAC** has imposed several formal as well as informal restrictions on domestic exporters, including limits on the share of production that can be exported to the EAC by firms producing in free zones and industrial parks. In terms of **donor influence**, we can see or assume significant influence by Uganda's biggest donors: USA, UK, Germany, China, EU. Uganda receives just under USD 2 billion per year in official development assistance (ODA) as well as some concessional finance that may not be categorised as ODA (World Bank, 2018b). These donors exercise both formal and informal influence over Uganda's domestic policies, including industrial policy.

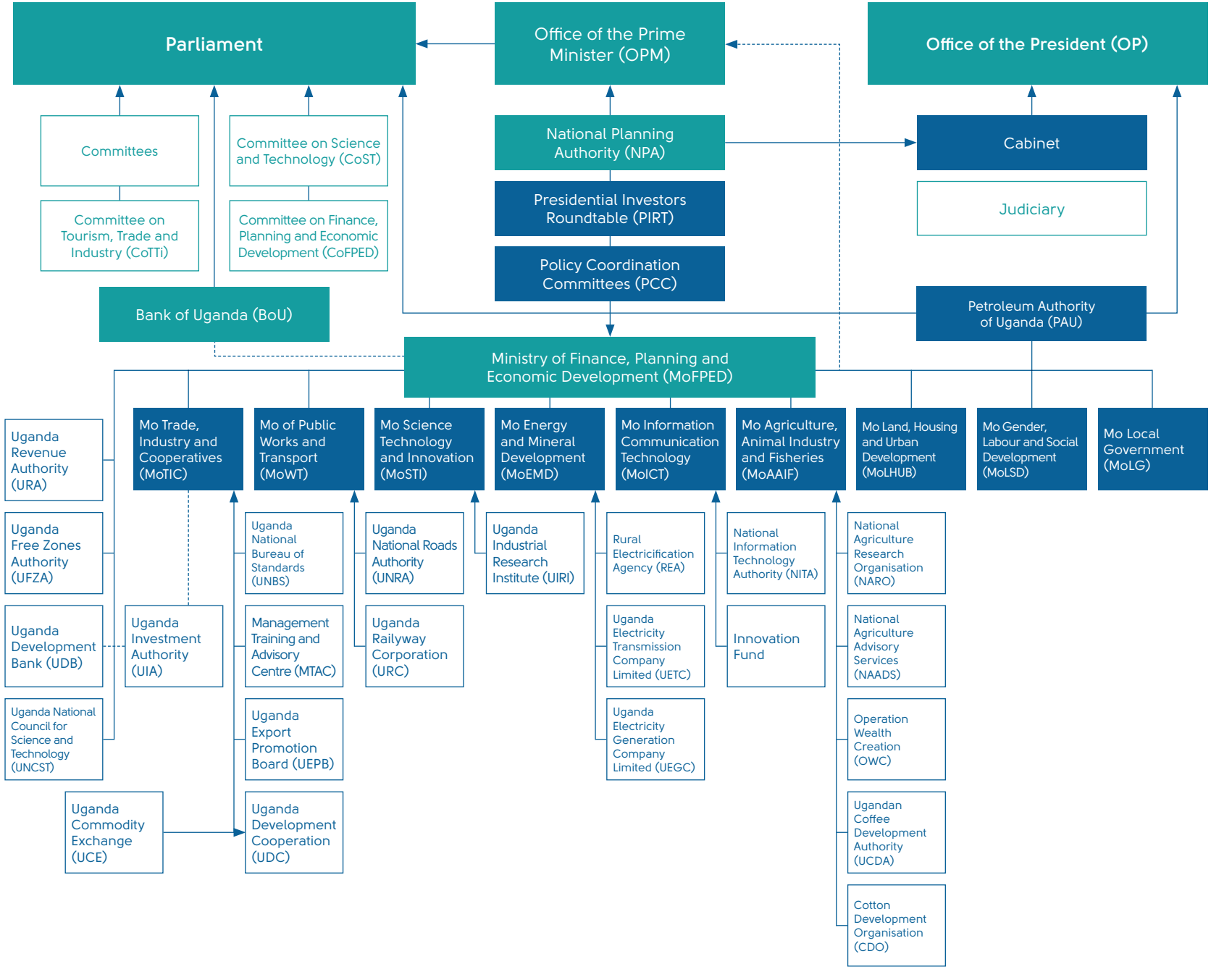
While it is undeniable that changes in the international and regional trade frameworks affect which industrial policy tools can be pursued, it should be acknowledged that many industrial policies are still permitted in Uganda's context, given its LDC status. In addition, if anything, changes in world trade rules "have made it even more necessary for developing country industrial policy-makers to be 'smart' about devising development strategy and designing industrial policy measures" (Chang et al., 2016). Chang et al. (2016) notably list all the industrial policy measures that can still be used under major trade agreements.

The Delivery of Industrial Policy

Uganda's current industrial policy delivery mechanisms reflect the underlying political settlement and demonstrate a number of clear gaps and weaknesses. The state apparatus behind Uganda's industrialisation currently lacks an effective mechanism to coordinate industrial policy delivery, creating conflicts of mandate and weak coherence across MDAs. In particular, while MoTIC has the formal authority and mandate to implement industrial policy, its mandate and authority have been weakened by low resource allocation and presidential directives giving MoFPED significant industrial development responsibilities. The ruling elite's ad-hoc decisions and tendency towards independent and direct means of consulting and policymaking have weakened formal channels. Finally, GoU has used sector development agencies with mixed success.

Photo credit: Jjumba Martin

Figure 12: Key government bodies involved in industrial policy with de jure and de facto reporting lines



Ggoobi (2019) surveys all actors involved in industrialisation in Uganda and groups them according to their interest in industrialisation and their power. The Office of the President (OP) and the Parliament are the players with the "overall authority, resources and influence over other actors" in implementing industrial policy (Ggoobi, 2019). All ministries report directly to the Cabinet, which is responsible for all ministerial agendas, and the Cabinet in turn reports to the OP. At the ministerial level, the ministries of Energy and Mineral Development (MoEMD), Works and Transport (MoWT), and MoFPED are relatively well-resourced and have strong ties to the OP, making them the strongest ministries involved in industrialisation. While industrialisation is not their main mandate, these three ministries have been somewhat successful in coordinating key projects for industrialisation, including the construction and management of roads, dams, and industrial parks. These ministries oversee key agencies and parastatals such as UDC, UDB, UFZA, UIA, Uganda National Roads Authority (UNRA), and URA. The NPA is positioned above all the ministries and sits in the cabinet, which provides it with some power to coordinate planning across MDAs. However, NPA also reports to MoFPED, creating tension as NPA seems to answer to various power centres without clear authority. Ggoobi (2019) also identifies several other actors that are powerful but less interested in industrialisation because of competing priorities within their mandates, including the Ministry of Agriculture, Animal Industry and Fisheries (MoAAIF) and the Ministry of Lands, Housing & Urban Development (MoLHUD). Finally, he identifies a group of key actors that are highly interested in industrialisation but lack the power to influence implementation: local suppliers, local government leaders and, crucially, MoTIC, which carries the official mandate to promote industrialisation and owns the National Industrial Policy (NIP).

Uganda has lacked the kind of apex organisation - seen in most successfully industrialising countries - that is empowered to coordinate the delivery of an industrial strategy with high levels of technical capacity and political power. While the ministry responsible for industry, MoTIC, is underfunded and lacks significant technical capacity, other more dominant bodies like MoFPED do not consider the entire gamut of industrialisation policies in their agenda and lack a technical understanding of industrial sectors (Ggoobi, 2019; Calabrese et al., 2020). Instead, MoFPED ends up carrying out some of the projects that would be in an industrialisation policy package, such as development of industrial parks, but not others that would be synergistic with such initiatives, such as provision of targeted financial capital to select industries in the parks. The Industrial Council, which was meant to oversee the implementation of the NIP, may have been able to carry out a coordination role, but has not yet been created. In 2020, there are indications that NPA's industrial policy coordination mandate is becoming stronger (interviews). NPA is set to begin drafting a new Industrialisation Masterplan (with EU funding) in consultation with a steering committee that includes members of MoTIC (interviews), but it is too early to tell how consequential this document will be and what effect this will have on NPA's ability and mandate to coordinate industrial policy delivery.

The lack of a single body in charge of industrial policy has multiple negative consequences. Policies are not formulated cohesively with the aim of unlocking capabilities and intersectoral complementarities,

and are largely made in silos of the broader policy package and goals. In the case of UIA, the officials are left in a perplexed situation where they report to MoFPED for finance and budget, but report to MoTIC for policy coordination. Investors have also expressed the struggle they face when it comes to communicating challenges to the government. This is because of the lack of accountability: both MoFPED and MoTIC are incentivised to pass the liability to each other. Further, many private sector actors currently encounter "commission agents" - government officials who offer to connect the private sector to the right people in government to deal with their enquiries for a fee (interviews). A lack of clarity around decision-making responsibilities and overlapping mandates provide opportunities for corruption.

MoTIC has the formal authority and mandate to implement industrial policy. MoTIC is the owner of the NIP 2008, the new draft NIP and its corresponding draft strategy, the National Industrial Development Strategy (NIDS) 2020-2025. The ministry is also responsible for other ancillary policies including the National Trade Policy (2007), the EAC Industrialisation Policy (2012-2032), the National Competition Policy (2020), and the Buy Uganda Build Uganda Policy 2014 (BUBU). As shown in Figure 12 above, a number of key agencies responsible for implementing different aspects of industrial policy report to MoTIC. For example, the UDC makes long-term investments in key industries, the Uganda Export Promotion Board (UEPB) disseminates information to facilitate Ugandan exports, and the Management Training and Advisory Centre (MTAC) assists industry and economic actors to improve management practices.

However, MoTIC's mandate and authority have been weakened by low resource allocation and the rise of presidential directives designed for MoFPED to implement industry-related initiatives (Ggoobi, 2019). Many of the more influential and somewhat effective agencies responsible for the implementation of industrial policy are now domiciled under MoFPED, including UIA, whose mandate includes developing industrial parks, and UFZA. MoFPED has a Minister of State for Investment and a Commissioner for Investment, and both are responsible for implementing the ongoing industrial parks projects, whose mandates overlap with MoTIC's underfunded Commissioner for Industry. In addition, both the draft NIP 2019 and strategy developed by MoTIC are yet to be finalised and published, but the Investment Law under MoFPED was passed in 2019. This has resulted in unmotivated leadership in the MoTIC and eroded the enthusiasm of its officials (Ggoobi, 2019). With regard to financial capacity, only about UGX 200 billion of total allocation for 2019/20 budget was for the entire trade and industry portfolio in MoTIC, while UGX 150 billion was just for the electrification of industrial parks allocated to MoFPED (Kasaija, 2019).

The use of presidential directives (Ggoobi, 2019) and ad-hoc decisions (Kjaer & Katusiimeh, 2012) inevitably weakens the state's coordination capability and obfuscates formal means of policy implementation. Presidential interventions such as the Banana Industrial Development Initiative and the Presidential Initiative on Science and Technology, may duplicate the work of other institutions. The industrial parks initiative - arguably the core of Uganda's fledgling industrial development agenda - was reportedly launched through a Presidential

directive delivered to MoFPED in 2007 in the form of an 8-page letter, and no further evidence has been generated (for example through feasibility or cost-benefit analyses) to inform the industrial parks initiative beyond the contents of that letter (Ggoobi, 2019). The letter directed MoFPED to develop industrial parks in 20 specified locations, defining "what an industrial park [is], how many factories each should accommodate, how the factories should be clustered, and the enterprises that should be located in each of the parks" (Ggoobi, 2019). According to UIA, a later presidential directive requires them to deliver three industrial parks per year (interviews).

According to Ggoobi (2019), the ruling elite increasingly prefers independent and direct means of consulting and policymaking, which often thwart formal processes. This, some argue, helps build patronage from key industry players and constituencies, in order to strengthen the ruling elite's electoral position (interviews). Political economy scholars further posit that in an environment where the ruling elite tends to be suspicious of threats from within and outside the ruling coalition, key mandates - such as monitoring and implementing reforms - are intentionally given to multiple state organs (interviews). This is reportedly a form of "insurance" that these functions be carried out, even if the ruling elite's support from the head of one ministry is lost (interviews; Bukenya & Muhumuza, 2017). If this is true, it is unsurprising that numerous reforms aimed at removing these duplications have been ineffective (Bukenya & Muhumuza, 2017).

Finally, GoU has used sector development agencies with mixed success. For example, the DDA enabled significant progress in the dairy sector not only thanks to its technical capabilities, but also its ability to mediate competing interests. When the DDA attempted to address a binding constraint to upgrading in the dairy sector - substandard milk sterilisation and transportation methods - it faced strong resistance from informal dairy farmers, who constituted a large part of the NRM support base. For informal farmers, new regulations would be costly to comply with and would result in higher prices in the informal market, making them less competitive. The DDA was able to mediate between these two groups and reach a compromise by delaying subsequent regulations to give farmers more time to adjust to the transition and costs before implementing them (Kjaer, 2015). In contrast, in the fisheries sector, developmental interests were overpowered by short-term extractive interests (discussed above), showing that sector development agencies need to be politically empowered to effectively manage winners and losers.

Uganda's Current Industrial Policy Targeting Approaches

Uganda's current industrial policy objectives broadly align with an overarching goal of economic transformation through building new productive capabilities. In line with the NDP III Strategic Direction and the draft NIDS 2020 - 2025, the highest-priority objectives of Uganda's industrial policy are to:

1. facilitate value addition to locally available materials for agro and extractive industrialisation,

2. create industrial employment and spur inclusive development through spillovers into other sectors and backward linkages to the country's agricultural base, and

3. establish strategic industries to reduce the importation of products that can be locally produced (MITC, 2019; NPA, 2019).

Photo credit: Jjumba Martin

Uganda's industrial policy has been criticised for being broad and generic. According to AfDB (2014), "no clear criteria are used in selecting beneficiaries" for the incentives offered to investors. Kadoma et al. (2016) find that "Uganda's current industrial strategy operates within a liberalized policy framework" containing "policy-actions that target the entire industrial sector" and that the National Industrial Policy proposes "generic policy actions applicable to the entire manufacturing sector". Similarly, Shinyekwa & Ntale (2018) charge that Uganda's agro-industrialisation policy "lacks prioritisation within many priority commodities" and Obwona et al. (2014) find that "GoU has failed to identify sectors with a strategic potential to generate spillovers to other sectors" and "failed to determine strategic priorities to be pursued". Indeed, a survey of the active government policies and strategies on industrialisation shows a broad, inconsistent, and overlapping (see also Fowler & Rauschendorfer, 2019) array of priority sectors, as seen in Table 6.

The prioritisation of sectors has not yet been done based on a rigorous methodology (interviews). For example, the third National Development Plan (2020/21 - 2024/25) simply states that the prioritisation of manufacturing sectors "is based on analysis of Uganda's importation trends and the changing world trends for the manufacturing power houses like China. This combination will facilitate job creation and production for both the domestic and international markets" (NPA, 2020).

Table 6: Government Policies on Industrialisation and Sector Priorities

Policy Document	Strategic Objectives/Theme	Sectors & Priorities (as defined in the policy document)
Vision 2040	— Transform Uganda from a low income to a competitive upper middle-income country within 30 years — Accelerate industrialisation through upgrading and diversification — Effectively harness the local resources, offshoring industries and developing industrial clusters along the value chain	— Oil and gas, tourism, minerals, ICT business, industrialisation, agriculture, water resources
National Development Plan III 2020/21 - 2024/25	— Enhance value addition in key growth opportunities — Strengthen the private sector to create jobs	— Mineral development: iron & steel, refined gold, copper, inorganic fertiliser — Oil refining — Tourism — Light manufacturing: textiles and apparels, shoes; assembly of electronic items; paper and paper products; chemicals, petro-chemicals and pharmaceuticals; and cereal and cereal products — Heavy manufacturing will include: iron and steel; cement; tiles; sanitary ware, plumbing, fixtures and fittings and automobile assembly
Draft National Industrial Policy 2018 & Draft National Industrial Development Strategy	— Facilitate domestic value addition to benefit from regional and global value chains — Establish and promote industries that create employment, inclusive growth and sustainable development in other sectors of the economy or industrial sub-sectors — Establish strategies industries to reduce importation of products that can be locally produced from the available raw materials	— Agro-industrialisation: fruit processing, coffee processing, cotton, textiles & apparels, tea processing, livestock (incl. meat, dairy & leather products) — Extractive: iron & steel, oil & gas, fertilisers & cement — Knowledge based industries: assembly of automobiles, other vehicles, and electronics
National Exports Development Strategy 2015/16 - 2019/20	— Increase the Ugandan productive sectors with international export markets — Increase the value of Uganda's exports of the specified products and services to the targeted markets over the next five years.	— High priority: coffee, iron and steel products, fish, cement, tobacco, sugar, flowers, tea — Medium priority: Hides & skins, cocoa, sim sim, maize, plastics, rice, cotton, fruits & vegetables — Low priority: beans

The President's rhetoric on priority sectors for industrialisation has been similarly inconsistent. In both the 2018 State House Address and 2019 State of the Nation Address, the President announced the priority industries and sectors that he considered to be the main drivers of industrialisation. The 2018 speech (The State House of Uganda, 2018) requested UIA to focus on cotton-based industries, coffee, and copper for the production of cables and transformers. However, by 2019, the priority industries had changed to oil and gas and minerals (see Table 6) (State of the Nation Address, 2019). In the same year, the President inaugurated 32 experts to provide advice on ICT innovation and tasked the team to develop policies and strategies to strengthen the ICT sector for industrialisation (Draku, 2019). Despite the encouraging focus on industrialisation, the frequency of contradiction in statements on priority sectors creates uncertainty for investors and challenges the bureaucracy's ability to implement a coherent industrial policy in the long-term (interviews).

The new draft National Industrial Policy (NIP) (MoTIC, 2019a) and the accompanying draft National Industrial Development Strategy (NIDS) 2020-2025 (MoTIC, 2019b) feature perhaps the most rigorous sector selection exercise done so far, but these documents have remained in draft form since 2018. The first step looked at a longlist comprising a range of sectors within three broad categories identified as priorities: agro-industries, extractives, and knowledge-based sectors. Under each of the focus sectors, a number of target subsectors were selected. A long-list of industries was scored against several criteria*8, relying on knowledge of the industry from theory and experience from Uganda (interviews). In the second step, each shortlisted industry was scored according to UNIDO's (2011) attractiveness-feasibility matrix. These attractiveness and feasibility scores*9 were computed by UNIDO in 2016 - 2018 and the averages of these two scores were ranked by descending order (interviews). Finally, the ten top scoring industries were selected (see Table 6) (interviews). However, the most important part of the methodology - how the criteria were scored - was not made public, making the process difficult to assess.

*8 Long-list scoring criteria: employment creation, level of value addition to local raw materials, export potential, regional and global value chain positioning, import substitution potential, and social inclusion.

*9 The Total Attractiveness Score reflects the potential impact of the industry on several economic outcomes and is calculated using a weighted average of the following indicators: forward and backward linkages (15%), potential impact on GDP growth and manufacturing value addition (15%), low environmental impact (15%), potential for employment (10%), potential for profitability and tax collection (10%), modest investment requirements (10%), skills development impacts (10%), strategic fit with country vision of the future (10%), and potential for inclusive growth (5%). The Total Feasibility Score estimates the feasibility of the industry's growth based on several business environment measures, using the following weighted indicators: availability of competitive raw materials and inputs (20%), adequacy of policies and regulations (15%), low competitive pressure (15%), access to available markets (15%), ease of doing business and favourable macroeconomic conditions (15%), infrastructure and energy quality and cost impact (10%), technology and readiness (5%), and availability of adequately trained workforce (5%).

Uganda's Current Use of Industrial Policy Instruments

The bulk of Uganda's actually implemented industrial policies can be grouped around six pillars:

1. Electricity infrastructure development and cross-subsidisation;
2. Transport infrastructure development;
3. Tax holidays, exemptions, and rebates;
4. Export levies on raw materials;
5. Free or subsidised land inside and outside industrial parks and free zones;
6. Protective import tariffs;
7. Public investment and subsidised credit into pioneer firms; and
8. Promoting local content.

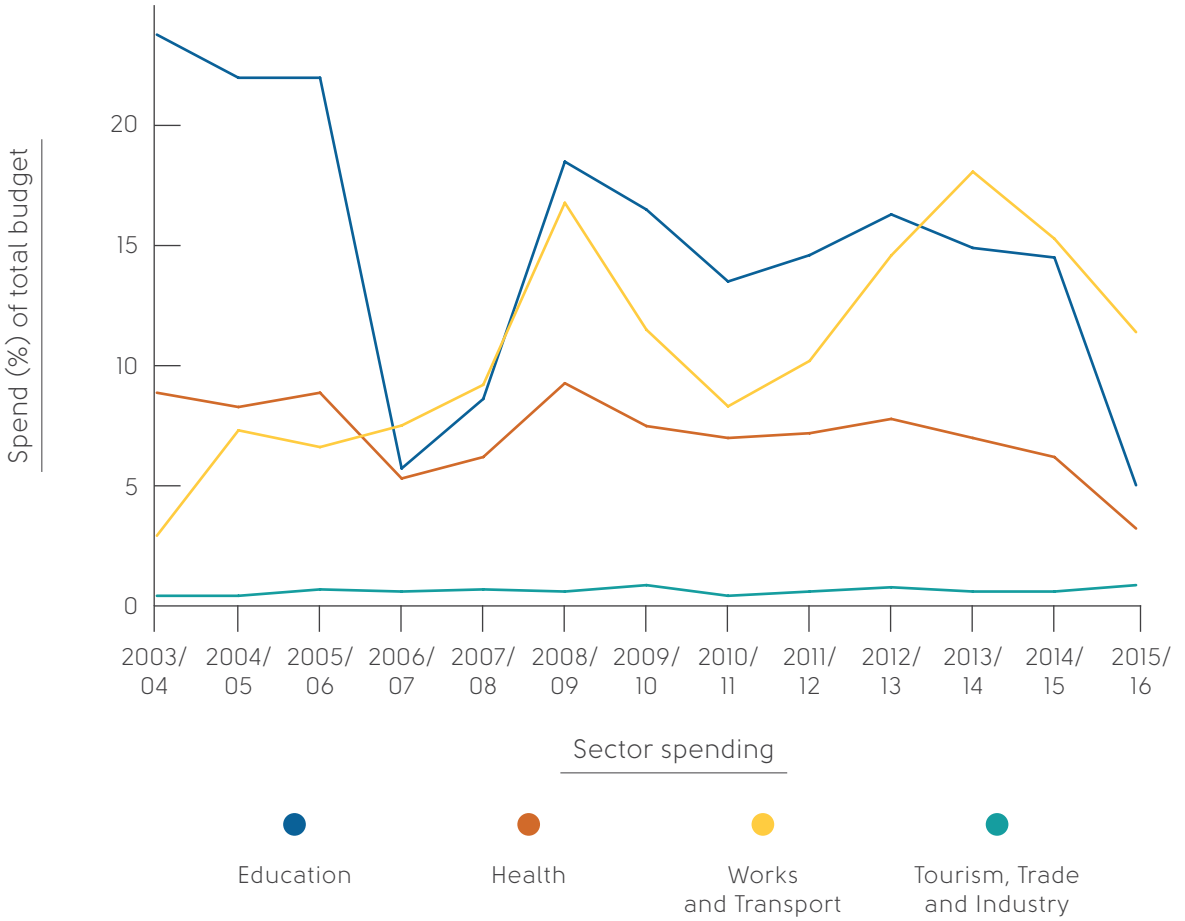
Photo credit: Ed Ram

Electricity infrastructure development and cross-subsidisation. The government's ambitious investments in electricity generation will unlock some industrial development, but major challenges remain in transmission and distribution. As Figure 13 shows, public spending on works and transport increased sharply from around 3% of the total budget in 2003/04 to almost 17% in 2008/09 and has remained a top priority since then, dropping below 10% only once in 2010/11 (an election year). In the 2019/2020 budget, the Minister of Finance announced an allocation of UGX 6.4 trillion for works and transport (Kasaija, 2019). Investment in major infrastructure projects has focused largely on the construction of the Bujagali (completed in 2012), Karuma and Isimba hydroelectric power plants (both at roughly two-thirds completion) (NPA, 2019). Electricity will now be available and on par with or cheaper than the rest of the region except for Ethiopia for at least the coming decade (Walter & Aubert, 2018). Tariffs have recently been reduced for large industries as a result of the successful refinancing of Bujagali Dam. In 2019, off-peak tariffs for the "extra-large industries" category were further decreased to USD 0.05 per KWh, as called for repeatedly by President Museveni in recent years. This presents an opportunity for the largest industrial producers, such as the iron and steel sector, to expand output, especially by adding a night shift to use off-peak tariffs (interviews). It also presents a pull factor for new large-scale industries to set up operations in Uganda. However, considerable reliability and coverage challenges persist, even in industrial parks (Walter & Aubert, 2018; interviews).

Transport infrastructure development. The government's ambitious investments in electricity generation will unlock some industrial development, but major challenges remain in transmission and distribution. As Figure 13 shows, public spending on works and transport increased sharply from around 3% of the total budget in 2003/04 to almost 17% in 2008/09 and has remained a top priority since then, dropping below 10% only once in 2010/11 (an election year). In the 2019/2020 budget, the Minister of Finance announced an allocation of UGX 6.4 trillion for works and transport (Kasaija, 2019). Investment in major infrastructure projects has focused largely on the construction of the Bujagali (completed in 2012), Karuma and Isimba hydroelectric power plants (both at roughly two-thirds completion) (NPA, 2019). Electricity will now be available and on par with or cheaper than the rest of the region except for Ethiopia for at least the coming decade (Walter & Aubert, 2018). Tariffs have recently been reduced for large industries as a result of the successful refinancing of Bujagali Dam. In 2019, off-peak tariffs for the "extra-large industries" category were further decreased to USD 0.05 per KWh, as called for repeatedly by President Museveni in recent years. This presents an opportunity for the largest industrial producers, such as the iron and steel sector, to expand output, especially by adding a night shift to use off-peak tariffs (interviews). It also presents a pull factor for new large-scale industries to set up operations in Uganda. However, considerable reliability and coverage challenges persist, even in industrial parks (Walter & Aubert, 2018; interviews).

Figure 13: Government spending on selected budget lines*10

Source: World Bank BOOST Uganda



*10 Sectors are from Uganda's budget classification system which includes an administrative, economic, functional and geographical classification. Tourism, trade and industry refers to budget allocations for the Ministry Trade, Industry and Cooperatives; Tourism, Wildlife and Antiquities; Uganda National Bureau of Standards; Uganda Industrial Research Institute, Uganda Tourism Board; and District Trade and Commercial Services.

Tax holidays, exemptions, and rebates. A wide range of companies can, in principle, qualify for a 10-year, 100% corporate income tax exemption. These include firms in industrial parks and free zones, investors beyond a certain investment threshold, and agro-processing companies. In practice, these tax holidays tend to be negotiated on a case-by-case basis with the highest-ranking officials (interviews). Tax rebates and exemptions are also applied to the import of industrial inputs and machinery for companies in free zones.

Export bans and levies on raw materials. These have been introduced on selected raw materials to incentivise – or force – firms to process them domestically. Export levies are applied to raw hides and skins, tobacco, coffee, and cotton (WTO, 2019). The levies on coffee and cotton are intended for general sector development activities, not agro-processing specifically. In addition, the following raw materials are currently subject to EAC-wide export bans designed to induce domestic value addition, and retain them within the EAC:

- Waste and scrap of ferrous cast iron
- Wood charcoal
- Unprocessed timber from any wood grown in the Partner States
- Fresh unprocessed fish (Nile perch and tilapia)

Free or subsidised land inside and outside industrial parks and free zones. In some industrial parks - such as Kampala Industrial Business Park (commonly known as Namanve) - UIA has sold land to investors at a subsidised rate (estimated at roughly 80% of market value) (interviews). A further industrial park in Tororo is under construction - managed by a Chinese company - and will focus on mineral-based industries such as phosphate-based fertiliser and iron and steel. A third park in Kaweweta - also managed by a Chinese company - will focus on agro-processing. However, beyond land, the infrastructure and services provided in these parks have so far been minimal (interviews). The first free zone - the Arua Special Economic Zone - will focus on fish processing, timber processing, and feature pre-built factory units and warehousing facilities (interviews). Land has been allocated for several free zones (none operational yet) and a total of 22 public industrial parks as well as several privately owned and operated parks. Land has also been provided to several investors outside of parks or free zones, for example in the dairy (Karingi et al., 2016) and forestry industries (interviews). Further, UIA has been charged with acquiring and transferring leases to investors seeking to develop. This is done through the Uganda Land Commission, which records and manages the acquired land, and provides it to investors under leasehold. UIRI also provides operating facilities and land to its incubatees, mostly in agro-processing.

Protective import tariffs. Uganda has harmonised its import tariff scheme with the EAC's CET. Under the CET, raw materials are subject to a 0% import duty, semi-processed goods are taxed at 10%, and finished goods at 25%. Further, the CET contains a Sensitive Items list - negotiated at the EAC level - of goods that are given an agreed duty rate higher than that stipulated by the regular CET specifications. According to the EAC customs protocol, the following goods are subject to higher than normal import tariffs: milk products, maize, rice, sugar, cotton fabrics, bed/table linen, worn clothes, manufactured tobacco products, primary cells and batteries. In addition, Uganda has extensively used

so-called "Stays of Application" to raise the import tariff to up to 60% on goods target processed materials such as paper products, processed coffee, and dairy spreads and fats, and to 35% (rather than the CET 25%) on a range of iron and steel products, paper products and packaging, and furniture. Processed foods have also been targeted, including tomato pastes, cocoa, and sugar products.

Public investment and subsidised credit into pioneer firms. Uganda Development Bank (UDB) and UDC were resuscitated in 2016 to provide growth capital to industrial pioneer firms, and their recapitalisation has begun, with UDC so far receiving about UGX 120 million (interviews). UDB was reconstituted in 2016 and has disbursed a total of UGX 633 billion over the last five years (2016 - 2019). In 2018, 42% of disbursed funds went to the agriculture and agro-processing sector, 39% to manufacturing, 10% to infrastructure, and the rest to human capital, tourism, and other sectors. UDB reportedly received a total of UGX 150 billion in from the Treasury in 2018 and 2019 (Golooba-Mutebi, forthcoming), but the majority of its current capital was raised from private sources and foreign development finance institutions. The UDB's loan terms and interest rates are determined on a case-by-case basis, but UDB notes that tenors are up to 15 years, with grace periods up to 3 years, and interest rates up as low as half of market rates (12-13%) (interviews). The sector focus is very broad, including agro-industry, mineral-based industry, "other" manufacturing, and even some traders of essential goods (interviews). UDC has so far received about 30% of the UGX 500 billion government recapitalisation promised in the 2016 Act re-establishing the body. As with UDB, most of its current funds were raised from other sources such as overseas Development Finance Institutions (interviews). UDC's current strategy is to "invest in areas that have the greatest multiplier effect on the Ugandan economy, that maximize the utilization of local raw materials as well as reduce the country's trade deficit" (UDC, 2019). It has so far invested in Kalangala Infrastructure Services Ltd (KIS), Soroti Fruit Factory, Kigezi Highland Tea Ltd (KHTL), and Atiak Sugar Factory. Target sectors for further investments include a wide range of agro-processing, minerals processing, and fast-moving consumer goods sectors.

Promoting local content. The Buy Uganda Build Uganda (BUBU) policy - proposed by the Private Sector Foundation Uganda, adopted by MoTIC, and launched in September 2014 (MoTIC, 2014), is aimed at promoting local content in public and private procurement. However, beyond the oil and gas sector, the policy has not been translated into law and thus had a minimal effect beyond a few ad-hoc initiatives. Oil and gas contractors are required to give preference to goods and services produced provided by Ugandan companies, and goods or services not available in Uganda to be undertaken by a joint venture with a Ugandan partner owning at least 48% of the shares. The Uganda Investment Code of 2019 states general requirements such as that investors qualifying for tax benefits must employ and train local staff "to the fullest extent possible", but does not specify requirements. Further, AfDB (2014) found that "there is no enforcement mechanism to ensure the effectiveness of the incentives offered".

Table 7: Mapping of current (and recent) industrial policy instruments employed in Uganda

Area of Intervention	Type of Instrument: Regulation	Incentives / Disincentives	Information	Direct Provision of Goods & Services
Product Market	— Import tariffs (e.g. dairy; fabrics; steel) — Export levies on raw material (e.g. scrap metal; raw fish; unprocessed timber) — Local content requirements (oil & gas) — Foreign market access through trade deals	— Income tax exemptions for manufacturing investment (e.g. agro-processing; export manufacturers) — Export levies on raw material (e.g. raw hides & skins) — Import duty exemptions for export manufacturers (e.g. textiles, cotton, linen; any firm in a free zone) — VAT exemptions for industrial services and materials	— Export market information / trade fairs — Investment promotion — Investment facilitation (UIA one-stop service centre)	— Dedicated infrastructure development (e.g. power substations for steel) — Local content requirements in public procurement — Trade facilitation support — > State-owned enterprises — Provision of value chain infrastructure / functions (e.g. fisheries; dairy) — Business development services (e.g. UIRI; Enterprise Uganda) — Government procured tourism marketing in target countries
Land Market		— Provision of subsidised land to manufacturers (e.g. Namanve - mixed; Tororo - mineral-based; Kaweweta - agro-processing)		— Provision of free land to specific investors — Free facilities for industrial MSMEs (e.g. UIRI)
Labour Market	— Staff training requirements on companies (oil & gas)	— Training grants (e.g. BUBU Capacity Building Programmes; Skilling Uganda) — Training expenditure tax benefits		— Provision of training through public TVET institutions — International exchange programmes / scholarships (e.g. oil & gas)
Capital Market				— Public concessional loans (UDB) — Concessional lines of credit (Agricultural Credit Facility / Microfinance Support Centre) — Public venture capital (UDC)
Technology		— R&D grants (MoSTI Innovation Fund) — Import duty exemptions on plant & machinery		— Public research institutes (e.g. NARO) — Support to universities for industrial research (Presidential Initiative on Science & Technology) — Technology extension programmes

Uganda: Future Pathways and Recommendations

Uganda: Future Pathways and Recommendations

This chapter explores the future of industrial policy for economic transformation in Uganda. It sets out potential economic transformation pathways, considers options for designing effective industrial policy delivery mechanisms, proposes principles for the targeting of industrial policy, and makes recommendations for a more effective use of the industrial policy toolbox.

Photo credit: Jjumba Martin

Transformation Pathways

The current trajectory looks untenable: genuine economic transformation is needed to create jobs and prosperity for the bulging population. Faced with a rapidly growing, urbanising, and increasingly educated youth population that has no living memory of the painful liberation struggle that brought the ruling party to power in 1986, the political legitimacy of Uganda's leadership will increasingly depend not only on peace and stability, but also on the promise of decent work and incomes for all. The latter will require the creation of decent jobs at scale through growth in labour-intensive higher-value-added activities and continuous upgrading.

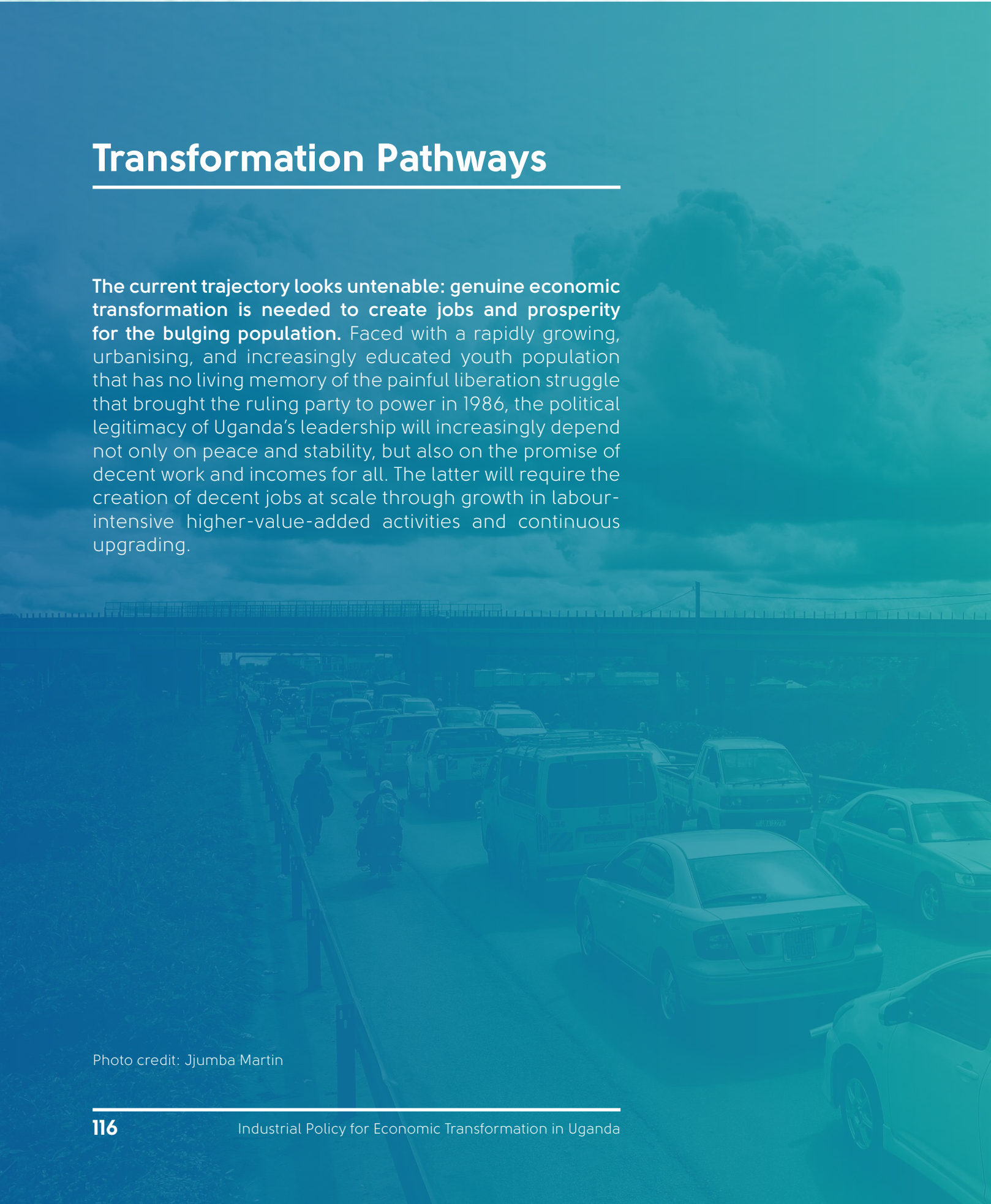


Photo credit: Jjumba Martin

However, even though Uganda faces several challenges as a small landlocked country, it has untapped opportunities to reinvigorate economic transformation: first, it should be noted that being landlocked has not stopped other countries from achieving economic transformation. Ignoring other contextual differences, it is clear from countries like Austria and Switzerland that being landlocked does not, by itself, preclude economic transformation. Aside from having one of the highest GDPs per capita in the world, Switzerland has the world's highest manufacturing value added as a proportion of GDP (Chang, 2007). Closer to Uganda, Ethiopia and Rwanda are the second- and third-fastest growing economies in the world, with promising developments in their respective high-value-added sectors.

Second, Uganda's position as a landlocked country with relatively weak coastal transport links acts both as a hindrance for many export sectors (AfDB, 2014) and as a natural protection for domestic producers against overseas imports (Spray, 2017b; Calabrese et al., 2020). This means Uganda may be outcompeted by coastal countries in the overseas export of low-value-per-weight goods due to higher costs and longer delays for both importing inputs and exporting products. However, the natural import barrier of weak coastal transport links means that, within the region, Ugandan low-value-per-weight products are at an advantage vis-a-vis their imported competitors, who face costly transport and logistics costs. Furthermore, Uganda enjoys "captive markets" in its inland neighbours - DRC, South Sudan, Rwanda, and Burundi - due to the fact that its access to the sea is still considerably better than these countries'; for much of Eastern DRC and South Sudan, the only viable import routes pass through Uganda.

Third, Uganda is abundantly endowed with natural resources. Uganda has a natural advantage in the production of high-value-added goods based on its rich natural resources, including mineral resources*11, oil and gas, fresh water, fish, forests, solar and hydroelectric potential, arable land*12, and nutrient-rich soils (AfDB, 2014; UDC, 2019; interviews).

Fourth, with low labour unit costs and highly trainable workforce due to high basic literacy rates compared to other SSA countries (URA, 2019; interviews), Uganda stands a chance to capture significant jobs in the migration of manufacturing firms away from China. Due to shrinking labour forces and rising wages, a migration of low-wage-dependent manufacturing activities away from the region – especially from China - and to lower wage locations is underway. Chinese wages for unskilled workers rose by 281% between 2003 and 2010 (Ethiopian manufacturing wages increased by just 1% in the same period) (Horizon East Africa, 2019) and are projected to increase four-fold in the next decade. The Chinese economy could lose or actively offshore up to 85 million unskilled manufacturing jobs, which presents an opportunity for African countries (Dollar et al., 2017). Much of SSA has failed to take advantage of rising wages in Asia because of high unit labour costs (Horizon East Africa, 2019), but Uganda has an opportunity to buck the trend. Uganda could emulate Ethiopia's emerging success in entering export manufacturing - largely due to labour unit costs that are a fraction of China's (Horizon East Africa, 2019) - but upgrading towards higher skill and value-added activities would be key.

Fifth, Uganda has a rapidly growing and urbanising domestic market. Uganda's coule become one of the larger domestic markets on the continent, depending on the disposable incomes of its rapidly growing population. Further, Uganda's population is rapidly urbanising from a very low base, with its total urban population expected to increase from 6.1 million people at present to at least 32 million people in 2050 (World Bank, 2019). This implies that between 2020 and 2050, the equivalent of one additional Kampala-sized city will need to be constructed approximately every 1.7 years. This colossal construction drive will inevitably be a central part of Uganda's evolving economy over the coming decades. Urbanisation also leads to faster demand growth for high-value-added products, presenting an opportunity for domestic manufacturers.

Finally, regional trade agreements and demand growth present opportunities for Ugandan firms to access large markets and add value in regional production networks. Regional integration creates the promise of scale and specialisation necessary to make companies more productive and competitive. The EAC's Common External Tariff, and in particular the Sensitive Items list, gives East African producers some protection against external competition on the East African market, and there are significant opportunities to build regional value chains (Calabrese et al., 2020). The recently signed African Continental Free Trade Agreement (AfCFTA) presents further opportunities to serve fast-growing African B2B and consumer markets (Horizon East Africa, 2019). For example, total consumer spending in Africa has tripled in real terms since 1990 and is set to continue growing exponentially, with rapidly growing young, connected and urban middle classes across the continent (Hatch et al., 2011).

*11 Surface deposits found in Uganda include clay, sand, limestone, marble, kaolin and sources of stone aggregate and dimension stone (AfDB, 2014; UDC, 2019). Minerals found in Uganda include salt, kaolin and bentonite, phosphates, vermiculite & lime (AfDB, 2014; UDC, 2019). Valuable metals found in Uganda include base metals and ferroalloys, cobaltiferous pyrites, precious metals, chromium, nickel, tin, tungsten, and pegmatite minerals (AfDB, 2014; UDC, 2019).

*12 Uganda has 200,520 km^2 of arable land out of a total area of 241,550 km^2 (AfDB, 2014; UDC, 2019).

Industrial Policy Delivery

While this study cannot recommend changes to political realities, it can provide ideas for how stakeholders interested in industrialisation might build industrial policy delivery mechanisms that stand the best chance of generating conducive political conditions as well as successful technical implementation. It is clear from the above analysis that Uganda's political elite hold little "disposable" political capital to "spend" on industrial policy. As such, the little room for manoeuvre available must be used carefully. Recognition of Uganda's complex political context suggests that gradual, pragmatic, and trial-and-error learning is warranted. The best approach will be to "cross the river by feeling the stones", a metaphor widely attributed to Deng Xiaoping, who used it to describe China's approach towards economic reform starting in the late 1970s. In successful industrialisers, the management of both mutual interests and learning for productivity between state and industry has typically been done by one or more highly centralised bodies that would be considered pockets of efficiency and enjoyed embedded autonomy. Such a body (or bodies) is missing in Uganda, and the challenge at hand is how to create them given the difficult prevalent political economy.

Photo credit: Jjumba Martin

This section introduces three types of industrial policy delivery channel that Uganda's political elite could seek to establish, and briefly discusses their respective chances of success in a context of scarce political, technical, and financial resources. These approaches are not mutually exclusive: indeed they have often worked in unison in other countries . However, effectively implementing all three risks draining the state's resources. Table 8 briefly presents the potential advantages and disadvantages of each approach.

*13 In Malaysia, for instance, all three delivery mechanisms are at work. The industrial development vision comes from the Economic Planning Unit, which also monitors progress; implementation is headed by the Ministry of International Trade and Industry; and specialised agencies follow up on sector issues.

Table 8: Three potential pocket of efficiency for industrial policy

	Advantages	Disadvantages
A "super-ministry" of Industry, Trade, and Investment (MoITI)	– All key functions housed under one entity with strong mandate to drive industrialisation agenda – Single point of engagement for private sector – Overcome "mandate wars" with MoFPED – Opportunity to build a lasting institution and mainstream Uganda's industrialisation agenda into GoU formal institutional framework	– Indirect reporting line to President, via Cabinet as well as MoFPED, which allocates budget resources – Subject to civil service rigidities and politics, making performance-based personnel management and capacity building difficult – Would require politically costly process of removing entire functions from other ministries
An Industrial Policy Delivery Unit	– Direct line of command from President – High concentration of political, financial, and human resources on priority initiatives – Outside of civil service rigidities and politics	– Must work with/through other MDAs to deliver effectively – Requires significant shake-up of existing formal institutional framework
Sector Development Authorities	– Enables greater technical specialisation and closer "embeddedness" of bureaucrats in each target sector – Can be targeted at sectors where existence of mutual interests is more likely – Can have direct line to President – Can be outside of civil service rigidities and politics	– Risks diluting the political, financial and technical resources that would otherwise be concentrated in a single delivery unit – Does not provide cross-sectoral coordination

A Ministry of Industry, Trade, and Investment

Based on consultations with many of the leading stakeholders in Uganda's industrialisation, Ggoobi (2019) recommends the establishment of a new Ministry of Industry and Investment (MOII). Ggoobi's rationale for creating MOII is that it would overcome the industrial policy coordination problem by having all of the most important functions housed under one entity with a strong mandate to drive the industrialisation agenda. Apart from enabling the efficient delivery of industrial policy, it would give private companies a single point of engagement in government, reducing uncertainty, strengthening public-private dialogue, and reducing avenues for corruption through government gatekeepers.

Ggoobi (2019) further proposes moving UIA and UDC from MoFPED, and the Department for Industry from MoTIC, into the new MOII. As a result, MoFPED's role would shift to focussing on budgeting and finance, and MoTIC would focus on trade and cooperatives. All the other ministries and agencies would remain unchanged. Ggoobi (2019) hopes that MoII would "end, or at least reduce, the mandate wars between MoTIC and MoFPED, and provide effective leadership to a technical working group representing all relevant sectors".

However, we contend that the MoII would miss crucial functions and thus curtail its ability to effectively oversee industrial policy delivery. These include standards, innovation, industrial extension, export promotion, and trade facilitation. Removing trade from the core industrial policy mandate is dangerous, as the importation of inputs and export of high-value-added products is paramount to successful industrialisation. MoTIC already includes several of these functions. Further, creating a new ministry risks further diluting the delivery mandates.

A more strategic approach might therefore be to expand and empower MoTIC, adding the Investment element and thus making it the Ministry of Industry, Trade and Investment. The Cooperatives element may fit better into the Ministry of Agriculture. The Ministry of Industry, Trade and Investment would therefore consolidate the following key departments and agencies for industrial policy: Department for Industry, UNBS, UEPB, MTAC (already under MoTIC), UIA, UNCST, UDC, UFZA (from MoFPED), and UIRI (from MoSTI).

What would it take to make MoITI a pocket of efficiency with embedded autonomy? Leading stakeholders observe that the President's increasing use of directives that bypass institutional channels (as for example with his letter instructing MoFPED to build industrial parks) is mainly due to his perception that the MDAs are failing to produce strong strategies and policy proposals (interviews). A ministry that is fully mandated and resourced to lead all the important aspects of industrial policy would be able to present the Head of State and other stakeholders with strong policy proposals. Making MoITI a pocket of efficiency would require technical expertise, enabled by a large budget and meritocratic human resource management. Perhaps more crucially, it would require a leadership that has the political elite's trust, both in their loyalty and in their competence. It is unrealistic to place one ministry above the rest - especially above MoFPED, which ultimately decides on other ministries' budget allocations - or to allow it to not report to Cabinet. On the contrary,

an expanded and empowered MoITI would be an opportunity to build a lasting institution and mainstream Uganda's industrialisation agenda into the formal institutional framework of GoU.

However, establishing MoITI would not be without challenges. First, MoITI would face the same constraints as any other ministry: civil service rigidities, for instance in human resource management, subservience to the Treasury in matters of resourcing, and formal degrees of separation from the President (interviews). Second, removing entire functions from MoFPED and MoST may be politically costly or even untenable. Third, effectively resourcing an entire ministry is costly and would require a sizeable reallocation from other areas in the national budget.

An Industrial Policy Delivery Unit

In the same spirit as Korea's Economic Planning Board, Taiwan's Industrial Development Bureau, and the Rwanda Development Board, an alternative approach to industrial policy delivery would be through a delivery unit that combines multiple functions with a focus on top priority sectors and activities. A Ugandan Industrial Delivery Unit could sit outside of normal civil service rules, enabling it to hire and motivate a small team of the highest-calibre professionals, combine several industrial policy functions to "deliver" a small set of top priority industrial sectors and activities, and report directly to the President. Rather than attempting to reverse the proliferation of direct presidential involvement in the industrialisation agenda, this approach would institutionalise this political reality. It would make extensive use of presidential directives, but through a competent and informed organisational unit.

The Delivery Unit would combine several industrial policy functions in a small team Because the unit would focus on only a handful of priority industrial sectors and activities, it would not remove these functions from other agencies. In some cases, the Delivery Unit would have to rely on other agencies to carry out certain tasks, relying on Presidential Directives to do so. The Delivery Unit would play at least the following functions for the priority sectors and activities.

- Diagnostic research and feasibility studies on target sectors (likely commissioned to consultants);
- Formulation of industrial policy directives (incl. on trade, tax, land allocation, labour, education, and other areas as relevant);
- Investment promotion and facilitation with top priority potential and existing investors;
- Deal brokering with private industrialists, foreign and domestic;
- Conceptualisation and commissioning of business support services, curriculum design, supply chain infrastructure, and other publicly delivered goods and services;
- Monitoring of progress; and
- Facilitation of public-private dialogue (possibly through the Presidential Investors' Roundtable, which could report to the Industrial Public Delivery Unit).

What would it take to make the Delivery Unit a pocket of efficiency with embedded autonomy? If successfully established, resourced, and empowered, such a delivery unit would stand a reasonable chance of acting as a pocket of efficiency. Its proximity to the Head of State would allow the latter to give the unit political insulation. In addition,

a delivery unit of this sort could potentially deliver coordinated action by concentrating numerous functions in the same organisation and avoiding interference by having a direct line of command from the Head of State. Concentrating technical, political, and financial resources on a small number of priority sectors and activities would, in addition, be conducive to identifying and negotiating mutual interests, adequately compensating the losers of industrial policy, and maintaining the embedded autonomy to nurture learning for productivity. This would of course require the President to make the unit a top political priority. Some experts contend that such centralising initiatives in the current political environment are highly unlikely to succeed, given the patronage demands on the political elite and thus the shortage of disposable political capital available to the Head of State (interviews). It also has the greatest risk of being captured by the political elite for their personal and political interests, as has been seen with other agencies in the past.

Alternatively, to avoid the further proliferation of MDAs and build on existing capabilities, a similar delivery unit could be established elsewhere in the state bureaucracy. One pathway would be to empower the National Planning Authority (NPA) to play this role. NPA has already obtained funding for the development of a national Industrialisation Masterplan (interviews), overseen by a seemingly inclusive steering committee so far comprising MoTIC, MoFPED, UIA, UMA and others, with more stakeholders set to come on board (interviews). NPA currently reports to the Prime Minister's Office and Cabinet, not directly to the President. Establishing a direct reporting line to the President could be explored. A third approach would be to place a delivery unit of this kind under MoITI, authorise the unit to identify a handful of promising sectors, and give it sufficient political autonomy to make decisions based on economic analysis (interviews).

Empowering Sector Development Authorities and Specialised Institutes

A third approach would be to create and/or empower sector development authorities responsible for top priority sectors. Uganda currently has such authorities in place for the cotton, textiles, dairy, coffee, and forestry sectors, with varying levels of resource allocation and political clout. These sector development authorities, by and large, currently lack the technical, financial, and political resources to deliver transformative policies and programmes, including the lack of influence on broader policy processes. Empowering the authorities in a similar manner to a presidential delivery unit would enable them to have a transformative impact for the same reasons discussed above. Working through separate agencies for each priority sector risks diluting the political, financial and technical resources that would otherwise be concentrated in a single delivery unit, but may enable greater technical specialisation and a closer "embeddedness" of the bureaucrats in each target sector. Another advantage of a sector-specific approach is that it can be targeted at sectors where the existence of mutual interests is more likely. Where this is not the case, industrial policy delivery mechanisms would be little more than additional mechanisms for managing patronage politics. As discussed above, Uganda has had some success in creating sector-specific pockets of efficiency such as the DDA and the Petroleum Authority of Uganda.

Industrial Policy Targeting

The current industrial policy objectives promote import substitution without sufficient attention to the longer-term goals of reaching international competitiveness and boosting exports. While import substitution has often been an important first step in industrialisation, an equally important goal must be to build industries that are competitive on the export market. If domestic market protection is not lifted on time and if firms do not acquire capabilities, then the industries will be perpetually in need of propping up against more competitive imports, draining resources from the state while also making consumption more expensive for citizens. This would also have a direct negative impact on social welfare and an indirect negative effect on economic development because higher prices suppress domestic purchasing power and thus demand for other goods and services. The domestic market is also small when consumers have low purchasing power, meaning that an inward-looking import substitution strategy should be temporary and cannot be viable in the long-run. Moreover, technological catch-up, which is at the centre of industrialisation, requires the importation of technology (e.g. in the form of machinery), which in turn requires foreign exchange . In order to earn that much-needed foreign exchange, a country must export. Finally, an inward-looking strategy does not allow a country to enter global and regional value chains, which are now prevalent in almost every sector.

Photo credit: Ed Ram

The focus on value addition and agricultural linkages could be complemented with other efforts, for example, towards becoming the regional supplier of strategic inputs including iron and steel and simple manufacturing products such as food and wood products. A focus on local value addition of raw materials through import substitution policies can force local manufacturers to use locally produced inputs which are often of lower quality compared to international inputs, thus unnecessarily hurting their competitiveness. For example, Uganda may have a viable textiles and garments industry that is not necessarily dependent on Ugandan cotton, but instead imports a range of raw materials. This might be missed if the starting point for assessing an industry's strategic value is that it must add value to domestic produce. Further, the success of a policy which aims at creating backward linkages to the farm requires farms to be highly productive. The evidence suggests that low agricultural productivity is a binding constraint on the development of agro-processing: nearly all agro-processing industries in Uganda are operating far below capacity, due largely to insufficient or unreliable raw material supply (Fowler & Rauschendorfer, 2019; Shinyekwa & Ntale, 2018).

As is the case in most low-income countries, the Ugandan state's political, technical, and financial capabilities to effectively deliver industrial policy are severely constrained, making the debate around targeting industrial policy highly relevant. As discussed previously, "disposable" political capital is scarce, as is evidenced by the political elites' preoccupation with maintaining a stable ruling coalition through rising levels of patronage. Largely as a result of this political dynamic, technical capacity in the state bureaucracy is also scarce, as seen in the very limited presence of pockets of efficiency (see The Political Conditions for Industrial Policy). Finally, state financial resources are scarce given Uganda's low GDP, low tax-to-GDP ratio, and high debt servicing commitments, exacerbated by the demands of the increasingly fragile ruling coalition's patronage network (interviews). There are very few state financial resources left that can be used for industrial policy, which is expensive either because of the cost of the support provided (e.g. grants or subsidies) or because the "losers" of industrial policy need to be compensated in order to maintain stability and momentum.

In light of this, we argue that Uganda needs a more carefully focused, prioritised, and risk-adjusted industrial policy. The government's best chance at effectively catalysing economic transformation lies in promoting a small number of priority sectors through carefully targeted action. For example, in this regard, Shinyekwa & Ntale (2018) argue that Uganda should follow the example of countries where agro-industrialisation has worked, such as Chile and Malaysia, which "adopted a specific model" that "prioritised fewer commodities".

It is beyond the scope of this study to develop and apply a detailed industrial policy targeting methodology for Uganda, but several principles for such an effort can be distilled from the review of the approaches and experiences presented in this chapter. Table 9 lays out these principles.

Table 9: Proposed Principles for Industrial Policy Targeting

Principle	Rationale
Select a set of priority industrial sectors and activities that is coherent and consistent across all policy domains and strategies	A coherent and consistent list of priority industrial sectors and activities is crucial not only for the coordination of industrial policy delivery and the concentration of scarce resources, but also to ensure that clear signals are sent to the private sector. Investors in risky new ventures are likely to lose confidence if the signals from the government about its support are conflicted and inconsistent.
Develop a long-term vision and a phased approach	Economic transformation is a long-term process that never actually stops. The most strategic pathways to sustained transformation can be identified through a long-term vision. On these pathways, early success will unlock further possibilities for upgrading and diversification. For example, pursuing relatively low-value-added activities such as the production of spare parts for used automobiles as well as the final assembly of automobiles may later open up opportunities for backward integration in automobile production with locally supplied components, thus preparing both the market and the production capabilities.
Apply an iterative approach that maintains flexibility	Economic change, especially long-term change, is highly unpredictable. As such, a long-term transformation vision must be tempered with flexibility. The Ugandan state must itself take an entrepreneurial approach to industrial development, cognisant that industrial policy is inherently risky. Contextual changes will present new opportunities but also mean that an entire industrial sector may unexpectedly fail. The industrial development strategy must "cross the river by feeling the stones".
Take into account contextual factors and longer-term risks and opportunities	Longer-term trends are likely to shape the industrial development trajectory, and aside from adapting to these changes, target activities should be selected based on an appreciation of how they are likely to be affected by these shifts. It is important to consider longer-term trends at the domestic (e.g. population growth, ageing, urbanisation), regional (e.g. demand shifts, regional integration, resource pressures), and global (e.g. technological change, climate change) levels.
Apply a combination of methodologies for the selection of priority sectors	As seen above, no single proposed tool for industrial policy targeting is comprehensive and without shortcomings. Each has the ability to highlight certain factors prevalent to the selection of target activities, and a combination of tools should be used.
Utilise both quantitative and qualitative measures to score selection criteria	Some of the most important factors shaping a sector or activity's strategic value or feasibility cannot easily be quantifiably measured, such as political conditions.
Assess activities according to both strategic value and feasibility	The prominent targeting approaches discussed above can all be grouped according to a matrix similar to that of UNIDO (2011) discussed above. Strategic value (similar to UNIDO's "attractiveness") refers to the amount, or depth, of progress towards economic transformation entering a new activity is likely to unleash. Feasibility refers to the ease, or likelihood, with which the capabilities for, and competitiveness of, a new activity can be achieved.
Assess activities according to both strategic value and feasibility	The prominent targeting approaches discussed above can all be grouped according to a matrix similar to that of UNIDO (2011) discussed above. Strategic value (similar to UNIDO's "attractiveness") refers to the amount, or depth, of progress towards economic transformation entering a new activity is likely to unleash. Feasibility refers to the ease, or likelihood, with which the capabilities for, and competitiveness of, a new activity can be achieved.

Table 9: Proposed Principles for Industrial Policy Targeting continued

Principle	Rationale
Assess feasibility using indicators such as accordance with factor endowments, proximity to existing capabilities, emerging private sector growth, and, crucially, presence of conducive political conditions.	First, in the short-run, the portfolio of priority industrial sectors and activities should include activities that exploit Uganda's factor endowments (such as cheap labour and abundant natural resources). Second, these target activities should also build on the economy's existing capabilities (such as those applied in basic agro-processing and steel manufacturing). Third, it may pay off to prioritise activities within which Uganda's private sector already demonstrates some emerging strength (such as industrial timber and chocolate). Fourth, Ugandan firms are more likely to achieve international competitiveness in activities that are relatively unique to them, rather than those also being pursued by numerous competitor countries such as its regional neighbours. Fifth, the political conditions for industrial policy success (using a similar framework as the one applied in the previous chapter) must be assessed at the sector level, and heavily weighted in the final scoring. At a more granular level, the potential success of each specific enterprise can be assessed based on a range of factors relating to the relative cost and availability of its inputs and the market potential of its products or services.
Assess strategic value using indicators such as market opportunities, spillover opportunities, and uniqueness	Achieving sustained economic transformation requires the constant pursuit of new capabilities that shift, rather than conform with, the economy's existing competitive advantage. First, new activities with a high strategic value are ones that present opportunities for firm growth, job creation, generation of foreign exchange, and/or revenue (including tax). This can be assessed by examining the global, regional, and domestic demand for a product or activity, its recent growth, and its projected future growth, estimations of its direct and indirect employment generation, and its expected value-added, as a proxy for foreign exchange and revenue potential. Second, high strategic value means that an activity entails the development of significant new capabilities, whose mastery in turn will open doors to further upgrading and diversification in the future. This aspect can be assessed by examining the "proximity" of an activity to additional higher-value-added activities (for example, activities that require similar capabilities). The product space "opportunity gain" measure is one way of gauging this, but other, more qualitative approaches may paint a more accurate picture. Finally, a new activity that possesses high strategic value is one that could generate large spillovers, meaning that it is likely to stimulate firm growth, job- and income-creation, and skills acquisition in other activities, either downstream or upstream in the same value chain, or across value chains.
Do not discriminate a priori between manufacturing, agriculture, extractive, and services industries	The search for high-potential economic activities to promote should be informed by the above criteria. While the literature and international experience shows that manufacturing is likely to play a key role in economic transformation, the net in the search for high potential activities should be cast wider.
Select a risk-adjusted portfolio of priority industrial sectors and activities	Because industrial policy is inherently risky and state resources are scarce, the portfolio of priority sectors and activities should be risk-adjusted. In other words, it should contain a mix of some activities selected on the basis of their feasibility and others selected on the basis of their strategic value. The inclusion of low-risk activities is important to generate early successes and validate the use of industrial policy, but at the same time economic transformation can only be sped up and sustained by the inclusion of some higher-risk strategic bets.

Table 10: Illustrative Potential Target Activities

Table 10 highlights a non-exhaustive list of potential target activities or sectors to illustrate the types of findings that the application of the proposed targeting principles might yield.

Potential target sector or activity	Rationale with reference to proposed targeting principles
Animal industries	Multiple experts interviewed see the animal industries - including meat such as poultry, pork, fish, and beef, as well as eggs and dairy products - as a group of interrelated sectors in which Uganda is well-placed to be a regional leader. With rapid growth in domestic and regional demand due to urbanisation, population growth, and an emerging middle class, there is enormous potential for this sector to grow. It is relatively close to existing capabilities, with Uganda already developing a competitive edge, for instance in poultry and dairy, and with strong prospects for animal feed inputs such as maize, oilseed cake, and soybeans. It thus presents a relatively low-risk prospect. On the other hand, some new regulation and capability development is necessary to bring the sector to competitive export standards at scale, including the introduction of high-yielding and resilient breeds, highly efficient feeds, modern veterinary services, scientific farm management practices, cold storage, high quality packaging and labeling, and so on. These capabilities have spillover effects into other food industries. Animal feed, in particular, has been referred to as a "bottleneck good" whose larger-scale, higher-quality, and higher-efficiency production would unlock growth. This has strong backward linkages to smallholder farming growing the above mentioned feed inputs.
Ironmaking	Ironmaking is a missing link in the iron and steel value chain, with direct reduction and sponge iron production the most promising route (interviews). It is a relatively high-risk industrial project requiring large-scale investment in the hundreds of millions of USD, extensive regional cooperation, and significant new capabilities. These risks would be rewarded by high strategic value, derived first from precisely the industrial and engineering capabilities it requires, which are relevant for other heavy industries, second because of its (albeit moderate) job creation potential, and third because of the large amounts of foreign exchange savings and earnings from replacing both domestic and regional semi-finished steel imports with Ugandan-produced product. This last point is particularly relevant given the fact that domestic and regional demand for steel from the construction and infrastructure sectors are set to grow exponentially. Finally, the iron and steel value chain presents further opportunities for upgrading into various finished steel products, including machine and automobile parts as well as household goods such as kitchenware.
Industrial timber and related products	Industrial timber production is an example of a window of opportunity, both from a supply and a demand perspective. On the supply side, Uganda's average annual timber harvests predicted to grow up to 15-fold by 2030 (SPGS, 2013). On the demand side, the need for high-value wood products such as industrial grade timber, fibreboards, and furniture components is growing in neighbouring countries, especially Kenya, and will continue to grow exponentially due to rapid population growth and urbanisation throughout the region. New technology and capabilities will be required: the leading companies in the sector currently have outdated and inappropriate machinery and processing practices as well as a lack of international marketing capabilities (interviews), and in order to incorporate the fast rising timber supply from smaller-scale plantations, new aggregation systems and/or smaller-scale processing capabilities will be required.

Table 10: Illustrative Potential Target Activities continued

Potential target sector or activity	Rationale with reference to proposed targeting principles
Final assembly	Final assembly is an example of an industrial activity that often has more similarities across value chains than with downstream or upstream activities in the same value chain, thus demonstrating the importance of looking not just at sectors but also at activities as a unit of analysis. Whether garments, smartphones, electric appliances, or automobiles, final assembly is a low-value-added manufacturing activity that several firms in Uganda are already using to enter global value chains. The key will be to explore how these activities can lead to upgrading within those value chains and further diversification into similar activities in other value chains.
Tourism	While the tourism industry does not present the same capability spillover and job and income multiplier effects as many manufacturing sectors do, it is already Uganda's largest foreign exchange earner, and a high-potential channel for developing modern management and customer service capabilities. This could cause spillovers into all customer service activities, marketing, hospitality, and other high-growth service sectors. Again, a medium-term demand window of opportunity is likely, with global travel expected to continue growing rapidly after the COVID-19 pandemic as a result of growing disposable incomes in the huge populations of Asia and Africa.
Digitally delivered services	A focus on digitally delivered services is an example of taking into account longer-term trends including the exponential growth of manufacturing automation, connectivity, the internet of things, and e-commerce. These services are very broad in scope, including business process outsourcing (such as call centres and virtual assistants), software development (including cybersecurity, gaming, shopping, logistics management, data processing, social networking, and so on), digital design, content creation (whether music, video, or text), engineering, education, healthcare, marketing, data science, and more. Given the increasing automation of manufacturing, and thus its increasingly capital- and skill-intensive nature, Uganda's competitive edge from low labour costs will continue to be eroded, while many manufacturing activities will not absorb the amount of labour they used to. Digitally delivered services may provide a partial alternative, but even the lowest-skill jobs available are much higher-skill than traditional basic manufacturing. Developing the necessary capabilities and skills will take time, so a long-term strategy would be needed.
Labour export	Finally, the labour export sector is included here as an outlier, not because of its proven ability to catalyse economic transformation, but in order to illustrate how widely "the net can be cast" in the search for activities to promote through industrial policy. Ugandan firms are already active in facilitating the export of labour, notable examples including the movement of Ugandan domestic ancillary workers to the United Arab Emirates and security personnel to Iraq during the Iraq War. While well-known for exposing workers to hazards and abuse, and so far leading to very limited positive spillovers, this is not inevitable with the right policy support. GoU could explore the potential of industrial policy tools to ensure that the negative effects of labour export are minimised and the positive effects - including skills development, market exposure and linkages, remittances, the acquisition of entrepreneurial ideas, and productive investment upon return to Uganda - maximised.

Industrial Policy Targeting

Even though Uganda is already tapping into a wide array of industrial policy tools, these emerging industrial policy efforts have so far been thinly resourced, ad-hoc, poorly targeted, sometimes at odds with the most promising industrialisation pathways, and as a result, largely ineffective in shifting the incentives of the private sector towards the acquisition of new capabilities.

Table 11 summarises this section's recommendations, which are discussed in detail below.

Photo credit: Jjumba Martin

Table 11: Summary of recommendations

Focus support and protection exclusively on priority industrial sectors and activities	— Reserve the most generous industrial policy support and protection exclusively for specific top priority industrial sectors and activities to incentivise the private sector to move towards these activities. — Shift private sector incentives towards upgrading within sectors by making tax incentives, land allocations, power subsidies, public procurement contracts, and other government support conditional upon investing in value-adding activities. — Reform the trade regime to favour domestic industrialists and value addition by shifting protection from import trade and primary production towards higher-value-added activities.
Provide deeper support to priority industrial sectors and activities	— Prioritise additional resources towards providing dedicated infrastructure and services in industrial parks and free zones, including warehouse shells, dedicated utilities infrastructure, industrial waste and wastewater treatment services, expedited customs clearance, and emergency response services, amongst others. — Assess the possibilities of exercising more state control over capital markets with a view to increasing the flow of low-cost finance into priority industrial sectors and activities. — Elevate investment attraction and facilitation to a higher level of priority within GoU, empowering UIA to build an international presence, actively target investors for priority sectors, target the types of investors who demonstrate the willingness and capability to engage in value adding industries, and focus more on potential investors from Africa and Asia. — Fully leverage public procurement to support industrial development by requiring MDAs to procure domestically and using policy tools to ensure that Uganda's urbanisation spurs domestic production of construction materials. — Foster strong technical leadership in industrial ventures by facilitating joint ventures, access to international expertise, and international secondments for Ugandan managers, engineers, and technicians; build a collaborative framework between government, public research units, universities, specialised training institutes, and industries for targeted skills development, building appropriate training offerings and incentivising on-the-job upskilling.

Table 11: Summary of recommendations continued

Couple industrial policy support with requirements, performance pressure, and culling losers	— Couple FDI attraction and facilitation with smart conditionality to ensure that FDI serves industrial development objectives, including local content, investment in local value-addition. — Ensure that FDI targets the binding constraints in high-potential sectors - such as a shortage of capital, skills, technology, or international market linkages - through incentives or requirements on foreign investors. — Maximise the positive spillover effects of FDI by facilitating the flow of business deals, knowledge, technology, skills, and capital between foreign and domestic firms, including through joint ventures. — Consider (1) exposing multiple pioneer firms in target sectors/activities to some credible domestic competition from the start, and (2) demonstrating its ability and willingness to "cull losers" in order to fully incentivise each firm to rapidly build production capabilities and competitiveness.
Take a more regional approach to industrial development	— Prioritise efforts towards building regional value chains to become a regional leader in the production or provision of key products, components, and services, leveraging Uganda strategic geographic position and its captive inland markets — Invest in regionally linked transport and trade infrastructure, broker bilateral and regional deals to unlock progress on large-scale industrial ventures such as ironmaking, and push for regional collaboration on industrial policy, peace, stability, and mutual trust. — Step up efforts to push for more regional collaboration on transport infrastructure and lobby for the quicker resolution of intra-EAC trade barriers. — Lobby for smarter regional collaboration on import tariff policy, leveraging the Common External Tariff to protect East African infant industries and catalyse regional value chains. — Consider replacing the strict requirement for park and zone firms to export 80% of their production with smarter export requirements that foster regional trade, such as gradually increasing export targets in direct negotiation with pioneer firms, exempting a proportion of export revenues from taxation without imposing a strict minimum, or using export subsidies and export loans. — Upgrade production standards in priority agro-based industries to ensure regional and global market access and incentivise firms to upgrade their technologies, skills, and production processes.

Table 12: Focus support and protection exclusively on priority industrial sectors and activities

Reserving industrial policy support and protection for priority sectors and activities.	Currently, industrial policy instruments are not sufficiently tilting the incentives of the private sector towards priority industrial sectors or activities. Large investments (over USD 10 million for foreign investors; over USD 1-2 million for Ugandan investors) are receiving generous government support, including corporate income tax holidays of up to 100% for 10 years, heavily cross-subsidised electricity tariffs of USD 0.05 / kWh for the extra-large industries category, access to subsidised land and input import duty exemptions through industrial parks and free zones, and, in some limited cases, financing through UDB and UDC. But none of these incentives have so far been narrowly focused on priority industrial sectors and activities, and instead given to a wide range of investors. For instance, UDB's sector focus is very broad, including agro-industry, mineral-based industry, "other" manufacturing, and even some traders of essential goods (interviews). UDC and UIRI have been criticised for sometimes selecting firms based on short-term social impact ahead of business feasibility (interviews). Numerous Chinese manufacturers currently benefit from government support to produce basic goods that compete with already existing industries for the domestic market rather than investing in upgrading or to contribute to exports. Moreover, Uganda's existing leading business conglomerates have received government support and protection without clear conditions or requirements to invest in new capabilities or in priority industrial sectors and activities (interviews). In the next phase of industrial policy, the most generous support and protection should be reserved exclusively for specific top priority industrial sectors and activities to ensure that the private sector is incentivised to move towards these activities.
Shifting incentives from existing activities towards upgrading within sectors.	For example, investments in iron ore extraction and ironmaking, which are major missing links in the iron and steel value chain, benefit from the same incentives as investments in the already developed downstream activities (see also NPA, 2017; Senfuka et al., 2011). NPA (2017) notes that the investment required for upstream activities (iron ore mining, ironmaking, steelmaking) is greater compared to downstream activities (continuous casting and steel rolling). But private investors want to recover their finances quickly and therefore will always desire to invest where little capital is required so as to realise quick returns on their investments. As discussed above, the private sector is likely to take the path of least resistance to maximising profits and minimising risks. Therefore, if the same benefits are given to the continuation of existing activities as for investment in risky new activities, the most likely outcome is no change at all. The dairy sector provides another example. Even though it has been heavily supported for decades and can no longer be considered an infant industry, import tariffs remain very high at 60% (Frazer & Rauschendorfer, 2019). This virtually permanent and seemingly unconditional protection (as also seen in the example discussed above of Megha Milk being a UIRI incubatee for over six years) limits dairy producers' incentives to invest in productivity-enhancing technology (Karingi et al., 2016). Instead, the government could strategically differentiate incentives for investments within sectors to promote new investments along the value chain (such as ironmaking or powdered milk). Besides additional tax incentives, land allocations, or power subsidies, public procurement contracts (for example in the iron and steel sector) could also be made conditional upon investing in value-adding activities (e.g. ironmaking).
Shifting protection from import trade and primary production towards higher-value-added activities.	The trade regime currently favours importers of manufactured goods and producers of raw materials over domestic industrialists (Spray and Wolf, 2016). An expert quoted in Ggoobi et al. (2017) notes that "industrialisation in Uganda died the day government made importing so easy and more profitable than investment in manufacturing". Indeed, import protection, both at the national and EAC levels, appears to be skewed towards the production of raw materials including sugar (100%), rice (75%), and wheat (60%) (Karingi et al., 2016; Frazer & Rauschendorfer, 2019). In order to stimulate economic transformation, the trade regime would need to be reformed to favour domestic industrialists and value addition.

Table 13: Providing deeper support to priority industrial sectors and activities

Providing dedicated infrastructure and services in industrial parks and free zones.	The benefits offered by industrial parks and free zones are limited, as little infrastructure or dedicated services are provided (Calabrese et al., 2020), and land prices are often not far below market rates (interviews). Prioritising resources and phasing public investments into industrial park development (see Ggoobi, 2019) may allow the government to provide a more meaningful infrastructure and services, including warehouse shells, dedicated utilities infrastructure, industrial waste and wastewater treatment services, expedited customs clearance, and emergency response services, amongst others.
Ensuring low-cost finance for priority industrial sectors and activities.	Ugandan firms face domestic bank interest rates of above 20%, often with unfavourable terms. The commercial banks are highly risk-averse, investing in government bonds, real estate, telecommunications and other lower-risk ventures. Beyond the little amount allocated to it so far, the cost of capital is high even for UDB (interviews) - this constrains its ability to act as a catalyst for industrialisation. While the recapitalisation of UDB and UDC has begun, it is so far inadequate in scale and is likely to remain so, unless new low-cost sources of funds can be identified. GoU oversees a deregulated and liberalised banking sector and has not yet employed any of the tools used by successfully industrialised countries to "redirect" scarce financial capital into productive industrial sectors and activities by exercising more control over the financial sector. Such instruments come with serious risks of destabilising the macroeconomy and must therefore be carefully chosen, targeted, and managed, if used at all. However, the experiences of other countries - from South Korea to Ethiopia - warrant an open-minded investigation into the possibilities of exercising more state control over capital markets in Uganda with a view to increasing the flow of "growth money" (Lee, 2017) into industrialisation.
Stepping up investment attraction and facilitation efforts.	FDI will remain a crucial part of Uganda's industrialisation agenda, bringing much-needed capital, technology, skills, and global market linkages. UIA currently runs a largely reactive service and should instead adopt a proactive approach, with staff spending more time overseas identifying and approaching potential investors (interviews). Further, Uganda's conversion rate of planned investments into actual investments has been relatively low for FDI, at 27% (Shepherd, 2016). UIA also has little foreign presence, and instead hosts most of its promotional events in Uganda (interviews). For example, UIA (2017) mentions that only three outward missions were carried out in 2016/17 (to India, Japan, and Finland). It has been suggested that it would be more effective for UIA to have staff regularly travel, if not be based, abroad (interviews). This would enable them to meet investors in their home countries and provide a first point of contact to bring awareness to the opportunities that exist in Uganda as an investment destination (interviews). It is also important to actively target investors for priority sectors and to target the types of investors who demonstrate the willingness and capability to engage in value adding industries. More broadly, the investment attraction and facilitation functions are currently a relatively low priorities for the government, as reflected by UIA's status as an agency rather than a department or Ministry (interviews) and its small staff and budget (Calabrese et al., 2020; interviews). Investment attraction and facilitation should be elevated to a higher level of priority within GoU. Finally, the search for investors should pivot towards Africa and Asia, where most new investment is likely to come from (the president's individual efforts in China are a step in this direction) (interviews).

Fully leveraging public procurement to support industrial development.

While the Buy Uganda Build Uganda (BUBU) policy launched in 2014 has the potential to meaningfully spur domestic industries (SEATINI, 2019), it has not been integrated into law outside of the oil and gas sector. Further, directives to all MDAs to purchase goods and services from domestic suppliers where possible seem to have had only a limited effect, in part because of the absence of significant penalties for MDAs or industries that do not procure domestic inputs (interviews). In the electricity sector, it was envisaged that state agencies and parastatals would purchase a significant portion of their inputs - such as transmitters and switch boards - from domestic manufacturers, but quality and safety standards are not harmonised across MDAs and often misaligned with the production of domestic manufacturers (interviews). Similarly, steel is a major input for the construction of the Ayago, Isimba, and Karuma dams, as well as power transmission lines, industrial park infrastructure, water pipes, oil and gas pipelines, and other oil & gas infrastructure. But many opportunities to supply large infrastructure projects were missed, with NPA (2017) noting that such projects imported 99% of their steel requirements. GoU should require MDAs to procure domestically through the PPDA and BUBU (JICA, 2015). Finally, as noted earlier, Uganda's urban population is set to grow by a factor of five in the next three decades (World Bank, 2019). This will inevitably set off a massive construction drive, a significant proportion of which will be publicly commissioned. Local content policies and other industrial policy tools could ensure that this spurs domestic production of construction materials such as timber, steel, cement, and ceramics.

Fostering technical expertise in industrial ventures.

Technical skills are essential for technology adoption and diffusion and human capital accumulation is a key determinant of export diversification (Agosin et al., 2012). There are numerous examples of industrial ventures, including both government-run and private firms (such as in the processing of bananas, beef, potatoes, wood, and fruits) failing due to ill-informed management decisions such as the purchase of inappropriate machinery . According to one interviewee, a binding constraint to industrial development in Uganda is that there is "no critical mass of people who understand technology transfer - technology is imported without the skills to operate or repair it and without checking if it is appropriate for local needs" (interviews). Overcoming this constraint is likely to require highly trained technical experts with international experience, which can be achieved through facilitating joint ventures, access to international expertise, and international exposure for local staff. More broadly, the state can act as a catalyst of targeted human capital accumulation, according to existing and future needs, and in line with industrial policy objectives. When institutions for training specialised personnel are lacking, or when particular skills (or at least the bases for acquiring such skills) are not provided by the public sector, private firms either cannot grow due to the absence of skilled workers or have to train the necessary personnel in-house, which leads to high non-recoverable costs, if trained employees leave the company (Lebdioui, 2019b). In the absence of state interventions, skills mismatch may also lead to large graduate unemployment or a brain drain. Industrial development thus requires a collaborative framework between private and public actors, such as governments, public research units, and universities, to tackle skills mismatches and stimulate the accumulation of technical expertise required for industrial upgrading in value chains. The government could also facilitate the secondment of Ugandan managers and engineers to a joint venture partner firm's operation abroad or incentivising on-the-job upskilling efforts to transfer jobs and knowledge from expats to Ugandans.

*15 In Malaysia, for instance, all three delivery mechanisms are at work. The industrial development vision comes from the Economic Planning Unit, which also monitors progress; implementation is headed by the Ministry of International Trade and Industry; and specialised agencies follow up on sector issues.

Table 14: Coupling industrial policy support with discipline

Coupling FDI attraction and facilitation with smart conditionality to ensure that FDI serves the industrialisation agenda.	The Investment Code (UIA, 2019) states that investors receiving tax holidays and other incentives are required to source 70% of their inputs domestically, enter into joint ventures with a domestic firm owning at least 48% of the shares, train Ugandan staff, and create jobs. However, according to interviewees, none of these measures have yet been formally implemented, and there is little consideration of investor performance requirements at UIA (interviews). In practice, large investor agreements are negotiated on a case-by-case basis with high-ranking government officials including the Minister of Finance or even the President (interviews). The provision of full tax exemptions once an investor reaches a certain threshold (e.g. of domestic input sourcing, labour employment, investment value) may distort investor incentives, encouraging them to do just enough to benefit from the tax holiday (interviews). While rigid requirements may prove unhelpful in practice and case-by-case negotiation may be the most strategic approach, the current mismatch between paper and practice is a hindrance to investor confidence. Moving towards a progressive tax abatement as investors get closer to the government's goals of local content or investment value would minimise distortionary incentives. GoU could also consider empowering and capacitating UIA to play a stronger role in communicating and negotiating conditions on import and investment licences on a case-by-case basis while following certain agreed principles.
Targeting FDI at the binding constraints in high-potential sectors.	Investment deals should include incentives or requirements that ensure that foreign investors address the binding constraint(s) in their sector. These could include a shortage of capital, skills, technology, or international market linkages. In addition, further strategies could be developed to maximise the positive spillover effects of FDI, by linking foreign firms with domestic suppliers (e.g. through encouraging clustering, supplier linkages facilitation, supplier development, and/or local content requirements), and by facilitating the flow of knowledge, technology, skills, and capital beyond the boundaries of the foreign firm (e.g. through facilitating technology licencing and/or by compensating foreign firms for training local staff or letting them start their own firms, etc.). Another potential strategy is to promote joint ventures with international firms that can bring relevant expertise and affordable technology and negotiate a set of conditions whereby the investor can temporarily reap high profits in exchange for transferring skills and technology to the domestic workforce and partner firm. The foreign firm should be incentivised to do this seriously by ensuring that: (1) there is a credible risk of contract annulment if they fail to act, (2) they will reap benefits from cheaper Ugandan labour replacing expats, and (3) they will reap benefits from increased productivity and profits.

Managing domestic competition and "culling losers".

Efforts such as the Soroti Fruit Factory, the Tororo Fertilizer Factory, or Goodwill Tiles are examples of the government perhaps putting all of its eggs in one basket and thereby losing the ability to "cull losers", that is, to credibly threaten to withdraw support and follow through with this, without killing the entire sector as a result. The benefits of having multiple contending pioneer firms in priority sectors can be seen in the textile and apparel industry, where Tristar Textiles and Southern Range Nyanza, two heavily supported firms, failed and were folded and sold to the market-leading Fine Spinners. If only one potential pioneer firm had existed, there would have been no alternative for the government but to continue supporting the failing business or shut down the entire sector. The experience of UIRI demonstrates the difficulty of culling losers. UIRI has had serious challenges discontinuing support to failing incubatees or graduating successful ones (interviews), as well as facing political pressure to take in (and keep) incubatees based on their district of origin rather than on merit (interviews). Because support does not seem to be strictly conditional on performance, its incubatees are unlikely to feel the pressure to perform. There may also be a fear that, if tougher performance pressures were introduced, very few incubatees would remain (interviews). For future efforts, GoU should consider (1) exposing multiple pioneer firms in target sectors/activities to some credible domestic competition from the start, and (2) demonstrating its ability and willingness to "cull losers" in order to fully incentivise each firm to rapidly build production capabilities and competitiveness.

Table 15: Taking a more regional approach to industrial development

Building regional value chains.	Uganda's greatest short- to medium-term opportunities for industrialisation lie in the development of regional value chains and production networks. Building these networks would allow Uganda to become a regional leader in the production or provision of key products, components, and services, leveraging its strategic position in the centre of the region and its captive inland markets. The growth of regional production networks would make it imperative for Kenya and Tanzania to ensure strong trade links, which would enhance Uganda's access to coastal ports and thus its ability to enter and upgrade within global value chains. The COVID-19 pandemic demonstrates that regional production networks must be strengthened for economic resilience. Building regional production networks will require stronger transport and trade infrastructure, brokering of bilateral and regional deals, more regional collaboration on industrial policy including import protection, upgrading product standards, and broader regional collaboration to ensure peace, stability, and mutual trust. Uganda's industrialisation prospects are profoundly influenced by the regional market demand. For example, when South Sudan enjoyed a spell of security after its secession from Sudan, Uganda became its key supplier of a wide range of manufactured goods, with important effects on Uganda's overall export growth, but these exports all but vanished when instability returned, and many Ugandan producers, service providers, and traders saw their businesses crumble (interviews). It would be in the interest of industrial development for Uganda to be a stronger broker of peace in stability in South Sudan, eastern DRC, and the region more broadly.
Stepping up domestic efforts and fostering regional collaboration on transport infrastructure and trade facilitation.	Becoming a regional trade and logistics hub requires significant investment in infrastructure, from roads to border posts and trade clusters. Despite recent progress in expanding the paved road network, Uganda still ranks near the bottom of the quality of trade and transport-related infrastructure component of the World Bank's Logistics Performance Index (LPI), far below the sub-Saharan African average and other landlocked sub-Saharan African countries, and the quality of trade and transport-related infrastructure is consistently the lowest-scoring component of Uganda's LPI. Road transport links to the port of Mombasa as well as inland markets such as the eastern DRC are a major constraint on Ugandan exports to a significant captive market (interviews). As a consequence, firms see transport as a major constraint to business (World Bank, 2019; Calabrese et al., 2020)*16. While air freight may overcome these land transport constraints, none of Uganda's highest-productivity industries currently use air transport (Shepherd, 2016). But Uganda will rely on its neighbours for many parts of the regional transport improvements that are needed (JICA, 2015; Calabrese et al., 2020). As a result, GoU has no choice but to push for more regional collaboration and identify opportunities for its neighbours to benefit from investment in trade and transport infrastructure. Moreover, while significant efforts have been made to eliminate NTBs and improve trade facilitation standards and procedures (WTO, 2019; interviews), a 2016 study found that numerous non-tariff barriers, bilateral trade policy conflicts, and a lack of harmonised standards still restricted trade within the EAC (Calabrese & Eberhard-Ruiz, 2016). Customs and trade facilitation issues were found to take the longest time to be resolved, at an average of 10 months (Calabrese & Eberhard-Ruiz, 2016). Stepping up efforts to lobby for the quicker resolution of trade barriers in the EAC would benefit Uganda's industrial development.

*16 For example, in order to maintain Malaysia's position as the world largest latex goods exporter, the government has played a key role in building and safeguarding the country's image as a supplier of quality and reliable rubber products by setting stronger institutions to ensure quality control, as well as setting up new product quality certification schemes such as the Standard Malaysian Glove (SMG) (Lebdioui, 2019b). The government (through the Malaysia Rubber Board) has also ensured that domestic latex products meet international health and safety standards through intensified R&D activities and by offering product quality testing and compliance services for local firms. Such support is key because Malaysian products constantly face the challenge to comply with stringent standards and regulations imposed by export markets (ibid.).

Fostering regional complementarities and synergies in specific sectors.

As can be illustrated with reference to the iron and steel sector, there are large mutual gains to be made through more constructive regional collaboration on specific industrial sectors and activities. In order to develop iron reduction in Uganda, it will need to secure access to fuels from an EAC neighbour. One option is to import coal from Kenya, which has recently confirmed sizable deposits. Another option is gas imports from Tanzania, and an MOU has already been signed to that effect. Both of these pathways would require significant cross-country collaboration on fuel transport infrastructure and mutually advantageous extraction and trade deals that would need to be carefully negotiated. A third option - and possibly the easiest in terms of transport logistics - may be to import gas from Rwanda, which is currently using gas from Lake Kivu for electricity generation. Ignoring political animosities between the two countries, an economic win-win scenario could be for Uganda to import the Lake Kivu gas for its ironmaking, and in return guarantee the export of cheap and reliable electricity to Rwanda from Uganda's new dams, which will produce excess electricity for at least a decade (Walter & Aubert, 2018). This example demonstrates that there are deep regional interdependencies and that regional collaboration is needed to unlock progress on large-scale industrial projects such as ironmaking. The same regional neighbours that could supply the fuels needed to power Ugandan ironmaking are also the major potential demand centres for Ugandan steel exports. As such, the considerable regional market demand from the construction sector should be exploited.

Leveraging regional import tariffs for industrial development

It is in Uganda's interest to lobby for smarter regional collaboration on import tariff policy. Finding common solutions to collaborate and enjoy common markets, while at the same time building national industries, is paramount, particularly for relatively small states. The large regional market compared to Uganda's domestic market means that import protection would be much more powerful at the regional level than at the national level. The Common External Tariff could be used more extensively as a tool to develop regional industries. Karingi et al. (2016) argue that "tariffs on intermediates for which regional production already exists could be increased (e.g. steel and iron products), possibly through updating the sensitive items list", which would "increase the protection provided for local producers, help to prevent premature de-industrialization and encourage intra-EAC trade in intermediates and the development of new [regional value chains]". Again, the iron and steel sector is an illustrative case. Increased import tariffs on semi-finished steel products could push steel firms towards local production using Ugandan sponge iron. Kenya is a major existing and potential buyer of Ugandan steel. But Kenya's own steel sector is heavily reliant on imported semi-finished steel, so it would protest and probably block any country-level action by Uganda to raise import tariffs (e.g. through a stay-of-application) (JICA, 2015). Therefore, this would have to be negotiated at the EAC level, with a win-win scenario presented to Kenya, for instance through a reciprocal agreement for one of Kenya's high-potential sectors to be granted regional-level protection.

Moving towards smarter export requirements that foster regional trade.

The granting of generous tax and other incentives to investors who export 80% of their output outside of the EAC may not be the most strategic approach for Uganda. This approach is typical in special economic zones and export-processing zones which aim at attracting foreign companies and taking part in global value chains. In these instances, it is obvious that inputs and components would enter the country and exit again once the activity or stage of the value chain has been performed. At the international level, countries (including developing ones) are entering a dangerous "race to the bottom", lowering taxes to attract (volatile) FDI. At the same time, given the generosity of these fiscal incentives it is highly unlikely that a government could offer the same incentives to all firms operating in the country. Therefore, high export requirements are meant to avoid these firms moving to the country to access the local market, thereby creating unfair competition for domestic or regional producers that do not enjoy the same benefits. Still, this may not be the best approach for Uganda. First, Uganda's potential competitive advantages are likely to emerge more through regional trade than by entering global value chains, which would remain hard to access (due to geographical factors) and might lock the country in lower-value-added specialisations. Second, a rigid 80% requirement from day one is not conducive to the gradual building of production capabilities and international competitiveness. Following the experience of other successful industrialisers, a more inclusive and gradual approach to promoting exports among Ugandan domestic firms might be to grant firms domestic market protection and other production and investment incentives to begin with, allowing them to build important capabilities while gradually dialling up export targets, in direct negotiation with the firms. Another way to orient firms towards exports is to follow Japan's example, which exempted up to 80% of its industrial conglomerates' export revenues from taxation (Studwell, 2013), without imposing a strict minimum. Based on the experience of East Asian industrialisers, export subsidies and export loans are other powerful instruments to stimulate exports among domestic emerging market leaders. Compared to tax breaks (which require firms to already be able to export), subsidies allow firms to make the necessary investments to become exporters in the first place.

Upgrading production standards in Uganda's priority sectors would enhance its ability to become a regional leader.

Uganda's meat, poultry, fish, dairy, and feed products are frequently rejected in partner countries, such as Kenya - on the grounds that they do not meet sanitary and phytosanitary standards (interviews). Kenya, some argue, has used this as a tool to disrupt Uganda's dairy industry which poses a competition threat to Kenya's dairy production (interviews). Uganda's potential to become the clear regional leader in several agro-based industries therefore requires that its neighbours have no grounds on which to reject its products. In addition, raising industry standards is a powerful tool for incentivising firms to upgrade their technologies, skills, and production processes - in other words, to build value-adding capabilities.*17

*17 For example, in order to maintain Malaysia's position as the world largest latex goods exporter, the government has played a key role in building and safeguarding the country's image as a supplier of quality and reliable rubber products by setting stronger institutions to ensure quality control, as well as setting up new product quality certification schemes such as the Standard Malaysian Glove (SMG) (Lebdioui, 2019b). The government (through the Malaysia Rubber Board) has also ensured that domestic latex products meet international health and safety standards through intensified R&D activities and by offering product quality testing and compliance services for local firms. Such support is key because Malaysian products constantly face the challenge to comply with stringent standards and regulations imposed by export markets (ibid.).

Photo credit: Jjumba Martin

Conclusion

Achieving sustained economic transformation - moving Uganda's workers from low-value-added, low-income, low-skill activities into high-value-added, high-income, high-skill activities - will require effective industrial policy. History shows that industrial policy, especially selective industrial policy, has been key to driving sustained economic transformation across the world. Government action is needed to overcome fundamental market failures preventing the economy's firms from developing new productive capabilities.

After around four decades of being largely absent, disrupted, or ineffective, industrial policy is beginning to make a comeback in Uganda. The political elite's focus has started to tilt towards a more active role of the state in driving industrialisation. That shift is likely to be influenced by the recognition that the previous neoliberal policy framework led to shallow and stalled economic transformation, and by the fact that stronger support for active industrial policy is now available from China (now Uganda's largest creditor) as well as the World Bank (whose mainstream policy conditionalities have shifted). The more assertive role of the state in driving industrialisation has been seen through investment in infrastructure and, more recently, through fledgling attempts to promote specific industrial activities. We have seen that, on this latter point, the rhetoric remains stronger than the action.

Uganda's industrial policy success will be profoundly shaped by political conditions and the state's capacity to deliver effectively. Uganda's political settlement - characterised by high patronage demands to maintain an increasingly fragmented ruling coalition - makes it challenging to deliver industrial policy effectively. However, there is some cause for cautious optimism in the finding that some mutual interests, pockets of efficiency, and embedded autonomy have existed in the government and in its relations with the private sector. Uganda's delivery mechanisms for industrial policy currently lack the financial, political, and technical resource allocations as well as the central coordination mandate, needed to attain strong results. We have seen that in successful industrialisers, centralised, highly resourced, and politically insulated government bodies were at the forefront of industrial policy coordination and delivery.

In the short-term, all recommendations for Uganda's industrial policy will need to be grounded by the context that the government possesses very scarce political, financial, and technical resources. Creative solutions that work around this reality are needed. In this context, the study has made recommendations or presented options for the creation of delivery mechanisms, the targeting of industrial policy, and the selection of policy tools.

First, effective industrial policy in Uganda will require the creation of one or a few politically insulated and technically empowered pocket(s) of efficiency in charge of delivering and coordinating industrial policy. Options - which are not mutually exclusive and could well be mutually reinforcing - include a "super-ministry" of Industry, Trade, and Investment; an industrial policy delivery unit; and specialised sector development agencies. While these options each have strengths and weaknesses, the delivery unit - whether it reports to the Head of State, a ministry, or another body such as the National Planning Authority - appears to offer the best use of the scarce resources available.

Second, Uganda's industrial policy should focus on a small, carefully targeted, and risk-adjusted portfolio of industrial sectors and activities. The study has found that Uganda's current industrial policy efforts are broad and targeting has been largely inconsistent and lacked rigour. We propose several principles for targeting in the future. Overall, it will be important to settle on a set of priority industrial sectors and activities that is coherent and consistent across all government policies and strategies.

Third, that industrial development portfolio should be pursued via tailored, coherent, and mutually reinforcing packages of industrial policy tools. These packages should be designed to support and discipline the private sector, enabling and incentivising it to rapidly build new productive capabilities and international competitiveness.

Finally, the study has unearthed several questions that warrant further research. First, the relationship between diversified conglomerates and the state could be further examined. The leading business groups are assumed to be some of the regime's biggest supporters, but they tend to have interests in trade, real estate, services, and manufacturing. It is therefore unclear how interested they are likely to be in industrial policy that favours manufacturing, and how smart industrial policy might shift their incentives. Second, further research could explore the varied treatment (both in terms of support and discipline) that specific firms are receiving from GoU in practice, perhaps via an anonymised survey of a number of sector-leading firms. Third, it would be instructive to more closely examine firm capabilities, what is driving or blocking their development, and how the binding constraints on firm capability growth could be lifted. In addition, the recommendations of this study have focused on what GoU could do. Fourth, further work could explore how the findings discussed here could be used to inform the work of development partners providing Official Development Assistance to Uganda. Fifth, two gaps in the global literature on industrial policy targeting are: (1) the actual experiences of countries with targeting, which methods have been applied, and how successfully, and (2) the lack of a rigorous operationalised methodology that combines several quantitative and qualitative measures to assess the strategic value and feasibility of new economic activities. Finally, the same analytical framework should be applied at the sector level, where most of the factors reviewed in this study vary greatly, which in turn leads to different industrial policy conditions, outcomes, and recommendations from sector to sector.

ANNEX 1: Detailed Mapping of Current Industrial Policy Instruments

Product Market

Import tariffs

Being part of the EAC customs protocol, Uganda has harmonised its import tariff scheme with the EAC's Common External Tariff (CET). Under the CET, raw materials are subject to a 0% import duty, semi-processed goods are taxed at 10%, and finished goods at 25%.

When the EAC's CET came into force in 2005, the effect in Uganda was mostly to raise tariffs, reflecting the fact that Uganda had comparably low tariffs in place compared to its neighbours before this. This raised Uganda's cost of importing from outside the EAC and helps explain why Uganda now imports mostly from within the bloc (Karingi et al., 2016).

Table 16: Estimated effect of CET tariff changes on EAC partner states

	Kenya	Tanzania	Uganda
Number of tariffs lowered	3,216	2,364	1,353
Number of tariffs increased	1,144	1,224	3,066
Number unchanged	753	1,525	694

Source: McIntyre (2005).

Further, the CET contains a Sensitive Items list - negotiated at the EAC level - of goods that are given an agreed duty rate higher than that stipulated by the regular CET specifications. According to the EAC customs protocol, the following goods are subject to higher than normal import tariffs: milk products, maize, rice, sugar, cotton fabrics, bed/table linen, worn clothes, manufactured tobacco products, primary cells and batteries.

The tariffs that protect the sensitive items appear to have helped increase domestic production. For example, 85% of cigars traded in the EAC are produced by EAC countries (Frazer & Rauschendorfer, 2019). However, as long as high tariffs are maintained, this does not necessarily mean that the region's producers of these goods have become internationally competitive.

Table 17: The EAC Sensitive Items list

HS Code	Product	Agreed Duty Rate
04.01	Fresh Milk	60%
04.02	Powder	60%
10.1	Wheat grain	35%
1005.90.00	Maize (corn)	50%
10.06	Rice	75% or US$200/MT whichever is higher
11.01	Wheat flour	60%
1701.11.90	Juggery	35%
1701.11.90	Sugar	100% or US$200/MT whichever is higher
24.02	Cigarettes	35%
24.02	Other manufactured tobacco	35%
2523.29.00	Portland cement	55%
3605.00.00	Matches	35%
Several HS Codes under textile chapters	Khanga, Kikoi and Kitenge made of cotton	50%
Several HS Codes under textile chapters	Bed, Table, Toilet and Kitchen linen made of cotton	50%
6305.10.00	Jute bags	45% or 45 US cents per bag whichever is higher
6309.10.00	Worn clothing and other worn articles	50% or US$0.75/kg whichever is higher
8309.10.00	Crown corks	40%
85.06	Primary cells and Primary batteries	35%

In addition to the Sensitive Items list, Stays of Application allow an individual member state to apply different rates from those listed in the EAC protocol to specific products (including those on the Sensitive Items list) for a specified time period. For example, Uganda used stay of applications approximately 150 times in 2019 alone, both to raise and decrease the prevailing tariff rate on goods (EAC, 2019). Stays to raise the tariff to up to 60% on goods target processed materials such as paper products, processed coffee, and dairy spreads and fats. This points to some use of the tool to promote domestic industries in these sectors. Other areas where goods have been subject to raised tariffs of 35% rather than the CET 25% include processed products of iron and steel such as flat-rolled products, electrodes and transmitters, paper products and packaging, and furniture. Processed foods have also been targeted, including tomato pastes, cocoa, and sugar products. Goods that have been subject to tariffs lower than the CET rate include grains and cereals, motor vehicles, mattress-making inputs, and inputs into electric stoves. This suggests that imports of these goods have been used to develop domestic industries or are important in cases where they are staple foods or stoves for cooking.

Duty remission scheme

This tool allows for a "remission" or refund of import duties paid on goods used as inputs by manufacturing export firms. Firms apply for these to the Ugandan EAC committee responsible, composed of customs and other government officials. There is currently a 90% remission on sugar for industrial use imported by manufacturers and a 100% remission on inputs for the manufacture of the following goods:

- exercise books and other essential goods
- stranded wire used in manufacture of tyres
- treads for cold retreading used in the retreading of tyres
- packaging materials for use in the manufacture of goods for export
- raw materials for use in manufacture of aluminum cans for the dairy industry

As of 2017, 55 companies from Uganda had benefited from the EAC Duty Remission Scheme, although some noted that this instrument is often used by large companies, and applications might be subject to elite influence (Frazer & Rauschendorfer, 2019).

Export bans on raw material

The following raw materials are currently subject to EAC-wide export bans designed to induce domestic value addition, and retain them within the EAC:

- Waste and scrap of ferrous cast iron
- Wood charcoal
- Unprocessed timber from any wood grown in the Partner States
- Fresh unprocessed fish (Nile perch and tilapia)

Local content requirements

The oil and gas sector is subject to a number of local content requirements. Two Acts passed in 2013 to govern exploration, production, storage and transmission of petroleum products require oil and gas contractors to give preference to goods produced in Uganda and services rendered by Ugandan citizens and companies. The Acts also contain a requirement for any provision of goods or services which are not available in Uganda to be undertaken by a company that has entered into a joint venture with a Ugandan company

which must have a share capital of at least 48% in the joint venture. The laws also introduced the requirement to demonstrate commitment towards maximising training and transferring knowledge to Ugandans in order to equip them with the necessary management and technical skills and expertise relevant for the oil and gas sector. This strict and broad set of requirements will of course see little impact until major oil and gas projects get underway.

Foreign market access through trade deals

Beyond domestic and regional markets, Uganda has access to overseas markets through numerous regional and bilateral trade agreements. Uganda has been eligible for the AGOA with the USA since 2001, which allows for duty free access to the US market for some agricultural goods, apparel, footwear, wine, certain motor vehicle components, chemicals, and steel, among others, provided the requisite rules of origin certification and other standards are met. Further, Uganda benefits from the Trade and Investment Framework Agreement (TIFA) with the USA since 2001 as part of COMESA and EAC. The Everything But Arms agreement - part of the EU GSP - allows all LDCs duty-free and quota-free access to EU markets, with the exception of armaments, and quotas on certain goods such as sugar, rice, and bananas. Specific rules of origin (ROO) are required for exports to the EU, however, to ensure that they originate from Uganda wholly or in majority and meet EU quality and sanitary standards. ROOs vary across goods but do not place any other restrictions on industrial policy. In practice, however, the EBA scheme has had very little effect in improving market access for developing countries or trade diversification (Brenton, 2005), due to the strict ROOs for entry to the European market, and limited capacity in developing countries to reach these standards and technical requirements. In addition, the EAC has signed an Economic Partnership Agreement (EPA) with the EU, however it will not enter into force until the four pending signatories, Burundi, Uganda, South Sudan and Tanzania, have signed and ratified the agreement. The EPA would expand duty free access to the EU market for over 80% of tariff lines including crucial goods such as fisheries, and facilitate the flow of development assistance in key areas including trade facilitation, Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT) regulations, and agricultural development. The timeline for its ratification and entry into force is still unclear.

Income tax exemptions for manufacturing investment Under the 2009 Income Tax Regulations, 100% corporate income tax exemptions are provided for ten years for companies exporting at least 80% of finished consumer and capital goods, whether or not the raw materials originate in Uganda (WTO, 2019). In principle, any company (including outside the parks/zones) in a range of activities*18 is eligible for the 10-year tax holiday. Also eligible are: (1) any foreign-owned company whose investment value is above USD 10 million, (2) any EAC-owned company whose investment value is over USD 1 million, and (3) any company in agro-processing or a range of other priority activities (WTO, 2019) (URA, 2019). According to URA (2019), these companies must source 70% of their raw materials locally and directly employ at least 100 Ugandans (or 60% EAC citizens) in order to be eligible. The 80% export requirement does not appear to apply to firms outside the parks/zones according to official documents. Further, 5% of the cost of construction of industrial buildings

is deductible from income tax (WTO, 2019). In practice, these tax holidays tend to be negotiated on a case-by-case basis with the highest-ranking officials (interviews). The Uganda Investment Code of 2019 states general requirements such as that investors must employ and train local staff "to the fullest extent possible", but does not specify requirements. Further, AfDB (2014) found that "there is no enforcement mechanism to ensure the effectiveness of the incentives offered".

Export levies on raw material

Raw hides and skins are subject to a 15% levy on the FOB (freight on board) value of the exports. Exports of raw tobacco are charged a levy of USD 0.20 per kg. The rationale for these levies is to encourage value addition and promote domestic industry. An export levy is also imposed on fish and fish products, at a rate of USD 0.05 per kg for large fish, and USD 0.02 per kg for small fish and fishery industrial by-products. These levies were imposed to avoid indiscriminate fishing. The Uganda Coffee Development Authority collects a 1% cess on coffee exports and the Cotton Development Organization collects a 2% cess on the exports of cotton - these are reportedly used for sector development activities. (WTO, 2019)

Mugisa (2017) notes that the introduction of an export levy on raw hides and skins, coupled with an import duty of 10% on wet blue and crust leather imports (as part of the EAC CET), may have encouraged a number of tanneries to start up in Uganda. However, there is no further documented evidence that would clarify whether this was correlation or causation.

Import duty exemptions for export manufacturers

Firms in industrial parks and free zones receive duty exemption on imported raw materials and intermediate goods for exclusive use in the parks or zones. Firms that have exported their products can get customs refunds on all or part of any import duty paid on materials inputs imported to produce for export. (WTO, 2019) The Uganda Investment Code of 2019 specifies that foreign investors who import machinery, equipment or vehicles for their project will face concessional rates of import tariffs and duties, though these are not specified (UIA, 2019). In addition, licenced manufacturers "may hold and use imported raw materials intended for manufacture for export in secured places without payment of taxes. The annual licence fee for a bonded factory is USD 1,500 per calendar year or on pro rata basis if issued within a calendar year." (WTO, 2019).

VAT exemptions industrial services and materials

Companies can also claim VAT exemptions on feasibility study and design services for the construction of a factory or warehouse, and on the supply of locally produced raw materials and inputs (URA, 2019).

*18 These activities are: "processing agricultural goods; manufactures or assembles medical appliances, medical sundries or pharmaceuticals, building materials, automobiles, household appliances or manufactures furniture, pulp, paper, printing and publishing of instructional materials; carries on business in logistics and warehousing, information technology or commercial farming and technical or vocational institutes" (WTO, 2019)

Export market information

UEPB disseminates export market information to exporters and potential exporters. This includes connecting SMEs to trade fair information, logistical and transport support and through national campaigns. The agency is now working towards the Dubai Expo 2020, and developing a 5-year strategy. Focus sectors include cut flowers, processed fruit and vegetable goods, and cereals. The export development strategy mentions an export development fund, which would support some of UEPB's work to support struggling SMEs, but this has not yet been established, which limits the agency's activities and potential to improve export performance. It works with UBOS to tackle issues with achieving international standards, which was cited as a major obstacle, and reports on progress to MoTIC. This includes the number of firms reached, trade fair links, and programs conducted (interviews; UEPB, 2020). UEPB's budget is approximately UGX 2 billion annually (interviews).

Investment promotion

UIA organises and hosts a number of trade fairs for both domestic and foreign investors. The UIA (2017) Annual Investment Abstract (the latest available version) cites the organisation of two Ugandan Diaspora meetings in Kampala and Kigali, as well as an Investment Week in June 2017. The latter included a conference on Private Equity and Venture Capital as well as consultative meetings with various private sector stakeholders. In 2017, UIA hosted 19 missions from abroad including France, the United Arab Emirates and China. Reflective of increased Chinese interest in Uganda, UIA also co-hosted the Uganda-China Economic Investment and Trade Cooperation Forum in 2017. UIA further provides a comprehensive overview of the various free trade agreements Uganda is a part of, as well as the export benefits these provide for investors in the country.

UIA (2019) has published A Practical Guide to Doing Business in Uganda which outlines key facts about Uganda, its economy and demographics, and licencing and permit obtention procedures. UIA describes Uganda as a unique opportunity for investment, with a large, skilled labourforce, low labour costs, and stable economic and political conditions" and as "one of the fastest growing countries in the world". The document highlights various investment promotion measures that are in place to encourage both foreign and domestic investment (including tax incentives, industrial parks and zones benefiting from improved infrastructure, etc.).

GoU has recently begun working with the UK Department for International Development's (DFID) Manufacturing Africa programme to improve its investment promotion activities. Thus far, this support has taken the form of technical assistance to UIA as well as direct foreign investment marketing and facilitation by McKinsey & Company (under contract from DFID) with an initial focus on edible oils, pharmaceuticals production, and electronics (interviews).

Investment facilitation

UIA has set up a One Stop Services Centre (OSC) (UIA, 2019; WTO, 2019) for all activities relating to investment promotion, both domestic and foreign, in Uganda. UIA now offers a variety of services to investors through its online platform, e-Biz, including applications for business registration, land title verification/search, investment licences,

environmental and impact assessments, as well as an online payment platform for various tax transactions and online e-visa applications. In all, the OSC aggregates twelve previously distinct agencies into one, for the purpose of streamlining and facilitating access to information as well as the operationalisation of investment in Uganda.

Dedicated infrastructure development

The government has provided some leading individual companies with dedicated infrastructure, such as an electricity transformer for Roofings Ltd., a leading steel company (interviews).

Local content requirements in public procurement

The Public Procurement and a Disposal of Public Assets (PPDA) was passed by the Ugandan Parliament in 2013 and this regulation operationalised the PPDA Act of 2013 as amended (MTIC, 2014). PPDA provides for the local Preference and Reservation Scheme under public procurement, which guarantees the government to take affirmative action to push for procurement of local supplies from small medium industries when procuring goods and services by the Procurement and Disposal Entity (MTIC, 2014). For the Local Preference Scheme, margins include i) 15% for goods manufactured, mined, extracted or grown in Uganda, ii) and/or 7% for works or services that are provided by Ugandan contractors/consultants. Goods qualify as domestically-manufactured if value addition or labour is more than 30% and the production is manufactured and assembled in Uganda. The scheme gives preference to Uganda citizens or companies (incorporated or registered in Uganda) controlled by Ugandan citizens (i.e. owning more than 50% of the capital) in the procurement. The reservation scheme targets particular groups or communities by reserving certain public procurement contracts for their goods and services (MTIC, 2014). "The PPDA must consult over other relevant authorities as well as stakeholders to specify which procurement contracts are subject to the Reservation Scheme, and designate to a particular sector within a specified geographical area eligible for the Scheme" (WTO, 2019). Currently, the scheme is applied to micro-small and medium-sized enterprises (MSMEs), where firms have to be 100% owned by Ugandan citizens. The government is expecting to promote the development of local private sector enterprises, especially involving the smaller firms to engage in manufacturing, production and supply of local goods and services (MTIC, 2014). In the 2016/17 financial year, 52.8% of total procurement value was awarded to local suppliers (WTO, 2019).

The government has also entered into some direct supplier agreements with domestic manufacturers, including for the supply of army uniforms by a company owned by the military itself (interviews).

Trade facilitation support

The EAC Customs Union (EACCU) Protocol includes several trade facilitation standards and procedures that are recommended by the WTO, including simplification and harmonization of trade procedures and other measures. In 2009, the EAC Secretariat was given the responsibility of recording and monitoring non-tariff barrier issues, and the EAC Elimination of Non-Tariff Barriers (NTBs) Act 2017 further sought to enhance trade facilitation. This act has established a National Monitoring Committee, national focal points, and implemented a time-bound elimination of all NTBs across the EAC.

State-owned enterprises

The WTO Trade Policy Review (2019) lists 30 SOEs in operation in Uganda. SOEs mainly exist in the sectors of finance, agriculture, water utilities, mining, housing, electricity, and transport (Table 18). In some of these sectors, the Government is not directly involved in the running of the business, but remains a shareholder (WTO, 2019). The national airline has been added since this table was put together.

Table 18: List of current State Owned Enterprises

Name	Activity	State holding (%)
Amber House Ltd.	Assets ownership and management (Amber House)	100
Dairy Corporation Ltd.	Dairy products (assets leased to Sameer Agriculture)	100
Housing Finance Bank Ltd.	Commercial banking	49.2
Kilembe Mines Ltd.	Copper mining	99.6
Kinyara Sugar Ltd.	Sugar production (due for sale)	30
Mandela National Stadium Ltd.	Stadium management	100
Munyonyo Commonwealth Resort Ltd.	Hotel	49
National Housing and Construction Company Ltd.	Housing estates and construction services	51
New Vision Group	Newspaper printing and publishing/TV/radio services	53
Nile Hotel International Ltd.	Hotel services concessioned to TPS Ltd. t/a Serena Hotel	100
Phenix Logistics Ltd.	Textiles	96
Post Bank Uganda Ltd.	Commercial banking	100
Uganda Development Bank Ltd.	Development banking	100
Uganda Development Corporation Ltd.	Government investment	100
Uganda Livestock Industries Ltd.	Government ranches (all ranches leased out)	100
Uganda Seeds Ltd.	Agriculture and seed promotion	100
Uganda Telecom Ltd. (UTL)	Telecommunication	31
Uganda Prison Industries Ltd.	Government prison welfare services	100
Uganda Post Ltd. (Posta Uganda)	National postal services	100
Uganda Property Holdings Ltd.	Government assets management	100
Uganda Electricity Generation Company Ltd. (UEGCL)	Electricity generation (concessioned to Eskom Ltd.)	100
Uganda Electricity Transmission Company Ltd. (UETCL)	Electricity transmission	100
Uganda Electricity Distribution Company Ltd. (UEDCL)	Electricity distribution (concessioned to Umeme Ltd.)	100
Corporations established by law		
National Enterprise Corporation		
National Medical Stores Ltd.		
National Water and Sewage Corporation		

Provision of value chain infrastructure / functions

Some of Uganda's few sector development agencies have directly provided specific infrastructure or services in value chains where a collective action problem or other market failure was preventing the execution of crucial functions. For instance, two EU-funded projects delivered milk cooling and collection facilities (through the Dairy Development Authority) and upgraded landing sites for fishing boats (through the Fisheries Authority).

The Cotton Development Organisation has internationally accredited facilities for testing and grading bales of cotton lint in line with internationally approved standards. Other laboratories for testing agro-processed goods and other manufactured products are available through UNBS's facilities, Chemiphar (a Belgian-owned laboratory), the Government Analytic Laboratory, UIRI, and the European institution SGS. Of these, Chemiphar and UNBS's microbiology laboratories are the only ISO certified institutions. Chemiphar has recently received funding from both Agricultural Business Initiative (aBi) and Yield Uganda Investment Fund.

Business Development Services

The government funds the provision of business development services to SMEs - without specific focus sectors - through organisations such as the UIRI and Enterprise Uganda. UIRI is a government-owned incubator that provides a range of benefits to seed- and early-stage companies. Enterprise Uganda was created through a GoU - UNDP project and later turned into a private nonprofit organisation that still receives a significant portion of its funding from the government. Enterprise Uganda provides short- and long-term training and mentoring to businesses ranging from micro- to medium-sized.

Land Market

Provision of subsidised land to manufacturers

Companies operating in free zones or industrial parks are eligible for an exemption from the payment of stamp duty for land owned by UFZA and free land rent for five years (WTO, 2019). In some parks - such as Namanve - UIA has sold land to investors at a subsidised rate (estimated at roughly 80% of market value) (interviews). Land has been allocated for several free zones (none operational yet) and 22 public industrial parks and several privately owned and operated parks. The first industrial park to be operationalised was Kampala Industrial Business Park - commonly known as Namanve - hosts a wide range of manufacturers and warehouses. A further industrial park in Tororo is under construction - managed by a Chinese company - and will focus on mineral-based industries such as phosphate-based fertiliser and iron and steel.

A third park in Kaweweta - also managed by a Chinese company - will focus on agro-processing. The first free zone - the Arua Special Economic Zone - will focus on fish processing, timber processing, and feature pre-built factory units and warehousing facilities (interviews).

Provision of free land to specific investors

Land has been provided to investors in the dairy industry such as Amos Dairy (Karingi et al., 2016), along with provision of other supporting infrastructure such as roads, milk coolers and collection centres.

Further to this, UIA has been charged with acquiring and transferring leases to investors seeking to develop. This is done through the Uganda Land Commission, which records and manages the acquired land, and provides it to investors under

leasehold. However, the process of acquisition is largely ambiguous and non-transparent, including valuation, allocation, and other stages of the transfer of leaseholds. The recent transfer of the land under public schools is also reported to be for private investors seeking land in urban areas (Veit, 2010).

Another trend has been that of degazzeting forests, or rendering them legally un-protected, to transfer to private investors. This was seen in 1997 when around 1,000 hectares of land in Namanve was acquired by the government for industrial development. Similarly, in 2003, 2005, and 2007 such instances were seen in Bugala Islands forests, Pian Upe Wildlife Reserve forests, Kaiso-Tonyo forests, and Mabira forests (Veit, 2010). UIRI also provides operating facilities and land to its incubatees, mostly in agro-processing.

Labour Market

Staff training requirements on companies

In terms of laws that have explicitly linked skills and training to large industries, petroleum has seen some reforms. The two laws that specifically address training have been the Petroleum (Exploration, Development and Production) Act, 2013 and the Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act, 2013 (Natamba, 2016). Amongst other local content requirements for the sector, the law also outlines required skills and knowledge transfer relevant to the petroleum sector.

Training expenditure tax benefits

Companies can qualify for an income tax deduction of 100% of expenditure on training or tertiary education for five years when they train employees who are permanent residents. This incentive is provided indefinitely (URA, 2019).

Provision of training through public TVET institutions

The government's programme Skilling Uganda 2011-2020 was aimed at improving the quality, accessibility, and effectiveness of Business, Technical and Vocational Education and Training (BTVET) in the country, and linking it to productivity growth for a more capable workforce. The plan includes two-year courses, training sessions, construction of training institutions, and private-sector collaboration. It is partially funded by the USD 100 million World Bank Uganda Skills Development Project (USDP). As part of the initiative, several BTVET institutions as well as one certified teacher training institution, the Abilonino Teacher Training School, have been constructed.

In 2019, UIRI launched the Uganda Industrial Skills Training Centre, for upskilling in Namanve Industrial Park. This has been supported by the Chinese government, and aims to develop an industrial workforce focussed on some of the sectors being developed in the industrial park: production of agro-processing implements and machinery, electrical machinery and auto-parts.

As part of the Skilling Uganda strategy, there are a number of training institutes and centres of excellence across the country, including the Entebbe Dairy Training School, the Kigumba Petroleum Institute, and numerous agricultural and technical institutes (BTVET strategy 2010-2020). These span a range of sectors including agriculture, agro-processing, automotive parts and assembly, construction, business development, and one in engineering and manufacturing technology. In addition, numerous private technical schools

under the Uganda Association of Private Vocational Institutions (UGAPRIVI). The BTVET online portal provides a comprehensive list of these (Uganda BTVET, 2020).

International exchange programmes / scholarships

The government has distributed USD 28 million - funded through a World Bank loan - in scholarships for students in the Albertine region to develop skills relevant to the oil and gas sector. Although the scholarship scheme was announced in 2014, no scholarships had been disbursed as of 2018. GoU has only set up a Bursary Management Scheme Agency currently preparing awareness campaigns in the region (Uganda Radio Network, 2018).

Capital Market

Concessional lines of credit

The Agricultural Credit Facility was set up by the Bank of Uganda in 2009. Its aim is to facilitate the "provision of medium and long term financing to projects engaged in Agriculture and Agro processing, focusing mainly on commercialization and value addition", modernisation and mechanisation. Loans are disbursed to farmers and agro-processors through private finance initiatives (PFIs), usually at more affordable terms than are available from commercial institutions. The scheme operates on a refinancing basis: the PFIs disburse the loans to clients and seek reimbursement from BOU. The primary collateral for these loans is the machinery and equipment financed, and any other marketable securities provided by the borrower. The maximum loan amount to a single borrower is UGX 2.1 billion, but this can be increased to a maximum of UGX 5 billion following assessment on a case by case basis (for projects that add substantial value to the agricultural sector and the economy as a whole). Loans are awarded for a period of 6 months to 8 years (BOU website).

The Microfinance Support Centre (MSC) was set up in 2001 to provide microfinance institutions, SACCOs, producer cooperatives, village savings and loans associations and SMEs with affordable credit. It aims to support such enterprises to "increase productivity, income and employment opportunities for Ugandans, especially those who are active in the agricultural sector". MSC has 200 agents covering all parts of Uganda, located in 12 zonal offices. It partners with various stakeholders including the Uganda National Chamber of Commerce & Industry, MoTIC, the Islamic Development Bank, Private Sector Foundation Uganda and more in order to conduct its activities (MSC website). MSC has disbursed numerous loans at 10% interest rates directly to selected agribusinesses with some observers judging the distribution of these loans to be politically motivated (interviews).

Public concessional loans - Uganda Development Bank

UDB was reconstituted in 2016 and reportedly received UGX 50 billion in 2018 and UGX 100 billion in 2019 from the Treasury (Golooba-Mutebi, forthcoming). According to its latest annual report (UDB, 2018), total capital raised was UGX 114 billion in 2018 and UGX 187 billion in 2019, suggesting that capital was raised from sources other than GoU. Also according to the 2019 annual report (UDB, 2018), the bank disbursed a total of UGX 633 billion (roughly USD 172 million at February 2020 exchange rates) over the last five years (2016 - 2019). In 2018, 42% of disbursed funds went to the agriculture and agro-processing sector, 39% to manufacturing, 10%

to infrastructure, and the rest to human capital, tourism, and other sectors. The UDB's loan terms vary by project, as do interest rates. These are determined on a case-by-case basis depending on the nature of the business, project cash flow and implementation schedule, and source of funds. However, UDB notes that tenors are up to 15 years, with grace periods up to 3 years, and interest rates up to half of market rates (12-13%) (interviews). The sector focus is very broad, including agro-industry, mineral-based industry, "other" manufacturing, and even some traders of essential goods (interviews).

Public venture capital - Uganda Development Corporation

UDC was revived in 2016 after having been shut down in the 1990s during the privatisation drive. It provides "venture capital" The current strategy is to "invest in areas that have the greatest multiplier effect on the Ugandan economy, that maximize the utilization of local raw materials as well as reduce the country's trade deficit" (UDC, 2019). It has so far invested in Kalangala Infrastructure Services Ltd (KIS), Soroti Fruit Factory, Kigezi Highland Tea Ltd (KHTL), and Atiak Sugar Factory.

Target sectors for further investments include agro-processing (tea, coffee, cocoa, fruit, grain, cassava and cotton, sugar cane), minerals processing (iron and steel, limestone, copper and cobalt, brine, glass and petrochemicals, marble), and fast-moving consumer goods (FMCGs).

UDC has so far received about 30% of the UGX 500 billion government recapitalisation promised in the 2016 Act re-establishing the body; most of its current funds were raised from other sources such as overseas Development Finance Institutions (interviews).

Technology Market

R&D grants

MoSTI is in charge of coordination and implementation of research and technology activities, through its own directorates, and UIRI and Uganda National Council for Science and Technology (UNCST). This involves establishing a National Research and Innovation Fund to promote supporting regulations and legislation, funding research, as well as provide infrastructure for research institutions in a number of fields including biotechnology, ICT, nanotechnology, and engineering (MoSTI Ministerial Policy Statement Financial Year 2017/2018).

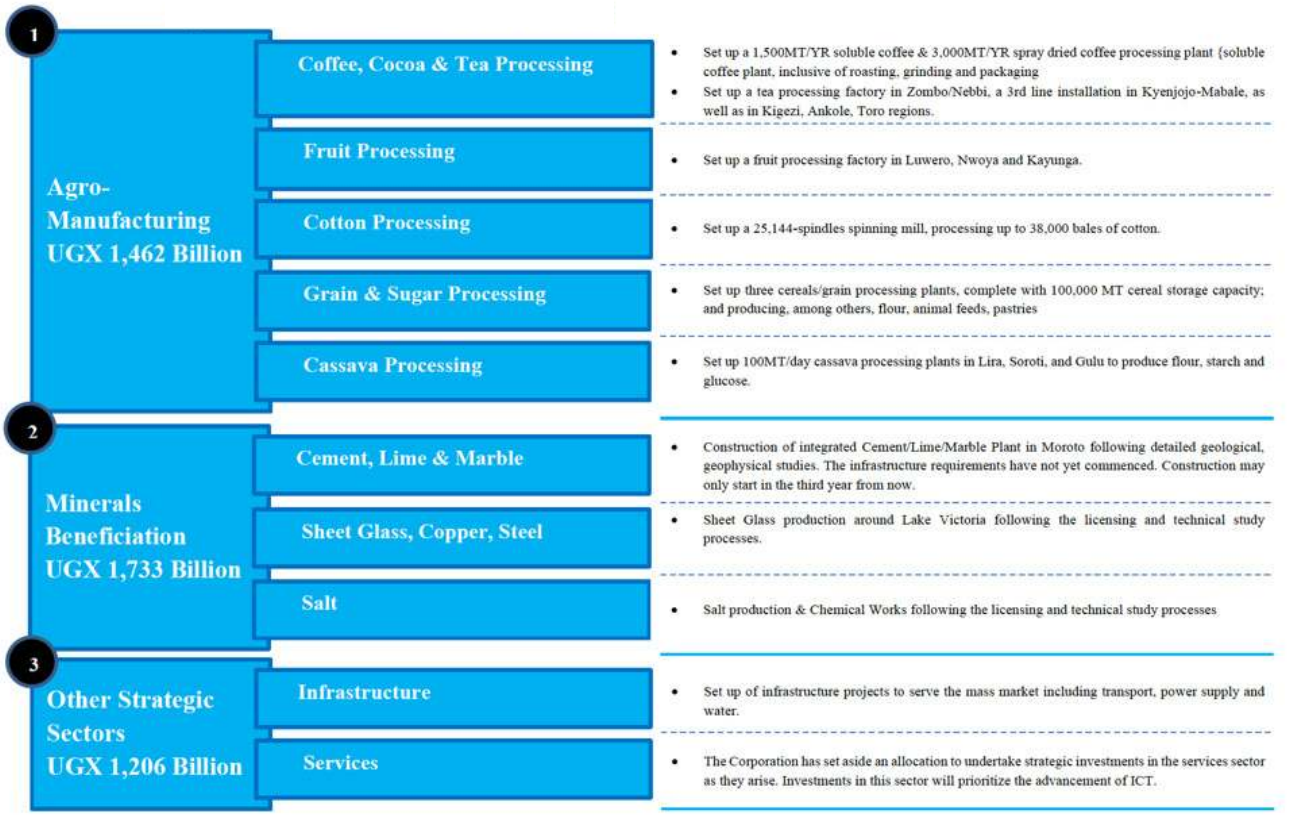
An Innovation Fund was established in the financial year 2017/18, to support innovation, product development and commercialisation. UNSCT supported research for developments such as the soil conditions monitoring technology (SOCOMOT) technology, which analyses soil fertility, and developing drought tolerant and disease resistant crops and livestock varieties like sorghum, soya bean and cassava (MoSTI Ministerial Policy Statement Financial Year 2017/2018).

Import duty exemptions on plant and machinery

Plants and machinery used for agriculture, manufacturing, oil and gas production, raw materials, pharmaceutical packaging, hotel equipment, and certain fertilisers are exempted from import duties and VAT. Firms in industrial parks and free zones, and manufacturing under bond, receive exemptions on import duties on machinery and equipment, and spare parts for exclusive use in the parks / zones.

Figure 14 below provides an overview of UDC's investment aspirations over the next decade, from its 2020 - 2030 strategic plan (UDC, 2019).

Figure 14: List of planned UDC investments 2019/20 - 2029/30



Source: UDC (2019)

An initial allowance of 50% of value is available in respect of plant and machinery, which is increased to 75% if such assets are outside the areas of Kampala, Entebbe, Namanve, Jinja, and Njeru. During the year, if a new industrial building or expansion to an existing one is put to use for the first time, 20% of the related cost is available as allowance (URA, 2019).

Public research institutes

The National Agricultural Research Organisation (NARO) is the major agricultural research institute in Uganda, which coordinates and conducts research with other research bodies as well. It was established in 2005, and is a public body. It works with several other research organisations, including the National Fisheries Resources Research Institute, National Forestry Resources Research Institute, the National Livestock Resources Research Institute, and several regional institutes. Its main role is to coordinate and guide national agricultural research and policy advice. It also provides grants and mobilises funds for further research. It is currently working with Kenyan and Tanzanian counterparts to improve the quality and nutrition density of regional mung beans, developing biodiversity in fisheries, and working with regional institutes on agro-machinery (NARO, 2020).

Support to universities for industrial research

The EAC protocol includes a section on promotion of "research and technological development through market-led research, technological development and the adaptation of technologies", through sharing of resources and research, and support and collaboration with the East African Science and Technology Commission and other institutions, among other activities. This includes implementation and coordination of support legislation, regulation, and the establishment of a Research and Technological Development Fund to implement the relevant clauses (EAC protocol).

Nationally, the Presidential Initiative on Science and Technology was established in 2010 to support UIRI, Makerere University, and UNSCT in R&D activities. This initiative has funded the Kira EV project to construct electric buses. The Ministry of Education and Sports and MoFPED were also directed to support innovations at Makerere University's Faculty of Technology for up to UGX 25 billion between 2010 and 2015.

Technology extension programmes

In January 2020, the President commissioned a new Industrial Skills Training Centre at Namanve industrial park under the auspices of UIRI with a grant from the Chinese government. Part of the centre's mandate is to support industrial firms with the uptake and development of new production technologies (interviews).

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