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1966-2016

SENEGAL

A GIFIID Pilot towards Quick Wins in Inclusive and Sustainable Industrialization



July 2016

SENEGAL

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For comments:

This technical project report has been prepared for the UNIDO project “Integrated Industrial Upgrading and Enterprise Development Approach”. Comments and suggestions on issues raised in this document are welcome and may be addressed to Nilgun Tas at n.tas@unido.org

SENEGAL

A GIFIID Pilot towards Quick Wins in Inclusive and Sustainable Industrialization

July 2016



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

FOREWORD



The global community has united around the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) and 169 associated targets. Between now and 2030, the global community commits to end poverty and hunger everywhere, build peaceful, just and inclusive

societies, promote gender equality and the empowerment of women and girls, and ensure the lasting protection of the planet and its natural resources. As a driving force for economic and social development and poverty elimination, the nexus of industry, infrastructure and innovation is universally recognized through SDG 9.

UNIDO is well placed to support global efforts to achieve the SDGs. Our mandate of inclusive and sustainable industrial development (ISID) calls for an expansion of productive capacities, resulting in income generation through decent work, while at the same time safeguarding the environment and ensuring efficient resource use. To operationalize ISID, UNIDO is currently implementing its Programmes for Country Partnerships (PCP) approach, which is designed to mobilize large-scale investments for accelerated industrial development. The PCP, through the implementation of UNIDO's integrated technical assistance services, aims at channelling financial and technical resources from government, the private sector and development financial institutions towards achieving ISID. The PCP model is being piloted in two African countries, Ethiopia and Senegal, and a third PCP has been recently launched in Peru.

UNIDO has a solid track record of providing policy-related advice to countries around the world to achieve dynamic structural change, generating new fast-growing activities characterized by higher value added and productivity, increasing returns to scale and sustained job creation. Experience shows us that sector-focused industrial policies have played an essential role in jump-starting development. It is crucial that policies target industries that are compatible with a country's comparative advantage, in sectors that truly reflect the country's existing and potential strengths.

To operationalize and test a sector targeting approach that matches emerging trends in global markets to an economy's existing and potential strengths, UNIDO teamed up with the National School of Development (NSD) of Peking University, led by Professor Justin Lin, to develop the Growth Identification and Facilitation for Industrial Upgrading and Diversification (GIFIUD) tool. This technical project report summarizes the observations of the UNIDO-NSD GIFIUD technical team in Senegal and sets a basis for learning lessons on sector targeting.

In closing, I extend my sincere gratitude to H.E. Mr. Mahammed Boun Abdallah Dionne, the Prime Minister of Senegal, who invited and strongly supported UNIDO to apply GIFIUD in Senegal.

A handwritten signature in blue ink, consisting of stylized Chinese characters, positioned above the printed name and title.

LI Yong
UNIDO Director General

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This technical project report SENEGAL A GIFIID Pilot Towards Quick Wins in Inclusive and Sustainable Industrialization was prepared under the overall guidance of Professor Justin Lin, Honorary Dean of the National School of Development (NSD), Peking University, China and the committed stewardship of H.E. Mr. Aly Ngouille Ndiaye, Minister for Industry and Mines (MIM), Senegal.

The report is the result of fruitful discussions and close collaboration between the members of a cross-institutional team co-led by Nilgun Tas (UNIDO) and Xiaofeng Shen (NSD). Other members of the core technical team, without whom this report would not have been possible, were Rafik Feki, Nobuya Haraguchi, Nicola Cantore, Aminata Fall, Anne-Cecile Souhaid and Charles Fang Chin Cheng of UNIDO and Yan Wang, Xiaofang Hua and Haixiao Wu of NSD.

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Technical Advisor, MIM, Mamadou Syll Kebe, Director of Industrial Redeployment, MIM, Momath Ba, Managing Director, APROSI, Mamadou Lamine Ba, Director for Business Environment, APIX, and experts of the PSE Bureau for Operational Monitoring (BOS), Ministry of Economy, Finance and Planning, Ministry of Commerce, Informal Sector and Promotion of Local Production, Ministry of Labor and Employment, and numerous discussants in the private sector.

The report further benefited from constructive comments and field level support by Victor Djemba, UNIDO Representative to Senegal and Tidiane Boye, Team Leader for UNIDO PCP for Senegal.

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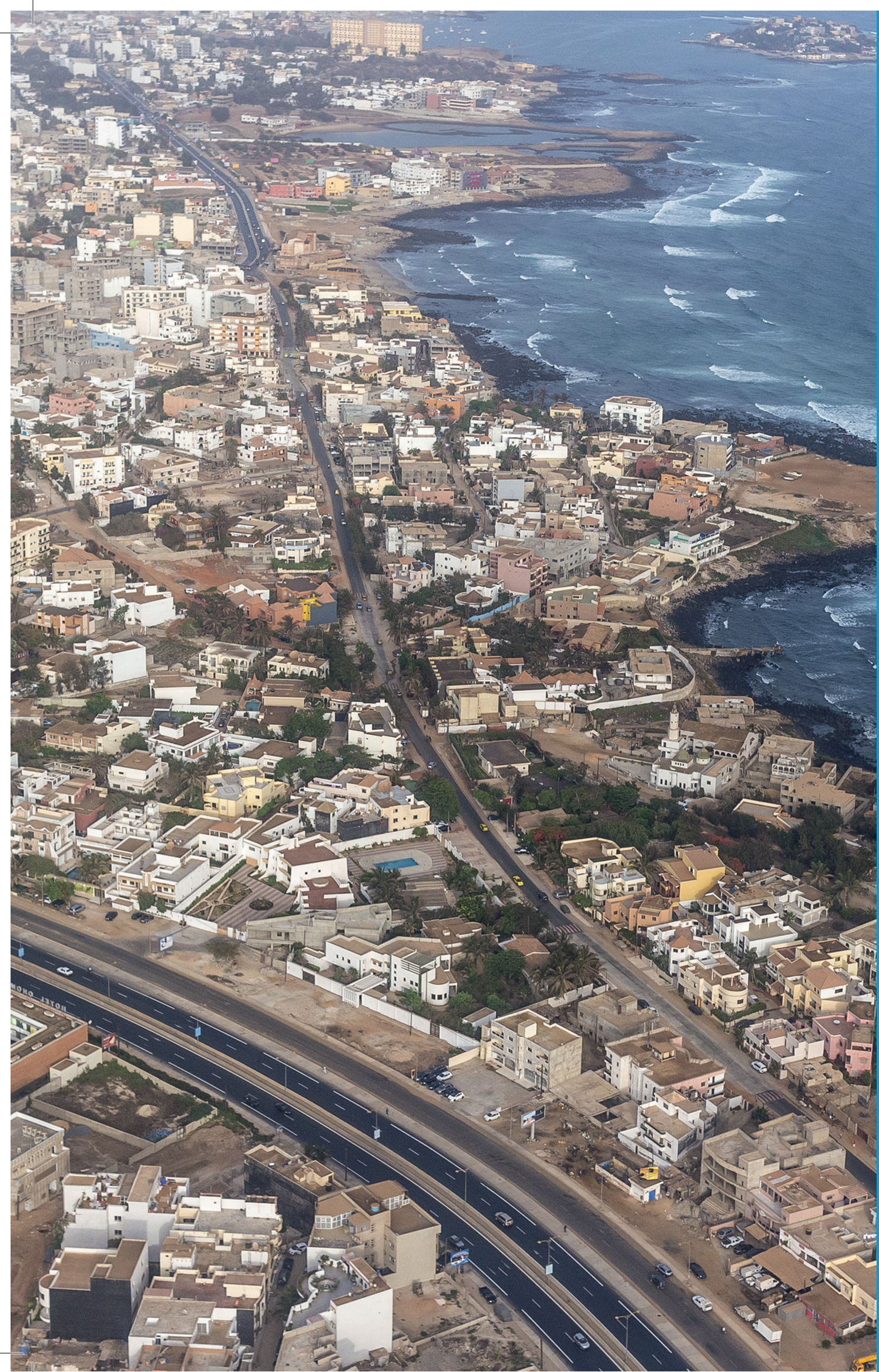
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EXECUTIVE SUMMARY

1. The Plan Senegal Emergent (PSE) undertaken by the Government of Senegal calls for an innovative and multi-disciplinary strategy to accelerate growth and development in the upcoming decades. The focus will be on industrialization and export diversification. UNIDO through its Senegal Programme for Country Partnership (Senegal PCP) is uniquely positioned to support the Government to achieve the PSE goal.
2. GIFIID (Growth Identification and Facilitation for Industrial Upgrading and Diversification) is an important component of the Senegal PCP, with a specific objective to assist the government to achieve “quick wins” and establish critical milestones of the longer-term reforms envisaged by the PSE. The approach is to target export-oriented and FDI-led industrial sectors selected based on the country’s latent comparative advantage and international market opportunities. If successful, GIFIID will lead to immediate job creation, income generation, and export diversification – all of which are urgently needed by Senegal. The ultimate goal of GIFIID is to achieve a fundamental structural transformation of Senegal’s economy, making it a competitive player in the globalized market.
3. GIFIID analyses identified three sectors as candidates for priority support to achieve quick wins based on international market opportunities that are emerging: wearing apparel, leather and leather goods, including footwear and commercial agriculture, including horticulture and food processing. All three are labor-intensive, strongly aligned with Senegal’s latent comparative advantage; they all have a long tradition in domestic production; and they have potential for accessing new global market space. International market opportunities are especially important to Senegal, because, as a small economy, the country’s best chance to grow dynamically is to join global value chains. It is therefore critical for the country to act fast to seize global market opportunities as soon as such opportunities emerge.
4. Senegal has achieved some remarkable results in promoting an internationally competitive horticulture sector in recent years. However, its wearing apparel industry and leather and leather products manufacturing, including footwear are currently struggling. To further diversify the country’s economy, including its exports, it is recommended to initially target these two sectors for focused support. The GIFIID analysis suggests that the international market space for these sectors is opening up due to the declining competitiveness of the currently dominant exporters, such as China and India, due to the rising wages in those countries. Senegal should seize the opportunity. The main factors which have helped its horticulture industry to attract foreign investment—a stable political environment, favorable geographic location and, above all, a hardworking and fast-learning people—will play in favor of developing wearing apparel and leather industries.
5. Foreign direct investment (FDI) can be critical to helping Senegal jumpstart the identified sectors and seize emerging international market opportunities. The present trend of “sunset” industries relocating out of China and other emerging markets, under the pressure of rapidly rising labor costs in those economies, offers a great opportunity for Senegal and other lower-income countries to attract investment from those countries and develop their “sunrise industries.” The timing is better than ever.
6. It is important for Senegal to be aware of the increasingly intensified competition for new investment around the world, including Africa. Proactive policy efforts are required to win the competition. An enabling business environment is essential, but the country should not wait till all conditions are in place. Instead, Senegal can take small, but persuasive steps for short-term results while continuing comprehensive reforms and investments planned under the PSE. “Quick win” programs, such as developing special economic zones (SEZs), designing special investment incentive packages, and targeting prioritized investment are all effective to attract “first comers” into the country. Initial successes can create a powerful “snowball effect,” encouraging additional investors to follow and reinforce the public support for long-term policy and regulatory reforms.
7. “Quick wins” are not necessarily “easy wins.” There are political risks and technical hurdles. Success requires strong political will of the government, concerted institutional commitment, and effective public-private sector partnerships. Collaboration among development partners can help Senegal move a long additional mile. UNIDO is poised to work with the Government of Senegal to achieve the “quick wins” through a multi-disciplinary array of technical services, in close collaboration with other development partners of the country. The recently launched Senegal PCP by the Government of Senegal and UNIDO testifies to a mutual commitment helping Senegal enter into the world ranks of higher achievers in inclusive and sustainable industrialization and economic development.



CHAPTER I: INTRODUCTION

The Plan Senegal Emergent (PSE) – Senegal’s rising aspiration

8. Senegal is at a juncture of great economic opportunity and challenge. As one of the most politically stable countries in Africa, and after years of significant public investment in improving physical infrastructure, the country is poised to fast-tracking economic growth in the coming years. The Plan Senegal Emergent (PSE), launched by the current leadership in 2014, envisages the acceleration of growth rates from 4.5% in 2014 to 6.7% in 2015 and, again, to 8% by 2017. If sustained, as the Plan aspires, such growth rates should put Senegal on the path leading to the status of an emerging economy by the year 2035.
9. To achieve the ambitious goals of the PSE, Senegal has to meet some major challenges. Internally, its GDP growth in the recent decade has been sluggish, averaging at 3.4% in 2006-2013, a record that is much lower than the average 6% for the whole sub-Saharan Africa (SSA) during the same period. Poverty has declined only slightly, presently standing at a high level of 47 percent of the population. Moreover, rural-urban migration has quickened resulting in about half of the nation’s population now living in cities, which puts pressure on urban job creation, especially among the youth. Externally, the country’s exports – 25% of its GDP – remain highly dependent on primary commodities that are vulnerable to climate shocks and global price volatility. Foreign direct investment (FDI) inflows have lingered at a meager 2% of GDP, compared unfavorably to the average of over 7% for other lower middle-income SSA countries.
10. To break through the trap of low growth and high poverty, the PSE calls for a new strategy that aims to achieve significant structural transformation. At the core of the new strategy is the diversification of the economy. In a joint 2015 Policy Discussion Paper by the Senegal Government and the International Monetary Fund (IMF), it is envisaged that, to unlock growth, Senegal requires “emerging sectors” that are “inclusive and job-rich”¹. Sectors such as labor-intensive manufacturing, exportable agribusiness, and tourism, are critical to creating new jobs, generating broad income, and increasing Senegal’s ability to divert external market volatility risks. In the long run, they will enable the country to maximize

its comparative advantages and provide milestones for Senegal’s journey towards modernization. The ultimate goal, as set by the PSE, is to transform the country into a competitive industrial hub in West Africa in the foreseeable future².

11. The goals set by the PSE are high, but achievable. It requires – apart from efforts to maintain political and macroeconomic stability – concerted efforts to encourage private investment, both domestic and foreign. In particular, reforms designed to promote FDI and FDI-led exports deserve to be a priority, considering the initial need for capital, technology and international market access. As seen worldwide, FDI can help countries jump-start some sectors where and when international opportunities exist. Well-designed and implemented policies and programs promoting FDI and enhancing its positive impact on the domestic economy can help Senegal accelerate the process to achieve some of the PSE goals. Innovative collaboration between the government, the private sector, and the development partners will play a significant role in this process.

UNIDO assistance through Programs for Country Partnerships (PCP)

12. The United Nations Industrial Development Organization (UNIDO) is uniquely positioned to assist the Senegal Government in achieving some of its development goals articulated in the PSE. UNIDO has for many years supported developing countries in sustainable industrialization. Its expertise and geographic coverage have enabled many countries at national and sub-regional levels in tailor-designing industrial policies as well as pragmatic policy implementation schemes. Over the years, UNIDO, together with its Member States, has been drawing lessons from both successes and failures in exploring new paths. Its programs often generate strong demonstrative impact and lay the groundwork for larger actions, when conditions for scaling up are ready.
13. In 2013, UNIDO General Conference, held in Lima, Peru, set Inclusive and Sustainable Industrial Development (ISID) to be its post-2015 mandate. The Lima Declaration on ISID aims to promote smart policies and innovative programs to accelerate inclusive and sustainable industrialization that will benefit all citizens. UNIDO and its Member States have agreed that ISID must be achieved through strong

1 IMF 2015, “Senegal: 2014 Article IV Consultation and Eighth Review Under the Policy Support Instrument – Staff Report; Press Release; and Statement by the Executive Director for Senegal” January 2015

2 Senegal Government 2014, Plan Senegal Emergent (PSE), February 2014

partnerships at the country level. It was decided that the first Programs for Country Partnerships (PCP) are to be piloted in Africa, the region currently most in need of ISID assistance. Senegal, at its Government's request, has become one of the first PCP pilots.

14. The objective of the Senegal PCP is fully aligned with the priorities in operationalizing key ISID aspects of the Plan Senegal Emergent, building upon UNIDO's services and achievements of past industrial development programmes in the country³.
15. The Senegal PCP embraces efforts in three inter-related areas: (a) formulating and implementing industrial policies that promote domestic and foreign private investment, (b) developing industrial parks/hubs for labor-intensive manufacturing activities, and (c) promoting three "agro-poles" (livestock, fruits and vegetables and fishery) that are value chains of high-potential in rural areas. UNIDO will employ the PCP as the platform to deploy a multi-disciplinary package of its services, in collaboration and coordination with Senegal's public and private sectors and Senegal's partners, to help speed up the progress in each of the above areas that are strategic to the structural transformation of Senegal's economy⁴.

GIFIUD – An innovative way towards "Quick Wins"

16. As part of the multi-sector assistance package offered by the PCP in Senegal, UNIDO and its collaborating partner, the National School of Development of the Peking University (NSD/PKU), jointly designed a pilot initiative, entitled "*Growth Identification and Facilitation for Industrial Upgrading and Diversification*", or **GIFIUD** in short. This initiative serves as a strategic instrument to identify and implement "quick wins" within the PCP.
17. The rationale of GIFIUD is straightforward: while the government is committed to wide-ranging and long-term reforms for the structural transformation of the economy, policies and programs should also be deployed to render concrete, measurable results at various stages along the way. This requires policy makers to identify the areas where "low hanging fruits"; early opportunities exist, and prioritize such areas for focused support, especially when resources are limited, in the initial stages. Early results, or "quick wins", are critical both economically and politically.

They create jobs, generate income, and diversify the country's exports – relatively quickly. More importantly, by demonstrating successes, even in a small and partial way, they send the right signal to the public and private stakeholders and build the necessary confidence in more profound and long-term reforms.

18. GIFIUD is based on the theory of *New Structural Economics (NSE)*, championed by Professor Justin Lin, former Chief Economist of the World Bank, and currently a Special Economic Advisor to Senegal at the request of its President. NSE advocates for systematic targeting and focused public policy support for prioritized industrial sectors as an effective way for lower income countries to achieve economic catch-up. Different from the old school of structural economists, the NSE emphasizes the identification of sectors according to the economy's *latent* comparative advantages and the use of industrial policies to *facilitate* rather than protect the prioritized sectors. The NSE builds upon the empirical evidence of the economic successes in recent world history, ranging from Japan in the post-WWII era, to the four "Asian tigers" following Japan, and, more recently, to the rapidly emerging China. These cases, known as the "Asian Miracle," demonstrate that, despite the different political and economic settings, government intervention, when smartly designed and implemented, can work effectively and hand in hand with market forces to create highly desirable economic results.

19. In recent years, practices advocated by NSE have gained traction, particularly among lower-income countries around the world, including many in Africa. The Asian Miracle has made a far-reaching impact. A growing number of governments are turning to strategies combining proactive public policy intervention and market opportunities. If such a model worked well in East Asia, why shouldn't it work in Africa?

20. Of course, "quick wins" are not necessarily "easy wins." They involve political risks and face technical challenges. All countries have to determine their development strategies pragmatically based on their political and economic context. However, to succeed, clear political vision and public-private partnerships are pre-conditional. It also requires high levels of professionalism. Well-intended government interventions, such as sector targeting, targeted investment promotion, prioritized industrial upgrading and modernization, special economic zones (SEZ), among others – are all at once a science and an art, requiring systematic and empirical analysis as well as diligence and creativity required

3 UNIDO, "Programme for Country Partnership for Inclusive and Sustainable Industrial Development: Senegal," Version 2.1, 11 December 2014.

4 Ibid. p. 26-27.

to assemble an effective operation. Experience and capacity will need to be built up through practice, including, sometimes, making mistakes. But, not to try is a huge mistake – it leads to no progress and, worse, risks lagging further behind, as the whole world is moving forward.

21. GIFIID is also underlined by another belief: that the timing for lower income countries to speed up the catching-up process in industrialization is never better. The international market is undergoing dynamic changes that are creating valuable opportunities for countries like Senegal. Especially, China and other emerging countries are experiencing declining competitiveness in many labor-intensive manufacturing sectors due to rapidly rising wages at home. Many firms in those so-called “sunset” industries are actively seeking to relocate to places where cheaper labor could be found. This trend opens up a great opportunity for lower income countries at earlier stages of industrialization – it offers both new international market spaces for them to enter, as well as potential investment inflows. GIFIID, by focusing on smart and highly targeted investment promotion and industrial upgrading, could provide a powerful instrument to help Senegal jump-start and expand some of the “emerging sectors” envisaged by the PSE.

GIFIID – the Senegal pilot

22. UNIDO and the National School of Development, Peking University (NSD/PKU), Professor Lin’s think-tank institute, have formed a joint technical team, composed of experts from both sides, for the implementation of GIFIID on a pilot basis. Professor Lin personally serves as the chief technical advisor to provide intellectual guidance and advice.
23. As a new UNIDO product, GIFIID is being piloted in a limited number of countries. The pilots will test the theoretical and practical approaches of GIFIID and allow UNIDO and the participating Member State governments to learn together first-hand. They aim to demonstrate positive results in the implementing countries and provide valuable inputs to improve the program design, which will benefit other UNIDO Member States to follow.
24. Pilot countries are selected based on the strong self-commitment of the participating Member States, supported by a request from the highest levels of the Government and a designated counterpart team composed of main public and private stakeholders in the country.
25. Based on Member State consultations in the fall of 2014, two countries became the first GIFIID pilots: Ethiopia and Senegal. In the case of Senegal, the Prime Minister made the official request for the GIFIID pilot. He also enlisted a counterpart team led by the Ministry of Industry and Mines, and including representatives from:
 - Prime Minister’s Office;
 - PSE Bureau for Operational Monitoring;
 - Ministry of Economy, Finance and Planning, represented by CEPOD (Center for Policy Studies for Development) and Customs and Taxes Directorate;
 - Ministry of Industry and Mines, represented by APROSI (Agency for Management and Promotion of Industrial Sites) and the Industrial Redeployment Directorate;
 - Ministry of Investment Promotion, represented by APIX (Agency for Investment Promotion) and Investments and Partnerships Directorate;
 - Two representatives of the private sector;
 - Ministry of Commerce, Informal Sector and Promotion of Local Production and SMEs; and
 - Ministry of Labor and Employment.
26. The UNIDO-NSD/PKU joint technical team GIFIID is co-led by Fatma Nilgun Tas, the UNIDO Task Manager and Xiaofang Shen, Technical Team Leader from NSD/PKU. Core members of the team include Yan Wang and Xiaofeng Hua from NSD/PKU and Nobuya Haraguchi, Nicola Cantore, Rafik Feki and Aminata Fall from UNIDO. Expert services of Anne-Cecile Souhaid (special economic and industrial zones), Ahmadou Aly Mbaye (Senegal business environment) and Charles Fang Chin Cheng (sector analysis) were also deployed by UNIDO for the project. Furthermore, Mr. Victor Djemba, the UNIDO Representative in Dakar and his office, as well as Mr. Tidiane Boye, Senegal PCP Team Leader have provided invaluable support to the technical team before, during and after fieldwork.
27. In March 2015, the joint technical team conducted a two-week field study in Dakar. Prior to the mission, the team had done extensive desk research, data collection and analyses, which had resulted in identification of potential sectors for GIFIID interventions.

28. While in the field, the team interviewed domestic and foreign private sector firms, business association leaders, bankers and business consultants to validate the desk research findings and gain insight to key issues concerning investors in the identified sectors. The team further worked closely with the Senegal counterpart team members from the various ministries, public agencies and academic research institutions to validate observations and collect views and suggestions on policy and institutional choices to deal with the identified issues. The team's goal was to gain a good understanding of not only what is desirable, but also what is feasible in Senegal. The report was provided to the national team members in English in July 2015 and in French in October 2015. The study report was updated with highly relevant and valuable inputs received from the national team in July 2016.
29. The remaining parts of this report highlight major findings from desk research and field investigation and offers recommendations to the government on follow up actions. More specifically, Chapter 2 starts with a brief introduction to the three-step GIFIUD methodology for sector selection, followed by the presentation of the results of each step undertaken in the Senegal pilot. Chapter 3 focuses on the identification of the "binding constraints" of the sectors selected, while evaluating the various hard and soft factors that may have significant impact on the recommended sectors. In conjunction with the discussion of each issue, the chapter provides preliminary thoughts on possible "quick win" policy solutions that can be further explored in follow-up work. In Chapter 4 the report summarizes technical assistance planned by UNIDO to support implementation of GIFIUD within the scope of its Program for Partnership (PCP) for Senegal.



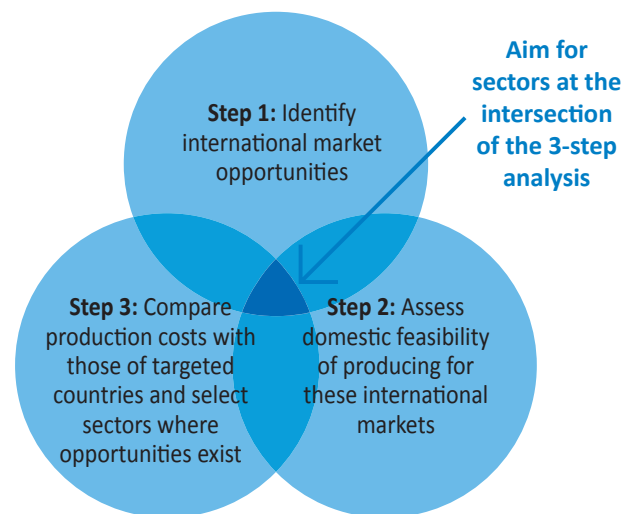
CHAPTER II: SECTOR IDENTIFICATION

An introduction to the GIFIUD approach

30. Sector identification is the most critical step under GIFIUD. Picking right, all steps that follow will support the industrial sectors that are likely to render maximum results; picking wrong, all the hard work and valuable resources to be deployed may be wasted, and may even be harmful to long term prospects of the economy. The “right” sectors are those that best match the given country’s *latent comparative advantage*, and have the best opportunity to succeed in the international market.
31. The concept “*latent*” here is the key. A sector of latent comparative advantage may not be competitive today in a given country due to the high transaction costs arising from inadequate infrastructure, poor logistics network, and a challenging business environment. But it is one that could become competitive based on its factor costs of production, which are implied by the country’s income level and endowment structure. GIFIUD assumes that some of the business environment weaknesses could be improved, sometimes relatively quickly, through proactive policy actions.
32. The orientation for being outward looking, or “*international*” is also essential. In a rapidly globalized economy, capital, goods and services move increasingly freely around the world. Production is more often than not carried out along international value chains, with components of finished goods being produced where they can be done so most efficiently. Thus, countries having an inward-looking strategy may not go very far. Countries striving to excel in identified market niches in the global economy; making best use of FDI; and promoting other forms of domestic and international cooperation will have a much better chance to succeed. This is especially true for small-sized economies.
33. Lin and Monga have elaborated the theoretical foundation for GIFIUD in detail in their recent work on “*growth identification and facilitation*” (GIF)⁵. GIF proposed a six-step approach for sector selection and facilitation; one on sector targeting and five on facilitation of sectors selected for targeting through targeted Government policy support. Under GIFIUD and for the purpose of operationalizing optimal sector identification based on latent comparative advantage, the most critical of these steps on

sector targeting is unpacked into three sub-steps as illustrated in Figure 1. As can be seen, the three sub-steps interact with each other. The resultant **central triangle** where all three intersect is likely to be where the best opportunities exist for the country. The essence of this analytical framework is: governments with limited resources can best achieve their goals by being as selective, focused, and practical as possible – always looking for where opportunities best exist and conditions can be improved relatively quickly.

Figure 1: Three-step Analytical Framework for Sector Identification



34. In **Sub-step 1**, the objective is to identify international market spaces that are opening up due to loss of competitiveness of some types of production in what we would call “targeted countries.” Specifically, this step starts with desk research on economic growth data to select a group of countries to be targeted for catch-up in this report, by Senegal. The targeted countries selected for catch-up should meet the following criteria:

1. As we are aiming to identify “latent” comparative advantage, targeted countries should have similar endowment structures with the pilot country (Senegal), measured by income level in purchasing power parity, and a development level that is not much more advanced than the pilot country.

2. A good measure is to identify countries targeted based on the above criteria is that they either have a current per capita income of about 100-300 percent higher than the pilot country; or, their per capita income levels were about the same as that of the pilot country 15-20 years ago.

5 Lin, Justin Yifu, and Célestin Monga. 2010. “Growth Identification and Facilitation: The Role of the State in the Dynamics of Structural Change”, Policy Research Working Paper 5313, World Bank, May, Washington, D.C.

3. A second issue that is critical when selecting targeted countries is to focus on economies that have been growing dynamically and consistently. Thus, we search for those economies that have registered high growth rates consistently for the past 15-20 years.

35. The use of GDP as a criterion for aiming for “similar endowment structure” when selecting “targeted countries” is based on the fact that a lower-income country with abundant labor or natural resources and scarce capital will have comparative advantage and be competitive in labor-intensive or resource-intensive industries. Similarly, a high-income country with abundant capital and scarce in labor will have comparative advantage and be competitive in capital-intensive industries. Therefore, “the optimal industrial structure in a country, which will make the country most competitive, is endogenously determined by its endowment structure. For a developing country to reach the advanced countries’ income level, it needs to upgrade its industrial structure to the same relative capital-intensity of the advanced countries”⁶. Accordingly, differences in factor endowment structure imply different development potential for countries at different income levels.

36. The criterion “dynamically growing” is as important. Endowment structures do change over time. As a country develops, its income level rises; and as its income level rises, its comparative advantage shifts. Understanding where you currently are and where you want to be next is strategically important for development policy making. Aiming too high, a country can be led by unrealistic expectations without being supported by its realistic resource base. Setting the target too low is also dangerous, as it can prevent the country from achieving its best potential. The best option for a country to achieve quick and consistent economic catch-up is to target other countries that are of similar endowment structure as its own, but are a few points ahead of it.

37. Justin Lin eloquently discusses this gradualist catching-up approach, sometimes known as the “flying geese” strategy, in his New Structural Economics (NSE) work (Lin, 2012a; 2012b). The approach is empirically supported by the industrialization pattern observed in the post-WWII world history. For instance, in the 1950s, Japan at the beginning of its economic catching-up process, had per capita income level at 35% of that of the United States’, its target country for catch-up. In the 1960s, Republic of Korea had an income level of 25% of Japan, which was its catch-up target country. Likewise, when China first embarked on its catching-up journey, in the 1980s, its income level was about one quarter of one of its major “comparator countries,” i.e., the Republic of Korea.

Table 1: Catch-up in the pre-war and post-war era

	Europe targeted the UK, gaps were small			Japan targeted Germany during Meiji Restoration			Japan targeted the US after the WWII		
	per capita GDP by 1990 International GK dollars								
	1870	% of UK	1890	1900	% of Germany	1950	1960	% of the US	
France	1,876	59%	2,376	2,876		5,186	7,398		
Germany	1,839	58%	2,428	2,985	100%	3,881	7,705		
U.K.	3,190	100%	4,009	4,492		6,939	8,645		
United States	2,445	77%	3,392	4,091		9,561	11,328	100%	
Japan	737		1,012	1,180	40%	1,921	3,986	35%	
	The East Asia NIEs (4 dragons) including S. Korea targeted Japan in the 1960-80s			China targeted the East Asian NIEs including S. Korea			Late comers started to target China after 2000		
	1960	1970	% of Japan	1980	1990	% of Korea	2000	2008	% of China
U.K.	8,645	10,767		12,931	16,430		20,353	23,742	
United States	11,328	15,030		18,577	23,201		28,467	31,178	
Japan	3,986	9,714	100%	13,428	18,789		20,738	22,816	
South Korea	1,226	2,167	25%	4,114	8,704	100%	14,375	19,614	
China	662	778		1,061	1,871	23%	3,421	6,725	100%
India	753	868		938	1,309		1,892	2,975	44%
Vietnam	799	735		757	1,025		1,809	2,970	44%

Source: Chandra, Lin and Wang 2013. Authors calculation based on Maddison dataset.

Note: Targeted countries in red. Following countries are in blue.

38. Having identified the right “targeted countries”, we focus on the “*performance of the targeted countries’ export products over the past 15-20*”, using a well-established criterion such as the revealed comparative advantage (RCA). RCA is an index, which shows *existing comparative advantage in a product* at any point in time and it will change over time. Thus, it is possible to identify certain tradable goods, which have performed well in international markets over previous periods, but have begun to lose competitiveness in that targeted country. This implies that some international market space for these tradable goods may be opening up. In other words, “sunset” industries detected in a targeted country could well become “sunrise” industries for other countries. Additionally, when such shifts take place, these industries of the targeted countries are likely to look for relocating to new locations that will offer continued competitive conditions, for instance, with lower production costs, thus providing a source of FDI for countries interested in targeting those sectors.

Box 1: Revealed Comparative Advantage

Revealed Comparative Advantage (RCA) is a useful concept based on Balassa (1965) to measure whether the country has “existing”; i.e. revealed comparative advantage in a commodity that the country is exporting. It is calculated as follows:

$$RCA_{ij} = \frac{\frac{X_{ij}}{X_{it}}}{\frac{X_{wj}}{X_{wt}}}$$

Where x_{ij} and x_{wj} are the values of country i 's export of product j and world exports of product j and where X_{it} and X_{wt} refer to the country's total exports and world total exports. Thus, if $RCA < 1$, the country has a revealed comparative disadvantage in the product, whilst if $RCA > 1$, the country has a revealed comparative advantage in the product. (See Annex I for details)

Source: World Integrated Trade Solutions (WITS) dataset and Annexes.

39. RCAs in targeted countries are calculated using the formula explained Box 1. We calculated RCAs for 213 countries in the world for many product groups from 1962 to 2013. Cases for Japan, the Republic of Korea and China are shown in Figures 2a-2c.

40. If the RCA is above 1, the product group is considered to have revealed comparative advantage. As RCA changes over time, we identify those sectors with RCAs that decline to under 1 in the targeted countries, and consider these product groups as experiencing “*declining competitiveness in the targeted countries.*”

41. The resultant product groups/sub-sectors with dramatically declining RCAs for the targeted countries are likely to be the best sectors for the pilot country looking for appropriate industries to develop and expand.

42. The process described in **Sub-step 1** may yield several candidate sectors that need to be further screened and prioritized based on the pilot country's means and needs. This is the objective of **Sub-step 2**. Several efforts are made in this step. The first, also primarily desk research, reviews the industrial data of the candidate sectors available for the given country. UNIDO has, over the years, developed a comprehensive database showing manufacturing value added and employment share of each sector in a large number of developing countries, which provides an excellent source of information for this analysis. Supplementary industrial statistics gathered from the given country could be used to further validate and update the picture. The results will show if there is a tradition of the industries identified by Sub-step 1 for a given country, how these sectors have evolved over time, and where they stand now in the country's industrial structure and vis-à-vis its exports.

43. In some cases, especially with regard to lower income countries, existing industrial data may not be complete, or even absent. That is why a second effort under Sub-step 2 is critical and involves fieldwork. Through interviews with business leaders, industry associations, line ministries and agencies, the financial sector and local think tanks, all of which may have valuable information and views about the targeted sectors, an understanding and insight need to be formed. The information thus gathered may not be comprehensive or statistically significant, but helps gain a multi-faceted perspective, which databases usually cannot capture. These are valuable inputs to further prioritize the sectors.

Figure 2a: Japan's revealed comparative advantage declined in labor-intensive sectors

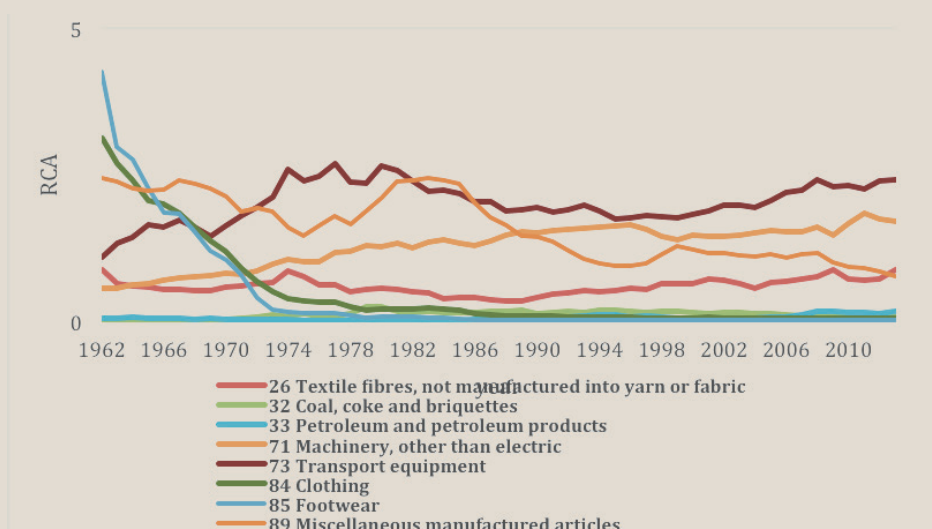


Figure 2b: Republic of Korea's revealed comparative advantage declined in labor-intensive sectors

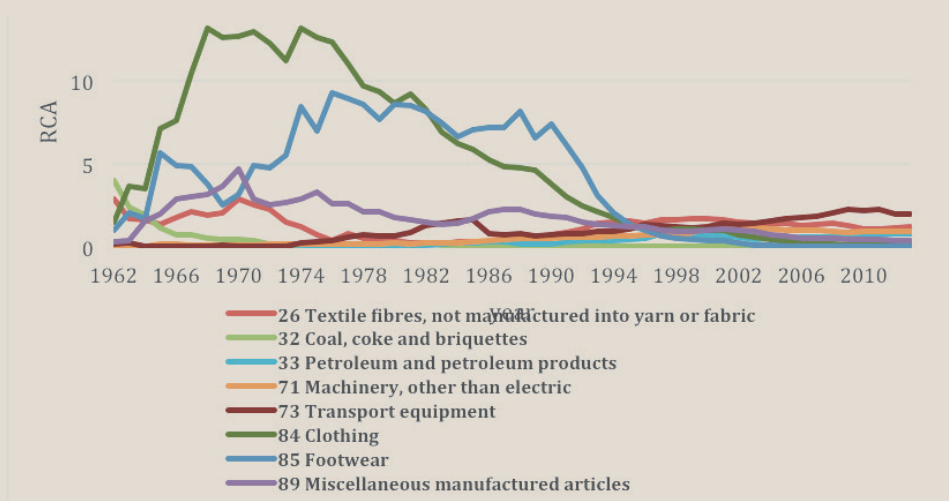
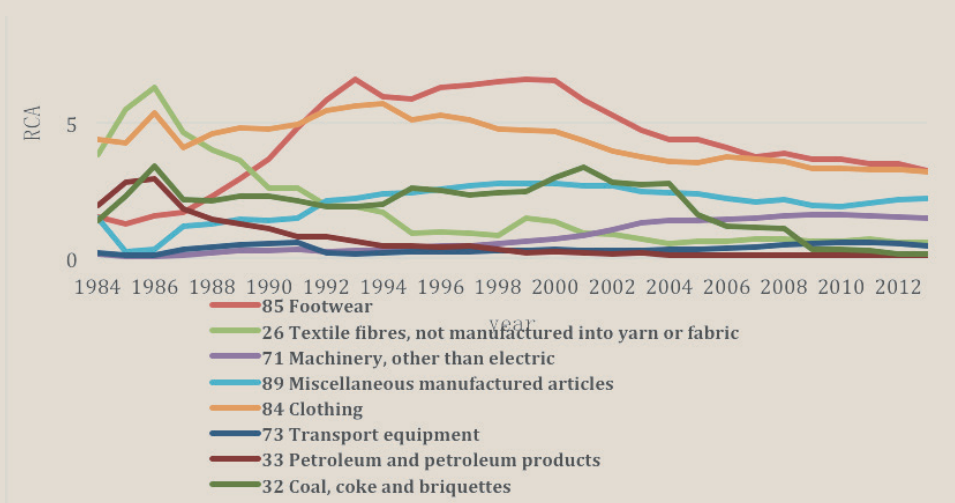


Figure 2c: China's exports sectors are declining



Note: RCA = share of an industry in the economy's exports / its share in global exports.
 Source: Authors' calculation based on UN Comtrade data, SITC rev.1, 2-digits.

44. **Sub-step 3**, following the findings and observations of Sub-steps 1 and 2, aims to investigate the production costs for sectors under consideration in the given country. Production costs are among the most important considerations of foreign and domestic investors when deciding whether or not to invest in a certain industry in a given country. Moreover, production costs are comparable. In a globalized market, investors usually have more than one choice when seeking locations for their investment. In recent years, especially, countries including many lower income countries in South Asia, Africa and elsewhere, are stepping up their efforts to attract investment. Many are offering similar or better conditions to compete for the same international market space and FDI sources. To win its position in this competition, the given country must understand its relative strengths and weaknesses as a production site, and know what to do about them.
45. It is therefore very useful to start with a production cost comparison in Sub-step 3. Gathering data needed for such a cross-country comparison can be time-consuming, but possible. It requires effort to draw from various studies conducted by national and international organizations. Furthermore, learning from the industrial communities and the business intelligence sources on the ground will often lead to more accurate and updated business cost information. Initially, the information compiled may lack specificity and be limited to a few countries; but overtime, this knowledge and information can be accumulated based on systematic and consistent efforts.
46. The fieldwork under Sub-step 2 will lead to Sub-step 3, identifying the “binding constraints” to the pre-selected industries and exploring the likelihood of applying “quick win” solutions; i.e. targeted policy choices available. This is a major step that will be elaborated in Chapter III and Chapter IV, respectively. It suffices to say here that some of the high costs could be reduced relatively quickly, if issues are addressed pragmatically. For instance, if the cost of electricity and other industrial utilities are high, developing an industrial park with focused infrastructural support may meet the need of a group of factories in the targeted industries. Likewise, if the initial cost of capital and international market access are too high, policies and strategy to attract FDI can help jump start production in those sectors relatively quickly.
47. In summary, the three steps applied, as described above, are highly complementary and interactive. The final result of the three-step analysis coincides

with the triangular area indicated in the middle of the diagram in Figure 1, where all three steps overlap. Sectors/product groups contained in this area meet three criteria: (a) they are consistent with the given country’s latent comparative advantage and face real opportunities to become internationally competitive; (b) they best reflect the country’s realistic capacity; and (c) their overall production costs, including labor, land, power, transportation, among other factors, are relatively low (or could be lowered relatively quickly) in the given country. Sectors that meet all these criteria have the highest potential for growth; they are the best candidates for prioritized “quick win” policy support.

GIFIUD Sector Identification for Senegal

48. The three-step latent comparative advantage analysis described above in the GIFIUD approach was applied to Senegal, with a view to identifying sectors for “quick wins”, subject to policy actions. The results are summarized below.

Sub-step 1 – Identifying quick win sectors for Senegal

49. First, based on the available GDP and GDP per capita growth data of 113 countries over the period 1990-2013, country performance is ranked⁷. Then, from among the top performers, those countries whose GDP per capita is 100-300 percent higher than that of Senegal today or was at about the same level as Senegal’s 20 years ago are selected. The resultant countries, presented in Table 2, are considered appropriate “targeted countries” for Senegal, i.e., they used to belong to the similar income level category of Senegal, but they have experienced consistent, dynamic growth over the last two decades and are today a few points ahead of Senegal.

Box 2: Identifying countries to be targeted

Identification of correct “targeted countries” which Senegal can follow for catch-up by using GDP data can be done through the practical procedure below:

7 For details, refer to “Technical Note on GIFIUD”, UNIDO-NSD, 2015

1) Extract GDP per capita growth rates, and GDP growth rates from the World Bank's World Development Indicators (WDI) database, and population and GDP Purchasing Power Parity (PPP) per capita data (WB's WDI database has data for 214 countries);

2) Apply Filter 1, if the country has too many missing values in growth rates (Number of observations < 15), it is eliminated from the analysis;

3) Apply Filter 2, population is an important endowment; it is used as a filter. Population of 5 million is used as a benchmark. Small countries with a population less than 5 million are eliminated from the analysis, (Senegal's population is 14 million. Small island countries are not comparable to Senegal);

4) Apply Filter 3, GDP PPP per capita can be considered the best indicator of endowments. If the GDP PPP per capita is higher than \$15,000, they cannot be a good country to target for Senegal with a PPP per capita income of \$2,170 in 2013, hence countries having high income (>\$15,000 are eliminated from the analysis);

5) Next, the longest time series are shortened, from the 1960s to between 1990 and 2013, and the average GDP per capita growth for the period is calculated (because the focus is on long-term and stable growth for 20 or more years); at the same time, the standard deviation of the GDP per capita growth rate is also calculated. If the standard deviation is larger than 11, then these countries are also eliminated, since this level of standard deviation indicates an unstable growth pattern.

6) Then, the remaining data for 113 countries is sorted by the average growth rates for the period 1990-2013, and ranked from the highest growth rate to the lowest growth rate to produce Table 2. Out of the countries in Table 2 below, China, India and Viet Nam are selected as targeted countries based on their ranking in GDP per capita growth rates in 1990-2013. Cambodia and Bangladesh are both dynamically growing, but their per capita income levels are not up to the criterion 1 "with per capita income 100% higher" than that of Senegal's. Thus, they are not selected as targeted countries, but they can be considered in a peer group that would compete with Senegal to seize emerging market opportunities (Table 3).

Table 2: List of countries that grew dynamically over the last decades

Country	Rank	GDP per capita growth (1990-2013)	Selected or not as targeted countries for Senegal and the reason why
China	1	8.85	Selected, dynamic, and its experience 15-20 years ago is relevant to Senegal (at 188% of Senegal's income level in 2000)
Myanmar	2	7.06	No, too many missing values, not stable
Cambodia	3	5.56	No, it is dynamic, but per capita income is not up to the criterion 1: 100% higher than that of Senegal. It is considered a peer
Vietnam	4	5.39	Selected, dynamically growing
India	5	4.69	Selected, dynamically growing
Lao PDR	6	4.66	No, a landlocked country
Sri Lanka	7	4.65	No, an island country
Korea, Rep	8	4.63	No, high-income country=\$32,708
Tajikistan	9	3.92	No, higher income=\$16598
Thailand	10	3.82	No, higher income=\$13931
Turkmenistan	11	3.82	No, higher income=\$13554, landlocked
Chile	12	3.76	No, higher income=\$21764
Singapore	13	3.73	No, high income country=\$76236
Bangladesh	14	3.72	No, per capita income is not up to the criterion 1: 100% higher than that of Senegal. It is considered a peer.
Malaysia	15	3.70	No, higher income=\$22555
Poland	16	3.68	No, higher income=\$22513
Mozambique	17	3.64	No, income lower than Senegal
Indonesia	18	3.63	No, a resource-rich country

Table 3: Targeted countries for Senegal

Country	GDP per capita, PPP (Constant 2011 Int'l \$)						GDP/capita Annual Growth	GDP Annual Growth
	1990	% of Senegal	2000	% of Senegal	2013	% of Senegal		
Senegal	1,856	100	1,916	100	2,170	100	0.52	3.33
Vietnam	1,501	81	2,650	138	5,125	236	5.39	6.83
India	1,812	98	2,600	136	5,238	241	4.69	6.39
China	1,488	80	3,609	188	11,525	531	9.03	9.92
Bangladesh*	1,239	67	1,606	84	2,853	131	3.69	5.44
Cambodia*	1,004	54	1,368	71	2,944	136	5.56	7.73

*Peer countries. Source: Calculated based on World Bank database

50. All “targeted countries” identified in this case are in Asia. This should probably not be a surprise, but taken as evidence of the so-called “Asian Miracle,” because these have been the economies that have shown dynamic and consistent growth over the last 20 or so years. Three additional important observations on the table deserve attention:

- All targeted countries were, indeed, poorer than Senegal 25 years ago, in terms of income per capita. However, all have caught up rapidly in the last two decades, while Senegal has stagnated.
- Particularly, China, India and Vietnam have registered remarkable growth rates and their income levels are now two to four times higher than Senegal’s.
- Pace of growth in Bangladesh and Cambodia, with current income levels only slightly above that of Senegal today, has picked up in the more recent past. Although they do not meet criterion 1 (with per capita income 100% higher than that of Senegal), they are listed here as peer countries. Both countries’ per capita income levels were below Senegal’s until 2000, but they have recently surpassed Senegal. Moving forward, they are likely to be strong peer competitors to Senegal in attracting the same or similar FDI, and particularly, labor-intensive

manufacturing activities that are relocating from China, India and other emerging markets.

51. Once the “targeted countries” are established, RCA analysis of the “targeted countries” using extensive trade data to reveal those tradable goods having significantly declining RCAs (RCA <1) is made. Such goods are likely to be experiencing a “sunset” process in the targeted countries due to various reasons and are, therefore, likely to become the “sunrise” industries for lower-income countries such as Senegal. Based on initial results, four product groups where RCAs are significantly declining in at least two “targeted countries” are selected for further investigation in Sub-step 2. More detailed description of the RCA analysis is provided in Annex 1. Table 4 below summarizes the end result: the four product groups that emerge are clothing (wearing apparel), leather and leather goods, including leather travel goods, footwear, and fishery, fruits, oil nuts and other agricultural cash crops. These product groups with RCAs declining in targeted countries are broadly considered to have international market opportunities and offer good export potential for Senegal.

Table 4: Common set of declining product groups in targeted countries⁸

Product code*	Product description	Vietnam's declining sectors	China's declining sectors	India's declining sectors
3, 5, 22	Fish, fruits, oil nuts and other agricultural raw materials	1	1	1
61, 83	Leather, leather goods including travel goods	0	1	1
84	Clothing	0	1	1
85	Footwear	1	1	1

*Product code is SITC 2-digit.

Note: Sectors with RCAs declining significantly (at 99% confidence level) are assigned a value of 1. Otherwise they are assigned a value of 0. Only those “significantly declining sectors in two or more countries” are listed here in this table. See Annex 1 for further detail.

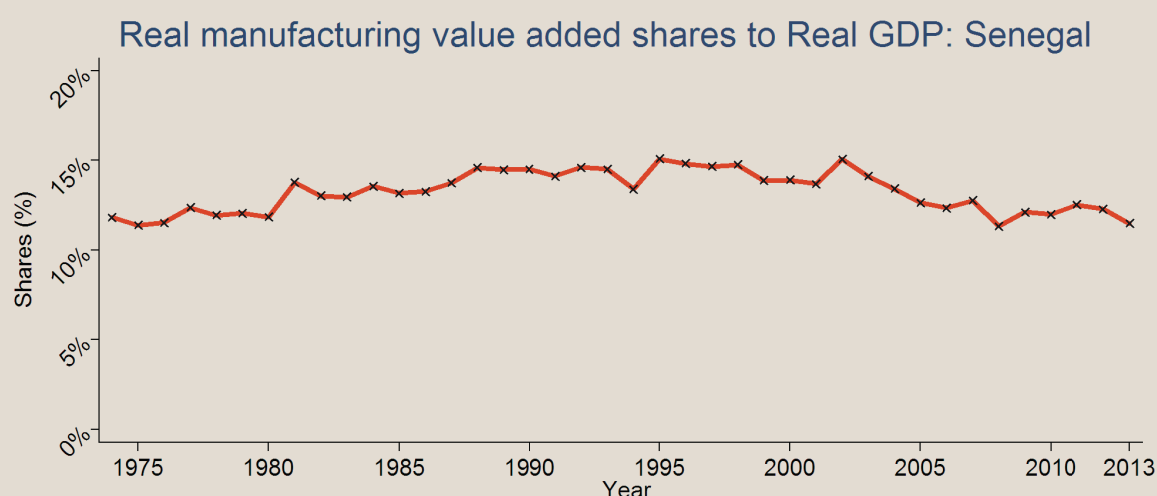
8 Bangladesh and Cambodia are not included in this table, because, as newly “taking-off” countries, they do not show declining RCA in the sectors.

Sub-step 2 – Assessing Senegal’s domestic capacity in selected sub-sectors

52. Based on product groups identified in Sub-step 1, the feasibility of focusing on them for targeted policy support in the context of Senegal’s current industrial structure is assessed. First, UNIDO’s industrial databases are queried with respect to manufacturing value added (MVA) and employment shares of the identified sub-sectors for Senegal.

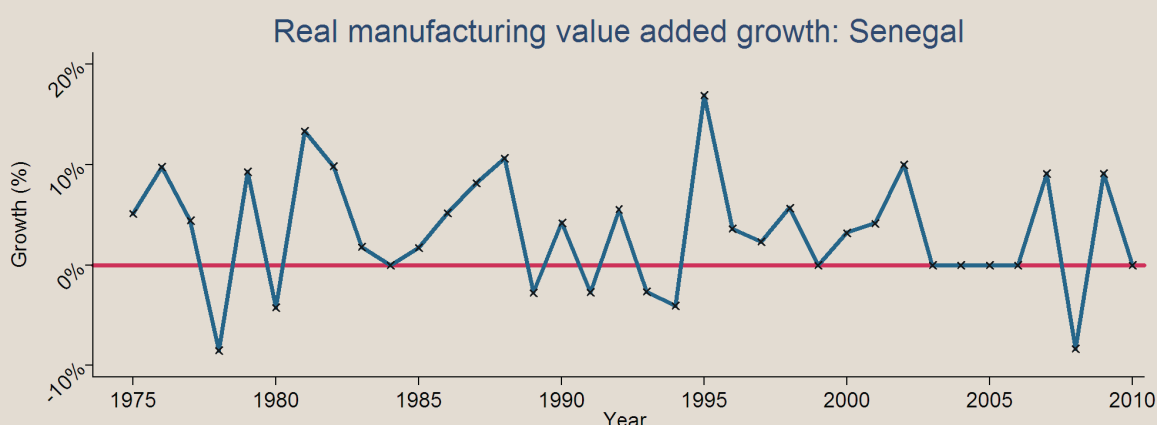
53. Manufacturing value added as a percentage of GDP in Senegal has ranged between 12 to 15 percent from 1975 to 2013, with variable growth rates, Figures 3 and 4. A trend for deindustrialization since 2003 is also discernable in Figure 4, where MVA as a percentage of GDP has been declining.

Figure 3: Manufacturing value added as percentage of GDP



Source: UN Statistics Division
MVA Growth Calculation: $[(MVA \text{ (constant 2005 \$) at time } t) / (GDP \text{ (constant 2005 \$) at time } t)]$

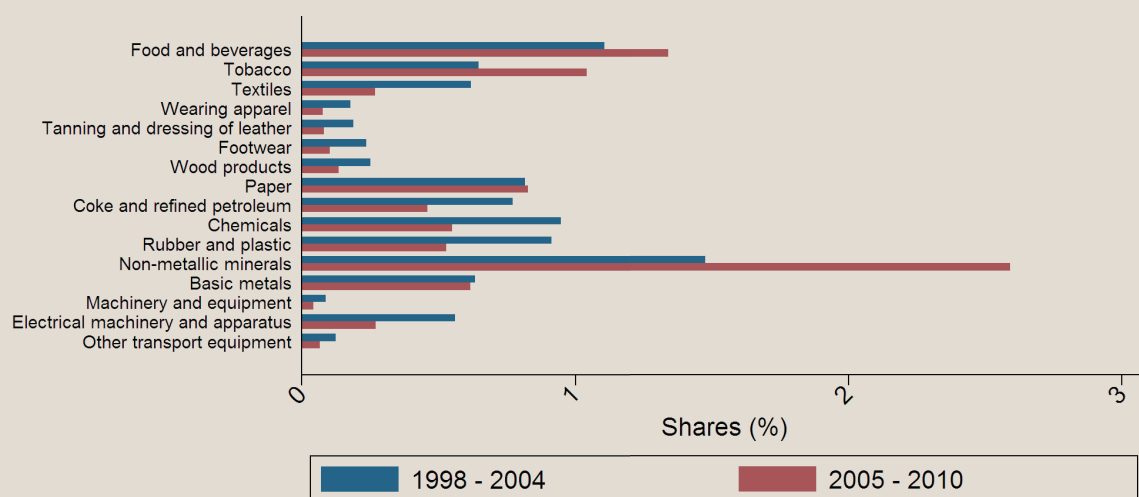
Figure 4: Manufacturing value added growth (1975-2010)



Source: UN Statistics Division
MVA Growth Calculation: $[(MVA \text{ (constant 2005 \$) at time } t) - (MVA \text{ (constant 2005 \$) at time } t-1)] / (MVA \text{ (constant 2005 \$) at time } t-1)$

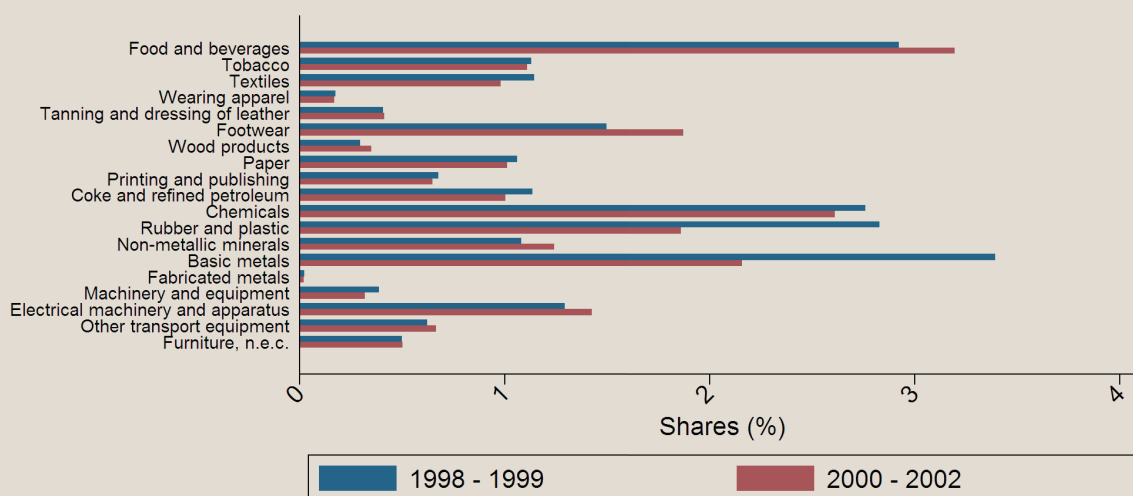
54. Drilling down to sub-sector levels reveals additional insights on how the identified sub-sectors have fared over the last decades. For instance, the sub-sector that contributes the highest share to manufacturing value added has been and continues to be the non-metallic minerals. The food and beverages sub-sector has increased its contribution of real value added to total manufacturing value added in the 1998-2004 and 2005-2010 and to employment in the 1998-1999 and 2000-2002 periods, Figures 5 and 6.
55. In comparison, real value added shares of wearing apparel (clothing), tanning and dressing of leather and footwear sub-sectors have declined further from their already low values, Figure 5, while only the employment contribution of the footwear sub-sector has increased slightly up to 2002, Figure 6.
56. With respect to employment creation, food and beverages, chemicals, basic metals and electrical machinery and apparatus sub-sectors have surpassed most others.

Figure 5: Value added share of sub-sectors in total manufacturing value added



Source: UNIDO INSTAD REV 3, UN Statistics Division
 RVA shares: $[\text{Real value added (2005 constant)} / \text{MVA (2005 constant)}] \times 100$

Figure 6: Employment shares of sub-sectors in total manufacturing employment



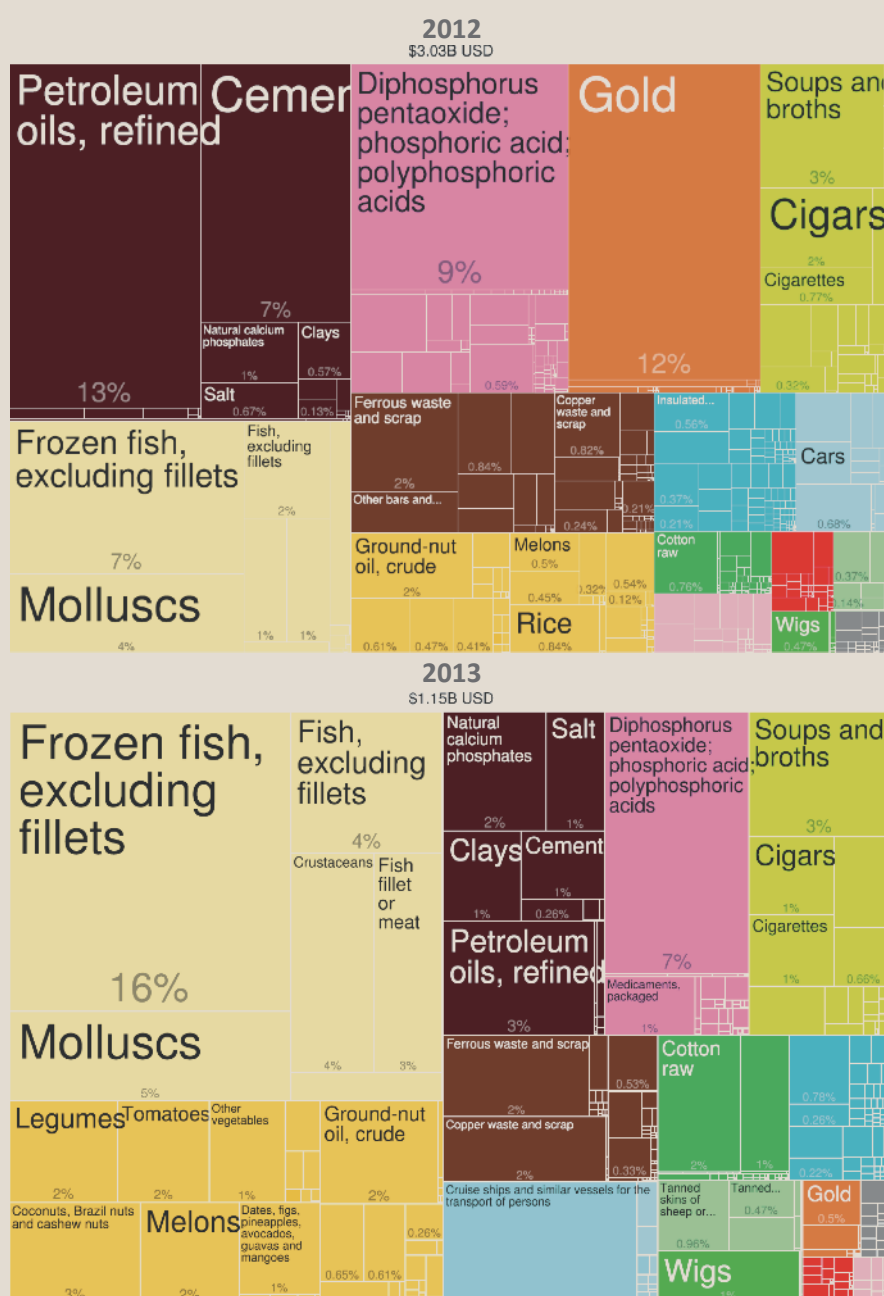
Source: UNIDO INSTAD REV 3, GGDC, KILM, and ILOSTAT
 EMP shares: $[\text{Formal employment} / \text{Manufacturing total employment (formal)}] \times 100$

57. Senegal's exports have decreased from around \$3.03B USD in 2012 to about \$1.15B USD in 2013, with the primary decrease experienced in the exports for petroleum oils and refined petroleum products, Figure 7. As a result, the proportion of imported petroleum products in Senegal's total imports of about \$7.2B in 2013 increased to 28% from 17% in 2012, Figure 8.
58. These statistics, albeit useful to indicate trends, do not capture the details of what has caused the trends. To gain insight, interviews were conducted with domestic and foreign companies currently

operating in the selected sectors, local business associations, leading local research institutions and public sector agencies. The sections below highlight the main observations.

Senegal's manufacturing industry is very weak today; but the country had a strong tradition in producing and trading in light manufacturing, such as garment and food production.

Figure 7: Senegal's exports in 2012 and 2013



http://atlas.cid.harvard.edu/explore/tree_map/export/sen/all/show/2012/ and [/2013/](http://atlas.cid.harvard.edu/explore/tree_map/export/sen/all/show/2013/)

many consumer goods lost competitiveness against cheap imports from China and other emerging markets. Manufacturers closed factories one after another. The once hustling industrial hubs, such as the SODIDA in Dakar, turned into warehousing business for imported goods.

Garment production, quite wide spread in Senegal till the late 1990s, has been rapidly shrinking over the last 15 years; it is presently at the brink of disappearing completely.

62. Around the time of independence, Senegal had relatively large production capacities in textiles and garments. The products served both the Senegal's domestic market and the neighboring countries. Until the seventies, the garments sector was led by a few large operators such as SIV (Société Industrielle du Vêtement), SAC (Société Africaine de Confection), among others. However, a profound slowdown of the sector set in with the departure of almost all major foreign players. The trend was briefly and partially reversed with the devaluation of the CFA currency in 1994, but the sector by then was primarily populated with small-scale tailoring activities that produced at low efficiency and high cost. The final hit on the sector came in the late 1990s, when cheap imports (as well as second-hand clothes) from China, India and other emerging economies started to crowd out the domestic producers from the market. According to a long-time and still existing small garments manufacturer, who also serves as the chairperson of the sector's manufacturer association, there were 67 members of the association up to the late 1990s. Today, there is only a handful remaining.
63. Unsurprisingly, the wearing apparel sector statistics show an almost constant negative growth rate in the last several decades, of -6.02% per year in 1974-83 and of -15.84 % in 1984-93, before recovering to 6.93% briefly in 1994-99 and plunging again to -2.7% in 2009-2013. Consequently, the sector's share in total manufacturing exports plummeted from 2.39% in 1974 to 0.76% in 1999, and respectively from 1.83% to 0.22% in manufacturing value added. There are still some exports of home textiles and various types of garments mainly to a few countries in the region; but, overall, the export amount is tiny, seldom going beyond \$200,000 per year.

Senegal's effort to modernize the tannery and leather goods manufacturing (including shoe-making) has achieved mixed results in recent years; country's rich natural resources and the progress made in exporting semi-processed leather suggest that this is an area of high growth potential for the country.

64. Senegal has rich livestock resources, amounting to around 15 million heads with a growth rate of around 2% per year in the last five years. Main livestock components are sheep (37%, with a growth rate of 3.2%), goats (32%, with a growth rate of 3.4%), and cattle (22.1%, with a growth rate of 1.6%). Livestock's share in the primary sector value added is around 23%, and it contributes 4.1% of the GDP. The Government has been strongly encouraging local firms to process before exporting.
65. Similar to the garments sector, tanning activities in Senegal can be dated back to the colonial period, when French trading posts used to collect and export raw hides and skins. Since independence, the Government has been actively encouraging local firms to process hides and skins before exporting, but the result has been limited. Shortly after independence, a state owned company (SERAS) was set up, with a monopoly status for collecting hides and skins and trading in processed leather. During the 1990s, the sector was liberalized and opened up to competition. However, the required scale of capital investment and market access limited the number of leather producers.
66. Today, the sector remains small, and is dominated by two large private sector players, both private firms established in the late 1990s. About ten other factory operators (of much smaller scale) and numerous micro-scale artisan shops also exist alongside the two.
67. Agence Nationale de la Statistique et de la Démographie (ANSD) estimates that the total turnover of the industry for 2010 was CFA 28 billion, a significant increase from CFA 7 billion in 2006. The industry as a whole, not counting the informal artisanal segment, employs about 500 workers. Senegal's exports amount to about \$5 million a year in this sector, which is a tiny fraction of the \$30 billion of world imports of leather and leather products. The growth potential, therefore, is very high.

68. The two larger scale private operators tell two different stories about success and failure. Along the relatively long value chain of the leather industry, from animal husbandry to hide and skin processing to final leather goods manufacturing, one of them has focused on the semi-processing of raw hides and skins to the “wet blue” stage. The firm exports all its output, mainly to Italy and Pakistan, where it is further processed into leather that could be used for belt, shoe and bag production. It has been performing quite well, with its turnover rapidly growing to CFA 4.4 billion in 2002. This firm has then obtained a loan from IFC, which enabled it to further upgrade its production facilities, and to expand exports.
69. The other large-scale private operator, on the other hand, tells a less successful story. In response to the Government’s encouragement to prolong the value chain of the leather industry in Senegal, it has tried to get into shoe making, based on its in-house processing of hides and skins to final shoe manufacturing. This strategy has not fared well. The firm’s financial performance has been poor. Sector observers indicate that the firm may be exiting the market soon, which would leave the more successful private operator as the only large player in the industry.
70. Commercial agriculture was held back by a combination of insufficient investment and an overall lack of appreciation for the poverty-fighting punch that a vibrant farm economy can deliver over a lengthy period. In the last 10-15 years, however, an FDI-led investment drive has developed a viable export-oriented industry featuring tomatoes and other fruits and vegetables, making Senegal a pioneer among Sub-Saharan African countries in diversifying its agricultural sector. The country today is the world’s second-largest exporter of cherry tomatoes, after Israel. Its good-quality products are highly sought after in Europe, especially in the latter’s off-season months (December through April). Globally, Senegal is the 23rd-largest tomato processor, being the only francophone Sub-Saharan African country that has a developed tomato processing industry.
71. Success was achieved through a long-term effort, not without zigzags. Until the 1970s, groundnut was the single traditional export product in the country. Throughout the 1970-1980s, under a new policy to diversify the economy, the government promoted phosphate production, tourism and horticulture. Tomato cultivation and processing were introduced. A large state owned enterprise (SOE) was established to pilot tomato processing and a small-farmer contracting system. With the support of the European Union, the Government organized special study tours for farmers to Europe and the United States to learn commercial production technologies and skills. Production of tomatoes did grow initially, but the leading SOE went bankrupt in 1989 due to poor management and high inefficiency. The whole scheme collapsed after that.
72. In the 1990s, the Government changed its policy. It privatized the SOE and started to welcome FDI. A number of private domestic firms bought the SOE assets and the tomato industry began to grow again. Overall horticultural production increased in the 1990s and soon became the most well paid activity among rural households. However, exports of fruits and vegetables faced great difficulties in rigorously controlled market access. Without significant investment in new technology and logistics facilities, Senegal products could not meet the high standards of the quality and delivery required by the European market.
73. The situation turned around in the late 1990s, when major FDI players came in. Large foreign companies, such as Grands Domaines Du Senegal (GDS), a subsidiary of the French multinational Compagnie Friotier specialized in fruits and vegetables, were attracted to Senegal by its political stability, favorable natural conditions (e.g., warm climate, proximity to Europe and United States), low labor costs, and welcoming policies and investment incentives offered by the Government. Foreign firms brought with them the needed capital, technology, and access to the European and other export markets. Through FDI, Senegal’s horticulture industry quickly improved its product variety and quality, developed a vertical value chain structure that also benefited local farmers, and the essential trade and logistics infrastructure for handling sensitive fruit and vegetable products. In a few years, the country became a successful horticultural product exporter.
74. The “early comer” foreign investors had to take high risks and overcome multiple hurdles in order to get their investment projects off the ground. For instance, acquiring land and going through a

Senegal’s agri-business and food processing industry have made encouraging progress in recent decades. Especially, an FDI-led horticulture export industry has emerged successfully, diversifying agricultural production in the country. This development also sets a good example of combining private sector efforts with supportive public policies.

plethora of administrative barriers for investment approvals was challenging to such extent that it was considered a “binding constraint”, determining the decisions to invest or not in the country. The Government’s investment promotion agency, APIX, acted as an effective “one-stop shop” to assist particularly, foreign investors throughout bureaucratic procedures and approvals. The Ministry of Trade, in the meantime, introduced an electronic system in 2004, which allowed customs clearance to be conducted in a timely manner and with a single request by an importer or exporter. These reforms significantly increased the efficiency and transparency of the system.

75. To encourage investments and exports in the sector, the Government helped firms reduce risks with multiple incentives. For example, agricultural companies that export at least 80 percent of their output are exempted from income taxes on distributed dividends, customs and stamp duties for production and transport equipment, some taxes on wages and business licenses and duties and taxes on local purchases. The corporate income tax rate is a low 15 percent. Every investor in the agricultural sector is exempted from the value added tax. In 2008, the government announced a program to increase agricultural production that included a five-year suspension of foreign exchange controls for agricultural investors, allowing these investors to expatriate their profits freely. This provision continues to apply to all firms exporting at least 80 percent of their output.
76. Senegal’s horticulture industry is still growing, and its earlier success continues to make a positive impact. In 2013, the World Bank approved a US\$86 million soft loan to help Senegal further transform its commercial agriculture with continued export diversification. “Senegal’s agricultural sector is marked by increasing private sector interest,” said senior World Bank officials. The extended loan would enable the government to continue to focus on “the key gaps” such as infrastructure and irrigation so that private sector energy will be further unleashed to support sustainable and inclusive growth, especially through the creation of jobs for young people and raising incomes for women⁹.

Sub-step 3 – Comparing Senegal’s production costs with those of targeted and peer countries

77. Recognizing the sectors with international opportunities and domestic growth potential is only the first step to success. At the end of the day, achieving the full prospects of identified sectors will depend on investors’ decisions on whether or not to make the required investment into these sectors. Furthermore, jump-starting domestic production and benefiting from a good share of international opportunities would require attraction of foreign investors to the country, who *already have access to the international markets*.
78. Production costs, particularly, the initial capital and infrastructure costs, play a critical role in foreign investors’ site selections. Senegal must be aware that it is only one of the many destinations investors may choose to go; and that many lower income countries in Africa and elsewhere are competing for the same international market space and FDI resources. To win a position in this global competition, Senegal must not only depend on its political stability and geographical advantage, but also do everything possible to make itself attractive for foreign investors looking for new low-cost sites for labor-intensive production.
79. The production cost structure may vary depending on the nature of the industries. Generally, investors will care about the cost of initial investment and the cost of production once operation starts. The former certainly means the costs to be incurred for land, buildings, infrastructure and capital equipment; but it also includes the time required to secure rights to land, construct factory premises, install power and other utility connections, clear imported machinery and equipment at the customs, and bring in foreign human resources, for example, production and quality supervisors, etc. Construction delays could cost an investor a lot, not only in out-of-pocket expenditures, but also as lost opportunities in the international markets. Once an investment moves into the operational stage, labor costs, bills for electricity, water and all other utilities, shipping and land transportation costs, the prices of raw materials, interest rates for working capital borrowing, will all have an impact on the total cost of production and affect significantly the competitiveness of the location, particularly in labor-intensive sectors. Time and uncertainty can sometimes make a huge impact on the operational costs. For instance, frequent labor strikes, power blackouts, and customs clearance delays cause serious disruptions to production lines and may result in loss of market share due to higher production costs.

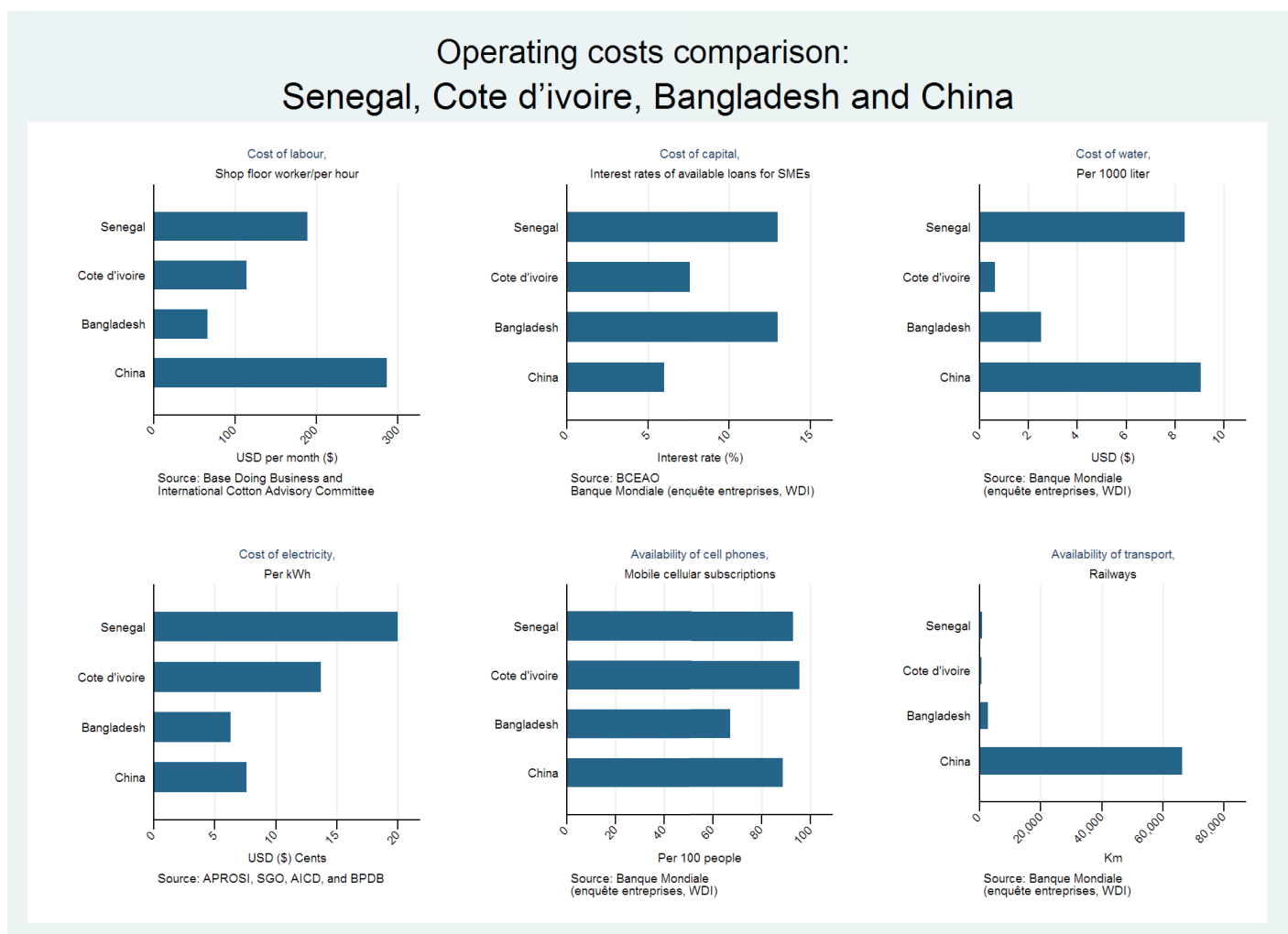
9 <http://www.worldbank.org/en/news/press-release/2013/12/19/world-bank-senegal-agribusiness-sahel>

80. Although a comprehensive, sub-sector specific and cross-country cost comparison is difficult and beyond the scope of this study, some data is available and provides a basic idea of Senegal's production costs as compared with selected peer countries. Based on the World Development Indices, World Bank's Doing Business reports and Enterprise Surveys and domestic data sources, Senegal today has relatively high operational costs as compared with the selected targeted and peer countries, i.e., Cote d'Ivoire, Bangladesh and China, Figure 9. In particular, its average cost of electricity, at USD 0.24 per kWh, is the most expensive. Water also appears to be very expensive, costing on average 400% and 600% more than it does in Bangladesh and Cote d'Ivoire, respectively.
81. How to reduce operating costs is extremely important to the high potential sectors identified in the previous sections. The issues are complex, involving from hard to soft business infrastructure. These will be further discussed in the following chapters focusing on identifying "binding constraints" and exploring practical solutions to remove them.

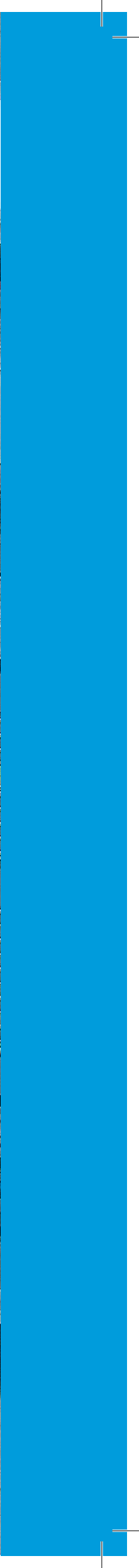
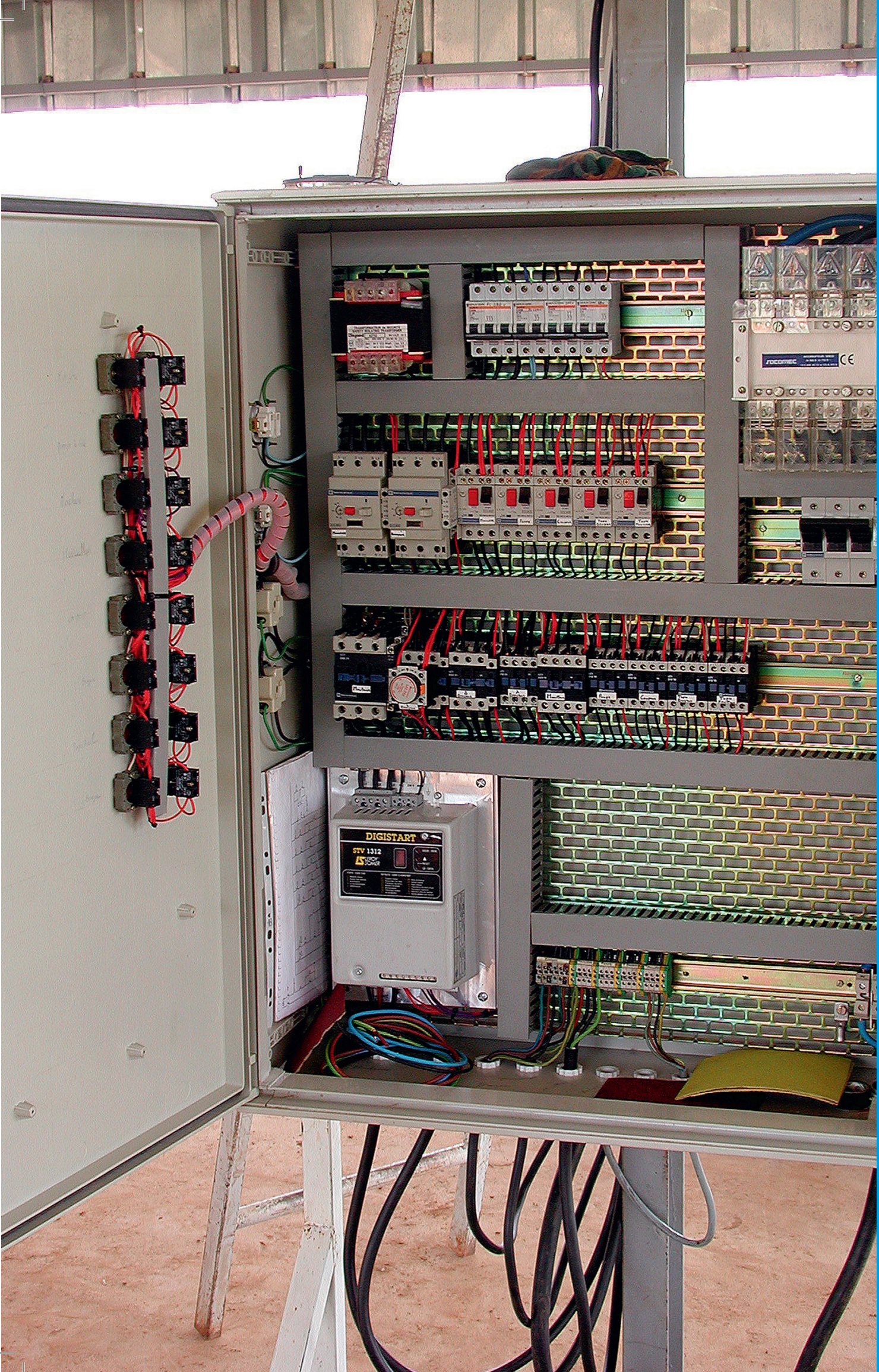
Summary of GIFIID sector identification

82. By applying the GIFIID's three-step sector identification methodology, the following product groups/sub-sectors have emerged as "quick win" candidates for priority policy support:
- Wearing apparel
 - Leather and leather goods, including shoe-making
 - Commercial agriculture, including horticulture and food processing
83. Our analyses on emerging international market opportunities suggest that these labor-intensive industries are best aligned with Senegal's latent comparative advantage. Senegal, one among similar countries with latent comparative advantage in labor-intensive industries, is clearly in a position to grasp some of these promising opportunities in the international marketplace.

Figure 9: Operating Cost Comparison: Senegal, Cote d'Ivoire, Bangladesh and China



84. However, our review of Senegal's domestic capacity reveals that the country is currently weak in all three sub-sectors. Especially, the situation of the country's wearing apparel manufacturing is quite dismal as a result of the consistent decline of production for the last few decades caused by both the market shifts and policy failures. The leather and leather goods industry and the agribusiness sector are, by and large, also struggling, although some shining spots do exist in both. They suggest that things can improve if right steps are taken to address the market and policy issues.
85. Our further probe into the sub-sectors sheds light on some key market and policy issues. On the one hand, the collapsed apparel sector and the struggling vertically integrated private firm, the unsuccessful shoe manufacturer, are examples that production volume and market size matter. Senegal, as a small economy, will probably remain vulnerable in a large, and constantly changing global marketplace. As seen, the once thriving garment-making was hit hard by the dismantled regional market at the end of colonial rule; and although it briefly bounced back, having relied on a protected small domestic market, its inefficient producers failed quickly again, as soon as the trade barriers came down and cheap imports came in.
86. The positive side of the stories is that, the situation can be reversed to benefit small economies, which tend to be more flexible and can act fast. For them, the key to succeeding in the vast world economy is in an export-driven strategy, accompanied by searching for niche markets and positioning themselves in global value chains. Many small economies, including some African countries such as Lesotho and Mauritius, have done well by following such a strategy. There is no reason why Senegal cannot do the same.
87. The timing may be better than ever for lower income countries like Senegal. As China, India and other emerging markets are graduating from many labor-intensive manufacturing activities, new spaces in the global market are opening up, and investors in those countries are looking for new production sites with lower wages. Senegal can benefit from this trend if it is quick and convincing enough at seizing the new opportunities when they arise.
88. Moreover, Senegal has had a strong tradition in garment, leather, and leather goods production and other light manufacturing activities, which is a factor that can play in its favor, as competition for new investment intensifies in the region. Manufacturing of wearing apparel and shoes are not only labor-intensive, but they can be skill-intensive as well, especially for high-end products. Knowledge and skills acquired from a long history and traditions do not disappear overnight, and a skilled and highly trainable labor force can be exactly what many foreign investors are looking for.
89. Perhaps, the most encouraging finding is the country's recent success in the horticulture industry. In a period of little more than a decade, Senegal's cherry tomatoes have made their way to the world market, and have been thriving in niches in Europe, one of the most difficult fruits and vegetable markets to enter. This achievement would not have been possible if not for the revolutionary switch to an FDI-led and export-driven development strategy pursued by the Senegal Government. It is the evidence that "Senegal can do it", when right policies are put in place.
90. Finally, in view of the momentum that already exists in horticulture, and the need for Senegal to further diversify its exports, it is desirable to further focus attention on two manufacturing sectors, wearing apparel and leather and leather goods, including shoe-making. Both are strongly aligned with Senegal's latent comparative advantage, and both have high potential opportunities in the international market. Manufacturing activities in these sectors, which also can relatively quickly create urban jobs, is a pressing need for Senegal. The fundamental factors which have helped the horticulture industry to attract foreign investment will be as important to the manufacturing sectors, i.e., a stable political environment, favorable geographical location and, above all, hardworking and fast-learning people – all of which will support FDI promotion in wearing apparel and leather and leather goods industries.



CHAPTER III: IDENTIFYING “BINDING” CONSTRAINTS

91. Governments develop sector priorities based on the country's needs and means. At the end of the day, it is the private investors who make the real investment decisions that can make the sectors fly high. Foreign investors, who can bring in the market access and the capital and technology commensurate with market requirements, can be quite demanding in deciding their new investment destinations, because they have choices on where to go. Moreover, investors tend to be cautious when considering a new destination country. They especially perceive high risks and costs of investing in a lower income country that has not been on the map of global investors.

92. It is therefore important that the host governments newly entering the global competition make all efforts to prepare an attractive business environment for potential investors. Apart from maintaining a stable macroeconomic environment and improving the general policy, legal and institutional frameworks, which are among the essential prerequisites, policy makers should understand the particular needs of the prioritized sectors and design programs to help reduce risks and costs for targeted investors. Often, problems can be many in the initial stages, and not all of the problems may be resolved at once. In such cases, efforts to identify a few "binding constraints" and removing them with available resources can go a long way – one bottleneck removed can sometimes result in the quick relief of a large proportion of the pain for firms.

93. In our GIFIUD exercise in Senegal, efforts to identify constraints already started at the stage of identifying labor-intensive sectors with high potential for new exporting opportunities. In Sub-step 3 of that process, as discussed in the previous chapter, some cost advantages and disadvantages of Senegal emerged when the country was compared with a few of its peers that are in the same global competition. In this Chapter, hard and soft business infrastructure issues that concern investors most, based on feedback received from the business community and other relevant domestic stakeholders, are described.

94. There are several positive findings, which are also important for policy makers to know. This chapter highlights these findings, sequenced by an approximate descending order in terms of the seriousness of the bottlenecks. Some preliminary ideas for improving the situation, where possible, are also highlighted in the discussions.

Power

Expensive and unreliable power supply is a widespread problem for the whole economy, and it is a very serious bottleneck, "a binding constraint", for industrial production. Although the overall power challenge will take much effort and time to resolve, it is feasible to provide priority supply within the existing system to remove this binding constraint for targeted industries in conjunction with the development of industrial zones.

95. This is no news, as the Government and development partners have highlighted this "binding constraint" in multiple studies and reports. Electricity tariffs to end-users at an average of USD 23.5 cents per kWh (in 2014) are high, compared to tariffs in neighboring countries, and the tariffs have remained unchanged since 2009. For industries, the problem is not only the high price, but also the unreliable supply featuring frequent blackouts. According to the IFC Enterprise Survey (2014), industries in Senegal on average would experience 6 power outages in a typical month, lower than the Sub Saharan Africa (SSA) average of 8.3. Value lost due to the power outages is about 2.8% of sales, compared to an average of 7.3% in SSA, 5.5% in Cote d'Ivoire (2009), 5.5% in Bangladesh (2013), and 0.4% in Cambodia (2013). In order to assure smooth production, most manufacturers (64.2%) have to have their own or share generators, which add both a high cost to the initial capital investment as well as to operating costs.

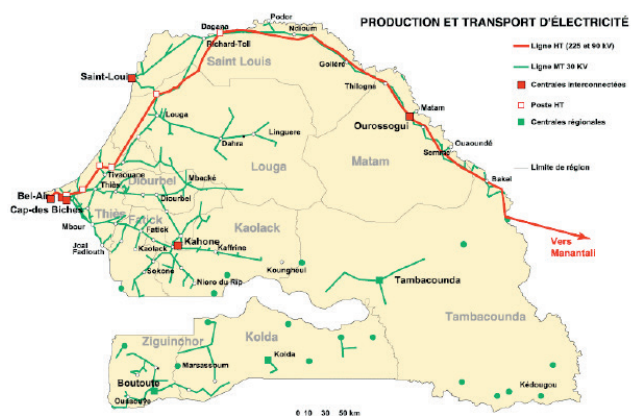
96. The government is currently dealing with generation, transmission and distribution of power as a top national priority. Electricity generation in Senegal largely depends on imported fuel oil, diesel and natural gas, all of which are much more expensive than hydropower production as seen in most of the neighboring countries.

97. To address the problem, the Government has been pursuing a diversification strategy, which encourages independent power producers (IPP) in generation by providing direct incentives to IPP to produce at reasonable cost and sell to SENELEC for transmission and distribution. A coal powered electricity generation plant; the largest IPP arrangement in the country so far, is nearing completion. Three other IPP have been concluded and are also under

construction (Sendou, Tobene, ContourGlobal). At least two other IPPs for power plants, one that uses wind energy and the other based on solar energy, are also expected to feed into the grid within 2016. With these efforts underway, electricity shortages due to generation capacity will have been alleviated and the Government expects to reduce the electricity cost by one third within 2016.

- 98. On the other hand, the real problem creating power outages is in transmission and distribution of electricity. The latest data of CRSE, the regulation authority, on “energy not supplied by SENELEC to final end users”, for 2012, was 32 GWh, out of which 18.971 GWh was not supplied due to incidents in the transmission and distribution network. In comparison, the “energy not supplied due to problems in generation” was 0.78 GWh in the same period. Problems in the networks include corrosion of insulators, overload, aged equipment, threat of irregular settlements, etc. Therefore, transmission and distribution networks are critical for solving the electricity supply problems in Senegal, while investing in new power plants to meet growing demand.

Figure 10: Transmission network managed by SENELEC



- 99. SENELEC manages a transmission network of 501.72 km, including seventeen 90 kV sections representing a total of 280.1 km and three 225 kV sections representing a total of 221.6 km, Figure 10. The distribution network includes 8,643 km of 30 and 6.6 kV in the medium voltage (MV) network and 7,823 km in the low voltage (LV) network.
- 100. Transmission and distribution of power will remain under the monopolistic control of SENELEC, the national power authority, largely due to the fact that it is unlikely to be attractive for private investment.

About 75% of SENELEC’s investments during the period 2014-2016 are foreseen in improving the transport and distribution network. Plans to take SENELEC totally out of generation and enabling it to fully focus on transmission and distribution with a dedicated budget, appropriate frameworks and a mandate to only focus on rehabilitating the existent network and expanding seem to be gaining traction.

- 101. The PCP agreed by UNIDO and the Government contains an energy component, which will provide more detailed analysis leading to policy recommendations and technical assistance for the urgently needed improvements in the power sector. Many of the policy, regulatory and institutional issues related to long-term improvement of the power sector will be addressed under that component¹⁰.
- 102. In the immediate term, though, some actions could be undertaken to give priority to support investments in the targeted manufacturing sub-sectors. Such a priority approach seems to exist in Senegal already. One interesting finding that emerged in interviews with firms in the field is that the power supply disruption does not seem to be a major problem in SODIDA, in an older industrial district in Dakar and in an area that has started to be populated by larger scale factories near Diamniadio. Firms located in these three industrial districts reported rare power outages, which used to be a daily concern previously. It seems that at least part of the solution is being implemented currently by giving priority to industrial areas in electricity supply.

Labor

Labor wages appear higher than in some other African countries, but this might be compensated by the good quality of the labor force to some extent. Also, a relatively generous regulation for “non-permanent” hiring has allowed companies to use “temporary” workers to reduce costs. On the other hand, the rigid firing regulations, coupled with a strong union tradition, seem to be a source of major concern for employers, especially manufacturers in labor-intensive sectors. Moving forward, a more streamlined system balancing the needs of both workers and employers can promote more inclusive and sustainable investment growth.

10 See Chapter IV.

103. Interviewed firms shared with the team their wage schedules differentiating skilled and unskilled labor, and showing the various workers' benefits required by the labor code. Table 5 suggests a typical scenario for wages for a salesperson working at a manufacturing firm located in Dakar. It also includes various benefit costs, such as social security, pension, and medical insurance, among others.
104. The minimum wage level required by law is currently set at the hourly rate of CFA 209.10. However, minimum wages by sector of activity and by category of workers are determined through collective bargaining (conventions collectives). For most such conventions, the monthly wage for the first category of workers is set at around CFA 47,700 for 173 hours

and 33 minutes per month. Workload per working day is eight hours or 40 hours per week. Work executed beyond that limit will increase the wage by 15% within the 41st - 48th hour range, and by 40% beyond that interval. In the cases of work in the night hours (from 10pm to 5 am) or on holidays, wages increase by 60% and when employees work on the night of a holiday, wages increase by 100%. Compared to some other countries in the region, the minimum wage is slightly, but not significantly higher.

105. Benefits, of different types, are paid to employees on top of wages. Family benefits are paid to the social security organization (Caisse de sécurité sociale), at the rate of 7%, with an annual upper limit of CFA 720,000. Employers' contribution to cover workplace

Table 5: Sample monthly payroll of a permanent employee

Description	Amount	Rate	Amount to be added (Employee)	Amount to be deducted (Employee)	Employer's social security contributions	
					Rate	Amount
Hiring date: 1 October 14 Function: Salesperson Category (of job): 4th level Number of dependents: 2 Leave days: 2.5 Collective agreement: Trade						
Base salary			71,231			
Supplementary hours						
Seniority bonuses						
Payments above salary (premium)			50,000			
Rewards						
Salary gross (1)	121,231					
Travel and hardship allow.						
Transport compensation			16,500			
Representation compensation						
Miscellaneous						
Total compensation (2)	16,500					
IPRES General Scheme (a)-Social security fund	121,231	5.60%	6,789	6 789	8.40%	10,183
IPRES Complementary Scheme (b)	121,231	2.40%			3.60%	
IPRES (c)= (a)+(b)	242,462			6 789		10,183
CSS – Work related accident insurance (d)	63,000				3.00%	1,890
CSS – family allowance (e)	63,000				7.00%	4,410
CSS – (f)= (d)+(e)						6,300
TRIMF	114,000	2		400		
IR-Income tax	114,000	2.5				
IPM						
CFCE-Employer's contribution	121,000				3.00%	3,637
Medicaments						
Deductions from former months						
Deductions from last month						
Restoration						
Total deductions (3)	7,189					20,120
Net Salary (4)= (1) – (3)	114,042					
Net to be paid (5)= (2)+(4)	130,000					

Source: A foreign invested manufacturing firm in Dakar, March 2015

accidents varies between 1.3% and 5%, according to the nature of activity and risks of accidents and professional diseases. A ceiling is fixed at CFA 720,000 per individual per annum. Employers are also required to contribute to employees' pension funds (Institut de Prévoyance Retraite du Sénégal - IPRES), under two different regimes:

- The general regime, in which the employer's rate is 8.4% (with an annual ceiling of CFA 2,400,000), while employee's contribution rate is 5.6%.
- The complementary executive regime, in which the employer's rate is 3.6% (with a ceiling of CFA 7,200,000 per annum), while the employee's rate is 2.4%.

106. Overall, based on field interviews, wages per se do not seem to be prohibitive for employers. This is due to several reasons.

107. First, because of the high unemployment rate, firms have no problem in hiring, as there is a large pool of eager and qualified applicants. One foreign firm that newly set up in Dakar was surprised by a few hundred applications within 24 hours of its advertisement of one office position. Second, interviewed company managers, both domestic and foreign, are generally happy with the quality of the labor force, saying that they find Senegalese workers hardworking and quick at learning. Labor training is usually required, ranging from a few months to up to a year depending on the types of jobs, particularly in manufacturing. Some firms are concerned about the high costs related to the potentially high turnover of workers after they have been trained.

108. Third, Senegal reportedly has one of the most generous "non-permanent hiring" rules and regulations. Basically, a worker working for less than 40 hours per week is considered "non-permanent", which is usually paid at a much lower wage than the "permanent" category and with no or much less benefits¹¹. Unsurprisingly, among the factories visited, the use of "non-permanent" workers is common, and its ratio can be as high as 25-40 percent. This generous allowance can be especially helpful to the businesses that are subject to seasonal fluctuations: for instance, wearing apparel and shoe manufacturers can face high amount of orders before holiday sales; and fishery and horticulture are influenced by harvest seasons. But this is not necessarily the best option for firms, since workforce stability and loyalty can be negatively

affected. For the "non-permanent" workers, this is an unfair treatment and it does not support the goal of inclusive and sustainable industrial development.

109. Difficulties in firing (of permanent workers) are definitely a source of major concern. There are two types of labor contracts in Senegal: fixed-term contracts and open-ended ones. In the former case the term of the contract is known and specified well in advance, and is renewable up to five years. This kind of contract requires the approval by the Government administrator (Inspection du Travail) within three months of initial hiring. In the case of open-ended contracts, the term of the contract is not specified upfront and no government approval is required. A renewable trial period of one month is applied for workers. For all cases, layoff of workers for business reasons, prior authorization from the administration (Inspection du Travail - IT) is required. Usually, before the approval is given, the employers are asked to first explore with staff representatives any other alternatives such as: reduction in the amount of working time, staff redeployment, training, etc. This employer-employee consultation can be difficult and time-consuming. It mostly leads to mediation for both parties, and, if failed, to the court. According to some interviewed managers, the court almost always rules in the workers' favor.

110. Related to the firing problem is the strong trade union tradition. According to studies,^{12,13} unionized worker representatives are powerful and influential. They may also be highly and politically connected, and "well protected". This results in tense working relationships in some sectors.

111. According to the same studies, the formal sector is disadvantaged compared to the informal sector, which is not unionized and as rigorously regulated. Foreign investors, moreover, are in a rather more disadvantaged position compared with domestic investors, simply because they have lesser political clout and they probably prefer to follow the official requirements more systematically. In the existing law governing the special economic zones (SEZs), where foreign manufacturing firms might choose to go, five-year, fixed-term contracts are required.

11 Gouvernement du Sénégal. Manuel du Travailleur, Livre 3, Textes d'Application, page 46. Edited by Friedrich Ebert Stiftung. 2013

12 Stephen Golub and Ahmadou Aly Mbaye. 2002. "Obstacles and Opportunities for Senegal's International Competitiveness: Case Studies of the Peanut Oil, Fishing and Textile Industries". World Bank Africa Region Working Paper Series Number 37

13 Nancy Benjamin and Ahmadou Aly Mbaye. 2012, "The Informal Sector in Francophone Africa. Firm Size, Productivity and Institutions". With Ibrahima Thione Diop, Stephen Golub, Dominique Haughton and Birahim Bouna Niang. A Copublication of Agence Française de Développement and the World Bank. The World Bank Edited

112. Labor issues, especially those related to layoffs, seem to be receiving priority attention of the government. There is currently a discussion on significantly relaxing some of the contracting requirements in industrial parks and SEZs. Allowing more apprenticeships and short-term contracting may also bring more flexibility to layoffs. More relaxed contract termination requirements can encourage more formal and permanent hiring, helping bring the informal and non-permanent workers into the mainstream and enhance labor stability and the loyalty valued by employers.

Taxes and Incentives

The tax environment for businesses in Senegal is a mix of positive and negative elements, but a number of issues require attention for improvements.

113. For exporters, i.e., those exporting more than 80% of their products, Senegal offers a generous 50% reduced corporate income tax, or 15% at the moment. This to most investors is simple and reasonable. Exporters also enjoy three years of duty exemption on imported capital equipment, raw materials and semi-finished products. Further, exporters are exempted from “patente”¹⁴, a local turnover tax paid annually, the local “license fees,” and the employer’s contribution (CFCE) charged at 3% of the payroll expenditures. Finally, the current SEZ law, stipulated in 2008, provides qualified export firms total exemption of profit tax, VAT and import duties for up to 50 years¹⁵.

114. There have also been a number of legitimate concerns from the business community. The first is the tendency for ad hoc changes in the fiscal environment. One cited example is the steep hike of corporate income tax from 25% to 30%, introduced by the government at the end of 2012, without adequate warning to the business community. To make things worse, the newly introduced rates were to be collected retroactively from January of 2012. It was understood that the government needed to make up the revenue loss due to the broad reduction of personal income taxes in that year. However, the

decision seemed to neglect the difficulties caused to large number of firms whose business plans (including taxes) must be done ahead of time, not retroactively. Another example of ad hoc changes is the new requirement for all exporting firms to annually apply for “exporter status”, due to concerns that some firms were cheating. While this concern is also understandable, there is no strong reason to punish all firms, because there are a few bad apples in the barrel.

115. It is further noted that some peculiar inconsistency exists in the present tax and incentive regimes. For instance, the current SEZ law contains a 2% turnover tax in the designated SEZs, instead of a corporate income tax. If implemented, this tax could wash out all the other generous incentives offered by the same law, because it would require newly established firms to pay taxes at the rate of 2% of their annual sales way before they reached breakeven, meaning even when they may be making losses in their first years of operation. There is at least one case in which a foreign manufacturing firm that recently set up in Senegal chose not to be located in the designated SEZ after considerations of this tax as weighted against what is available outside the SEZs for exporting companies.

116. The tax regime and investment incentive packages in Senegal are complicated, and a comprehensive review is necessary, but goes beyond the scope of this study. Nevertheless, it can never be over-emphasized that tax issues are an important element in shaping investors’ decisions. Especially for the “early comers” who are likely to face higher initial capital costs and who perceive relatively higher risks, tax incentives are instruments that Governments can use to help investors reduce costs and risks. This is why all governments seriously competing for FDI pay lots of attention to incentive offers. As importantly, the stability and consistency in designing and implementing tax regimes and incentive packages are critical. Many firms can still plan and do good business, if the tax rates are somewhat high, but known ahead of time. The last thing they want is unforeseeable changes and surprises.

14 “Patente” for industries with turnover equal to or greater than 500 million CFA will be a lump sum of 800,000 plus 19% of turnover. For large businesses with turnover greater than or equal to 50 billion, the variable portion of patente is 25%.

15 The provisions of this law, however, have not been implemented since there have been no SEZs up and running in the country.

Trade Logistics

Trade and logistics appear to be a relative strength for Senegal, although further improvements can be made to make the country even more attractive to investors.

117. Senegal has a relatively advanced port and good airports, and roads are rapidly improving. Thanks to the long tradition of trade with Europe and neighboring countries, the country also appears to have a relatively advanced logistics service sector. Shipping costs from Dakar to a major port in the Euro zone is about US\$1,200 per standard 20' container. According to the World Bank's annual survey of logistics professionals working in Senegal, about 60 percent of shipments have met the quality criteria in 2014 (Table 6).

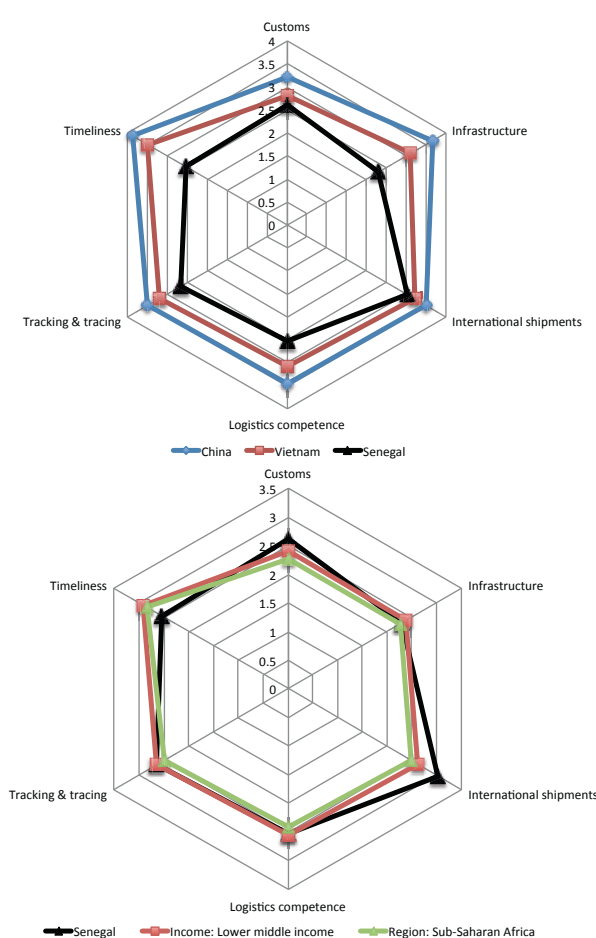
Table 6: Logistics scorecard

2014	Senegal
Export time and cost / Port or airport supply chain	
Distance (kilometers)	750km
Lead time (days)	1 days
Cost (US\$)	750US\$
Export time and cost / Land supply chain	
Distance (kilometers)	775km
Lead time (days)	2 days
Cost (US\$)	1,500US\$
Import time and cost / Port or airport supply chain	
Distance (kilometers)	750km
Lead time (days)	1 days
Cost (US\$)	1,500US\$
Import time and cost / Land supply chain	
Distance (kilometers)	137km
Lead time (days)	3 days
Cost (US\$)	866US\$
Shipments meeting quality criteria (%)	59.16%
Number of agencies - exports	3
Number of agencies - imports	4
Number of documents - exports	4
Number of documents - imports	5
Clearance time without physical inspection (days)	2 days
Clearance time with physical inspection (days)	3 days
Physical inspection (%)	13.69%
Multiple inspections (%)	7.07%

Source: World Bank Logistics Performance Index, downloaded on 23 May 2015 from <http://lpi.worldbank.org/domestic/performance/2014/C/SEN>

118. In 2014, top performer in logistics performance, as assessed by logistics professionals outside the country, in Senegal's income group (lower-middle income) has been Viet Nam. Senegal has almost matched Viet Nam's performance with respect to customs and international shipments, but has not done so well in infrastructure, logistics competence, tracking and tracing and lagged behind in timeliness. China has performed much better than both Senegal and Viet Nam in the same year. When compared to average performance of all countries in its income group, Senegal has performed better in international shipments, but has had below average performance in timeliness, Figure 11.

Figure 11: Senegal's logistics performance compared



Source: World Bank Logistics Performance Index, downloaded on 23 May 2015 from <http://lpi.worldbank.org/domestic/performance/2014/C/SEN>

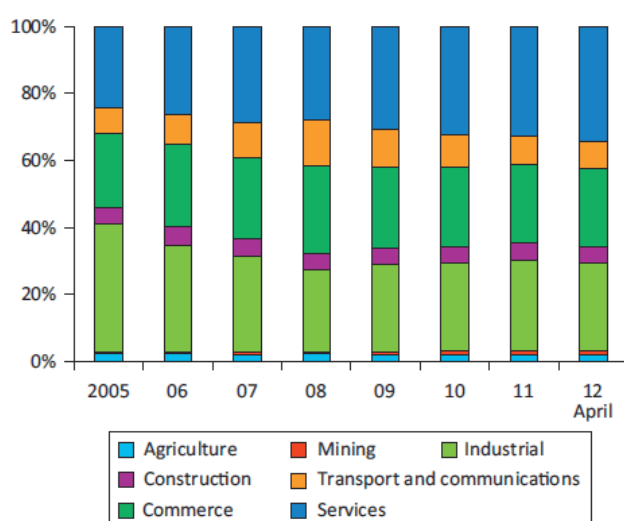
119. Clearly, further improvements are needed in ensuring shipments reach their destinations in a timelier manner, and that capacities in logistics competence, tracking and tracing are enhanced.

Access to Finance

Access to finance remains difficult in general, and especially for domestic SMEs. Foreign companies will have less need for initial investment capital borrowing, but will mostly need working capital financing.

120. Banks and microfinance institutions dominate Senegal's financial sector. In 2015, there were 22 banks, 2 non-bank financial institutions (e.g. leasing), and over 230 microfinance institutions.
121. Investors report that loans for long-term lending are scarce and expensive. Currently, short to medium term lending rates vary at 12-13%. Foreign investors are expected to bring in the initial capital. As can be seen in Table 7, domestic credit provided by the financial sector as a percentage of GDP has increased from around 31% to 35% from 2011 to 2013. In parallel domestic credit to private sector by banks has also increased from around 28.6% to 33% in the same period.
122. Currently, the largest proportion of bank lending goes to the services sector, with industrial lending declining from nearly 40% of the total in 2005 to around 22% in 2008 and has been steady since.
123. Banking services in Dakar appear relatively advanced and poised to support large, export-oriented firms. Banks accept letters of credit issued by large international buyers as security for short-term (working capital) lending.

Figure 12: Evolution of the distribution of bank lending in Senegal by sectors



Source: Central Bank of West African States.

124. Table 8 shows the results of the 2014 Enterprise Survey of the World Bank in Senegal. On the average, the Senegalese private sector identifies access to finance as a major obstacle (51.6%) when compared to all countries (28.7%) and countries in Sub-Saharan Africa (40.8%). However, firms that export 10% of more of their sales (23.3%) and firms with foreign ownership (29.7%) report values that correspond to the average of all countries in the world.

125. Manufacturing firms, firms that export more than 10% of their sales and firms with 10% or more foreign ownership report that Senegal banks have not rejected their loan applications. Exporting firms (51.6%) and to a lesser extent firms with foreign ownership (38.7%) finance their investment through bank financing. Access to working capital does not also seem a major objective for exporters and firms with foreign ownership.

Summary of main constraints

126. In this Chapter, results of fieldwork related to power, labor, taxes and incentives, trade logistics, and access to finance for manufacturers in Senegal were studied. Focus was on sectors where "quick wins" seemed highly likely, such as wearing apparel, leather and leather goods, including shoes for exports¹⁶. Results of a rapid assessment on the extent these constraints could discourage foreign direct investors from choosing Senegal as their destination to invest in export oriented production were also provided.

127. In summary, fieldwork confirmed that there were no significant challenges with respect to banking services and access to working capital financing in Senegal. On the other hand, main constraints identified consist of:

- Uncertainties and complexities in the incentives offered to investors, particularly with respect to taxation and customs privileges;
- Continuing power outages, despite recent improvements;
- Need for training of labor and overcome some rigidities related to layoff of workers.

128. Additionally, to render the planned SEZs successful in line with international practice and sustainable, efforts to encourage and establish linkages between foreign investors attracted to the SEZ and the local economy should be planned and implemented from the start.

¹⁶ For the methodology for identification of sectors that offered "Quick Wins" by way of their alignment with latent comparative advantage of Senegal and emergence of international market opportunities, see Chapter II.

Table 7: Financial sector indicators

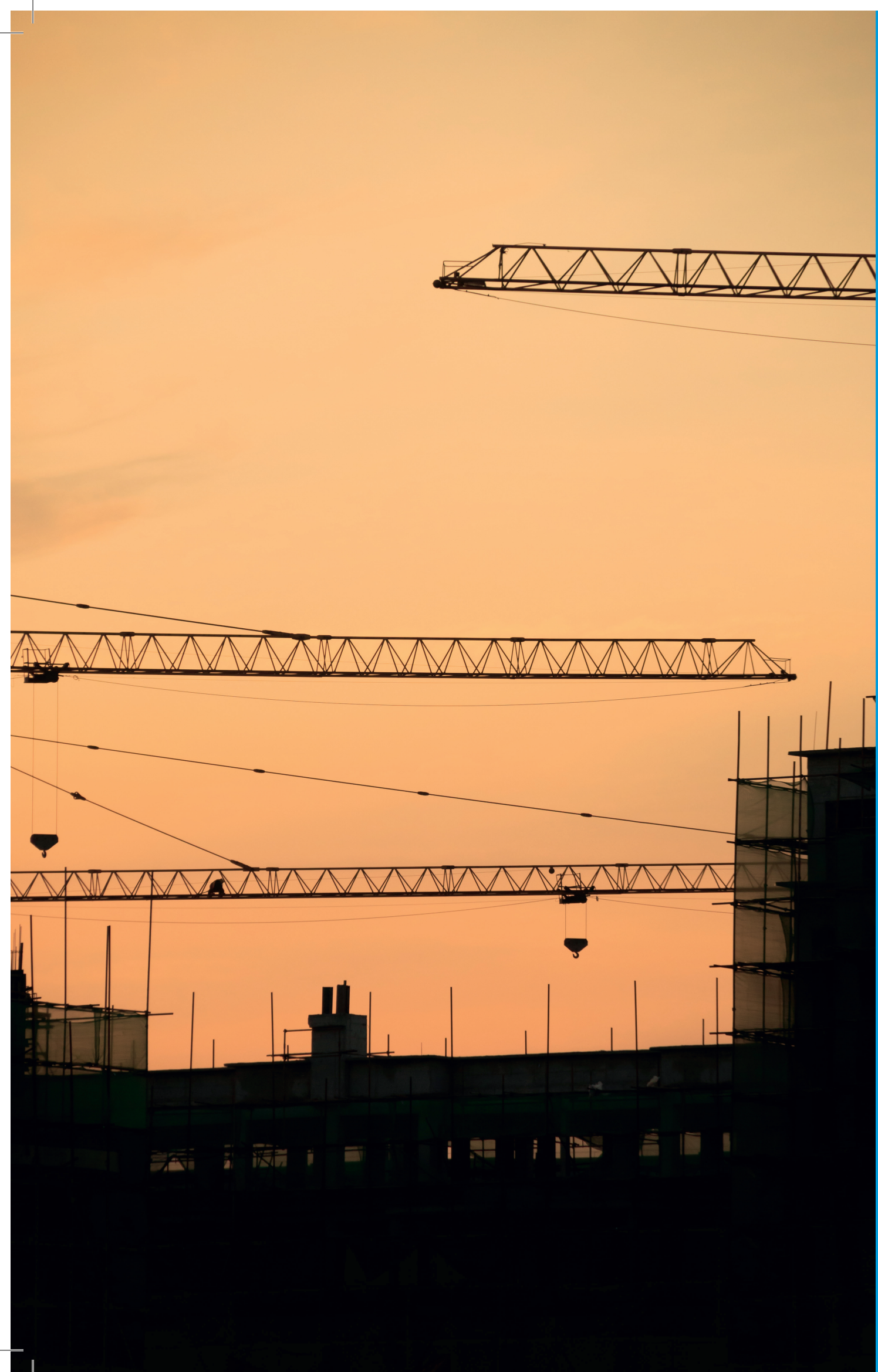
Description	2011	2012	2013
Commercial bank branches (per 100,000 adults)	4.5	4.7	4.7
Depositors with commercial banks (per 1,000 adults)	132.5	131.7	153.9
Claims on private sector (annual growth as % of broad money)	12.0	6.9	9.4
Domestic credit provided by financial sector (% of GDP)	31.1	31.3	35.1
Domestic credit to private sector (% of GDP)	28.7	29.9	33.0
Domestic credit to private sector by banks (% of GDP)	28.6	29.9	33.0
Deposit interest rate (%)	3.5	3.5	3.5

Source: WDI, downloaded from the WB website on 26 May 2015

Table 8: Access to finance

Description	Percent of firms with a bank loan/line of credit	Proportion of loans requiring collateral (%)	Value of collateral needed for a loan (% of the loan amount)	Percent of firms whose recent loan application was rejected	Percent of firms using banks to finance investments	Proportion of investments financed internally (%)
All Countries	34.4	77.9	194.3	12.2	24.7	71.6
Sub-Saharan Africa	23.1	80.6	181.8	14.3	18.3	76.7
Senegal	22.6	78.9	271.7	2.6	19.2	71.9
Manufacturing	26.6	78.0	264.4	0.0	16.0	66.3
Services	21.4	79.3	273.9	3.7	21.1	75.2
Direct exports are 10% or more of sales	46.1	72.0	n.a.	0.0	51.6	46.0
Non-exporter	20.6	80.4	318.1	3.0	9.1	79.2
Domestic	20.3	83.0	287.5	3.7	14.0	73.5
10% or more foreign ownership	38.1	64.7	226.6	0.0	38.7	66.0
Description	Proportion of investments financed by banks (%)	Proportion of investments financed by supplier credit (%)	Percent of firms using banks to finance working capital	Proportion of working capital financed by banks (%)	Proportion of working capital financed by supplier credit (%)	Percent of firms identifying access to finance as a major constraint
All Countries	14.5	4.6	30.2	11.9	10.3	28.7
Sub-Saharan Africa	9.9	4.3	22.9	9.4	7.8	40.8
Senegal	6.6	6.6	19.6	7.0	12.3	51.6
Manufacturing	6.5	8.2	17.2	6.5	8.0	51.8
Services	6.7	5.6	20.3	7.2	13.6	51.5
Direct exports are 10% or more of sales	16.7	18.7	41.3	19.2	5.7	23.3
Non-exporter	3.5	2.8	17.0	6.0	12.9	54.0
Domestic	5.0	4.3	15.5	5.8	11.9	54.3
10% or more foreign ownership	12.8	15.2	46.9	15.0	14.5	29.7

Source: <http://www.enterprisesurveys.org/data/exploreeconomies/2014/senegal#finance--ownership-type>, downloaded on 1 June 2015.



CHAPTER IV: REMOVING CONSTRAINTS FOR QUICK WINS

129. Apart from maintaining a stable macroeconomic environment and improving the general policy, legal and institutional frameworks, which are among the essential prerequisites, it is clear that when a country decides to do “targeted investment promotion” in selected sectors that are aligned with its latent comparative advantages and emerging international market opportunities, recognizing the particular needs of the prioritized sectors and designing programs to help reduce risks and costs for targeted investors would be critical.
130. Eliminating power outages by investing in generation, transmission and distribution of energy, removing rigidities in the labor market, fixing challenging tax regimes, overhauling the customs administration and building capacity in the trade logistics sector to improve quality of shipment services or developing specialist skills in the labor force all imply long-term policy interventions that may take decades to yield results, despite being highly desirable. While these interventions are implemented systematically, countries can and should reach for “low-hanging fruit” by way of “quick win” solutions. One of these solutions involves setting up special economic zones or industrial parks where primary constraints in targeted sectors are resolved.

Special Economic Zones

Special Economic Zones can be a catalytic way to address many of the issues discussed, particularly for targeted sectors in Senegal. SEZ efforts are already underway, championed by the top leadership in the government and in collaboration with bilateral and multilateral development partners. Concrete investment results in the near future are critical, while persistent efforts will be required to fine-tune the policy and legal framework and build the institutional capacity in order to achieve maximum and lasting benefits of the SEZs in support of the country’s sustainable development goals.

131. Special economic zones (SEZ) and industrial parks are becoming a popular way to jump-start targeted industries and promote FDI in countries around the world, including Africa. Well-designed and implemented SEZ have proven effective in assisting countries to utilize limited public resources and capacity to overcome bottlenecks in hard and soft business infrastructure. For instance, they enable

concentrated power, roads and other infrastructure development in localized areas; they allow specially designed policy support packages, including tax and customs incentives, on-site trade logistics operations, including customs clearance through bonded warehouses, simplified labor regulations, and streamlined licensing procedures. Moreover, SEZs allow focused FDI promotion and targeted industrial upgrading, which, if well done, can become successful even when the overall business environment of the country is not quite ready. For all these reasons, they are sometimes called “one stone to kill multiple birds.”

132. From the public point of view, SEZs are vehicles to create jobs and increase exports, both significant for economic growth. They also make it possible to design and experiment new policy and regulatory reforms, enforce new performance standards for social and environmental impact enhancement, and monitor the compliance of firms within the created industrial space. Lessons learned from SEZs can later be replicated in other parts of the country, thus helping accelerate the overall reform process.

133. The concept of SEZ is not new to Senegal, but the country’s track record to put it into practice has not been successful. As early as in 1974, in an attempt to stimulate the economy, the then government passed the Dakar Industrial Free Zone (DIFZ) Law, and designated an area of 650 hectares, 18 kilometers away from Dakar, for its implementation. However, the zone only attracted nine factories between 1976 and 1983, employing 600 workers. Though the law granted strong fiscal incentives, investment in the zone was stymied by initial provisions in the law requiring firms to hire a minimum number of workers and exceed specified levels of investment. The government also set unrealistic export requirements for firms coming to the zone. Furthermore, the DIFZ did not provide pre-built factory and warehouse facilities for lease, which discouraged enterprises that were unable or unwilling to make the initial capital investment in buildings. Finally, if a company left the zone, its assets became the property of the DIFZ Administration.

134. Throughout the 1990s and early 2000s, the Government of Senegal tried to formulate an effective plan for the development of Diamniadio as an industrial hub, on an area of more than 2,500 hectares located 35 kilometers southeast of Dakar. A feasibility study (2007) for the Diamniadio Industrial Platform was supported by the Millennium Challenge Corporation (MCC) of the United States, which

found the project to be infeasible, partly because of competing plans to develop another large SEZ adjacent to the new international airport.

135. Construction of the new Blaise Diagne International Airport began in 2008. Next to the airport, the government conceived of a plan to develop the Dakar Integrated Special Economic Zone (DISEZ), of about 1,400 hectares, in four phases over a period of 20 years. Phase I (50 hectares) was originally scheduled to commence operations in 2010, and have a projected 600 firms by 2016. A residential, leisure, and commercial support area was also planned for development. DISEZ, indicated in Figure 13, was envisioned to attract firms in sectors such as agribusiness, assembly, trading, chemicals, pharmaceuticals, logistics, construction materials, and shared services (BPOs, call centers, regional headquarters).

136. In 2007, Law No. 2007-16 created DISEZ and designated the Agence Nationale Chargée de la Promotion de l'Investissement et de Grands Travaux (APIX) as the High Authority (regulator). The government of Senegal and APIX signed an agreement in 2008 with Economic Zones World (EZW), a Dubai based company specialized in zone development. EZW received a concession to expand the Dakar Container Terminal, under a grand development plan to build synergy between DISEZ, the expanded port, and the new airport. Under the agreement, the Government of Senegal was to provide for all off-site infrastructure; including roads, linkage to the new airport, and off-site utility connections. This project, again, failed to move forward, not least because the lack of funding for the overly ambitious plan. EZW pulled out of the project in 2012.

Figure 13: Location of DISEZ



Source: APIX, January 2015

Diamniadio Industrial Park

137. In 2014, the new Government decided to step up the SEZ effort again, this time undertaking a new strategy, drawing lessons from the unsuccessful past. The new guiding principle is: think big, start small and move fast. The President and the Prime Minister personally championed the new approach. The Ministry of Industry and Mines, specifically APROSI, is designated to be in charge of the industrial zone development, supported by the Ministry of Investment Promotion, Ministry of Economy, Finance and Planning and other key ministries. Thought leaders, such as Justin Lin, were invited to provide guidance and practical advice. Key multilateral development organizations such as the World Bank, the Islamic Development Bank and UNIDO, and interested bilateral development partners, including China were mobilized to support these new government initiatives.
138. One new SEZ initiative that has received the top priority is the Diamniadio Industrial Park (DIP)¹⁷. The prioritization of DIP is based on substantial policy deliberation and consultation with potential investors¹⁸. The zone covers a land area of 50 ha in the grand Diamniadio Industrial Platform once considered for support by the MCC and is in the middle of the planned “Pôle Urbain de Diamniadio” (the new town) covering a total area of about 2000 ha. DIP is right next to the newly built highway connecting Dakar, and near the new airport, which is about to be inaugurated. The land is owned by the state and has been vacant,¹⁹ so land acquisition in this case was relatively simple and easy.
139. To avoid past mistakes of overstressing limited financial resources, the Government decided to develop DIP in two phases. The first phase focuses on the construction of approximately 10 ha on the highway frontage, to be followed by the second phase, which will complete the rest of the 40 hectares, Figures 14-15. The total estimated cost of DIP is US\$100 million. The Finance Act 2015 has allocated US\$40 million of public funding to support the development of Phase 1, which aims
- at completion in 12 months, ready for prospective investors to move in. Phase 2 is expected to follow as soon as Phase 1 is complete. Government efforts are already underway to explore a possible soft loan of \$60 million from multilateral and bilateral partners.
140. Since the fall of 2014, as soon as the decision to develop DIP was made, the Government has wasted no time and has been actively working with China as a key partner to construct Phase 1. China’s expanding interest in infrastructure development, including in Africa, seems to fit well with the needs of Senegal. The intention to initially target potential relocating investors from coastal China – which seems reinforced by the high interest expressed by Chinese investors through two business delegations to Dakar²⁰ – must also have played a part in the decision to hire a Chinese infrastructure contractor – a Chinese built industrial zone can make relocating Chinese investors feel more at home.
141. Between November 2014 and March 2015, progress has been extremely fast. While the two parties were still negotiating the final contract, the Chinese Overseas Construction Group (CGCOC) had already started preparation of technical work, including development of a preliminary physical plan followed by more detailed layout designs, working closely with domestic planners and designers designated by APROSI, the government implementing agency for DIP. In the meantime, APROSI out-sourced three studies to qualified domestic professionals: an environmental impact assessment, a social impact assessment and a geological study, all of which were completed by March 2015. In May, the Government and CGCOC signed the final contract. According to APROSI and CGCOC, the agreed contract required that, by May 2016, all phase 1 construction, including five standard modern factory buildings and one administration building, are completed. With these pre-built factory shells, new investors can simply move in, hook up, and start production. In the words of the CGCOC manager, “There is not a single day that can be wasted!”
142. As of early July 2016, construction of phase 1 is satisfactory; with the planned factory buildings and the commercial administrative building, that will contain a bank branch, restaurant, etc., poised to be completed by end of August 2016, Figures 16, and 17.
143. As the DIP construction is thus accelerated, a number of key issues need to be addressed as soon

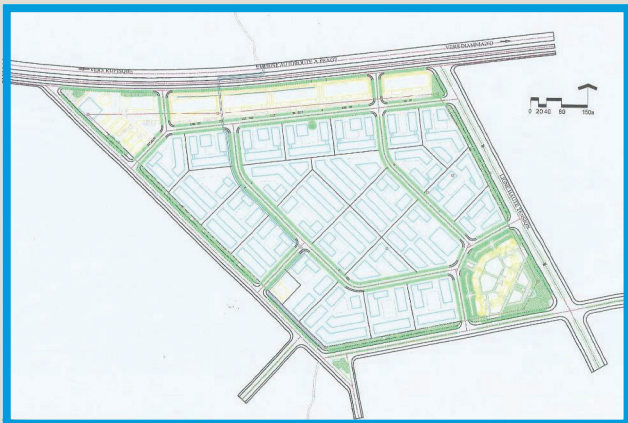
17 One of the planned Integrated Industrial Platforms (PID), as per the Emerging Senegal Plan (PSE) and commonly known as APROSI II.

18 For instance, when two Chinese business delegations visited Dakar in 2014 to explore investment possibilities, they were taken to several potential locations and asked to provide their feedback regarding each location’s attractiveness.

19 Some recent squatting took place as soon as the word about DIP went out. The government made an effective effort to move the squatters off the land by March 2014.

20 A third delegation of Chinese investors is expected to visit Senegal in July 2015.

Figure 14: Overall plans and perspective of Diamniadio Industrial Park



Source: APROSI

Figure 15: Site photo of Diamniadio Industrial Park



Source: UNIDO, November 2014

Figure 16: Factory Buildings in Diamniadio Industrial Park, 12 July 2016



Figure 17: Commercial and administration building in Diamniadio Industrial Park, 12 July 2016



as possible. First, although the Government seems to intend granting DIP, the SEZ status, thereby making it subject to the SEZ Law (2007), the decision is yet to be finalized and clearly announced. Second, the current incentive system appears fragmented and somewhat out of date; and a good review of the current package balancing both investors' needs and the Government's revenue expectations can be beneficial. Some provisions of the existing law seem confusing and counterproductive. For instance, the 2% turnover tax discussed earlier could seriously damage the attractiveness of all other incentives offered under the SEZ law, and prevent investment from coming into SEZs.

144. At the institutional level, there seems to be a real need for streamlining and some consolidation. Currently, at least two key ministries, the Ministry of Industry and Mines and Ministry of Investment Promotion, are closely involved in developing and managing SEZs and are only distinguished by geographical definitions. At the same time, two major implementing agencies, APIX and APROSI, exist, one responsible for investment promotion in general, the other for DIP's investment promotion. It will be in the interest of both incoming investors and the country as a whole to have one national face, while a clear division of labor by functions among the various agencies may minimize overlapping and maximize cooperation.
145. The Government seems fully aware of all these needs. A High Authority of the Special Economic Zone (HASEZ) has been established recently with the mandate to assess and revise all existing laws and regulations related to SEZs and FDI promotion. HASEZ's operation was still pending on allocation of sufficient number and quality of staff and budget, at the time this report is written. A speed-up of HASEZ operations will significantly benefit all with a clear and sound legal and regulatory framework for the Diamniadio Industrial Park and the similar initiatives to come.

Operationalizing the Diamniadio Industrial Park: UNIDO's response

146. The Government has requested UNIDO to support the operationalization of the Diamniadio Industrial Park. UNIDO technical assistance on integrated industrial platforms/industrial parks is to be delivered through the Senegal Programme for Country Partnerships.

Incentives to investors in targeted sectors

147. One of the incentives offered to investors in the Diamniadio Industrial Park (DIP) is the pre-built factory shells offered in Phase 1. Investors choosing to locate in DIP will have the opportunity to lease modern factory buildings, thereby, significantly lowering initial investment requirements as well as lead-time to operations.
148. Other incentives planned are fiscal incentives that come with SEZ status of the Park, one-stop-shop services and other on-site amenities, the scope of which need to be determined, for firms locating in DIP.
149. In the area of fiscal incentives for DIP tenants, discussions are already underway. For instance, one of the options considered is adjustment of fiscal incentives depending on the destination of products from DIP: zero percent customs duties for imports used in production and zero percent turnover tax, if all products are exported, and if the destination of products is the domestic market, to apply 2-4% tax on turnover, while customs duties would still be zero percent on production inputs.
150. In order to realize the benefits envisaged from Phase 1, UNIDO assistance, designed in collaboration with APROSI, APIX and HAZES, under the overall coordination of BOS and the Ministry of Industry and Mines and being delivered along the timeline of the Phase 1 infrastructure completion, focuses on:
- Defining a business model and preparing a business plan for Diamniadio Industrial Park;
 - Providing assistance in the completion of the legal and regulatory provisions and the incentive package to be applicable to the Park;
 - Defining a management model and preparing all necessary processes and procedures for full operations of the Park (including the DIP One Stop Shop) and building capacity of administrators in their implementation;
 - Providing assistance in the promotion and road shows to secure industrial tenants to the Park;

- Providing assistance to the mobilization of funding for Diamniadio's second phase (gap estimated at US \$ 60 million);
- Establishing a public- private dialogue platform with the national private sector.

151. Practices implemented in DIP in the short-term will later be translated into the broader legal, regulatory and administrative frameworks and incentives regimes that will be applicable to integrated industrial platforms, and in general to industrial land development interventions that Senegal plans to implement under the PSE, with UNIDO assistance.

Access to electricity

152. The Diamniadio Industrial Park (DIP) is in an area where an 80 MVA substation is installed at the newly built Blaise Diagne International Airport. The airport demand is estimated to be 8 MVA, and the DIP's forecasted demand is approximately 30 MVA. Therefore, the existing substation is enough to supply the demand. The Government will be installing a 15 km transmission line from the Blaise Diagne International Airport to DIP, with the aim of completing electrification of the Park along the construction timeline of Phase 1. The DIP already has a lower voltage substation installed on-site.

153. Renewable technologies for electricity production, including solar and waste to power are being considered by APROSI, which has already commissioned a study particularly focusing on solar installations to meet part of the electricity demand of office buildings in Diamniadio Industrial Park. The scenario with waste to power technologies provides an integrated approach to deal with energy issues as well as environment issues, contributing to avoid past errors made in waste management, for instance with SODIDA.

154. Industries in Senegal have experience on production of electricity from waste (e.g. CSS with bagasse). While currently, and until 2019, third party access to the grid is restricted, there is experience of industries on selling excess electricity production to SENELEC, providing an agreement is made on a compensation model.

155. In the preparatory work for Phase 2 of DIP, on site small to medium scale concentrated solar and waste power and carbon capture and storage will be factored in so as to assess the potential emission reductions to move the DIP towards a carbon neutral balance, with UNIDO assistance.

Labor

156. In SEZ's five-year, fixed term contracts are required and as indicated in Chapter III, exporting firms subject to seasonal fluctuations in demand and involved in labor-intensive manufacturing may find these terms constraining. Within the scope of discussions already underway, allowing shorter-term contracting, particularly in the initial periods of investments, may be considered among the incentives offered to investors in DIP. UNIDO technical assistance will facilitate discussions among stakeholders on available options, results of which will be incorporated into the SEZ frameworks applicable to DIP.

157. A significant incentive for investors will be the organization of vocational training, specifically designed to serve the needs of the targeted industries in the integrated industrial platforms (industrial parks) and SEZ, and particularly on-site at the DIP or through existing vocational and technical training institutions in Dakar or near Diamniadio.

158. Firms locating at the DIP would benefit from such developments, as initial labor training for the required industrial skills is a burden on new investments. Initiatives fully or partially financed by the Government, with firms in DIP contributing to development of training content and/or teaching staff, or through cost sharing with fee payments will be considered within UNIDO assistance.

Linking local economy and manufacturers with foreign investors in DIP

159. SEZs, such as the one that is being developed at DIP, are credited for creating jobs; thereby income for the domestic labor force; the much needed export earnings and taxes for the public coffers; as well as putting the host country on the global landscape for foreign direct investment flows, due to high quality infrastructure and services, in relatively short time spans.
160. One area where SEZs have drawn criticism globally is that they may end up creating “enclaves” for foreign investments, particularly in sectors with low capital investment requirements, that are ready to relocate to greener pastures in other countries when labor costs rise, without living up to the expectations that the local economy is diversified, upgraded and increased its openness to trade²¹. Such failed SEZ experiences are not uncommon in Africa and elsewhere, and deserve close attention for learning lessons on how best to integrate the economic activities in SEZs with the local economy from the start.
161. In the special and first case of the DIP being developed as an SEZ, attraction of exporting foreign investments to the DIP, particularly in the targeted labor-intensive sectors (wearing apparel, leather and leather goods, including shoes), where Senegal’s production is very limited, is expected the create large scale export earnings in the order of tens of millions, and a significant number of jobs (starting from 1,000 in 2016 to reach about 8,000, when the full 50 ha are developed).
162. Taking measures to ensure that DIP is sustainable with respect to job and export earnings creation²² and that foreign investments in DIP find favorable conditions to establish backward and forward linkages with the local economy, while integrating production in Senegal to global value chains through industrial upgrading and diversification, will be critical on the way forward.

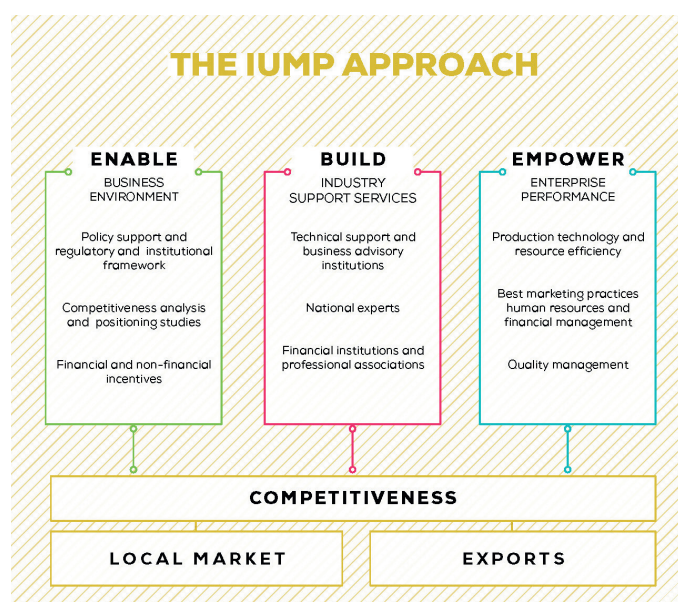
21 Special Economic Zones Progress, Emerging Challenges and Future Directions; Thomas Farole, Gokhan Akinci, Editors, WB 63844, 2011

22 Such benefits are deemed “static measures of success”, unless both the local economy is linked to SEZ economy and reforms tested in SEZ spill over into the broader investment environment in the country; *ibid.* p. 7.

Senegal’s Industrial Upgrading and Modernization Programme (IUMP)

163. Senegal has established and operates a successful industrial upgrading and modernization programme (IUMP)²³. The Programme supports manufacturers in upgrading their technologies, quality and management practices, and has been set up with assistance from UNIDO in 2003.

Figure 18: Senegal Industrial Upgrading and Modernization Programme (IUMP)



164. IUMPs, Figure 18, including in Senegal, are sector focused and have a holistic approach, consisting of interventions at three levels: policies and governing frameworks, institutions and firms. In sectors “targeted” for support, the sectoral business environment is reviewed with respect to legal, regulatory, administrative and institutional frameworks to identify main challenges and their resolution; thus creating ENABLED conditions for firms in targeted sectors to invest and grow. In fact, the review of constraints for sectors recommended for targeting in this report, and those that can be deemed “binding” has laid the groundwork for creation of an enabled environment for these sectors.
165. Most IUMPs target sectors with potential for exports or where exporting has just started. In targeted sectors, IUMP works with firms, technical and business support institutions, the domestic consulting sector, the financial sector and Ministries, Departments and Agencies of central and local government.

23 PMN in French

166. Institutional capacity bottlenecks that hinder the growth of targeted sectors are identified and institutional capacities are BUILT to ensure firms in the targeted sectors are able to access trained labor, finance, business development services, time-bound fiscal incentives, quality and technology development services and simple, transparent and least costly administrative procedures. As this package of incentives are sector targeted, successful results achieved in increased market access through exporting, innovation and value addition create success stories that can be replicated in new sectors/market niches. Planned UNIDO assistance towards the operationalization of DIP will be building institutional capacities for the implementation of “targeted investment promotion” for the Park, as well as in Park management and operations.

167. At the firm level, IUMP works with individual and clusters of firms in targeted sectors. Firm or cluster level assistance is provided to improve firm level competitiveness or collective efficiencies for clusters of firms. These interventions may cover upgrading internal capabilities for firms in managing human resources, marketing and finance, and technology and innovation, including in establishing and managing business partnerships.

168. The Senegal Programme for Country Partnership (PCP) among others also consists of assistance to Senegal’s national IUMP and its Industrial Upgrading Bureau (BMN). This assistance will aim to contribute to establishment of linkages between prospective DIP tenants and domestic manufacturers.

169. While in the start up phase, DIP tenants may be sourcing most or even all production inputs through imports through “container in-container out” operations; opportunities are expected to arise also for local sourcing. For instance, a prospective DIP jeans manufacturer may want to contract out “embroidery” operations to one or more local contractors; a leather suitcase or bag producer may procure components and accessories locally; or all DIP manufacturers may prefer to procure packaging materials locally.

170. Decisions of foreign investors to localize parts of their production will depend on the capabilities of domestic manufacturers to deliver at competitive prices, and at the required quality and quantity levels and in a timely fashion. Senegal IUMP, with UNIDO assistance, will mobilize and build capacity in domestic producers for partnerships with DIP manufacturers. Identification and resolution of

sectoral business environment challenges and building institutional support services, for instance for labor training, logistics services, and the like will help both DIP investors and local producers and industrial service providers!



CHAPTER V: CONCLUSIONS

171. Government of Senegal has strongly committed to jumpstarting industrial diversification through FDI based export oriented manufacturing and is investing at the Diamniadio Industrial Park (DIP), which will also be the first Special Economic Zone becoming operational in the country.
172. GIFIID analysis identified three sectors for priority policy support and targeted investment promotion: wearing apparel, leather and leather goods, including shoes, and horticulture and food processing, aligned with the latent comparative advantage of the country. These sectors also align with strong interest of foreign investors in emerging economies to relocate their labor-intensive production to new locations due to rising labor costs.
173. Being one of the most politically stable countries in Africa, Senegal has a long tradition in wearing apparel, leather and leather products manufacturing, although current production in these sectors is very limited; and the country is already a successful exporter of horticulture products to European markets.
174. The country is strategically located with respect to North American and European markets and enjoys the benefits of comparatively high quality logistics infrastructure and services. It has a hardworking and quick learning labor force that can be deployed in labor-intensive production at relatively competitive costs. Access to power is improving, with cost of electricity poised to come down. Access to finance, including working capital, particularly by foreign invested firms does not seem to be major challenge.
175. Subject to an attractive incentives package offer, including pre-built factory shells, as discussed in this study, Senegal can induce relocation of exporting foreign investors from emerging economies such as China and India in labor-intensive industries to the DIP.
176. While engaging in targeted investment promotion in priority sectors, measures to engage and upgrade the domestic producers, and to link them to DIP tenants in the medium-term will be critical to creating dynamic benefits and spillover effects for the whole economy.
177. UNIDO is poised to support Senegal in this endeavor through planned and already launched interventions under its Programme for Country Partnership (PCP), in collaboration with other development partners.



**ANNEX: SECTORS ALIGNED
WITH LATENT COMPARATIVE
ADVANTAGE OF SENEGAL**

178. After identifying targeted countries, we calculate the Revealed Comparative Advantage (RCA) for 213 countries in 1962-2013 at SITC 2-digit level. RCA changes over time, and comparison across countries yield useful clues on international opportunities – where market space is likely to exist. We identify those “tradable sectors” that have “run out of steam” in targeted countries (RCA declining significantly), and industries that are likely to relocate to other countries, by running a regression of RCAs on time. Concretely the following steps are followed.
179. After running the regression, sectors where RCA is rising or declining are identified: if the coefficient b is positive/negative and significant at 1% confidence level, then the sector is considered rising/declining significantly.
180. The rising and declining sectors for China, India and Vietnam are determined using data from 2000-2013, because the RCAs for these countries exhibit a bell shaped curve over time. Using recent 13-year data can better capture the declining segments in RCAs. Regression results of only those sectors rising/

Table A: Sectors with significantly declining RCAs in Vietnam, India and China

Vietnam			
Declining sectors			
Product code	Product description	Coefficient b	t-value
2	Dairy products and eggs	-0.12871	-4.00052
22	Oil seeds, oil nuts and oil kernels	-0.11282	-9.39461
29	Crude animal and vegetable material	-0.07916	-4.32663
3	Fish and fish preparations	-0.50438	-7.78171
33	Petroleum and petroleum products	-0.2172	-18.1727
4	Cereals and cereal preparations	-0.1653	-3.62262
5	Fruit and vegetables	-0.03866	-4.12649
83	Travel goods, handbags and similar	-0.19264	-8.25637
85	Footwear	-0.70377	-8.12938
9	Miscellaneous food preparations	-0.07514	-5.42287
93	Special transactions, not classified	-0.03462	-3.33882
94	Animals, n.e.s., incl. Zoo animals,	-0.26449	-5.54526
India			
Declining sectors			
Product code	Product description	Coefficient b	t-value
22	Oil seeds, oil nuts and oil kernels	-0.07471	-3.72419
27	Crude fertilizers and crude mineral	-0.08882	-4.03999
29	Crude animal and vegetable material	-0.18495	-8.99293
61	Leather, leather products	-0.20752	-9.22025
65	Textile yarn, fabrics, made up articles	-0.18576	-10.7464
7	Coffee, tea, cocoa, spices & manuf.	-0.20944	-6.26296
3	Fish and fish preparations	-0.16746	-5.77846
42	Fixed vegetable oils and fats	-0.07762	-4.08408
43	Animal and vegetable oils and fats,	-0.06984	-5.59068
5	Fruit and vegetables	-0.07902	-9.39312
53	Dyeing, tanning and colouring mater	-0.03845	-3.60675
66	Non metallic mineral manufactures,	-0.22528	-4.75164
69	Manufactures of metal, n.e.s	-0.04844	-5.32779
83	Travel goods, handbags and similar	-0.24534	-20.8081
84	Clothing	-0.18403	-14.2542
85	Footwear	-0.04373	-5.52744

declining with the slope coefficient b negative and its absolute value greater than 0.03, and statistically significant are shown in Table A.

China			
Declining sectors			
Product code	Product description	Coefficient b	t-value
0	Live animals	-0.05592	-5.75304
1	Meat and meat preparations	-0.04092	-7.71083
3	Fish and fish preparations	-0.04767	-12.1996
22	Oil seeds, oil nuts and oil kernels	-0.04883	-3.20138
26	Textile fibers, not manufactured	-0.03366	-6.5362
27	Crude fertilizers and crude mineral	-0.0985	-3.90526
29	Crude animal and vegetable material	-0.05361	-6.52258
32	Coal, coke and briquettes	-0.27517	-11.7163
35	Electric energy	-0.07918	-5.09532
4	Cereals and cereal preparations	-0.0556	-6.31859
5	Fruit and vegetables	-0.0339	-6.67137
57	Explosives and pyrotechnic products	-0.17941	-7.45967
61	Leather, leather products	-0.05531	-6.10955
85	Footwear	-0.21629	-8.27962
89	Miscellaneous manufactured articles	-0.05589	-5.67548
83	Travel goods, handbags and similar	-0.28279	-7.90498
84	Clothing	-0.09054	-6.89943
9	Miscellaneous food preparations	-0.03209	-6.18781
94	Animals, n.e.s., incl. Zoo animals,	-0.03033	-4.1703

181. Then, sectors with a significantly declining RCA are assigned a value of 1. The rest are assigned a value of 0, Table B. Here, if the slope coefficient b is negative with its absolute value larger than 0.03, and the p -value indicating significance at the 1% confidence level (i.e. $p < 0.01$), then we consider the RCA for this sector is “significantly declining”.
182. We then use another step to show the “Common Set of declining sectors”. The criterion is that “a sector is identified only if it is declining in at least 2 targeted countries” in the regressions.
183. These subsectors/product groups are considered to have good potential for Senegal to enter and develop, as there is market space and potential for relocation of firms from targeted countries to Senegal, together with their knowledge and access to international markets, Table C.

Table B: Screening of RCAs with respect to significance; Vietnam, China, India

Product code	Product description	Vietnam declining sectors	China declining sectors	India declining sectors
0	Live animals	0	1	0
1	Meat and meat preparations	0	1	0
2	Dairy products and eggs	1	0	0
3	Fish and fish preparations	1	1	1
4	Cereals and cereal preparations	1	1	0
5	Fruit and vegetables	1	1	1
6	Sugar, sugar preparations and honey	0	0	0
7	Coffee, tea, cocoa, spices	0	0	1
8	Feed Stuff for animals excl. un-milled	0	0	0
9	Miscellaneous food preparations	1	1	0
11	Beverages	0	0	0
12	Tobacco and tobacco manufactures	0	0	0
21	Hides, skins and fur skins, undress	0	0	0
22	Oil seeds, oil nuts and oil kernels	1	1	1
23	Crude rubber including synthetic an	0	0	0
24	Wood, lumber and cork	0	0	0
25	Pulp and paper	0	0	0
26	Textile fibers, not manufactured	0	1	0
27	Crude fertilizers and crude mineral	0	1	1
28	Metalliferous ores and metal scrap	0	0	0
29	Crude animal and vegetable material	1	1	1
32	Coal, coke and briquettes	0	1	0
33	Petroleum and petroleum products	1	0	0
34	Gas, natural and manufactured	0	0	0
35	Electric energy	0	1	0
41	Animal oils and fats	0	0	0
42	Fixed vegetable oils and fats	0	0	1
43	Animal and vegetable oils and fats,	0	0	1
51	Chemical elements and compounds	0	0	0
52	Crude chemicals from coal, petroleum	0	0	0
53	Dyeing, tanning and coloring matter	0	0	1
54	Medicinal and pharmaceutical products	0	0	0
55	Perfume materials, toilet & cleansing agents	0	0	0
56	Fertilizers, manufactured	0	0	0
57	Explosives and pyrotechnic products	0	1	0
58	Plastic materials, etc.	0	0	0
59	Chemical materials and products, n.	0	0	0
61	Leather, leather products	0	1	1

62	Rubber manufactures, n.e.s.	0	0	0
63	Wood and cork manufactures	0	0	0
64	Paper, paperboard and manufactures	0	0	0
65	Textile yarn, fabrics, made up articles	0	0	1
66	Non metallic mineral manufactures,	0	0	1
67	Iron and steel	0	0	0
68	Non ferrous metals	0	0	0
69	Manufactures of metal, n.e.s	0	0	1
71	Machinery, other than electric	0	0	0
72	Electrical machinery, apparatus and	0	0	0
73	Transport equipment	0	0	0
81	Sanitary, plumbing, heating and lighting	0	0	0
82	Furniture	0	0	0
83	Travel goods, handbags and similar	1	1	1
84	Clothing	0	1	1
85	Footwear	1	1	1
86	Scientific & control instruments, photographic equipment	0	0	0
89	Miscellaneous manufactured articles	0	1	0
91	Postal packages not class	0	0	0
93	Special transact. Not class. Accord	1	0	0
94	Animals, n.e.s., incl. Zoo animals,	1	1	0
95	Firearms of war and ammunition thereof	0	0	0
96	Coin, other than gold coin, not leg	0	0	0

Table C: Sectors aligned with Senegal's comparative advantage

Product code	Product description	Vietnam's declining sectors	China's declining sectors	India's declining sectors
3	Fish and fish preparations	1	1	1
5	Fruit and vegetables	1	1	1
22	Oil seeds, oil nuts and oil kernels	1	1	1
27	Crude fertilizers and crude mineral	0	1	1
29	Crude animal and vegetable material	1	1	1
61	Leather, leather products	0	1	1
83	Travel goods, handbags and similar products	1	1	1
84	Clothing	0	1	1
85	Footwear	1	1	1

Note: Senegal is doing well already in agri-business and in the area of minerals processing; hence these sectors are not selected for quick wins in this Study, which focuses on sectors marked in **red**.

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UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Vienna International Centre
P.O. BOX 300, 1400 Vienna, Austria
Telephone: (+43-1) 26026-0
Fax: (+43-1) 26926-69
E-mail: unido@unido.org
www.unido.org