STRATEGIC FRAMEWORK FOR FREE ECONOMIC ZONES AND INDUSTRIAL PARKS IN THE KYRGYZ REPUBLIC

MAY 2018

CAREC
Central Asia Regional Economic Cooperation Program

ADB

STRATEGIC FRAMEWORK FOR FREE ECONOMIC ZONES AND INDUSTRIAL PARKS IN THE KYRGYZ REPUBLIC

MAY 2018


Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO)

6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines
Tel +63 2 632 4444; Fax +63 2 636 2444
www.adb.org

ISBN 978-92-9261-150-7 (print), 978-92-9261-151-4 (electronic)
Publication Stock No. TCS189336-2
DOI: http://dx.doi.org/10.22617/TCS189336-2

Notes:
In this publication, "$" refers to United States dollar.
Corrigenda to ADB publications may be found at http://www.adb.org/publications/corrigenda.
The Asian Development Bank refers to "China" as the People's Republic of China; "Korea" and "South Korea" as the Republic of Korea; "Kyrgyzstan" as the Kyrgyz Republic; "Laos" as the Lao People's Democratic Republic; "North Korea" as the Democratic People's Republic of Korea; "Russia" as the Russian Federation; and "Vietnam" as Viet Nam.

Contents

Tables, Figures, and Boxes

TABLES

FIGURES

BOXES

Acknowledgments

This study was undertaken on behalf of the Central Asia Regional Economic Cooperation (CAREC) Secretariat and the Asian Development Bank (ADB). The team would like to thank Werner Liepach, Director General, Central and West Asia Department (CWRD); Hong Wei, Deputy Director General, CWRD; and Safdar Parvez, Director, Regional Cooperation and Operations Coordination Division (CWRC), CWRD, for the overall guidance.

Guoliang Wu, CAREC Unit Head, CWRC, led the project team. Aradhna Aggarwal, Strategy Formulation and Policy Planning Expert; and Michael Daly, Industrial Park Development Expert, are the lead consultants. Data analysis and survey fieldwork were handled by national consultant: Gulnara Arymkulova, Industrial Park Development Specialist for the Kyrgyz Republic; Meruert Makhmutova, Industrial Park Development Specialist for Kazakhstan; and Zhenshan Yang, resource person on industrial park development. Reports and data were further validated by Ronaldo Oblepias, Development Economist.

Consultation missions and fieldwork in Kazakhstan and the Kyrgyz Republic were organized by Kenzhekhan Abuov, Project Officer, ADB Kazakhstan Resident Mission; Meder Turgunbekov, CAREC Advisor to the National Focal Point in the Kyrgyz Republic; and Aidana Berydbekova, CAREC Regional Cooperation Coordinator for the Kyrgyz Republic. Ruby Torralba, senior programs assistant, CWRC, handled mission and study logistics and managed the publishing process.

The study team interacted closely with and would like to express special thanks to officers and staff of the Ministry of Economy, Ministry of Finance, and the free economic zones and high technology park managing companies in the Kyrgyz Republic.

Evgeny Sinelschikov, Zhanna Ustemirova, Sveta Chirkova, and Rustam Sataev translated the study. Joanne Gerber, Kimberly Fullerton, Tuesday Soriano, and Ma. Cecilia Abellar edited the manuscript; Francisco Trivino Jr. designed and typeset the report; Jasper Lauzon designed the cover; and Prince Nicdao typeset the report in Russian.

The study team expresses its appreciation to staff of the ADB Department of Communications, Office of Administrative Services Logistics Management Unit, and resident missions in Kazakhstan and the Kyrgyz Republic for their support.

Abbreviations

CAREC	–	Central Asia Regional Economic Cooperation
CIS	–	Commonwealth of Independent States
CSF	–	critical success factor
EAEU	–	Eurasian Economic Union
EPZ	–	export processing zone
FDI	–	foreign direct investment
FEZ	–	free economic zone
GDP	–	gross domestic product
GVC	–	global value chain
HEZ	–	hybrid export zone
ICT	–	information and communication technology
IT	–	information technology
km	–	kilometer
M&E	–	monitoring and evaluation
PRC	–	People's Republic of China
RTA	–	regional trade agreement
RVC	–	regional value chain
SEZ	–	special economic zone
SMEs	–	small and medium-sized enterprises
TFP	–	total factor productivity
WTO	–	World Trade Organization

Currency Equivalents

Currency Unit	–	Som (KGS)
Som1.00	=	$0.01
$1.00	=	Som69.91

Executive Summary

A. Background: In December 2014, the Asian Development Bank (ADB) approved the Regional Policy and Advisory Technical Assistance for Supporting Industrial Park Development in the Central Asia Regional Economic Cooperation (CAREC) Region with a twofold objective: (i) evaluating the features, functions, and effectiveness of existing free economic zones (FEZs) and industrial parks in the region by undertaking diagnostic studies; and (ii) developing strategic frameworks for their development in accordance with international rules and best practices. Two pilot countries were identified: Kazakhstan and the Kyrgyz Republic.

The diagnostic study conducted for the Kyrgyz Republic's existing FEZs and industrial parks arrives at the conclusion that zones in the Kyrgyz Republic have met with limited success and that there are several gaps in their planning and development, supporting similar observations made by various assessment studies in the past. In view of this, the present report focuses on developing a strategic framework to support industrial park development in the country. While the diagnostic study focuses on the current status of FEZs and industrial parks expressing concerns over their viability from a static perspective, strategic framework adopts a dynamic perspective. It identifies the benefits of FEZs and industrial parks, and develops a strategic framework with an action plan to turn them into development engines.

B. Objectives: A strategic framework is a systematic approach of envisioning a desired future, and translating this vision into broadly defined goals or objectives and a sequence of action plans to achieve them. It outlines what policy makers expect to achieve with FEZs and how they plan to achieve it. The broad objective of the strategic framework presented in this report is to improve the policy framework for planning, developing, and upgrading industrial parks in the Kyrgyz Republic to increase the overall productivity and international competitiveness, with the ultimate goal of driving industrial development. The specific objectives of the strategic framework are to

(i) provide an overview of the development patterns of the Kyrgyz Republic against the background of geographic, historical, and economic factors;
(ii) analyze current development opportunities and challenges;
(iii) investigate the development strategy, and explore the rationale and roles of different types of zones in the strategy to address development challenges;
(iv) discuss the mechanisms underpinning the impact of zones on economic growth;
(v) outline the main pillars of the development strategy for FEZs and industrial parks, and describe key approaches and instruments that can be used and adapted when promoting zones in the Kyrgyz Republic;
(vi) provide best practices that can be adapted to the Kyrgyz Republic; and
(vii) discuss critical factors for effective implementation of zone policy as well as monitoring and evaluation (M&E).

C. The Conceptual Framework: The conceptual framework underpinning the strategic framework is provided by a FEZ policy circle which describes how the strategy-making process moves from its initial inception through to policy design, implementation, and evaluation. It sets out the fundamental steps that must be taken in the strategic planning process. In general, there are four steps of strategy formulation:

- **Planning.** FEZ and industrial park policy making is complex because it is explicitly crosscutting; it does not fit within one ministerial portfolio or one level of government, and there is often disagreement among different government organs over the policy provisions. Further, it affects different interest groups including government organizations (government agencies at the federal, state, and local levels), private businesses, and individuals asymmetrically generating fierce debate over the impact of the policy. Successfully addressing these trade-offs calls for a comprehensive and evidence-based approach in policy making which needs planning.
- **Strategic directions design and development.** There can be multiple approaches to design and plan strategy surrounding the FEZs. The strategic direction outlines what policy makers expect to achieve and how (i.e., design, location, incentive structure, management processes, services to be provided, governance, labor action plan, and any other initiative, and is contingent upon the vision, mission, and objectives).
- **Implementation.** For effective implementation, how a policy is to be implemented should be an integral part of policy design. It is crucial to identify practical constraints in implementation and tools to overcome them, if the policy is to be successful.

- **Monitoring and evaluation.** For effective monitoring and evaluation of the FEZ and industrial park policy, a well-designed evaluation strategy comprising appropriate methods, tools, benchmarking, and outcome indicators is a critical element of the strategic framework.

The strategic framework covers all these steps of the policy cycle and is broadly organized in two parts: planning and strategic proposals, in the above sequence. It outlines issues faced by policy makers at each stage of the policy cycle and presents strategic proposals.

D. Planning for FEZs and Industrial Parks: The policy tool of industrial parks and FEZs is not adopted in the vacuum. There are three principles fundamental to the development of FEZs and industrial parks. First, the zones cannot be insulated from the broader macroeconomic contexts of the economy. Policy makers must therefore assess these settings and must identify the strengths, weaknesses, opportunities, and threats of the economy. Second, the FEZs and industrial parks have to be situated within the broader national and regional development strategic framework. This means that there needs to be an alignment between the zone program and wider strategies of trade and industrialization. The synergies between the zones and regional/national development create a mutually reinforcing and self-supporting system where the benefits of zones flow forward and backward, expanding the regional capacity and improving competitiveness. Third, as a policy tool FEZs/industrial parks have multiple objectives to serve; but the same objectives may be served by many other tools. Evidence-based policy is informed by an assessment of alternative policy tools against the backdrop of the macroeconomic contexts. While assessing the development of FEZ and industrial park policy from this perspective, the present study arrives at the following conclusions:

- **The most challenging task for policy makers is to push the economy from the low productivity trap to a high productivity virtuous circle and improve its competitiveness.** The Kyrgyz Republic has a unique pattern of economic development, which is an outcome of its history as much as of its geography and physical features. Under the former Soviet Union, there was rapid development of industry in the early stages of its development. However, due to the lack of technological upgrading and investment, industrial development slowed down considerably in the late 1960s and subsequently declined in the 1980s as the Russian Federation got engaged in Afghanistan, making many industries uncompetitive and irrelevant. Following its break-up from the former Soviet Union in 1991, the Government of the Kyrgyz Republic set out on the path of implementing a market-based development strategy with a vision to make the country the Switzerland of Central Asia. Given its history and geographic features, a major development challenge of the Kyrgyz Republic is achieving inclusive and sustainable economic development. As early as in the mid-1990s, the government implemented an economic strategy with sustainable development as the core strategy, which formed the core of subsequent policy documents. In 2013, it adopted a new economic strategy mainstreaming the objective of sustainable development in its development strategy. But the country seems trapped in the resources curse due to foreign currency inflows on account of its gold mining, remittances, and foreign aid flows. It is reflected in highly volatile growth rates and symptoms of Dutch disease. The latter is manifested in low competitiveness, high unemployment rates, low and diminishing productivity rates, and sectoral retrogression with low and declining shares of manufacturing. There are clear symptoms of deindustrialization. This has affected its export competitiveness and attractiveness to foreign investors. Thus, the most challenging task for policy makers is to push the economy from the low productivity trap to a high productivity virtuous circle and realize the full potential of the emerging opportunities to drive the economy to the path of "industrial diversification." This will ensure productive employment and optimum use of resources facilitating social and environmental development.
- **Institutional bottlenecks need to be unplugged to promote productivity and competitiveness.** Following the existing literature, a distinction has been made between cost competitiveness, productivity-linked cost competitiveness, and productivity-based competitiveness. While the former two determine the ability to sell in international markets and require a particular focus on cost factors, the productivity-based approach is concerned with value creation. It is found that cost competitiveness of the economy is affected largely by high unit cost of labor (which means that wages are growing faster than productivity) and high inflation rates. Further, structural bottlenecks—mainly, weak governance with corruption and bribery prevailing at different levels, high cost of energy, tedious custom rules, and unfriendly business rules and regulations—have constrained productivity and raised costs of doing business; and finally, productivity growth is constrained by the low quality of education system, underdeveloped financial systems, lack of technological capabilities, and low efficiency of research and development infrastructure.

- **FEZs and industrial parks can serve as highly potent policy tools to address institutional bottlenecks and promote competitiveness.** Low cost competitiveness and low productivity discourage investment in productive activity. This impedes expansion in the scale of production, which in turn prevents the use of new technologies, investment in learning, and upgrading of businesses. This keeps costs high and productivity low. There is thus a vicious circle of low competitiveness and productivity in the economy. The challenge is how to break the vicious circle and enter the virtuous circles of competitiveness and productivity. The remedy lies in giving a big push to the economy to raise the levels of investment. In the contemporary world, two major tools of that can serve as a "big push" to initial levels of investment are free economic zones and industrial parks. In the contemporary world, where global value chains (GVCs) are becoming increasingly influential in determining trade and foreign direct investment (FDI) patterns, as well as growth opportunities, FEZs and industrial parks can be the key channels for GVC integration and can break the vicious circle of low competitiveness and productivity in three ways: (i) by overcoming structural constraints and lowering the cost of doing business they can be instrumental in attracting GVC-linked investment from both domestic and foreign investors; (ii) by attracting in particular FDIs, they can serve as a tool to bring new technologies in the country; and (iii) by generating agglomeration economies they can increase scales of production and reduce costs. Finally, they can be a tool to promote vertically specialized industrialization which is also termed as smart industrialization.
- **There is a disconnect between development strategy and FEZs.** The country has had four phases in the evolution of the FEZ policy since 1991. An overview of the performance of FEZs and industrial parks reveals that they have failed to generate substantial gains for the country supporting the observations of the diagnostic study conducted by ADB and various other studies in the past. It is found that instead of overcoming the structural and production failures, FEZs and industrial parks themselves are affected by these failures. There is a disconnect between the policy approach adopted toward FEZs and the objectives assigned to them; and between the key element of the development strategy and FEZs/industrial parks. It is not known what strategic approach has been adopted for FEZs to achieve the objectives. In fact, FEZs and industrial parks are hardly mentioned in the development strategy document. Further there is a disconnect between the industrial strategy and changing global and trade dynamics. In the contemporary world, where the rise of GVCs has reshaped global production and trade systems, and participating in and moving up GVCs is critical for industrial development for latecomer countries, the industrial strategy of the Kyrgyz Republic has little narrative of global value chains or smart industrialization. FEZs and industrial parks are essentially viewed as industrial infrastructure to attract investment; their role in promoting balanced regional development is not recognized which remains one of the key objectives of the overall development strategy. There is thus a need to develop a strategic framework to address this situation and integrate FEZs and industrial parks into the broader strategy of industrialization.

E. Strategic Proposals: In order to exploit the full potential of FEZs, the strategic framework presented here is founded on five pillars including the ones on implementation, and monitoring and evaluation.

- **Transitioning from export-processing-zone type FEZs to eco-zone type hybrid FEZs.** Over the past two and a half decades, the diffusion of new technologies, particularly information and communication technology (ICT), has placed technology at the core of economic activity. With production and technological activity becoming internationalized through GVCs, technology flows through these chains, creating possibilities for local firms to source these technologies and strike R&D and technology partnerships with other companies and institutions. It means that FEZs and industrial parks that are set up to attract GVC-linked activity can serve as an important tool to generate a trade-investment-services-technology nexus. However, a traditional, fenced, small sized FEZ will not allow spillover and economies of scale advantages to be generated.
  - » **Promote hybrid variety of FEZs.** It is proposed to shift to the concept of "economic zones," which comprise both bonded (single unit FEZs) and non-bonded companies, both foreign and domestic (in line with the Polish model); and smaller processing zones and industrial parks operating within them (along the lines of the Chinese model). Most Southeast Asian countries have also successfully transitioned to these types of zones. The existing FEZs may be designated as the industrial nodes to develop clusters around them in a geographically delineated area by encouraging the growth of both export-oriented and domestic market-oriented projects. A mix of bottom up and top down approach may be adopted to promote clusters in the selected regions by creating synergies between the FEZ/industrial park and regional development programs and synergizing the efforts of the government at the center and regional levels.

» For creating a critical mass of activity in FEZs, a nondiscrimination approach may be adopted for FEZ tenants. The nature of the activity attracted by them will be determined by market forces. On the other hand, industrial parks may focus on priority industries. Both FEZs and industrial parks are tracts of land developed by the government for industrial activity. In the Kyrgyz Republic, it is the tax incentive regime that differentiates the FEZs from industrial parks. Both need to be developed as complementary to each other to break the vicious cycle of low competitiveness by offering cost-competitive platforms for attracting GVC-linked FDI, as well as promoting domestic investment.

  To attract investment, the Kyrgyz Republic may target selected value chains depending on its competitive advantages. These GVCs must be mapped to identify the range of the activities in which the country has competitive advantages. Special benefits may be offered to target investors in these value chains.

- **Promoting an investment climate in FEZs.** The key factor underpinning FEZ-led growth is their ability to attract investment, in particular GVC-linked investment, and facilitating the insertion of domestic firms into international production networks by overcoming the institutional and production bottlenecks that characterize the business climate outside them. Zones need to offer the investors high quality infrastructure, good location, incentive packages, simple administrative procedures, and relaxed regulatory machinery to reduce the cost of doing business and make them attractive for investors. This in turn requires a well-developed and comprehensive institutional framework in place, which ensures stability and certainty in these provisions, and signals political commitment. Strong government support for the FEZ (and industrial parks) program in the strategic intent, and in the broad approach are critical to attracting high-quality long-term investors. Policies and operational practices in the zones need to be in line with the needs of private investors. Business environment within FEZs must be insulated from that outside of them to make them attractive, and these policies should be transparent and stable. Many zone programs undermine investor confidence by failing to deliver a conducive and predictable policy environment.
- **Promoting linkages with the domestic economy.** Three overlapping strategies are identified to promote linkages with the domestic economy:
  - » **The minimalist approach:** This approach requires the government to lower transaction barriers between the FEZ and domestic firms. Thus, sales of goods and services by a domestic enterprise from the national customs territory to FEZ enterprises need to be considered exports to entitle local suppliers the benefits as indirect exporters. Further, on the administration side, paperwork requirements must be simplified and delays reduced for local firms to take advantage of the benefits. Finally, domestic market sales may be allowed on the condition of the payment of the duties forgone in FEZs. If the FEZ product is manufactured using new and sophisticated technology, its domestic sale may be allowed duty free or at concessional rates.
  - » **The proactive approach:** The approach requires a minimalist approach to be complemented with appropriate and wide-ranging policy frameworks that strengthen the domestic productive capacities and spillover benefits from foreign investment, knowledge, and innovations. A well-crafted package of macroeconomic and industrial policies needs to be in place with an appropriate mix of macro management tools, labor market policies, competition policies as well as policies for investment in education, skills, technology, and strategic infrastructure.
  - » **The targeted approach:** This approach places FEZs and industrial parks at the center of the process of industrialization. From this perspective, nations can industrialize by joining a supply chain using FEZs as a tool and then moving up along them and jumping to more sophisticated chains. This is referred to as vertically specialized industrialization. Increasing participation in most global value chains requires a range of goods and services that must be available at competitive prices and quality. The role of the government is to focus on understanding the requirements of the FEZ industries, creating dynamic domestic firms by offering them incentives, building production capabilities, building networking capabilities, managing technology development, and skill formation. For this, the government is to develop policies, agencies, and institutions that ensure advancements in all the segments of the production processes in FEZ industries. Raising competitiveness of domestic firms and industries thus becomes crucial in shaping the outcomes.

An overarching focus on the development of hybrid clusters using the minimalist and "proactive policy" approaches with a mix of "focused approach" should be the way forward for the Kyrgyz Republic.

- **Promotion of regional and cross-border value chains.** Regional value chains (RVCs) can be a path for the Kyrgyz Republic to integrate into GVCs. Factors that can facilitate the promotion of RVCs include membership in the Eurasian Economic Union (EAEU); emergence of transport corridors; and economic diversity among member countries, with the Russian Federation as a leading global economy. By coordinating efforts to strategically foster FEZ-based clusters that take advantage of complementary endowments of different member countries, the Kyrgyz Republic can leverage zone infrastructure and regional integration to overcome its limitations of scale and specialization. Sectors in which RVCs can flourish based on regional comparative advantages, are agriculture-related, textiles, cleantech, and light industries. An appropriate strategy—involving harmonization of standards and regulations in selected sectors, FEZ definition and regulations, and fiscal incentives at the regional level, as well as programs and projects integrated with entrepreneurship development programs for enhancing capabilities of firms in participating and managing the chains at the national level—will be the way forward in promoting these chains. It is also recommended to set the target of creating a geographically delineated cross-border zone in Naryn beside the transport and logistics hub currently being set up to complement the growth of the Kashgar development zone on the People's Republic of China (PRC) side of the border. The promotion of a cross-border zone will reinforce the logistics hub; involve economic integration in the cross-border region and include intersector cooperation among a wide set of actors, including the entire socioeconomic system and administrative institutions.
- **Implementation strategy.** The strategic framework draws on four main models of implementation to identify the factors critical for successful implementation of the FEZ strategy: conflict-ambiguity model, human resources capability model, institutional complementarity model, and risk management model. The key lessons are as follows:
  (i) **Stakeholder management:** Identify the stakeholders; assess their roles and responsibilities, commitment, and resistance; engage them in decision making and prosperity sharing; coordinate them, keep the policy goals clear and consistent, and communicate the policy clearly to stakeholders including the implementing agencies.
  (ii) **Human resources management:** Train the implementing personnel, ensure accountability, and offer incentives.
  (iii) **Complementary institutional initiatives:** Conduct macro management of the economy to create an environment in which trade and investment can grow exponentially.
  (iv) **Risk management:** Anticipate, assess, and manage risks in implementing the policy effectively, diversify economic activities, export destinations, and FDI source countries within FEZs; promote rigorous marketing of FEZs to help manage market risks: adopt best practices regarding FEZ-related risks, such as fraud and money laundering, noncompliance, and change in the government attitude toward FEZs.

- **Monitoring and evaluation:** Monitoring and evaluation (M&E) provides government officials and stakeholders with means to learn from past experiences; improve the design, implementation, planning, and allocation of resources; and demonstrate results as part of accountability to key stakeholders. There is no best practice model for M&E; it is contextual. Different methods may be adopted depending on the objective of M&E, indicators identified for evaluation, data availability, and human resources. However, key lessons are as follows:
  - » Develop a monitoring and evaluation framework, including a schedule for evaluations.
  - » Develop performance indicators covering the measures of inputs, processes, outputs, outcomes, and impacts of the policy.
  - » For each evaluation, prepare an initial evaluation plan; identify the indicators; recruit and train a team to conduct the evaluation.
  - » Do not overengineer an M&E system, particularly through multiple monitoring systems or with an excessive number of performance indicators.
  - » Present the evaluation results externally.
  - » Develop an action plan for follow-up; M&E is worthwhile only to the extent that it is actually used to improve government performance.

Chapter I: Introduction

1.1 Background

Strategically located at the crossroads between Europe and Asia, the Kyrgyz Republic is a landlocked mountainous country with a total area of 199,900 square kilometers and population of 6 million (64% living in rural areas). At gross domestic product (GDP) per capita of $1,077 (2016), it is a lower middle-income country with about 32% of its population living below the poverty line. Following its breakup from the former Soviet Union in 1991, the economy underwent severe hardships due to the breakdown of inter-republic trade links, payment mechanisms, and the withdrawal of subsidies. Notwithstanding that, the Government of the Kyrgyz Republic set out on the path of implementing a market-based development strategy with a vision to make the country the Switzerland of Central Asia. As early as 1992, it enacted its first free economic zone (FEZ) law, "On free economic zones in the Kyrgyz Republic 1992," with "effective involvement of the Republic into the international division of labor" as one of its major objectives (Government of the Kyrgyz Republic 1996). Due to earnest market-based initiatives taken by the government, it became the first member country of the Commonwealth of Independent States (CIS) to be accepted into the World Trade Organization (WTO). In 2010, it had the distinction of being the first former Soviet Republic to adopt a democratic constitution. According to the Economic Intelligence Unit (2016), it is the most open economy of Central Asia.

In 1996, the government launched the Economic Strategy (1996–2005) and Socioeconomic Plans with private sector-driven market-led growth, public sector reforms, and priority sector development as the key pillars of its development strategy. Infrastructure, human development, enterprise sector, natural resource management, and public administration were identified as five priority sectors. These have been the broad development priorities since then with little variation. The long-term Comprehensive Development Framework (2001–2010) initiated in 2001, national poverty reduction strategy (initiated in 2003), and medium-term development plans continued to focus on these major directions with sustainable development and poverty reduction as the goals to be achieved, with little success though. In 2013, the government adopted the National Strategy of Sustainable Development (2013–2017), mainstreaming sustainable development in its development strategy, and with this, embraced the 5-yearly national strategy practice. With a new development strategy in place, amendments were made in the FEZ Law of the Kyrgyz Republic assigning free economic zones the task of "promoting social and economic development of the Kyrgyz Republic and its certain regions" (Article 3, Government of the Kyrgyz Republic 1996). There are five FEZs in the Kyrgyz Republic in different parts of the country; the establishment of industrial parks is underway.

In view of the above, in December 2014, the Asian Development Bank (ADB) approved the Regional Policy and Advisory Technical Assistance for Supporting Industrial Park Development in the Central Asia Regional Economic Cooperation (CAREC) Region with a twofold objective: (i) evaluating the features, functions, and effectiveness of existing FEZs and industrial parks in the region by undertaking diagnostic studies; and (ii) developing strategic frameworks for their development in accordance with international rules and best practices (ADB 2014). Two pilot countries were identified: the Kyrgyz Republic and Kazakhstan.

The diagnostic study conducted for the Kyrgyz Republic's existing FEZs and industrial parks (ADB 2017a) observes that zones in the country have met with limited success due to several gaps in their planning and development, supporting similar findings made by various assessment studies in the past (Bondar 2001, USAID and Bishkek Business Club 2014, UNECE 2015).

The present report focuses on developing a strategic framework to support industrial park development in the country. The objective is to improve the policy framework for planning, developing, and upgrading FEZs and industrial parks in the country to increase overall productivity and international competitiveness with an ultimate goal of driving social and economic development in the Kyrgyz Republic.

1.2 Objectives

The specific objectives of the report are as follows:

- To provide an overview of the development patterns of the Kyrgyz Republic against the background of geographic, historical, and economic factors.
- To dive into the current development challenges of the country.
- To investigate the development strategy of the country and explore the rationale and the role of different types of FEZs and industrial parks in the industrial development strategy of the Kyrgyz Republic to address development challenges.
- To discuss the mechanisms underpinning the impact of FEZs and industrial parks on economic growth.
- To outline the main pillars of the strategic framework and describe key approaches and instruments that can be used and adapted when promoting industrial parks and FEZs in the context of the Kyrgyz Republic.
- To provide best practice examples that can be adapted to the Kyrgyz Republic environment.
- To discuss the critical factors for effective implementation of the industrial parks and FEZs policy, and its monitoring and evaluation.

1.3 Definition of a Strategic Framework

Public policies often have multiple objectives to serve, some of which may even be conflicting. Special economic zones or FEZs (the generic term for FEZs) are no exception. They first emerged in 12th century Europe in the form of free ports, free cities, and free zones, and flourished during the Middle Ages when mercantilism ruled Europe. The objective was to foster reexport or *entrepôt* trade by overcoming high tariff barriers without opening the domestic market to foreign goods. Since then, the concept of FEZs has evolved, and acquired different designs and objectives in various contexts. FEZs have evolved from being trade- to investment- to development-oriented, from being purely an economic tool to a social and political tool, and from carrying out structural reform to promoting international and regional cooperation (Meng 2005).

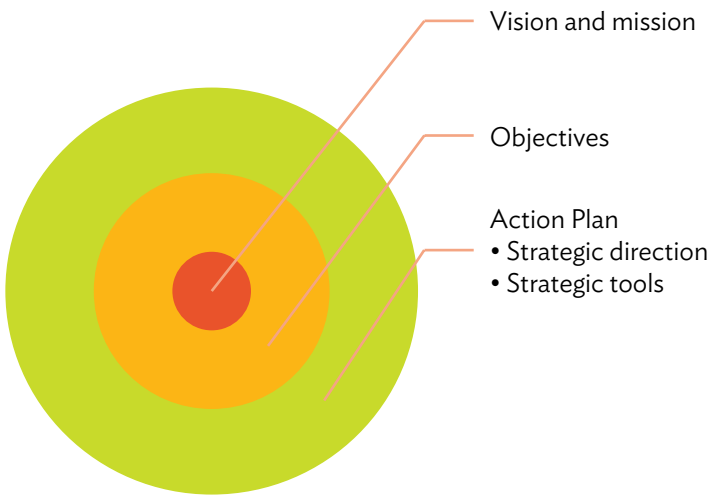
Success stories indicate that FEZs have the potential to serve different objectives such as promoting trade, foreign direct investment (FDI), industrial growth and diversification, spatial rejuvenation and urbanization, border development, or regional integration in different macroeconomic, sociohistoric, and political contexts. The challenge for government is to ensure that they are used most effectively and efficiently within a given context. A strategic framework is a road map in that direction. It outlines what policy makers expect to achieve with FEZs and how they plan to achieve it. It is a systematic approach of envisioning a desired future, and translating this vision into broadly defined goals or objectives and a sequence of action plans to achieve them.

Figure 1 shows that the strategic vision and mission are at the center of a strategic framework, indicating the purpose of setting up FEZs and industrial parks. An action plan provides strategic directions, representing tangible steps to achieve the mission. Objectives serve as the bridge between the vision and action plan.

The approach to strategic direction and tools is guided by a given institutional context, development strategy, and potential of the zones. Different strategic approaches are associated with different visions, missions, objectives, execution plans, and, hence, different critical success factors (CSFs). CSFs are core factors that pertain to FEZ design, location, incentive structure, management processes, services to be provided, governance, action plans, and any other initiative in the execution plan. The strategy and its implementation also affect the outcome of FEZs. A country that clearly identifies institutional impediments in its development process and assigns a well-defined strategic role for FEZs in its broader development strategy tends to perform better than others.

Considering that the Kyrgyz Republic has embarked on a sustainable economic development path with the vision and objectives of FEZs already specified in

Figure 1: The Strategic Framework



Source: Author, based on the literature.

accordance with national priorities, this report focuses on the action plan, outlining strategic directions and providing strategic tools to achieve these objectives and ultimate goals.

1.4 Why a Strategic Framework for Free Economic Zones and Industrial Zones in the Kyrgyz Republic?

Over the past few decades, the global economy's economic and institutional landscape has significantly changed. Many emerging factors—such as the dismantling of barriers to trade and investment; rapid changes in production, transport, and communication technologies; financial market integration; increasing nontariff barriers; growing legal obligations emerging from multilateral, bilateral, and regional agreements; and global warming—have posed significant challenges for developing countries, exposing them to fiercely competitive international markets while constraining their policy space, curtailing their ability to mobilize domestic revenue, and increasing their vulnerability to shocks and financial instability. Policy makers are challenged as to how best they can use the tools available to achieve sustainable and inclusive economic outcomes. One policy tool that has become increasingly popular with these governments is the promotion of FEZs and industrial parks geographically delineated areas designed to attract foreign manufacturing and trade; the difference between them lies in the fact that the former (FEZs) offer a differential policy regime that the latter do not do.

The past few decades have witnessed a surge in the number of FEZs from 500 across 73 countries and areas in 1995 to 3,500 across 130 countries and areas in 2006. These are estimated to account for 130 million jobs (direct and indirect) worldwide, about 1% of total global employment, and are an important destination of FDI (Boyenge 2007). For instance, the share of FDI flows going to FEZs in the Philippines is as high as 81% (Farole 2011). FEZs also accounted for slightly less than 20% of exports from emerging and developing economies in 2005 (Baissac 2011). Thus, these can be critical drivers of employment, investment, and exports in the global economy.

In some countries and areas—such as the People's Republic of China (PRC); Dominican Republic; the Republic of Korea; Malaysia; Mauritius; Mexico; Singapore; and Taipei,China—FEZs have played a critical role in catalyzing diversification and economic growth. But, aside from a few successful examples,

their development benefits by and large remain highly ambiguous (Aggarwal 2012, Akinci and Crittle 2008, Farole 2011, Madani 1999).

Several explanations have been offered for the underperformance of FEZs. An analysis of the performance of FEZ regimes in 32 countries and areas in Asia and Eurasia however showed that a lack of strategic planning surrounding FEZs was core of their failure (ADB 2015). The performance of FEZs depends on the strategic framework surrounding them, which requires a clear understanding of macroeconomic development challenges, broader development strategy, the role that zones can play within the strategy, mechanisms underpinning FEZ-induced development, and CSFs driving FEZs and their possible outcomes. In the absence of this understanding, the FEZ vision is often inflated, objectives are overstated or understated, strategic planning remains faulty, and performance assessments are misleading.

The Kyrgyz Republic has been experimenting with developing FEZs since the early 1990s. By early 1998, the Kyrgyz Republic had eight FEZs. It was widely believed that creation of a large number of such zones would expedite the revival of regional economies as well as of the country's economy as a whole. From time to time the government introduced changes in the Law on FEZs in an effort to strengthen its impact and ensure that FEZs operate in the way in which the law had intended. However, it had little success in generating substantial gains through zones, which eventually led to closure of some of them. Currently, there are five FEZs. The zones include Bishkek, located in the proximity of the capital; Maimak, on the Kyrgyz Republic–Kazakhstan border; Naryn, on the Kyrgyz Republic–PRC border; Karakol, near Issyk Kul Lake; and Leilek. In addition, the country has promoted a high-tech park and is planning to set up industrial parks.

In December 2013, the Parliament tweaked the FEZ Law to align the objectives of FEZs with that of the new national sustainable development strategy adopted in 2013. While FEZs are assigned ambitious objectives to achieve sustainable development and regional restructuring, there is no strategic framework in the policy documents identifying the strategic choices, directions, and tools to exploit them. The FEZ or industrial park programs are not integrated with the development strategy. The FEZs or industrial parks find little mention in the poverty reduction strategy or the recently launched sustainable development strategy (2013–2017). Thus, there is a compelling need for strategy building to exploit the zones' potential. This strategic framework will encompass strategies required to achieve program objectives; informing policy makers, developers, and regulators on the strategic framework of an effective zone program.

1.5 The Proposed Strategic Framework

The proposed new framework has six pillars:

- Integrating FEZs and industrial parks with a sustainable development program by using a mix of bottom-up and top-down approaches;
- Enhancing better investment climate within FEZs and industrial parks by ensuring the development of sound legal and regulatory frameworks, better institutional designs, and coordination;
- Using a proactive approach in integrating FEZs and industrial parks with global value chains (GVCs) and upgrading along them by strengthening domestic capabilities;
- Forming regional and cross-border value chains;
- Developing a sound implementation strategy; and
- Establishing a sound monitoring and evaluation (M&E) framework.

The key assumption underlying this strategic framework is that FEZs and industrial parks in the Kyrgyz Republic can play valuable roles, if managed strategically to promote cluster development. Sustainable development means economic growth that creates opportunities for the poor, and generates the conditions for them and their future generations to take advantage of those opportunities. At the center of sustainable and inclusive development are sustainable productivity growth and competitiveness, which require policy paradigms that focus on innovation, logistics, and human skills. Economic clusters are recognized as key central drivers of economies of scale, knowledge creation, knowledge spillovers, and knowledge diffusion. The pro-poor growth potential of cluster development resides not only in productivity growth but also in the conducive environment that it creates for the promotion of broad-based and inclusive

forms of development by integrating the regional communities with the production systems.

FEZs and industrial parks can provide a viable, internationally competitive platform for cluster formation that is capable of attracting GVC-linked activity. In the contemporary economy, multinational corporations are increasingly restructuring their operations to avail of economies of scale and scope by internalizing the economies of specialization through the integration of assets, production, and marketing activities across countries to advance their core competencies in the global markets. They seek locations where they can offshore a part of their activity most efficiently. FEZs and industrial parks, which offer a favorable investment climate through improved infrastructure, simplified rules, and harmonized processes, can serve as platforms for attracting this investment and promoting trade and technology transfers. The Kyrgyz Republic is in its early stage of industrialization and is in need of industrial diversification for creating high quality sustainable economic development.

FEZs that can be transformed into clusters of highly competitive traded firms can make significant contribution to industrial diversification and regional development of the Kyrgyz Republic. The strategies and policies outlined in the strategic framework aim at leveraging FEZs and industrial parks for enhancing productivity and promoting regional development.

1.6 The Conceptual Framework

The analytical framework used for the strategic framework is provided in Figure 2. This a policy circle that describes how the strategy-making process moves from its initial inception through to policy design, implementation, and evaluation, and serves as the framework for organizing the rest of the report.

In general, there are four steps of strategy formulation: planning, strategic directions design and development, implementation, and evaluation.

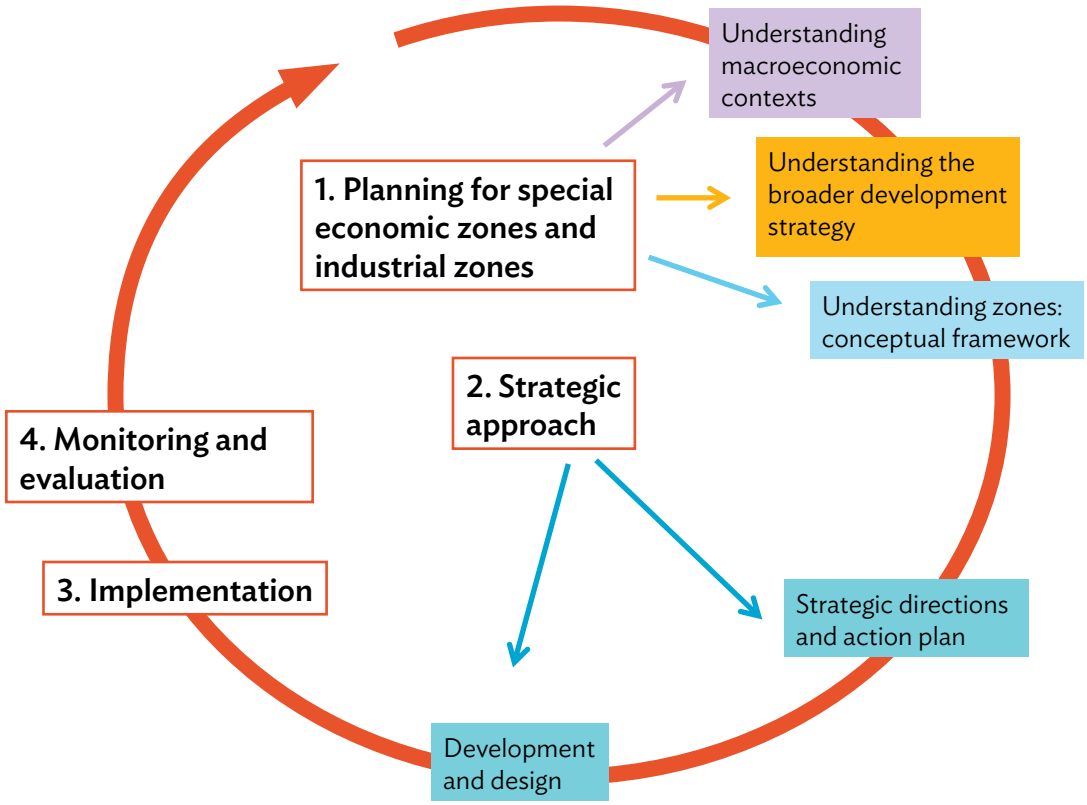
(i) **Planning.** FEZ and industrial park policy making is complex because it is explicitly crosscutting. It does not fit within one ministerial portfolio or one level of government, so there is often disagreement among different government organs over policy provisions. In addition, it affects different interest groups, including government organizations at each level, private businesses, and individuals, generating often fierce debate over the impact of the policy.

Successfully addressing these trade-offs calls for a comprehensive, evidence-based approach in policy making. The incorporation of evidence into policy development and review requires a clear understanding of the broader institutional contexts in which the policy is to be implemented; alternative policy tools; the broader national development strategy in which the policy is to be embedded, and the ways in which the "policy" works.

Evidence-based FEZ and industrial park policy is founded on an understanding of a variety of ways in which growth may come about, and associated costs and benefits. The choice between them is not simple, because achieving rapid growth is not an end; it needs to be sustainable and inclusive to ensure economic development. The challenge to policy makers is to choose a policy approach in the current landscape that pushes growth accompanied by social and institutional restructuring, equity, and greening, requiring an assessment of alternative policy tools against the backdrop of development challenges from a broader perspective of inclusive and sustainable development. Strategic thinking of the rationale and usefulness of zones is critical for legitimizing the establishment of economic zones.

Further, the zones cannot be insulated from the broader institutional setup of the economy. Therefore, policy makers must assess the institutional settings, leading sectors driving growth, level of development, resource endowments, and the constraints the economy faces in the development process. They must identify the economy's strengths, weaknesses, opportunities, and threats.

Figure 2: Policy Circle of Free Economic Zones and Industrial Parks



Source: Author, based on the literature.

FEZs and industrial parks must also be situated within the national and regional development strategic frameworks; there must be an alignment between investment in zones and outside of zones, as well as close links between the zone program and wider strategies of trade and industrialization. This helps ensure long-term political support and resource commitments to zone development; more importantly, the synergies between the zones and national development create a mutually reinforcing and self-supporting system where the benefits of zones flow forward and backward, expanding capacity and improving competitiveness.

Finally, a holistic FEZ and industrial park strategy needs to be based on a clear understanding of characteristics of different types of zones, their rationales, success factors, the channels through which FEZs and industrial parks affect the process of industrialization, and the development outcomes.

(ii) **Strategic directions.** The direction outlines what policy makers expect to achieve and how (i.e., design, location, incentive structure, management processes, services to be provided, governance, and any other initiative; and is contingent upon the vision, mission, and objectives). Different approaches adopted by policy makers in regard to strategic direction

are associated with different sets of CSFs. A critical element in strategy building is a clear vision of the overall economic development path being targeted, and the specific role of zones on that path. The strategies regarding targeting industries—locational preferences, targeting tenants, developing an ecosystem, and developing their linkages with the wider economy—are guided by these considerations.

Further, the absence of good laws and regulations almost inevitably leads to failure. The law establishes the institutional structures, including the roles of the government operator, government developer, and government regulator, as well as that of private operators and private developers. The administrative framework establishes the structure of governance, while an unambiguous set of rules and procedures guide the entire process of licensing, tenancy, incentives, customs, labor regulations, domestic procurement, domestic sales, subcontracting, security, financial transactions, and trade. These rules should evolve over time to meet the changing needs of investors and governments, and to experiment with different approaches to identify the most effective ones.

There is more to successful zones than just facilities and services within them. If FEZs are not able to forge backward and forward linkages with the rest of the economy, these cannot catalyze the process of industrial diversification. A sufficient condition for the success of FEZs is that they are able to generate spillover effects through linkages with the rest of the economy. This process is not automatic. It also requires strategic directions in the strategic framework.

(iii) **Implementation.** The inability to implement or to abandon policies launched amid great expectations erodes citizens' confidence in government. Governments need to find mechanisms to manage a zone policy more effectively, both horizontally and vertically; thus, how a policy is to be implemented should be an integral part of policy design. It is often assumed that policy making is a political process, while implementation is largely an administrative function. Yet, according to E. Clay and B. Schaffer, the dichotomy between policy and implementation is an "escape hatch" that allows policy makers to avoid responsibility for the policies that they make (Clay and Schaffer 1984). For effective implementation, "How a policy is to be implemented should be an integral part of policy design" (Government of the United Kingdom 2001) and implementers need to be recognized as an integral part of the policy process rather than as officials simply implementing a program. It is crucial to identify practical constraints that need to be overcome if the policy is to be successful. This entails three tasks: improving the coordination of government policies across government departments, improving the coordination of different levels of government, and bringing government and stakeholders together in policy development through deliberation and policy implementation (Peach 2004). Apart from technical knowledge, implementation requires profound political will, information, coordination, and adequate resources to succeed.

(iv) **Evaluation and monitoring.** The role of evaluation is to provide feedback to inform evidence-based policy making. Evaluation provides the basis for policy relevance, performance, and implementation. This means that the whole policy cycle needs to be accompanied by appropriate M&E tools so that the decisions made at each step of the policy circle can be based on evidence. For effective M&E of the FEZ and industrial park policy, a well-designed evaluation strategy comprising appropriate methods, tools, benchmarking, and outcome indicators is a critical element of the strategic framework.

Following the above framework, the rest of the report is organized into 10 chapters. Chapters II to IV focus on the planning of FEZs. While Chapter 2 focuses on understanding the macroeconomic landscape of the Kyrgyz Republic, Chapter 3 defines the concepts of competitiveness and offers different definitions. Chapter IV provides insights on FEZs and industrial parks.

Chapter 5 assesses the performance of FEZs and industrial parks, and identifies factors that constrain their performance. This analysis is followed by a new strategic framework of FEZs and industrial parks with six pillars that can address the challenges surrounding them. The rest of the chapters focus on the strategic directions and instruments for each pillar of the strategic framework. Chapter 6 focuses on leveraging FEZs and industrial parks for cluster development. Chapter 7 deals with enhancing the investment climate in and surrounding FEZs and industrial parks, while Chapters 8 and 9 focus on strengthening the development role of FEZs and industrial parks. Chapter 10 provides an exposition of the implementation strategy, Chapter 11 looks at M&E tools, and Chapter 12 offers the conclusion.

Chapter II: Understanding the Development Patterns, Opportunities, and Challenges in the Kyrgyz Republic

The country's mountainous landscape and continental climate along with other geographic, historical, demographic, and political features condition specifics of production structure and substantially impact on the growth process. The objective of this chapter is to understand these distinctive features of its development, as well as its strengths, weaknesses, opportunities, and threats as a first step toward developing a strategic framework for free economic zones (FEZs) and industrial parks of the Kyrgyz Republic.

2.1 Geography

Fragile ecosystem. The Kyrgyz Republic is a small country, covering 199,900 square kilometers, and is almost entirely mountainous with only 7% of the land area suitable for arable agriculture (FAO 2000). There are over 88 major mountain ranges in the Kyrgyz Republic, most of them forming the Tien Shan system—the Celestial Mountains. The others, such as the Chon Alai range in the south of the country belong to the Pamir system. Tien Shan stretches across several countries but much of the system lies in the territory of the Kyrgyz Republic with rich mineral deposits of rare earth and precious metals and coal. The Kumtor gold mine, which opened in 1997, is one of the largest gold deposits in the world (Curtis 2007). New gold mines are planned at Jerooy and Taldy–Bulak, and a major gold discovery was announced at Tokhtonysay in late 2006 (Curtis 2007).

The Kyrgyz Republic is among 200 priority ecological regions of the planet. Its flora and fauna are extremely diversified. Although the Kyrgyz Republic occupies only 0.13% of the earth's surface, the country is inhabited by about 3% of the world fauna, and more than 7,400 types of plants grow here (Kyrgyz Republic Review 2012).

Moreover, the Kyrgyz Republic is the only Central Asian country with water resources completely formed within its area, which is its hydrological peculiarity and advantage. The country's own power resource production is mostly concentrated in production of electric power with over 90% generated by hydroelectric plants. There are abundant opportunities for promoting renewable energy using energy of the sun, wind, small rivers, and chutes, and the products of livestock waste processing, including production of biogas and organic fertilizers.

However, these features also present challenges related to environmental and ecological security in the region. While rare minerals bring revenue, they also have implications for the environment. For instance, abandoned uranium mines, toxic deposits, huge amount of radioactive wastes stored on the surface in mines, tail storages and burials of radioactive wastes (inherited from the regime of the former Soviet Union) which are located in areas prone to landslides and earthflow activity can pose serious threat for both, the Kyrgyz Republic, and neighboring countries if they contaminate water of the rivers in the area particularly because the former is the course of water for these countries (IAEA 2005). Moreover, excessive mining activities in the region can threaten the glaciers that act as a crucial source of freshwater for the neighboring countries.

The forests of the country are already facing degradation. Around 64% of the population living in rural areas depends on forests for private cattle grazing and fuelwood and this has damaging effects on forests. According to a World Bank study (World Bank 2015a), 50% of forests during the past 20 years have been exterminated in the Kyrgyz Republic so that at present the forests of the country cover only 4.25% of the land.

It is also observed that while water is formed in this area, a significant part of collected water is lost in the process of use. During 2006–2010, average water loss in transportation reached 23% of the water intake, posing the issue of water security (IMF 2014). The country's energy security level is also under threat. Only 10% of its energy demand is met by hydroelectric energy; it is dependent for the rest of its energy demand on its neighboring countries. Apparently, the country's growth process is conditioned by river water content, oil prices, and mining. The ecosystem is highly fragile which requires that rationalization of the use of natural resources be placed at the heart of any development strategy of the country.

Landlock. It is a landlocked country away from seas and oceans. The country is bounded in the north by Kazakhstan, in the south by the People's Republic of China (PRC) and Tajikistan, and in the west by Uzbekistan. Colliers International (2016) identified the lack of access to the sea as a main "poverty trap" that hinders the development of countries, condemning them to stagnation. According to this study, 48 landlocked countries in the world are deprived of access to the sea and, thus, cut off from maritime trade, which accounts for about 90% of world trade. These 48 countries are home to 40% of the "bottom billion," the poorest group of humankind (Colliers International 2016).

However, the Kyrgyz Republic has a location advantage. It is situated almost at the center of the Eurasian continent and is strategically located on the ancient Silk Road, which connected Asia with Europe. It is a land bridge between the PRC, the manufacturing center of the world; Europe, the market for manufactured products; and the Middle East, source of fossil fuels. Thus, it has the opportunity to benefit from being a transit country for trade across these markets, provided it offers a transport and trade facilitation system that is competitive in, among other factors, cost, speed, and efficiency (ADB 2009). Its topography is characterized by a number of valleys divided by mountain ranges, most of which rise over 4,000 meters above sea level. Therefore, historically, a greater emphasis has been on rail transport. With an increasing relevance of the country as a land bridge, importance of road transport is also underscored. Therefore, one of the key growth areas in the country is the transport sector. The Central Asia Regional Economic Cooperation (CAREC) Program initiated by 10 countries in 2010 identified six priority corridors with a mix of rail and road transport to reinforce links among countries in the region, and with the global market. Of these, four transit through the Kyrgyz Republic:

- CAREC Corridor 1 links Europe to the PRC and East Asia. The corridor traverses from the border with the Russian Federation to the PRC via Kazakhstan and the Kyrgyz Republic. It comprises 13,600 kilometers (km) of roads and 12,000 km of railways, one logistics center, and three airports.
- CAREC Corridor 2 connects the Caucasus and Mediterranean to East Asia. The route covers the Kyrgyz Republic along with Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan, and the PRC. It comprises 9,900 km of roads and 9,700 km of railway.
- CAREC Corridor 3 has 6,900 km of roads and 4,800 km of railways, running from west and south of the Siberian region of the Russian Federation through Afghanistan, Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan to the Middle East and South Asia.
- CAREC Corridor 5 connects East Asia to the Arabian Sea through Central Asia. The route covers the PRC, the Kyrgyz Republic, Tajikistan, and Afghanistan. The corridor has 3,700 km of roads and 2,000 km of railways.
- The North–South Road connects Corridors 2 and 3 and goes up to Kashgar in the PRC.

These corridors and connecting roads are expected to provide the landlocked Kyrgyz Republic access to Eurasian and global markets. Efficient economic corridors foster a virtuous growth cycle, allowing access to new markets. FEZs are connected with these spatial initiatives in the country. However, creating and upgrading the physical infrastructure is only a necessary condition for promoting trade, it is not a sufficient one to ensure an increase in traffic.

2.2 History

Historically, the Kyrgyz Republic was inhabited mainly by nomadic tribes. It came under the control of the former Soviet Union in the 1860s. Enforced settlement and collectivization in the 1930s transformed the independent tribal, nomadic lifestyle of the Kyrgyz people. However, the Russian Federation successfully harnessed their pastoral skills and traditions as herdsmen to raise sheep and cattle with an emphasis on specializing in fine-wool sheep which were less resilient than the local land races (Fitzherbert 2000). Stock numbers were deliberately increased, supported by imported feed and other services. However, excessive stocking led to the serious deterioration of the pastures and rangelands. In addition to wool, the country was also a supplier of cotton, and mutton in the former Soviet Union-run value chains. In return, it depended on the supply of finished and semi-finished goods from other countries in the region.

After independence, sheep numbers declined sharply with the privatization and division of the sheep flocks, the collapse of the wool market, unavailable or unaffordable imported feed, and the loss of captive Russian Federation markets. This had a profound influence on the production systems and pastoral resources of the Kyrgyz Republic. The total area of planted fodder crops recorded a steep decline over time. It was replaced by wheat to achieve self-sufficiency in food. But agricultural productivity declined sharply with the privatization of land and the breakup of the collectives. Land has been distributed to collectives' members in small units with no modernization strategy in place, affecting adversely the agricultural sector, the economy's key sector.

Under the regime of the former Soviet Union, large-scale industrialization was introduced in the economy when company towns based on heavy industries and uranium mining operations were established there. This was accompanied by a large influx of Russians to operate them. During the Second World War, many large industries were also relocated from Europe to what was then Kirghiz Soviet Socialist Republic. But these heavy industries were not established based on the local availability of raw materials and demand. They were linked with the internal value chains of the former Soviet Union. There was little technological upgrading and investment in the industries declined as the former Soviet Union got engaged in Afghanistan in the 1980s, making them uncompetitive. After disintegration of the former Soviet Union, these industries became irrelevant and most of the ethnic Russians who were running them left.

Indeed, the Kyrgyz Republic's light industry produced textiles, clothing, and footwear, while the agricultural sector produced cotton, silk, fruits, and vegetables. In addition, automobiles, tractors, electrical equipment, furniture, timber, cement, and prefabricated cement walls were other major industrial products of the country, which also turned into a major producer of hydroelectric power. But goods manufactured were of poor quality. With much focus on large projects, development of light industries slowed down considerably after the mid-1960s and it was expensive and inefficient to support them in a market-based setting.

Thus, the Kyrgyz Republic lost both its industrial base and competent labor force. These industries were sold off for favors, closed down, or abandoned. The country faced massive deindustrialization and unemployment (OECD 2002).

Inspired by the shock therapy philosophy that dominated the early 1990s, the Government of the Kyrgyz Republic adopted a rapid reform program to dismantle the command economy and to integrate with the global economy. However, dismantling the centrally planned economy created severe disorganization in the absence of appropriate market institutions posing severe economic, social, and political challenges before the government, soon after independence (Olcott 2010, Pomfret 2006). The Kyrgyz Republic has been struggling to build productive capacity since then.

2.3 Economic Challenges

Low and volatile GDP growth rates. The Kyrgyz Republic, a lower middle-income country, registered an average annual growth rate of 1.4% between 1990 and 2015, and was left way behind by its peers in the lower middle-income country group and areas in gross domestic product (GDP) per capita (Figure 3). At the time of its independence, its per capita income was $1,096 (at constant 2010 prices), which was slightly above that of the lower middle-income countries and areas. It was soon overtaken by the latter with the gap widening over time. By 2015, the average GDP per capita of the lower middle-income countries almost doubled to $2,077 while the GDP of the Kyrgyz Republic declined to $1,017 from its 1990 level.

Not only was the growth rate of GDP per capita in the Kyrgyz Republic lower than that of the group average, it was also much more volatile (Figure 4). Between 1991 and 1995, the real GDP of the country declined by 45%. Clearly, the decision to adopt radical economic reforms exacerbated the severity of the post-independence recession.

By 1995, the economy was on the growth path. The Kyrgyz Republic's economy grew by 15% between 1995 and 1997. Much of the economic growth originated in one project, the Kumtor gold mine, which was explored during this period. It boosted

real GDP during the investment stage in 1996–1997 and has been an important contributor to real GDP since then. The bumper harvests of 1996 and 1997 also contributed to growth. But, the period of economic acceleration was short. In 1998, the growth rate plummeted again; this time due to the Russian Federation economic crisis, domestic bank failures, and poor agricultural performance. In the early 2000s, growth picked up, but continued to be greatly influenced by Kumtor. A landslide in 2002 brought the growth to zero. The country went through political upheavals in the early 2000 and 2010–2011 (Kubisec 2011). The 2008 global financial turmoil adversely affected GDP growth in 2009. The effects are visible in GDP growth slumps in these years. Growth rebounded in 2011 at 5.7% but continued to fluctuate between zero and 10%. Overall, it may be seen that the growth is highly fragile in the Kyrgyz Republic. The coefficient of variation in the growth rate has been 73% as compared with 40% for the lower middle-income countries as a group.

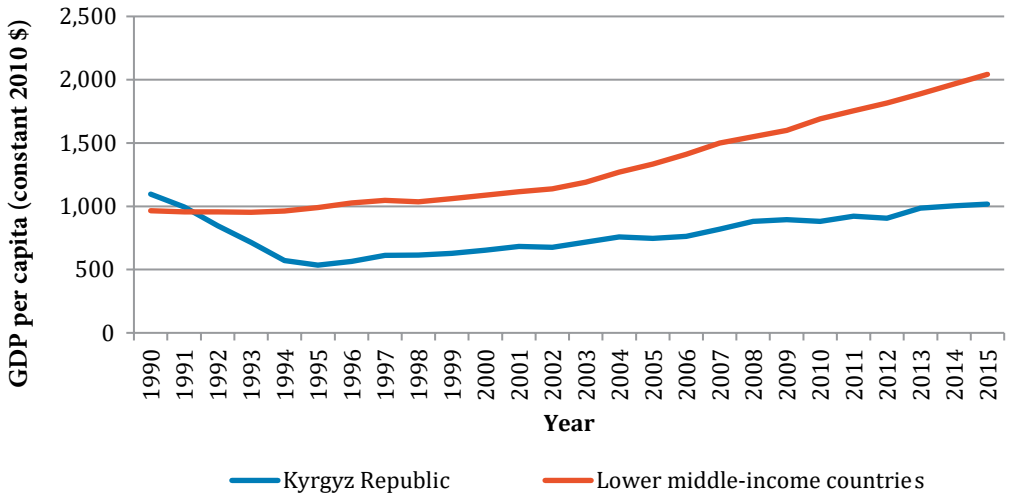
Consumption-led growth and resource curse-like situation. GDP is a sum of final consumption by households, investment, and net exports to the rest of the world, i.e.:

GDP(Y) = Private Final Consumption+Public Final Consumption+Investment+Exports-Imports.....(1), and

Total Absorption (TA) = Private Final Consumption+Public Final Consumption+Investment..(2)

The contribution of each of the three components in the total GDP (1) has an important implication for the growth process. Figure 5 depicts the composition of GDP in the Kyrgyz Republic from 1990 to 2015. It shows that public and private final consumption has been the most important driver of growth in the country. Until the 2000s, the ratio of consumption to GDP fluctuated between 80% and 100% of GDP but in the post-2005 period, it crossed 100%. It is

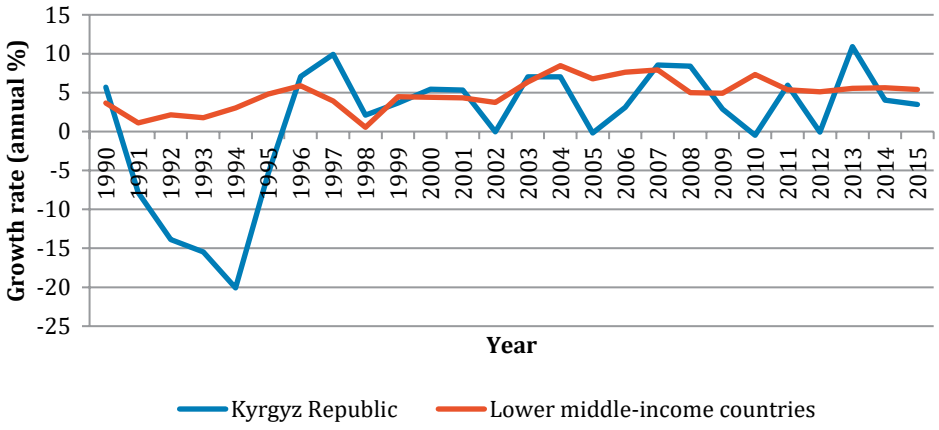
Figure 3: Gross Domestic Product per Capita of the Kyrgyz Republic and Lower Middle-Income Countries and Areas, 1990–2015 ($)



GDP = gross domestic product.

Source: World Bank. World Development Indicators. http://data.worldbank.org/indicator.

Figure 4: Annual Gross Domestic Product Growth at 2010 Constant United States Dollars



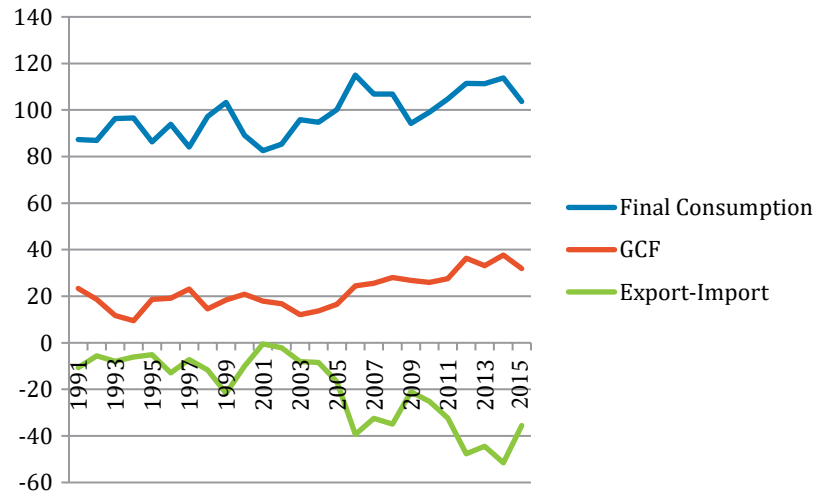
Source: World Bank. World Development Indicators. http://data.worldbank.org/indicator.

seen that the high level of consumption is essentially funded by imports, which are growing much faster than exports causing growth-reducing effects. This situation cannot be sustained as it is driven by a buildup of foreign debt. Further, a high imbalance between production and consumption drives imbalance in the growth of employable population and the economy's capability of absorbing the labor resource; and hurts skill accumulation, industrial diversification, and production capacities. The increasing prevalence of consumption-led growth therefore presents challenges for policy makers. Policies that strengthen investment and address these imbalances are central in fostering sustainable growth.

Three factors underlying consumption-led growth in the Kyrgyz Republic are natural resources, remittances, and foreign aid. The Kyrgyz Republic is not considered a mineral-rich country. However, it has major reserves of gold and other rare earth materials. The importance of natural resources can be gauged from the rent from natural resources as a percentage of GDP. Figure 6 shows the share of mineral rent in the country's GDP. It rose sharply in the post-2001 period and soared to 12% of the GDP by 2011. The gold price crash in 2011 resulted in a sharp decline in the mineral rent and the GDP growth rate. GDP growth in the Kyrgyz Republic remains highly dependent on output of the Kumtor gold mine. Based on Centerra's[1] estimates, operations at Kumtor will cease in 2026 —fewer than 10 years from now. Indeed, there have been more discoveries of such mines in recent years. In addition, the country also has deposits of other rich minerals. It may be seen that the rent component in GDP has been rising faster in the Kyrgyz Republic than the average of the lower middle-income countries. But excessive mining may have catastrophic environmental effects. Further, Kumtor alone accounted for 7.4% of the rent and as much as 23% of the country's total industrial output in 2015 (World Bank 2015b). Despite this, it has created employment for just 3,000 workers with limited spillover effects. The mineral sector, which contributes a large percentage of GDP and employs few employees, raises wage levels. This is translated into a general rise in wages causing "cost disease" in the economy. This affects the competitiveness of other sectors, in particular, the tradable sectors that face direct competition from the rest of the world. This is typically a Dutch disease-like situation.

[1] Centerra is a Canada-based gold mining and exploration company engaged in the operation, exploration, development, and acquisition of gold properties in several countries, including the Kyrgyz Republic.

Figure 5: Demand Components of Gross Domestic Product of the Kyrgyz Republic, 1990–2015 (% of GDP)



GCF = gross capital formation.

Source: National Statistical Committee, Government of the Kyrgyz Republic.

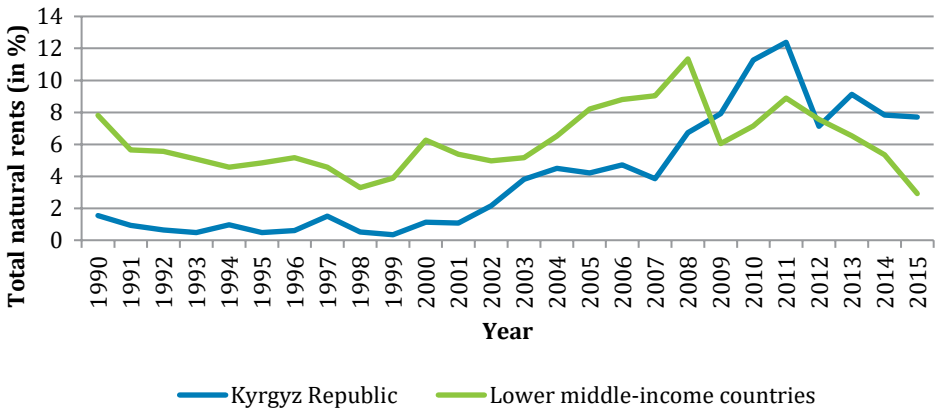
Although Dutch disease is generally associated with natural resource abundance, it can occur from any development that results in a large inflow of foreign currency. Thus, another important factor underlying consumption-led growth in the Kyrgyz Republic is remittances from the country's large number of labor migrants, who accounted for about 29% of the 2.5 million economically active population (ADB 2012). Remittances account for about 25% of GDP of $5.9 billion (Figure 7). The high remittances contributed to lowering the current account deficit from 13.7% of GDP in 2008 to 6.4% in 2011, and became the country's most important source of foreign exchange (ADB 2012). The problem of excessive labor force in the Kyrgyz Republic is also resolved by mass labor migration. However, this trend leads to degrading human capital inside the country. Equally important, the windfall gains from remittances have large direct consumption effects by raising disposable incomes and significantly contributed to the resource curse-like situation in the country.

Foreign aid is the third major source of foreign currency contributing to the resource curse-like situation in the country (Rajan and Subramanian 2008). The level of foreign aid distributed in the country increased several times from $3.4 million in 1992 to $206 million in 2015. As percentage of GDP, it soared from the 1990s onward, peaking in 1999 at 12%, then dipping continuously to 2%–3% (Figure 8). Even at this level, it is a significant source of foreign currency to distort growth patterns, due to the sheer size of it.

There are several mechanisms through which "resources curse" can affect the process of economic growth (Frankel 2010). Figure 9 depicts the likely effects of a resources curse on the process of economic development. Two major symptoms of resource curse are macroeconomic volatility and Dutch disease (or low competitiveness) of an economy. The high volatility of global prices of mineral and inflows of other resources[2] can produce excessive macroeconomic instability while increased wages and incomes associated with

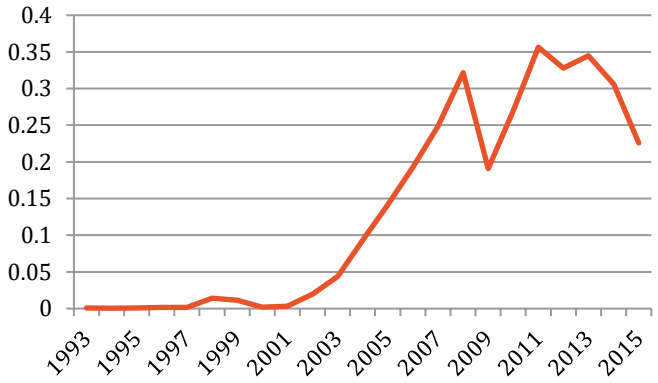
[2] The Russian Federation slowdown, for instance, has had a dampening effect on remittances, affecting growth significantly.

Figure 6: Total Natural Resources Rent (% of Gross Domestic Product) of the Kyrgyz Republic and Lower Middle-Income Countries



Source: World Bank. World Development Indicators. http://data.worldbank.org/indicator.

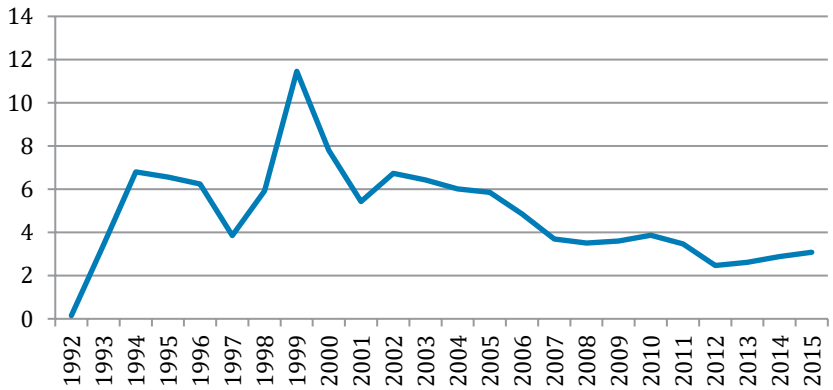
Figure 7: Remittances Received as a Percentage of Gross Domestic Product of the Kyrgyz Republic, 1993–2015



Source: World Bank. World Development Indicators. http://data.worldbank.org/indicator.

the inflows of foreign currency lead to higher aggregate demand and spending by the public and private sectors, putting pressure on prices and affecting inversely the incentives to invest in building capacity and innovation. The non-tradable sectors, which do not face international competition, expand due to higher prices and increased demand, but the tradable sectors (in particular, manufacturing), where prices are internationally determined, are hit hard. Rising wages and costs with poor incentive to improve the efficiency and quality squeeze the profits of these sectors, affecting their competitiveness and, hence, growth (van der Ploeg 2011). The demand for agricultural and manufacturing products is diverted to international markets and is met by imports, leading to current account imbalances reflecting the economy's low competitiveness.

Figure 8: Foreign Aid from Development Assistance Committee Member Countries Received as a Percentage of Gross Domestic Product of the Kyrgyz Republic, 1993–2015



Source: World Bank. World Development Indicators. http://data.worldbank.org/indicator.

The resource curse-like situation is apparent in the patterns of GDP growth in the Kyrgyz Republic. The consumption effect has reached phenomenal proportions and its impact has been felt in every aspect of life in the country. There has been a surge in demand for durable goods, construction, personal services such as health and education, financial services, trade and transport, communication, and tourism. While demand is rising, productive capacities are affected adversely due to lack of investable resources and incentive to work. Imports are relatively cheaper and of better quality, adversely affecting investment incentive. This is manifested in the growth of joblessness, low levels of productivity and competitiveness, and, in turn, structural retrogression in the economy as shown in what follows.

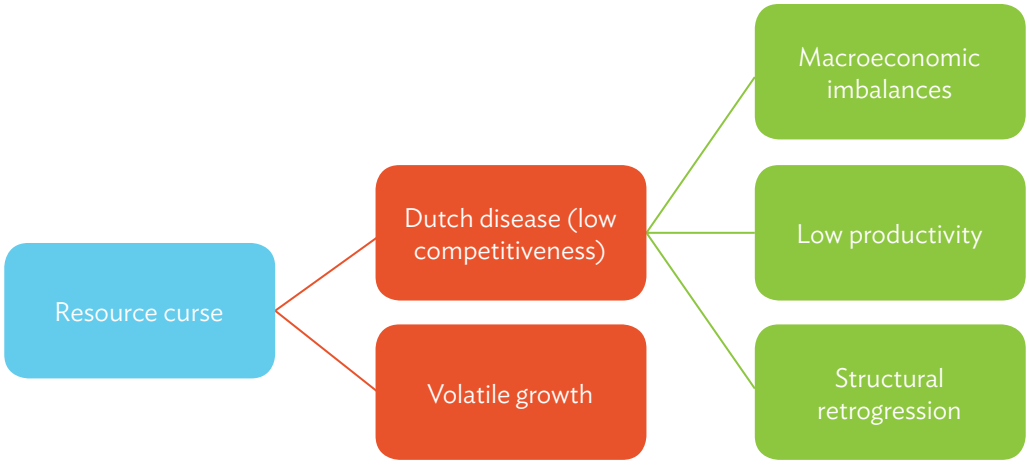
Growth of joblessness. An analysis of national employment statistics indicates that the Kyrgyz Republic was able to add only 553,600 jobs in 11 years from 1991 to 2011.[3] Over the same period, 1.1 million people were added to the working age group of 15–64. The average annual employment growth rate was a mere 1.35% while the working age population was growing at the average rate of 1.72%, widening the gap between jobs sought and jobs created. Figure 10 shows that the unemployment rate has continued to be above 8% since 2004, having accumulated and with lasting consequences for a broad array of economic and social outcomes.

Low productivity trap. The problem of resource curse is also manifested in the low levels of productivity in the Kyrgyz Republic. There are many different productivity measures. The choice between them depends on the purpose of analysis and in most cases on data availability (OECD 2001). Of the two most commonly used measures—labor productivity (value added per unit of labor) and total factor productivity (TFP)—which one is better has been a subject of debate in academic and policy circles.[4] But these measures are not independent of each other. In the case of the Kyrgyz Republic, productivity growth seems to have shown downward trends irrespective of the measure. The Conference Board estimates indicate low TFP growth in the Kyrgyz Republic compared with all regional economies during 1999–2014; its TFP growth was zero in 2014 (as reported in ADB 2017a). This is

[3] National Statistical Committee of the Kyrgyz Republic. http://www.stat.kg/.

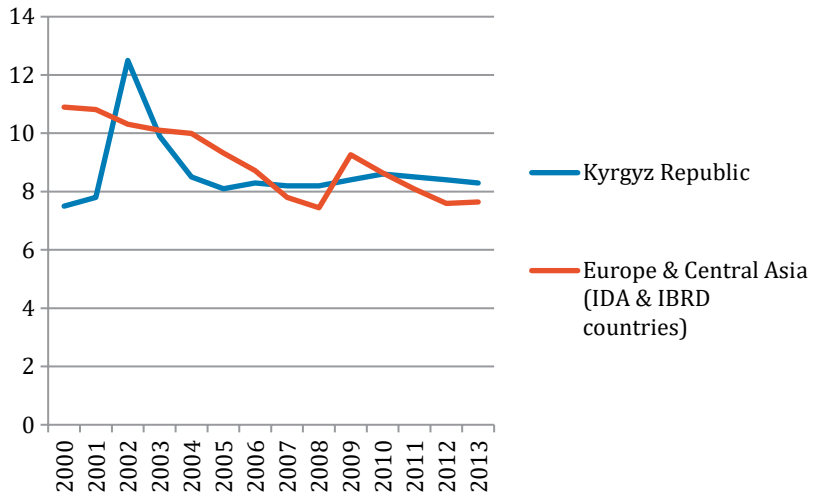
[4] Some argue that TFP is the appropriate measure of productivity, labor productivity is crude. Others dismiss TFP as ambiguous based on arbitrary assumptions.

Figure 9: Effects of the Resources Curse on Economic Growth



Source: Author, based on the existing literature.

Figure 10: Unemployment Rates, 2000–2015 (%)



IBRD = International Bank for Reconstruction and Development, IDA = International Development Association.

Note: IDA member countries lack financial capabilities to borrow from the IBRD middle-income and creditworthy poor countries.

Source: World Bank. World Development Indicators. http://data.worldbank.org/indicator.

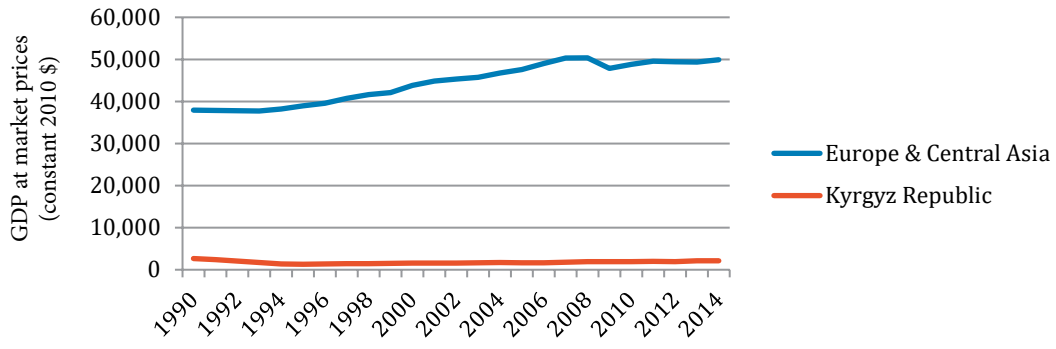
reflected in labor productivity as well. Figure 11 shows labor productivity of the Kyrgyz Republic and low- and middle-income countries of Europe and Central Asia. The gap is not only large but has been growing over time. It also shows that labor productivity growth is negligible in the Kyrgyz Republic.

Structural retrogression. An essential insight of development economics is that economic growth is intrinsically linked to changes in the structure of production (Ark and Timmer 2003, Timmer and Szirmai 2000, Timmer and de Vries 2009). According to this view, economic development in developing countries requires continuous upgrading of resource allocation from low-productivity to high-productivity sectors. This is also crucial from the perspective of generating productive employment. The notion of productive employment is associated with higher productivity (contribution), decent earnings, and, in turn, poverty reduction. It is at the core of the concept of "inclusive growth" (Ranieri and Ramos 2013) and is enshrined in the Sustainable Development Goals. It is growth accompanied by shifts in labor flows from low- to high-productivity activities vital for promoting productive employment. This needs technological progress, capital accumulation, and economies of scale. However, in the Kyrgyz Republic, growth has not been accompanied by the required structural transformation. On the contrary, it has witnessed retrogression in the structural composition of GDP and employment. Figure 12 shows that the contribution of agriculture has been declining, which is in line with the growth process. Traditionally, decline in agriculture is accompanied by an increase in the share of industry. However, in the Kyrgyz Republic, construction, retail and wholesale trade, and transport and communication account for a growing share of GDP. Wholesale and retail trade has emerged as the single largest sector, overtaking agriculture. Most of these services are non-tradable. It must also be noted that agriculture, also considered as a low-productivity sector, still accounts for around 25% of the GDP.

Changes in the GDP structure are accompanied by commensurate changes in the composition of employment as well, with the exception of mining (Figure 13). Construction and services have emerged as the major employers absorbing labor displaced from agriculture, in line with their contribution to GDP. However, mining, which contributed around 5% of GDP, did not generate employment. Its share in employment remains below 1%.

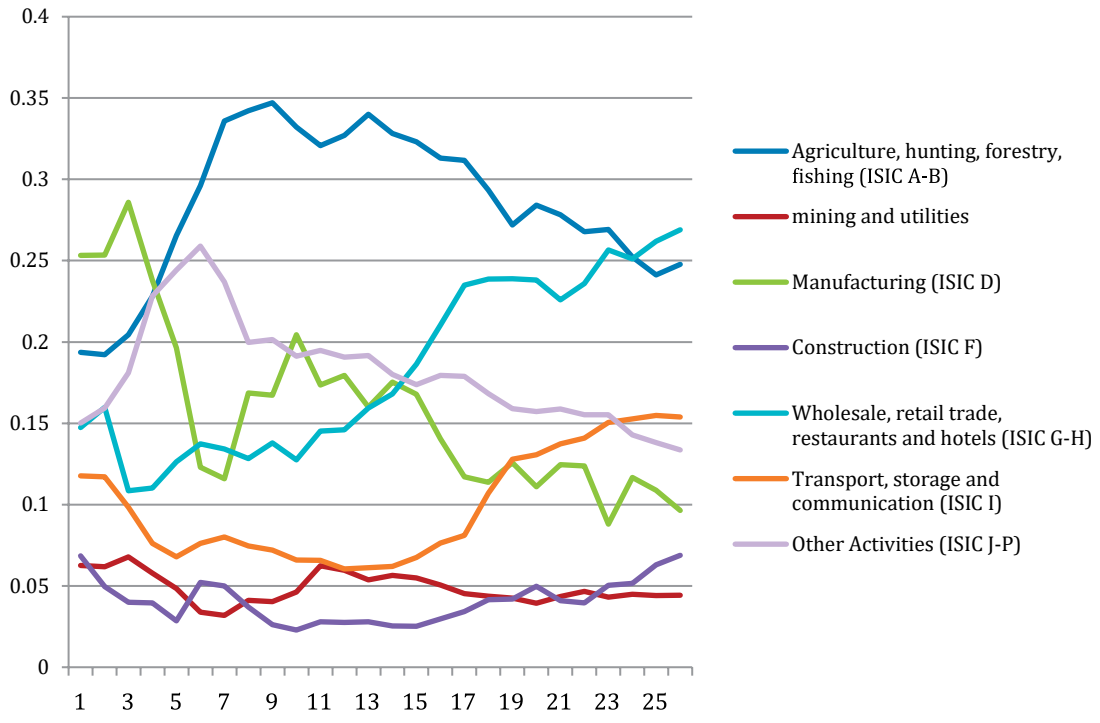
There are powerful empirical and theoretical arguments in favor of manufacturing growth as the main engine of growth in economic development. Theoretically, it is argued that compared with agriculture and services, the manufacturing sector offers a large scope of capital accumulation, economies of scale, and embodied and disembodied technological progress, all of which are directly related to productivity. Therefore, any shift of labor and other

Figure 11: Labor Productivity in Central Europe and the Kyrgyz Republic, 1990–2014



Source: World Bank. World Development Indicators. http://data.worldbank.org/indicator.

Figure 12: Sector Shares in Gross Domestic Product (total value added)



ISIC = International Standard Industrial Classification.
Source: UNSD Statistical Databases. https://unstats.un.org/unsd/databases.htm.

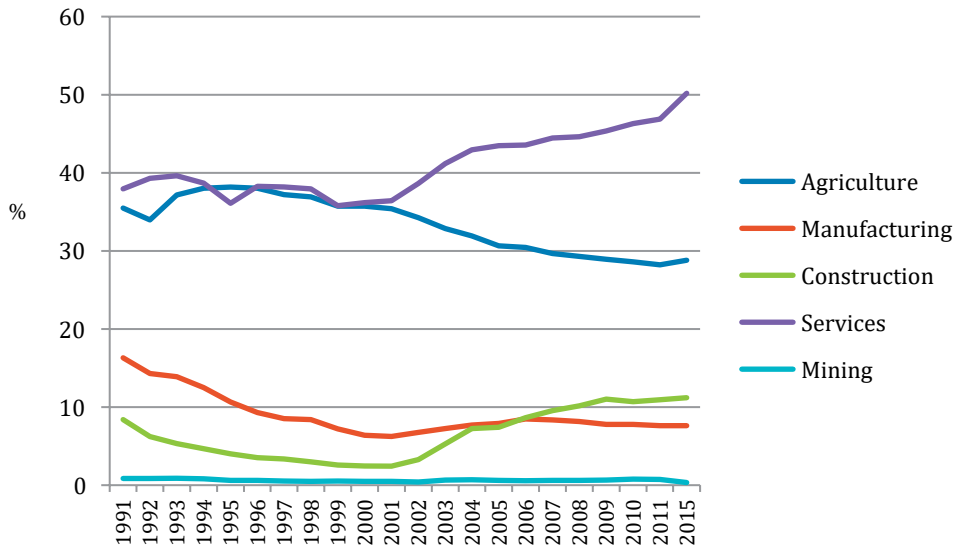
resources from agriculture to manufacturing results in an immediate increase in overall productivity and income per capita, and is a major source of productivity growth. However, the share of manufacturing in employment in the Kyrgyz Republic is as low as 7.7%. In 1990, at the time of independence, nearly 16% of the workforce was in manufacturing. This share declined continuously in the initial phases, and then stabilized between 7% and 8%.

Figure 14, which projects both employment share and productivity by sector, reveals that labor is concentrated in low-productivity sectors: agriculture, construction, public administration, and internal trade. High-productivity sectors are not generating sufficiently large employment to attract labor from low- to high-productivity sectors. Low productivity is pervasive in the country by international standards (as seen in Figure 11). This means that the economy is trapped in a low-productivity vicious cycle with most workers stuck in low-productivity sectors within an overall low-productivity paradigm.

Weak manufacturing sector. Figure 15 shows that the shares of manufacturing in both GDP and trade declined. Notably, the shares of medium and high value added manufacturing fell drastically in both GDP (MHVAsh) and trade (MHXsh). These are clear signs of the Dutch disease.

Further, the production structure of manufacturing has been dominated by basic metal and metal articles, which constitute nearly 60% of manufacturing production. Among other industries, food and

Figure 13: Employment Shares by Sector



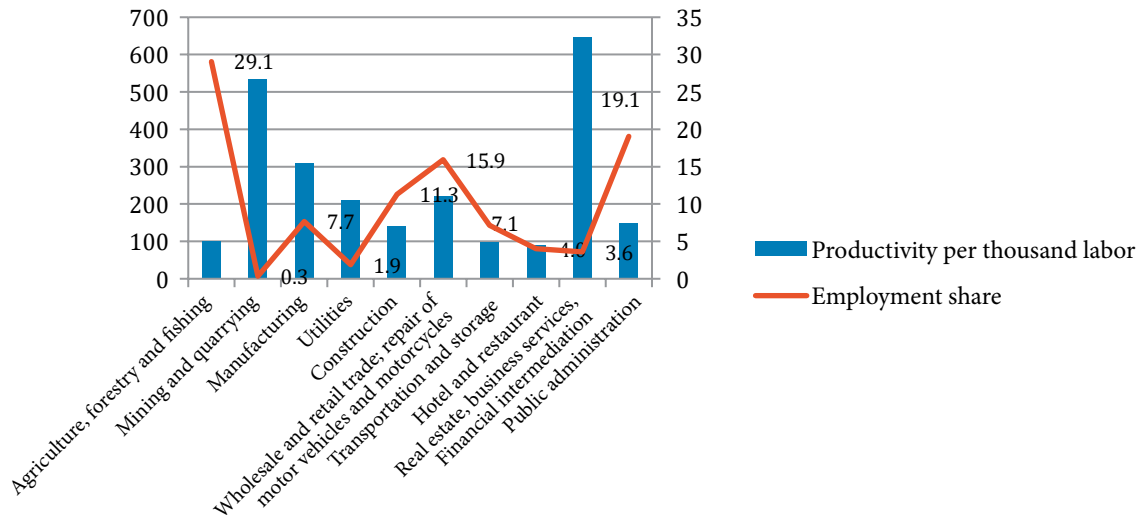
Source: National Statistical Committee of the Kyrgyz Republic. http://www.stat.kg/.

beverages, rubber and plastic products, and textile production appear to make significant contribution (Figure 16). The Kyrgyz Republic's textile and apparel sector is an engine of job creation and one of the country's major export industries. The Kyrgyz Republic's existing textile and apparel sector has many strengths, such as established trade links with regional partners, vertical integration, and well-organized industry associations. However, short- and medium-term challenges persist, including lack of access to finance, skilled labor, and modern inputs; difficulty meeting quality, social, and environmental requirements; and lack of capacity to market. Over time, the share of textiles production has also been declining and its share is being replaced by coke and refined petroleum products. The industrial structure thus appears narrow and is driven essentially by resource-based industries.

Exports: A comprehensive indicator of international competitiveness. A high export–GDP ratio is an economic phenomenon of a resources-abundant country. This is reflected in a high export–GDP ratio of the Kyrgyz Republic at the time of independence when it was an exporter of livestock and other primary products in the internal value chains of the former Soviet Union (Figure 17). These chains were broken down with the dissolution of the Soviet Union, pulling down the export–GDP ratio of the Kyrgyz Republic in the early 1990s. The discovery of the Kumtor gold mine once again put the country on the export growth path. However, the tempo could not be maintained and since 1997, the export share in GDP has been declining steadily, and within the past 2 decades, has fallen from 60% to 20%. Apparently, the country is losing competitive advantages in general and could not reinforce the exports generated by the gold mine.

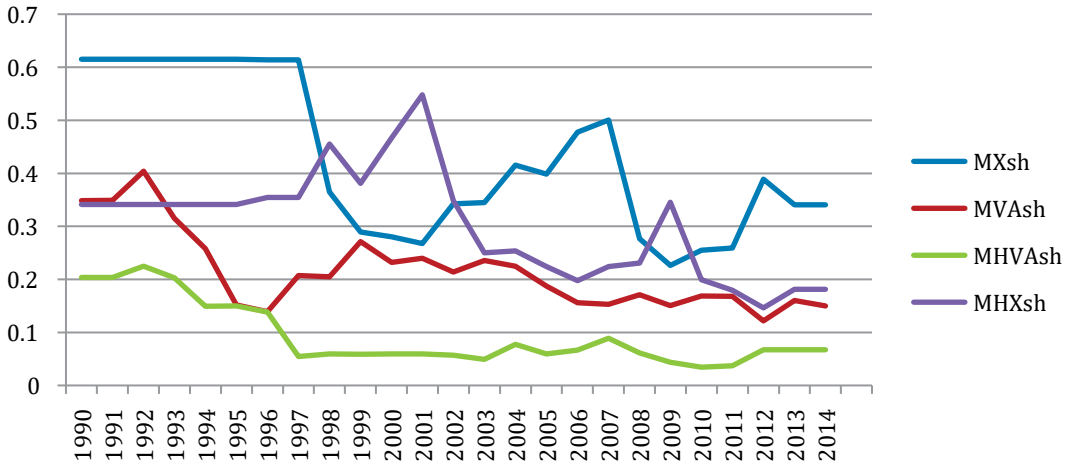
This is also reflected in the composition of exports. The main exports of the Kyrgyz Republic are nine commodity groups: livestock; fruits and vegetables; tobacco; textile apparels; inorganic chemicals: pearls, precious metals, and semiprecious stones; and metal-based instruments and articles. The country enjoyed

Figure 14: Employment Shares by Productivity, 2015



Source: National Statistical Committee of the Kyrgyz Republic. http://www.stat.kg/.

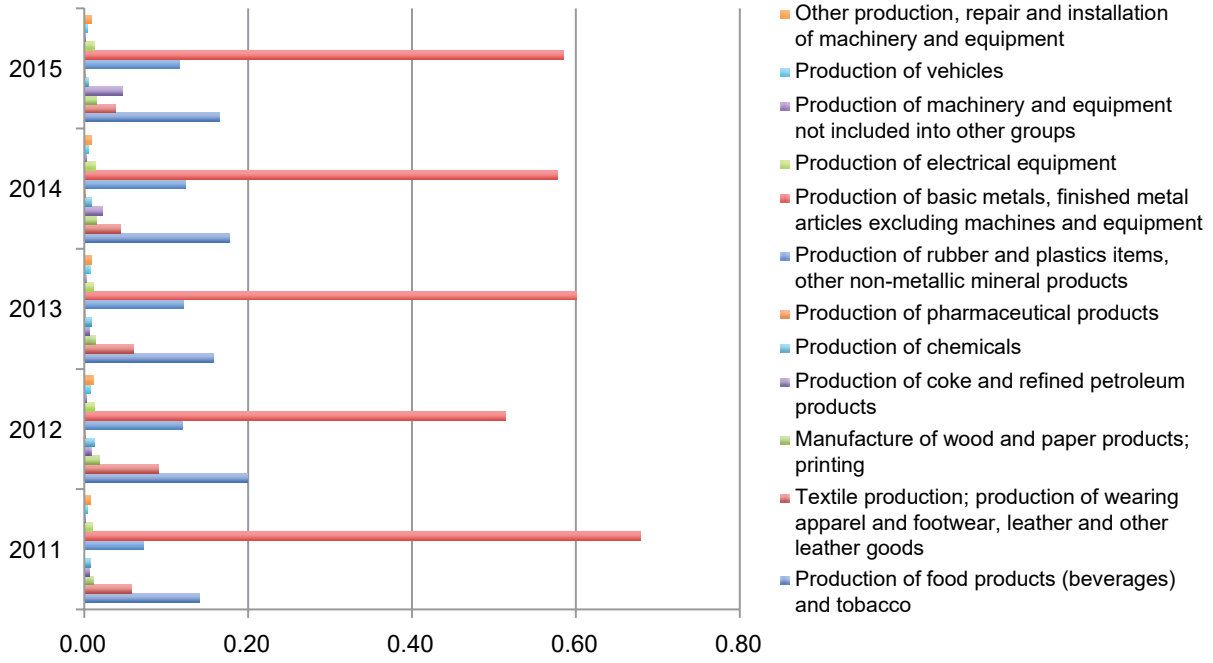
Figure 15: Share of Manufacturing and High-Manufacturing Sector



MHVAsh = medium- and high-tech manufacturing value-added share in in total manufacturing value added; MXsh = manufactured exports share in total exports; MVAsh = manufacturing value added share in total gross domestic product; MHXsh = medium- and high-tech manufactured exports share in total manufactured exports.

Source: United Nations Industrial Development Organization. 1997. *Industrial Estates: Principles and Practices.* Vienna.

Figure 16: Composition of Manufacturing Value Added, 2011–2015



Source: National Statistical Committee of the Kyrgyz Republic. http://www.stat.kg/.

revealed comparative advantage[5] in these product groups, which accounted for 65% of the country's exports in 2012 (International Trade Commission). The share of precious metals, stones, and pearls was as high as 38% (largely due to Kumtor). The country also exports some electronics and machinery that formed 13% of its trade in 2012.

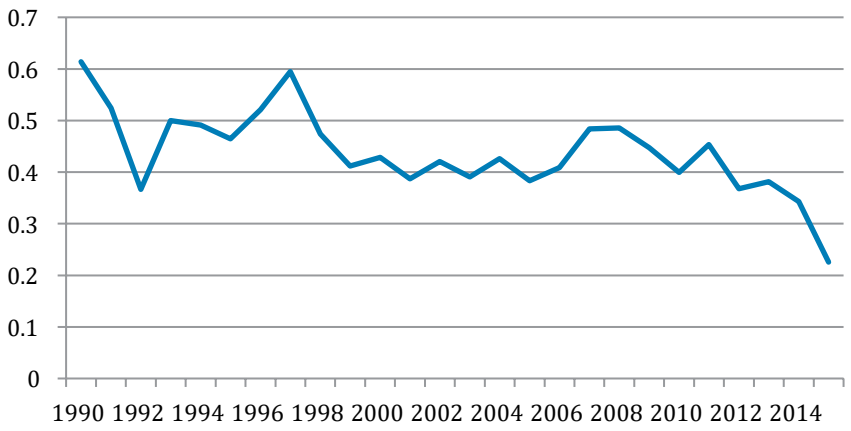
Revealed comparative advantage is a critical indicator of a country's competitiveness in export markets. The more revealed comparative advantages a country has, the more competitive productive capabilities it possesses. In the Kyrgyz Republic, the number of product groups in which the country has revealed comparative advantage declined over time. The 2015 statistics reveal that the country is steadily losing revealed comparative advantage in fertilizers, fabrics, metal instruments, and some food processing items. The share of mineral oils also declined substantially from 10% in 2012, steadily to 3% in 2015 (International Trade Commission, latest updates). Overall, manufactured items seem to have lost their share in exports with the share of gold and semiprecious stones rising to 50%.

Foreign direct investment. The total FDI stock in the Kyrgyz Republic in 2015 stood at $3.9 billion and formed 4%–6% of its GDP. Much of this is in Kumtor.

5 $$RCA = \frac{E_{ij}/E_{it}}{E_{nj}/E_{nt}}$$

where RCA = revealed comparative advantage, E_{ij} = exports of good *i* by country *j*, E_{it} = total exports of country *j*; E_{nj} = world exports of good i, and Ent = total world exports. A country is considered to have a revealed comparative advantage in some product i if the share of i in the country's exports is above its share in total world exports. A high number of revealed comparative advantages implies that a country has capabilities in many sectors.

Figure 17: Export Trade to GDP Ratio, 1990-2014



Source: United Nations. UN Comtrade Database. https://comtrade.un.org/. United Nations Conference on Trade and Development.

Other than that, there are 12 foreign companies. Of these, two are in the food processing industry, one is in construction, while the rest are in services (International Trade Commission, latest updates).

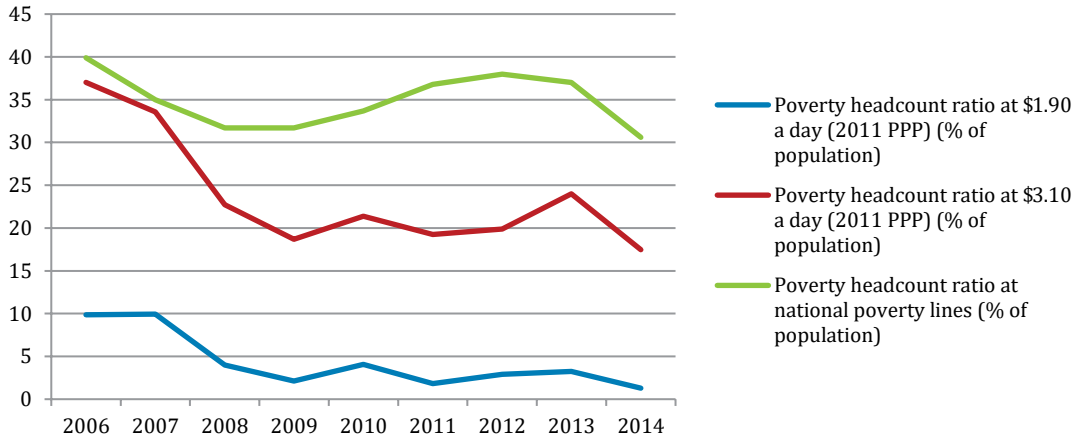
2.4 Sociopolitical Challenges

Poverty. Although the Kyrgyz Republic has been successful in reducing its rate of extreme poverty ($1.90/day) to less than 5%, the national poverty rate based on the national poverty line was as high as 32% in 2014 (Figure 18). This was up from 31.7% in 2008. Although the poverty is more acute in rural and mountainous areas, rates remain alarmingly high even in cities.

Regional inequities. Administratively, the country is divided into seven provinces or oblast: Chui, Talas, Issyk-Kul, Naryn, Osh, Jalalabad, and Badken, which, in turn, are divided into 45 districts or *rayon*. High mountains divide the northern and southern Kyrgyz Republic. The northern group includes the Chui, Talas, and Issyk-Kul regions. The southern group includes Osh, Badken, and (partly) Naryn and Jalalabat. A single road unites the two parts of the country. The division is not merely geographic, however. It extends to ethnic, economic, and political disparities. The north is more developed with most economic centers built during the years of the former Soviet Union in Bishkek. The south is less developed, and more conservative and traditional. It is also more agrarian than the north (Hyunjung 2015). Figure 19 shows that northern oblasts have higher shares in gross regional product. The disparities seem to have grown over the period between 2006 and 2014. While much has been said about the north–south divide, it may be noted that in economic terms, there are wide disparities even in the north. Bishkek and Issyk-Kul enjoy not only rather high per capita income but are also growing rapidly. Other northern regions are aligned more with the southern regions even if they are better off than the latter.

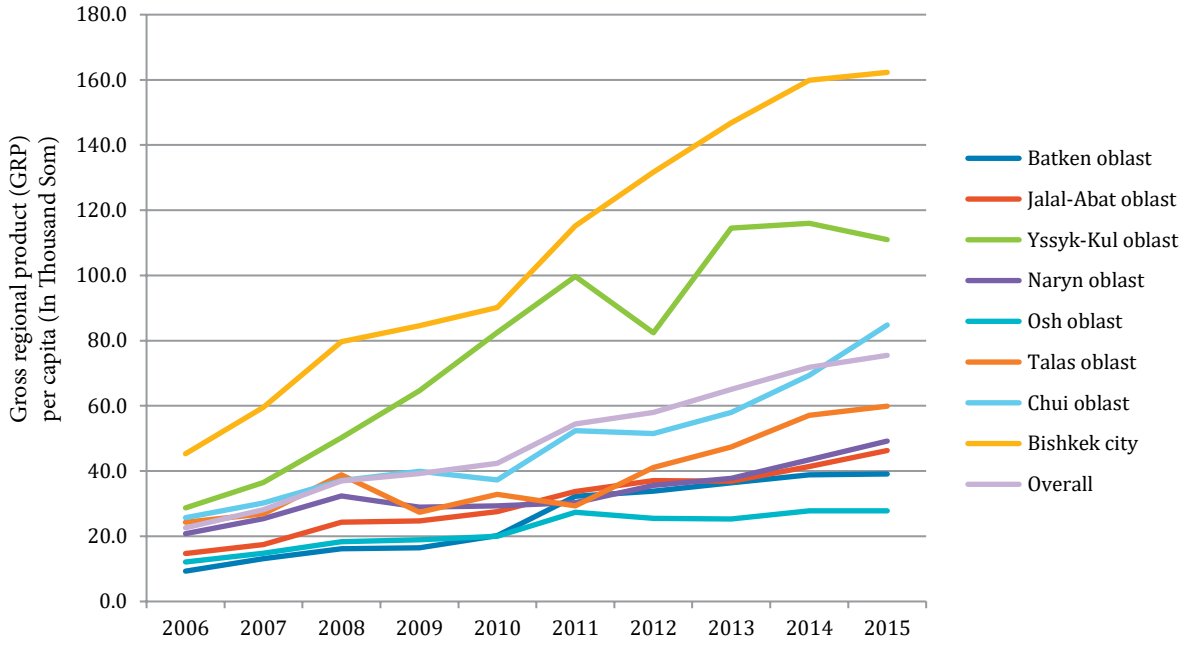
Rural–urban disparities have also been high, with a far higher poverty incidence in rural areas compared with urban areas (40% versus 24% in 2010). However, income inequality, as measured by the Gini coefficient, declined moderately from 0.45 to 0.37 between 2001 and 2010 (ADB 2012).

Figure 18: Poverty Rates in the Kyrgyz Republic, 2006–2014



PPP = purchasing power parity.
Source: World Bank. World Development Indicators. http://data.worldbank.org/indicator.

Figure 19: Regional Inequalities in the Kyrgyz Republic, 2006–2014



Source: National Statistical Committee of the Kyrgyz Republic. http://www.stat.kg/.

2.5 Conclusion

Under the former Soviet regime, there was rapid industrial development in the Kyrgyz Republic in accordance with the Soviet focus on promoting large scale industrialization, but it could not be sustained over time largely due to cumulative distortions faced by the Soviet economy. Post-independence, the country adopted the institutions of free trade and investment regimes, but its economic performance deteriorated. The Kyrgyz Republic is susceptible to a variety of shocks such as volatile oil prices, natural shocks, and political instability. Its considerable physical, educational, medical, and social service infrastructure is the legacy of the Soviet period, but over more than 2 decades after the collapse of the Soviet Union, these systems are crumbling and suffering from overuse, neglect, and low human capital. Despite having no hydrocarbon resources, it could not escape the resources curse. Its considerable gold resources along with remittances and foreign aid have created a resource curse-like situation. This is reflected in highly volatile growth rates, low competitiveness, low and diminishing productivity rates, and sector retrogression with low and declining shares of manufacturing. The leadership has not been successful in putting the country on the path of sustainable economic development, which has been at the core of its economic strategy since the mid-1990s. The fall in economic performance is associated with widely pervasive poverty, social and regional inequities, and political conflicts. Thus, the most challenging task is to push the economy from a low-competitiveness trap to high-competitiveness virtuous cycle.

Chapter III: Competitiveness Drivers: Factors that Hamper Business Competitiveness in the Kyrgyz Republic

The Kyrgyz Republic's successful achievement of sustainable development will be contingent on its broad-based productivity and competitiveness gains. This chapter focuses on the drivers of competitiveness that have hindered the economic performance of the Kyrgyz Republic's economy and which need to be addressed to drive its growth.

3.1 What Are Competitiveness Drivers?

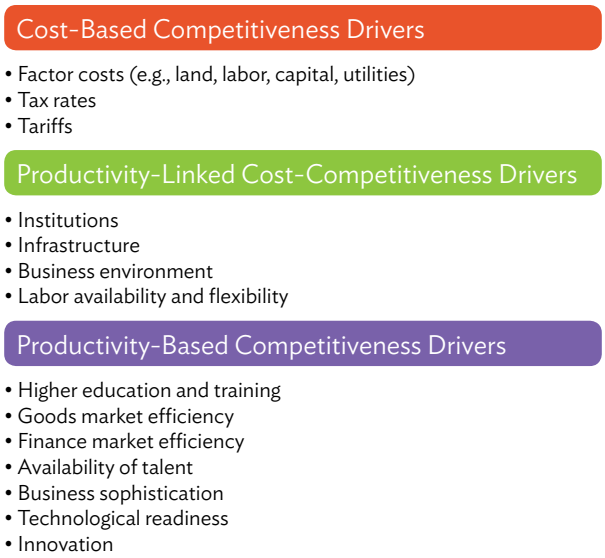
3.1.1 Types of Competitiveness Drivers

Cost-based drivers. Cost competitiveness is defined by a country's unit cost level, which drives companies' ability to compete successfully in global markets (Figure 20). This definition is motivated by a concern about a country's external balance, that is, its ability to sell its products and services, defend its international market share, and thus generate the inflows needed to pay for imports. A country is competitive if its macroeconomic aggregates are in balance. Countries losing competitiveness in the sense of rising relative unit labor costs are in danger of building up current account imbalances. This perspective is criticized for motivating policies that focus on lowering costs to raise exports. However, cost-based competitiveness is a dominant form of competitiveness at lower levels of development, at least from a short-term perspective.

Productivity-growth drivers (Delgado et al. 2012, Porter 1990, Porter 2000). These drivers are concerned with value creation and are associated with education, high skills, research and development, and innovation. It is at the center of productive employment, higher wages, long-term growth rates, and prosperity (Lewis 2004, Pages-Serra 2010). This perspective is focused on the medium to long term. The literature on growth spurts shows that the level of sustained productivity growth is what ultimately matters, not the stability or variability of growth rates (Figure 21).

Productivity-linked cost-competitiveness drivers. These drivers of competitiveness are associated with

Figure 20: Framework for Competitiveness Drivers



Source: Author, based on the existing literature.

low costs driven by institutional and macroeconomic conditions that allow productive firms to thrive; in turn, the development of these firms supports the expansion of employment, investment, and trade (Altomonte and Békés 2016). This perspective brings the two views on competitiveness closer: cost-based and productivity-based.

In the literature, the focus on productivity growth drivers is paramount. Productivity drives long-term prosperity levels and is thus an appropriate and critical target for policy. However, the drivers of cost competitiveness and productivity-linked cost-competitiveness cannot be overlooked.

3.1.2 Competitiveness Indexes

Several international organizations provide annual country rankings of competitiveness covering a wide spectrum of competitiveness drivers. Some of the key rankings are the following.

(i) The Doing Business Project of the World Bank compiles information on starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. It focuses on institutions surrounding the business sector.
(ii) The World Bank Group's Enterprise Surveys cover a broader range of investment climate factors including access to finance, tax rates, corruption, labor regulations, informal sector practices, business licensing and permits, courts, infrastructure, crime, and competition.
(iii) The World Bank Group's Worldwide Governance Indicators assess six categories of governance: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. The indicators present country rankings based on the perceptions of governance and may not reflect real changes in governance over time.
(iv) The Global Competitiveness Index, provided by the World Economic Forum, is based on components grouped under 12 pillars to assess institutions, infrastructure, the macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, finance market development, technological readiness, market size, business sophistication, and innovation.
(v) Global Innovation Index is the result of a collaboration between Cornell University, INSEAD, and the World Intellectual Property Organization as copublishers, and their knowledge partners. The Global Innovation Index relies on two sub-indexes—the Innovation Input Sub-Index and the Innovation Output Sub-Index—each divided into three sub-pillars composed of individual indicators, with a total of 81 indicators in 2017.

Of the preceding, the World Bank's indexes, namely the Doing Business Index, Worldwide Governance indicators, and Enterprise Surveys are used for assessing productivity-linked cost-competitiveness drivers while the World Economic Forum's Global Competitiveness and Global Innovation Index rankings cover indicators of both productivity-linked cost competitiveness and productivity-growth competitiveness drivers, with a focus on the latter.

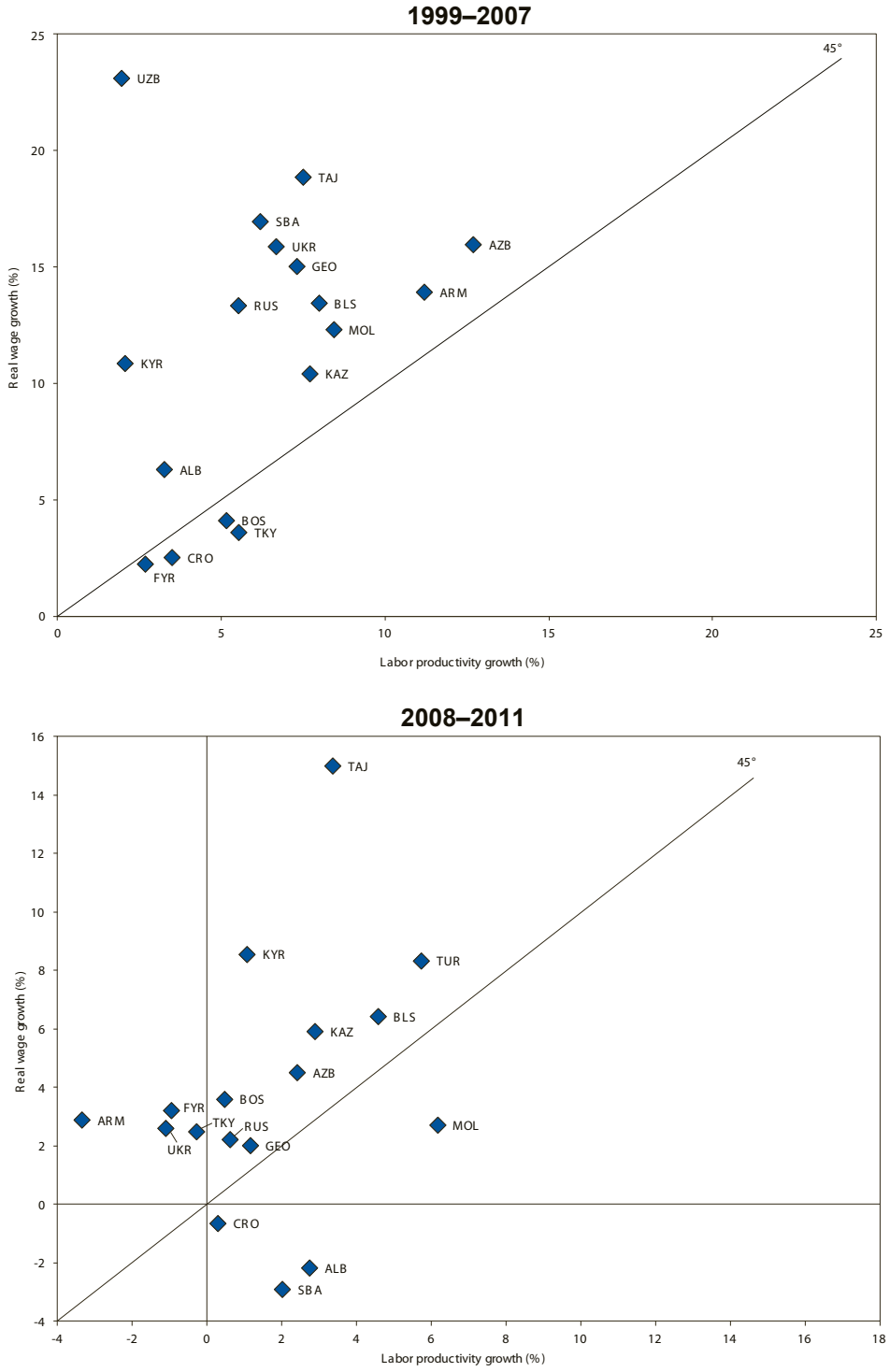
3.2 Analysis of Competitiveness Drivers in the Kyrgyz Republic

3.2.1 Cost-Competitiveness Drivers

Cost competitiveness is critical for the Kyrgyz Republic to improve its export performance and to position itself as an attractive destination for foreign direct investment (FDI), in particular, export-oriented FDI. The most successful countries used cheap labor, tax breaks, and cheap land with good infrastructure to build manufacturing competitiveness and attract more FDI, which can bring necessary technology and improve productivity levels in the long term.

Unit cost of labor. Figure 21 shows that productivity growth has been rather low in the Kyrgyz Republic. During 1997–2007, it was at the bottom among member countries of the Commonwealth of Independent States in productivity growth. In the post-crisis period, it just

Figure 21: Productivity–Real Wage Growth Relationship in the Commonwealth of Independent States



ALB = Albania, ARM = Armenia, AZB = Azerbaijan, BLS = Belarus, CRO = Croatia, BOS = Bosnia, FYR = Former Yugoslav Republic of Macedonia, GEO = Georgia, KAZ = Kazakhstan, KYR = Kyrgyz Republic, MOL = Republic of Moldova, RUS = the Russian Federation, SBA = Serbia, TAJ = Tajikistan, TKY = Turkey, UKR = Ukraine, UZB = Uzbekistan.

Source: International Labour Organization. 2013. *Global Wage Report 2012/2013: Wages and Equitable Growth.* Geneva.

managed to sustain positive growth in productivity. But its average real wage has been growing much faster than productivity (value creation) (ILO 2013). Between 2008 and 2011, when real wage growth became more closely aligned with productivity growth in many countries, in the Kyrgyz Republic, the gap between the two widened (Figure 21), hampering its cost competitiveness by raising the unit cost of labor.

This is further supported by the rising patterns of monthly earnings in the Kyrgyz Republic. Figure 22 shows that the mean real monthly earnings have been rising faster in the Kyrgyz Republic compared with the Central Asia region as a whole. According to official statistics, the mining sector experienced the most rapid wage gains. The mining wages continue to grow rapidly with 67% growth over the period between January 2014 and July 2017. Wage growth even in the information and communication technology (ICT) and financial sectors lagged behind those in the mining sector.

Prices. Inflation is an endemic problem of the Kyrgyz Republic. The producer price index shows a steep rise in prices (Figure 23). After 2010, the rate at which prices were rising somewhat slowed down. In 2013, prices even fell but since then, prices have again been going up. This is a clear manifestation of cost disease in the economy.

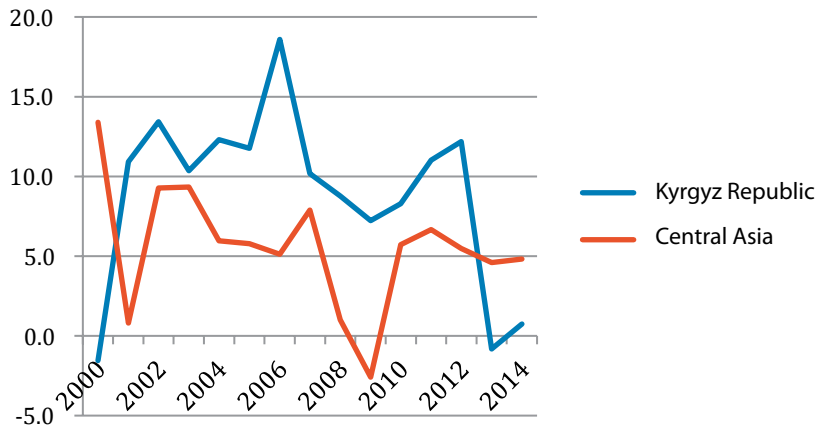
Tariff rates. Additionally, as part of its Eurasian Economic Union (EAEU) accession, the Kyrgyz Republic committed to adopt the unified tariff schedule of the EAEU over time. According to the Protocol of 8 May 2015, the Kyrgyz Republic will be applying the EAEU's customs duties which are higher than those in the Kyrgyz Republic (ADB 2017a). In some cases, the Kyrgyz Republic can adopt rates different from the EAEU tariff rates until 2020. But these are for agricultural products, not industry products. This would further affect the cost competitiveness of the country.

Cost attractiveness is a necessary condition for being able to attract investment, particularly in a factor-driven economy such as the Kyrgyz Republic. Sharp wage increases, lagging labor productivity, and a dramatic rise in producers' prices may impact on the country's ability to attract investment.

3.2.2 Productivity-Linked Cost-Competitiveness Drivers

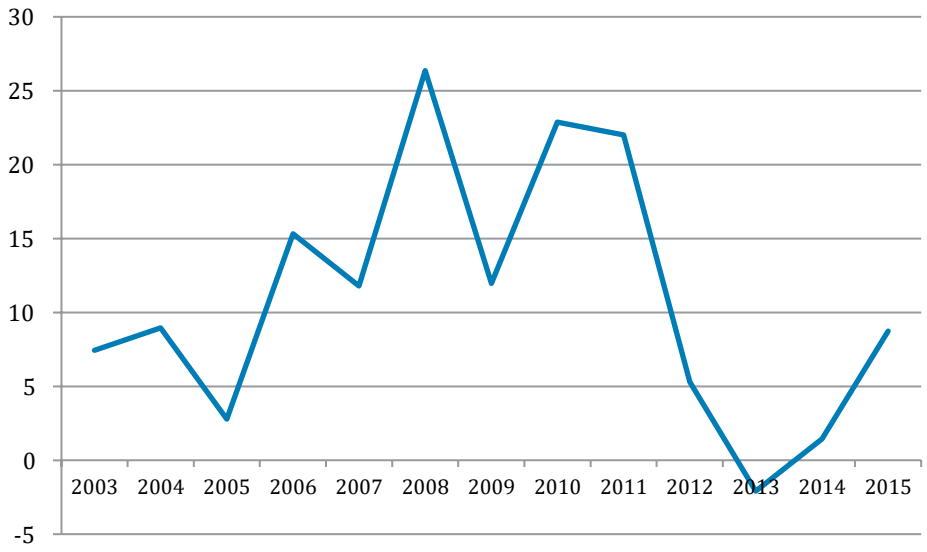
Governance. Governance-related factors—such as political stability, bureaucratic systems, corruption, and level of transparency and efficiency in public service delivery—have an overwhelming effect on investment and economic growth. Most studies find a positive relationship between good governance and economic growth. Post-independence, the Kyrgyz Republic adopted a Western development model with a market economy, the rule of law, civil rights, and pluralism as the pillars. However, the dominance of informal institutions such as family and kinship structures, traditions, social norms, and

Figure 22: Mean Real Monthly Earnings of Employees, Annual Growth (%)



Source: International Labour Organization, ILOSTAT.

Figure 23: Growth in Producer Prices (2005 = 100)



Source: National Statistical Committee of the Kyrgyz Republic. http://www.stat.kg/.

tribal affiliations in a context of poorly established governance structures impeded the establishment of the rule of law and democratization. It has been politically stable since 2010 when democracy was ushered into the country, but concerns about law enforcement abuses, and voice and accountability violations in the country remain, while corruption is pervasive. To address these, the National Anticorruption Strategy of the Kyrgyz Republic was adopted in February 2012. Amendments were subsequently passed later that year on the law "On Fighting Corruption" and inter- and intra-agency anti-corruption programs and plans were developed (National Council for Sustainable Development of the Kyrgyz Republic 2013).

The institutional bottlenecks in governance are reflected in Figure 24. The World Governance Index places the Kyrgyz Republic in the bottom 20 percentile across most indicators of governance, meaning more than 80% of the countries in the sample have better governance than it. Although it performs better in quality of regulations, and voice and accountability (due to a highly vocal civil society), its success in implementing the rule of law and effective governance has been rather limited. The 2013 Enterprise Survey reveals how more than 50%–60% of the sample firms encountered corruption at various levels of production processes. The Global Competitiveness Report rankings support these observations.

Infrastructure. That infrastructure matters to growth is now well recognized; a plethora of evidence exists that better quantity and quality of infrastructure can facilitate private investment by cutting costs. In turn, this can raise the productivity of human and physical capital and, hence, spur growth. Good transport infrastructure, a robust communications infrastructure, and access to efficient utility providers for electricity and water have important influence on cost competitiveness and have direct links with productivity.

An overview of the Kyrgyz Republic's infrastructure indicates that the country is facing serious challenges in this critical component of productivity-linked cost competitiveness (Figure 25). In infrastructure sub-indexes in the Global Competitiveness Report, the Kyrgyz Republic ranks 113th, below its overall competitiveness ranking of 111th of 138 countries. More worrisome is the quality of infrastructure, where the Kyrgyz Republic is ranked 117th (Figure 25). Road transportation is intensive and connects the country

Figure 24: Governance Indexes

Worldwide Governance Indicators, 2015	Enterprise Survey, 2013	Global Competitiveness Ranking, 2017 (of 138 countries)
• Control of Corruption: 11.6 • Government Effectiveness: 18.3 • Political Stability and Absence of Violence: 18.5 • Regulatory Quality: 36.1 • Rule of Law: 14.9 • Voice and Accountability: 31.5	• Firms experiencing at least one bribe request: 60 • Public transactions where an informal payment was requested: 53.6 • Firms expected to give gifts in meetings with tax officials: 55 • Firms expected to give gifts to secure government contracts: 55 • Value of gifts expected to secure a government contract (% of contract value): 2.4 • Firms expected to give gifts to get an operating license: 60 • Firms expected to give gifts to get an import license: 65.5 • Firms expected to give gifts to get a construction permit: 43 • Firms expected to give gifts to get an electrical connection: 50% • Firms expected to give gifts to get a water connection: 61% • Firms expected to give gifts to public officials "to get things done:" 51% • Firms identifying corruption as a major constraint: 60% • Firms identifying the court system as a major constraint: 4.8%	• Property Rights: 120 • Intellectual Property Protection: 115 • Diversion of Public Funds: 85 • Irregular Payments and Bribes: 130 • Judicial Independence: 96 • Favoritism in Decisions of Government Officials: 81 • Efficacy of Legal Framework: 103

Sources: World Economic Forum. 2017. *Global Competitiveness Report 2016–2017.* Geneva; World Bank. Enterprise Surveys. http://www.enterprisesurveys.org/; Worldwide Governance Indicators. 2015.

with Europe, the Persian Gulf, CIS, and Southeast Asian countries.[6] Roads also link the Kyrgyz Republic with all neighboring countries (Uzbekistan, Tajikistan, Kazakhstan, and the PRC). There is no railway connection between the southern and northern parts of the Kyrgyz Republic; these are also connected by roads. However, the quality of roads is a vital issue. This is especially true in mountainous terrain where road building requires not only considerable initial investment but also funds for continued maintenance and reconstruction. The country's rankings in other modes of transport are also low. Mobile telephone subscription is a widely used means of communication where it ranks as high as 37th. It may be noted that its neighbor, Kazakhstan, ranks 6th in mobile subscription.

Another major infrastructure issue is electricity outages. Two major risks were identified for the power sector: energy supply security and accumulating energy debts.[7] As high as 73% of the firms covered in the World Bank Enterprise Survey (2013) reported having faced electricity outages and 35% consider this to be a major constraint. The Global Competitiveness Report places it at 109th. Even for internet bandwidth, it ranks 64th, which means the speed is rather low by international standards.

6 http://mineconom.gov.kg/index.php?option=com_content&view=article&id=1739&Itemid=608&lang=ru (accessed 20 August 2017).

7 An agreement between the Government of the Kyrgyz Republic and the Russian Federation in 2014 transferred to Gazprom (the Russian Federation company) the ownership of the Kyrgyz Republic's entire gas sector—including the troubled state company Kyrgyz Gaz, gas pipelines, gas distribution stations, and underground storage facilities—for the price of $1. In exchange, Gazprom promised to forgive the Kyrgyz Republic's debts and, more importantly, to serve as a mediator between the Kyrgyz Republic and its gas supplier, Uzbekistan, to ensure stable deliveries.

Figure 25: Quality of Infrastructure in the Kyrgyz Republic

Global Competitiveness Ranking, 2017 (of 138 countries)	Enterprise Survey, 2013
• Infrastructure : 113 • Quality of infrastructure: 117 • Quality of roads: 131 • Quality of railroad: 81 • Quality of air transport: 90 • Available airline seat kilometer millions per week: 91 • Quality of electricity supply: 109 • Mobile telephone subscriptions per 100 population: 37 • Fixed telephone lines per 100 population: 96 • Internet bandwidth kb/s/user: 64	• % of firms facing electrical outages: 73 • Duration of a typical electrical outage: 3.7 hours • Average losses due to electrical outages: 4% of annual sales • Firms owning or sharing a generator: 39% • Average proportion of electricity from a generator: 8.3% • Firms identifying electricity as a major constraint: 35% • Proportion of products lost to breakage or spoilage during shipping to domestic markets: 1% • Firms identifying transport as a major constraint: 14% • Percent of firms experiencing water insufficiencies: 12

Sources: World Economic Forum. 2017. *Global Competitiveness Report 2016–2017.* Geneva; World Bank. 2013. Enterprise Survey. http://www.enterprisesurveys.org/.

Overall, a relatively large percentage of executives in the Kyrgyz Republic perceive infrastructure as a major challenge for their businesses.

Rules and regulations. As stated above, rules and regulations are another major determinant to wealth and long-term growth, as these shape incentives for key economic actors in society, and are created to reduce uncertainty about exchanges and to enhance predictability (Coase 1937, Shubik 1975, Williamson 1975, Williamson 1985). Rules and regulations also reduce transaction costs that arise in economic activities from the separation of buyers and sellers and ensuing information problems. These may have an affirmative impact on the firms' performance, but the possibility cannot be ruled out that these rules may constrain the firms' economic freedom, thus reducing their efficiency. Rules and regulations also increase entry costs disproportionately, deny economic freedom to do business, and restrict the entry of dynamic enterprises and exit of sick businesses. A number of studies show that cross-country differences in business rules affect firms' performance (Dollar, Hallward-Driemeier, and Mengistae 2005; Levie and Autio 2011).

The Kyrgyz Republic has made good progress toward implementation of the principles of liberal trade and investment regimes since independence. It has also successfully introduced multiparty democracy and pluralism. However, many structural challenges remain (Figure 26). As a result, it ranks 75th out of 190 countries in 2017 in the World Bank's Doing Business ranking (World Bank 2017). The Kyrgyz Republic has provided accelerated business start-up procedures, improved access to credit information by beginning to distribute both positive and negative credit information, and simplified procedures for registering property and obtaining construction permits. However, getting electricity permits can be arduous, with long waits; trading across borders involves high transaction costs; and paying taxes imposes hindrances. The country has lowered tax rates across the board, yet it ranks rather low in citizens paying taxes due to the processes of tax payment that need to be addressed.

The World Bank's Doing Business surveys show a significant improvement in business regulations in the Kyrgyz Republic over the past 2 years. However, the regulatory burden is still quite substantial. The country ranks 108th of 138 countries in the burden of government regulations (World Economic Forum 2017).

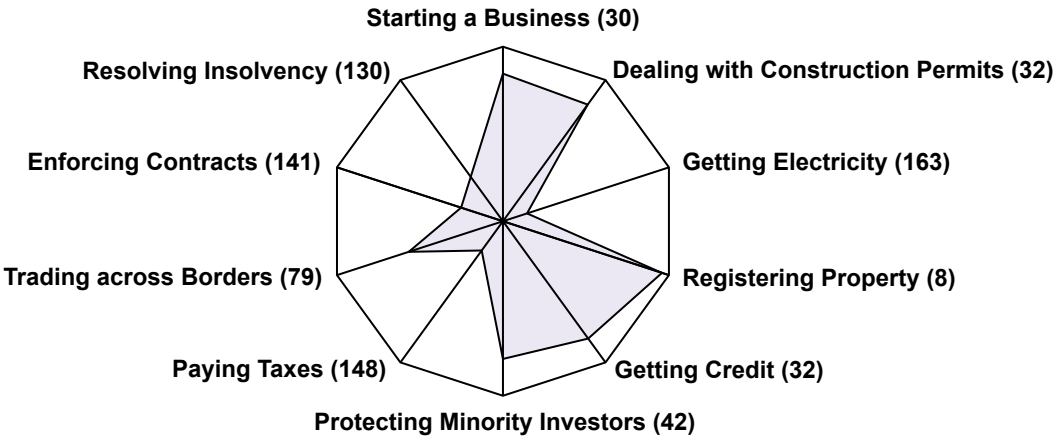
3.2.3 Productivity Growth Drivers

Human resources. The emergence of the endogenous growth theory in the 1980s (Romer 1986) placed human capital at the core of economic development. Knowledge can raise the returns on investment, which can, in turn, contribute to the accumulation of knowledge. It does this by stimulating more efficient methods of production organization as well as new and improved products and services. Knowledge can also spill over from one firm or industry to another. Such spillovers can ease the constraints placed on growth by scarcity of capital. Since knowledge investments are characterized by increasing (rather than decreasing) returns, they are the key to long-term economic growth. A successful growth strategy must have, at its core, measures to promote education. Higher education, in particular, is crucial for economies to move up the value chain beyond simple production processes and products.

The Kyrgyz Republic is facing several challenges regarding human capital (Figure 27). These pertain not only to the shortage of scientific personnel for technical, engineering, and innovation management, but also to personnel with technical and engineering skills based on technical and vocational education. The country has a high enrollment ratio in the tertiary sector (46% gross), but only around 18% of the graduates are in science and engineering, and the key problem is the overall low quality of education that ranks 74th of 127 countries (Cornell University, INSEAD, and WIPO 2017).Global Competitiveness Index results indicate low rankings in quality of education across most spheres with an overall quality of education ranking of 106. Despite not-so-low government expenditure (i.e., 5.5% of GDP) the quality of the country's education leaves much to be desired.

Over 33% of firms in the World Bank Enterprise Survey (2013) considered a shortage of trained workers a major constraint on their performance. On-the-job training presents a prime opportunity to expand the knowledge base of workers, improve employability, and compensate for the low quality

Figure 26: Business Environment in the Kyrgyz Republic



Sources: World Bank. 2016. *Doing Business 2016: Measuring Regulatory Quality and Efficiency.* Washington, DC; World Bank. 2017. Enterprise Survey. http://www.enterprisesurveys.org/.

Figure 27: Human Capital Indexes

Enterprise Survey, 2013	Global Competitiveness Ranking, 2017 (138 countries)	Global Innovation Index, 2017 (Rank in 27 countries)
• Firms offering formal training: 62.9 • Workers offered formal training: 32.4 • Firms identifying an inadequately educated workforce as a major constraint: 33.5	• Higher education and training: 87 • Quality of math and science education: 117 • Quality of management schools: 134 • Quality of education: 106 • Quantity of education: 62 • Availability of scientists and engineers: 116	• Human capital and research: 74 • Education: 79 • Expenditure on education (% GDP): 31 • Pupil–teacher ratio: 45 • Tertiary enrollment (% gross): 58 • Graduates science and engineering: 68 • Tertiary inbound mobility: 41

Sources: World Economic Forum. 2017. *Global Competitiveness Report 2016–2017*. Geneva; Cornell University, INSEAD, and World Intellectual Property Organization. 2017. *The Global Innovation Index 2015: Effective Innovation Policies for Development*. Geneva: WIPO; World Bank. 2013. Enterprise Survey. http://www.enterprisesurveys.org/.

of education. As a result, over 62% of the firms offer such training. This increases the cost of doing business for them. It must be noted that the Kyrgyz Republic is supplier of low- and medium-skill labor to the neighboring countries.

Financial system. Financial markets are critical to providing capital for investment in physical assets. A positive link exists between the sophistication of the financial system and economic growth. Financial sector development can enhance resources allocation and accelerate growth. Similarly, by facilitating risk management, improving the liquidity of assets, and reducing trading costs, financial development can encourage investment in large-scale and high-return activities (Levine 1997). This removes constraints on productivity growth (Kumbhakar and Mavrotas 2005).

Figure 28 suggests that one of the major constraints to domestic investment in the Kyrgyz Republic is the lack of financial deepening. The country consistently ranks low in nearly all aspects of financial markets. About 80% of the investment is funded through internal funding, so it cannot sustainably support the needed transformational agenda that the government envisions.

Technological capabilities. Investments in research and development and innovation are central to competitiveness and economic growth (Figure 29). Rapid advances in new technologies, reinforced by the process of globalization, have exposed firms in developing countries to intense technological competition in both domestic and export markets. Conscious efforts toward building technological capabilities are increasingly vital to survive.

There is an intense race to attract FDI to acquire cutting-edge technology and innovation. It is expected that the presence of global multinational enterprises should encourage technology transfers to local firms, automatically through spillover mechanisms such as labor turnovers, imitation, competition, and demonstration. However, these require a comprehensive approach toward building technological capabilities for adaptation, diffusion, and use of these technologies in local contexts.

Figure 28: Financial Sector Development

Enterprise Survey, 2013	Global Competitiveness Ranking, 2017
• Proportion of investments financed internally: 80% • Proportion of investments financed by banks: 8.7% • Proportion of investments financed by supplier credit: 7.9% • Firms using banks to finance investments: 23.3	• Finance market development: 96 • Financing through local equity markets: 110 • Soundness of banks: 119 • Availability of finance services: 105

Sources: World Economic Forum. 2017. *Global Competitiveness Report 2016–2017.* Geneva; World Bank. 2013. Enterprise Survey. http://www.enterprisesurveys.org/.

Figure 29 presents the ranking of the Kyrgyz Republic in the Global Competitiveness Report and Global Innovation Index.[8] The latter shows that the Kyrgyz Republic lags far behind in innovation and research and development, not only in global ranking (95th of 127) but also in the region (lower than that of Azerbaijan, Kazakhstan, and Tajikistan, for which rankings are available). In addition, its output ranking of 104th, relative to the input ranking of 86th, shows low efficiency of its research and development resources. The overall low productivity that characterizes the economy is reflected in the productivity of research and development inputs, where it ranks 114th.

On the input side, factors responsible for the Kyrgyz Republic's low rankings in technological capabilities are low-quality education, lack of technological and managerial competency, underdevelopment of innovative technology in the education system, lack of financial sector development, weak university–industry collaboration, and meager budgetary allocations for education and research and development. Further, FDI, an important source of technology transfer, is mainly in exploration, extractive, and mining. This has affected technology transfers and technology acquisition across the economy. Finally, there is a low level of susceptibility of business to technological activities, attributable to a lack of local and foreign competition.

3.3 Conclusion

Notwithstanding that the Kyrgyz Republic somewhat improved its overall competitiveness, over time, some areas of concern led to low competitiveness and productivity, and impeded investment and diversification. These areas are summarized for each category of competitiveness in the figure below (Figure 30).

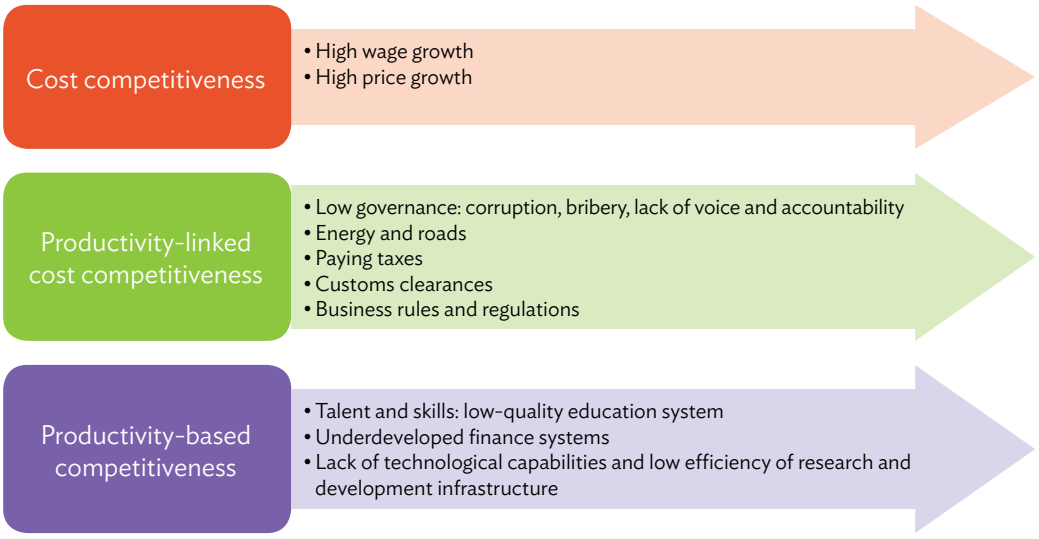
[8] The first sub-index of the Global Innovation Index, the Innovation Input Sub-Index, has five enabler pillars: institutions, human capital and research, infrastructure, market sophistication, and business sophistication. Innovation outputs are the results of innovative activities within the economy. Although the Output Sub-Index includes only two pillars, knowledge, and technology outputs and creative outputs, it has the same weight in calculating the overall index scores as the Input Sub-Index.

Figure 29: Research and Development, and Innovation Indicators and Drivers

Global Innovation Ranking 127	Global Competitiveness Ranking: Access to Technology	Global Competitiveness Ranking: Supply-Side Factors	Global Competitiveness Ranking: Demand-Side Factors
• Overall rank: 95 • Input: 86 • Output: 104 • Efficiency: 114 • Patent applications following the standards of PCT, per billion PPP in $: 79 • Innovation linkages: 87	• Company spending on research and development: 131 • Availability of latest technologies: 128 • Firm-level technology absorption: 133 • FDI and technology transfer: 128	• University–industry collaboration in research and development: 121 • Quality of scientific research institutions: 121 • Capacity for innovation: 120 • Technological readiness: 117	• Intensity of local competition: 130 • Foreign competition: 121 • Competition: 107

PCT = Patent Cooperation Treaty, PPP = purchasing power parity.
Sources: World Economic Forum. 2017. *Global Competitiveness Report 2016–2017.* Geneva; Cornell University, INSEAD, and WIPO. 2017. *The Global Innovation Index 2015: Effective Innovation Policies for Development.* Geneva: WIPO.

Figure 30: Key Competitiveness Challenges



Source: Author.

Chapter IV: Promoting Economic Zones: Toward a Virtuous Cycle of Competitiveness and Productivity

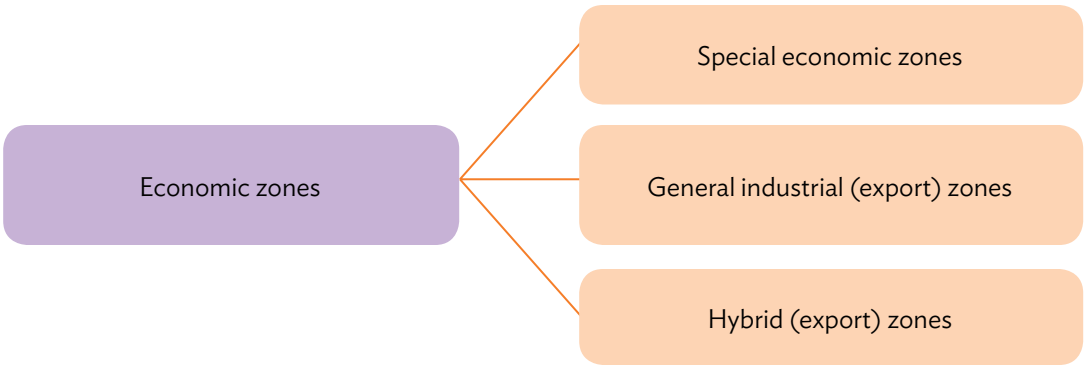
As discussed in previous chapters, the major challenge the Kyrgyz Republic's economy faces today is low competitiveness and productivity, which is a clear manifestation of a Dutch disease-like situation. Low cost competitiveness and low productivity discourage investment in productive activity, impeding expansion in the scale of production, which, in turn, prevents the use of new technologies, investment in learning, and upgrading businesses. Low levels of productive investments, thus, keep costs high and productivity low, creating a vicious cycle back to low competitiveness and productivity in the economy. This circle is reinforced by another circle of low competitiveness, low investment levels, low competition in the market, high costs, and low productivity. Low productivity and competitiveness are also associated with low levels of productive employment, low skill formation, and inefficient use of resources, which, in turn, impede inclusive and environmentally sustainable growth and feed into the vicious cycle of poverty.

The challenge is to break these cycles to push the economy into virtuous cycles of higher investment, increasing scales, higher learning curve effects, and higher efficiency and productivity. In the contemporary world, two major tools to do so are free economic zones (FEZs) and industrial parks. This chapter explores how these policy tools can be leveraged to give a major push to initial investment and to improve competitiveness and productivity in the Kyrgyz Republic.

4.1 Free Economic Zones and Industrial Zones: Conceptual Clarification

Zones have become a worldwide phenomenon and are ubiquitous in both developed and developing countries. The number of zones with different designs and objectives have proliferated, therefore, a clear distinction among the different types of parks and zones is needed. Figure 31 provides a broad classification of zones according to their design, functions, and market orientation. Broadly, there are three types: general industrial zones, FEZs, and hybrid parks. The generic "economic zones" is used here to refer to them.

Figure 31: Classification of Zones



Source: Author.

4.1.1 General Economic Zones (Industrial Zones or Industrial Parks)

An industrial park is a tract of land developed for industrial activity. It consists of a geographically delimited area, created with the intention of offering well-developed yet cheap industrial space for small and medium-sized enterprises (SMEs). According to the United Nations Industrial Development Organization (UNIDO) 1997 they are tracts of land developed and subdivided into plots, according to a comprehensive plan, with a provision for roads, transport, and public utilities, with or without factories for the use of a group of industrialists. In other words, they are planned and government-created industrial areas that offer enabling environments in a limited place, with their own administrative regime. Infrastructure, such as roads, power, and other utility services, is provided to facilitate the growth of industries. The most common names given to them are industrial zones, industrial districts, industrial subdivisions, trading zones, industrial areas, and industrial tracts.

The underlying principle of industrial zones is clustering general or specialized firms. Zones have gained increasing prominence in industrial and innovation policies throughout the world due to the agglomeration benefits instrumental in enhancing the competitiveness of firms, regions, and countries (Table 1).

Table 1: Types of General Industrial Zones

Location
• In or near big cities • In undeveloped regions • In rural areas
Industrial activity
• **Traditional manufacturing industries** • **Heavy manufacturing industries** • **Eco-industrial parks** are communities of manufacturing and services businesses seeking enhanced environmental and economic performance by collaborating in the management of environmental and reuse issues including energy, water, and materials.[a] • **Technology parks** are clusters of universities, research and development institutions, companies, and markets, that facilitate the creation and growth of innovation-based companies through incubation and spinoff processes, and provide other value-added services together with high-quality space and facilities to stimulate and manage the flow of knowledge and technology. • **Innovation districts** are top-down urban innovation ecosystems designed around four multilayered and multidimensional models of innovation—urban planning, productive, collaborative, and creative—all coordinated under strong leadership, with the ultimate objectives of accelerating the process of innovation and strengthening the location's competitiveness.
Composition
• **Multitrade zones** are industrial parks providing factory accommodations to any manufacturing unit, irrespective of its line of production. • **Single-trade zones** are industrial parks providing factory accommodations exclusively to industrial units belonging to the same trade in manufacturing or services (e.g., an industrial estate for manufacturing of leather goods, pottery, or wooden furniture), with the advantage of common technical service facilities organized efficiently and economically for the benefit of the tenants, collective purchases of raw materials, and joint efforts in sales of finished products. • **Vertically integrated zones** accommodate industries that are vertically integrated (e.g., functional estates for radios or sewing machines) that may have many small-scale units that are manufacturing components and parts with one central assembly and finishing unit, creating advantages of specialization, standardization, and economies of scale. • **Ancillary zones** are zones in which different small-scale units manufacture components, parts, and stores that are required by a large industrial unit on a subcontracting basis and are located in close proximity to the large industrial unit to facilitate technical supervision and economic transport. • **Incubator zones** are zones that provide startups with the transitional space requirements of small enterprises as they develop from one phase of growth to another.

continued on next page

Table 1 *continued*

Ownership
• **Private economic zones** are models where the private sector designs, builds, owns, develops, operates, manages, and promotes a zone. • **Government economic zones** are fully developed, managed, and operated by a government. • **Public–private partnership zones** have a variety of forms, including buy–build–operate, lease–develop–operate, build–own–operate, build–develop–operate, design–construct–manage–finance, design–build–finance–operate, and design–build–operate–manage.

[a] T. E. Tudor, E. Adam, and M. Bates. 2007. *Drivers and Limitations for the Successful Development and Functioning of EIPs: A Literature Review*. Northampton, UK: University of Northampton.

Source: Author, based on the literature.

4.1.2 Free Economic Zones

FEZs are government-promoted industrial parks on well-defined geographically delineated economic spaces where commercial activities are primarily export-oriented and are carried out under special regulatory, incentive, and institutional frameworks different from the rest of the economy. The three distinctive elements of a basic FEZ design are as follows: (i) it is set up for export-oriented enterprises licensed under the zone regime; (ii) it offers special regulatory regime to enterprises physically located within the zone for exporting activity; and (iii) it has a separate customs area, offering duty-free benefits and streamlined procedures, and its own management authority (Akinci and Crittle 2008). The benefits offered to firms located in FEZs include import duty exemptions, simplified custom procedures, liberal foreign exchange policies, and fiscal incentives to reduce their entry and production costs, enabling them to compete in the global market.

A FEZ is a distinct variety of industrial park, with a specialized institutional environment. The objective of setting up FEZs is to facilitate the inflows on export-oriented investment, particularly through foreign direct investment (FDI). The rationale of setting up FEZs is to overcome institutional deficits in the wider economy, which industrial parks cannot address. Therefore, special economic zones (SEZs) are set up only for firms that predominantly cater to foreign markets or are located in undeveloped regions.

Different terms are applied to FEZs, partly reflecting their functional differences as well as authorities' preferences (Farole 2011). There are four different FEZ types: free-trade zones, export processing zones (EPZs), single-factory zones, and FEZs (Table 2).

Each type further branches out, with variations in objectives, location, design, composition of activity, services provided, and ownership. The variety of FEZs are outlined in Table 3.

The upshot is that the concept of FEZs has evolved over time, with changes in the economic conditions in which they operate (Aggarwal 2012, Kusago and Tzannatos 1998). Originally FEZs were set up to promote trade and to acquire bullion, but today, governments have increasingly embraced them as part of their development and international relations strategy and experimented with particularly innovative features to use them more effectively.

4.1.3 Hybrid Economic Zones

One aspect of FEZ evolution is the shift in their status from being purely export oriented to a hybrid zone. A hybrid export zone encompasses both general economic zones and one or more types of FEZs. A simple hybrid zone is divided into two parts: a general zone open to all industries and a separate EPZ area reserved for export-oriented EPZ-registered

Table 2: Categories of Special Economic Zones

Type	Description
Free-trade zone	Located in most ports and airports around the world, a free-trade zone is a small, fenced-in, duty-free area, offering warehousing, storage, and distribution facilities for trade, transshipment, and reexport operations without import- or export-duty payments.
Export-processing zone	A relatively small, geographically separated area within a country to attract export-oriented industries by offering favorable investment and trade conditions. In particular, this zone provides for the importation of goods to be used in the production of exports on a bonded, duty-free basis.
Single-factory/enterprise zone	This scheme provides incentives to individual enterprises regardless of location; factories do not have to locate within a designated zone to receive incentives and privileges. Mexico's maquilas and Mauritius's export-processing zones are examples.
Special economic zones	Special economic zones are generally a much broader concept and typically encompass much larger areas and social infrastructure. They accommodate all types of activities, including tourism and retail sales, permit people to reside on site, and provide a broad set of incentives and benefits.

Source: Author, based on the existing literature.

Table 3: Varieties of Free Economic Zones

By Development
First-generation. These free economic zones (FEZs) are dominated by low-cost labor-intensive activities, embodied by the earliest zones. Low (i.e., unskilled) labor cost is the major factor driving competitiveness of these zones.
Second-generation. These FEZs benefit from the tendency of multinational companies to offshore increasingly complex economic activity. These emerged in relatively more developed economies, where production processes are more sophisticated and technologies are more advanced. The skills formation effect of these FEZs is important.
Third-generation. As FEZs upgrade further, third-generation firms emerge, using highly complex skills and technology-intensive operations. These become important contributors to technology generation and spillovers.
Fourth-generation. In recent years, diverse types of highly specialized, fourth-generation zones have emerged, adapting to diverse economic needs.
By Economic Activity
Sector-specific. These offer facilities configured to the needs of specific industries.
High-technology. These zones promote research and development, high-technology, science, petrochemical, and heavy industry.
Services-based. These zones focus on trade in services. Historically, services were considered nontradable, and offshoring was confined to manufacturing. However, the evolution of information and communication technology opened up the possibilities of outsourcing and offshoring in the services sector.
Country-specific. Foreign companies or governments set these up to bring in substantial foreign direct investment, such as Taipei,China zones in the People's Republic of China (PRC); PRC, Australia, and Saudi Arabia zones in Pakistan; Singapore FEZs in Indonesia; and a Republic of Korea zone in Bangladesh. More recently, the Government of the PRC has made significant investments to establish FEZs in several countries of Africa.

continued on next page

Table 3 *continued*

By Ownership
In the initial phase of their evolution, all FEZs were owned by the public sector. Even in the 1980s, less than 25% were in private hands. By 2006, 62% of the 2,301 zones were privately developed and operated.[a] A key factor behind the rise of private participation is the belief that such facilities can be profitably operated by developers, and the burdens that FEZs place on government resources can be reduced. However, FEZs cannot be operated without government support (i.e., governments must provide administrative services and customs facilitation). Further, although the government does not provide direct funding in these models, it may offer some concessions, such as subsidized land prices and/or financial incentives such as tax-exempt status.
By Geography
Port- and airport-based. Traditional trade-based FEZs are parts of port or airports with international routes. Many first-generation zones were also set up as enclaves near ports.
Flexibly located. Following their evolution from being trade-based to comprehensive FEZs, these are flexibly located in interior and border regions with convenient accessibility.
International
The objective of international FEZs is to enhance regional cooperation by promoting exchange of information, mutual understanding, transfer of technology and investment, as well as improving the infrastructure. These FEZs take the form of growth triangles and cross-border economic zones.
Border economic zones. Set up in border areas to exploit comparative advantages of border areas that arise due to their climatic conditions, factor endowment, spatial proximity to foreign markets, and the relatively high potential for developing cross-border backward and forward linkages and regional cooperation, examples include those in the PRC, Thailand, Viet Nam, and countries in the Greater Mekong Subregion.
Growth triangles. A growth triangle (GT) is an economic and social transaction space, covering parts of three adjoining countries to improve their regional competitiveness. It brings together the resources of three neighboring countries to foster economic development. Since 1998, the first time that this term was coined, several GTs have emerged: the Tumen River Delta on the PRC's northeast border–Russian Federation–Democratic People's Republic of Korea; Cambodia-Lao People's Democratic Republic (Lao PDR)-Myanmar; Thailand-Viet Nam-Yunnan province in the PRC; and Brunei Darussalam-Indonesia-Malaysia-the Philippines East ASEAN Growth Area (BIMP-EAGA).
Cross-border economic zones. These zones are spread over well-defined, geographic proximate areas in border areas covering two or more countries and/or areas. They are established by integrating border economic zones on both sides of the border to catalyze economic activity and to promote regional cooperation, including Hekou–Lao Cai and Pingxiang–Dong Dang on the PRC–Viet Nam border, Ruili–Muse on the PRC–Myanmar border, and Mohan–Moding on the PRC–Lao PDR border and social transaction space, covering parts of three adjoining countries and/or areas, to improve their regional competitiveness and to foster economic development.

[a] Akinci and J. Crittle. 2008. *Special Economic Zone: Performance, Lessons Learned and Implications for Zone Development*. Washington, DC: World Bank.

Source: A. Aggarwal. 2012. *Social and Economic Impact of FEZs in India.* Delhi: Oxford University Press.

enterprises (as in Thailand). A complex hybrid zone is a geographically delineated area encompassing a variety of FEZs and general industrial parks (such as in Malaysia, Indonesia, and the Philippines). The objective is to cluster the export-oriented and domestic market-oriented firms to generate scale advantages and facilitate linkages between the two and enhance spillovers. The emergence of hybrid zones has blurred the distinction between FEZs and general economic zones.

4.2 Economic Zones and Sustainable Economic Development: Underlying Mechanisms

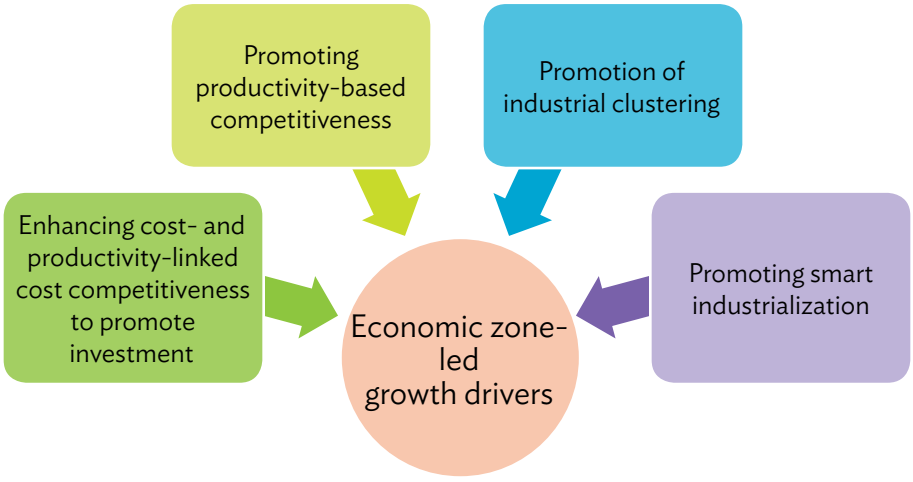
There are four ways in which zones can break the vicious cycle of low competitiveness and productivity (Figure 32). First, by lowering the cost of doing business, zones can attract investment from both domestic and foreign investors. Second, by attracting in particular FDI, they can serve as a tool to bring new technologies into a country. FDI can have spillover effects in the rest of the economy through the demonstration effect, labor movement effects, and competition to push productivity levels. Third, by generating agglomeration economies they can increase scales of production and reduce costs. Finally, these can be a tool to promote vertically specialized industrialization, also known as smart industrialization.

4.2.1 Enhancing cost and productivity-linked cost competitiveness

The key challenge developing countries face in the process of industrialization is low-incentive structures to invest in industrial activity, directly linked to high indirect costs of doing business. The indirect cost of doing business is high in these places due to various structural bottlenecks such as infrastructure deficiencies, procedural complexities, bureaucratic hassles, and barriers raised by monetary, trade, fiscal, taxation, tariff, and labor policies and strong domestic lobbies. The high costs of production, coupled with imperfect capital and financial systems, discourage both local and foreign investment in the industry sector.

Since countrywide development of infrastructure is expensive and implementation of structural reforms requires time due to socioeconomic and political realities, economic zones can be created as strategic locations that offer enabling investment climates. These zones can offer numerous benefits to reduce the cost of doing business, including provision of standard factories or plots at low rents with extended lease periods and cheap utilities. Many other provisions, including single-window clearance, specialized infrastructure, centralized administration, and simplified procedures, also ensure productivity-linked cost competitiveness. FEZs, which are characterized by special regulatory regimes, are expected to be more efficient locations to attract global value chain (GVC)-linked activities than even industrial parks.

Figure 32: Economic Zones and Sustainable Economic Development: Underlying Mechanisms



Source: Author.

In the 1960s, the emergence of economic zones in developing countries was concomitant with the rise of GVCs. As competition for market access between United States (US) and European firms intensified as a result of General Agreement on Tariffs and Trade negotiations, the US companies initiated the model of GVCs wherein production processes were fragmented to offshore labor-intensive segments to developing countries to exploit differences in location costs. To attract this investment, many developing countries opted to set up economic zones as attractive production sites. As European and then Japanese companies also started offshoring, the number of economic zones started surging during the 1980s.

The wave of globalization and explosion of information and communication technology post-1990 which propelled globalization of production and trade not only in simple manufacturing processes but also in complex processes and services through increasingly complex global supply chains led to a proliferation of economic zones (Coffey 1996, Gereffi 1999, LaRRI 2000). Production processes are being relocated not only through offshoring but also through offshore outsourcing to local firms.[9]

Today, there is an intense race to attract GVC-propelled investment, particularly FDI, by setting up industrial parks and FEZs. Each country and/or area offers an array of incentives to attract FDI, not only for increasing investment inflows but also to access technologies that foreign investors possess.

4.2.2 Promoting Productivity-Based Competitiveness

Spillover effects of foreign direct investment. The presence of foreign firms in economic zones generates important spillovers through demonstration effects, on-the-job training, learning by doing and copying, and diffusion of technology and knowledge. These spillovers fill gaps in technical, marketing, and managerial know-how faced by firms in developing countries and areas. Thus, in essence, economic zones contribute to entrepreneurship and productivity-based competitiveness through the spillover effects of multinational corporations.

Technology and skills transfers within zones spill over through backward and forward linkages to the rest of the economy to promote knowledge and upgrade the productive structure of the economy. Backward linkages occur when zone firms source intermediates locally and/or outsource a part of their activity to local firms, stimulating the production of intermediate inputs into the local economy, leading to an increase in national income and welfare. Further, learning and knowledge created in zones are eventually transmitted to domestic firms that supply the zone firms when the companies within a zone buy inputs from the host country.

Forward linkages are established when final products produced in a zone are sold in the domestic market (Warr 1989). Two other important channels promote forward linkages between zones and the domestic mainland. First, when firms set up production units in the domestic mainland to cater to domestic markets after succeeding in export markets, they introduce new products and new technologies in the domestic mainland. Second, trade bodies, manufacturers' associations, and export-marketing bodies provide a valuable forum for information sharing and spillovers and act as catalysts (Aggarwal 2012).

While there is significant literature on the role of FDI in technology transfers and diffusion in developing countries, the contribution of GVC-linked outsourcing to domestic firms in technological upgrading of the economy has attracted little attention. Yet outsourcing has exposed large export opportunities for domestic firms in developing countries. Integration within GVCs is an important way to strengthen the competitiveness of developing country firms and build their productive capacities. Entry into GVCs

[9] Offshore outsourcing is associated with subcontracting parts of the whole production process to specialized firms abroad, while offshoring is the shift of production to a new location in another country through affiliates.

promises access to a global pool of new technologies, skills, capital, and markets, as well as upgrading of firm-level capabilities from learning through technology diffusion and exposure to international best practices of corporate governance. As a consequence of learning by exporting, they can target more sophisticated market segments such as design, marketing, and branding, thus becoming instrumental in promoting for promotion and diversifying of export activities in the country. One clear example of upgrading among developing country producers happened in East Asia. According to Gereffi domestic producers in these countries and areas moved from assembly of imported inputs, to increased local production and sourcing, to the design of products sold under the brands of other firms, and finally to the sale of own-branded merchandise in internal and external markets (Gereffi 1999).

4.2.3 Promotion of Industrial Clustering

The foundation of the theory of geographic clustering of firms was laid by Alfred Marshall as far back as 1890. The concept has evolved, with many scholars underscoring the role of clustering in accelerating the process of growth and development. A myriad of definitions of clusters exists, but two main elements characterize a cluster. First, a cluster consists of groups of firms that are linked vertically and/or horizontally through their commonalities and complementarities in products, services, inputs, technologies, or outputs. Second, firms in the cluster encourage the formation, and enhance the value-creating benefits via their interaction. The clustering benefits include scale economies, pool of labor, innovation, and productivity growth (Kuah 2002).

Clusters and industrial zones share the advantages of economic agglomeration even while they differ fundamentally in terms of origin, entry barriers, composition of enterprises, and entrepreneurship impacts on the local economy. Clusters are often organically formed from existing industries as determined by historical legacy (Miller and Cote 1985). Governments, in particular local governments, can only help facilitate the growth of existing clusters. Economic zones, on the other hand, are government-created agglomerations of industries in a limited geographic area, in which adequate infrastructure and an enabling business environment are provided mainly to promote priority industries. Zones are largely seen as industrial enclaves offering good infrastructure to attract investment, while organically developed clusters are associated with agglomeration economies and are seen as instruments of promoting growth and productivity.

Because of their image as enclaves, agglomeration economies associated with FEZs have been assumed to be of minor importance (Akinci and Crittle 2008, Meng 2005). However, they are growing bigger, becoming better integrated with the economy, and are shifting to more technology- and capital-intensive production. There is a need therefore to move to new policy paradigms to capture their potential benefits.

Porter promoted his cluster concept with an overarching focus on the competitiveness of firms, industries, regions, and nations in a global economy, which makes his clusters trade-oriented (Porter 1990). He identified exposure to foreign competition of firms and industries as both a driving factor and distinctive feature of cluster formation and development. The concept of FEZs thus bears clear commonalities with Porterian clusters. FEZs are, essentially, highly geographically concentrated government-promoted agglomerations of "internationally competitive enterprises" equipped with inherent advantages of an efficient infrastructure and quality services and a favorable business environment, few regulatory restrictions, and a minimum of red tape. Their advantages are thus, rooted in agglomeration economies arising out of knowledge spillovers, resource sharing, and labor pooling. The specialization of activities within these clusters creates a pool of skilled labor; external economies in the form of lower transport and logistics costs, lower communications costs, and (to the extent that utilities are shared) lower infrastructure costs; and knowledge spillovers (Marshall 1890). These external economies can have strong positive effects on FDI inflows (for instance, Ng and Tuan 2006). Further, initial investment attracts more foreign and domestic firms and promote further specialization; thus, launching the process of "circular and cumulative causation" or chain reactions (Myrdal 1957, Kaldor 1966). The concentration of rivals, suppliers, and customers fosters important linkages, complementarities, knowledge, and technology spillovers, stimulating innovative activity and raising productivity and competitiveness (Porter 1990). The cluster can further expand by the tendency of spin-offs and suppliers of both the clustered industry and

related industries to locate near the zone. According to Porter, these processes can take place in all clusters, but "traded" (i.e., export-oriented) clusters are more important than "nontraded" clusters—that is, economic zones. This simultaneous expansion of activities may be linked with the theory of big push (Rosenstein-Rodan 1943), which characterizes the process of balanced growth and is crucial for sustained economic growth. In the terminology of Hirschman (1958), this process involves forward and backward linkages and hence, results in unbalanced growth. FEZs in his framework, serve as growth poles/growth centers. They can be "Gerschenkronian institutional innovations," used by developing countries to catch up with the early industrializers.

There is one caveat, however. Economic zones, which are government-created, may lack the social capital and cultural cohesion due to their linkages with global rather than local production systems. Thus, government interventions in domestic capacity building, network platform development, skills development, and technology and marketing development are critical in the process.

4.2.4 Promoting Smart Industrialization

In this era of globalization and radical technological explosion, when industrialization is becoming an increasingly complex process, the proliferation of GVCs across both manufacturing and services sectors, and at all levels of production, has opened up a new channel of industrialization for developing countries. Instead of developing fully integrated production structures, developing country producers can focus on processes in which they have competitive advantages. In the early stage, these may be low value-added processes. However, over time, they can move up the value chain by moving to higher value-added activities or upgrading in terms of more technological sophistication in production. This process is termed "smart industrialization" or "vertically specialized industrialization" (Milberg, Jiang, and Gereffi 2014). The FEZs and industrial parks, which are vehicles of the GVCs, can become the centerpieces of this type of industrialization.

4.3 Economic Zones: Strategic Approaches, Critical Success Factors, and Development Outcomes

The economic performance of economic zones is mainly determined by the strategic approach adopted toward them. A country that clearly assigns a well-defined strategic role for economic zones and implements that effectively tends to perform better.

Theoretically, there are a variety of policy approaches. Different strategic approaches are associated with different execution plans and, hence, different critical success factors (CSFs). CSFs are core factors that pertain to zone design, location, incentive structure, management processes, services to be provided, governance, action plans, and any other initiative in the execution plans. There is no generic list of these factors; they are conditional upon the strategic approach.

Based on the mechanisms of zone-induced growth, two approaches to promote zones and to discuss CSFs have been identified: investment-centered approaches and development-oriented approaches.

4.3.1 Investment-Centered Approaches: Promoting Cost Competitiveness of Economic Zones to Attract Investment

The key idea underpinning investment-centered approaches is that economic zones are economic enclaves set up to attract FDI investment to promote manufacturing for fostering export and employment growth. There are two main approaches to attract investment:

(i) **Improvement in cost-based competitiveness.** This focuses on attracting simple, labor-intensive, GVC-linked investment, which is relocated by multinational corporations to take advantage of low-cost production. Objectives include employment generation, export growth, and foreign exchange earnings. The attractiveness of economic zones for this purpose is directly related to their

Figure 33: Conceptual Framework of Economic Zones

Source: Author.

cost competitiveness and tax incentives. Government-offered fiscal and nonfiscal concessions, low wages, relaxed labor laws, cheap land and factory sites, and low-cost utilities are some of the attractive features these zones need to offer. Productivity-enhancing effects are limited, due to the concentration on simple assembling activities.

(ii) **Improvement in productivity-linked cost-based competitiveness.** Here, the focus is on attracting GVC-linked FDI for technology transfer and industrial diversification. The attractiveness of economic zones is influenced by good business environments, including good governance; single-window clearances; high-class infrastructure, both basic and specialized; tax incentives; relaxed FDI and trade regimes; and good connectivity with ports and airports.

In these approaches, the presence of multinational corporations is considered a necessary and sufficient condition to generate spillovers. However, evidence suggests that there are no automatic spillovers from FDI. Notwithstanding their success in attracting investment, the development effects of these trade and investment enclaves on the wider economy remain rather limited (Jayanthakumaran 2003, Warr 1989). Hamada (1974) showed that technology accompanied by FDI in economic zones is capital-intensive and may have little relevance for the wider economy. Companies are typically more integrated with other foreign countries than the domestic economy and generate few backward and forward linkages. These approaches may also be associated with colossal revenue forgone in tax incentives, large government expenditures on infrastructure, and lowering of labor and environment standards.

4.3.2 Development-Oriented Approaches: Improvement in Productivity

These approaches underscore the role of strategic planning in turning economic zones into development engines. This requires a shift from an investment to a development paradigm to promote spillovers (Kim and Zhang 2008, Wilson 1992):

(i) **Promoting spillover effects.** This approach focuses on promoting backward and forward linkages by creating demand for local products and services and transferring technology to the local economy. CSFs include low policy barriers in transactions between economic zones and the wider economy, and a proactive approach by the government in building domestic industrial capabilities (e.g., the PRC; the Republic of Korea;

and Taipei,China). This approach is a horizontal approach and may not generate desired benefits.

(ii) **Agglomeration approach.** The objective here is to catalyze the growth of existing clusters by promoting economic zones around them or developing economic zone-induced clusters. Economic zones can accelerate cluster development by becoming facilitators and initiators. CSFs include a critical mass of capable and competitive local suppliers in components, machinery, and services; a network of research and development facilities; entrepreneurship; higher education institutions integral to innovation and upgrading; continually improving pools of skills, technology, infrastructure, and capital specialized to a particular business; and highly competitive firms oriented toward innovation, quality improvement, and improving efficiencies. Foreign companies looking for outsourcing options favor firms located in clusters as insurance against delays and risk of nondelivery. Geographic proximity of firms can act as a driving force for innovation, learning, and knowledge spillovers. Trade gains are higher when goods are subject to agglomeration economies because the concentration of global production in a single location allows greater exploitation of external economies and, hence, raises efficiency. But agglomerations also generate costs termed "diseconomies of agglomeration," such as congestion, environmental degradation, and regional imbalances (Marshall 1890, Krugnam 1991). They can be associated with large-scale displacement of a population involved in agriculture, and colossal revenue forgone in tax incentives.

Smart industrialization approach. Under this approach, economic zones are at the center of industrialization. Instead of creating expertise across a number of industries, governments start by identifying GVCs and increasing participation in them through economic zones. GVC participation may offer firms access to a global pool of new technologies, skills, capital, and markets. As a consequence of learning by exporting, countries can then upgrade and eventually target more sophisticated market segments, such as design, marketing, and branding.

Central to this process is the role of policy makers in upgrading activities within and outside of economic zones through well-designed policy packages. Participation in GVCs requires a range of goods and services that must be available at competitive prices and quality. Government intervention must center around understanding the requirements of zone industries, creating dynamic domestic firms by offering incentives, building production and networking capabilities, and managing technology development and skills formation. The government must proactively fund networks of researchers, startups, established firms, and consortia to create an ecosystem for the development of industry. A serious risk is if a country fails to upgrade, it is locked in low value-added operations where it starts losing competitive advantage due to rise in wages and other costs (Milberg, Jiang, and Gereffi 2014). This can delay the process of industrialization in the economy due to large-scale diversion of resources to FEZs. In this process, economic zones lose their relevance and harm the process of industrialization in the wider economy.

In sum, the critical factors and economic outcomes (benefits and costs) of FEZs will depend on the strategic approach adopted by policy makers.

- If they adopt the investment-centered approaches, they need to focus on making FEZs attractive to investors and do nothing else.
- If they adopt the development approaches, they need to not only generate economic activity but should also have strategic plans integrated with the national development plan to promote spillover effects.
- If smart industrialization is considered the way forward, they need to align their industrial policy with the FEZ strategy.

The approach adopted needs to be context-based on the development challenges and development strategy. FEZ is not merely a policy. It's a development strategy

and needs to be used strategically. As an economy transitions from one stage of development to another and moves up the value chain, new challenges emerge. This requires evolution in design, services, infrastructure facilities, and incentive structures of economic zones. Thus, the development process initiated by economic zones feeds back into the economic zone system; economic zones evolve and reinforce the development process in the wider economy.

4.4 Free Economic Zones and Industrial Parks: The Relevance for the Kyrgyz Republic

As stated in Chapter 2, the most challenging task for policy makers in the Kyrgyz Republic is to push the economy from a low-competitiveness trap to a high-competitiveness virtuous cycle. Competitiveness is a complex concept incorporating a myriad of interdependent factors. Low competitiveness discourages investment in productive activity, which impedes expansion in the scale of production, and in turn prevents investment in learning, and upgrading businesses. Investment promotion therefore is central to the Kyrgyz Republic's industrial development in the first place. FEZ and industrial park policies can be powerful means to attract investment. It is observed that structural failures have impeded cost competitiveness of the economy. This provides a strong basis for setting up industrial parks and FEZs in the Kyrgyz Republic as a strategy of promoting location-specific competitiveness. By reducing the cost of establishing and expanding business operations for both foreign and domestic investors, FEZs and industrial parks can be instrumental in promoting investment and attract GVC-linked activity. Technology transfers associated with GVC-linked FDI can be potentially an important source of productivity growth and may help the local firms upgrade their technological capabilities through spillover effects, which can improve productivity-based competitiveness of the economy to drive its growth. The development of economic corridors, accession to the World Trade Organization (WTO) and membership of the Eurasian Economic Union (EAEU) (Chapter 2) will bring immense trade and investment opportunities for the Kyrgyz Republic's leveraging FEZs and industrial parks. Economic zones can thus well serve as an instrument of industrial diversification if they are effectively designed to address growth-impeding constraints.

But promoting FDI is not the ultimate objective of the zones in the Kyrgyz Republic. It focuses on sustainable regional development, and FEZs and industrial parks can be instrumental in achieving this objective through the agglomeration approach. Thus, there is a need to adopt an appropriate policy approach to economic zones with a well-defined vision, mission, action plan, development outcomes, and success factors. Promoting regional development through these zones requires the government's concerted efforts to build strong domestic capabilities to reap the benefits of technology and knowledge transfers. Moreover, the development of both economic zones and the regional economy needs to be fully synchronized. If it remains focused on creating economic zones and does nothing else, it cannot leverage the benefits of these zones for promoting productivity-based competitiveness which is central to sustained long-term growth.

Notwithstanding the above possibilities, there are costs and risks attached with the policy if it is not effectively implemented, as discussed above. Further, there have been changes in the regional and international contexts that are seen to have affected the dynamism of FEZs as a tool of attracting trade and investment activity in general. These are: restrictive WTO rules, global slowdown, growing protectionism, and perceived contradictions between FEZs and regional trading agreements. The Kyrgyz Republic is a member of the WTO and is obliged to follow the WTO principles of nondiscrimination and transparency in trade and trade-related policies and measures. There are no direct WTO commitments for FEZs. But, its disciplines regarding subsidies are of main concern for the viability of FEZ programs in developing countries (ADB 2017a, Creskoff and Walkenhorst 2009). The "Subsidies and Countervailing Measures Agreement" influence

FEZs by restricting all direct (not indirect) subsidies and direct taxes exemptions contingent on export performance provided by FEZs. The Kyrgyz Republic's accession to the EAEU (joining Armenia, Belarus, Kazakhstan, and the Russian Federation), on 1 January 2015, has also influenced its regional economic contexts. With several FEZs across the region, there is a possibility of intense regional competition. As suggested in the diagnostic report, the strategic framework of FEZs and industrial parks must take these changing contexts into account in strategic proposals.

Chapter V: Economic Zones in the Kyrgyz Republic: A Proposed Strategic Framework

The existing assessments (ADB 2017a, Bondar 2001, UNECE 2015, USAID and Bishkek Business Club 2014) recognize that economic zones in the Kyrgyz Republic have failed to generate substantial gains for the country, although they have been assigned the highly ambitious goals of promoting sustainable development and regional restructuring. The analysis in this chapter provides a brief overview of the performance of various economic zones in the country and explains it in terms of macro-, meso-, and micro- factors. It reveals that there is a mismatch between the policy approach adopted toward economic zones and their objectives. There is also a disconnect between the key elements of the development strategy and development of economic zones. A new strategic framework here is proposed to close these gaps.

5.1 Evolution of Economic Zone Policy in the Kyrgyz Republic

Free economic zones. The history of FEZs in the Kyrgyz Republic dates back to 1991, when the country's Supreme Soviet ruled to grant Naryn the FEZ status at the request of the regional Council of People's Deputies. In so doing, a number of factors were taken into account: underdevelopment of the territory, insufficient social and production infrastructure, available raw materials, a favorable geographic location for cross-border trade and economic relations, and the need for foreign capital. The status provided for preferential tax and customs regimes as well as simplified procedure for export–import operations. In 1992, the Law of the Kyrgyz Republic on FEZ in the Kyrgyz Republic was passed with "effective involvement of the economies of separate regions and the Kyrgyz Republic on the whole into the international division of labor for foreign capital, technologies and management experience," as one of the objectives (Government of the Kyrgyz Republic 1996). It was widely believed that "creation of a large number of such zones would expedite the revival of regional economies as well as of the Republic's economy as a whole" (Bondar 2001).

In 1993, the statute on the Naryn FEZ was approved officially. Subsequently, more FEZs were created. In March 1996, a number of amendments were made in the Law on FEZ to make it effective. By 1998, there were eight FEZs across the Kyrgyz Republic. These were large open zones. The entire Naryn oblast was designated as a FEZ modeled on the FEZs of the People's Republic of China (PRC). By 1998, they attracted 501 enterprises with 305 being in Bishkek alone. However, they could not generate substantial gains. According to a World Bank study, FEZs provided opportunities of tax avoidance by allowing the opportunity of trading. Goods could be sold in the domestic mainland without paying any duty; any individual could purchase goods in the FEZs and sell them in the domestic mainland. FEZs were large and open and, hence, there was no effective way to control the movements in and out of FEZs. A considerable amount of retailing had developed in zones. In an assessment of tax revenue forgone, the revenue lost was estimated to be as high as Som105 million in 1998 (World Bank 2000).Following a performance analysis by a government commission, in 1998, some of the zones were closed for poor economic performance, imperfect legislation, inefficiency of executive government agencies, tax revenue forgone, and rampant bureaucracy on the local level and others were downsized (Bondar 2001).

The law was further amended in 2002 to plug the gaps by reducing size, restricting trading to 30%, and creating boundary along them. But these steps could not ensure the effective use of FEZs. By 2006, there were four FEZs: Bishkek, Karakol, Maimak (on the Kyrgyz–Kazakh border), and Naryn (on the Kyrgyz–PRC border). Of some 650 entities registered in these zones, 458 were in Bishkek, which was the only FEZ operating effectively (WTO 2006). The authorities were concerned that FEZs, especially at Karakol and Maimak, were tax shelters. There was evidence of substantial leakage of sales from FEZs onto the domestic market without payment of all domestic taxes. Even if FEZ firms were found to be on average five to seven times more productive than domestic firms because of the improved business environment in FEZs and access to superior technology (WTO

2006), the government informed the World Trade Organization (WTO) that it was contemplating withdrawal of FEZ tax benefits.

In 2009, preferential treatment was suspended for all FEZs with the exception of the FEZ Bishkek on the ground that they were not able to install fencing under the law, which required installation of fencing for the tenants to enjoy FEZ status.

Overall, the law was amended nine times between 1992 and 2011 (WTO 2013).In 2012, the Ministry of Justice proposed further amendments to the Law on Free Economic Zones and the "Tax Code" to establish uniform guidelines for registration of legal entities in the FEZ territory with one central public authority: the Ministry of Justice. The objective was to promptly receive necessary information on FEZs from one public authority and to create a single electronic database (Kalikova & Associates 2012). Following this rule, many companies did not apply for reregistration and opted to operate without the FEZ status. Thus, the number of tenants fell further.

The conclusion is that the policy was changed several times to plug in leakages but frequent changes affected investors adversely. There was too much emphasis on preventing leakages of the tax revenue with little effort to provide effective administration and to market the FEZs to attract investment.

In 2013, the government adopted a new development strategy with sustainable economic development as the main focus. In 2014, the government introduced a new Law on FEZs of the Kyrgyz Republic, in which the purpose of setting up FEZs was explicitly aligned with the overall development strategy of "sustainable development." It stated clearly that FEZs are created "for the purpose of assistance to social and economic development of the Kyrgyz Republic and its certain regions (the accelerated development of regions)"(Government of the Kyrgyz Republic 2013).

The FEZs have been seen as a tool of regional development since their conception, but the government clarified its intent further in the new law. In 2017, the fencing requirement of FEZs was replaced by that of FEZ tenants individually to operationalize them. There are changes in the Customs Code as well, following the country's accession to the Eurasian Economic Union (EAEU) in 2015 (ADB 2017a).

While the FEZ policy has evolved over time, the government has diverted its attention to other types of economic zones as well, namely, general industrial parks and high-tech industrial parks.

High-tech industrial park. Emergence of a high-tech park is an outcome of the private initiative in the country. In 2007, a number of information technology (IT) companies formed the Kyrgyz Software and Services Developers Association and promoted the idea of creating a high-tech park with the Ministry of Transport and Communications' collaboration. The Parliament passed a law in 2011 enabling the creation of a high-tech (virtual) park—a network of programmers and developers working under a favorable (5% income) tax regime (for 15 years) with the objectives of promoting the development of software, export of information technology and software, and creation of interactive service centers. In 2013, a (virtual) high-tech park was set up. The park's motto is "Live in Kyrgyz Republic, work across the world!" It registers only export-oriented companies with 80% share of exports in sales. Since the park is virtual, it is extended throughout the Kyrgyz Republic's territory and has made the whole country a high-tech park. The park initially attracted three domestic IT companies. Since then, it has been growing rapidly.

Industrial parks. The idea of industrial parks is of recent origin in the Kyrgyz Republic. The law on industrial parks has not yet been adopted, but the draft law on industrial parks indicates that the idea is essentially to create industrial infrastructure as the basis for the modern industry to growth. According to the diagnostic study conducted by ADB (ADB 2017a), the government is considering two textile "technopolis" (as textile parks come to be called) of which one is a greenfield zone and

the other one is a brownfield project for converting an old machinery plant into a textile "technopolis" (both are in Bishkek – the capital of the country or nearby). The study thus reveals that the Ministry of Economy and the Bishkek municipal government are considering the abandoned industrial areas in the eastern part of Bishkek as venues for future industrial parks. The factories and plots there were privatized as part of the country's 1990 reforms. From the Bishkek authorities' point of view, this area has the appropriate infrastructure, including connections to the railway network and a relatively dependable power supply. However, only one project has been finalized till late. Another brownfield project that would convert an old, large company into an industrial park is under consideration in the town of Tash-Kumyr, Djalalabad Oblast. In addition, one more greenfield zone is being considered in Tokmok town not far from Bishkek.

To attract investment in economic zones, tax benefits are offered. The tax regimes vary widely across the zones. While FEZs enjoy almost a complete lifelong tax-free regime (with 2% fee on their sales turnover), industrial parks are allowed a 5-yearly tax incentive regime (5% corporate income tax; 10% social charges; and full or partial exemption from land and property tax for 5 years). The virtual high-tech park is offered 15-yearly tax exemption in corporate income tax, value-added tax, and sales tax with 5% personal income tax. The underlying principle is to offer large tax benefits to export-oriented companies.

The upshot is that, in line with the global trend, the Government of the Kyrgyz Republic is also contemplating promoting a variety of economic zones throughout the country as "industrial infrastructure with enabling conditions." It is keen to leverage FEZs and industrial parks for sustainable economic development. However, its FEZ experiment is marked by frequent policy changes and a lack of strategic direction. This is manifested in their performance as well, which is discussed in the next section.

5.2 Performance of Economic Zones in the Kyrgyz Republic

5.2.1 Investment and Trade Promotion

Free economic zones. There are five FEZs in the Kyrgyz Republic located in Bishkek, Karakol, Naryn, Makmal, and Leilek in border areas with Kazakhstan, Tajikistan, and the PRC. In reality, only Bishkek has been effective in generating some benefits. Of the five FEZs, only three have reported trading activities between 2006 and 2012, with Bishkek accounting for over 99% of total trade from FEZs (WTO 2013).

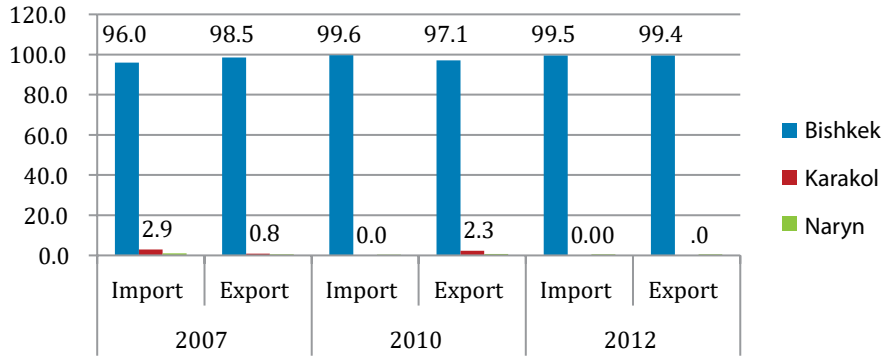
Thus, Bishkek alone has been contributing 14% to total exports. While this figure is exaggerated as it includes domestic sales also from the FEZ, there is evidence that, post-2011, the Bishkek FEZ has witnessed rapid growth in its investment, employment, exports, and production activity. Figure 35 presents the performance of the Bishkek FEZ since 1996.

The main export commodity groups produced in FEZs are plastics; rubber; machinery and mechanical appliances; electrical equipment; sound and video recorders and reproducers; ground, air, and water transport; vegetable products; mineral products; leather; textiles and textile products; paper; etc. The main imported products are plastics; rubber; machinery and mechanical appliances; electrical equipment; sound and video recorders and reproducers; ground, air, and water transport; etc. Overall, machinery and instruments form a substantial part of trade within the FEZ.

Clearly, political stability can have important ramifications for the performance of FEZs. However, there is a caveat. While the accelerated performance of the Bishkek FEZ in recent years is encouraging, it is still performing way below its potential, providing employment to only 10 workers per hectare on average. Among other FEZs, Leilek and Karakol do not have active enterprises. Maimak has some inmates but they are not registered there and have no physical trading activity (ADB 2017a). Naryn has witnessed some dynamism recently with active support of international agencies (GIZ, for instance), but this has not been converted into accelerated investment in the zone (see also Chapter 9 of this report).

High-tech virtual park. Figure 37 summarizes the growth of the virtual high-tech park in the Kyrgyz Republic. It indicates that exports from the park have grown three times in the past 3 years from Som80 million in 2014 to Som241 million som in 2016 with employment growing from 60 to 251 persons over the same period. It shows that information and communication technology is a potentially high

Figure 34: Free Economic Zone Trade, 2007, 2010, and 2012 (% of FEZ exports[a] and imports)

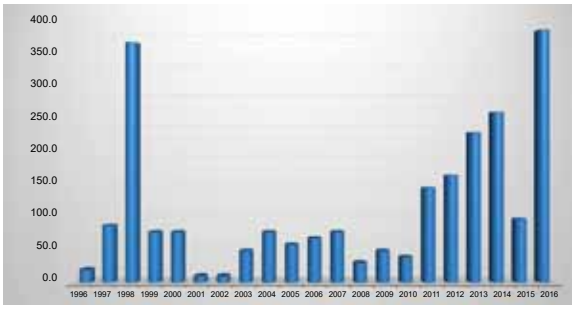


	2007		2010		2012	
	Import	Export	Import	Export	Import	Export
% of total economy wide	5.3	12 .7	2.5	5. 8	3.6	14

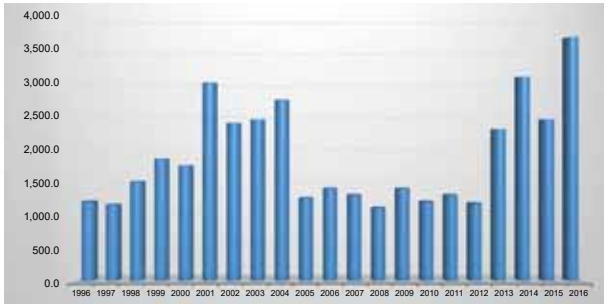
[a] Exports include reexports.
FEZ = free economic zone.
Source: World Trade Organization. 2013. Trade Policy Review Kyrgyz Republic.

Figure 35: Performance of Bishkek Free Economic Zone

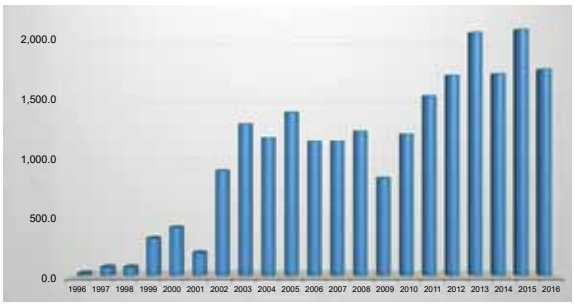
A. Investment (million som)



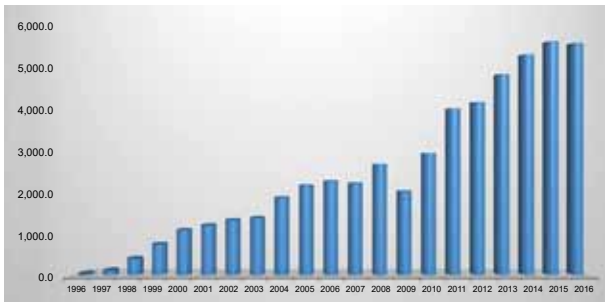
B. Employment (number)



C. Exports (million som)

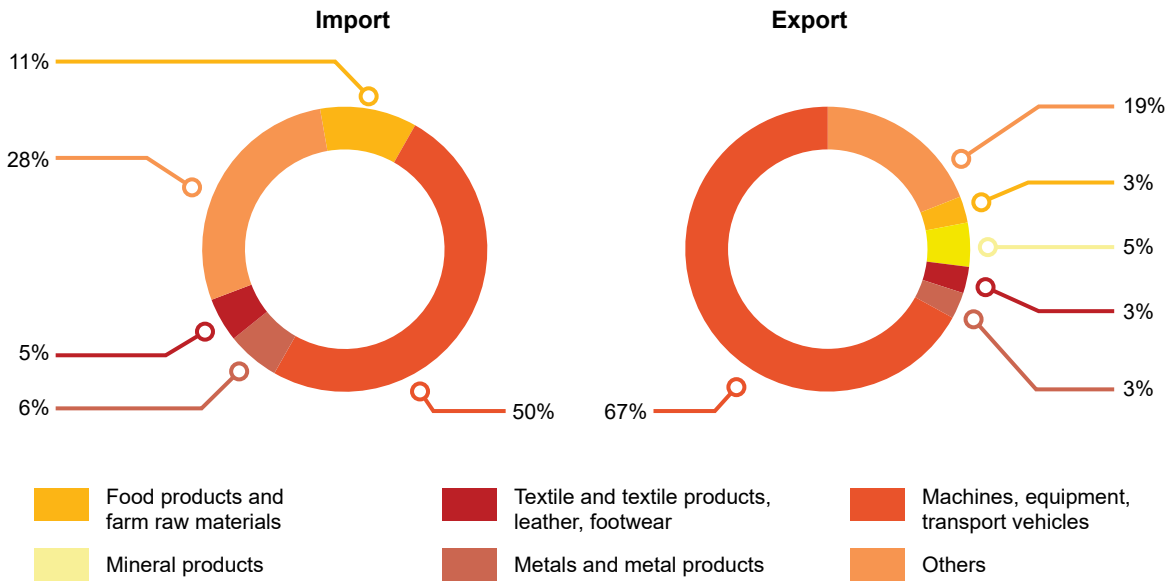


D. Production (million som)



Source: Bishkek FEZ Authority. http://fez.kg/statistics-information/.

Figure 36: Composition of Imports and Exports, 2013



Source: The State Agency for Investment and Export Promotion under the Ministry of Economy of the Kyrgyz Republic. http://www.invest.gov.kg/en/why-kyrgyzstan/free-economic-zones/.

growth sector in a country characterized by poor transport infrastructure and a major power shortage.

5.2.2 Introducing New Technologies into Sectors of the Economy

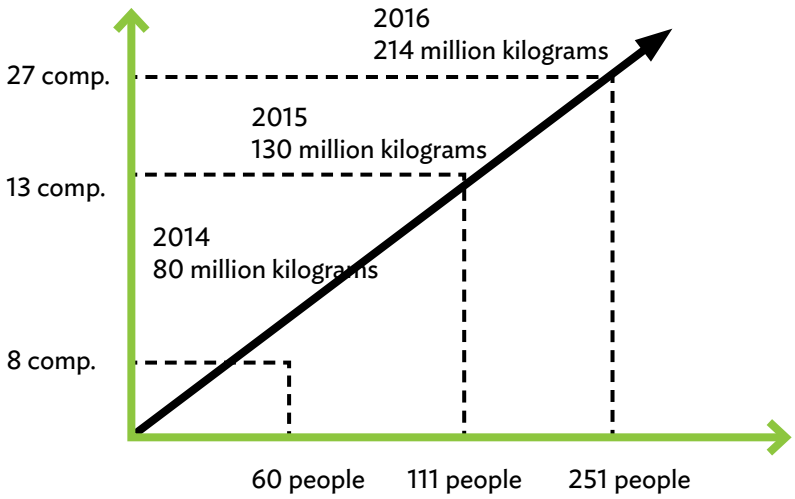
The main focus of the FEZ policy in the Kyrgyz Republic is to attract foreign direct investment (FDI) to obtain technological know-how. The underlying assumption is that FDI is accompanied by new knowledge, technologies, products, and processes. Technologies and skills are expected to spill over, not only to other zone firms, but also to entrepreneurs in the domestic mainland through vertical (i.e., backward) and horizontal (i.e., forward) linkage effects, catalyzing productivity growth (Johansson 1994). However, for these effects to take place, the necessary condition is that there is substantial FDI and this brings new technologies or managerial know-how. According to official data, 27 countries have investments in Bishkek, varying from food processing to high-tech instrument manufacturing. This is indicative of the potential of FEZs to attract new technologies. But there is no data on foreign investment or the kind of activities that foreign investors are investing in. This is despite the objective of FEZs being to promote foreign investment.

5.2.3 Accelerating Spillovers for the Development of Modern, Highly Productive, Competitive Industries

There is little data to analyze if there are spillover effects from FEZs in the Kyrgyz Republic. However, considering FEZs have not generated substantial activity across the country, this is a foregone conclusion.

As discussed in the previous chapter, the FEZ sector can play an important role in promoting and strengthening technological capabilities. As an example, in 1991, only 2.8% of Shenzhen's manufactured exports were high-tech. By 2004, these

Figure 37: Performance of High-Tech Park



Source: Kyrgyz Software and Services Developers Association. https://www.slideshare.net/azisabakirov/kyrgyz-hightech-park.

amounted to $30.6 billion, accounting for 51.2% of manufactured exports (Li 2006). By 2007, in all large FEZs in the PRC, over 40% of the total industrial output was from high-tech industries (Zheng 2010). But FEZs must generate a critical mass of economic activity to set the conditions for the subsequent process of growth. In the Kyrgyz Republic, zones have yet to witness the flow of substantial private innovative investment to make an impact on the process of industrialization.

5.3 Assessment of Free Economic Zone and Industrial Park Policies and Implementation

5.3.1 Disconnect between the Policy and Implementation

Two major objectives of setting up FEZs in the Kyrgyz Republic were to provide favorable conditions to attract foreign capital, technologies, and management experience; and the development of the territory's economic potential by integration of foreign capital with material and monetary means of local enterprises and organizations based on state and private property (Government of the Kyrgyz Republic 1996). In simple terms, the two objectives were: first, to offer a good investment climate to attract FDI and technologies; and second, to maximize spillover effects to strengthen local enterprises. However, the policy could not be implemented effectively and failed to attract investors.

The performance of FEZs is influenced by several factors that can be seen as a four-level hierarchy (Figure 38) (Akinci and Crittle 2008, Madani 1999, Sit 1988, Yuan and Lorraine 1992). Analysis of these factors indicates serious implementation gaps which affected the FEZs.

International conditions. These define opportunities and constraints for FEZs. Part of the poor FEZ performance in the Kyrgyz Republic might be attributed to the general global slowdown during the

Figure 38: Critical Success Factors for Attracting Investments in Free Economic Zones

International	Macro	Regional	Micro
• Growth in global gross domestic product, trade, and foreign direct investment flows • Multilateral and regional trade agreements	• Trade policy tools • Political stability • Competitive advantages • Level of industrialization • Government attitude and role	• Regional economic infrastructure • Connectivity and export infrastructure • Availability of labor • Bureaucratic hurdles • Local government attitude	• Legal framework • Incentive package • Zone infrastructure • Zone administration

Source: A. Aggarwal. 2012. *Social and Economic Impact of FEZs in India.* Delhi: Oxford University Press.

crisis period of the late 2000s. However, the Bishkek zone shows revival post-2011 despite the global crisis. Even the Russian Federation crisis of 2014 and 2015 had little impact on the Bishkek FEZ. Further, it is seen that the FEZs never took off even before the global crisis. One of its FEZs' key competitive advantages is that these are beneficiaries of the Generalized Systems of Preferences by the United States, Canada, European Union, Switzerland, Norway, Turkey, and Japan, that makes its FEZs highly attractive. Many countries, including Bangladesh, benefit from this status. Apparently, the reasons for their nonperformance are domestic.

Macro conditions. One of the most important reasons for the poor performance of the FEZ sector is the resource curse-like situation that has affected the economy's competitiveness. FEZ performance cannot be assessed independently of the comparative advantages of the macroeconomy despite the fact that FEZs offer low-cost destinations. Indeed, manufacturing exports have been falling due to the lack of competitiveness, and a part of FEZ performance reflects the symptoms of Dutch disease that has infected the economy. Political instability and social tensions may be other important factors affecting FDI inflows to the country. These tensions—which can be attributed to an array of intertwined factors, including north–south political competition, widespread official corruption, and broader geopolitical issues (Bond and Koch 2013)—are further exacerbated by political instability in its neighboring countries. Political instability in the region creates uncertainties, and investors tend to invest in the region only if there is a compelling reason to do so (for instance, gold mines or hydroelectric power). Revival of Bishkek and, to some extent, Naryn, may in part be attributed to political stability since 2011. Two large regional economies, namely the Russian Federation and the PRC, have interest in the region for its potential for trade and transport (Montgomery 2016) and need to be tapped.

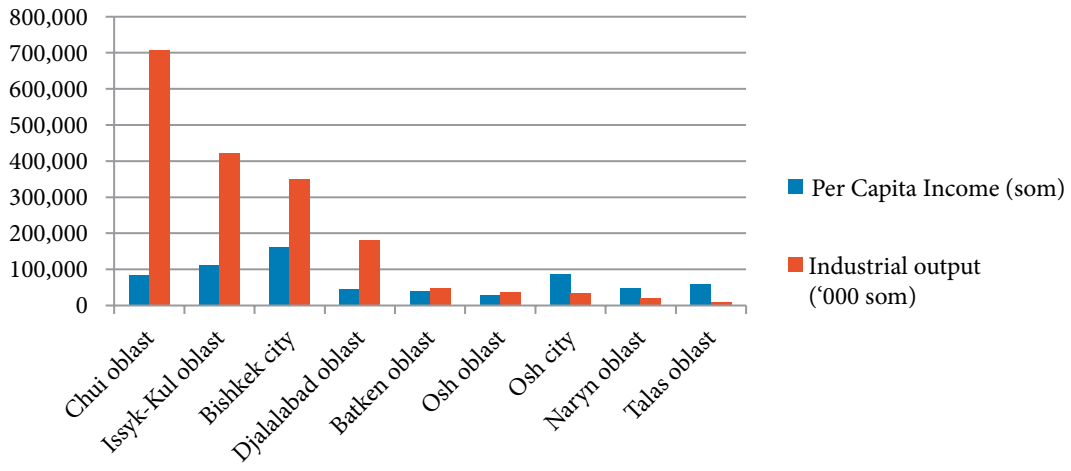
Regional conditions. Kim and Zhang emphasized that setting up of FEZs can work, but only if sufficient extant industrial capacity and organizational skills exist in the area in terms of networks of specialized firms, service providers, human skills, start-ups, and consortia that creates an ecosystem for the industry development and upgrading (Kim and Zhang 2008). FEZs feed on regional capabilities to attract highly competitive investment. Shenzhen was successful because economic activity was created on a large scale based initially on the investment by Chinese from Hong Kong, China. The vision was to generate agglomeration economies, which could then become self-perpetuating. It faced the issues of smuggling, misuse of tax benefits, and money laundering, but addressed them without changing its vision.

The Kyrgyz Republic started with large open FEZs, but gradually moved toward the first-generation export-processing-zone type of FEZs with public ownership, small size, and fenced-in boundaries to

better monitor leakages from them (Naryn being the exception). Their regional settings affected their prospects rather adversely. To understand regional dynamics, the Kyrgyz Republic needs to be divided into three, not two, distinct regions differentiated by geographic characteristics as well as by the economic and demographic structure. First, the Chui Valley, with the capital city of Bishkek in Northern Kyrgyz Republic, which is the most industrialized region of the country. Regional capability development in the country is mainly driven by Bishkek city. Second, the Northern Mountain Region, which is composed of three oblasts: Talas, Issyk-Kul, and Naryn. Talas, the smallest oblast of the country, covers a large valley rich in silica sand, marble gold, and many other mineral products. The settlement structure of Issyk-Kul oblast is oriented around its immense 7,000 square kilometer lake at an altitude of 1,600 meters. Besides agriculture and fishery, tourism has been an important sector since the 1970s, as is mining. Naryn is in the Kyrgyz mountain region, is quite remote, and at high altitude (the regional capital is situated at over 2,000 meters) and with good conditions for pasture. Third, the Southern Kyrgyz Republic—composed of the oblasts Jalalabad, Osh, and Batken (since 2002, Osh city has been an oblast)—covers the irrigated and fertile piedmonts of Ferghana Valley with little industrialization. Thus, most regions (except Chui and Bishkek) in the Kyrgyz Republic lack industrial capability to support FEZs.

Figure 39 highlights disparities between these regions. While the focus in the political discourse is on the north–south divide, there are substantial disparities even in the north. Whereas three northern regions (Bishkek, Issyk- Kul, and Chui) reported per-capita incomes above the national average in 2015, Naryn and Talas are at the bottom. In the south, all three regions reported below average per-capita incomes. Per-capita gross regional product in the Batken and Osh regions were less than half of the national average. Statistics suggest that only the Bishkek FEZ is performing well. Apparently, the lack of dynamism in other regions, in particular, Naryn, Batken, and Talas, has affected FEZ activity there as well. Even while most FEZs are located conveniently near transport corridors, that alone cannot be a sufficient ground for attracting industrial activity, in particular, export-oriented activity, unless a big push is given to generate regional capabilities.

Figure 39: Regional Capabilities in the Kyrgyz Republic



Source: National Committee on Statistics. The Kyrgyz Republic.

Microclimate. The objective of creating FEZs is to insulate them from the prevailing business environment in the wider economy to ease doing business and to cut costs. Therefore, the investment climate prevailing in FEZs can overcome some of the institutional bottlenecks characterizing the macroeconomic and regional investment climate. The performance of the Kyrgyz Republic's FEZs in the four pillars of microeconomic climate leaves much to be desired.

(i) **Governance.** The administrative structure of FEZs is not institutionalized. The director is centrally appointed with no institutionalized administrative framework in place. It is decided by the director of the FEZ. This creates uncertainty and is contrary to best practice. Further, FEZs are governed by different codes implemented in the wider economy, and frequently changing rules outside of FEZs affect their business environments. Also, there is no transparent approval criteria for firms' entry into FEZs. In addition, frequent changes in the FEZ law without a grandfathering clause, except in exceptional cases, has created uncertainty among investors. Finally and most importantly, FEZs are not insulated from corruption and undue interferences by tax and customs authorities, thus discouraging incentives to invest (Box 4).

(ii) **Absence of single-window clearances.** There is no single-window clearance concept in the free economic zones of the Kyrgyz Republic even if this concept is not alien to the country.[10] All clearances must be sought from local government units, as general directorates only play the role of facilitators. To centralize the data as a step toward having a single window, investors are required to reregister with the Ministry of Justice under new guidelines. But many companies have decided not to reregister. This shows a lack of interest in getting registered as FEZ tenants to receive tax benefits or in the transparency of the system.

(iii) **Incentive package.** An attractive incentive package is the highlight of FEZs in the Kyrgyz Republic. The package includes exemptions from corporate income tax (10% outside FEZs), land tax, property tax, duties on the import of fuel and raw materials, as well as value-added tax (12% outside FEZs) on the exports of goods produced with local raw materials and equipment, and payments for land use. Considering that the country ranks at the bottom in tax payments (despite low tax rates), this is a major attraction for firms. However, there is no analysis as to how tax benefits factor into firms' decision over other factors to enter into the zones. Many tenants have not reregistered to get tax benefits, even in Bishkek; hence, the reasons for the lack of reregistration need serious investigation.

(iv) **Infrastructure.** The evolution of policy shows that policy makers' focus has been mainly on how to plug the leakages from FEZs instead of strengthening their administration and benefits. Most zones (except Bishkek) were set up in border areas with serious infrastructural challenges. Leilak and Naryn do not even have basic infrastructure. Electricity shortages pose a major infrastructural bottleneck. There is no specialized infrastructure for business development (e.g., common business facilities, recreation, banking, or transport) or sector-specific infrastructure (food testing labs, supporting institutions, business services, etc.).

(v) **Skilled human resources.** Despite high levels of education, during a survey of the Kyrgyz Republic's employers by the ILO (2009), it was found that a little less than half of the surveyed employers in the country were generally satisfied with the quality of workers produced by the country's vocational education and training system (ILO 2009).[11] One of the main challenges of the vocational education and training system found in the Kyrgyz Republic is its limited relevance to labor market demand. Also, a lack of linkages between the vocational education and training system and the private sector and the lack of clear vision for its future development were emphasized (ILO 2009).

FEZs in the Kyrgyz Republic are first-generation traditional EPZs not only in size, industry composition, and fencing, but also because they only provide

[10] The country is in the process of implementing a single window export/import operations in the country.

[11] Kyrgyz Republic. Bishkek.Invest Park. Special Economic Zones in the New Model of Vocational Education. https://invest-park.com.pl/en/blog/2017/02/07/special-economic-zones-in-the-new-model-of-vocational-education/.

Box 1: Republic of Korea Citizen Lee John Baek and the FEZ Development Central Corporation JSC vs. Bishkek FEZ

In November 2013, a Moscow tribunal, the MCCI Permanent Court of Arbitration, rendered an investment treaty award brought by a Republic of Korea investor. The case arose out of a 93-year lease that was granted to the investor, Lee Jong Baek, to develop property in the Bishkek FEZ that later had multiple issues. The investor suffered creeping expropriation due to the government's adverse changes in legislation, undue interference by tax and customs authorities, and termination of the lease. The tribunal ordered that the Kyrgyz Republic pay the investor $22.7 million that included costs and attorney's fees. This case highlights issues of governance in the FEZs.

FEZ = free economic zone.
Source: J. Kim. 2015. New Frontier in Investor–State Dispute Settlement? The Moscow Convention and Lee Jong Baek v. Kyrgyz Republic. *Pepperdine Dispute Resolution Journal*. 15. p. 549.

basic facilities. The concept of FEZs has evolved dramatically worldwide. New innovative features are being added to FEZs to make them more attractive. Each country is attempting to offer an array of services and incentives to attract FDI. FEZs are evolving; small, enclosed, public-owned, and highly specialized FEZs are discarded in favor of large, private, and comprehensive FEZs. Yet the approach of policy makers toward them in the Kyrgyz Republic remains traditional and cautious. This has lowered the relative attractiveness of its FEZs and has harmed their performance.

Investment climate in high-tech park: While the high-tech park is performing well, there are serious impediments to its future growth. The IT industry is facing serious handicaps in infrastructure and human resources in the Kyrgyz Republic. Computer technology departments at state universities are underfunded and are out of sync with the global tech market. This can be a major constraint for the promotion of the high-tech park. The key constraint to their growth will be the nonavailability of world-class IT professionals, unless the education system is focused on creating human capacity. Further, according to Ookla, a website that measures internet speeds around the world, average Kazakhstan connections are at least twice as fast as the fastest Kyrgyz Republic connections. The Kyrgyz Republic is now third in speed in Central Asia, according to Ookla; in 2010 it was first (Rickelton 2014). There is no strategy to promote the industry. A National Strategy on Information Technologies was developed in 2002 with the aim of catching up with more rapidly developing economies in bandwidth and internet speed by 2010. But after the collapse of the former government, it was not carried forward. Basic conditions must be created for the success of the high-tech park.

In sum, the policy was not based on an adequate understanding of the critical success factors (CSFs) of FEZs, and the impact of macro and regional dynamics on their performance. Much of the focus was on tax benefits and tax leakages. The broader economic climate surrounding them was ignored.

5.3.2 Disconnect between the Development Strategy and Free Economic Zone Policy

The Kyrgyz Republic embarked on the process of sustainable economic development (in content) in the mid-1990s, when the first economic strategy was adopted in 1995. Subsequent development plans, including the "comprehensive development framework" (2001–2010), "the national poverty reduction strategy" (starting in 2003), "new economic policy" (2009), and the numerous sector development programs, etc. continue to focus on sustainable economic development in the interest of achieving poverty reduction.

The government assumed the role of "facilitator" with market-driven growth supported by horizontal policies being the cornerstone of the growth process. It took upon the responsibility of providing a good business climate through the promotion of market-based institutions, good governance, infrastructure development, and human resources development. Agriculture, mining, energy, transport, tourism, and small and medium-sized businesses were targeted as priority sectors. As part of the open door policy, export diversification was set as one of the major goals and FEZs were considered as export centers and centers of investment growth, stimulating the inflow of new technologies, output growth, and production for export of modern products.

In 2013, the government laid the foundation of the 5-yearly national strategy for sustainable development program, mainstreaming sustainable development in its development strategy with a vision to achieve economic prowess with social inclusion and environment protection. The first 5-year strategy (2013–2017) assigns a special role to regional development as the locomotive of the national development process. It set out the objectives of improving "the general business climate, trade infrastructure, road network, and extending the powers of the local authorities in the budget to develop small and medium-sized businesses in the region, improve the quality of life, increase the rate of growth of the region's economy, and to ensure continued growth in the volume of retail trade turnover and market services to the population" (Chapter 11). Border areas are given special attention, accelerating economic activity to create new jobs, and stimulating the economy dramatically are considered major parts of the action plan. A new FEZ law was introduced in 2014 with regional development as one of the FEZs' purposes.

Despite the FEZs' objectives being aligned with the development strategy's objectives since the mid-1990s, a disconnect remains between the development strategy and FEZs. It is not known what strategic approaches are adopted for FEZs to achieve the objectives. In fact, FEZs and industrial parks are hardly mentioned in the strategy document.

Economic zones are expected to promote the country's economy to a new technology platform by encouraging the formation of industries with a high-level of productivity and added value; by being drivers of the regional development program of the government, which is at the core of the policy reform agenda; and by providing impetus to the development of environment-related and friendly industries. Therefore, it is critical to understand the links between FEZs on the one hand, and sustainable regional development on the other.

Further, there is a disconnect between the policy and the changing global trade and investment landscape. Today, where the rise of global value chains (GVCs) has reshaped global production and trade systems and altered the organization of firms, industries, and national economies, the development of stand-alone domestic industries is no longer possible. Domestic industries have become deeply involved in complex, overlapping business networks created through GVC-linked FDI and global sourcing. Companies, industries, localities, and countries have come to occupy specialized niches within GVCs (Gereffi and Sturgeon 2013). The changing landscape in production systems has affected industrial policies, and participating in and moving up GVCs when targeting key sectors and activities are critical for industrial development for "latecomer" countries to help generate productive activities and capacities which, in turn, contribute to increasing income, employment, economic diversification, and resilience. As stated previously, economic zones could be instrumental in attracting GVC-linked investment and critical elements of the development policy. However, the development strategy in the Kyrgyz Republic does not have any narrative on value chains, either global or regional.

The upshot is that FEZs have been created as industrial infrastructure to attract FDI with little understanding of institutional, structural, and production bottlenecks that impeded the growth process, and of how FEZs could overcome them and bring about growth. There is a lack of vision, leadership, learnings, and strategic directions that led to their failure.

5.4 Strategic Framework

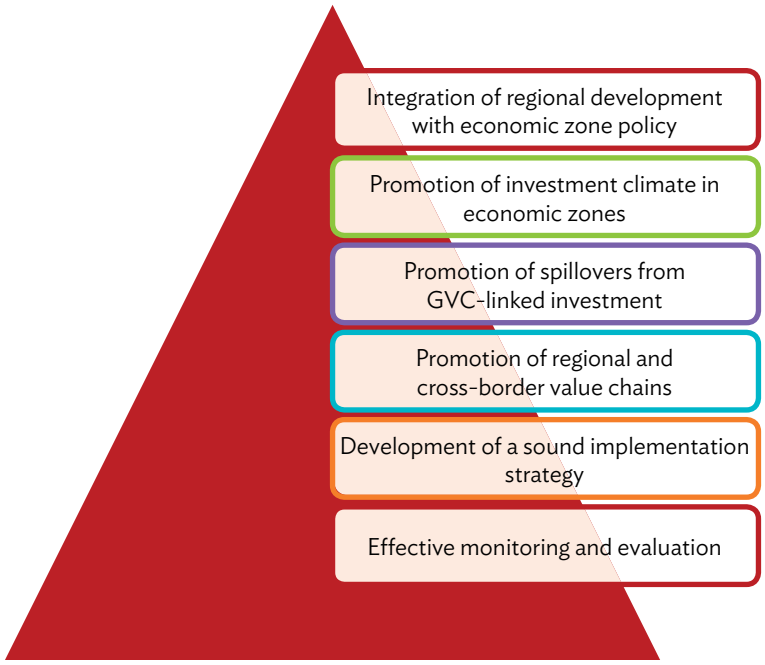
The preceding discussion shows that economic zones have been severely underused in the Kyrgyz Republic. The strategic framework needs to address this situation. The new strategic framework is based on six pillars to exploit the full potential of economic zones (Figure 40).

In late-industrialized countries, rapid development or application of technological change becomes necessary to catch up with the early industrializers to bridge the technological gap. The more backward a country's economy and the later it embarks on industrialization, the more acute is the need for acceleration of growth in technological capacity, capital accumulation, and socioeconomic and institutional change.

One important advantage of late industrializers is the availability of not only foreign technology, but also other foreign resources, skills, and capital as FDI. The proliferation of GVCs has opened enormous possibilities of tapping into these resources. In this era of globalization when it is becoming increasingly difficult to build industrial capabilities across the full range of activity, countries can insert themselves in GVCs and specialize in a single stage of production, depending upon competitive advantage, and then upgrade themselves.

While GVCs are proliferating the focus is now shifting to regional value chains (RVCs) and cross-border chains with regional trading agreements multiplying. Economic zones can play an instrumental role in generating these chains to promote industries of regional importance. The new strategic framework

Figure 40: Strategic Framework for Economic Zones in the Kyrgyz Republic: Six Pillars



GVC = global value chain.
Source: Author.

is an attempt to harness the power of FEZs and industrial parks to leverage the opportunities presented by the proliferation of value chains at different levels.

Another highlight of the strategic framework is the adoption of the cluster-based approach to link FEZs with the key strategic goal of regional development. The agglomeration of outward-oriented firms within these zones can help augment regions by giving them a major push (Shafaeddin 1998). This requires a shift from an investment-based approach of economic zones to a development-oriented approach, and from small-sized economic zones to large cluster-based economic zones that can create critical mass of activity. Finally, the principle underlying the strategic framework is that the success of FEZs and industrial parks is contingent upon three things: the ability of zones to attract investment, the ability of economic zones to generate spillover effects, and the ability of the authority to implement the strategy effectively. These form the foundation of the new strategic framework, which will be elaborated in the next six chapters.

Chapter VI: Pillar 1: Integrating the Regional Sustainable Development Program with Economic Zones

This chapter outlines the first pillar of the strategic framework surrounding economic zones. It recommends placing economic zones at the center of the regional sustainable development strategy, builds on the agglomeration approach to economic zones, and is founded on the experience of countries that have successfully leveraged the opportunities presented by economic zones to promote regional development.

6.1 Toward an Economic Zone-Based Regional Development Strategy: A Cluster-Based Approach

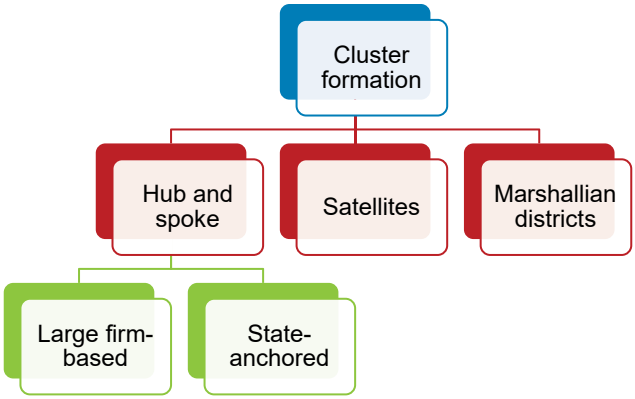
The National Sustainable Development Strategy (2013–2017) recognizes the importance of the development of industry for job creation and socioeconomic development of the regions of the Kyrgyz Republic (Government of the Kyrgyz Republic 2013: Chapter 11). However, the foundation of a regional economy is the development of industrial clusters, not independent, unrelated firms. These clusters benefit the regional economies by generating agglomeration benefits, which support entrepreneurship, new firm formation, knowledge creation, and the availability of capital, and create regional growth poles. In recent years, "cluster strategies" have become a popular regional development approach among state and local policy makers and economic development practitioners. For this, policy makers need to promote and maintain the economic conditions that enable new clusters to emerge.

Industrial clusters are geographic concentrations of similar or related firms that together create competitive advantages for member firms, and regional and national economies (Porter 1990). Though Porter coined and popularized the term, advantages of clustering have been recognized in economic literature since the time of Marshall (1890), who laid the foundation of a theory of geographic clustering of firms. According to Marshall, proximity of firms by geography that he described as an "industrial district," generates externalities. These externalities, which he terms "agglomeration (or localization) economies," arise from labor market pooling, knowledge interactions, specialization, and sharing of inputs and outputs; and are associated with economic benefits for member firms such as access to specialized human resources and skills, economies of scale, knowledge spillovers, and pressure for higher performance raising productivity and competitiveness (Porter 1990). Producers in industrial agglomerations derive benefits from knowledge and ideas that are present "in the air" (Marshall 1890) and that act as as a major driving force for knowledge creation and knowledge spillovers (Kesidou and Szirmai 2008). The presence of providers of customized business development and infrastructure services, regulatory agencies, research institutions, consultants, and other logistics-related organizations in and around the cluster leverages interdependencies to provide innovative new solutions, cut costs, and create external economies. A key element of agglomeration economies is circular and cumulative causation (Myrdal 1957) or chain reactions (Kaldor 1966) whereby initial investment attracts more firms and promotes further specialization. This process is supported by the tendency of spinoffs and suppliers of both the clustered industry and related industries to locate near the zone. The process is self-reinforcing, in which the clustered firms and industries create a mutually supporting system with benefits flowing forward and backward, and generating evolutionary dynamics capable of pushing the economy to the process of growth that is self-reinforced, accelerated, and cumulative (Matthews 2010).

Traditionally, clusters are formed organically through a bottom-up process. There are different conditions in which clusters emerge and develop (Figure 41).

Marshallian districts. An industrial district is a highly geographically concentrated group of firms that conduct activities in the same field, share values and knowledge, and are linked in a complex mix of competition and cooperation (Bergman and Feser 1999). They either collaborate with each other, are in direct competition with each other, or are in a supplier–producer relationship. Their most distinctive feature

Figure 41: Formation of Clusters



Source: A. Markusen. 1996. Sticky Places in Slippery Space: A Typology of Industrial Districts. *Economic Geography.* 72 (3). pp. 293–313.

is their being embedded in the sociocultural milieu of the region, which nurtures the functional dynamism of the cluster as well as trust and collaboration, generating agglomeration benefits. Their emergence is facilitated by initial resources, a series of business conditions that facilitate them, and chance.

Hub-and-spoke clusters. These clusters are formed around a single or few dominant firms that represent the core of the cluster. Numerous small firms that surround them represent suppliers of raw materials, of externalized services, or are specialized in a particular phase of the hub production process. These firms trade directly with large ones. While there are strong ties between the hub-and-spoke firms, cooperation between spokes may be lacking, enhancing the dominant firms' bargaining power. This hub is dependent on the strategies and performance of hub firms.

State-anchored clusters. A state-anchored cluster is a variant of the hub-and-spoke cluster in which the dominant player is not controlled by the private sector. It is formed around a public or government organization that dominates the region and economic relationship among cluster members. This hub entity is surrounded by numerous small firms that benefit from public–private contracts.

Satellite clusters. Satellite clusters arise when multiplant and/or multinational firms locate their subsidiaries in a particular geographic region to benefit from government facilities and low costs associated with supplies and workforce. These firms are not linked by upstream or downstream operations in the same area; they are entirely controlled by remotely located parent firms. They are often stand-alone firms and lack a blend of competition and collaboration.

Economic zones are satellite clusters attracting multiplant and/or multinational firms, which locate their subsidiaries there to benefit from government facilities and incentives. These subsidiaries have linkages with extra-regional or global rather than local production systems. Since the value of a cluster depends not on the proximity of firms, but on synergies and networks they establish with the local economy, economic zones are largely seen as infrastructure propositions set up to attract investment, unlike organically developed clusters associated with functional dynamism and seen as instruments of promoting growth and productivity. But zones may transform into clusters as they evolve with appropriate government interventions.

Evidence suggests many of these free economic zones (FEZs) and economic zones evolved over time

and integrated well with the regional economies. The transformation of Shenzhen from a small fishing town to a large metropolitan city is rather well known. Other examples are Baguio and Bataan in the Philippines; Bayan Lepas in Penang, Malaysia; Lat Krebang outside of Bangkok; and Aqaba in Jordan. Porter (1990) promoted his cluster concept with an overarching focus on the competitiveness of firms, industries, regions, and nations in a global economy, which makes his clusters trade-oriented. He identified exposure to foreign competition of firms and industries as both a driving factor and distinctive feature of cluster formation and development. The cumulative and circular process can arise in all clusters, but "traded" clusters are more important than "nontraded" clusters. There is evidence that foreign companies looking for outsourcing options favor firms located in clusters as insurance against delays and risk of nondelivery (Aggarwal 2011). A stream of literature shows that internationally competitive clusters in host countries act as a pull factor for inward FDI (Amiti and Javorcik 2008, Debaere, Lee, and Paik 2010, Nachum and Keeble 2000, Ng and Tuan 2006).

The concept of a cumulative and circular process has been reemphasized in the new economic geography theories wherein a concentration of manufacturing in one region can lead to a still larger concentration of manufacturing in that region, assisted essentially by international trade (Fujita, Krugman, and Venables 1999, Krugman 1991). Trade gains are also found to be higher when goods are subject to agglomeration economies, because the concentration of global production in a single location allows greater exploitation of external economies and, hence, raises efficiency.

It is expected that FEZs, which are agglomerations of trade-oriented highly competitive firms, have better prospects of promoting productivity and development through skill development, knowledge creation, and knowledge spillovers than inward-looking clusters. Over the past 25 years, the pace of technological change is becoming more rapid and the knowledge intensity of production is growing remarkably. This has made continuous technological upgrading of firms crucial for growth and competing in international markets. Firms in developing countries depend on technology transfers to acquire technological capabilities. But, a considerable amount of technology transfer is occurring through global value chain (GVC)-linked foreign direct investment (FDI) and outsourcing activity. Economic zones set up to attract GVC-linked FDI and outsourcing activity (Chapter 4), can serve as important vehicles of technology transfers and tools to augment existing clusters or to create technologically dynamic ones (i.e., satellite growth).

FEZs and economic zones are growing bigger, becoming better integrated with the economy, and are shifting to more technology- and capital-intensive production. Thus, they can serve as a highly useful policy tool if they can be better linked with the rest of the economy—government interventions in domestic capacity building, network platform development, skills development, and technology and marketing development are critical in the process.

The development strategies of the Kyrgyz Republic need to be based on a broader understanding of the challenges posed by a new technological regime, as emerging environment demands internationalization of production, commercialization, and, most notably, knowledge creation. Economic zones can play an important role in promoting industrial diversification. These satellite platforms may transform into Marshallian industrial districts by strengthening and intensifying backward and forward linkages among economic zone firms, both suppliers of intermediate goods and competitors for the same final markets.

Historically, organic clusters could not take root in the centrally planned economy of the Kyrgyz Republic. As mentioned, the process of industrialization initiated under the Soviet regime was largely driven by company towns where a single industry or a large state-owned factory accounted for most of the local economy and reaped the advantages of economies of scale and absence of market competition. The tightly controlled centrally planned economic system impeded spillovers from these company towns and, in turn, growth of the state-anchored clusters surrounding them. It is expected that the creation of economic zones in the market regime, accompanied with appropriate polices, will facilitate the promotion of clusters around them.

There is a strong case for adopting the FEZ-anchored cluster-based approach in regional development. This is expected to increase not only the competitiveness

of firms in international markets but ensure larger gains from effective trade and spatial transformation. This may lead to increasing productivity growth and, hence, better-paying jobs and skill formation, enhancing human development (Aggarwal 2007). The efficient use of resources may be instrumental in preserving resources and protecting environment. Thus, the FEZ-anchored clusters may serve as an engine of sustainable regional development.

6.2 Promoting New Clusters through Economic Zones: Alternative Models

Currently, the Kyrgyz Republic is focused on setting up first-generation export processing zones (EPZs), which are not expected to yield economy-of-scale advantages. It is imperative for the country to envision a larger role for economic zones. Next, alternative approaches to develop FEZ-anchored clusters are proposed.

6.2.1 The Polish Model

Poland has one of the most successful industrialization programs and its special economic zones (SEZs)[12] at its center. The first FEZ was established in 1995 in Mielec; currently, 14 zones are operational. These are open regional economies, dotted with FDI enterprises. These enterprises can have subzones (their subsidiaries) in other parts of the country. Zones are offered exemption from the income tax on activity conducted in the FEZ and specified in a permit. Other incentives include fully prepared development sites offered at competitive prices, the possibility of purchase or lease of properties located within the FEZ without the need to construct new properties, access to government investment grants, and subsidies in local employment offices. Companies located in SEZs can also count on partial or full real estate tax exemptions, know-how, and post-investment assistance comprising skilled employees and proximity to other companies. The costs of a new investment project, however, may not be lower than €100,000 and must be creating a stipulated number of jobs. FEZ incentives offered in Poland are a type of regional aid; it is not prohibited under the World Trade Organization (WTO) rules. These incentives carry obligations for investors who have to create the declared number of new jobs within the declared deadline and maintain them in the region for up to 5 years.

SEZs in Poland are managed by a joint-stock or limited liability companies in which the Treasury or regional government holds the majority of shares. The most important tasks of management companies include organizing negotiations and issuing for permits to conduct activity in SEZs; constructing and developing infrastructure in SEZs; selling or intermediating in the sale of land within SEZs; intermediating in communications between investors, utility suppliers, and local government authorities; and monitoring the activity of entrepreneurs for compliance of their activities with permits.

The clustering of firms also facilitates cooperation between schools and entrepreneurs by offering apprenticeships and training programs, conducting research projects in collaboration with universities, supporting student associations, and providing equipment used as teaching aids. One of the most efficient forms of cooperation is classes sponsored by companies functioning in the zones. Over 100 have been created in the last 2 years, contributing to skills formation in the country (Invest Park).

As of 31 December 2015, the total employment in Poland's SEZs stood at 312,022 persons. The area under SEZs has increased from 5,000 hectares in 2004 to 20,000 by 2015 (Chance 2017). Following the steady growth of SEZs, the Council of Ministers decided to increase the size of all zones up to 25,000 hectares in 2015. On 23 July 2013, it also extended the term of SEZ operation until 31 December 2026, and it is expected to be extended further in the future.

6.2.2 Augmenting Existing Industrial Clusters through Special Economic Zones and Industrial Estates: The People's Republic of China Model

SEZs in the People's Republic of China (PRC) were launched in 1979 as part of Deng Xiaoping's program of turning the country into an advanced industrialized nation by 2000 (Mckenney 1993). The PRC discarded traditional closed processing zones and set up SEZs,

[12] Special economic zones or SEZs is the official term for FEZs in Poland.

as industrial mega towns spread over several square kilometers (km). Shenzhen today, for instance, spans nearly 2,000 square km, while Shanghai's Pudong district is 522 square km, and Hainan is 34,000 square km.

Initially, four FEZs (i.e., Shantou, Shenzhen, Xiamen, and Zhuhai) were set up (Chang 1988). The choice of coastal areas was not merely to facilitate trade; cheap land, active participation by officials, a long tradition of trade and entrepreneurship, and a greater likelihood of nonresident PRC investment were other important factors for the choice of location (Lai 2006). SEZs in the PRC aimed to create large clusters of highly competitive export industries in locations where the outside investment climate was already conducive for spin-off activity.

Subsequently, smaller zones were created in proximity to existing zones or near industrially developed locations and clusters[13] to generate synergies and to promote a critical size of economic activity. For instance, at the beginning of 1984, the PRC decided to establish economic and technological development zones in highly developed areas and existing industrial clusters (that were created in the earlier regime, but were incipient) with good industrial foundations and convenient communication to infuse new technologies. Further, in 1998, the government began establishing national hi-tech industrial development zones to promote local, new, high-tech industries oriented to both domestic and overseas markets and based on local scientific and technological strength, similar to industry zones with various incentives, located primarily in the vicinity of economic and technological development zones.

The strategy of locating these zones in the same region paid off. While economic and technological development zones attracted foreign enterprises, hi-tech industrial development zones fostered the development of high-tech indigenous firms. Liu and Wu found that an economic and technological development zone and a hi-tech industrial development zone located in the same region have significantly more FDI after controlling for the effects of other factors (Liu and Wu 2011).

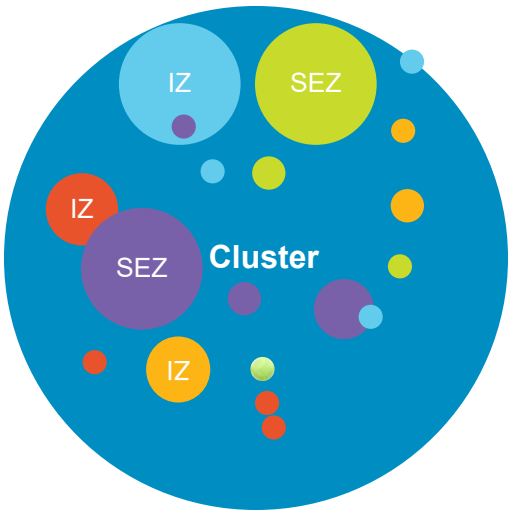
To reinforce this dynamism, newer varieties of SEZs are being created within the existing zones. In April 2000, traditional zones of the closed industrial estate variety were launched within the existing economic and technological development zones and hi-tech industrial development zones. Aside from this, smaller, specialized SEZs were created within larger SEZs. The PRC also set up free trade commercial zones, logistics parks, border economic zones, and cross-border zones. Thus, the SEZ sector has been expanded both horizontally (i.e., stretching from the east coast to the inland middle and west region) and vertically (i.e., the creation of zones within zones).

As part of the industrial cluster strategy, a variety of zones are being located proximate to each other to augment and reinforce each other (Kim and Zhang 2008). By 2007, 300 of 326 municipalities had 1,346 zones (Wang 2009). Zones are also being developed not only by the national, provincial, and municipal governments, but also by the private sector. Agglomeration economies generated in the process have attracted further inflows of FDI (Amiti and Javorcik 2008, Debaere, Lee, and Paik 2010), while Wang (2009) showed that increasing investment in SEZs positively affects domestic investment as well. One of the primary benefits of SEZs to investors is tax breaks, which are not conditional on exporting activity. There is no tax before the investment turns a profit. Once there are profits, corporations enjoy a tax holiday for 2 years followed by 50% exemption in the third and fourth year. It is in the fifth year that they start paying taxes.

As a result of the dynamic forces generated by agglomeration economies, the PRC succeeded in developing growth poles around its largest SEZs (Mathews 2010). Two of the most powerful growth poles are the Pearl River Delta in the south, with Shenzhen at the core; and the Yangtze River Delta

[13] The PRC already had inward-looking clusters when it began the process of industrialization.

Figure 42: The People's Republic of China's Model of Special Economic Zones



IZ = industrial zone, SEZ = special economic zone.
Note: The dots represent different types of special economic zones at different levels of government.
Source: Author.

in the east, with Shanghai as its principal. Mathews argued that as industrial concentration in Shenzhen and Shanghai grew, firms agglomerated around them, creating industrial towns and cities. He reported that there are more than 200 specialized towns in the Pearl River Delta alone (Mathews 2010). Therefore, the success of SEZs in the PRC is not due to their location in coastal areas. The PRC succeeded due to the web of SEZs and clusters it created throughout the country in such a way that they reinforced each other. Under the Partnership Assistance Program initiated by the government, well-developed, large SEZs are matched with less developed SEZs to promote them, building dynamism in less developed regions through SEZ partnerships.

6.3 Strategic Action Plan for the Kyrgyz Republic

The cluster development strategy in the Kyrgyz Republic calls for a two-pronged action plan: (i) to emulate the Polish model of creating large, open FEZs in selected regions with foreign and domestic companies issued permits to operate in them according to FEZ rules; and (ii) to further reinforce them by developing industrial estates within these FEZs in the PRC's style.[14]

[14] Enterprise-specific FEZs are single-company FEZs that resemble maquiladoras clustered on the United States–Mexico border to create an economic wall. Many countries, including India, Malaysia, Mauritius, and Poland, have set up this type of FEZ as well.

6.3.1 Transform Satellite-Type Economic Zones into Hybrid Zones Rejuvenating Regional Economies

The Kyrgyz Republic identified five locations for FEZs, mostly near border areas. Most are in industrially backward areas. It is proposed to transform them into hybrid economic zones with both export-oriented and domestic market tenants attracted to them in line with the Polish model. While export-oriented companies will enjoy the FEZ's benefits (single-unit FEZs, see Chapter 4), domestically oriented companies will enjoy the industrial parks' specific benefits. In addition, areas may be allocated for specialized industrial parks, for instance, Textile Technopolis, similar to the PRC model. This model is presented in Figure 43.

This will synergize efforts being made both at the national and regional levels in promoting industrialization and developing infrastructure. Thus, the core idea is to designate current EPZ-variety FEZs, as hybrid zones to promote them as industrial hubs with single-enterprise FEZs (with fence around them as stipulated in the new law) and industrial parks.

Clustering of domestically oriented firms with exporting firms will increase the scale of activity, a critical condition for cluster formation. This would allow new technologies to flow in with a larger scope of spillovers and would ensure sustainable development gains from effective trade and spatial transformation.

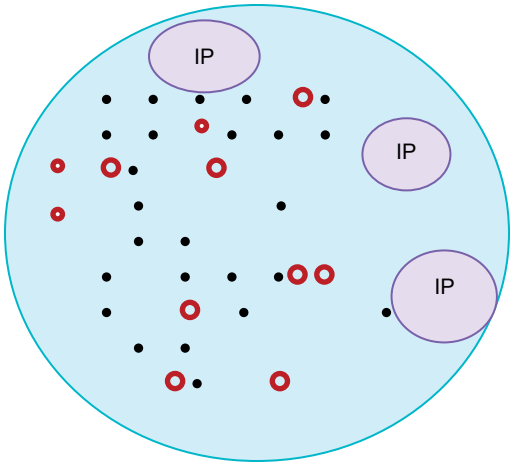
6.3.2 Targeting Activity: Complement Free Economic Zones with Industrial Zones

There are three approaches to target activity in economic zones.

(i) **Horizontal approach.** This approach includes promoting industrial clusters without setting any industry-specific choices. From this perspective, both FEZs and industrial parks are created with basic government infrastructure and differing incentives for investment; the nature of activity is determined by market forces.

(ii) **Vertical approach.** This approach aims to improve the performance of particular industries, firms, or sectors. The focus is on promoting clusters of both FEZs and industrial parks of priority industries.

Figure 43: Proposed Special Economic Zone Model for the Kyrgyz Republic



IP = industrial park.
Note: Dots represent single-unit special economic zones and domestic market-oriented enterprises, both small and large.
Source: Author.

(iii) **Complementary approach.** This approach views FEZs and industrial parks as serving two distinct sets of objectives. FEZs are relevant because they promote trade and FDI, so export-oriented tenants of FEZs would focus on sectors where the country has competitive advantages (not insisting on priority industries). Industrial Parks are set up to promote priority industries. Both FEZs and industrial parks would bring industrial technologies critical for ensuring the competitiveness of FEZ-induced clusters, which strengthen urban economies for more balanced regional growth.

If FEZs are not embedded in the local economic milieu, they may fail to trigger regional momentum. Typically, they tend to specialize in sectors with regional advantages. Thus, regulation of activities in FEZs is counterproductive. However, some of the industrial parks (within FEZs or outside them) may target the industries aligned with development priorities.

The Republic of Korea followed the strategy of leveraging the benefits of FEZs and industrial zones to generate industrial capabilities. The government introduced an economic development strategy in 1962, and the country has achieved unprecedented rapid growth since then. The manufacturing sector drove the economy's full-fledged growth, and industrial zones and FEZs significantly contributed to its manufacturing growth as incubators of the sector. To support an export-driven industrial strategy, the government established "Korea Export Industrial Parks" and FEZs to attract FDI to bring in foreign exchange and new technologies in matured export sectors. At the same time, it developed industrial zones aligned with economic development strategies.

The government aggressively developed large, medium-sized, and small parks, and especially targeted to develop specialized industries covering all regions. While the national parks were under the Ministry of Land, Transport and Maritime, the local parks were under the direct supervision of the heads of the regional governments. As the economy developed, the industrial structure was upgraded by shifting to industrial estates and FEZs of more sophisticated industries. The existing parks and FEZs were upgraded with more complex services including research and development support, business services, and residential services provided by the government.

The cluster-based industrial development can bring huge benefits for the Kyrgyz Republic also, with FEZs and industrial parks playing complementary roles.

6.3.3 Target the Scope of Priority Activity

While the issue of industrial targeting has been discussed in the previous section, the scope of priority activity has not been addressed. Two approaches to define priority industry may be used.

(i) **Classical approach.** In this system, sectors are defined according to traditional statistical nomenclature.
(ii) **System-based approach.** In this system, sectors are defined across value chains to promote integrated industrial parks to localize value chains. Large companies adopt this strategy to cut logistics costs by using FEZs or industrial parks to upstream and downstream links in a GVC within the FEZ or local production systems, and to forge an industrial chain by creating all necessary backward and forward linkages. This process enhances industrial efficiency by reducing transport and inventory costs, and ensures all advantages of vertical integration.

A system-based approach would help targeting value chain-linked activities forming local value chains in the zones.

6.3.4 Target Value Chains

As emphasized in Chapters 4 and 5, developing countries must integrate into GVCs to strengthen their competitiveness and build their productive capacities. Such participation grants considerable benefits to developing countries: access to global markets, network technology that would not otherwise be available, and new sources of capital through GVC-linked FDI.

There are two types of GVCs: producer- and buyer-driven. Producer-driven chains arise when multinational corporations disintegrate their production and restructure their operations to advance

core competencies in global markets and offshore an increasing share of their noncore manufacturing and services activities.

Over the years, along with offshoring, offshore outsourcing has also become increasingly important. Contract manufacturing, for example, is used by large original brand manufacturers or original equipment manufacturers as an alternative to operating and maintaining their own offshore facilities. Contract manufacturers are domestic producers that are approached for outsourcing by original brand manufacturers or original equipment manufacturers to make specific parts using their designs and technology. This has led to a growing proportion of international trade occurring in components and other intermediate goods (Yeats 2001).

These supply chains are typical of capital- and technology-intensive industries. But they are also formed in low-tech industries. Figure 44 depicts an offshoring-based (producer-driven) value chain of Nutella, a chocolate spread, to provide an overview of how these chains operate.

In buyer-driven chains, power and sources of profit are in the hands of companies at the end of the chain (i.e., large retailers, importers, and brand-name companies). They build partnerships with existing suppliers, identify new suppliers, and source new products. In most cases, such companies own no production facilities at all. They focus only on designs, retailing, and marketing their products, and subcontract all manufacturing activities. The subcontractor must source materials and components, manufacture the article, and perform necessary quality controls. The establishment of overseas buying offices and frequent international travel support the intense interaction required for exchanging tacit information and building personal relationships between buyers and suppliers.

The Organisation for Economic Co-operation and Development (OECD), in cooperation with the World Trade Organization (WTO), launched an ambitious project on the measurement of trade in value-added terms. Intercountry input–output tables and a full matrix of bilateral trade flows are used to determine the trade in value-added data. This database, OECD-TiVA, and the input–output tables, provide an overview of the length of GVCs across sectors. It shows that basic metals, electrical machinery, other transport equipment, apparel, and food industries are among those with the relatively long GVCs—industries where the Kyrgyz Republic also has competitive advantages (OECD 2002). The Kyrgyz Republic may identify some key industries and products and target global value chains by mapping

Figure 44: Value Chain of Nutella

PRC = People's Republic of China.

Source: K. De Backer and S. Miroudot. 2013. Mapping Global Value Chains. OECD Trade Policy Paper No. 159. Paris: OECD. http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=TAD/TC/WP(2012)6/FINAL&docLanguage=En.

Table 4: Step-by-Step Process to Attract Global Value Chain-Linked Investments

Step 1: Map value chains through a simple flow chart	Identify the core transactions in a selected sector (i.e., the simple process from design to the end customer).
Step 2: Illustrate opportunities and constraints	Identify opportunities and constraints (or strengths, weaknesses, opportunities, and threats) at each value chain level.
Step 3: Identify competitive advantages	Identify the range of activities in which the country has a competitive advantage.
Step 4: Create an inventory of market players	Identify and map key market players governing value chains.
Step 5: Target key suppliers	Target key suppliers.

Source: Author, based on the existing literature.

them by sector and identifying the range of activities in which it has competitive advantages. Table 4 provides a step-by-step process to identify and target the relevant GVCs.

6.3.5 Target Investors

It is often difficult to generate a critical mass of activity or to ensure the survival of small and medium-sized enterprises in an isolated place. Many countries have adopted a strategy of attracting large multinational corporations that are developed as groups, with upstream and downstream firms connected in the supply chains. The "go-as-a-group" model has several advantages, such as achieving market internalization of intermediate products, formulating internalization advantages, reducing international market risk, and reducing export tariffs and other barriers. Governments in developing countries may exploit the increasingly popular use of this strategy by private enterprises and target such groups of foreign businesses. South Africa, for instance, has attracted the entire value chain of Mercedes-Benz. Similarly, the Dominican Republic has invited IBM; and Apple set up its group in Ireland. Many Japanese car companies have adopted this model. The Kyrgyz Republic may learn from the experience of these countries to identify the large investors in the selected value chains and facilitate investment by them to generate critical mass of activity.

6.3.6 Set Up International Parks

Country-specific parks or FEZs may also be encouraged. Countries, such as the PRC, Japan, and Singapore, have been promoting such parks in developing countries. Japan, for instance, has been promoting industrial parks dedicated to Japanese companies. Japanese trading corporations are involved in design, development, and sale of these parks. For instance, Thilawa Industrial Park is being developed by Mitsubishi Corporation, Sumitomo Corporation, and Marubeni Corporation in Myanmar; the Phnom Penh Special Economic Zone has been set up by Sumitomo Corporation in Cambodia. There are many such parks that have emerged in Southeast Asia and South Asia. Similarly, the PRC has been setting up such parks in Southeast Asia and Africa while Singapore is focusing on Southeast Asia. The Government of the Kyrgyz Republic may want to target such international parks. This will also be a learning experience for the country.

6.4 Major Recommendations

Recommendations from this section include transforming the current satellite FEZs in the Kyrgyz Republic into hybrid zones, with both FEZ and non-FEZ units, and specialized industrial parks within them; adopting a horizontal approach of attracting activity in the initial stages of FEZs to create a critical mass of activity, with industrial parks focusing on priority industries aligned with regional specialization; targeting investors, in particular group investors by offering them good investment climate and special benefits; and planning an international park in the Kyrgyz Republic in cooperation with the PRC, for instance.

Chapter VII: Pillar 2: Promoting Investment Climate in Economic Zones

7.1 Conceptual Framework

As stated previously, a critical factor underpinning free economic zone (FEZ)-led growth is the zones' ability to attract investment, in particular global value chain (GVC)-linked investment, and be inserted into international production networks. FEZs are set up essentially to attract GVC-linked investment by overcoming the institutional and production bottlenecks that characterize the business climate of developing countries. Zones offer the investors high-quality infrastructure, good locations, incentive packages, simple administrative procedures, and relaxed regulatory machinery to reduce the cost of doing business and to make them attractive for investors. In turn, this requires a well-developed and comprehensive institutional framework, that ensures stability and certainty in these provisions, and signals political commitment. This institutional framework encompasses three major principles (Figure 45).

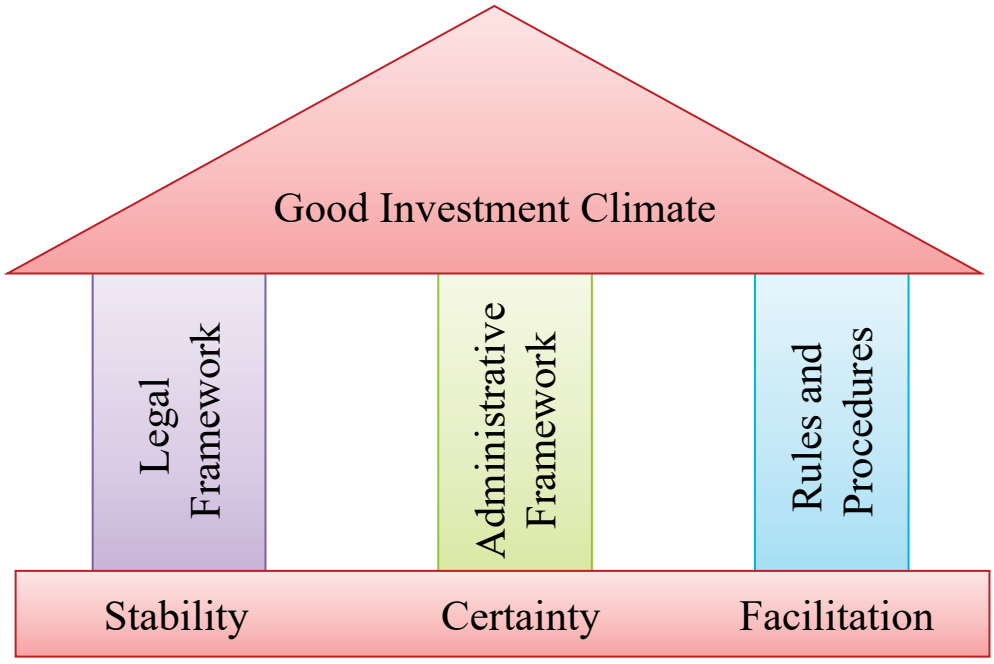
7.2 Key Features of the Strategic Pillars

7.2.1 Legal Framework

FEZ laws and accompanying regulations are the critical foundation for any FEZ program. A legal framework establishes an unambiguous set of rules and procedures guiding the entire process of site selection, investment, development, licensing, and operations. It must be comprehensive, stable, and transparent with unambiguous ground rules established for all stakeholders. It must also be insulated from policy changes outside of the zones by the following:

(i) **Overriding law.** For instance, in India, Section 51 of its SEZ Act overrides provisions contained in any other act.
(ii) **Grandfather clause.** This is an exemption that allows firms to continue with activities or

Figure 45: Principles of a Good Business Climate



Source: Author.

operations approved before the implementation of new rules, regulations, or laws. As an example, Sri Lanka has a grandfather clause in contracts signed with foreign investors, reducing uncertainty and enhancing predictability (Aggarwal 2006a).

Many zone programs undermine investor confidence by failing to deliver a predictable policy environment (Farole 2011). Abrupt cancellation of existing policies, initiation of new ones, or return to old ideas create an unpredictable environment for investors. But it does not mean that the legal regime for FEZs should be rigid. The legal framework must be flexible to meet changing policy needs. A more effective approach is to adjust the FEZ rules in an evolutionary manner to reflect ongoing changes in the program with a reasonable time frame to phase out old ones. The People's Republic of China (PRC), for instance, set the period of 5 years to roll back its tax benefits to foreign investors in FEZs and to initiate a new tax regime.

Viet Nam implemented its zones on a pilot basis; maintained regulatory flexibility (particularly in the early days); and tested alternative models, approaches, and policies in different zones, often with various foreign partners. This flexibility allowed Viet Nam to learn and adopt good practices that could later be formalized in its national zone policy.

7.2.2 Administrative Framework

Political support. Consistent political support at the highest level is critical to the success of FEZ programs. One of the most important success factors for FEZs in East Asia was strong support and active commitment at the highest levels of political leadership. The most successful countries with FEZ policy, including the PRC, Costa Rica, the Republic of Korea, Mauritius, and Viet Nam, gave their zones the highest level of political attention, signaling to officials that the zones are a central instrument in the government's industrial development strategy. It is also an important signal to foreign investors of the government's commitment to outward-oriented growth and foreign investment, thus lowering the perception of risk on the part of foreign direct investment (FDI). The Kyrgyz Republic's FEZs have never benefited from top-level government commitment. These have been subject to frequent policy changes. These need to be viewed as a critical policy tool and should find space in the National Development Strategy as a first step toward political commitment.

Effective regulatory authority. The FEZ regulatory authority is the most important institutional actor in any zone program. It can make the program if it has quality, capacity, and focus; includes cross-ministerial involvement and significant representation from the private sector; has a strong and institutionally founded mandate; and has an inclusive and capable agenda of incorporating and coordinating the key stakeholders.

A variety of institutional arrangements are adopted to designate the regulatory authority. It may be a government corporation, a department based in a specific ministry, a zone-specific management board, or an investment promotion agency. The best practice is to establish the regulator as an autonomous agency under a board of directors that includes cross-ministerial and private sector members. If it is not feasible to create an independent agency initially because of legacy situations or other political economy factors, then a timeline should be established to move toward an autonomous or semiautonomous body. Private participation should include an association of zone operators or companies, if one exists.

Further, the top government authority should chair the autonomous body. For example, ,the FEZ programs in the Dominican Republic, Kenya, and Senegal report directly to the presidents; in Bangladesh, it reports to the prime minister.[15] This empowers the regulator to effectively coordinate actions with other ministries. However, there are cases, such as in the Republic of Korea and Taipei,China, where line ministries have also anchored the authority successfully.

[15] The downside to having high-level authority on the board is that the regulator's important activities can be unnecessarily delayed due to the necessary engagement of the highest authority. To avoid such delays in Bangladesh, the Prime Minister appointed a permanent secretary to sit on the executive board of the regulatory authority.

The bottom line is that the authority should be adequately empowered through the FEZ law. If the zone regulatory authority is institutionally and operationally weak, this affects its potential to plan and implement the zone program. FEZ regulation involves a wide range of activities that cross various ministerial domains, including customs; land use and zoning; taxation; business registration and licensing; immigration; and environmental, labor, and social compliance. Best practice is that the regulator is empowered to make and enforce decisions on all of these issues. It is also critical that the regulator's authority extends over not just national but also local authorities, particularly for land-use planning, and environmental and licensing issues.

Roles of other stakeholders. The FEZ's operation requires two key players: the zone regulator and zone manager or operator (i.e., General Directorate). Since FEZs in the country are fully in the hands of the public sector, the regulatory government body also performs all other functions simultaneously with the General Directorates. However, if the private sector's participation is also allowed in the future, the traditional structure may create a conflict of interest and undermine private investment. In countries where private and government FEZs coexist, the regulatory role should be separated as much as possible from the roles of owner, developer, and operator. Even where the government is the lead developer, the regulatory activity of the zone authority should be conducted at arm's length. Alternatively, private sector representation should be allowed on the regulatory body. Two best-practice examples are India, in which the regulatory body is under the authority of the Ministry of Commerce and has not been assigned any responsibility of zone development and management; and the Dominican Republic, where the Ministry of Industry and Commerce, which is the regulator, also manages zones through an autonomous agency called Proindustria. An autonomous body, the National Free Zones Council, has been set up with private representation on its board to address conflicts of interest.

General Directorates. An administrative framework in which General Directorates have a limited role is likely to face serious coordination issues. Due to heavy centralization, management issues are not addressed quickly, and FEZ projects and infrastructure development are not executed in a timely manner. This also affects the motivation level among General Directorates to take proactive measures to improve services in FEZs. Therefore, the directorates should be effectively empowered while managing the zones. Further, healthy competition among directorates for attracting investment may contribute to improvement in the investment climate in the zones. For instance, in the Republic of Korea, there is intense competition between various "free economic zones" to attract investment.

Budget. Finally, the budget of FEZs may be linked with the revenues earned. In the PRC, a formula is set up for establishing the annual SEZ budget, including giving the SEZ authority a specific share of taxes generated through the zone. Along with autonomy, this gives the SEZ authority an incentive not to compete on tax holidays.

7.2.3 Rules and Procedures for Improving the Business Climate

One-stop shop or single window. Having a one-stop shop is the objective of virtually all zone programs. FEZs offer one-stop services to both developers and investors at two levels: setting up of a company, and zone companies' day-to-day operations. Although many countries have made significant progress shortening the time between application and license provision, truly effective administrative delivery remains hampered by weak institutional authority and coordination in most zones. The concept of single window is not implemented in the FEZs of the Kyrgyz Republic. Instead, investors have to obtain licenses and permits from local government units.

Some best practices for consideration are to

(i) create one point of contact for each investor, responsible for completing the necessary procedures related to moving in or post-production for the investor (e.g., Sri Lanka);
(ii) have staff seconded from different agencies to the FEZ authority to form a physical one-stop shop for giving licenses and permits at the time of approval (e.g., India and the Philippines);
(iii) create an online system of FEZ governance (e.g., India and Viet Nam);
(iv) develop an interactive online system (e.g., the Philippines);
(v) introduce the principle of automaticity, in which if an applicant receives no response from the authority after a certain length of time, authorization is granted by default (e.g., Bangladesh);

(vi) confer on zone administrations powers of local governments (e.g., the PRC); and
(vii) set up critical departments such as labor, property, engineering, and customer service within the zone (e.g., Sri Lanka).

The Philippines is one of the most successful countries in attracting FDI through FEZs, thanks to its one-stop shops. Box 2 offers some insights on investment facilitation by their regulatory board, the Philippine Economic Zone Authority.

Customs and trade facilitation. This is a basic facility in any FEZ and it is important to have a permanent customs official in each zone. All public sector zones have customs officials deputed in FEZs. To provide such facilities in private zones, there are institutional innovations. In the Dominican Republic, for instance, an interagency commission includes the customs authority, the zone regulator, and the association representing companies operating in the free zone. In India and Honduras, customs facilities are provided by FEZs in private zones as well, but for a price. Operators are responsible for paying a share of the costs of the customs officials.

Box 2: One-Stop Shop in the Philippines

The Philippine Economic Zone Authority (PEZA) is recognized internationally for its one-stop shop, providing 24-hour x 7-day a week service to investors. In investment facilitation, PEZA offers a one-stop shop providing building and occupancy permits, import and export permits with online procedures, environment certificate clearances, fast processing for food and medical devices, and special multiple-entry nonimmigrant visas. Under the law, all government agencies involved assign their respective representatives to the zone for this purpose. PEZA also offers exemption from local permits and fees, thus allowing investors to bypass local government units, notorious for their inefficiency and weak capacity to deal with the private sector. Therefore, firms are lured to PEZA zones, as they must deal only with one single agency.

Sources: M. Castell. 2004. *Assessing the Role of Government Institutions Supporting Industrial Adjustment in the Philippines: The Case of PEZA, CITEM and DBP.* Manila: De La Salle University; M. Pfister. 2017. What's Special about Special Economic Zones? A Case Study of the Philippines. Executive Doctorate in Business Administration de l'Universite Paris-Dauphine, Paris.

Box 3: Customs-Related Practices

India. All trading activities of the special economic zone, unless otherwise specified, are on the basis of self-certification. For imports, a bill of entry is submitted by the zone with customs, while exporters file a shipping bill. Goods are assessed based on the information provided. There is no physical examination of the goods, and the goods are allowed to move only after verifying marks and numbers on the packages (although customs authorities may examine the consignment when there is specific intelligence, but to do so, an order from the assistant customs commissioner must be obtained).

People's Republic of China. Despite its generally advantageous location in the PRC, Suzhou Industrial Park is landlocked. Thus, one of the most important areas for government support in the development of the park has been transport, logistics, and trade facilitation. From its inception in 1994, a customs sub-administration was planned. Suzhou Industrial Park operates as a virtual port and is allowed to handle customs clearance of exports and imports directly. Firms there enjoy an efficient "green lane" and independent customs supervision, that runs 24 hours a day, 7 days a week. An integrated free trade zone was established in the park in 2008 by integrating two processing trade zones, one bonded logistic center, and one customs checkpoint.

Sources: A. Aggarwal. 2012. *Social and Economic Impact of FEZs in India.* Delhi: Oxford University Press; T. Farole. 2011. *Special Economic Zones in Africa: Comparing Performance and Learning from Global Experiences.* Washington, DC: World Bank. p. 224.

The presence of customs authority in FEZs facilitates customs clearance which is time-consuming outside of FEZs (see Box 3 for some good practices).

Infrastructure. Three levels of infrastructure are critical for FEZs: onsite, offsite, and social. Most countries in the contemporary world offer world-class infrastructure within FEZs that enables resident companies to start production in the short term, and to reduce initial investment. In some countries, some of them have various sizes of rental factories. These factories are very attractive for small and medium-sized companies. While the focus is on onsite infrastructure, development of offsite infrastructure is often neglected. Investors sometimes face huge bottlenecks in accessing ports, highways, and airports due to poor roads and logistics. Another critical infrastructure issue seldom taken into account in zone planning is social infrastructure—in particular, schools and hospitals, but also recreational and other facilities that workers and managers rely on. Social infrastructure in the Kyrgyz Republic's FEZs is also very limited, while only basic industrial infrastructure is provided in the FEZs in comparison with other countries.

Private participation. Private participation in infrastructure development and management generally relieves the government of the burden of initial investment costs and ongoing management, and channels private investment into economically desirable sectors. The spectrum of possible public–private partnership models extends from those almost entirely controlled by the private sector to those almost entirely controlled by the public sector. Some of these options are as follows.

(i) The private sector designs, builds, owns, develops, operates, manages, and promotes the FEZ with no obligation to transfer it to the government, including build–own–operate, build–develop–operate, design–construct–manage–finance, design–build–finance–operate, and design–build–operate–manage. Although the government does not provide direct funding, it may offer some concessions, such as subsidized land prices and/or tax-exempt status. Further, the government provides administrative services and customs facilitation. India's private FEZs can be classified as these.

(ii) The private sector buys or leases land or FEZs from the government and operates the FEZ with no ownership transfer obligation to the government under the buy–build–operate and lease–develop–operate models. The Aqaba FEZ in Jordan has adopted this practice. It regulates lease rates, public services, and fees, while private sector services, unless monopolistic, are left to the market.

(iii) State governments partner with domestic private sectors (i.e., the traditional model); with foreign companies (e.g., Ghana's partnership with a Malaysian company in setting up the Tema FEZ, or development of the Dakar Integrated FEZ by investors from Dubai); or with other countries or areas (e.g., the Government of the PRC engaging Japan, Singapore, and Taipei,China to establish world-class zones).

(iv) A private entity may be given a contract to manage a state-owned FEZ for a limited period. Colombia, for instance, divested five of its six FEZs in 1995 under 15-year leases specifying the value of the zones, required investments, and a detailed development plan.

(v) Aspects of services or utilities are developed and managed by a private entity. The Ministry of Economic Affairs in Taipei,China harnessed the space to set up the core plaza in the Nantze EPZ.

(vi) Aspects of services or utilities or their maintenance are subcontracted to specialist firms for management for a fee. Management contracts allow private sector skills to be brought into services design and delivery, operational control, labor management, and equipment procurement. However, the public sector retains ownership of the facility and equipment.

It is important that legal provisions clearly set the FEZ designation criteria; physical development standards; developer license criteria; and roles, rights, and obligations of zone developers, operators, and governments in FEZs. There should be a formal coordination mechanism and agreement between the private developer and government (i.e., a zone developer agreement) outlining specific time-bound obligations of both parties for the development, financing, operation, regulation, and promotion of a specific zone through a memorandum of understanding. The regulator must oversee implementation of these agreements. Above all, the private developer should be ensured a voice in strategic decisions regarding the zone program.

Box 4: Public–Private and State–State Partnerships: Case Studies

Bangladesh. In 1999, then Prime Minister Sheikh Hasina of Bangladesh, at the groundbreaking of a zone to be developed by Youngone, a company from the Republic of Korea, pledged full support for the zone. Yet the company faced hurdles at every step, from obtaining an environmental clearance to electricity and water supply. The land deed was also not transferred. Progress ceased, and the zone size was cut. Some opined that the land prices appreciated after the development activity; therefore, the local government was reluctant to honor the agreement. After several years of tussle between the company and the government, the FEZ is finally commissioned and is under operation now.

Ghana. The relationship between the private developer in the Tema zone and the government became strained due to disagreements on issues related to infrastructure and services delivery. This slowed down investment in onsite infrastructure; eventually, the company sold most of its investments in Ghana.

People's Republic of China. In 1992, the PRC and Singapore decided to develop a modern industrial park east of Suzhou. The Suzhou Industrial Park has a total area of 288 square kilometers, of which the PRC–Singapore cooperation area covers 80 square kilometers. The park was built simultaneously with the competing Suzhou New District Industrial Park. The Suzhou city government had only a minority (35%) stake in the Suzhou Industrial Park, but it had a major stake in Suzhou New District Industrial Park. Thus, the city government largely ignored the Suzhou Industrial Park and concentrated on promoting the Suzhou New District Industrial Park. After 5 years of loss, in 2001, the Singapore consortium lowered its stake in the Suzhou Industrial Park to 35%, raising the PRC consortium's stake to 65% from 35%, reducing Singapore's share from a planned 70 square kilometers to just 8 square kilometers. The city government thus raised its stake, and turned the park into a profit-making venture.

Source: Various newspaper clippings and online reports.

Fiscal incentives. At least in the initial stages, every zone program has offered some form of fiscal incentive to attract investors. Yet some argue that fiscal incentives distort investor behavior, resulting in loss of revenue and can put countries in a "race-to-the-bottom" situation. However, evidence suggests that fiscal incentives are important in attracting investment if other requirements are fulfilled. Countries like India, the Philippines, Viet Nam, and even Cambodia have been successful in using incentives to attract investment in their FEZs.

Evidence suggests that incentives alone will not be useful in attracting FDI. Therefore, depending on country-specific contexts, experiences vary. Many African countries have had little success despite offering attractive incentives. In India, on the other hand, withdrawal of some key fiscal incentives was a major blow to SEZs. Poland extends the deadline for FEZs every time it starts approaching it, for fear of losing FDI.

Some best practices are as follows. First, fiscal incentives should be in conformity with the Agreement on Subsidies and Countervailing Measures of the World Trade Organization (WTO), which prohibits tax incentives as well as other financial assistance contingent upon exportation or local content. Under the provision of special and differential treatment, least-developed WTO members are exempted from the prohibition on export subsidies subject to certain conditions (Creskoff and Walkenhorst 2009).[16] Other countries and areas can offer incentives and still comply

[16] There are two important caveats: (i) exemption does not necessarily prevent another country from bringing a case against an exempted country under the Agreement on Subsidies and Countervailing Measures; and (ii) Article 27 includes an export competitiveness clause (i.e., if an exempt country achieves 3.25% of the world market in any product for 2 consecutive years, it is no longer exempt and must phase out all subsidies within 8 years.

with WTO if they separate incentives from their trade, targeting them to specific industry sectors, research and development, and lagging regions. These subsidies are not prohibited, although they are actionable. Exemptions from indirect taxes in FEZs are fully WTO-compliant. Therefore, the domestic material and service providers to FEZs should also be given tax benefits without violating WTO compliance. These benefits may be extended to industrial parks if their tenants also export. Second, incentives may be linked to specific criteria defining the desirability of a given project. These may be sector preferences, threshold employment or threshold investment. In some countries, the FEZ authority retains considerable administrative discretion to decide about the level of incentives on a project-by-project basis. This introduces in-transparencies and rent-seeking opportunities and, hence, must be avoided. The Kyrgyz Republic follows a good practice in this. But it offers lifelong tax benefits to FEZ tenants. In most countries, these incentives are time-bound (as with industrial parks in the Kyrgyz Republic). The Kyrgyz Republic may consider that a transition for tenants from a nontax to a tax regime, even in FEZs. A good practice is to set sunset or review clause on tax benefits.

Labor. The Kyrgyz Republic does not permit any derogation in the labor code in FEZs; it only relaxed the foreign employment visa processes in FEZs. This is the case for several FEZs, including those in Costa Rica, Honduras, India, Indonesia, Kenya, Mauritius, and Sri Lanka. These countries recently added services provided to FEZ tenants to reduce costs and improve labor standards, including the following:

(i) **Integrating inspection systems.** The Ministry of Labor, Trade Union Relations and Sabaragamuwa Development in Sri Lanka put in place an integrated inspection system with the assistance of the International Labour Organization, in which a multidisciplinary team of inspectors visit a factory to carry out an overall evaluation in a single visit.

(ii) **Assigning a specific labor window to the sector.** Some countries assign a special window for labor issues. For instance, in Guatemala, a special unit monitors labor inspections. In Sri Lanka, each EPZ has a labor inspection office on its premises. In Jebel Ali, United Arab Emirates, the customer service department handles labor disputes. Mauritius has a special migrant worker unit as well.

(iii) **Promoting a culture of compliance through self-assessment.** In Costa Rica and Honduras, self-assessment forms are developed to increase employers' knowledge of labor laws and to comply with them. Submission of self-assessment forms is followed by inspections.

(iv) **Labor inspectors as advice providers.** In Kenya, Mauritius, and Sri Lanka, labor inspectors advise employees, employers, and trade unions on labor issues through training, workshops, and onsite talks.

Box 5: Bangladesh's Labor Counselor Program

The Bangladesh Export Processing Zones Authority (BEPZA) initiated an innovative program in 2005. The program, funded by the World Bank, recruited 67 counselors to work closely with employees and management to address issues related to wages, working conditions, food, child care, benefits, and security. These counselors worked on behalf of BEPZA, but were perceived more as facilitators than as regulators or enforcers. The young recruits paid almost daily visits to their designated factories to work with management on the correct application of labor and compensation regulations, and acted as informal arbitrators between management and workers to resolve grievances. The program appears to be appreciated by both management and workers. The initial funding expired in 2009; at BEPZA's request, the Bangladesh Investment Climate Fund supplied additional funding to continue the program. BEPZA has committed to integrating the program into its mainstream operational budget. Despite significant unrest that shook Bangladesh's garment sector in 2010, no incidents were reported in any of the export-processing zones that featured this program.

Source: T. Farole and G. Akinci, eds. 2011. Special Economic Zones : Progress, Emerging Challenges, and Future Directions. Directions in Development: Trade. Washington, DC: World Bank.

(v) **Improving working conditions through tripartite committees.** In Indonesia, Honduras, and Sri Lanka, local tripartite committees are created in each EPZ. Each committee is made up of representatives of local governments, employers, and labor unions, and they promote local social dialogue for collective bargaining and dispute settlement.

Land. Land is private property in the Kyrgyz Republic. However, management committees follow the best practice of making land available at lower prices to tenants. It is important that land banks are created through land acquisition using a well-designed land acquisition policy so that land does not pose constraints in the implementation of its industrial parks (Aggarwal 2006b).

Environment. Governments and firms involved in any FEZ must follow good practices in environmental standards. Environmental rules cannot be relaxed for either FEZ developers or units. However, environment impact assessments may be conducted for FEZs, not for units. The FEZ green policy should be initiated to promote green FEZs for energy and water conservation and to minimize land, water, and air pollution. Finally, practices to promote the environment in FEZs should be encouraged, including setting up water and effluent treatment plants; reusing wastewater for landscaping; constructing green buildings; creating common storage areas for recyclable waste; developing internal transport facilities such as electric vehicles, compressed natural gas, biodiesel, or any other environment-friendly fuels; providing bicycle lanes to encourage cycling to and from the workplace; building exclusive pedestrian lanes; and creating internal connectivity through street networks. Many countries follow these practices to create aesthetic environments within their FEZs.

Accountability. There must be a mechanism to ensure accountability and prompt redress of complaints and grievances. To make the redress mechanism more meaningful and effective, a structured mechanism needs to be in place. Such a system would ensure efficient and just redress within the given framework of rules and regulations. Certain civil penalties must also apply for failure to follow FEZ rules. Goods of persons subject to such penalties may be seized and sold by the administration. In addition, criminal penalties may apply for certain offenses.

Free economic zone promotion. Scant information is available on the Kyrgyz Republic's FEZs. A website on the Bishkek SEZ provides good information, but is in Russian. No information on other FEZs is available on the net. This is in stark contrast to the practice followed in Kazakhstan where efforts to attract investment by national or regional authorities and management companies of FEZs are duplicative. FEZ promotion is an important part of the FEZ strategy. These gaps need to be addressed to create awareness about the country's FEZs. The agencies within the country and its embassies in various countries should promote the FEZs.

7.3 Conclusion

Strong government support for zones, demonstrated by the strategic intent and broad approach to the FEZ program, is critical to attracting high-quality, long-term investors. Policies and operational practices in the zones must be in line with private investors' needs. FEZs must be set up to attract GVC-linked investors who face stringent requirements related to cost, time, quality, and flexibility to be successful. This requires hassle-free, low-cost locations. The business environment within FEZs must be insulated from the outside, and associated policies should be transparent and stable. Indeed, many zone programs undermine investor confidence by failing to deliver a conducive and predictable policy environment.

Chapter VIII: Pillar 3: Promotion of Spillovers from Global Value Chain-Linked Investment

As discussed in the previous chapter, under favorable conditions and good management, free economic zones (FEZs) can serve as efficient locations to attract investment. Yet, while attracting investment in economic zones is a necessary condition to bring about industrial diversification in a host country, it is not a sufficient one. Much of the investment attracted by economic zones is integrated with global production systems; therefore, the activities and technology attracted by them may have little relevance for the wider economy. Economic zones cannot automatically generate spillover effects to introduce new technologies in the wider economy. Thus, there is a need for the government's concerted efforts to build and strengthen domestic capabilities to reap the benefits of technology and knowledge transfers, such as adopting a pragmatic and dynamic approach to bring about structural transformation in the economy through FEZs. The third pillar of the strategic framework deals with the strategic approaches to leverage the benefits of investment attracted in economic zones to promote industrial diversification. This chapter outlines these approaches and explains the factors critical for their success.

8.1 Broad Policy Framework

FEZ effectiveness as an instrument for achieving long-term industrial development is conditional upon the linkages they create with the domestic economy. Linkages are defined as the ability of FEZ firms to develop productive relationships with domestic firms through the exchange of information and resources. These linkages provide the key channel through which various technologies may be diffused from FEZs to the rest of the host economy.

To review, there are two types of linkages: backward and forward. Backward linkages integrate the zone into regional and national economies by allowing domestic firms to step in as suppliers to FEZ firms and, in turn, to promote industrial development by creating demand for local products and services and transferring technology to the local industry. In general, however, these linkages remain weak for several reasons (Aggarwal 2007). Local firms often do not have the technological capability to provide the inputs foreign companies require. The necessary raw materials in the local market may be absent, so inputs must be imported and be subject to duties. Other factors include a poor work culture, poor infrastructure quality outside of the zones, and nonadherence to strict time schedules. Government regulation of FEZ transactions with the rest of the economy may also act as a barrier to connect them with the domestic economy. If domestic supplier firms do not benefit from functional drawback policies,[17] the tariff-free inputs within FEZs act as import subsidies competing against domestic input production and discouraging the creation of backward linkages (Madani 1999).

Forward linkages arise if FEZs are allowed to access the local market, introducing new products and new activity in the domestic mainland, thereby promoting industrial diversification. Since countries and areas do not allow domestic sales of FEZ products, the potential for forward linkages vanishes (Warr 1989, Jayanthakumaran 2003). However, there are best practices in this regard that are discussed later in this section.

Evidence suggests that the creation of linkages is largely conditional on three factors:

(i) **Government policies.** In countries where government policy allows local entrepreneurs to supply FEZ producers with duty-free materials, significant backward linkages may be created. Similarly, the government policy of sales to domestic tariff areas may affect the creation of forward linkages.
(ii) **Domestic capabilities.** In countries and areas that do not enjoy a solid industrial base, linkages are weak.

[17] Drawbacks for tariffs and rebates of sales taxes for goods sold by domestic producers to enterprises in the special economic zones (SEZs).

(iii) **Composition of free economic zone activity.** Low-technology and high labor-intensive activities are less likely to generate a significant impact on the rest of the economy.

Based on the above factors, three overlapping strategies are proposed to promote these linkages (Figure 46):

(i) **Minimalist approach.** This focuses on remedying government policy barriers. It requires the government to lower transaction barriers between the FEZ and domestic firms. It represents a necessary policy action for establishing linkages between FEZs and the wider economy.
(ii) **Proactive approach.** This approach calls for a more interventionist approach. It focuses on creating favorable domestic conditions and strengthening domestic capabilities, which can be conducive to such transactions.
(iii) **Targeted approach.** This is similar to a smart industrialization strategy, where government policy actions center around FEZs activity (Chapter 4). This broader approach focuses on upgrading the FEZs to move up the value chains.

8.2. Minimalist Approach: Lowering Policy Barriers for Linkages

8.2.1 Backward Linkages

Both policy and administrative factors play a role in limiting backward integration. On the policy side, a major issue is the lack of a level playing field between local and foreign suppliers to FEZs. For example, in some countries, FEZ-based firms are required to pay tariffs and local sales and value-added tax on all purchases from the local market, but they can access those same goods from international suppliers tax- and duty-free. These policies hamper the competitive position of domestic suppliers vis-à-vis international suppliers.

On the administration side, delays and heavy paperwork requirements make it difficult for local firms to take advantage of benefits. In most cases, concerns regarding security and leaks of FEZ products into the local market resulted in restrictions on the movement of trucks from domestic territories into the FEZs.

The minimalist policy approach involves lowering these policy and administrative barriers and is based on the following subpillars:

Figure 46: Approaches to Leverage Benefits of Free Economic Zones for Industrial Diversification

Source: Author.

(i) Sales of goods and services by a domestic enterprise from the national customs territory to FEZ enterprises are considered exports, which gives local suppliers benefits as indirect exporters.
(ii) Domestic enterprise exporting to FEZs does not require an export license for the sale of any goods and services to FEZs.
(iii) FEZ companies may purchase goods and services sold by a domestic enterprise with local currency obtained through conversion of foreign currency through a bank or a licensed foreign exchange bureau.
(iv) Administrative barriers are lowered, and processes are simplified (e.g., in India, the government introduced a self-certification system for domestic procurement just like exports and imports, so units need not seek permission for these transactions).

8.2.2 Forward Linkages

For forward linkages, the main policy barrier in the zones in general are restrictions on local sales. Domestic tariff area sales strengthen FEZ linkage to regional industries to maximize their benefits and to facilitate the technological transfer from FEZs to domestic companies. However, most countries restrict these sales with a view to eliminate competition between the FEZ and domestic firms. Only a small proportion of sales is permitted to the local market.

The minimalist approach argues for lowering these barriers by allowing domestic sales subject to payment of corresponding taxes on the raw materials and other regulations that the units have forgone, meaning that domestic sales from FEZs are permitted without any duty if essential raw materials and inputs are of host-country origin; and allowing domestic sales duty-free if the FEZ product is manufactured using new and sophisticated technology not available locally (e.g., the People's Republic of China (PRC), Indonesia).

8.3 Proactive Approach

While the lowering of policy-related barriers in transactions between FEZ and domestic firms creates a necessary condition for promoting such linkages, it is insufficient alone. As discussed above, domestic suppliers often have problems in producing at the level of quality exporters demand, adhering to time limits, and offering the scale needed. Thus, the minimalist approach needs to be complemented with appropriate and wide-ranging policy frameworks that strengthen domestic productive capacities and spillover benefits from foreign investment, knowledge, and innovations.

Policies targeted to increase the competitiveness of local suppliers are likely to be the prerequisite for knowledge spillover. A well-crafted package of macroeconomic and industrial policies is required

Box 6: The Republic of Korea's Policy of Subcontracting

In 1974, the Government of the Republic of Korea allowed outsourcing of production processes from its free export zones (FEZs) to firms in the wider economy, as zones were fully occupied, and firms had difficulty expanding their facilities within the zones. Outsourcing proved to be instrumental in the development and technological upgrade of firms located outside of the zones. In 1976, there were 94 firms in Masan FEZ, employing some 4,518 workers outside of the zones (or 15% of zone employment); by 1988, 56 out of the 73 zone firms engaged 525 domestic firms. These 525 firms employed 16,686 workers, equivalent to half of the entire Masan Free Trade Zone workforce. In 2001, there were 258 non-EPZ subcontracting firms of this kind around Busan and Masan zones, employing 4,567 workers. This very successful backward linkage increased employment and exports, as well as transfer of technology.

Source: D. Madani. 1999. *A Review of the Role and Impact of Export Processing Zones.* Washington, DC: World Bank; M. Maruyama and Y. Nobuko. 2008. Revisiting Labor and Gender Issues in Export Processing Zones: Cases of the Republic of Korea, Bangladesh, and India. Tokyo: Institute of Developing Economies.

to complement the promotion of zones to stimulate the process of industrialization. This package includes policies for the labor market; competition; and investment in education, skills, technology, and strategic infrastructure.

These are essentially horizontal industrial policies. Some of these policies are as follows:

(i) **Macroeconomic policies.** The stability of the macroeconomic environment is significant for improving the economy's competitiveness. Fiscal and monetary imbalances raise costs, which hamper the economy's cost competitiveness. The government needs to keep these imbalances under control to maintain competitiveness of the economy and domestic producers.

(ii) **Improved business-related institutions.** The quality of institutions has a strong impact on a firm's capabilities. Sound public institutions that enforce contracts, adequately secure property rights and investor protection, ensure an impartial judiciary, promote transparency and trustworthiness, and reduce overregulation and corruption can be instrumental in promoting entrepreneurship and startups and enhancing the scale of investments. They also improve trust between foreign and domestic firms.

(iii) **Human capital.** Human capital is a major constraint in countries where limited educational resources are targeted toward technical and vocational education. Technical workers are often central to ensuring standards compliance and quality requirements.

(iv) **Technological readiness.** An efficient innovation system should be developed that facilitates investments in knowledge, technology dissemination, skills upgrading, and entrepreneurship.

(v) **Financial systems.** Financial system development can alleviate cash constraints and facilitate global value chain (GVC) participation. By lowering the cost of borrowing funds, well-functioning financial systems can encourage domestic entrepreneurs to invest in productive capacities.

(vi) **Infrastructure.** The quality and extensiveness of infrastructure networks significantly impact on economic growth in a variety of ways. Well-developed multimodular transport systems enable entrepreneurs to get their goods and services to market in a secure, timely, and cost-efficient manner, and to facilitate the movement of workers to the most suitable jobs. Uninterrupted electricity supplies allow factories to run continuously. Finally, a solid and extensive telecommunications network allows for a rapid and free flow of information, which increases overall economic efficiency by expediting business processes and decision making.

(vii) **Sophistication of business services.** Businesses require the services of a variety of professionals, including architects, designers, auditors, accountants, engineers, doctors, lawyers, tax consultants, management consultants, and information and communication technology (ICT) consultants. This highlights the importance of efficient services sectors to support GVC and non-GVC investment.

(viii) **Strengthened small sectors in the economy.** Policies that artificially increase the participation of firms in GVCs through direct government incentives for specific activities and disincentives for other activities will not generate sustainable benefits. Linking with lead firms can be a more solid foundation on which to build for many innovative small and medium-sized enterprises (SMEs).

In sum, this approach focuses on creating domestic capabilities through horizontal policies. The present approach adopted by the Kyrgyz Republic is akin to the proactive approach. This strategy is aligned to the matrix-based approach adopted in the European industrial strategy of combining the vertical and horizontal tools. It requires a threshold level of technological, human capital, and industrial development on which FEZs and industrial parks of high-tech industries can draw. The idea is to improve domestic capabilities, which, in turn, are likely to be reinforced by technological spillovers from GVC-linked activities in economic zones. The underlying assumption is that the interaction between foreign firms and domestic producers is instrumental in generating productivity spillovers. In this approach, economic zones play a catalytic role and not a central one.

8.4 Focused Approach

Unlike the proactive approach, the focused approach places zones at the center of the process of industrialization. It is akin to a smart-industrialization strategy as discussed in Chapter 4. It is based on the realization that industrial transformation is a complex process that involves significant institutional and

social transformation. It requires identification of the focused drivers of industrial development and formulation of well-designed policies to push these drivers (Chang 2002). Developing countries, as late entrants, face an even more complex and daunting set of circumstances due to advancement in technology than those faced by now-advanced countries when they embarked on industrialization.

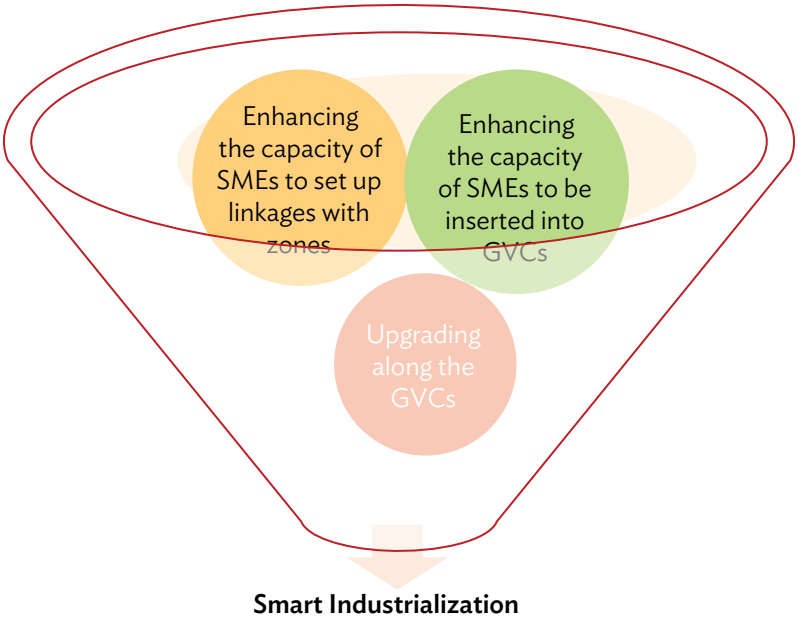
In this scenario, GVCs offer a new, focused industrial diversification path. Countries and areas can industrialize by joining a supply chain using FEZs as a tool, then moving up along them, and/or jumping to more sophisticated chains (Milberg, Jiang, Gereffi 2014). From this perspective, FEZs are a tool of smart industrialization policy in which both FEZs and the wider economy require continuous upgrading to ensure evolution of the economy to higher value-added activities.

As discussed, there are two aspects of GVC-linked investment attracted by zones: (i) foreign direct investment (FDI) through offshoring, and (ii) domestic investment through offshore outsourcing. While FDI is a vehicle of transferring new technologies and managerial skills, offshore outsourcing, through contract manufacturing in both technology and low-technology industries, has opened up a range of opportunities for developing country firms, in particular SMEs, to find a niche in which to specialize rather than be competitive along the entire production chain.[18]

The focused approach thus comprises three strategic tools (Figure 47).

Integrating SMEs effectively within GVCs. Contract manufacturing in GVCs has the potential to offer SMEs in developing countries access to a global pool of new technologies, skills, capital, and markets. The contractor is responsible for sourcing the materials and components, manufacturing the article, and performing the necessary quality controls. In high-technology industries, the contractor also has access

Figure 47: Strategic Framework for Smart Industrialization



GVC = global value chain, SMEs = small and medium-sized enterprises.
Source: Author.

[18] SMEs have emerged as major exporters all over the world. Even in the United States, nearly 90% of exporters were SMEs, and their share of merchandise exports hovers around 30%.

to the technology of the outsourcing firms. As a consequence, it can upgrade itself and target more sophisticated market segments, such as design, marketing, and branding. The government needs to make concerted efforts to develop local suppliers and component manufacturers through identification of the sectors where the economy has competitive advantages; mapping the value chains in these sectors, and identifying the activities on which the country is ready to focus; offering training and assistance to improve capabilities in these activities; and identifying the GVCs and helping firms to get inserted into these value chains through both joint ventures and contract manufacturing.

Strengthening FEZ-centered capabilities of domestic producers. This element of the policy focuses on enhancing backward linkages between zone and local firms. It involves the following action plan:

(i) **Identify and target goods and services required by FEZ entrepreneurs.** Increasing participation in most GVCs requires a range of goods and services that must be available at competitive prices and quality. This is particularly crucial for local SMEs that need access to the necessary range of services to concentrate on the value chain-specific activity they do best. Seizing the opportunities offered by GVCs requires competent and innovative domestic entrepreneurs as well as the country's policy makers to address a number of interrelated challenges, such as understanding the requirements of FEZ industries, creating dynamic domestic firms by offering incentives, building production capabilities and networking capabilities, managing technology development, and encouraging skills formation. For this, the government must develop policies, agencies, and institutions that ensure advancements in all segments of the production processes in FEZ industries. Raising competitiveness of domestic firms and industries thus becomes crucial in shaping outcomes.

(ii) **Target "winner" firms and supporting them.** One approach is that the government identifies "winner" domestic firms and provides targeted support to them to build domestic capabilities along the value chains through public–private collaborations, research funding, government procurement, subsidies, and other direct and indirect measures. An example is that of the PRC automotive industry, where a selected number of firms were given preferential treatment, and their alliances were forged with up to two foreign firms each to create domestic capabilities. Experts around the world are deeply divided over picking winners with some offering a complete hands-off approach by the government and others supporting government intervention to promote national champions. An overview of these arguments in a comparative analytical framework shows that many arguments against champions-promoting policies are made in a static classical framework (Falck, Gollier, and Woessmann 2011). From a dynamic view, a strong case may be made for champions-promoting policies but with a caveat that there are possibilities of government failures with political motives taking center stage. Its success requires political will and commitment.

(iii) **Target new industries and support them through vertically strategic industrialization.** In late industrializing economies, industrial targeting may be a component of smart industrialization policy, although views differ on how to select the target industries (Lin and Chang 2009). Identifying the value chains in target industries and augmenting them through vertically strategic industrialization may be implemented using FEZs as a tool. The government needs to be proactive not only in developing industry-specific infrastructure, but also in identifying human skills and technological needs for which the demand may arise. It should proactively fund networks of researchers encompassing university-based personnel, startups, established firms, and consortia to create an ecosystem for industry development and upgrading.

(iv) **Train labor.** Training of labor is critical in FEZ-centered industries to improve productivity. For this, FEZ authorities need to partner with the private sector to identify skills development needs, create programs to address them, and find sustainable funding sources. The best example of success in this area is the Penang

Skills Development Centre in Malaysia, a public–private effort considered to be a key factor in the success of Malaysia's economic transformation.

Government-sponsored support helps domestic firms build their FEZ-centered productive capacities. As a consequence, they can target more sophisticated market segments such as design, marketing, and branding, and move up the value chains.

Upgrading FEZs. As economic development takes place and economic activities in FEZs upgrade, new institutional challenges arise, and new development goals are posed. Thus, there are evolutionary changes in the motives, approaches, and designs of FEZs that, in turn, impinge upon their development outcomes and success factors. More specifically, there are two-way dynamic linkages between FEZs and the wider economy. To the extent that FEZs are successful in addressing institutional bottlenecks, they have income-enhancing impact in the economy. However, to the extent that the production capabilities grow and economic activities within them upgrade, FEZs must also be upgraded to push the economy up the development ladder to initiate a circular process with self-reinforcing and cumulative effects on the economy.

Thus, FEZs can be used as incubators of ideas and policies for enhancing growth and economic development in host economies. As the economy transitions from one stage of development to another, new challenges emerge, as does the call for new policies to address them. Using zones as policy laboratories can be useful to test critical changes in the policies before deciding to extend them to all firms in the economy. FEZs can also be testing laboratories for solutions to social and environmental issues bound to emerge in the process of transformation. India's policy of green SEZs and the PRC's eco-industrial parks are cases in point.

The biggest threat associated with vertically strategic industrialization is getting locked into low value-added stages of GVCs within FEZs. If local operations remain confined to the low value-added segments of a GVC, the risk is that the country starts losing a competitive advantage at that level of production process due to FEZ-induced growth in the wider economy. Many countries, tempted by the direct gains of employment and income generation, continue to maintain the cost advantage of FEZs by lowering labor standards and offering attractive incentives. This can delay the process of development outside of FEZs due to large resources invested in FEZs. Most successful countries, however took a risk of adopting the focused approach and were paid off hugely (Box 7). This requires political will and spirit of experimentation with strategic policy making informed by a medium- to long-term vision.

8.5 Complementing Smart Industrialization with Agglomeration Economies

Chapters 5 and 6 proposed the development of FEZs in the Kyrgyz Republic within the framework of cluster development policies. In this framework, zones are a driving force of cluster formation and development.

Agglomeration economies that emanate from clustering of firms in FEZs can be a crucial factor in the smart industrialization strategy. While scouring the globe to identify the most efficient locations for offshoring and offshore outsourcing, multinational corporations take into account not only a relaxed regime and tax incentives, but also the advantages of localization economies. According to Porter, "The enduring competitive advantages in a global economy are often heavily local, arising from concentrations of highly specialized skills and knowledge, institutions, rivals, related businesses, and sophisticated customers" (Porter 1998).

The presence of industrial clusters promotes the growth of shippers, logistics services providers, ICT vendors, providers of customized business development services, infrastructure providers, regulatory agencies, research institutions, consultants, and other logistics-related organizations in and around the cluster that can leverage interdependencies to provide efficient and effective logistics solutions and to create innovative new solutions, cut costs, and create external economies. Agglomeration economies reduce costs, strengthen capabilities of firms, and generate growth dynamics. Cluster-based producers and workers can be potentially better off than they would be if they were operating in isolation.

Box 7: Successful Upgrading of Special Economic Zones: Taipei,China and the Republic of Korea

Taipei,China. As industrialization progressed and labor costs began rising, Taipei,China upgraded its export processing zones (EPZs) from labor-intensive traditional industries to capital-intensive industries. In the beginning (1966–1968), all export-processing zone enterprises were exempt from taxes for 5 years. During the 1970s, tax incentives were focused on intermediate and capital goods industries and on upcoming export industries; traditional export items ceased to be eligible for tax incentives. In 1980, Taipei,China set up its first science park in Hsinchu as an industrial park to foster scientific and technological development. This was followed by Tainan Science Park in 1995, and Kaohsiung Science Park in the early 2000s to strengthen its innovation capabilities. In the late 1990s, against the backdrop of the Asian financial crisis, the government committed itself to the development of the logistics industry and decided to use EPZs as a vehicle to promote the industry. Since then, it has been promoting logistics facilities within its EPZs. In 2003, the government enacted the Act for the Establishment and Management of Free-Trade Ports, aiming to promote the development of global logistics and management systems; attract high value-added manufacturing; and upgrade national competitiveness. Under the act, six free trade zones were set up. Of these, Taoyuan Air Cargo Park Free Trade Zone is a public–private partnership, and the rest are government-owned zones. There has thus been continuous evolution in the EPZ sector, which occurred interactively with the development process taking place in the rest of the economy.

Republic of Korea. In the late 1980s, wages in the Republic of Korea increased steeply, and the country started losing competitive advantages in labor-intensive products. This led the government to restructure economic activity. In line with the changing industrial policy, free export zones were restructured in favor of capital- and technology-intensive products to attract more sophisticated technologies. In 2000, the Republic of Korea introduced duty-free zones under the aegis of the Ministry of Land, Infrastructure and Transport. These aimed at improving the competitiveness of the logistics industry through improved added value from transshipping, distribution, repackaging, multiple-country consolidation, processing, and manufacturing. Under the policy, six logistics-oriented zones are operational. Between 2008 and 2010, these free-trade zones generated $8.3 billion of imports and $14.6 billion of exports; the firms employed 13,676 persons. In 2002, the Republic of Korea devised the concept of free economic zones (FEZs) as part of its efforts to attract more foreign investment, particularly in high-technology services and cutting-edge technology sectors to transform itself into the financial, logistics, and business hub of Northeast Asia and bring about balanced regional development. There was thus continuous upgrading of FEZs depending on the goals of the national development strategy.

Sources: H. G. Jeong. 2008. Experience of the Korean Economic Special Zone and Its Implication for Central Asian Countries. Presentation to Uzbekistan Government. 2 June; S. C. Lee. 2008. Korea's Experience on Special Economic Zones (SEZs) and Its Implications for Uzbekistan. In Government of the Republic of Korea, Ministry of Finance and Economy. *Feasibility Study on Establishing Special Economic Zones in Uzbekistan.* Seoul: Korean Institute of International Economic Policy; D. K. Elms and P. Low, eds. 2012. *Global Value Chains in a Changing World.* Geneva: World Trade Organization.

Further, the geographic proximity of firms can act as a major driving force for innovation, learning, and knowledge spillovers (Gilbert, McDougall, and Audretsch 2008, Kesidou and Szirmai 2008). Knowledge inflows, knowledge creation, and knowledge spillovers are key aspects of agglomeration economies. Clustering encourages networking among firms to take advantage of complementarities, exploit new markets, integrate activities, and pool resources and knowledge. Thompson revealed that geographically concentrated foreign firms were better than dispersed foreign transnational corporations in transferring technology and managerial skills via training and spillover to PRC firms (Thompson 2002).

Yeung highlighted the significant impact FEZs have on the spatial and economic restructuring of regions surrounded by FEZs (Yeung 1995). For example, the transformation of Shenzhen from a small fishing town to a large metropolitan city is rather well known. However, the contribution of FEZs in turning Baguio and Bataan in the Philippines; Bayan Lepas in Penang, Malaysia; Lat Krebang outside of Bangkok; and Aqaba, Jordan into flourishing cities is little known.

An overarching focus on the development of these clusters using the focused approach should be the way forward for the Kyrgyz Republic. The government needs to be a catalyst in the development of FEZ-induced clusters, using the focused approach. Initial investment is likely to attract more firms to promote further specialization, supported by the tendency of spinoffs and suppliers of both the clustered industry and related industries to locate near the zone leading to larger concentration of manufacturing in that region, assisted essentially by international trade (Fujita, Krugman, and Venables 1999, Krugman 1991, Ottaviano and Naghavi 2009). This will generate better prospects of promoting regional development.

8.6 Conclusion

Attracting investment is a necessary condition for driving FEZ-led industrialization. The government must adopt a dedicated strategic approach toward the development of FEZs to combine their synergies with regional economies, and reap the benefits of increasing returns, external economies, and complementarities. Strategic policy intervention with vision, strong commitment, a legal and institutional framework, and a continuously unfolding and dynamic set of policies are the keys to success.

Chapter IX: Pillar 4: Augmenting Regional Value Chains and Cross-Border Chains

As discussed previously, participation in global value chains (GVCs) can generate considerable economic development benefits if accompanied by appropriate strategies to upgrade along them. Today, trade and foreign direct investment (FDI) are inextricably intertwined through GVCs. According to an estimate by the United Nations Conference on Trade and Development (UNCTAD), 80% of all international trade flows take place within global production networks that are built, coordinated, and governed by multinational corporations (UNCTAD 2013). The proliferation of these GVCs has been made possible by transformational changes in technology and the process of trade liberalization brought about by the multilateral trading system institutionalized through the World Trade Organization (WTO).

The process of trade liberalization is reinforced by the liberalization of FDI through a wave of new-generation regional trading agreements that involve deeper (i.e., WTO plus) integration of regional economies, i.e., "new regionalism." This has directed the attention of experts to establishing regional value chains (RVCs) and cross-border chains. This chapter focuses on the promotion of RVCs and cross-border value chains as the fourth pillar of the strategic framework of zones in the Kyrgyz Republic.

9.1 Relevance of Regional Value Chains

RVCs are organized at the regional level, rather than the global level for consumption that may take place regionally or globally. Unlike GVCs, RVCs are organized mainly by regional companies. Therefore, their promotion is likely to enhance the capabilities of domestic companies, both through the participation in and governance of these chains. However, it must be noted that the possibility of transnational corporation participation in building and coordinating them within the region cannot be ruled out. Production systems today are becoming increasingly complex. In an effort to focus on "core competencies," firms are competing to outsource nearly every business function deemed noncore. The emergence of information and communication technology (ICT) has enabled a wide range of service tasks to be standardized, fragmented, codified, modularized, and more readily outsourced across borders. With this have emerged multilayered GVCs. For less-developed countries, relocation of a part of production by relatively more advanced countries in the region to them as Tier 2 suppliers facilitates the formation of regional production networks (Box 8). Box 8 presents the case of the Lao People's Democratic Republic where the free economic zones (FEZs) are benefited by regional production networks.

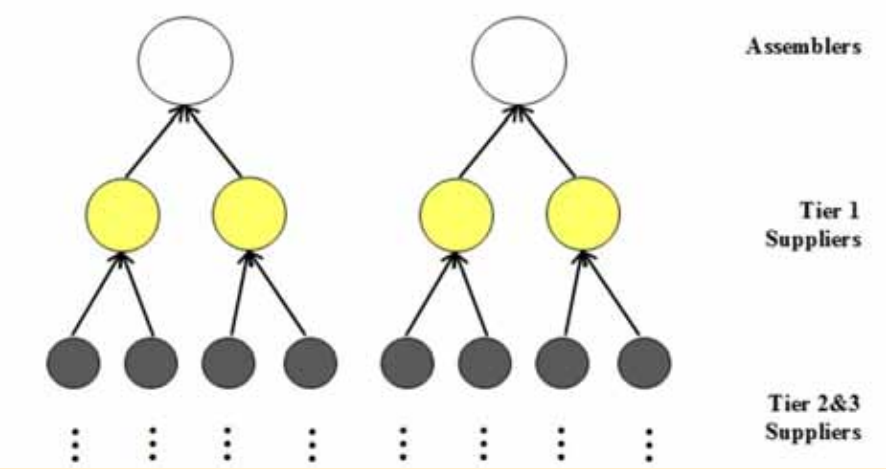
It is increasingly believed that the promotion of RVCs is critical for developing countries to promote the competitiveness of their firms for several reasons.

RVCs as the pathway to GVCs. Access to GVCs involves many prerequisites, including logistics and the institutional and legal environments, which require significant investment in both human and financial resources, and active public policies in this area (World Bank 2016). In this system, late-industrialized countries are more likely to attract activities at the bottom of these value chains. Even when integrated into GVCs, many remain confined to the low value-added parts of GVCs due to competition from across the globe.

However, participation in RVCs can prepare firms from developing countries to eventually join GVCs. These chains center on the specificities of local demand and consumption practices and are not constrained by the demanding norms required in GVCs. Thus, RVCs can enhance integration, productivity, and division of labor in the region and incorporate indigenous firms into a regionwide logistics system that can be gradually upgraded. Once RVCs are established, the end-products can also be exported globally, particularly to other developing country markets, laying the foundation for consolidating and upgrading the process to link it, as a next step, to GVCs (Weigert 2016).

RVCs for decoupling of growth from that of advanced countries. The dependence on GVCs has coupled the growth of developing countries with that of industrialized countries. For decoupling and to enhance regional competitiveness, regional ties need to be strengthened. Continued dependence on multinational corporations for trade and FDI is likely

Box 8. Regional Value Chains and Special Economic Zones: A Case of the Lao PDR



Lao PDR = Lao People's Democratic Republic.
Source: Author, based on the literature.

Free economic zones (FEZs) in the Lao People's Democratic Republic (Lao PDR) have helped connect the country with the regional and global production network by successfully attracting several multinational corporations, such as Nikkon (Japan), Essilor Lao Co. Ltd. (France), Aeroworks Co. Ltd. (Netherlands), Toyata Boshoku Lao Co. Ltd. (Japan), Celestica Lao Co. Ltd (Canada), MMC Electronics Lao Co. Ltd. (Japan), Dai-Ichi Denshi Lao Co. Ltd. (Japan), Lao Tool Co. Ltd. (Japan), etc. Many factories located in the FEZs operate as part of the regional production network. Their regional headquarters (for instance, in Thailand or Viet Nam) relocate or expand the more labor-intensive processes to the Lao PDR. For example, Mascot Ltd. sources raw materials from Viet Nam to truck its raw materials to the factory in VITA Park, Lao PDR. The finished materials are then sent back to Viet Nam. Similarly, Essilor gets raw materials and support from Thailand for production of lens, then sends its lens to Savannakhet Special Economic Zone in the Lao PDR to be distributed around the world. Toyota Boshoku Laos Co. Ltd. started its operation to produce vehicle seat covers in April 2014 as a satellite factory of Toyota Boshoku in Thailand. The factory sources necessary raw materials from Thailand, trucks to produce seat covers, and exports them back to Toyota Boshoku Thailand.

Although mainly labor-intensive processes are currently done in the Lao PDR FEZs, this beginning could provide a solid foundation for more advanced processes in the future as observed in some FEZs. For domestic firms, locating in FEZs also offers an opportunity to develop their capacity to produce for export markets and to access international distribution and marketing channels.

Source: Government of the Lao People's Democratic Republic (Lao PDR). 2017. Presentation at ASEAN-UNCTAD Seminar. Bangkok. 1–2 June 2017.

to undermine the strategies for developing indigenous capabilities and may result in the middle-income trap. It is expected that RVCs will create new dynamic comparative advantages to overcome the inherent constraints of GVCs, accelerating the strategic diversification and sophistication of developing economies.

RVCs for leveraging both regional trade agreements and FEZs. As the Kyrgyz Republic is a member of the Eurasian Economic Union (EAEU), it is important to understand the challenges and opportunities posed by the membership of regional trade agreements (RTAs) in regard to FEZs. Members' primary concern is the potential for trade triangulation. If a product processed under a preferential duty scheme of the

FEZ is allowed to enter into the customs territory of an RTA member with little or no value added as an originating product, it opens the possibility that any product not originating in an RTA member country may enter the RTA member country duty-free through the FEZ, benefiting FEZ operators. This will put local producers who do not receive FEZ benefits at a disadvantage against the FEZ operator and can pose a threat to the effectiveness of the RTA. At the same time, excluding FEZ investors from taking advantage of the RTA may prevent member RTA countries from realizing the full potential of these two trade and investment-generating instruments and achieving effective regional integration.

To fully leverage the two policy tools, RTAs have taken various approaches. Most have implemented a system to avoid duty-free entry of products processed within the region under FEZ schemes, but the degree of stringency varies. Most RTAs do so either by establishing a special rule on the treatment of products processed in FEZs of RTA member countries or by applying rules of origin that are generally applicable to products processed anywhere in the RTA area.

The EAEU treaty on FEZs stipulates that products produced in FEZs will be regarded as goods of the customs union, provided certain conditions are met: the HS (Harmonic System of trade classification) code of the product differs at the four-digit level from the HS code of non-originating materials used in the manufacture of the goods; specific conditions are fulfilled under which manufacturing or technological operations are sufficient, where they take place to be considered as a country of origin; or the percentage of the costs of the used non-originating materials or the added value reach the fixed share of the cost of goods. In this case, the duty will be assessed on imported intermediate goods before the final goods enter the EAEU region and not on the latter. Thus, the agreement does not completely exclude FEZs from taking advantage of the union and has allowed member countries to realize the potential of the EAEU and FEZs. However, its effectiveness depends on the restrictiveness of the percentage share of the foreign components.

This opportunity can be further leveraged by developing RVCs and using zones as hubs, where the regional partners can also trade duty-free. By combining and coordinating efforts to strategically foster FEZ-based clusters that take advantage of complementary endowments of different member countries, the Kyrgyz Republic can leverage zone infrastructure and regional integration to overcome limitations of scale and specialization. This may facilitate improved backward linkages within the region in critical sectors. Such integration of RVCs within FEZs may also forge deeper regional economic integration.

For this, it is important to establish a concrete strategy for the development of RVCs in the region through industrial parks and FEZs. Many lessons could be learned from other regional experiences on the continent or elsewhere in the world.

9.2 Facilitators of Regional Value Chains

Deep regional integration. In the early and mid-1990s, former member countries of the Commonwealth of Independent States (CIS) actively signed preferential trade agreements to restore economic relations with the Russian Federation. These initiatives became precursors to economic integration initiatives in later years. The Kyrgyz Republic was one of the most active participants in these initiatives, and it is a member of several regional groupings with different levels of regional integration. The following regional agreements can be the building blocks in establishing RVCs in the region:

(i) **Commonwealth of Independent States.** This is a loose confederation of nine member states (i.e., Azerbaijan, Armenia, Belarus, Kazakhstan, the Kyrgyz Republic, Moldova, the Russian Federation, Tajikistan, and Uzbekistan) and two associate members (Turkmenistan and Ukraine) located in Eurasia. It has few supranational powers but aims to be more than a purely symbolic organization, nominally possessing coordinating powers in the realms of trade, finance, lawmaking, and security. It has also promoted cooperation on cross-border crime prevention.

(ii) **Commonwealth of Independent Free Trade Area.** Of the nine CIS member countries, eight have formed a free trade area, including the Kyrgyz Republic.

(iii) **Eurasian Economic Union.** Of the eight members of the free trade area, five launched the EAEU, with the Kyrgyz Republic as a founding member. It is an economic union of states located primarily in northern Eurasia. A treaty aiming for the establishment was signed on 29 May 2014 by the leaders of Belarus, Kazakhstan, and the Russian Federation. Subsequently, Armenia and the Kyrgyz Republic also joined the union, which came into force on 1 January 2015. Today, it is an RTA that introduces free movement of goods, capital, services, and people, and provides for common policies in the macroeconomic sphere, transport, industry and agriculture, energy, foreign trade and investment, customs, technical regulation, and competition and antitrust regulation. Provisions for a single currency and greater integration are envisioned in the future. The union operates through supranational and intergovernmental institutions.

(iv) **Free trade agreements.** In addition to being a part of the economic union, the Kyrgyz Republic has five RTAs in effect with regional economies (i.e., Armenia, Moldova, Kazakhstan, Ukraine, and Uzbekistan). It is also a beneficiary of the Generalized Systems of Preferences by the United States (US), Canada, the European Union (EU), Switzerland, Norway, Turkey, and Japan. It is further benefited from agreements between the EAEU and Viet Nam (already signed) and others that are underway.

(v) **Agreements with FEZs of neighboring countries.** In 2015, bilateral agreements on cooperation were signed between the administration of Vitebsk FEZ in Belarus and the General Directorates of Naryn and Bishkek FEZs. In the same year, a tripartite agreement on cooperation between Vitebsk, Naryn, and Kashgar in the People's Republic of China (PRC) was also signed which can be instrumental in the formation of RVCs in the region.

Regional connectivity. It facilitates trade flows between countries by reducing transaction costs. From the perspective of the value chain, connectivity and a transport system without fragmentation and inefficiency make it possible to establish regional supply chains and help link them to GVCs (Kang and Won 2017). As shown in Chapter 2, there are a number of trade and transport corridors in the Kyrgyz Republic that have transformed the country from a landlocked into a landlinked economy.

The emergence of transport corridors has been a highlight of the region. These corridors, along with the New Silk Road or Iron Silk Road, act as pivotal land bridges between the countries of Central Asia; Central Asia to Iran and Pakistan via Afghanistan; and the PRC to Europe via Central Asia and Kazakhstan. Over time, economic development efforts will need to shift from transport corridors to more integrated economic corridors that incorporate new trade and settlement patterns, including corridor town development and corridor value chains (ADB 2012). These corridors will be important building blocks in promoting RVCs.

Economic diversity with the Russian Federation as a leading goose in the region. The flying geese paradigm explains regional development through a regional hierarchy. The most developed country takes the role of the leading goose in the pattern, while other countries benefit from the lead goose in order of their development level under the conditions of deep regional integration. For instance, in the 1970s and 1980s, Japan took the role of the leading goose in East Asia, while the newly industrializing economies of the Republic of Korea; Hong Kong, China; Singapore; and Taipei,China followed as tier-two countries; Indonesia, Malaysia, the Philippines, and Thailand as tier-three countries; and the PRC was at the rear of the formation. The lead goose, Japan, formed RVCs and supplied capital, technology, and even developmental norms through these chains to second-tier geese, which then traded with third-tier geese.

Table 5 shows similar economic diversity among members of the EAEU. The Russian Federation has the largest economy in the region in size, population, and gross domestic product (GDP). It is the dominant economic power and has the potential of emerging as the lead goose. It is one of the leading host economies of FDI globally. In 2013, the Russian Federation was third in FDI absorption globally; in 2014, it came in 16th despite the conflict with Ukraine and a mutual embargo by many Western countries (Czerewacz-Filipowicz 2017). Finally, it is also one of the largest investing countries in the world.

Table 5: Level of Economic Development of Eurasian Economic Union Members: 2015

Country	GDP (current prices, $ billion)	Position in World Bank Ranking in GDP Based on Purchasing Power Parity	Population (million)
Russian Federation	1,861.00	5	143.800
Kazakhstan	212.26	42	17.290
Belarus	76.14	65	9.470
Armenia	10.88	130	3.006
Kyrgyz Republic	7.40	136	5.834

GDP = gross domestic product.

Source: E. Ustyuzhanina 2016. The Eurasian Union and Global Value Chains. *European Politics and Society.* 17 (S1). pp. 35–45.

Table 6: The Russian Federation's Share in Exports and Imports of Its Eurasian Economic Union Partners: 2013 (%)

	Armenia	Belarus	Kazakhstan	Kyrgyz Republic
Export	25.7	45.3	8.0	8.6
Import	24.3	53.2	33.4	33.2

Source: E. Ustyuzhanina. 2016. The Eurasian Union and Global Value Chains. European Politics and Society. 17 (S1). pp. 35–45.

Further, the Russian Federation is the single most dominant trading partner for the majority of CIS member countries in both exports and imports (Table 6). At the same time, the import and export shares of these countries in the Russian Federation are insignificant (Czerewacz-Filipowicz 2017).

The turnover between other member states of the EAEU is not very significant, with the exception of trade relations between Kazakhstan and the Kyrgyz Republic. In merchandise trade within the EAEU, mineral products accounted for 30.7% of the mutual trade volume; machinery, equipment, and vehicles formed 21.5%; food products and agricultural raw materials made up 13.9%; and metals and metal products contributed 11.3%. The Russian Federation constituted a 70% share in mineral products and over a 62% share in machinery. Moreover, by the end of 2013, there were more than 10,000 joint ventures in the EAEU in the fields of nuclear science, automotive, space, machinery, and metal-based products. The Russian Federation dominated both the number of projects and amount of accumulated FDI (as reported in Ustyuzhanina 2016).

Globally, the Russian Federation participates in GVCs in the fields of aircraft engineering, engine building, car manufacturing, and cattle breeding, predominantly at the stage of final production and distribution. The regional jet, SSJ, is built by 82 companies from eight countries; all have production facilities in the Russian Federation. As a result, regional economies may target space in these value chains in which the Russian Federation's position is relatively advantageous. Some of the operations may be relocated to regional economies taking advantage of the EAEU.

Harmonization of FEZ programs and other rules. In general, the formation of RVCs is facilitated by harmonized regulations governing investment, tax, land, labor and immigration, and customs, as also the harmonized FEZ definitions and rules in the region. The EAEU RTA provides a platform for harmonizing rules and regulations of FEZs and other institutions. This process would set the stage for the formation of RVCs.

9.3 Strategy for Zones to Promote Regional Value Chains

To leverage zones to develop RVCs, EAEU member countries need to develop regional manufacturing or service linkages, using the zones as hubs. By combining and coordinating efforts to strategically foster FEZ-based clusters that take advantage of complementary endowments of different member countries, member countries can help sectors leverage FEZ infrastructure and RTA depth to promote regional production networks, regional specialization, and economies of scale. This would facilitate improved backward linkages in critical regional sectors and enable them to complement each other's resources and capacities and to cooperate to achieve shared goals (Figure 48).

9.3.1 Step 1: Identify Growth Sectors

Within manufacturing, the biggest sector in shares in gross output is food and beverages in Belarus; basic metals in Kazakhstan, the Russian Federation, and Ukraine; machinery and automotive in Belarus and the Russian Federation; chemicals in Belarus and Kazakhstan; mineral products in Kazakhstan and the Russian Federation; and apparel in the Kyrgyz Republic. The most promising RVCs that can be formed from the perspective of the Kyrgyz Republic are food processing, machinery and equipment, and light engineering. There are hundreds of brands and retail operators in the Russian Federation, including DIXY Group, Lenta, Magnit, O'KEY Group, and X5 Retail Group. Demonstrable increases in revenue and profits, plus expanding store networks, suggest a certain robustness in Russian Federation food retail operations. These offer a huge opportunity for food, apparel, and light industries to be inserted in these value chains.

According to *Forbes*, 28 Russian Federation companies are in the list of the top 200 companies (RT 2015). However, the Russian Federation's GVC participation index remains rather low. The percentage of the total Russian Federation foreign value added in gross exports with other countries is also small. Even if the transport equipment industry—where the foreign content of the Russian Federation's exports

Figure 48: Strategic Framework for Promoting Regional Value Chains

Source: Author.

was the highest in 2008—amounted to 20%, this is considerably less than in other countries. This shows that formation of RVCs may hugely benefit the Russian Federation along with other regional economies.

The EAEU agreement opened new opportunities by initiating collaborative projects based on regional integration. The Trade Council of Russia, for instance, covers not only the Russian Federation but also most of the CIS countries, including the Kyrgyz Republic, and helps these countries expand their access to international markets. Further, the agreements signed between the EAEU and nonregional countries offers benefits to all member countries. Finally, there are prospects of collaboration in education, research and development, and social development projects.

9.3.2 Step 2: Create Linkages in Zones by Harmonizing Rules and Regulations

Having harmonized regulations helps a country promote intraregional investment by lowering investors' costs of search and compliance (Box 9). In addition to regulations, technical standards and safety requirements also need to be harmonized for the free flow of goods and services across the region to facilitate the formation of RVCs.

The same is also true for the FEZ-related regulations within an RTA. Having clear FEZ rules and consistent definitions of terminologies across member countries reduces the search costs for investors, allowing them to focus more on strategic factors, such as customer base, suppliers, and distribution network. A harmonized approach reduces competition for investment in FEZs of the regional economies. Harmonization of the rules may also lead to specialization based on comparative advantage. Further, by binding together within an RTA, governments are less likely to change their regulations. This provides predictability to investors, which is critical to building a long-term, sustainable business base to promote RVCs across the region.

Box 9: Harmonization of Sectors in the European Union

Many products on the European Union (EU) market are subject to harmonized rules that protect consumers, public health, and environment. Harmonized rules preclude the adoption of possibly divergent national rules and ensure the free circulation of products within the EU. The principle of free movement of goods ensures that these provisions do not lead to the creation of unjustified trade barriers.

Harmonized sectors are subject to common rules across the EU. They provide a clear and predictable legal framework for businesses. If manufacturers follow these rules, their products can be sold freely in the market.

In the majority of harmonized sectors (e.g., electronic and electric equipment, machinery, lifts, and medical devices), EU legislation is limited to essential health, safety, and environmental protection requirements with no restrictions on technical specifications. In other sectors (e.g., automotive and chemicals), legislation provides detailed requirements obliging certain types of products to have the same technical specifications.

The European Commission aims to remove barriers for companies to establish their subsidiaries or branches or offer cross-border services to make it easier for them to do business. There is alignment in the requirement of professional qualification for different professions to expand services across sectors.

Source: European Commission. Single Market for Services. https://ec.europa.eu/growth/single-market/services_en.

Milberg, Jiang, and Gereffi argued that even industrial policy across the region could be harmonized to anchor RVCs in a broader set of industries, ranging from minerals to agriculture to apparel to mobile phones (Milberg, Jiang, and Gereffi 2014). The UNCTAD also argued for a deeply integrated regional policy framework centered around economic and social upgrading within regional supply chains (UNCTAD 2015). It called for a bolder regional integration agenda that includes an arrangement designed to maintain stable intraregional and effective exchange rates, macroeconomic policy coordination, financial regulation, and competition policy. Management of capital flows, and intraregional lending and policy adjustment will be crucial if strong productive regional links are to emerge in support of shared industrial development.

Of course, harmonizing regulations is more easily said than done. Each country is sovereign and has its own national agenda. Also, each country has a different level of political and administrative capacity. Thus, it takes a long time for all parties to agree. One potential solution is to set a transition period to allow each member to adjust its national policies.

Financial incentives are a crucial aspect of zones and need to be discussed separately. Different structures and levels of financial incentives among FEZs pose problems of incentive-based competition with little gain to a host country. One possible way to address this issue is to offer performance-linked incentives based on investment amount or employment generation (e.g., in Poland).

Cooperation on a strategic framework can also take the form of co-branding and co-marketing of FEZs of the region. In this context, it would be cost-effective, particularly for small countries with limited investment promotion budgets, to consider advertising the region's zones collectively as investment destinations. This will not only help foreign players, but also regional players in making investment decisions from a regional perspective.

9.3.3 Step 3: Initiate Programs and Projects for the Promotion of Small and Medium-Sized Enterprises

Finally, it is important to initiate programs and projects for small and medium-sized enterprises (SMEs) and other firms to strengthen their capability and awareness in these possibilities. These programs should be sector-based and should focus on firms' capacity building to help improve market access, sales, product and services offerings, quality controls, financial management, and productivity. They should also focus on improving access to working capital requirements and equipment financing. This requires programs on entrepreneurship and startups integrated with the zone framework to promote participation of firms in GVCs and RVCs, as well as their capacity to build them by outsourcing and offshoring.

The upshot is that trade and investment creation, resulting from regional cooperation, are highly relevant to regional production networks. With reduced barriers to trade and investment within the region, lead firms are able to organize production in regionally relevant industries according to the respective comparative advantages of member countries. They can then engage in fragmented trade along value chains, increasing regionalization. Regional firms upgrade by engaging in these chains. Regional presence allows lead firms to minimize transport costs and benefit from lower trade costs within a regional cooperation framework. In turn, this regional cooperation framework is an important gateway to greater multilateral liberalization and can lead to increased FDI inflows from within and outside the region.

9.4 Managing Cross-Border Value Chains

Borders are used as a means of internal control and defense from external threat (Sack 1986). They signify political territoriality, which means bounded space. They generally disrupt economic and political activity

by splitting economic spatiality and turn border areas into geographic peripheries. According to the regional economics theoretical framework, economic activity tends to concentrate near the geographic center because of the benefits of localization and agglomerations, reduced transport costs, a developed and shared labor force, and the concentration of facilities that serve different industries (Marshall 1890, Myrdal 1957, Krugman 1991).

Although border regions tend not to be relatively disadvantaged in availability of resources, they do not attract production activity, mainly because of their distance from major metropolitan centers (Dimitrov et. al. 2003). Viewed from this perspective, development of regional transport and logistics corridors are central to enhancing the effectiveness and impact of border areas. These corridors encompass improved transport infrastructure and connectivity across the countries in the region, and facilitate the movement of factors and goods across borders. The opening of borders offers access to cross-border businesses, forming cross value chains. In that case, border regions acquire special geographic advantage. When enterprises are vertically linked, the incentive of spatial concentration is strong (Niebuhr and Stiller 2002).

However, evidence indicates that the creation of transport or logistics facilities may not automatically result in the development of production networks in the border region due to institutional barriers at the borders, such as cultural, historical, or social differences. In other words, even if the economic barriers disappear completely, the level of cross-border economic interaction will be lower than the respective level of economic interaction within countries, because of the presence of noneconomic barriers (Brenton, Sheehy, and Vancauteren 2001). There is a need to develop fully integrated production networks, which have a territorial basis, rather than merely increase in interregional cross-border trade. This requires that factories be built and facilities set up. In turn, this involves flow of investment and activity to the border to take advantage of comparative advantages and cross-border markets. Development of economic zones at borders may turn these peripheries into the centers of growth and attract spin-offs through the following channels.

- **Utilization of resources at the border.** In general, borders have their own spatial advantages due to their climatic conditions, factor endowment, spatial proximity to the foreign market, and the relatively high potential for developing cross-border backward and forward linkages. Their potential remains unused in the absence of economic activity. Border economic zones might attract investment that can exploit benefits of economies that arise from exploiting these advantages
- **Exploiting cross-border complementarity of resources.** Border areas between relatively advanced and less advanced economies offer their respective border areas complementary location advantages. In that case, border regions acquire special geographic advantage when enterprises are vertically linked, presenting the opportunities of backward and forward linkages and the incentive of spatial concentration is strong (Niebuhr and Stiller, 2002).
- **Lower cost of utilities.** Border economic zone companies in less-developed countries can overcome high business and service-link costs or structural deficiencies (such as absence of ports or important resources) by connecting to neighboring countries through borders.
- **Expansion in markets and economies of scale.** Border zones have access to new cross-border markets, thus creating new opportunities for companies to expand their activities beyond their national borders, as well as providing consumers with a wider range and higher-quality products and services. This particularly applies in the case of SMEs, which are usually even more oriented toward nearby countries than larger firms, because they may experience more internal constraints to international growth, such as limited capital, management, time and experience, than larger enterprises (Buckley 1989).
- **Peace and stability.** Economic cross-border cooperation spills over into political cooperation. Though realists claim economic interdependence increases the likelihood of conflict, other schools of political science argue economic interdependence makes war between trading partners less likely. It is integral not only to maximizing economic welfare, but also to peace and prosperity in these areas if economic cooperation prospers.

The Kyrgyz Republic set up three FEZs in the border areas with neighboring countries: Maimak (with Kazakhstan); Leilek (Tajikistan), and Naryn (PRC). While Leilek and Maimak are not operational, Naryn has shown some dynamism in recent years. A strategic framework for the Naryn FEZ as a cross-border zone is discussed next.

9.4.1 Naryn Free Economic Zone as Industrial–Commercial–Logistics Hub

The Naryn Region is the largest region (oblast) of the Kyrgyz Republic; it is larger than Switzerland. The region is known for its pastures and is one of the poorest regions in the country with an economy dominated by animal herding (sheep, horses, and yaks), and wool and meat as its main products. To induce dynamism in the economy, the entire region has been given the status of a FEZ. Since the area cannot be fenced, it offers the provision of an enterprise-specific FEZ with every tenant being the bonded enterprise and, hence, satisfying the fencing requirement.

On the territory of the Naryn FEZ, construction of an industrial–commercial-logistics hub (free trade zone: Chapter 4) is underway. This will become the largest zone with an area of over 200 hectares. The territory of the Industrial Trade and Logistics Hub is located in At-Bashy district, 85 kilometers (km) from the city of Naryn and 400 km from Bishkek. The site is located 500 meters from the Bishkek–Naryn–Torugart road.

The hub is proposed to be established in accordance with the objective of border area development under the National Strategy of Sustainable Development of the Kyrgyz Republic for 2013-2017; Article 455 of the Customs Code of the EAEU; Law "On FEZs in the Kyrgyz Republic" and Program of Cross-Border Cooperation between the Government of the Kyrgyz Republic and the Government of the People's Republic of China for 2015–2020.

The zone aims to enhance the export transit potential of the Kyrgyz Republic in the Eurasian region, attract FDI, and accelerate development of manufacturing. The 200-hectare area of ready infrastructure is divided into three integrated and bonded areas:

(i) **The logistics center.** It is a complex of specialized terminals and warehouses. It offers a variety of cargo operations such as overloading, terminal processing, and additional logistics services. The area of the logistics zone will be 60 hectares of land.

(ii) **The trading zone.** It is a center of wholesale and retail trade, public catering facilities, a sanitary quarantine point, specialized automated storage facilities for goods, certification centers, freight forwarding and brokerage firms, insurance companies, travel companies, etc. The area of the trade zone will be 60 hectares.

(iii) **Production zone.** A complex of industrial enterprises for assembling, packaging, disassembling, storing, cleaning, exhibiting, repacking, distributing, and sorting activities, to attract domestic and foreign investors in priority industries. The area of the industrial park will be 90 hectares. Priority industries include food, agricultural processing, textiles, and honey.

The zone can bring immense development benefits to the region and can kick-start economic activity.

- **Specialization in transport and logistics.** The hub is meant to be a one-stop shop where products can be assembled, packaged, warehoused, imported, exported, and transshipped with FEZ benefits. The hub is located along the Bishkek–Naryn–Torugart road. Thus, this project is facilitated by the TRACECA program, which is regarded as the main and additional trade corridor of the ancient Silk Road. Further, the construction of a railway along the PRC–Kyrgyz Republic–Uzbekistan route is underway which will give access to foreign markets of India, Pakistan, Iran, and Turkmenistan through the Kashgar District, and the economic belt of the Silk Road. It is expected to generate employment for 3,000 workers.
- **Promotion of cross-border bazaar trade.** A major advantage of the hub will be promotion of cross-border bazaars in the Kyrgyz Republic. The trading zone will be a center of wholesale and retail trade for duty free products along the lines of the Khorgos International Centre for Boundary Cooperation in Kazakhstan (ADB 2017b), which will facilitate the development of bazaar activity in the region and outside. It may be noted that Dordoi Bazaar near Bishkek city and the Karasuu Bazar at Kara-Suu, Osh Province are the two largest economic activities of the Kyrgyz Republic These international bazaars, which were started

Figure 49: Naryn Free Economic Zone as Industrial–Commercial–Logistics Hub

1- Logistics zone, 2- Trade zone, 3- Industrial zone.

Source: Presentation prepared by the General Directorate, Naryn for promotion, 2017.

post-independence, emerged as major reexport platforms of goods mainly from the PRC. According to a study by the World Bank (2009), foreign sales in the two largest bazaars in the Kyrgyz Republic, Dordoi and Karasuu, accounted for 75% and 85% of their total sales. Bazaar goods originating in the PRC account for 90% of bazaar imports and reexported through Uzbekistan, Kazakhstan, the Russian Federation, and Tajikistan. The Kyrgyz Republic has emerged as the supplier of clothing to bazaars across Central Asia. Dordoi alone provide direct employment to 55,000 and indirect employment to around 100,000–150,000 persons. In addition, employment is also generated in auxiliary services and outside trade. These markets are affected adversely in recent years due to changing regional contexts. First, Kazakhstan implemented customs union rules in 2011 and imposed limits on the purchases from Dordoi and Karasuu markets, hitting the markets hard. But joining the Union did not provide a solution to the Kyrgyz Republic to its bazaar crisis since the tariff rates had to be raised to bring them on par with the Union's customs rates. This dealt a major blow on these bazaars. Further, the emergence of the Khorgos International Business Center at the Khorgos Eastern gate diverted the flow from Kazakhstan. Setting up a logistic hub with free trade zone within the Naryn FEZ is expected to help promote bazaars and tourism in the area, and will boost other international and local bazaars in the country.

9.4.2 Developing Cross-Border Value Chains: A Proposed Framework

The promotion of trade alone may not be a sustained growth model in the region. With changing global and regional dynamics, it may not be possible to sustain them in the long term. Thus, it is important to develop production networks with bazaars as an important constituent.

The PRC on its side of border with Naryn is developing a 50 square km SEZ in Kashgar to boost the city's economy and population to 1 million. Kashgar connects the middle and south roads of the Silk Road and has been an important international business town since ancient times. With a border of 888 km and four entry ports, it connects the PRC with six neighboring countries, including Afghanistan, India, the Kyrgyz Republic, Pakistan, Tajikistan, and Uzbekistan, creating an international market with a 1.3 billion population (Bangsong 2010). While Kashgar is

not rich in resources, the central government put in an initial investment of CNY1.14 billion ($186 million) for its development over 2011–2015. It exempted enterprises in Xinjiang from corporate income tax for 2 years, and the companies will only pay half of the required amount in the following 3 years. Guangdong province, designated by the central government as a partner assistant[19] of Kashgar, will arrange CNY9.6 billion in aiding the region from 2011 to 2020. The Kashgar SEZ has an import–export processing zone, a logistics storage center, and a commercial service center.

Taking a cue from the PRC, the Kyrgyz Republic needs to promote a manufacturing zone on its side of the geographically delineated area within Naryn to form cross-border value chains with its PRC counterpart. While Naryn is enjoying the status of FEZ, sparsely located industries in the vast area may not generate agglomeration advantages. It is important to delineate an area to set up a hybrid FEZ in the vicinity of the trade hub. The proposed border economic zone may attract investment that can exploit the benefits of economies that arise from the presence of the trade hub. It will have access to new cross-border markets, thus creating new opportunities for companies to expand their activities beyond their national borders, as well as providing consumers with a wider range of products and services. Border industries represent important clients for small locally based suppliers and subcontractors, contributing to the transfer of technology and management skills to domestic firms. For example, the links forged between Singapore and parts of Malaysia and Indonesia in the Indonesia–Malaysia–Singapore growth triangle have helped them to prosper (Ohmae 1995).

The setting up of a border zone will be facilitated by the agreement on trade and economic cooperation signed between the Naryn and Kashgar free economic zones in April 2014. It included the expansion of places for Kyrgyz Republic entrepreneurs in Kashgar markets. Kyrgyz Republic entrepreneurs will also be provided with market places in the trading house "Guangzhou Hsinchu" on favorable terms. In addition, there is an agreement between Naryn and the Vibsk FEZ in Belarus and a tripartite agreement between Kashgar, Belarus, and Naryn.

In sum, it is recommended to set out the target of transforming the Naryn FEZ into a hub of hybrid zones to create agglomeration economies and generate a critical mass of activity. A free trade zone is already coming up. A comprehensive hybrid FEZ with residential complexes within Naryn may be set up to promote the development of the area and form cross-border value chains. It is expected that apparel, equipment, and agriculture-related industries will proliferate in the region. The promotion of the cross-border zone will involve economic integration in the cross-border region and include intersector cooperation among a wide set of actors, the entire socioeconomic system, and administrative institutions.

Promotion of transport and logistics and improving the transit potential of the Kyrgyz Republic between the PRC and South Asia are the main characteristics of the region. These features must be leveraged to form an industrial cluster that delivers opportunities for the development of international cooperation by promoting cross-border value chains. The idea should be to increase interconnections between areas, which are located at neighboring borders by instituting regional institutions.

Similar projects may be taken up in the future with Kazakhstan in Maimak which borders with Zhambyl.

[19] The "partner assistance" program matches developed regions with the least developed areas to help them and improve living standards.

Chapter X: Pillar 5: Implementing the Zone Strategy

Implementation means moving a policy from concept to reality, and from design to enactment.

It is often assumed that policy making is a political process, while implementation is largely an administrative function. Yet policy makers may use this dichotomy as an escape hatch to avoid responsibility for policies they make (Clay and Schaffer 1984).

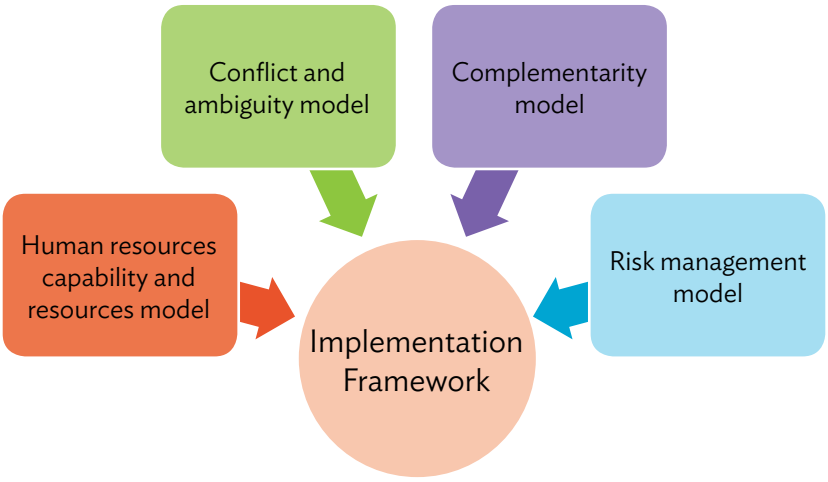
How a policy needs to be implemented should be an integral part of the strategic framework (Government of the United Kingdom 2001).

A formal framework needs to be set up for ensuring effective implementation, which is indicative of the importance the government is attaching to implementing the policy. This chapter describes the principles for the effective implementation of the free economic zone (FEZ) policy in the Kyrgyz Republic. The strategic framework provided here draws on the literature of public policy implementation to identify the factors that are likely to be critical in the implementation of this policy (Figure 50).

10.1 Conflict and Ambiguity Model

Most public policies are implemented through various public and private organizations, which may have conflicting agendas, mandates, and concerns. These conflicts are often managed by introducing ambiguous and inconsistent goals, which then act as a rhetorical device to support a range of competing positions or to obscure the conflicting agendas and vested interests associated with the policy implementation (Matland 1995). Policy ambiguities can be in goals or in means to achieve them; ambiguities can be horizontal, with overlapping mandates and confused responsibilities among implementing agencies and other public bodies; or vertical, where policies do not have clear implementation plans or funding; or these may be introduced in policy drafts in such a way that different actors interpret them differently. Some policy ambiguity may be necessary; its presence facilitates clearance by the legislature.

Figure 50: Framework for Implementation Strategy



Source: Author.

But the intensity of conflicts increases with the number of actors, incompatibility of concerns, and perceived stakes. While conflicts in some policies are manageable, other policies are inevitably conflicting and it is not possible to avoid conflicts in their implementation. In turn, these conflicts affect their effective implementation. They must be managed by persuasion, bargaining, or coercion introducing ambiguity at all levels of the policy.

These ambiguities may have high costs and can introduce inconsistencies in goals and means, making it difficult to achieve goals with the means specified in the policy design (Matland 1995). They affect the interpretation of the policy by different officials and agencies, capability of providing services to the directed group, and capability of superiors to monitor and evaluate the policy. Due to these ambiguities, implementation becomes vague and discretionary, leading to rent seeking and corruption. Most importantly, as there is greater clarity in the policy in the implementation process, actors become aware of the threat to their turf and mandate. They try to limit the scope of the policy and to propose several changes to maintain their powers and current status.

From this perspective, the FEZ policy is one of the most contentious policies in development literature. Few topics in development economics have generated such heated debate as FEZs. Academics, civil society, politicians, and activists across the ideological spectrum have united in their criticism of FEZs to protect their

Box 10: Special Economic Zone Implementation in India

In India, the Special Economic Zones (SEZs) Act was passed by the Parliament in May 2005 without much opposition, and received presidential assent within 1 month. It became operative in February 2006 when the SEZ rules were also finalized. Not many believed that enactment of the SEZ Act would provoke interest among investors to establish SEZs. It was only the Ministry of Commerce, which owned the program, that believed SEZs would attract investment worth ₹1 trillion, including foreign direct investment of $5 billion–$6 billion by the end of December 2007. It was estimated this would generate 500,000 direct jobs.

A wave of SEZ proposals and approvals was initiated in February 2006. The number of notified SEZs zoomed from 19 in 2005 to 50 by December 2006, and formal approvals went up to 236 during the same period of time. This unprecedented rush to set up SEZs triggered a fierce nationwide debate among different interest groups over the usefulness of SEZs. Anti-SEZ protests were staged, which turned violent and shook the government. Early in 2007, violent protests in Nandigram forced the government to cancel the project, reduce the maximum allowed size of SEZs, enforce a temporary moratorium in SEZ projects, and make several changes in the policy before lifting the moratorium.

The debate on the merits of SEZs is not new. However, in India, several projects were stalled, delayed, or even canceled due to protests across the country. Opponents challenged not just the implementation, but also the logic of SEZs, in particular, private SEZs. SEZs were perceived as a tool used by big industrialists and real estate developers to grab land from farmers. Concerns were also expressed over the possibility of large-scale resources diversion from other areas to SEZs, their misuse for real estate development, a colossal government revenue loss, rise of corporate colonial rule, regional inequities, and labor and environment exploitation. Initially, marginal changes were introduced, but finally, in 2011, major tax benefits were withdrawn, dealing a major blow to the policy. Since then, the number of SEZs in India has declined drastically.

Sources: A. Aggarwal. 2006. Performance of Export Processing Zones: A Comparative Analysis of India, Sri Lanka, and Bangladesh. *Indian Council for Research on International Economic Relations (ICRIER) Working Papers.* No. 155. Delhi: ICRIER; A. Aggarwal. 2012. *Social and Economic Impact of SEZs in India.* Delhi: Oxford University Press.

respective interests and ideologies. Liberals criticize FEZs for causing distortions in the market forces and generating political rents; leftists view them as antisocial and a tool of labor exploitation; activists view them as land grabs; activists for women are concerned with the working conditions of female workers; environmentalists see them as a threat to environment; and financial departments fear colossal revenue loss to exchequers. In many countries, conflicts among interest groups have been at the center of the failure of FEZ policy (Box 10).

From the perspective of the conflict-ambiguity model, stakeholder management is the key to successful implementation of the special economic zone (SEZ) policy. Some argue that policies with high-intensity conflict can be implemented using a top-down approach. This is because implementation plans of such policies require the compliance of groups opposing the policy and its goals. This compliance may not come automatically, and requires the use of effective power by the top authority. The higher the authority's power, the greater compliance there will be.

There is evidence in the existing literature that this policy has been successfully implemented in countries where the top authority directly regulates FEZs (e.g., Bangladesh, the People's Republic of China (PRC), and Jordan) or the state has assumed a strong development role (e.g., the PRC; the Republic of Korea; Mauritius; and Taipei,China). In such top-down cases, the prerequisite for successful implementation is "effective communication between the policy makers and implementing authority," which, in turn, requires the following rules for effective implementation of the policy:

(i) keep the policy goals clear and consistent;
(ii) communicate the policy clearly to the implementing agencies, as too much ambiguity in the policy imposes both discretion and confusion in agencies that administer policies, leading to different interpretations by different officials, and also corruption and rent seeking;
(iii) elaborate on the tools and processes;
(iv) limit the extent of change; and
(v) provide explicit outcome criteria.

However, a pure top-down approach may have major weaknesses. Owners may fail to consider broader issues surrounding the policy, be influenced by a particular ideology or line of thinking, or be motivated by considerations not connected to the policy. Hence, local officials or implementing officials who have better knowledge and information of ground-level realities and are in a better position to give inputs in policy design, are marginalized. Besides, the top-down approach may involve the problem of personalization or personal interests. This will place an individual or a group at the center at the expense of the wider population and affect implementation adversely. In the Kyrgyz Republic, for instance, earlier FEZ policies had to be scrapped due to "bad locations" which might possibly be the result of extra-policy factors.

Notwithstanding this, a pure bottom-up approach also cannot work in FEZ policy. As discussed above, the FEZ policy is highly conflict-prone. It may raise an enormous amount of attention among interest groups, as well as the public. Conflict management in this case becomes difficult. However, stakeholders should have some participatory influence over relevant government policies and actions to provide a public voice. Legitimation is required at both policy making and implementation stages. Legitimacy includes four key dimensions: legal conformity, shared beliefs, evidence of consent, and good performance. The extent to which agencies' missions reflect the interests of the local environment and are based on public engagement determines the likelihood of success, so it is important to identify stakeholders; assess their roles, responsibilities, commitment, and resistance; plan a communications strategy and dialogue for feedback and inputs; and engage them in decision making. These stakeholders may be distinguished on the basis of the type of relationship i.e., vertical or horizontal and their position: internal or external (Table 7).

A streamlined approach to stakeholder management can reduce the ambiguities and can ensure compliance by different groups.

10.2 Human Resources Capability Model: Human Resources Management

Assuming that the FEZ policy is characterized by a high degree of consensus and is defined clearly, the implementation process becomes dominated by technocratic questions of the human capability of implementing the policy and incentive structure for compliance. Success, in large part, depends on the officials' skills, capacity, and commitment to the implementation structure.

Table 7: Types of Free Economic Zone Stakeholders

	Horizontal	Vertical
Internal	Relevant ministries, agencies, or policy sectors at the Center	Implementers, subordinate agencies and bodies
External	Coordination with private sector, civil society organization, public	Local governments, international agencies

Source: Author based on the existing literature.

Box 11: India's Self-Examination Customs Clearance System in Special Economic Zones

Under the 2005 Special Economic Zones (SEZs) Act, all trading activities of the SEZ unit, unless otherwise specified, operate on the basis of self-certification. This means that goods are assessed on the basis of the information provided by the tenants. There is no physical examination of goods, and the goods are allowed to move after verifying marks and numbers on the packages only. The system is a major move toward trade facilitation.

While the system of self-certification is a major shift in the regulatory approach, customs officials trained to monitor and regulate the activities of business units are not comfortable with it. They are on deputation from the Department of Revenue, generally for 3 years where they are trained in a very different way. Many of them are in peculiar positions while dealing with customs clearances of SEZ tenants and have a sense of insecurity. This sometimes results in confrontation and disputes in the implementation of customs rules.

Source: A. Aggarwal. 2012. *Social and Economic Impact of FEZs in India.* Delhi: Oxford University Press.

It is generally difficult to implement any new and radical policy because once a country is set on a certain policy path, actors become institutionalized. They are trained and shaped by a particular belief system—a set of basic values, causal assumptions, and problem perceptions—and exemplify a significant degree of coordinated activity over time (Sabatier 1988). These actors tend to protect the existing system because of lack of understanding of the new systems and sometimes even capability (Box 11). It does not mean that all actors try to maximize their self-interest; rather, it is assumed that actors have only limited capacity to understand the philosophy and prerequisites behind the new policy. The human resources capability model expects actors to perceive the world through a wider set of beliefs, necessitating great effort and costs by those who desire change. This brings the concept of learning, training, and incentive structures to the center of implementation.

Under this model, the success factors are as follows.

Training. "Policy learning" is an important aspect of policy implementation from the perspective of this model. Policy learning refers to "relatively enduring alterations of thought or behavioral intentions which result from experience and which are concerned with the attainment (or revision) of policy objectives" (Heclo 1974: 306). It alters the belief system and offers new insights on the saliency of problems, the

factors affecting them, and consequences for policy alternatives (Sabatier 1988). This requires training programs for capacity building. Bennett and Howlett pointed out that policy learning includes three complex processes: learning about organizations, learning about programs, and learning about policies (Bennett and Howlett 1992). For FEZs, training programs require learning about the broader macro context, alternative policy tools, rationale of the FEZ policy, designs of the policy and best practices, success factors, and outcomes.

Accountability. The concept of accountability is associated with honesty and integrity. It makes public officials answerable for their behavior and performance. Accountability also means establishing criteria to measure the performance of public officials, as well as oversight mechanisms to ensure that standards are met.

All participants in the implementation process should have a clear understanding of their roles and relationships, meaning these must be clearly defined. Participants can discharge their accountability functions effectively only if they know to whom they are accountable and for what. Likewise, they can hold others accountable only if they understand who is accountable to them and for what. They should know the key activities that must be undertaken, and how they should be organized.

Further, implementing agencies, to achieve the specified objectives, must be given the means, including the necessary authority, autonomy, and resources.

Finally, all participants in the implementing agencies must know how their performance will be evaluated. There are two relevant variants of accountability: accountability as honesty and accountability as performance (Ackerman 2005). The first variant is associated with rule-following bureaucrats, and the second variant with proactive public decision makers who are expected to perform efficiently and effectively. Ackerman indicated that the honesty version is process-oriented, while the performance is results-driven where accountability is seen as the ability to produce effective policy outcomes (Ackerman 2005). While the former is the ability to answer to superiors, the latter is a broader concept covering the community. The state's policy toward these attitudes needs to be clarified to the officials in the strategic framework.

Incentives. An incentive is a tool used to trigger a motivational reaction, that is, a change in human behavior. There are three types of mechanisms for gaining compliance from an implementing actor: normative, motivating a person by a superior authority to deliver; coercive, referring punishment in the case of failure to deliver the goal; and remunerative, through financial and nonfinancial incentives to do the job. Financial incentives comprise salaries and other monetary benefits, while nonfinancial incentives cover career development, technical upgrading through training, and paid leave. There are also choices between individual and group-based incentive systems. It is believed that "individually driven incentive systems may lead team members to focus on their own personal outcomes, detracting from teamwork, helping behavior, coordination, and team performance as a whole" (Barnes et al. 2011). A well designed mixed incentives system is critical to ensure high levels of compliance.

10.3 Institutional Complementarity Model: Complementary Institutional Support

This model assumes there is complementarity in institutions. From the perspective of implementation, this means a policy needs to be supported by a set of complementary policies. In other words, other institutions need to be aligned with the new policy to implement it; any inconsistency in the system affects the policy adversely. Thus, a comprehensive implementation strategy seeks to create a policy environment necessary for FEZs to flourish.

Since the primary objective of FEZs is to promote trade and investment, the macromanagement of the economy is essential for creating an environment in which trade and investment can grow exponentially. The investment policies cover not only foreign direct investment (FDI) but also domestic private sector concerns for the country to remain competitive. This requires a set of support policies directed at trade and investment, including membership in multilateral

trade agreements and regional trade agreements (RTAs), bilateral agreements on FDI, and multilateral investment guarantee agencies; regulation of monetary, fiscal, and exchange rate policies to keep the economy competitive for attracting global value chain (GVC)-linked trade and FDI; infrastructure for standards and technical regulations for ensuring the safety and quality of products in the market, as well as competent authorities in place to undertake standardization, testing, and certification; physical property rights and intellectual property rights; efficient legal systems; and economic diplomacy in general. Strengthened economic diplomacy will involve strategic and value-adding initiatives abroad to create better political environments for the benefit of trade and investment.

Further, the FEZ policy also needs to be integrated with export promotion and investment promotion policy frameworks. It is generally seen that FEZ promotion is the responsibility of the FEZ-related promotion infrastructure, while export promotion is under the purview of export promotion councils (e.g., in India) or any other export promotion infrastructure (Kazakh Exports), and investment is placed under the boards of investment (e.g., in the Philippines). Since trade and investment are intertwined and FEZs serve as the key instrument to promote both, their promotion should be an integral part of the overall strategy of trade and investment promotion.

Finally, the SEZ policy itself needs to have an institutional provision for an appeal and dispute settlement mechanism. If SEZ developers and tenants have any complaint against the approval decision or any other matter pertaining to their operations in SEZ, a single-window mechanism should be available to address these matters. Tenants and developers should not feel stranded when they hit a bottleneck. To make the redressal mechanism more meaningful and effective, a structured system needs to be established to ensure that the redressal sought is just and fair and within the given framework of the rules and regulations.

10.4 Risk Management Model

Effective implementation of the FEZ strategy requires risk management that pertains to the ability or use of tools that assess risks and their sources, and that respond and control or prevent situations that may have an adverse impact on the policy's implementation. Risk management is a process consisting of well-defined steps that, when taken in sequence, support better decision making by contributing to greater insight into risks and their impact on business. These risks may be classified into two categories: market-related risks, which can affect the trade and investment environment in a country and, in turn, FEZs; and FEZ-specific risks.

International trade is affected by, but not limited to, a range of market risks including:

(i) **Global business cycles.** Business cycles—alternating periods of recession and recovery—are integral to all free market economies. They do not occur at regular intervals, but every peak is followed by contraction due to the economy overheating. In this era of globalization, a business downturn in one part of the world leads to contagion, causing crashes in other parts. During this period, exports and investments slow down, affecting FEZs as well.

(ii) **Country political risks.** These risks arise out of major political instability, war, or civil disorder, which could result in defaults on payments, exchange transfer blockages, nationalization, or confiscation of property.

(iii) **Macroeconomic mismanagement.** This relates to unsound monetary or fiscal policies, and occurs when a country opts for expanding monetary supply or bloating fiscal deficit to boost demand. This may lead to inflation, which can affect the producer in higher local costs, difficulty in planning, and currency depreciation.

These risks can have far-reaching effects on the FEZs' performance. Some of them can be managed by diversifying economic activities, export destinations, and FDI source countries within FEZs; promoting the clustering of both domestic and foreign firms within FEZs; introducing flexibility in the rules on domestic market sales during crises to provide support to FEZ tenants; focusing on improving the business climate in FEZs during this period; and rigorously promoting the marketing of FEZs.

FEZ-specific risks include the following:

(i) **Fraud, tax avoidance, and money laundering.** While boosting economic opportunity, FEZs offer substantive relaxations in finance and trade controls and enforcement, creating opportunities for money laundering, tax avoidance, trafficking of counterfeit products, and financing of terrorism. These risks arise due to inadequate anti-money laundering and combating the financing of terrorism safeguards; relaxed oversight by competent domestic authorities; weak procedures to inspect goods and register legal entities, including inadequate record keeping and information and communication technology systems; and the lack of adequate coordination and cooperation between zone and customs authorities. The most commonly identified predicates are participation in an organized criminal group and racketeering, illicit trafficking in narcotics, fraud, counterfeiting and piracy of products, and smuggling (FATF 2010). Thus, awareness should be created in the private sector and among relevant competent authorities—namely, FEZ administrators, customs authorities, and bank regulators—to better identify the cases of FEZs misused by criminals. A stronger focus in training programs on these issues is essential to raise awareness about the potential misuse of FEZs. There is also a clear need to improve cooperation between competent authorities at the national and international level, as the exchange of information is a key element to identify illicit activities (e.g., fraud schemes) using FEZs. Finally, several organizations have developed reference tools for addressing some of these issues, including Caribbean Financial Action Task Force guidelines (2001) and the World Customs Organization instruments and standards. These may be used as guides for building measures to counter these risks.

(ii) **Noncompliance.** In addition to fraud, there may be serious issues of noncompliance by FEZ tenants. To address them, certain civil penalties should be set for failures to follow FEZ rules and to pay duties. The administration may seize and sell goods of persons subject to such penalties. In addition, criminal penalties may apply for certain offenses. In addition, FEZs cannot be used as an excuse for noncompliance with international standards in environment and labor issues (e.g., as in Bangladesh, Cambodia, and Myanmar). The regulator, in cooperation with international agencies and national governments, may tackle these issues.

(iii) **Changes in government policies and attitudes.** As discussed above, public policy decisions have the potential to involve conflicts with varying intensities. FEZ policy is normally associated with a high intensity of conflict. In such cases, policy actors engage in one or more political strategies or tactics to generate a favorable environment for the policy. However, this equilibrium depends on the feedback on outputs and outcomes and can be disturbed over time. Once this equilibrium is disturbed, and the government finds that the political returns on the policy are eroding, it can backtrack and withdraw its support to FEZs. FEZ implementers should be aware of this possibility and adapt to new realities without hurting existing tenants and contracts with them.

Chapter XI: Pillar 6: Monitoring and Evaluation

Monitoring and evaluation (M&E) is an important policy tool to track the progress of free economic zones (FEZs) and to facilitate decision making. Monitoring can be defined as a continuing function of overseeing progress in the achievement of results, involving a regular collection of information to assist timely decision making, ensure accountability, and provide the basis for evaluation and learning. Monitoring gives information on where the program is at any given time (or over time) relative to respective targets and outcomes.

Evaluation is a systematic and objective assessment of the FEZ program or policy, and its design, implementation, outcomes, and impacts. It is assessing or estimating the value, worth, or impact of an intervention and is typically done periodically, perhaps annually or at the end of a phase of a project or program. The aim is to determine efficiency, effectiveness, impact, and sustainability. Evaluation is a comparison between what is observed and expected.

A clear M&E framework is essential to guide policy makers, which reflects

(i) the specific questions that need to be answered to gauge the impact and success of the program,
(ii) information needed to determine if the expected objectives and outcomes were accomplished
(iii) performance indicators to be used for the evaluation, and
(iv) methodologies used to process the information.

11.1 Identifying the Questions to be Answered and Information Needed

The objective of M&E is to track FEZ strategies to help align them with changing realities and ensure transparency and public accountability for evidence-based policy making. As discussed in this report, the FEZ strategy consists of several elements: the mission, objectives, FEZ benefits and costs, designs, governance, and implementation. The whole policy cycle needs to be accompanied by evaluation tools. The first task is to define what is to be evaluated. For instance, it could be the design of the program and objectives, mission, implementation, outcomes, impacts, or any specific part thereof. The objective of M&E is to improve the quality of program designs by requiring the specification of clear objectives, use of performance indicators, and assessment of risks. For example, some of the relevant questions that need to be addressed are as follows:

(i) Is the FEZ policy serving its purpose?
(ii) Should the government continue with the FEZ initiative in its present form?
(iii) How is the FEZ policy performing versus other policies?
(iv) What elements of the policy are performing better?
(v) What challenges does the policy face?
(vi) How are the benefits weighed against the costs?
(vii) How can the design and management of future activities be improved?
(viii) How does the effectiveness of alternative interventions compare?

Note that not all the questions are asked at the same time. Different questions may be asked at different points in time depending on the strategic requirement. When used dynamically, M&E is an effective management tool to guide policy design and implementation. If it is managed rigidly, inefficiently, or with conflicts of interest, then it can stifle creativity and dynamism.

The process requires data collection and data analysis. It necessitates preparation of detailed operational plans; adequate training to develop skills in data collection, data interpretation, and analysis and reporting; management information system skills to implement performance monitoring systems; and stakeholder engagement in the M&E process. This provides a broader perspective and legitimacy to the exercise and addresses the conflict–ambiguity issue in the implementation of this policy (World Bank 2004).

11.2 Performance Indicators

Performance indicators include the measures of inputs, processes, outputs, outcomes, and impacts of the policy. While inputs and processes represent the policy, outputs are the direct result of these inputs. Outcomes represent the performance of FEZs, whereas impact is on the wider economy and society. Policy involves three basic processes: transformation of policy inputs and processes into output, transformation of output into outcomes, and transformation of outcomes into impact. For each level, indicators are identified and progress is assessed toward achieving them (Figure 51).

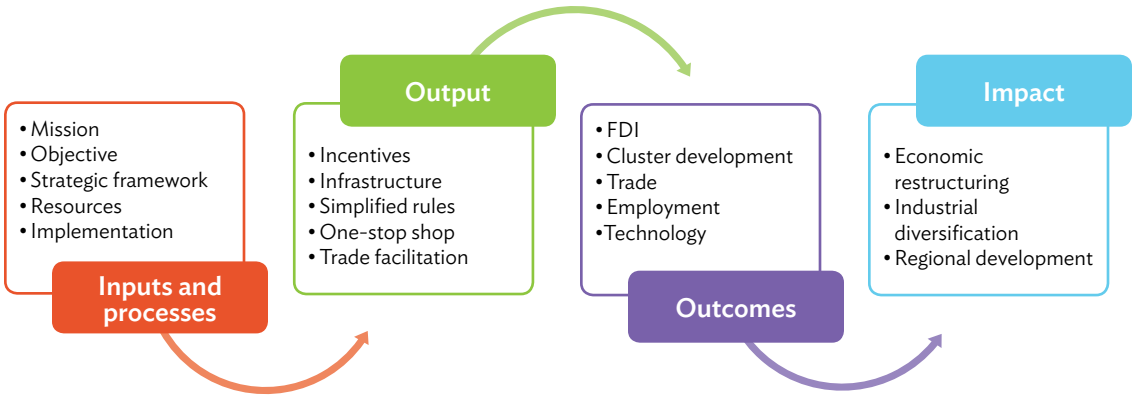
Depending upon the basic processes, three types of evaluation processes are defined:

(i) **Formative.** This analyzes how policy elements convert inputs into activities and outputs. Its conclusions are used to improve the administration of the policy.
(ii) **Outcome**. This focuses on how the implementation of the policy design leads to the achievement of objectives. It evaluates the design of the policy and focuses on the direct beneficiaries (i.e., FEZ tenants) of the program.
(iii) **Summative**. This measures whether the policy actions had a significant effect on the wider economy (i.e., impacts). This deals with spillover effects and the wider economy and society. It is also known as impact assessment and covers intended and unintended effects.

The output, outcome, and impact indicators are context-specific and are related to the policy design. They need to be further elaborated depending on the policy inputs.

(i) **Output indicators (Formative Evaluation).** Output evaluation includes examining the infrastructure, administrative processes, types of facilities, trade facilitation, and incentives. The investment climate in FEZs must be analyzed, including how attractive the FEZs are compared with the rest of the economy. Whether they overcome the institutional constraints of the wider economy must be examined, as well as the FEZ investment climate's gaps, and if the country has adopted best practices in the policy design.
(ii) **Outcome indicators (Outcome Evaluation).** Outcome measures include the magnitude of trade and FDI, type of investment attracted, source countries, type of employment generated, female employment, labor conditions, type of companies, composition of exports, motive of companies investing, taxes forgone, tax receipts, and export destinations. Output measures also cover the indicators for backward and forward linkages, including

Figure 51: Types of Indicators for Monitoring and Evaluation Framework



FDI = foreign direct investment.
Source: Author.

sourcing from domestic firms, outsourcing of production outside of FEZs, value added, and FEZ sales in domestic markets. Policy makers must ask if the FEZ policy succeeded in generating agglomeration effects if the actors operating in the cluster are interlinked, if investors have long-term investment plans, and why they were attracted to FEZs. Further, they must analyze if the companies attracted to zones have a pull effect, what kind of activities they are involved in and where their exports are directed, how the FEZ affected export performance and productivity of companies, how much tax revenue was forgone, the cost of the FEZ program, and evidence of linkages between FEZs and the outside economy.

(iii) **Impact indicators (Summary Evaluation).** Impacts are a multidimensional vector that covers technological, economic, social, and environmental effects based on multidimensional inputs.

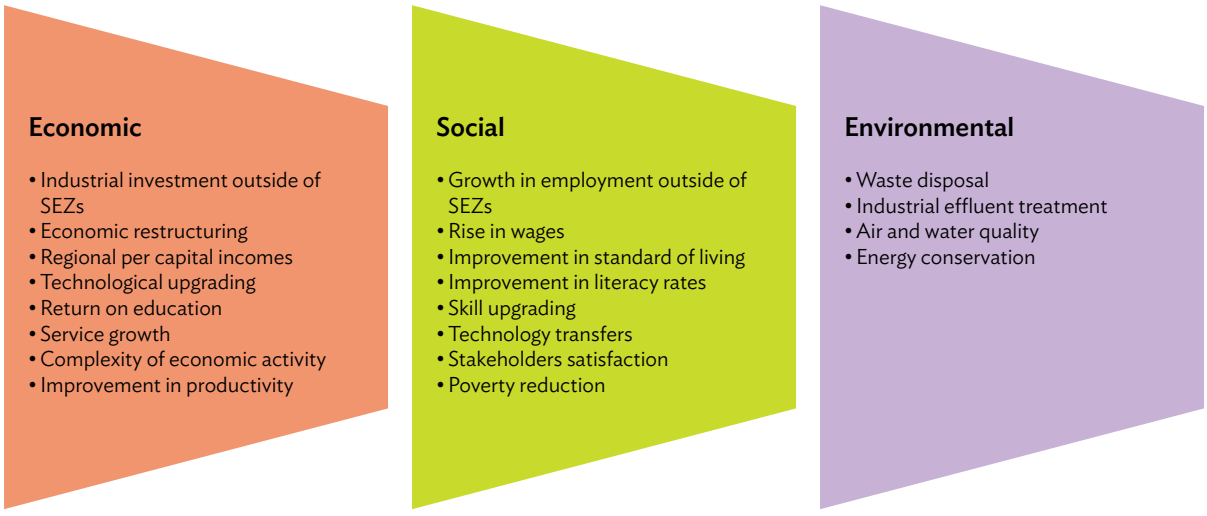
Most studies on FEZs focus on outcome indicators such as foreign direct investment (FDI), employment, exports, and foreign exchange earnings. There are a few analyses on backward and forward linkages, tax receipts and tax revenue forgone, and spillover effects, but a shift has occurred in the focus from outcome evaluation to summative evaluation. Studies are emerging on the poverty impacts of FEZs, labor effects, knowledge creation, or regional structural change. However, an exhaustive analysis of impacts along the functional chain of effects and spin-off activities would be doomed to fail, as any impact analysis needs to focus on selected impact dimensions.

Overall, authorities must avoid defining too many indicators or those without accessible data. This makes the system costly, impractical, and likely to be underused. It must also be noted that the indicators should be consistent with each other as well. If too many indicators are selected, there is a chance of inconsistency between some of them. Also, there is a trade-off between picking the desired indicators and having to accept those available. This trade-off must be taken into account in the analysis of the results.

11.3 Methodologies

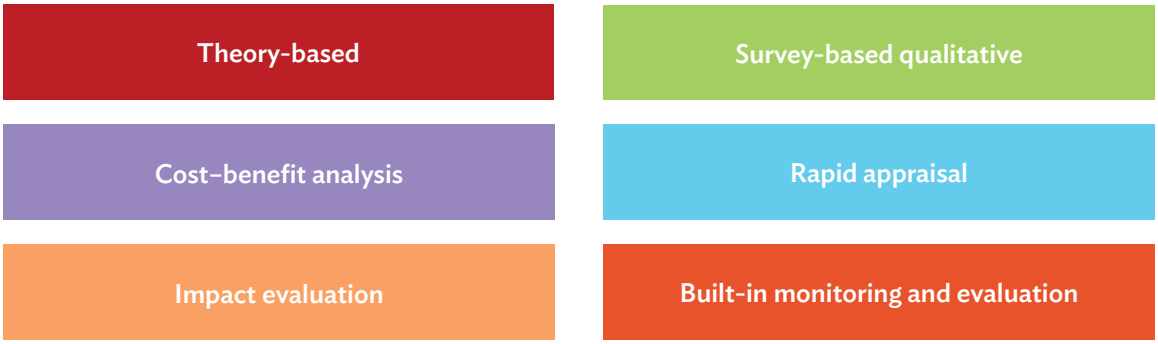
There is a range of methodologies for M&E (Figure 53). However, there is no best model of what the M&E system for FEZ policy should look like. Much depends on the availability of information and the potential use of the system.

Figure 52: Social, Economic, and Environmental Indicators for Summative Evaluation



SEZ = special economic zone.
Source: Author.

Figure 53: Methods for Monitoring and Evaluation



Source: World Bank. 2004. *Monitoring and Evaluation: Some Tools, Methods, and Approaches.* Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/23975.

Theory-based approach. The theory-based evaluation approach attempts to analyze why policy produces intended or unintended effects by mapping out the determining or causal factors important for success, and analyzing how they interact. It also develops an understanding of power relationships, influence, and interest groups, as well as their complex interrelationships. It then shows if the objectives or outcomes are less or more likely to be achieved. Steps can be monitored as the program develops, allowing critical success factors (CSFs) to be identified.

Theoretical frameworks adopted for this approach of evaluation are useful, as they can help policy makers position FEZs within a broader framework and prioritize indicators. They also facilitate the selection of indicators that can be critical for FEZs in a given host country. There are distinct theoretical perspectives on FEZs highlighting different dimensions, benefits, and impacts of FEZs (Box 12). These may be grouped into two categories: pessimistic and optimistic. While the classical (i.e., rightist) and Marxist (i.e., leftist) approaches are pessimistic, institutional approaches are optimistic. The theoretical approach is particularly useful as it provides the platform for impact assessment through other qualitative and quantitative methods.

Built-in M&E approach. In the built-in M&E method, the M&E system is integrated into the FEZ program. It is fully and functionally interfaced in the aspects and indicators used to monitor and evaluate those aspects. The built-in M&E system also makes the implementing agency, the agent responsible for evaluation; information is used immediately at the level where it is produced and then sent upward (i.e., bottom-up) for collation, analysis, interpretation, and utilization at each level. It is a two-way flow of information, as feedback from above is then fed back (i.e., top-down) to each level below. Such a system creates intelligent institutions and cultures of information within which informed decisions are made to plan the policy (Bhola 2006).

Survey-based qualitative. Formal surveys can be used to collect standardized information from a sample of firms and/or other sections of the community affected by the FEZs, depending on the M&E's objective. These surveys can be used to collect data on a wide set of output, outcome, and impact indicators. For output and outcome indicators, the target group is FEZ tenants, while for impact assessments, it is the wider economy and community outside of the FEZs. These surveys can be used to provide baseline data against which the performance of the program is compared, comparing firms from different industries at a given point in time,

Box 12: Theoretical Perspectives on the Usefulness of Free Economic Zones

Neoclassical (Orthodox). Free economic zones (FEZs) are cheap locations offering tariff exemptions and other tax benefits to promote trade in tariff-distorted economies. This approach is heavily concerned with trade and trade-generated benefits of FEZs: employment and income effects, and foreign exchange earnings. However, these gains are found to be ambiguous. Employment generation leads to positive income effects, but there are no indirect effects of FEZs because they have no backward or forward linkages with the rest of the economy. This approach does not associate FEZs with foreign direct investment (FDI)-generated benefits. International capital inflows promoted by FEZs can divert resources against a country's comparative advantage, reducing the country's welfare. In specific terms, it focuses on outcome indicators—exports, foreign exchange earnings, employment, and gross domestic product.

Political economy approach. This approach draws on the public choice theory, which has a close affinity with neoliberalism. According to this approach, FEZs are an outcome of the politics of interest groups. They are established to generate rents to a few capitalist and multinational corporations by offering them tax incentives and other benefits at the expense of the rest of the population. These groups would make investments anyway, but due to the large stakes involved, they provide incentives to government officials to influence policy in their favor. Thus, FEZs are tax shelters that induce relocation or diversion of economic activity from domestic areas, resulting in huge costs to the state exchequer, with no net addition to investment and economic activity. This results in massive revenue forgone in tax incentives, with no additional benefits. The focus here is on forgone taxes, and received and additionality of investment.

Marxist dependency theory. The basic tenet of this theory is that the primary rationale of setting up FEZs is to offer cheap labor to augment global value chains (GVCs). According to this theory, FEZs are a tool to facilitate the production systems (i.e., GVCs) largely driven by multinational corporations to exploit differences in location costs. The research and management activities are controlled by core or developed countries, while assembly line work is relegated to periphery countries. Industrialization and technical progress in the periphery is insufficient to break dependency ties with the center. The system benefits only the core countries at the expense of the periphery or satellites, and is a tool of labor exploitation. This approach focuses on labor conditions and wages.

Heterodox theory. FEZs are a strategic tool to attract FDI to fill gaps in technical, marketing, and managerial know-how that developing countries' firms face. A potentially important indirect effect of FEZs is the export spillover effect. Foreign affiliates attracted to FEZs can stimulate local firms to begin to export by showing them how to produce, market, sell, and distribute manufactured goods to the world market. This approach deals with outcome indicators, such as FDI, technology transfers, and backward linkages; and impact indicators, such as technological upgrading and export acceleration.

Dynamic classical approach. Following the success of FEZs in China, this approach recognizes that FEZs may be set up as testing laboratories for facilitating the process of economic transition and liberalization. In such a case, FEZs are considered a stepping-stone to test trade and investment liberalization measures before implementing them in the general domestic environment. Thus, this approach looks at the economic reforms process as an outcome of the FEZ policy.

Life cycle approach. Under this approach, the benefits of FEZs are not uniform across countries and zones; they are conditioned upon the type of activity they attract and their evolution. Thus, the composition of FEZs becomes an important aspect in determining their effects.

continued on next page

Box 12 *continued*

Newer international division of labor perspective. According to this approach, FEZs provide the platform to become attached to GVCs; upgrading along these value chains is the way developing countries can industrialize in this era of rapid technological changes.

Agglomeration approach. This approach highlights the importance of FEZs in promoting agglomeration economies, which is instrumental in promoting competitiveness, research and development, and innovation.

Source: A. Aggarwal. 2012. *Social and Economic Impact of FEZs in India.* Delhi: Oxford University Press.

comparing changes over time in the same group, comparing actual achievements with targets set in the program, describing the effects of the program on a particular community or group, and providing key input to a formal evaluation of program impact. This methodology requires sound technical and analytical skills for sample and questionnaire designs, data analysis, and processing. Findings from these surveys can be applied to wider target groups. Some disadvantages of this M&E method are: these surveys do not provide longitudinal data, which can provide a clearer picture of the changes taking place over time; the sample can be biased or too small to present a true picture; sometimes information is difficult to obtain through formal interviews; and it may not provide fine details.

Rapid appraisal method. Rapid appraisal methods are quick, low-cost ways to gather the views and feedback of beneficiaries and other stakeholders to respond to decision makers' need for information. These views provide rapid information for management decision making, especially at the activity or program level. They can also provide qualitative understanding of complex macroeconomic changes; highly interactive social situations; and values, motivations, and reactions to policy. However, findings usually relate to specific firms or communities; thus, it is difficult to generalize from findings. Some rapid appraisal methods are as follows:

(i) **Key informant interviews.** A series of open-ended questions are posed to implementing authorities, firms, or individuals selected for their knowledge and experience related to the policy. Interviews are qualitative, in-depth, and semi-structured.
(ii) **Community group interviews.** A series of questions and facilitated discussions occur in meetings open to all firms or community members depending on the objective of the appraisal. The interviewers follow carefully prepared questionnaires.
(iii) **Mini-surveys.** A structured questionnaire with a limited number of close-ended questions is administered to a selected sample group, who may be random or purposive.

Cost–benefit analyses. Warr proposed a cost–benefit framework to assess FEZ policy (Warr 1983). A cost–benefit analysis is a tool for assessing whether the costs of an activity can be justified by the outcomes and impacts. It measures both inputs and outputs of FEZs in monetary terms. FEZs benefit the economy by making payments for the input use (i.e., wages, electricity tariffs, taxes, and payments for local inputs) and by generating profits channeled to domestic shareholders. The cost of FEZs is measured by the expenses involved in establishing and administrating FEZs, nonfiscal incentives, and taxes forgone. If the excess of actual payments at the market price over the opportunity cost of the resources (i.e., shadow price) exceeds the costs of setting up and maintaining zones,

then their contribution to the economy is considered positive. Forward and backward linkages are assumed to be insignificant in this exercise. However, this method is fairly technical and is based on several assumptions due to nonavailability of requisite data. The results are essentially projected results, which may be highly dependent on assumptions made. It considers only direct benefits; all indirect and spillover benefits to the wider economy are ignored and therefore of little value.

Impact evaluation. Impact evaluation is the systematic identification of FEZ effects on the wider economy and community. Impact evaluations can range from large-scale sample surveys in which FEZ beneficiaries and control groups are compared before and after, and possibly at several points during program intervention, to small-scale rapid assessments and participatory appraisals where estimates of impact are obtained from combining group interviews, key informants, case studies, and available secondary data. While rapid evaluation methods can be used to estimate impact, more sophisticated methods of impact evaluation can provide more reliable findings. Such methods entail the comparison of FEZ-related and -affected target groups with non-FEZ-related- and -affected (i.e., control) groups at two or more points in time. This type of evaluation is highly demanding in statistical sophistication. The two broad techniques for the analysis are:

(i) **Randomized evaluation design (i.e., experimental design).** This involves the collection of information on FEZ-affected and control groups at two or more points in time, and provides the most rigorous statistical analysis of project impacts and the contribution of other factors. In practice, it is rarely possible to use this design for reasons of cost, time, methodological, or ethical constraints. Most impact evaluations use less expensive and rigorous evaluation designs.

(ii) **Quasi-experimental design.** In this design, a nonequivalent control group is selected to match the characteristics of the FEZ beneficiaries; the latter is compared with the former at a point of time. This model sacrifices methodological rigor in return for significant reductions in cost and time requirements.

Impact evaluation explains the extent to which FEZs can benefit the region and the community outside of FEZs. The results can be used to inform decisions on whether to expand, modify, or eliminate the program. It is highly data-intensive, requiring data not only on FEZs or the regions affected by FEZs, but on the groups not under the purview of FEZs.

11.4 Conclusion

In regard to FEZ policy, M&E provides government officials and stakeholders with means to learn from past experiences; improve the design, implementation, planning, and allocation of resources; and demonstrate results as part of accountability to key stakeholders. It is therefore crucial to develop a Monitoring and Evaluation framework, including a schedule for evaluations.

There is no best practice model for M&E; it is contextual. Different methods may be adopted depending on the objective of M&E, indicators identified for evaluation, data availability, and human resources. For each evaluation, an initial evaluation plan needs to be prepared which may follow identification of the indicators; and training of a team to conduct the evaluation. There is a danger of over engineering an M&E system, particularly through multiple monitoring systems with an excessive number of performance indicators (Mackay 2007). This can kill creativity and the spirit of experimentation. Most importantly, however, M&E is worthwhile only to the extent that it is actually used to improve the government performance. This requires an action plan for a follow-up.

Chapter XII: Conclusion

A major development challenge of the Kyrgyz Republic is achieving inclusive and sustainable economic development. The government implemented an economic strategy with sustainable development at its core in the mid-1990s. Subsequent documents highlighted the government's intentions of achieving inclusive and sustainable growth. In 2013, it adopted a new economic strategy mainstreaming the objective of sustainable development in its development strategy. But the country seems trapped in the resources curse due to foreign currency inflows on account of its gold mining, remittances, and foreign aid flows. This reality is reflected in highly volatile growth rates, low competitiveness, low and diminishing productivity rates, and sector retrogression, with low and declining shares of manufacturing. Economic specialization in the commodity sector has affected the competitiveness of the industry sector, while high wages in the mineral sector and inflows of remittances have driven up the average wage rate and consumption levels with little incentive to invest, resulting in cost disease. In turn, this affected the Kyrgyz Republic's export competitiveness, and, along with institutional bottlenecks, affected its attractiveness to foreign investors.

While cost-competitiveness of the economy is affected by high wage and price growth with an increase in tariff rates; governance-related factors, business rules and regulations, and poor infrastructure hinder productivity-linked cost-competitiveness. Low productivity-based competitiveness has emerged due to a low-quality education system, underdeveloped financial systems, a lack of technological capability, and low efficiency of research and development infrastructure. The government sector is subjected to weak rule of law, weak voice in the legal system, discretionary interpretation of the law, and a high level of corruption, which further diminish incentives to private entrepreneurs to make large-scale investments in the country.

The vicious cycle of low competitiveness -> → low investment levels → low competition in the markets →high costs →low productivity must be broken and substituted by virtuous cycles of competitiveness and productivity by triggering competitiveness drivers. The remedy lies in pushing the economy to higher levels of private investment, both local and foreign. Today, two major tools that can serve a big push are: FEZs and industrial parks. The Kyrgyz Republic has had a long experience of developing FEZs. Despite much efforts and highly ambitious goals of promoting socioeconomic development assigned to them, FEZs in the Kyrgyz Republic have made a limited contribution to investment and growth. This raises two pertinent questions: One, should the Kyrgyz Republic focus on regional economies? Two, if yes, what should be the strategic framework?

While addressing the first question, this report offers strong arguments in favor of developing economic zones and thus focusing on regional economies as a development strategy. First, in the late industrialized countries, rapid development or application of technological change becomes necessary to catch up with the early industrializers to bridge the technological gap. One important advantage of late industrializers is the availability of not only foreign technology but also other foreign resources, skills, and capital in the form of FDI. The proliferation of GVCs has opened enormous possibilities of tapping into these resources. In this era of globalization when it is becoming increasingly difficult to build industrial capabilities and across the full range of activity, countries can insert themselves in GVCs and specialize in a single stage of production, depending upon competitive advantage, and then upgrade themselves. FEZs and industrial parks serve as the platform for hosting these GVCs and tapping into foreign resources. Second, economic realities have changed over the last decade with the creation of the Eurasian Economic Union (EAEU), political stability, an upcoming multimodal corridor network across the region, and the proposed Silk Road Strategy. FEZs and industrial parks can leverage these trade drivers. Third, the presence of foreign firms generates important spillovers through demonstration effects, on-the-job training, and learning by doing and copying, and contributes to the diffusion of technology and knowledge. These spillovers fill the gaps in technical, marketing, and managerial know-how which firms in a developing country, such as the Kyrgyz Republic, face. Fourth, FEZs and industrial parks also promote agglomeration economies, and the specialization of activities within these clusters creates pools of skilled labor, external economies in the form of lower

transport and logistics costs, lower communication costs, lower infrastructure costs, and knowledge spillovers. Further, the geographic proximity of firms can act as a major driving force for innovation, learning, and knowledge spillovers, and, in turn, promote productivity-based competitiveness. Finally, FEZs and industrial parks can serve as the centerpiece of smart industrialization. Instead of creating expertise across a number of industries, governments can start by identifying value chains and increase participation in them through these zones. This may offer firms access to a global pool of new technologies, skills, capital, and markets. As a consequence of learning by exporting, firms in the Kyrgyz Republic can upgrade and eventually target more sophisticated market segments, such as design, marketing, and branding.

However, there are costs and risks associated with FEZs and industrial parks (Chapter 4). As highlighted by ADB (2017a), these include, colossal revenue forgone in tax incentives without attracting additional activity, large government expenditures on infrastructure, allocative inefficiency, and lowering of labor and environment standards. In view of these costs, experts around the world are deeply divided over the usefulness of economic zones in attracting investment and promoting development. Many of the arguments against FEZs however are offered in "static classical equilibrium contexts." This report uses dynamic contexts to underline the potential of this tool and draws on the success of many developing countries in driving investment, exports, and economic development using zones as the platform. A classic example of successful zone program is the "enterprise zones" in the United States, which have been promoted to rejuvenate regional economies. In developing countries also, zones have evolved over time. They are growing larger, open, comprehensive, and hybrid, with greater integration with regional economies and are directed to regional rejuvenation. From the dynamic perspective, the most serious risk perhaps is that if a country fails to upgrade, it is locked in low value-added operations where it starts losing competitive advantage due to rise in wages and other costs and, hence, investment.

Much depends on the effectiveness with which the potential of this tool is used. There is a need to focus attention on how to design and use them within the broader development strategy. The limited success of economic zones in the Kyrgyz Republic can be attributed to the fact that policymakers have not yet recognized the potential of FEZs and industrial parks in the development strategy. They have adopted a static enclave approach where the potential of FEZs and industrial parks has been severely underutilized.

Widespread weaknesses in the macro business environment affected the growth of FEZs and industrial parks, and the investment climate in zones could not be insulated from the rest of the economy. There is a disconnect between the policy approach adopted toward FEZs and the objectives assigned to them. There is also a disconnect between the key elements of the development strategy and the development of zones. While the major goal of the development strategy is to achieve sustainable regional development and that of FEZs is also to achieve socioeconomic development at regional and national levels, but the latter are not integrated with the former nor do they find any mention in the former.

A new strategic framework proposed here has six pillars:

(i) integrating FEZs and industrial parks with the sustainable regional development policy framework,
(ii) improving the attractiveness of FEZs and industrial parks to attract GVC-linked investment,
(iii) promoting spillovers from GVC-linked investment,
(iv) promoting RVCs and cross-value chains,
(v) developing a sound implementation strategy, and
(vi) establishing a sound M&E framework.

Pillar 1: Integrate FEZs and industrial parks with the regional development policy. There is a strong case for transforming existing satellite FEZs into nodes of dynamic clusters with both industrial parks and single-enterprise FEZs operating within them to increase not only the competitiveness of firms in international markets, but to ensure larger gains from effective trade and spatial (regional) transformation. More specifically, the current FEZs need to be transformed into hybrid economic zones where both export-oriented and domestic market-oriented firms operate to generate a critical mass of activity. Market forces will determine the nature of the activity they attract. Specialized industrial parks may also be set up within these new FEZs, but they may also be located in other locations. Both are tracts of land developed by the government for industrial activity. Both need to be developed as complementary to each other to break the vicious cycle of low competitiveness by offering

cost-competitive platforms for attracting GVC-linked FDI, as well as promoting domestic investment.

To attract investment, the Kyrgyz Republic may target selected value chains depending on its competitive advantages. These GVCs must be mapped to identify the range of activities in which the country has competitive advantages. Investment by target investors in these value chains may be facilitated, with a particular focus on group investors. The Kyrgyz Republic can also invite international companies and/or governments to set up industrial parks. This will offer the country a learning experience in developing such parks.

Pillar 2: Improve the attractiveness of FEZs and industrial parks to attract GVC-linked investment. Policies and operational practices in the zones need to be in line with the needs of private investors and international standards. FEZs are set up to attract GVC-linked investors who face stringent requirements related to cost, time, quality, and flexibility to be successful. They require hassle-free and low-cost locations to be successful. Thus, the business environment within FEZs must be insulated from the outside to make them attractive, and policies should be transparent and stable. Many zone programs undermine investor confidence by failing to deliver a conducive and predictable policy environment. The three strategic pillars for a good business climate are a sound legal framework with an overriding or grandfather clause for stability; a sound administrative framework for offering single-window clearances; and rules and regulations covering provisions pertaining to infrastructure, incentives, administrative services, labor, and environment, based on best practices. Some of the best practice countries and areas are Dubai, Jordan, Bangladesh, and the Philippines.

Pillar 3: Promote spillovers from GVC-linked investment. There is a need for the government's concerted efforts to build and strengthen strong domestic capabilities to reap the benefits of technology and knowledge transfers. FEZ effectiveness as an instrument for achieving long-term industrial development is conditional upon the linkages created with the domestic economy. The creation of backward linkages is largely conditional on the type of FEZ activity, government policies, and domestic capabilities. Based on these factors, three strategies are proposed to promote these linkages: the minimalist approach, requiring the government to lower transaction barriers between FEZs and domestic firms; the proactive approach, which creates favorable domestic conditions and strengthens domestic capabilities; and the focused approach, which places zones at the center of the process of industrialization through vertically specialized industrialization. A comprehensive approach combining all three approaches is the way forward for the Kyrgyz Republic.

Pillar 4: Promote RVCs and cross-border value chains. RVCs can be a path for the Kyrgyz Republic to integrate into GVCs. They can also reduce dependence on multinational corporations' strategies, decouple growth with that of developed countries, and forge deeper regional economic integration. Factors that can facilitate the promotion of RVCs include membership in the EAEU; emergence of transport corridors; and economic diversity among member countries, with the Russian Federation as a leading large economy. By coordinating efforts to strategically foster FEZ-based clusters that take advantage of complementary endowments of different member countries, the Kyrgyz Republic can leverage zone infrastructure and regional integration to overcome its limitations of scale and specialization. The sectors in which RVCs can flourish, based on regional comparative advantages, are machinery and equipment, apparel, agriculture-related, and light industries through retail chains. An appropriate strategy—involving harmonization of standards and regulations in selected sectors, harmonization of FEZ definition, FEZ regulations, and fiscal incentives, as well as initiation of programs and projects integrated with entrepreneurship development programs for enhancing capabilities of firms in participating and managing the chains—will be the way forward in promoting these chains. It is also recommended to set the target of transforming the Naryn FEZ into a cross-border zone over a long period of time with a focus on machinery and equipment, electronics, and agriculture-related industries to complement the growth of Kashgar SEZ on the PRC side of the border. The promotion of a cross-border zone will involve economic integration in the cross-border region and include intersector cooperation among a wide set of actors, including the entire socioeconomic system and administrative institutions. Currently, setting up a commercial hub is under consideration. At least one geographically delineated manufacturing node on the territory of Naryn needs to be set up as a cross border zone to complement the proposed commercial zone there. At present, the whole territory is a FEZ with little agglomeration benefits.

Pillar 5: Develop a sound implementation strategy. Implementation means moving a policy from concept to reality, from design to its enactment. Four main models of implementation identify the factors critical for successful implementation of the FEZ strategy: conflict-ambiguity model, human resources capability model, institutional complementarity model, and risk management model. Their recommendations can be distilled as follows:

Stakeholder management. Identify stakeholders, assess their roles and responsibilities, commitment, and resistance. Plan a communication strategy and dialogue for feedback and input, engage them in decision making and prosperity sharing, and limit the extent of change. It is also important that the policy goals are kept clear and consistent, and are communicated to the implementing agencies. Too much ambiguity in the policy imposes both discretion and confusion in agencies that administer policies, leading to different interpretations by different officials, and also corruption and rent seeking.

Human resources management: Train implementing personnel, set up mechanisms to ensure accountability, and offer incentives.

Management of complementary institutions. Conduct macromanagement of the economy to create an environment in which trade and investment can grow exponentially and integrate FEZs with export promotion and investment promotion policy frameworks.

Risk management: Anticipate, assess, and manage risks in implementing the policy effectively, diversify economic activities, export destinations, and FDI source countries within FEZs; promote the clustering of both domestic and foreign firms within FEZs; develop flexibility in the rules on domestic market sales during crises to provide support to FEZ tenants; promote rigorous marketing of FEZs to help manage market risks; and adopt best practices regarding FEZ-related risks, such as fraud and money laundering, noncompliance, and change in the government attitude toward FEZs.

Pillar 6: Establish a sound M&E framework. A clear framework is essential to guide M&E to gauge the impact and success of the program in the expected objectives and outcomes, and to identify methodologies to process the information. Different methods may be adopted depending on the objective of M&E, indicators identified for evaluation, data availability, and human resources availability. M&E is worthwhile only to the extent it is actually used to improve the government performance; hence, prepare an action plan for a follow up and dissemination of results. There is a danger of overengineering an M&E system, particularly through multiple monitoring systems with an excessive number of performance indicators. This can kill the spirit of experimentation.

References

Ackerman, J. 2005. Social Accountability in the Public Sector: A Conceptual Discussion. *Participation and Civic Engagement Papers.* No. 82. Washington, DC: World Bank.

A. Aggarwal. 2006. Performance of Export Processing Zones: A Comparative Analysis of India, Sri Lanka, and Bangladesh. *Indian Council for Research on International Economic Relations (ICRIER) Working Papers.* No. 155. Delhi: ICRIER.

____. 2006. Special Economic Zones: Revisiting the Policy Debate. *Economic and Political Weekly.* 41 (43–44). pp. 4533–4536.

____. 2007. Impact of FEZs on Employment, Human Development and Poverty. *ICRIER Working Papers.* No. 194. Delhi: ICRIER.

____. 2011. Promoting Agglomeration Economies and Industrial Clustering through FEZs: Evidence from India. *Journal of International Commerce, Economics and Policy*. 2 (2). pp. 201–227.

____. 2012. *Social and Economic Impact of FEZs in India.* Delhi: Oxford University Press.

Y. D. Ahn. 2007. Foreign Direct Investment in Korea's Free Economic Zones. Presentation. 2 June 2007. http://slideplayer.com/slide/11713875/ (accessed 6 August 2017).

G. Akinci and J. Crittle. 2008. *Special Economic Zone: Performance, Lessons Learned and Implications for Zone Development.* Washington, DC: World Bank.

M. Ali. 2012. Government's Role in Cluster Development for MSEs: Lessons from Ethiopia. *Chr. Michelsen Institute (CMI) Reports.* No. 2012:2. Bergen, Norway: CMI.

C. Altomonte and G. Békés, eds. 2016. *Measuring Competitiveness in Europe: Resource Allocation, Granularity and Trade.* Brussels: Bruegel Blueprint.

M. Amiti and B. S. Javorcik. 2008. Trade Costs and Location of Foreign Firms in China. *Journal of Development Economics.* 85 (1–2). pp. 129–149.

B. van Ark and M. Timmer. 2003. *Asia's Productivity Performance and Potential: The Contribution of Sectors and Structural Change.* Groningen, Netherlands: University of Groningen.

Asian Development Bank. 2009. *Trade Facilitation and Logistics Development Strategy Report: The Kyrgyz Republic.* Manila.

____. 2012. *Kyrgyz Republic Country Assistance Program Evaluation: Evolving Transition to a Market Economy Country Assistance Program Evaluation*. August. Manila.

ADB. 2014. *Technical Assistance Report: Supporting Industrial Park Development in the Central Asia Regional Economic Cooperation Region.* Manila.

____. 2015. *Asian Economic Integration Report 2015: How Can Special Economic Zones Catalyze Economic Development?* Manila.

____. 2017a. *Diagnostic Study of the Kyrgyz Republic.* Manila.

____. 2017b. *A Strategic Framework for Special Economic Zones and Industrial Zones in Kazakhstan.* Manila.

Atameken. 2016. *Cancelation of Customs Privileges Will Entail Stoppage of Enterprises in FEZs.* 29 March. http://oskemen.palata.kz/en/news/22103-otmena-tamozhennyh-l-got-povlechet-ostanovku-predpriyatij-v-FEZ.

R. Auty. 1991. Managing Mineral Dependence: Papua New Guinea 192–89. *Natural Resources Forum.* 15 (2). pp. 90–99.

____. 1993. *Sustaining Development in Mineral Economics.* London: Routledge.

C. Baissac. 2011. Brief History of SEZs and Overview of Policy Debates. In T. Farole, ed. *Special Economic Zones in Africa: Comparing Performance and Learning from Global Experiences.* Chapter 2. Washington, DC: World Bank.

R. Baldwin. 2011. Trade and Industrialisation after Globalisation's 2nd Unbundling: How Building and Joining a Supply Chain Are Different and Why It Matters. *NBER Working Paper No. 17716.* Cambridge, Massachusetts.

Z. Bangsong. 2010. Kashgar to Become Home to Xinjiang's Own FEZ Nation. *Economic Observer*. Issue 471. 3 May. p. 9. Translation: T. Xiangyang. Original article: http://www.eeo.com.cn/ens/ Politics/2010/07/23/176357.shtml.

C. M. Barnes, J. M. Schaubroeck, M. Huth, and S. Ghumman. 2011. Lack of sleep and unethical behavior. *Organizational Behavior and Human Decision Processes.* 115. pp. 169–180.

C. Bennett and M. Howlett. 1992. The Lessons of Learning: Reconciling Theories of Policy Learning and Policy Change. *Policy Sciences.* 25 (3). pp. 275–294.

P. Brenton, J. Sheehy, and M. Vancauteren. 2001. Technical Barriers to Trade in the EU: Data, Trends and Implications for Accession Countries. *Journal of Common Market Studies* 39 (2). pp. 265–284.

V. M. Buckley. 1989. From the Darkness to the Dawn: The Later Prehistoric and Early Christian Borderlands. In R. Gillespie and H. O'Sullivan, eds. *The Borderlands. Essays on the History of the Ulster-Leinster Border.* Institute of Irish Studies at Queen's University. Belfast. pp. 22–41.

E. M. Bergman and E. J. Feser. 1999. *Industrial and Regional Clusters: Concepts and Comparative Applications*. Morgantown, West Virginia: Regional Research Institute, West Virginia University.

H. S. Bhola. 2006. Approaches to Monitoring and Evaluation in Literacy Programmes. Background paper for the Education for All Global Monitoring Report 2006 Literacy for Life, UNESCO Institute for Education.

A. R. Bond and N. R. Koch. 2013. Interethnic Tensions in Kyrgyzstan: A Political Geographic Perspective. *Eurasian Geography and Economics*. 51 (4). pp. 531–562.

Y. Bondar. 2001. Free Economic Zones in Kyrgyzstan's Reforming Economy. http://www.ca-c.org/ journal/2001/journal_eng/cac-03/18.bonden. shtml.

J. P. S. Boyenge. 2007. ILO Database on Export Processing Zones, Revised. Working Paper. Geneva: International Labour Organization. http://www.ilo.org/ public/libdoc/ ilo/2007/107B09_80_engl.pdf.

J. A. Cantwell and S. Iammarino. 2001. EU Regions and Multinational Corporations: Change, Stability and Strengthening of Technological Comparative Advantages. *Industrial and Corporate Change: Special Issue on Geography of Innovation and Economic Clustering.* 10 (4). pp. 1007–1037.

M. Castell. 2004. *Assessing the Role of Government Institutions Supporting Industrial Adjustment in the Philippines: The Case of PEZA, CITEM and DBP.* Manila: De La Salle University.

Central Asia Regional Economic Cooperation. 2015. CAREC Corridors: Implementation Progress, Planned Activities and Support Needed. Kyrgyz Republic 14th CAREC Transport Sector Coordinating Committee Meeting. Ulan Bator, Mongolia. 28–29 April 2015. http://www. carecprogram.org/uploads/events/2015/010-TSCC-Meeting-Mongolia/Presentation-Materials/Session-1/Kyrgyz.pdf.

C. Chance. 2017. Foreign Direct Investment in Polish Special Economic Zones: Client Briefing. https:// www.cliffordchance.com/briefings/2017/02/ foreign_direct_investmentsinpolishspecia.html.

D. W. Chang. 1988. *China under Deng Xiaoping: Political and Economic Reforms.* New York: St. Martin's Press.

H. Chang. 2002. *Kicking Away the Ladder: Development Strategy in Historical Perspective.* London: Anthem Press.

E. Clay and B. Schaffer. 1984. *Room for Manoeuvre: An Exploration of Public Policy in Agricultural and Rural Development.* London: Heineman Educational Books.

R. Coase. 1937. The Nature of the Firm. *Economica.* 4 (16). pp. 386–405.

W. J. Coffey. 1996. The Newer International Division of Labor. In P. W. Daniels and W. E. Lever, eds. *The Global Economy in Transition.* London: Longman.

Colliers International. 2016. Special Economic Zones in Poland: e-Investment Potential. Outsourcing Portal. 7 September. http://www.outsourcingportal.eu/en/special-economic-zones-in-poland-the-investment-potential.

Cornell University, INSEAD, and World Intellectual Property Organization (WIPO). 2017. *The Global Innovation Index 2015: Effective Innovation Policies for Development.* Geneva: WIPO.

S. Creskoff and P. Walkenhorst. 2009. Achieving WTO Compliance for Special Economic Zones in Developing Countries. PREM Notes. No. 134. Washington, DC: World Bank.

G. E. Curtis. 2007. Country Profile: Kyrgyzstan. A report prepared under an Interagency Agreement with the Department of Defense. Washington, DC: Federal Research Division, Library of Congress.

K. Czerewacz-Filipowicz. 2017. The Russian Federation RTAs in the Light of Global Value Chains. *Procedia Engineering.* 182. pp. 120–126.

Y. Daneykina et al. 2015. Threats and Challenges to the Regional Security in Central Asian Region (the Example of the Republic of Kyrgyzstan). *Procedia - Social and Behavioral Sciences.* 166. January 2015. pp. 86–91.

P. Debaere, J. Lee, and M. Paik. 2010. Agglomeration, Backward and Forward Linkages: Evidence from South Korean Investment in China. *Canadian Journal of Economics.* 43 (2). pp. 520–546.

M. Delgado et al. 2012. The Determinants of National Competitiveness. *National Bureau of Economic Research (NBER) Working Papers.* No. 18249. Cambridge, Massachusetts: NBER.

S. DiGiovanna. 1996. Industrial Districts and Regional Economic Development: A Regulation Approach. *Regional Studies.* 30. pp. 373–386.

M. Dimitrov et al. 2003. Cross-Border Co-operation in Southeastern Europe: The Enterprises' Point of View. *Eastern European Economics.* 41 (6). pp. 5–25.

D. Dollar, M. Hallward-Driemeier, and T. Mengistae. 2005. *Investment Climate and Firm Performance in Developing Economies.* Chicago: University of Chicago Press.

D. K. Elms and P. Low, eds. 2012. *Global Value Chains in a Changing World.* Geneva: World Trade Organization.

Economic Intelligence Unit. 2016. *Democracy Index 2016.* London: The Economist.

European Commission. Single Market for Services. https://ec.europa.eu/growth/single-market/services_en.

O. Falck, C. Gollier, and L. Woessmann, eds. 2011. *Industrial Policy for National Champions.* Cambridge: MIT Press.

T. Farole. 2011. *Special Economic Zones in Africa: Comparing Performance and Learning from Global Experiences.* Washington, DC: World Bank.

T. Farole and G. Akinci, eds. 2011. Special Economic Zones: Progress, Emerging Challenges, and Future Directions. *Directions in Development*: Trade. Washington, DC: World Bank.

FIAS 2011

Financial Action Task Force (FATF). 2010. *Money Laundering Vulnerabilities of Free Trade Zones.* Paris.

A. Fitzherbert. 2000. *Kyrgyz Republic in Country Pasture/Forage Resource Profiles.* Food and Agriculture Organization of the United Nations.

J. Frankel 2010. The Natural Resource Curse: A Survey. *NBER Working Papers* No. 15836. Cambridge, Massachusetts: NBER.

M. Fujita, P. Krugman, and A. Venables. 1999. *The Spatial Economy: Cities, Regions, and International Trade*. Cambridge, Massachusetts: Massachusetts Institute of Technology.

G. Gereffi. 1999. International Trade and Industrial Upgrading in the Apparel Commodity Chain. *Journal of International Economics*. 48 (1). pp. 37–70.

G. Gereffi and T. Sturgeon. 2013. Global Value Chains and Industrial Policy: The Role of Emerging Economies. In D. Elms and P. Low, eds. *Global Value Chains in a Changing World.* Geneva: WTO, Fung Global Institute, and Temasek Foundation Centre for Trade and Negotiations.

B. Gilbert, P. McDougall, and D. Audretsch. 2008. Clusters, Knowledge Spillovers and New Venture Performance: An Empirical Examination. *Journal of Business Venturing*. 23 (4). pp. 405–422.

Government of the Kyrgyz Republic. *Expanding the Country's Capacities: National Poverty Reduction Strategy 2003–2005 Comprehensive Development Framework of the Kyrgyz Republic to 2010*. http://siteresources.worldbank.org/INTPRS1/Resources/Country-Papers-and-JSAs/Kyrgyz_PRSP.pdf.

____. The National Council for Sustainable Development of the Kyrgyz Republic. Strategy for Sustainable Development of the Kyrgyz Republic for the Period 2013–2017. *Approved Decree of the President of the Kyrgyz Republic. http://patent.kg/index.php/en/innovation/91-npa-innovatsii/1001-national-strategy-for-sustained-development-of-the-kr-for-2013-2017.html.*

____. 1996. The Law of the Kyrgyz Republic on Free Economic Zones (FEZs) in the Kyrgyz Republic. 15 March. http://www.libertas-institut.com/de/Mittel-Osteuropa/Free%20Economic%20Zones%20Law.pdf.

____. 2013. Law of the Kyrgyz Republic About Free Economic Zones in the Kyrgyz Republic. Accepted by Jogorku Kenesh of the Kyrgyz Republic on 11 December 2013.

____. 2012. *Kyrgyz Republic Review*. http://eng.gateway.kg/content/strategies/nprs0305/55.

Government of the United Kingdom. 2001. *Modern Policy Making: Ensuring Policies Deliver Value for Money.* Report by the Auditor General and Comptroller. 20 July 2009. www.nao.org.uk/publications/.../modern_policy-making.aspx.

M. Gulbrandsen and L. Nerdrum. 2007. Public Sector Research and Industrial Innovation in Norway: A Historical Perspective. *Working Papers on Innovation Studies.* No. 20070602. Oslo: Centre for Technology, Innovation and Culture, University of Oslo.

K. Hamada. 1974. An Economic Analysis of the Duty Free Zone. *Journal of International Economics.* 4 (3). pp. 225–241.

W. F. Hatch. 2014. *Asia's Flying Geese: How Regionalization Shapes Japan*. Ithaca, New York: Cornell University Press.

R. Hausmann et al. 2011. *The Atlas of Economic Complexity*. Cambridge, Massachusetts: Puritan Press.

H. Heclo. 1974. *Modern Social Politics in Britain and Sweden: From Relief to Income Maintenance.* New Haven, CT: Yale University Press.

A. O. Hirschman. 1958. *The Strategy of Economic Development.* New Haven, Conn: Yale University Press.

H. Hotelling. 1931. The Economics of Exhaustible Resources. *Journal of Political Economy*. 39 (2). pp. 137–175.

K. Hyunjung. 2015. Social Economic Change as a Precondition of Ethnic Conflicts: The Cases of Osh Conflicts in 1990 and 2010. *MGIMO Review of International Relations*. 3 (54). pp. 201–211.

International Atomic Energy Agency (IAEA). 2005. Environmental Contamination from Uranium Production Facilities and Their Remediation. Proceedings of an international workshop on environmental contamination from uranium production facilities and their remediation organized by the IAEA. Lisbon. 11–13 February 2004. http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1228_web.pdf.

International Labour Organization (ILO). 2009. Labor Migration and Productive Utilisation of Human Resources: Kyrgyz Republic. Bishkek.

____. 2013. *Global Wage Report 2012/13: Wages and Equitable Growth.* Geneva.

International Monetary Fund (IMF). 2016. IMF Primary Commodity Prices.http://www.imf.org/external/np/res/commod/index.aspx (accessed 21 May 2017).

____. 2014. Poverty Reduction Strategy. https://www.imf.org/external/pubs/ft/scr/2014/cr14247.pdf.

International Trade Commission. http://www.intracen.org/itc/market-info-tools/trade-statistics/ http://www.intracen.org/itc/market-info-tools/foreign-direct-investment/.

Invest Park. Special Economic Zones in the New Model of Vocational Education. https://invest-park.com.pl/en/blog/2017/02/07/special-economic-zones-in-the-new-model-of-vocational-education/.

International Trade Centre. Foreign Direct Investment Data. http://www.intracen.org/itc/market-info-tools/foreign-direct-investment/.

International Trade Centre. International Trade Statistics 2001–2017. http://www.intracen.org/itc/market-info-tools/trade-statistics/.

Japan International Cooperation Agency (JICA), Mitsubishi Research Institute (MRI), and Japan Association for Trade with Russia and NIS (JATRN). 2015. Strategy Planning for Attracting Japanese Companies in Special Economic Zones in the Republic of Kyrgyz Republic. Tokyo.

K. Jayanthakumaran. 2003. Benefit–Cost Appraisals of Export Processing Zones: A Survey of the Literature. *Development Policy Review.* 21 (1). pp. 51–65.

H. G. Jeong. 2008. Experience of the Korean Economic Special Zone and Its Implication for Central Asian Countries. Presentation to Uzbekistan Government. 2 June.

H. Johansson. 1994. The Economics of Export Processing Zones Revisited. *Development Policy Review*. 12 (4). pp. 387–402.

N. Kaldor. 1966. *Causes of the Slow Rate of Growth of the United Kingdom*. Cambridge, UK: Cambridge University Press.

Kalikova & Associates. 2012. Corporate Issues: Industry and Legal Update. Issue 7. September. http://www.k-a.kg/sites/default/files/ilucorporate_sep2012eng.pdf (accessed 20 August 2017).

G. S. Kang and Y. Won. 2017. Eurasian Economic Integration and Regional Connectivity. *Procedia Engineering*. 182. pp.120–126.

T. Karl. 1997. *The Paradox of Plenty: Oil Booms and Petro-States.* Berkeley, California: University of California Press.

E. Kesidou and A. Szirmai. 2008. Local Knowledge Spillovers, Innovation and Export Performance in Developing Countries: Empirical Evidence from the Uruguay Software Cluster. *The European Journal of Development Research.* 20 (2). pp. 281–298.

C. Ketels. 2016. *Review of Competitiveness Frameworks: An Analysis Conducted for the Irish National Competitiveness Council.* Dublin: National Competitiveness Council.

J. Kim. 2015. New Frontier in Investor–State Dispute Settlement? The Moscow Convention and Lee Jong Baek v. Kyrgyz Republic. *Pepperdine Dispute Resolution Journal.* 15. p. 549.

J. Y. Kim and L. Zhang. 2008. Formation of Foreign Direct Investment Clustering: A New Path to Local Economic Development?—The Case of Qingdao. *Regional Studies.* 42 (2). pp. 265–280.

I. Kiprianoff. 2005. Cross-Border Cooperation in the Nordic Countries: The Conditions, Barriers, and Efforts to Tackle the Challenges. Essay for Blekinge Tekniska Högskola/Sektionen för Teknokultur, Humaniora och Samhällsbyggnad (TKS). http://www.essays.se/essay/1fbe268433/.

H. Klüver. 2009. Interest Group Influence on EU Policy-Making: A Quantitative Analysis across Issues. Paper for the 11th Biennial Conference of the European Union Studies Association. Los Angeles. 23–25 April.

S. Krätke. 1999. A Regulationist Approach to Regional Studies. *Environment and Planning A*. 31 (4). pp. 683–704.

P. R. Krugman. 1991. Increasing Returns and Economic Geography. *Journal of Political Economy.* 99 (3). pp. 483–499.

____. 1994. The Myth of Asia's Miracle. *Foreign Affairs.* 73 (6). p. 62.

T. Kuah. 2002. Cluster Theory and Practice: Advantages for the Small Business Locating in a Vibrant Cluster. *Journal of Research in Marketing and Entrepreneurship*. 4 (3). pp. 206–228.

P. Kubisec. 2011. Are Central Asian Leaders Learning from Upheavals in Kyrgyz Republic? *Journal of Eurasian Studies*. 2 (2). pp. 115–124.

S. C. Kumbhakar and G. Mavrotas. 2005. Financial Sector Development and Productivity Growth. *United Nations University-World Institute for Development Economics Research (UNU-WIDER) Research Papers.* No. 2005/68. Helsinki: UNU-WIDER.

T. Kusago and Z. Tzannatos. 1998. *Export-Processing Zones: A Review in Need of an Update*. Washington, DC: World Bank.

Kyrgyz Republic Review. 2012. http://eng.gateway.kg/content/strategies/nprs0305/55.

Labor Resource and Research Institute (LaRRI). 2000. Export Processing Zones in Namibia: Taking a Closer Look. Windhoek.

H. H. Lai. 2006. FEZS and Foreign Investment in China: Experience and Lessons for North Korean Development. *Asian Perspective*. 30 (3). pp. 69–97.

C. J. Lee. 2003. The Applicability of Sociological Theories to Ethnic Conflicts in Central Asia: The Case of Kyrgyz Republic. *International Area Review*. 5 (2). pp. 39–64.

S. C. Lee. 2008. Korea's Experience on Special Economic Zones (FEZs) and Its Implications for Uzbekistan. In Government of the Republic of Korea, Ministry of Finance and Economy. *Feasibility Study on Establishing Special Economic Zones in Uzbekistan.* Seoul: Korean Institute of International Economic Policy.

O. Leskinen et al. 2012. *Norway—Oil and Gas Cluster: A Story of Achieving Success through Supplier Development.* Cambridge, Massachusetts: Harvard Business School.

J. Levie and E. Autio. 2011. Regulatory Burden, Rule of Law, and Entry of Strategic Entrepreneurs: An International Panel Study. *Journal of Management Studies*. 48 (6). pp. 1392–1419.

R. Levine. 1997. Financial Development and Economic Growth: Views and Agenda. *Journal of Economic Literature.* 35 (2). pp. 688–726.

W. W. Lewis. 2004. *The Power of Productivity: Wealth, Power, and the Threat to Global Stability*. Chicago: Chicago University Press.

Y. Li. 2006. Trade Balance: Numbers Can Be Deceiving. *China and World Economy.* 14 (3). pp. 54–70.

J. Lin and H. Chang. 2009. DPR Debate: Should Industrial Policy in Developing Countries Conform to Comparative Advantage or Defy It?" *Development Policy Review.* 27 (5). pp. 483–502.

P. H. Liotta et al. Environmental Change and Human Security: Recognizing and Acting on Hazard Impact. Springer.

B. Liu and Y. Wu. 2011. Development Zones in China: Are STIPs a Substitute for or a Complement to ETDZs. 47. pp. 97–145.

K. Mackay. 2007. *How to Build M&E Systems to Support Better Government.* Washington, DC: World Bank Independent Evaluation Group.

D. Madani. 1999. *A Review of the Role and Impact of Export Processing Zones*. Washington, DC: World Bank.

A. Markusen. 1996. Sticky Places in Slippery Space: A Typology of Industrial Districts. *Economic Geography*. 72 (3). pp. 293–313.

A. Marshall. 1890. *Principles of Economics*. London: Macmillan.

R. Martin and P. Sunley. 2001. Deconstructing Clusters: Chaotic Concept or Policy Panacea? *Journal of Economic Geography*. 3 (1). pp. 5–35.

J. A. Mathews. 2010. Strategizing in Industrial Clusters: Collective Efficiency, Increasing Return and Higher-Order Capabilities. Lund, Sweden: Lund University. Unpublished.

R. E. Matland. 1995. Synthesizing the Implementation Literature: The Ambiguity-Conflict Model of Policy Implementation. *Journal of Public Administration Research and Theory: J-PART*. 5 (2). pp. 145–174.

M. Maruyama and Y. Nobuko. 2008. Revisiting Labor and Gender Issues in Export Processing Zones: Cases of South Korea, Bangladesh, and India. Tokyo: Institute of Developing Economies.

K. McKenney. 1993. *An Assessment of China's Special Economic Zones: Executive Research Project S94*. Washington, DC: Industrial College of the Armed Forces.

M. McMillan and D. Rodrik. 2011. Globalization, Structural Change, and Productivity Growth. *NBER Working Papers*. No. 17143. Cambridge, Massachusetts: NBER.

G. W. Meng. 2005. Evolutionary Model of Free Economic Zones: Different Generations and Structural Features. *Chinese Geographical Sciences*. 15 (2). pp. 103–112.

W. Milberg, X. Jiang, and G. Gereffi. 2014. Industrial Policy in the Era of Vertically Specialized Industrialization. In J. Salazar-Xirinachs and R. Kozul-Wright, eds. *Industrial Policy for Economic Development: Lessons from Country Experiences*. Basingstoke, UK: Palgrave Macmillan.

R. Miller and M. Côté. 1985. Growing the Next Silicon Valley. *Harvard Business Review*. 63 (4). pp. 114–123.

D. W. Montgomery. 2016. *Practicing Islam: Knowledge, Experience, and Social Navigation in Kyrgyz Republic*. Pittsburgh: University of Pittsburgh.

G. Myrdal. 1957. *Economic Theory and Underdeveloped Regions*. London: Duckworth Press.

L. Nachum and D. Keeble. 2000. Localized Clusters and the Eclectic Paradigm of Foreign Investment: Film MNCs in Central London. *Transnational Corporations*. 9 (1). pp. 1–38.

National Digital History of Kyrgyz Republic. 2016. Free Economic Zones of Kyrgyz Republic. http://e-history.kz/en/publications/view/1894.

National Statistical Committee of the Kyrgyz Republic. http://www.stat.kg/.

L.-Y. Ng and L. Tuan. 2006. The Place of FDI in China's Regional Economic Development: Emergence of the Globalized Delta Economies. *Journal of Asian Economics*. 18 (2). pp. 348–364.

A. Niebuhr and S. Stiller 2002. Integration Effects in Border Regions - A Survey of Economic Theory and Empirical Studies. ERSA conference papers ersa02p066. European Regional Science Association.

K. Ohmae. 1995. *The End of the Nation State: The Rise of Regional Economies*. London: HarperCollins.

M. B. Olcott. 2010. *Kyrgyz Republic: Unfulfilled Promise?* Washington, DC: Carnegie Endowment for International Peace.

A. Ordabayev. 2015. The Geopolitics of Transport Corridors in Central Asia. *The Institute of World Economics and Politics (IWEP) Working Paper Series*. Almaty.

Organisation for Economic Co-operation and Development (OECD). 2002. *Working with Conflicts in Kyrgyzstan. PCIA Based on an Analysis of the Conflict Situation in Southern Kyrgyz Republic*. Helvetas Kyrgyz Republic. Nicole Bisig.

____. 2011. *Measuring Productivity OECD Manual: Measurement of Aggregate and Industry-Level Productivity Growth.* Paris.

____. 2012. Mapping Global Value Chains. Policy Dialogue on Aid for Trade. Paris.

____. 2016. Multi-Dimensional Review of Kyrgyz Republic: Volume 1—Initial Assessment. Paris.

G. I. P. Ottaviano and A. Naghavi. 2009. Offshoring and Product Innovation. *Economic Theory.* 38 (3). pp. 517–532.

C. Pages-Serra, ed. 2010. *The Age of Productivity: Transforming Economies from the Bottom Up*. Washington, DC: Inter-American Development Bank (IADB).

I. Peach. 2004. Managing Complexity: The Lessons of Horizontal Policy Making in the Provinces. *The Scholar Series.* Regina, Saskatchewan: University of Regina.

G. Peters. 2005. Concepts and Theories of Horizontal Policy Management. Paper for the X Congreso Internacional del CLAD sobre la Reforma del Estado y de la Administración.

M. Pfister. 2017. What's Special about Special Economic Zones? A Case Study of the Philippines. Executive Doctorate in Business Administration de l'Université Paris-Dauphine, Paris.

C. Pietrobelli. 1996. *Emerging Forms of Technological Cooperation: The Case for Technology Partnerships, Inner Logic, Examples and Enabling Environment*. Geneva: UNCTAD.

F. van der Ploeg. 2011. Natural Resources: Curse or Blessing? *Journal of Economic Literature*. 49 (2). pp. 366–420.

R. Pomfret. 2006. *The Central Asian Economies since Independence.* Princeton, New Jersey: Princeton University Press.

M. E. Porter. 1990. *The Competitive Advantage of Nations*. New York: Free Press.

____. 1998. Clusters and the New Economics of Competition. *Harvard Business Review.* 76 (6). pp. 77–90.

____. 2000. Locations, Clusters and Company Strategy. In G. L. Clark, M. P. Feldman, and M. S. Gertler, eds. *The Oxford Handbook of Economic Geography*. Oxford: Oxford University Press.

R. Prebisch. 1950. *The Economic Development of Latin America, and Its Principal Problems.* Lake Success, New York: United Nations.

R. Putnam. 1993. What Makes Democracy Work? *National Civic Review*. 82 (2). pp. 101–107.

R. G. Rajan and A. Subramanian. 2008. Aid and Growth: What Does the Cross-Country Evidence Really Show? *The Review of Economics and Statistics.* 90 (4). November. pp. 643–665.

R. Ranieri and R. A. Ramos. 2013. Inclusive Growth: Building Up a Concept, International Policy Centre for Inclusive Growth. Working paper.

C. Rickelton. 2014. Kyrgyz Republic: Bishkek Struggles to Keep IT Specialists In-House. *Eurasianet Weekly Digest.* http://www.eurasianet.org/node/70581 (accessed 20 August 2017).

R. M. Romer. 1986. Increasing Returns and Long-Run Growth. *The Journal of Political Economy.* 94 (5). pp. 1002–1037.

P. Rosenstein-Rodan. 1943. Problems of Industrialization of Eastern and SouthEastern Europe. *Economic Journal.* June.

RT. 2015. 27 Russian Firms among World's Most Powerful Companies. *Forbes.* 7 May.

Russian Exports National Information Portal. http://www.rusexporter.ru/

P. Sabatier. 1988. An Advocacy Coalition Framework of Policy Change and the Role of Policy-Oriented Learning Therein. *Policy Sciences.* 21 (2-3). pp. 129–168.

J. D. Sachs and A. M. Warner. 1995. Natural Resource Abundance and Economic Growth. *NBER Working Papers.* No. 5398. Cambridge, Massachusetts: NBER.

R. Sack. 1986. *Human Territoriality: Its Theory and History.* Cambridge, UK: Cambridge University Press.

M. Shafaeddin. 1998. How Did Developed Countries Industrialize? The History of Trade and Industrial Policy: The Cases of Great Britain and the USA. *UNCTAD Discussion Papers.* No. 139. Geneva: UNCTAD.

M. Shubik. 1975. The General Equilibrium Model Is Incomplete and Not Adequate for the Reconciliation of Micro and Macroeconomic Theory. *Kyklos.* 28 (3). pp. 545–573.

V. F. S. Sit. 1988. China's Export-Oriented Open Areas: The Export Processing Zone Concept. *Asian Survey.* 28 (6). pp. 661–675.

A. Szirmai. 2008. Explaining Success and Failure in Development. *Maastricht Economic and Social Research Institute on Innovation and Technology (MERIT) Working Papers.* No. Maastricht: MERIT.

____. 2009. Industrialisation as an Engine of Growth in Developing Countries. *MERIT Working Papers.* No. 010. Maastricht: MERIT.

J. Temple and L. Woessmann. 2006. Dualism and Cross-Country Growth Regressions. *Journal of Economic Growth.* 11 (3). pp. 187–228.

J. L. Thompson. 2002. The World of the Social Entrepreneur. *International Journal of Public Sector Management.* 15 (5). pp. 412–431.

M. P. Timmer and A. Szirmai. 2000. Productivity Growth in Asian Manufacturing: The Structural Bonus Hypothesis Examined. *Structural Change and Economic Dynamics.* 11 (4). pp. 371–392.

M. P. Timmer and G. J. de Vries. 2009. Structural Change and Growth Accelerations in Asia and Latin America: A New Sectoral Data Set. *Cliometrica.* 3. pp. 165–190.

T. E. Tudor, E. Adam, and M. Bates. 2007. *Drivers and Limitations for the Successful Development and Functioning of EIPs: A Literature Review.* Northampton, UK: University of Northampton.

United Nations. UN Comtrade Database. https://comtrade.un.org/.

____. UNSD Statistical Databases. https://unstats.un.org/unsd/databases.htm.

United Nations Economic Commission for Europe (UNECE). 2015. Regulatory and Procedural Barriers to Trade in Kyrgyzstan: Needs Assessment. Geneva and New York: United Nations.

United Nations Conference on Trade and Development (UNCTAD). 2013. *World Investment Report 2013: Global Value Chains—Investment and Trade for Development.* Geneva.

____. 2015. *Strengthening Subregional, Regional and Interregional Dialogue and Cooperation and Their Contributions to Economic Integration and Development: Policy Lessons for Development-Oriented Regional Integration.* Geneva.

United Nations Industrial Development Organization (UNIDO). 1997. *Industrial Estates: Principles and Practices.* Vienna.

USAID and Bishkek Business Club 2014. Current State and Prospects for Development of Free Economic Zones in the Kyrgyz Republic.

E. Ustyuzhanina. 2016. The Eurasian Union and Global Value Chains. *European Politics and Society.* 17 (S1). pp. 35–45

E. Vinokurov and Eurasian Economic Union. 2017. Current State and Preliminary Results. *Russian Journal of Economics.* 3 (1). pp. 54–70.

J. Wang. 2009. The Economic Impact of Special Economic Zones: Evidence from Chinese Municipalities. Unpublished.

P. Warr. 1983. The Private Provision of a Public Good Is Independent of the Distribution of Income. *Economics Letters.* 13 (2–3). pp. 207–211.

____. 1989. Export Processing Zones: The Economics of Enclave Manufacturing. *The World Bank Research Observer.* 9 (1). pp. 65–88.

M. Weigert. 2016. Regional before Global: A Value Chain Approach to Industrialisation in West Africa. *Bridges Africa.* 5 (9).

O. Williamson. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications.* New York: Free Press.

____. 1985. *The Economic Institutions of Capitalism.* New York: Free Press.

P. Wilson. 1992. *Exports and Local Development: Mexico's New Maquiladoras*. Austin: University of Texas Press.

World Bank. 2011. *2011 Annual Review: FIAS: The Facility for Investment Climate Advisory Services.* Washington, DC.

World Bank. Countries and Economies. http://data.worldbank.org/country.

____. 2013. Enterprise Survey 2013. http://www.enterprisesurveys.org/.

____. World Development Indicators. http://data.worldbank.org/indicator.

____. World Integrated Trade Solution Database. http://wits.worldbank.org/.

____. 2000. Kyrgyz Republic: Fiscal Sustainability Study. Report No. 20644.

____. 2004. *Monitoring and Evaluation: Some Tools, Methods, and Approaches*. Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/23975.

____. 2009. *Bazaars and Trade Integration in CAREC Countries.* Washington, DC: World Bank.

____. 2014. *World Development Indicators 2014.* Washington, DC.

____. 2015. Kyrgyz Republic: Communities Forests and Pastures. Report ACS 13613.

____. 2015. Worldwide Governance Indicators. https://data.worldbank.org/data-catalog/worldwide-governance-indicators.

____. 2016. *Doing Business 2016: Measuring Regulatory Quality and Efficiency.* Washington, DC.

____. 2017. Doing Business. http://www.doingbusiness.org/data/exploreeconomies/kyrgyz-republic.

World Economic Forum. 2013. *Global Competitiveness Report 2013–2014.* Geneva.

____. 2015. *Global Competitiveness Report 2015–2016.* Geneva.

____. 2017. *Global Competitiveness Report 2016–2017.* Geneva.

World Trade Organization (WTO). 2006. Trade Policy Review Kyrgyz Republic.

____. 2013. Trade Policy Review Kyrgyz Republic.

M. L. Wyzan. 1995. First Steps toward Economic Independence. *Europe-Asia Studies.* 48 (6). pp. 1029–1030.

A. Yeats. 2001. Just How Big Is Global Production Sharing? In S. Arndt and H. Kierzkowski, eds. *Fragmentation: New Production Patterns in the World Economy.* New York: Oxford University Press.

Y. M. Yeung. 1995. Globalisation and Its Impact on Urban Development in South-East Asia and Vietnam. Unpublished.

J. D. Yuan and E. Lorraine. 1992. Export Processing Zones in Asia: A Comparative Study. *Asian Survey*. 32 (11). pp. 1026–1045.

D. Z. Zheng. 2010. *Building Engines for Growth and Competitiveness in China: Experience with Special Economic Zones and Industrial Clusters*. Washington, DC: World Bank.

Strategic Framework for Free Economic Zones and Industrial Parks in the Kyrgyz Republic

Free economic zones that can be transformed into clusters of highly competitive traded firms can contribute significantly to industrial diversification and regional development of the Kyrgyz Republic. This strategic framework outlines strategies and policies for leveraging them to enhance productivity and promote regional development.

The framework involves six pillars for integrating free economic zones and industrial parks: (i) using a sustainable development program with a mix of bottom–up and top–down approaches; (ii) enhancing the investment climate by ensuring the development of sound legal and regulatory frameworks, better institutional designs, and coordination; (iii) using a proactive approach with global value chains and upgrading along them by strengthening domestic capabilities; (iv) forming regional and cross-border value chains; (v) developing a sound implementation strategy; and (vi) establishing a sound monitoring and evaluation framework.

About the Central Asia Regional Economic Cooperation Program

The Central Asia Regional Economic Cooperation (CAREC) Program is a partnership of 11 member countries and development partners working together to promote development through cooperation, leading to accelerated economic growth and poverty reduction. It is guided by the overarching vision of "Good Neighbors, Good Partners, and Good Prospects." CAREC countries include: Afghanistan, Azerbaijan, the People's Republic of China, Georgia, Kazakhstan, the Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan. ADB serves as the CAREC Secretariat.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to a large share of the world's poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical

CAREC SECRETARIAT
www.carecprogram.org

ASIAN DEVELOPMENT BANK
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
www.adb.org