Public Disclosure Authorized

Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 23-Sep-2019 | Report No: PIDC27599

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Turkey	P171645		Turkey Organized Industrial Zones Project (P171645)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EUROPE AND CENTRAL ASIA	Feb 24, 2020	Sep 15, 2020	Finance, Competitiveness and Innovation
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Republic of Turkey	Ministry of Industry and Technology	

Proposed Development Objective(s)

Increase the efficiency and environmental sustainability of Organized Industrial Zones.

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	300.00
Total Financing	300.00
of which IBRD/IDA	300.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	300.00

Environmental and Social Risk Classification	Concept Review Decision
Substantial	Track II-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

Turkey's pace of income convergence has been one of the most remarkable globally of the past fifteen years. Reforms starting in the early 2000s accelerated private activity and public service delivery. Per capita GDP trebled in 15 years, reaching US$10,500 in 2017 and resulting in one of the biggest jumps in per capita income rankings since 2002. Job creation, particularly in services, helped absorb a lot of labor transitioning out of agriculture. This led to a sharp drop in the share of the population with per capita expenditure below the poverty line ($5.5 a day in 2011 PPP) from 37 percent in 2002 to 9 percent in 2017. Turkey experienced strong economic convergence, coming close to transitioning out of upper middle-income status in less than 20 years – a feat achieved only by a handful of countries in recent years.

Sustaining growth and improvements in living standards will require higher productivity in the economy. Growth since the 1980s was driven largely by an increase in labor and physical capital inputs thanks to reforms that lifted constraints on factor mobility and reduced market distortions. The contribution of productivity on the other hand has been relatively less and on a declining path in recent years. As a result, potential output—what the economy can produce when factor inputs are fully utilized—has flattened out. Unless Turkey can produce more and better output with its available inputs, the return on those inputs, including labor, will stagnate. At Turkey's current level of per capita income, it cannot compete with low skill, labor intensive manufacturing economies. It also cannot keep raising prices to sustain wage increases unless the quality of output also improves. At the same time, labor-saving technologies have raised concerns for emerging markets with abundant labor (like Turkey). Turkey needs a new ladder of development that takes advantage of new technologies and changing patterns of globalization to deepen the country's manufacturing and services capacities.

Strategic priorities in Turkey's New Economic Program (September 2018) and 11th National Development Plan 2019–2023 (July 2019) are increasing productivity, industrial modernization, and sustainability. The New Economic Program considers strategies such as adopting modern technologies into domestic production, improving efficiency in the use of energy sources, supporting producers' innovative activities, and reallocating resources toward high value-added sectors or more productive uses as the critical pathways to growth. The National Development Plan prioritizes policies to accelerate growth, improve the ecosystem, and ensure sustainability. It aims to increase manufacturing productivity and product quality, thus improving industrial capacity and international competitiveness. To improve the ecosystem and foster the development of the manufacturing sector, the Plan envisions providing high-quality, sustainable, reliable and low-cost energy to producers. Incentive mechanisms are to be restructured to prioritize lean and clean production, energy efficiency, and industrial symbiosis.

Turkey's economy has a rapidly increasing environmental footprint. Economic growth has not yet decoupled from rising energy use, pollution, and greenhouse gas emissions, a process that has been underway in advanced OECD countries for the past decade or so. Turkey therefore has considerable potential for greater resource efficiency.

Sectoral and Institutional Context

Organized Industrial Zones (OIZs) in Turkey have played an important role in the industrialization process and are seen as one of the most successful industrial policies in the country's history. The first OIZ was established in Bursa in 1961, and they have since spread throughout the country. As of January 2019, there were 327 OIZs in 80 cities (of which about 250 are operational). In 2018, there were around 53,000 businesses employing more than 1.8 million people in OIZs in Turkey. Besides contributing to industrialization and technological development, OIZs constitute an engine for job creation. OIZs in Turkey are typically established using a public-private partnership model. Initially, OIZs have a higher share of public ownership and control; the balance then shifts to the private sector as the zone develops.

The government expects OIZs to play an important role in industrial transformation and productivity upgrading. The 11th Development Plan targets boosting manufacturing competitiveness and efficiency through upgrading the infrastructure and services offered by zones. For example, the Plan envisions the establishment of Innovation Centers in OIZs to support tenant companies on business development, innovative technologies, lean production, efficiency, technology management, clustering and digitalization.

Countries around the world use zones as an economic development tool, with mixed results. These can take the form of OIZs, industrial parks, special economic zones, free zones, etc. Such zones can help overcome barriers to business development, such as excessively strict regulations, poor infrastructure, and inadequate access to logistics for international trade. Zones can provide a more favorable business environment in a geographically limited area, for instance, through a more efficient legal and regulatory framework, high quality public services, and better infrastructure such as roads, energy sources, water, and wastewater treatment facilities. This in turn can help the firms located in the zones to be more productive, as well as more energy efficient and environmentally friendly. On the other hand, zones can be poorly executed by not considering private sector demand or addressing market and government failures. Such zones risk becoming a burden on government finances.

OIZs in Turkey allow companies to operate within an investor-friendly environment with ready-to-use infrastructure and social facilities, but there is room for improvement. Infrastructure includes roads, water, natural gas, electricity, communications, waste treatment, and other services. Firms operating in OIZs can also benefit from a range of fiscal and financial benefits. A recent report found that the majority of the firms in OIZs located there due to the higher quality infrastructure and an investment environment with lower degrees of uncertainty. The report also found that OIZs' economic and innovation performance can be improved if the existing structure is aligned with global best practice.[1]

Significant gains are possible through transitioning some OIZs to eco-industrial parks, or "Green OIZs". The World Bank Group recently performed a technical analysis to identify resource efficiency opportunities related to the implementation of Green OIZ criteria in 18 OIZs. Positive returns were found for investments in green infrastructure, energy and water efficiency, and industrial symbiosis. Green investments would be good for the environment by cutting down on resource usage and greenhouse gas emissions. They would also help cut costs for OIZ managers and firms by reducing input prices (e.g. for electricity and water) and bring branding benefits from green certifications.

[1] http://www.tr.undp.org/content/turkey/tr/home/library/poverty/2023_e-do_ru-tuerkiyede-organize-sanayi-boelgelerinin-doenueuemue.html (accessed on 4 April 2019).

Relationship to CPF

The Project supports Focus Area 1 (Growth) and Focus Area 3 (Sustainability) of the World Bank Group FY18-21 Country Partnership Framework (CPF) for Turkey. For Focus Area 1, the Project is linked to Objective 3: Enhanced Competitiveness and Employment in Selected Industries. According to the CPF, to create the jobs needed to employ the rapidly growing labor force and raise it to a higher income level, Turkish businesses need to improve their competitiveness through innovating, boosting productivity and moving up the value chain. To support these aims, the CPF foresees potential lending related to innovation, technology absorption, cleaner production and an improved business environment. The CPF also highlights the IFC's aim to improve the competitiveness, productivity, and sustainability of Turkish manufacturers through development of a national Green OIZ Framework. This lending operation builds directly on the Green OIZ framework.

For the Sustainability Focus Area, the CPF indicates that the WBG's program will help address the SCD-highlighted challenge of reorienting growth towards a more green, resilient and sustainable pattern. CPF objectives relevant to the Project include improved generation of green energy (Objective 7) and increased sustainability of infrastructure assets (Objective 9).

C. Proposed Development Objective(s)

Increase the efficiency and environmental sustainability of Organized Industrial Zones.

Key Results (From PCN)

The project investments ultimately aim to contribute to productivity growth and sustainable industrial development of the Turkish economy. Possible intermediate and outcome indicators include:

- Number of investments in OIZ green infrastructure supported by the Project, e.g. advanced wastewater treatment plants, captive power plants, shared steam pipelines (#)
- Amount of private investment facilitated in OIZ green infrastructure ($)
- Number of firms that benefit from OIZ green infrastructure investments (#)
- Renewable energy generated due to OIZ green infrastructure investments (MWh)
- Wastewater treated in new/upgraded facilities (million m^3/year)
- Energy savings from OIZ green infrastructure investments (MWh and $)
- Water savings from OIZ green infrastructure investments (m^3 and $)
- Reduction in CO_2 emissions due to supported investments (metric tons CO_2-equivalent)
- Investments in OIZ competitiveness infrastructure, e.g. innovation centers (#, $ of private investment, and # of firms that benefit)
- Investments in OIZ basic infrastructure, e.g. wastewater treatment plants, energy transmission lines, roads (#, $ of private investment[10], and # of firms that benefit)
- Number of regulations and standards developed/amended in support of "Green OIZ" framework (#)
- Number of OIZs certified as "Green OIZs" (#)
- Number of firms reporting that they benefit from OIZ green and competitiveness infrastructure investments (#, citizen engagement indicator)
- Number of firms that report that they understand the benefits of Green OIZs (#, citizen engagement indicator)

D. Concept Description

The proposed Project would support both infrastructure and the enabling environment for OIZ sustainability, competitiveness, and efficiency.

Component 1: OIZ infrastructure investment

This component would finance infrastructure investments in OIZs that meet pre-defined criteria for sustainability, competitiveness, and efficiency. The Ministry of Industry and Technology (MoIT) offers a concessional lending scheme to OIZs for their establishment and development. Historically, the majority of OIZ investments under the lending scheme have gone to basic infrastructure, such as roads and power. A smaller share has gone to wastewater treatment and administrative buildings. A 2017 reform expanded what the lending scheme can finance to include a broad range of infrastructure and productivity-enhancing and environmentally friendly investments. The component would utilize the existing scheme (with some adjustments) to: a) ensure that investments are demand-driven (as the proposals come from OIZ management); b) leverage private sector financing (since the OIZs are responsible for repayment); and c) build on current government systems.

Component 1(a): Infrastructure to improve sustainability and competitiveness

This subcomponent would support OIZ investments in more advanced infrastructure (where there has historically been little focus). This includes green infrastructure and competitiveness infrastructure and related services. Given the positive externalities and less traditional, more experimental (in some cases) nature of these investments, more concessional terms might be required for the MoIT's lending scheme.

- Green infrastructure. Examples include investments in energy supply from renewable sources (e.g. rooftop solar photovoltaic, biogas), LED street lighting, advanced wastewater treatment, improved energy efficiency of administrative buildings, and recycling/reusing waste materials for production inputs. It could also include investments to facilitate industrial symbiosis between two or more firms, e.g. pipes to share heat/steam that is a by-product of one industrial process and needed as input to another. Green infrastructure would have both environmental and competitiveness benefits by reducing electricity, water, and waste expenditures for OIZ management and resident firms. The infrastructure would also be expected to help zones obtain a "Green OIZ" certification (see Component 2).

- Competitiveness infrastructure and services. Examples include investments in shared-use facilities for training/education, research, product testing, etc. The facilities could be used to help firms increase their productivity, energy efficiency, innovation, digitization, and management capacity and move toward Industry 4.0. The purchase of materials, equipment, and training curricula development could also potentially be covered, as could the delivery of training and consulting services to OIZ firms.

Component 1(b): Infrastructure to improve efficiency

This subcomponent would support more traditional, basic OIZ infrastructure, especially in less developed OIZs/regions. Examples include roads, power, water/gas supply, communications networks, and administrative buildings. This could help bring investors and jobs to the zones by offering an attractive investment environment. Social infrastructure, such as child care facilities to facilitate women's employment, could also be supported. The subcomponent could support investments that the MoIT has approved but have not yet been initiated. Economic rate of return would likely be a key criterion for choosing which basic infrastructure investments to finance.

Component 2: OIZ enabling environment for industrial transformation

This component would support the institutional frameworks and technical assistance needed for upgrading OIZ and firm sustainability and competitiveness. Possible examples include:

- Technical assistance and capacity building to the MoIT (Directorate General of OIZs) and OIZs on preparing, assessing, and evaluating investment proposals.
- Support to the project implementation unit.
- Support to implementation of a national Green OIZ framework. A draft Green OIZ framework was developed under an ongoing IFC Green OIZ advisory services project, and it recommends a set of institutional and regulatory reforms. The component could support the implementation of these reforms, including operationalizing a Green OIZ certification mechanism. (The Green OIZ certification standard will be unique to Turkey and build on the international eco-industrial park framework that the WBG published in December 2017.)
- Feasibility studies for non-traditional green and competitiveness infrastructure investments, including industrial symbiosis. The government, OIZs, and firms often do not understand the potential returns and spillovers from these investments, meaning they are unlikely to take place without additional support. The investments could subsequently be financed under Component 1(a).
- Learning from international and domestic experience. Activities to learn from eco-industrial park experiences in Europe, South Korea, and elsewhere could be supported, including analyses, study tours, and dissemination. Activities could also be included to facilitate learning and spillovers from OIZs in Turkey that make early investments in green and competitiveness infrastructure to other OIZs in Turkey. Such internal knowledge sharing could catalyze demand for new investments.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

Environmental and social risks are not fully known since specific project investments will be determined during implementation. Although the Project's impacts are not expected to be complex as the locations of the investments will be in OIZs, there will be environmental impacts related to construction activities and potentially industrial symbiosis investments. Environmental risks associated with construction activities include: (i) Noise, dust, wastewater generation etc., (ii) occupational health and safety such as accidents and injuries, chemical exposure, noise and vibration exposure, (iii) hazardous and non-hazardous waste generation, (iv) fire and explosion risks, (v) community health and safety impacts such as increased traffic, noise and dust problems, etc., (vi) sludge and solids generation from wastewater treatment plants. Industrial symbiosis impacts can be variable depending on the firms and sectors involved.

Social risks are expected to be limited to labor and working conditions, as well as occupational and community health and safety issues, given that the investments are expected to take place in existing OIZs. Community health and safety risks may apply in conditions where OIZs are located in the vicinity of urban, semi-urban or rural settlements.

The Project is also expected to generate positive environmental and social impacts. Green infrastructure investments are expected to reduce the use of water and electricity from non-renewable sources, ultimately lowering CO_2 emissions. Positive social impacts could come from employment opportunities resulting from project investments, as well as better OIZ services for employees, e.g. training and childcare facilities.

CONTACT POINT

World Bank

Stefka Slavova, Thomas Edward Haven
Lead Economist

Borrower/Client/Recipient

Republic of Turkey
A. Gökben Yener
Head of Department, General Directorate of Foreign Economic,
gokben.yener@hazine.gov.tr

Implementing Agencies

Ministry of Industry and Technology
Ramazan Yildirim
Director General of Organized Industrial Zones
ramazan.yildirim@sanayi.gov.tr

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: http://www.worldbank.org/projects

APPROVAL

Task Team Leader(s):	Stefka Slavova, Thomas Edward Haven

Approved By

Practice Manager/Manager:		
Country Director:		