



STRATEGIC ASSESSMENT: A Capital Investment Plan For Lebanon

INVESTMENT OPPORTUNITIES AND REFORMS

Wissam Harake and Christos Kostopoulos | April 6, 2018

STRATEGIC ASSESSMENT: **A Capital Investment Plan For Lebanon**

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Abstract

The quality of Lebanon's infrastructure is amongst the poorest regionally and globally. In fact, out of 137 countries, Lebanon ranks 130 in quality of overall infrastructure.¹ This has been induced by low public spending on infrastructure, a consequence of the country's debt burden as well as the long-term absence of a budget. The Capital Investment Plan (CIP) can be an effective tool to help reinforce Lebanon's dilapidated infrastructure, abetting a boost in economic growth. The Government of Lebanon has requested from the World Bank an assessment of the CIP.

This paper presents an assessment for the projects in the CIP by the World Bank Group, which has had a long-term engagement with Lebanon, both sectorally and cross-sectorally. The assessment was undertaken on the basis of the listing provided in the Government's own Capital Investment Plan document, as well as other ad hoc information. Each project in the CIP requires an independent appraisal as per highest standards. In addition, a sustainable macro-fiscal framework and debt strategy are essential for a successful implementation of the CIP. The IMF is taking the lead on a macro-fiscal assessment for the CIP, which was presented at the Paris conference.

The Assessment generally finds that the choice of sectors is appropriate for a CIP for Lebanon, and that many of the listed projects are relevant, indeed, some are critical, to help alleviate infrastructural bottlenecks. Nonetheless, horizontal and vertical reforms, including the reduction of fiscal impact, are essential to enable the CIP and make the projects sustainable and attractive to investors. This document suggests a list of indicative reforms. It does not, however, address crippling barriers in project implementation in infrastructure, which have resulted in long delays and significant additional costs.

1 Source: World Economic Forum, Global Competitiveness Index 2017-2018.

I. INTRODUCTION AND SUMMARY OF ASSESSMENT

A. The Physical Deficit

1. **A central pillar in the social contract between Citizen and State is the delivery of basic public services.** In Lebanon, there are significant deficiencies in key basic services, including, electricity, water supply, sanitation, transport, waste management, telecommunications and others. These services are not only essential for growth of productivity and income, but also for ensuring a basic level of living standard for residents. When effectively provided, they can have a positive impact on income equality, allowing low income groups access to better and more productive opportunities. Their provision also enhances health and education outcomes, thus improving human capital—a critical driver of growth in high middle-income economies such as Lebanon. Instead, the Lebanese typically reach out to informal, and sometimes even legally questionable, providers and mechanisms to supplant these deficiencies.
2. **The lack of fiscal space combined with missing official budgets from 2005 to 2016 resulted in a sharp fall in public spending on infrastructural projects.** Gross public debt is estimated at around 153 percent of GDP by end-2017, with only Japan and Greece higher globally. Debt service for the government reaches about 10 percent of GDP annually, consuming about half of domestic revenues. As a result, the government suffers from a long term and sizable fiscal deficit, which in 2016 (the latest full year actual data) registered 9.6 percent of GDP. The lack of fiscal space has translated into low government capital expenditures, which, at an average of around 1.5 percent of GDP since the beginning of the millennium, is significantly below comparator countries.
3. **As a result, the country's infrastructure network and quality have deteriorated, particularly electricity, water supply, waste management and transport—services important for the population's well-being.** In fact, out of 137 countries, Lebanon ranks 130 in quality of overall infrastructure, with quality of electricity supply at 134, quality of roads at 120 and quality of mobile-cellular telephone

subscriptions at 104.² Further, low public investment in these sectors has caused capacity to lag behind demand, leading to a reduction in potential economic growth and an overall deterioration in living conditions.

B. Lebanon's Capital Investment Plan and Sector Challenges

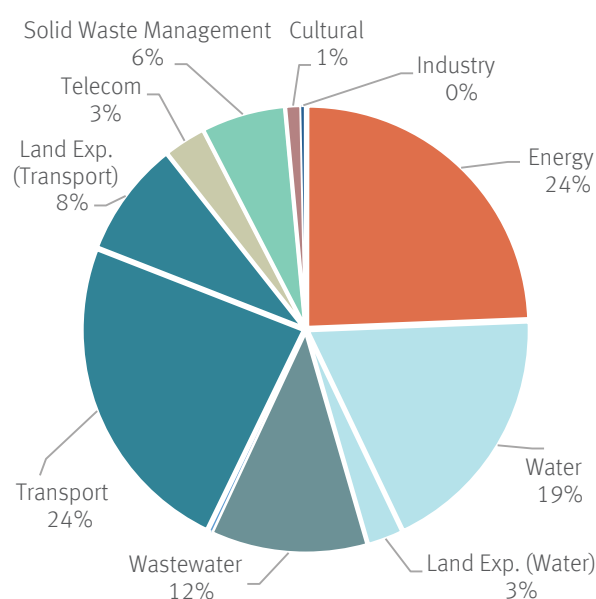
4. **The Capital Investment Plan (CIP) includes over 280 infrastructural projects, divided between energy, transport, water, wastewater, solid waste treatment, telecommunications, special economic zones and culture and tourism.** Geographically, the CIP covers the whole of Lebanon, with some projects designated as national and others as local—North, Beirut and Mount Lebanon, South and the Bekaa areas. Sectorally, the largest investment share is allotted to the transportation, amounting to 32 percent of the total CIP, of which 8 percent are allocated to land expropriation (Figure 1). Almost quarter of the investments are reserved for the energy sector, while water and wastewater are assigned 22 percent and 12 percent, respectively.
5. **Around half of the total investments are earmarked for “national” projects, with the rest allocated locally.** National projects aim at benefiting the entire population, such as the majority of investments in the energy and transportation sectors as well as the telecommunications or the cultural sectors. These projects, amounting to a total of US\$ 10,306 million, are therefore not assigned to specific governorates. Of the locally designated investments in the CIP, 23 percent are located in Mount Lebanon, followed by the North governorate (17 percent) and Nabatiye (15 percent) (Figure 2).

2 Source: World Economic Forum, Global Competitiveness Index 2017-2018.

ELECTRICITY

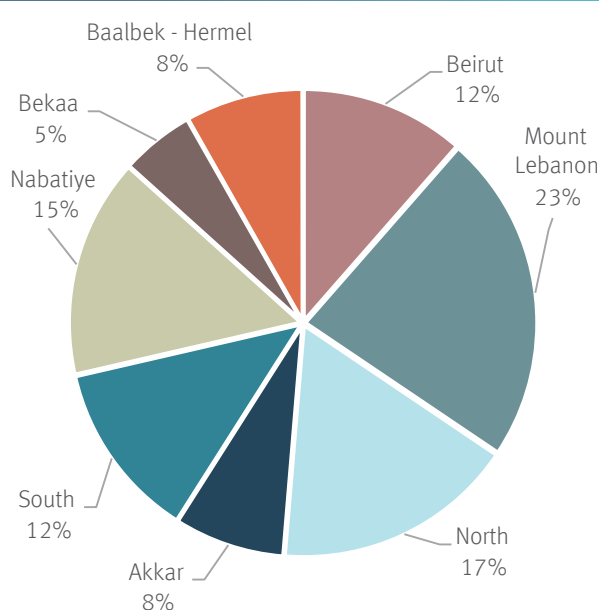
6. **Power supply remains inconsistent for 92 percent of households, who need to be linked to private generators.** Despite its large and subsidized budget, Electricité du Liban (EdL), the national utility company, is both inefficient and insufficient, generating in 2017 an average capacity of 2,066 MW, compared to a peak demand of 3,400 MW.³ This results in systematic and long daily blackouts, causing the extensive use of back-up private generators at a cost that is three times the level of EdL tariffs. Moreover, whereas only about half of total electricity production costs are recoverable, electricity tariffs have remained unchanged since 1996 (when the price of oil was US\$ 23 per barrel).
7. **Recent World Bank surveys also indicated that availability of reliable electricity in Lebanon is the second biggest obstacle to private sector growth, after political instability.** This is particularly significant because substantial investments, primarily from the private sector, are needed along the entire energy value chain, from upstream fuel supply and mid-stream generation and transmission to downstream distribution networks and retail operations, to address the sector's historic challenges.
8. **The CIP contains 17 separately identified investment projects in the power sector for a total of US\$ 5,592 million, to be implemented over three cycles covering the period 2018-2030.** To accommodate increased capacity, there will also be a need for transmission investments to absorb the capacity and to ensure stability of the network.
9. **The objective of the electricity investments is to increase power supply to 24/7 over the medium term.** Toward that objective, electricity sector reforms should be adopted as a top priority. This includes private sector participation in both generation and distribution, necessitated by a lack of fiscal space, as well as the introduction of renewable energy. With transmission losses estimated at 40-50 percent, additional capacity would be wasted without a resolution to this inefficiency.

Figure 1: CIP allocation of costs by sector



Source: WB staff assessment.

Figure 2: Share of non-national CIP investment cost by governorate



Source: WB staff assessment.

3 Source: Government of Lebanon.

Still, additional generation alone is insufficient; absent other adjustments, an expansion of power supply will lead to a rise in government transfers to EdL, resulting in a widening of the fiscal deficit. As such, it is necessary to introduce a multi-year electricity tariff cost-recovery plan for EdL over a medium-term transition period.

10. **Importantly, reforms should also address the high cost of power generation in Lebanon, much of which is related to the use of fuel oil as an input.** Instead, power stations in Lebanon can run on natural gas, which is much less expensive, more efficient and less environmentally polluting. This however requires the development of new Liquefied Natural Gas (LNG) importing and supply infrastructure facilities, which should be consistent with plans to explore and exploit off-shore domestic gas resources.

WATER SUPPLY AND SANITATION

11. **Notwithstanding Lebanon's relatively high per capita water endowment, inadequate management of and investment in the sector are leading to chronic supply shortages.** There is a seasonal mismatch between water supply (at its peak in the rainy winter) and demand (peaking in the hot, dry summer months). One of the principal factors that is exacerbating this seasonal water imbalance is the very low water storage capacity (6 percent of total resources, compared to the MENA average of 85 percent). As a result, water supply services are below the levels expected in a middle-income country. If no action is taken, including in water governance to improve efficiency and manage demand, the country will continue to depend in the long-run on mined groundwater. Water storage capacity should expand in order to boost resilience to natural (i.e. drought) and man-made (i.e. refugees) shocks.

12. **The Capital Investment Plan (CIP) includes 124 water supply projects and 82 wastewater projects, covering the whole of Lebanon: North, Beirut and Mount Lebanon, South and the Bekaa areas.** The objective on water supply is to reach 24/7, which contributes to restoring or maintaining

the social contract on water service. Over the years, citizens need for additional water sources and sanitation has increased due to population growth, economic development, urban expansion, supply shortages and the inability of public water entities to deliver required volumes and quality of service in water supply and sanitation.

TRANSPORT

13. **Lebanon's endemic traffic congestion problem is estimated to cost the economy between 5 and 10 percent of GDP annually.** Road transport is by far the most dominant form of transport in Lebanon for passengers, freight and commerce, with about 1.2 million vehicles in a country of only 4.5 million people. Traffic congestion and high transport costs are having huge detrimental effects on the development of lagging regions and are forcing the population to move closer to employment and services in Beirut. This dynamic has the dual effect of exacerbating congestion in Beirut and increasing poverty in the regions.
14. **The CIP contains 24 separately identified investment projects in the transport sector for a total of US\$ 7,381 million, implemented over three cycles covering the period 2018-2030.** The bulk of the transport investments are to complete Lebanon's highways, while the remaining investments are focused on the development of strategic assets. The latter include the expansion of Tripoli Port to become an important gateway to Syria and Iraq, the construction of the first modern railway linking Tripoli port to Syria, the introduction of a reliable public transport network and bus rapid transit (BRT) lines, and the expansion of Beirut airport. Regional and smaller investments represent a much smaller share and are primarily focused on the rehabilitation of the road network.

SOLID WASTE MANAGEMENT

15. **Solid waste disposal is a persistent and critical issue in Lebanon.** Before the Syrian crisis, only 53 percent of municipal solid

waste was disposed of in the country's only two sanitary landfills: Naameh and Zahlé. The remaining was disposed of in unsanitary landfills and hundreds of open dumps, which is a main source of pollution to air, watersheds and coastal zones. In the summer of 2015, a visually powerful garbage crisis that left piles of it uncollected on the streets of Lebanon galvanized sizable popular demonstrations.

16. **The CIP contains one entry for a single cycle investment program in the solid waste sector: "Solid Waste Management to cover all Lebanon including collection, sorting, treatment and landfill sites" for a total of US\$ 1,400 million.** Further discussions identified the following centralized waste treatment investments: (i) three Waste to Energy (WtE) facilities in the urbanized coastal regions (Beirut, the north around Tripoli and South Lebanon around Saida/Zahrani), and (ii) more traditional schemes based on composting and sanitary landfilling for the more rural parts of Lebanon in the north Akkar area and for the Bekaa valley. The WtE schemes would require three times US\$ 375 million and the two rural schemes together around \$US 175 million. In addition, roughly US\$ 100 million would be required to cleanup hundreds of illegal dumpsites in Lebanon, and for some, the rehabilitation into sanitary landfills.

TELECOMMUNICATIONS

17. **Lebanon has a unique opportunity to develop a new comprehensive policy to address the various bottlenecks affecting the growth and development of broadband infrastructure and services.** The main opportunity is to leverage on Lebanon's education and skill level, by providing modern broadband infrastructure and ICT applications. This would boost the competitiveness of the service sector, and create jobs and income opportunities for the skilled workers.
18. **The CIP contains 8 separately identified investment projects in the telecoms sector for a total of US\$ 700 million, implemented over Cycle 1 covering the period 2018-2021.** The objective is to modernize

Lebanon's broadband and digital platform infrastructure, providing faster internet and cloud based services to government, businesses and consumers in Lebanon.

19. **In embracing this much-needed reform, Lebanon will need to pay attention to the important factors, including:**
 - accounting for the fiscal implications;
 - managing risks and opportunities to make sure that the benefits of broadband reach to different regions and income and social groups; and
 - avoiding the emergence of oligopolies in the sector

INDUSTRY

20. **Lebanon's industrial sector has lagged, both on regional and global comparative basis (WB, 2016).⁴** Consequences include, inadequate high-skill job creation and the exacerbation of macro-fiscal imbalances. One possibility to strengthen the industrial sector is via spatial industrial policies, most notably, industrial parks and special economic zones (SEZs), which support increased investment and competitiveness in the industrial sector. The CIP presents two such projects. The first, led by Ministry of Industry (Mol), includes the second phase for 3 industrial parks in Alkaa, Baalbek and Terbol, while the second is the Tripoli Special Economic Zone (TSEZ).
21. **The proposed industrial parks aim to improve the competitiveness of Lebanon's industries via (i) the provision of critical infrastructure; and (ii) in recognition that land prices are a principal impediment to competitiveness of industry in Lebanon, long-term leasing of municipal lands at very low prices to industries in the zone.** However, the authorities can help assure success by reinforcing the role of the private sector in order to ensure that these locations will attract new businesses and investment.
22. **The TSEZ is located adjacent to the Tripoli port, imparting a critical advantage.** In fact, it is expected to go beyond the trading and logistics role and develop an industrial

⁴ World Bank (2016), *Lebanon Economic Monitor: A GeoEconomy of Risks and Rewards*, Spring 2016.

park to attract foreign and domestic investments on manufacturing and related activities. A central caveat is in regard to the excessive fiscal incentives from which TSEZ businesses will benefit, and which are enshrined by law. The potential exists that TSEZ businesses will gain a significant competitive edge over non-TSEZ businesses, to the extent that the former enters an existing market. As a result, the incentive for businesses would be in favour of relocation to the zone at the expense of expansion. It is thus imperative that access to the zone is awarded to expanding businesses. Specifically, due to the location, the export market should be a key target, and sufficient measures/conditions can be undertaken by the authorities to ensure that access is offered to exporting businesses.

CULTURAL HERITAGE

23. **Tourism based on heritage assets is a traditionally strong pillar of the Lebanese economy.** Lebanese cities are among the oldest continuously inhabited areas in the world. The richness of the melting pot of communities in Lebanon is one the most representative tracts of the country and has historically been a driver of innovation. Lebanon, not accidentally, is the country where the first alphabet of the humankind was invented. Consequently, tourism in Lebanon has always been a major contributor to the economy. From Stone Age settlements to Phoenician city-states, from Roman temples to rock-cut hermitages, from Crusader Castles to Mamluk mosques and Ottoman hammams, heritage sites of global significance are displayed all across the country reflecting ancient and modern world history. This has been widely recognized by the international community; with 5 UNESCO World Heritage Sites, the country has the highest density of these sites globally compared to its population.
24. **Contribution of tourism to the country GDP is estimated at 25 percent, which is by far above the world average of 14 percent, above any other country in the Middle East and twice as much as a prime tourism destination like Italy (10 percent).** Despite elements of fragility due to the regional

context, and fluctuations in the sector, tourism remained a strong employment generating sector, especially for low-skilled workers; the sector accounts for 24 percent of total employment in Lebanon. Before the impact of the Syrian crisis, the number of visitors reached 2.5 million per year (2010). Soon afterwards, numbers declined, and lately, due to enhanced efforts for the stability of the country, the trend reversed back into the positive.

25. **The CIP contains 11 separately identified investment projects in the sector for a total of US\$ 264 million, to be implemented over the Cycles 1 and 2, covering the period 2018-2025.** They are related to a larger economic sector that can be defined as High-Value Added Services, which includes Tourism & Heritage and Creativity & Knowledge. Experience to date in Lebanon has shown that supporting knowledge and leveraging heritage assets in cities improved local economic development and job creation, especially in secondary and tertiary cities in lagging regions. It also enhances the livability for local communities in an inclusive manner, and attracts significant private sector investment.

C. Assessment Methodology

26. **The Government of Lebanon (GoL) has requested from the World Bank Group (WBG) an assessment of the Capital Investment Plan (CIP), which comprises a list of over 280 projects, large and small, with geographic and other limited designations.** In light of the aforementioned physical deficit, the CIP can be an effective tool to help reinforce Lebanon's dilapidated infrastructure, abetting a boost in economic growth. World Bank's long-term engagement with Lebanon affords its staff country context and sector insight, in addition to the technical know-how, to provide an assessment of the CIP project list.
27. **A framework for the assessment was designed based on four main categories: (i) Strategic Assessment; (ii) Assessment for Growth, Employment and Inclusion; (iii) Feasibility Assessment; and (iv) Reform**

Needs Assessment. Annex A presents the Guidance Note for the Capital Investment Plan Assessment Framework. The Note lays out the specific criteria that are used and offers guidance on how to make the assessment.

28. **The assessment affords a chance to review opportunities for private investment in Lebanon.** Capital investment projects are no longer the exclusive purview of government investment departments. Many countries have found that the private sector provides quality investments and value for money in critical infrastructure areas—energy, telecommunications, transportation etc. At the same time, investors see capital projects as opportunities to participate in critical investments of national priority with substantial international attention and possibly co-financing. However, for such opportunities to be translated to better (and profitable) public services, updated and stable legal and regulatory frameworks are required.
29. **The IMF is taking the lead on a macro-fiscal assessment for the CIP, which was presented at the Paris CEDRE conference.** Nonetheless, this document quantifies the growth dividend on the real GDP that is needed to neutralize the impact of

increased public spending on the debt-to-GDP ratio over a 10-year period from 2018 to 2027. Lebanon can ill afford to ignore fiscal constraints and the GoL should aim to have them incorporated and accounted for in the final plan. This does not only apply to government expenditures, but also to revenues. For the former, public-private partnerships (PPP) are an important strategy, and the recently passed PPP law can be an effective vehicle. On the revenues side, telecom revenues are not only one of the top revenue sources for the much-indebted government, it is also a rare source of hard currency, noting that the foreign currency-denominated portion of public debt is equivalent to about 56 percent of GDP (end-October 2017).

D. Results in Aggregation

30. **The strategic assessment of CIP projects reveals that the vast majority of projects are regarded as being of strategic priority for the relevant sector and are part of an official sector strategy** (Table 1). All projects in the water, wastewater, solid waste, telecommunications, cultural and industry sectors are strategic priorities in

Table 1. Percentage of projects in the sector which meet the strategic criteria.

	Strategic Assessment			
	The project is a strategic priority for the sector	The project will help significantly reduce the cost structure in the sector	The project will help attract FDIs in the sector	The project belongs to an official sector strategy
Electricity	83*	100	83	87**
Water	100	100	0	100
Wastewater	100	100	0	100
Transport	92	67	38	54
Telecommunications	100	25**	38**	0
Solid Waste	100	L	83	100
Cultural	100	82**	73***	100
Industry	100	100	50****	100

* Less than 10 percent of projects require more information to assess the statement

** 13 percent of projects require more information to assess the statement

*** 18 percent of projects require more information to assess the statement

**** One of the two projects requires more information to assess the statement

L Not relevant

Source: WB staff assessment.

their relevant sectors, while most of the projects in transportation (92 percent) and electricity (83 percent) are considered a strategic priority. In terms of strategic integration, all projects in the water, wastewater, solid waste, cultural and industry sectors are part of an official sector strategy. Eighty seven percent of the projects in the electricity sector are embedded in a broader national sector strategy while 54 percent of the projects in the transportation sector follow a sector

strategy. Telecommunication stands out as the only sector lacking an official sector strategy.

31. **The vast majority of projects in the CIP are expected to reduce the cost structure in the sector, and a good sum can attract FDIs.** CIP projects are expected to significantly reduce the cost structure in their relevant sector. This is particularly the case for all projects in electricity, water, wastewater and industry, as well as the great majority

Table 2. Percentage of projects in the sector which meet the growth, employment and inclusion criteria.

Assessment for Growth, Employment and Inclusion			
	The completed project has high sustainability of growth impact	The completed project contributes significantly to high productivity jobs	The project creates a large or moderate number of jobs
Electricity	78*	I	74
Water	I	I	I
Wastewater	I	I	I
Transport	58	0	96
Telecommunications	13**	25***	38**
Solid Waste	0	0	83
Cultural	82	55	100
Industry	100	100	100

I denotes 'inconclusive', as more information is required to assess the statement

* 22 percent of projects require more information to assess the statement

** 13 percent of projects require more information to assess the statement

*** 25 percent of projects require more information to assess the statement

Source: WB staff assessment.

Table 3. Percentage of projects in the sector which meet the feasibility criteria.

Feasibility Assessment		
	The project is shovel ready in 0-18 months	The implementing agency has the necessary capacity
Electricity	48*	9
Water	I	I
Wastewater	I	I
Transport	25	96
Telecommunications	50**	63***
Solid Waste	50	100
Cultural	91	100
Industry	50	100

I denotes 'inconclusive', as more information is required to assess the statement

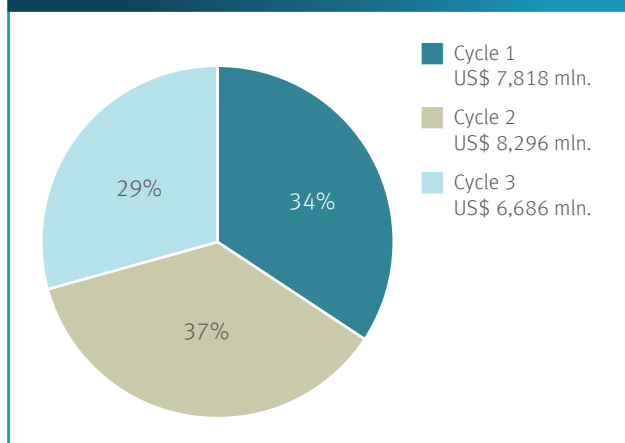
* 26 percent of projects require more information to assess the statement

** 13 percent of projects require more information to assess the statement

*** 38 percent of projects require more information to assess the statement

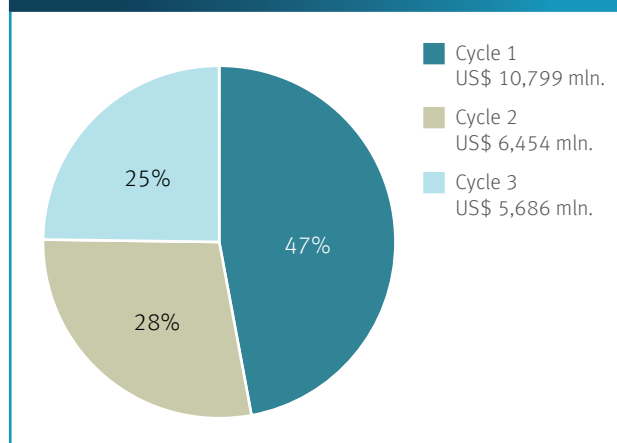
Source: WB staff assessment.

Figure 3: CIP allocation of Cycles – WBG



Source: WB staff assessment.

Figure 4: CIP allocation of Cycles – GoL



Source: WB staff assessment.

of projects in transportation and cultural sectors. Furthermore, the great majority of projects in electricity (83 percent), solid waste (83 percent) and the cultural sector (73 percent) are capable of attracting FDI.

32. The assessment for growth, employment and inclusion of CIP projects shows that most of the projects in electricity, transportation, culture and industry have a highly sustainable growth impact (Table 2). In addition, most completed projects in the industry, cultural, transportation, solid waste and electricity sectors are projected to create a large or moderate number of jobs.

33. The feasibility assessment for CIP projects shows that most of the projects in the cultural sector and around half of the projects in the industry, telecommunications, solid waste and electricity sectors are ready to be implemented within a period of 18 months (Table 3). Further, the implementing agency has the necessary capacity for all projects in the solid waste, cultural and industry sectors and most of the projects in the transportation (96 percent) and telecommunications sectors (63 percent).

34. According to the WBG, almost a third of total CIP cost is assessed for Cycle 1 (US\$ 7,818), and about 37 percent in Cycle 2 (8,296)⁵ (Figure 3). This compares to GoL's estimation of 47 percent (US\$ 10,799

million) and 28 percent (US\$ 6,454 million) of the CIP in Cycles 1 and 2, respectively⁶ (Figure 4). It is important to note that this is a static assessment by the WBG of when the projects are likely to commence implementation, under present conditions and based on previous experiences. With that in mind, the main WBG-GoL divergences in Cycle 1⁷ emanate from (i) water dams, with the WBG assessing US\$ 930 million less in value of projects in Cycle 1 than GoL does; (ii) two waste to energy facilities (US\$ 750 million) in the solid waste sector, which are assessed by WBG in Cycle 2, compared to Cycle 1 by GoL; and (iii) the 1000 MW Salaata power plant (US\$ 600 million), which is also assessed by the WBG for Cycle 2, compared to Cycle 1 by GoL.⁸ For the last divergence, given the urgent need for the additional generation capacity and likely time needed to develop the Salaata site, other more readily available sites should be developed to ensure that at least 1000 MW of new capacity comes online as soon as possible. Annex B presents a WBG-GoL project by project comparison on implementation cycles.

35. Sector allocation of the CIP per Cycle is broadly similar when comparing WBG assessment with GoL's estimations (Figure 5, Figure 6). WBG assessment of Cycle 1 projects is valued at US\$ 7,818 amount,

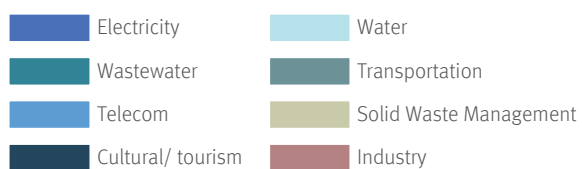
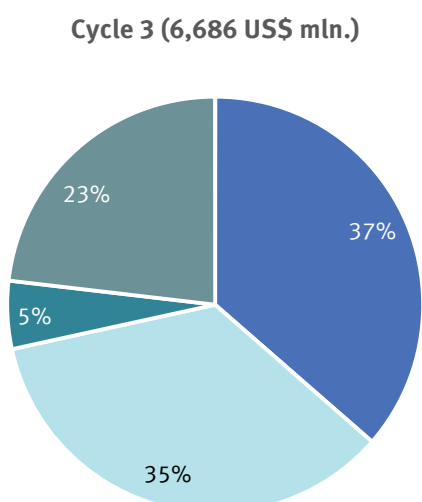
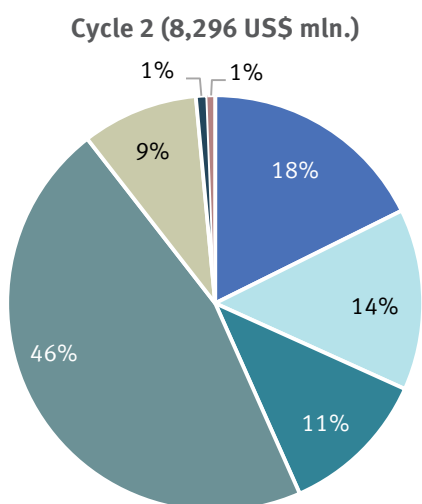
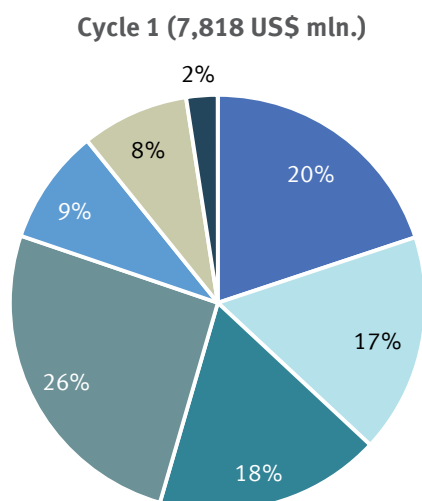
⁵ These figures include land expropriation costs in the amount of US\$ 311 million and US\$ 1,267 million in Cycles 1 and 2, respectively.

⁶ These figures include land expropriation costs in the amount of US\$ 693 million and US\$ 1,025 million in Cycles 1 and 2, respectively.

⁷ This also reflects the divergences in Cycle 2.

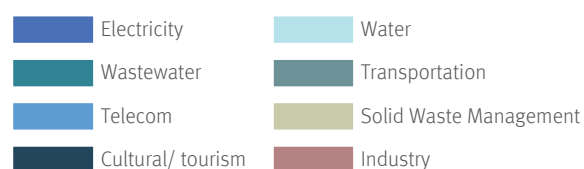
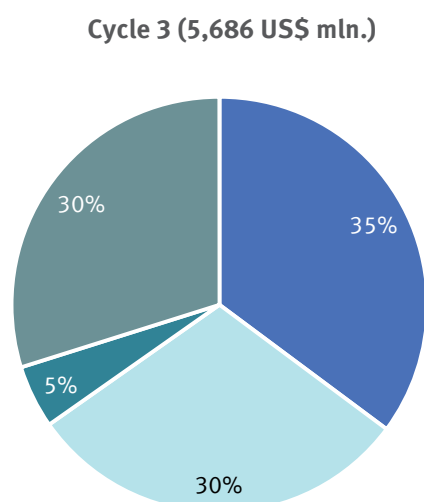
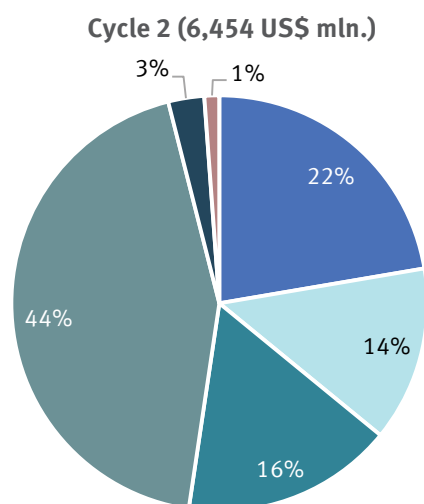
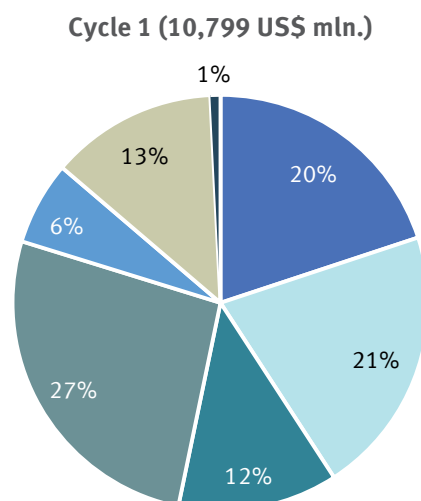
⁸ A few GoL Cycle 2 projects were assessed as Cycle 1 by WBG.

Figure 5: CIP allocation of costs by sector across Cycles – WBG



Source: WB staff assessment.

Figure 6: CIP allocation of costs by sector across Cycles – GoL



Source: WB staff assessment.

of which 26 percent is assigned for the transportation sector, followed by the electricity sector (20 percent), wastewater (18 percent) and water (17 percent) sectors, telecommunications (9 percent) and solid waste (8 percent). Cycle 2 of the CIP is valued at US\$ 8,296 million, 46 percent of which are transport infrastructure projects.⁹

E. CIP Enablers

- 36. Following the election of a president in 2016 and the subsequent formation of a unity government ending the prolonged political stalemate, political leaders made significant progress in 2017 by agreeing on long-standing reform measures.**

Crucially, on October 19, the Lebanese parliament approved the 2017 budget, making it Lebanon's first formal budget in 12 years. Other accomplishments include, a parliamentary election law—paving the way for the parliamentary elections in May 2018, the first since 2009—the civil service salary scale adjustment and the public-private partnership law. These achievements illustrate the potential for Lebanese authorities to undertake significant reform initiatives via national political consensus.

- 37. It remains a fact, however, that a principal component for an effective CIP is the adoption and implementation of a structural reform program.**

This section suggests a menu of such reforms that would help enable the State to deliver essential services and reinforce its infrastructure in a sustainable manner. Specifically, a list of cross-sectoral reforms is presented, which can (i) help establish solid foundations for sound investments; (ii) generate significant positive signals and good will to investors and donors; and (iii) provided there is a political will, can be completed in a relatively short period of time. This document also suggests sector-specific reforms that are needed in order to advance the sectors, making them more efficient and sustainable. The latter set of reforms are explained in more detail in following sections under the corresponding sector. Table 4 below presents a summary list of suggested reforms.

⁹ \$140 million worth of CIP projects presented by GoL were not assessed for any Cycle due to lack of information.

Table 4: A summary list of suggested structural reforms for the CIP.

Horizontal Reforms	Vertical Reforms
A fiscal framework which commits to a positive primary fiscal balance over the medium term, as part of a debt management strategy that aims to lower the public debt-to-GDP ratio so that it is on a more sustainable trajectory	Electricity <ol style="list-style-type: none"> 1. A multi-year electricity tariff cost-recovery plan for EdL over a transition period in tandem with increases in generation 2. Implementation of approved development plan for natural gas supply
Electricity tariff adjustment for new generation	Water & Wastewater <ol style="list-style-type: none"> 1. Parliament ratification of the water code 2. By-Laws of Law 221 for autonomy status of the Water Establishments 3. Staff recruited for O&M of water facilities
Anti-corruption Law	Transport <ol style="list-style-type: none"> 1. National Transport Strategy adopted 2. The review of the governance structure of the Civil Aviation sector 3. Identification of revenues and expenditures for sector
Expedite transition to Single Treasury Account	Solid Waste Management <ol style="list-style-type: none"> 1. Development of a tariff system for waste generators (households) 2. Policies to support capacity development with local governments for sector planning and operations 3. Defining feed-in tariffs for electricity from waste processing facilities based on long-term economic benefits
Reform of public investment management systems	Telecommunication <ol style="list-style-type: none"> 1. Adopting a unified vision 2. Harmonized licensing regime for DSPs 3. Restructuring of the telecoms sectors
Ratification of Public Procurement Law	Industrial Zones <ol style="list-style-type: none"> 1. TSEZ Regulatory and Licensing Regime
Endorsement of the new customs strategy	
Passage of credit infrastructure legislative package	
Regulations pertaining to the organizational and staffing structure, financing arrangements and functionality of HCP	
A strategic plan for the management of the fiscal commitments and contingent liabilities	

CONTAINING STRESSES FROM THE PUBLIC DEBT

38. Lebanon's large macroeconomic imbalances have kept borrowing costs high for businesses, raising cost of capital, reducing competitiveness and inhibiting investment. Since 2004, the lending rate averaged 8.8 percent for borrowing in Lebanese pounds (LBP) and 7.5 percent in US Dollar. High interest rates are imperative for an economy that is dependent on capital inflows to finance its large and persistent twin (fiscal and current account) deficits. In fact, the 2017-2018 Global Competitiveness Index (GCI) produced by the World Economic Forum ranks Lebanon's macroeconomic environment 133rd out of 137 countries, with government debt ranking 135th. This has enfeebled investment causing it to lag in Lebanon's growth model. Instead, consumption has been the primary driver, contributing an average of 4 percentage points (pp) to real GDP growth, 3.3 of which due to private consumption, over the 2005-2015 period.¹⁰ Meanwhile, the contribution of investment to real GDP growth was only 1.3 pp over the same period, falling sharply to 0.1 since 2011.¹¹

39. Lebanon has the third highest debt-to-GDP ratio in the world, imposing substantial financing needs on the Lebanese economy. Gross public debt is estimated to have reached around 153 percent of GDP by end-2017, with only Japan and Greece higher globally. Debt service for the government reaches about 10 percent of GDP annually, consuming about half of domestic revenues. As a result, the government suffers from a long term and sizable fiscal deficit, which in 2016 registered 9.6 percent of GDP. Externally, a large trade deficit drives a sizable structural current account deficit, which has averaged close to 20 percent of GDP since 2011. In 2016, gross financing needs for the public sector amounted to 30 percent of GDP, while that for the external sector (gross external financing needs) were 171 percent of GDP (IMF, 2017).¹² This

is all under the context of a fixed exchange rate regime that has been in effect for a couple of decades and which has become a central pillar of the Lebanese economy. The system is sustained in good part by foreign currency inflows, largely in the form of deposits at commercial banks. High interest rates are a reflection of the risk premium that needs to be paid in such a context to maintain the attractiveness of Lebanese assets. Nonetheless, such deposit inflows have decelerated sharply since 2011, increasing uncertainty on the economy's ability to meet its financing needs.

40. It is important for Lebanon to adopt significant fiscal reforms that would send a positive shock to markets and citizens that the Government of Lebanon (GoL) is on track to place the debt-to-GDP ratio on a sustainable path. This can be timed with the increased capital expenditures associated with the CIP so as to offset the contractionary effects of a fiscal adjustment program. As it currently stands, there is widespread apprehension on the government's ability to meet its financing needs in light of slowing deposit inflows to the banking sector. To counter this apprehension, the following initiative is suggested:

REFORM 1:

GoL to adopt a fiscal framework which commits to a positive primary fiscal balance over the medium term, as part of a debt management strategy that aims to lower the public debt-to-GDP ratio so that it is on a more sustainable trajectory.

41. Under current policies, Lebanon's debt trajectory worsens directly with the generation of more electricity. Electricité du Liban (EdL), the national utility company, imparts a staggering burden on Lebanon's public finances. Prior to the Syrian conflict, government transfers to EdL amounted to an average of 55 percent of Lebanon's fiscal deficit. At their peak in 2012 and 2013, the government transferred around US\$ 2 billion per year to EdL. As the overall fiscal balance has been in deficit since 1992, EdL transfers have been effectively paid through borrowing. Based on annual budget documents, World Bank staff estimate that cumulative government transfers to EdL from 1992 to 2013 accounted for a

10 Average real GDP growth was 4.6 percent over the 2005-2015 period.

11 Average real GDP growth was 1.8 percent over the 2011-2015 period

12 IMF Article IV, January 2017.

staggering 55.4 percent of 2013 GDP, and almost 40 percent of Lebanon's total public debt. That is to say: Lebanon's debt-to-GDP ratio would have been 83 percent instead of 138 percent (in 2013) if EdL had not been loss making. In response, it is recommended that the government place a limit on its transfers to EdL.

REFORM 2:

Council of Ministers (CoM) to pass a decree stating that any increase in power supply from new power generation output would be matched by a commensurate rise in the average tariff sufficient to leave government transfers to EdL unaffected by the rise in generation. Importantly, this will also establish the principle of linking tariff increases with service improvements. More than half of respondents to a World Bank's Social and Impact Assessment Survey said that they would be willing to pay double their current budget on EdL electricity in return for 24-hour service. The cost of EdL-supplied electricity would remain far lower than that of privately supplied generators.

ranked Lebanon 136th out of 176 countries worldwide in 2016, making Lebanon among the 50 most corrupt countries in the world. The citizens of Lebanon are looking to their government to make tangible measures in the fight against corruption. Two important measures are:

REFORM 3:

Council of Ministers (CoM) to endorse the National anticorruption strategy currently being developed by the Office of the Minister of State for Administrative Reforms (OMSAR).

REFORM 4:

Government to expedite reforms to enable the transition to the treasury single account (TSA) which facilitates efficient management and control of government's cash resources. Establishing a unified structure of banking arrangements through a TSA is good practice. Under such a structure all government funds are collected in one account, which reduces borrowing costs, extends credit and improves government's fiscal policy and helps reduce opportunities for corruption. For a TSA to be effective, a sound legal basis needs to be established to ensure its robustness and stability. A TSA policy will reduce the proliferation of bank accounts operated by ministries, departments and agencies. This in turn will promote greater financial accountability throughout the public sector.

GOVERNANCE AND INSTITUTIONS

42. **Like others, investors are highly weary of poor governance and weak institutions in Lebanon, which distort their risk-return calculus, raising the expected return and shortening the maturity thresholds that are needed for investments to proceed.** Institutions are extremely weak, characterized by both inefficiency and corruption. The country suffers from a governance trap, whereby political stability is maintained through subordination of national prerogatives to consensus among communal leaders, at the cost of strong institutions focused on the common good. As a result, Lebanon scores poorly on many aggregate governance indicators. For instance, out of 137 countries, Lebanon ranks 121 in irregular payments and bribes, 128 in public trust in politicians and 130 in efficiency of government spending.¹³ In addition, Transparency International's (TI) Corruption Perception Index (CPI)

43. **Lebanon needs Public Investment Management (PIM) systems which perform well despite systemic capacity constraints, and which seek good-fit (rather than "best practice") projects that are informed by the country's development priorities.** Efficiency in capital expenditure has become increasingly important in the face of public funding constraints in Lebanon. Many arguments for creating fiscal space are explicitly about the need to better manage scarce resources and boost public investment in physical assets, such as public infrastructure, and/or in the social sector facilities (i.e. health, education, etc.) that contribute to improvements in human capital. However, if the Capital Investment Plan is to be effectively implemented,

13 Source: World Economic Forum, Global Competitiveness Index 2017-2018.

challenges in core functions need to be addressed to help mitigate the risk of bad or inappropriate projects being undertaken, repeated cost overruns, implementation delays and poor investment outcomes. Thus, in anticipation of expanded capital expenditures, it is recommended:

REFORM 5:

Government to initiate reforms of Public Investment Management systems in Lebanon, with a view to improving the efficiency of capital expenditures.

44. **Strengthening the procurement process is key for Lebanon as it manages the large projects in the Capital Investment Plan.** Public procurement in Lebanon has recently received considerable attention, generating controversies related to transparency. Moreover, weak or lack of public procurement oversight continues to contribute to distorting fairness and competition, resulting in favoring the elite in capturing the major market opportunities.

REFORM 6:

Parliament to ratify the latest revised Public Procurement Law. The law of 1963, which constitutes the legal foundation of Lebanon's current institutional framework for procurement, is outdated, excessively centralized and inadequate, resulting in procurement and execution delays. A revised procurement law originally drafted in 1990, with the latest revision submitted to Parliament on December 12th, 2012, was only put on the agenda of the "Combined Committees" for discussion on February 24, 2015. However, due to lack of time, the review has only covered a small part of the Law, and as such it remains unratified.

TRADE

45. **Lebanon is a small open economy with a large trading sector, and enabling the trade environment will have a direct and positive impact on firm competitiveness and job creation.** Lebanon's exports and imports of goods and services averaged a significant 124 percent of GDP over the past decade. Meanwhile, customs

procedures are notoriously inefficient levying additional costs to businesses. In fact, the 2016 World Bank's Logistics Performance Index (LPI) indicates a lagging performance for Lebanon's customs.¹⁴ A key policy initiative in support of the trade sector is the modernization of customs procedures through the development and implementation of the new customs strategy. The following is suggested:

REFORM 7:

CoM to endorse the new customs strategy, which is currently being finalized and which will entail the following key features:

- Simplified procedures;
- Enhancing electronic data entry;
- Updating the existing ASYCUDA-based system to support e-payments;
- Developing an electronic registration module to include the development of an E-Single Window with focus on the coordination among all border agencies (such as Ministry of Agriculture, Ministry of Health, Ministry of Defense, Ministry of Economy and Trade, Ministry of Industry, and any other relevant body);
- Strengthening of the Risk Management System;
- Introducing a full-fledged Authorized Economic Operator (AEO) Program, which will expedite the process for low-risk traders.

DOING BUSINESS

46. **While there have been no substantial reforms across any of the key component measures that make up the Doing Business (DB) score since 2007, reform initiatives have been in the pipeline in key areas such as business regulation streamlining, extending credit to SMEs and insolvency resolution.** These are reforms that can be implemented promptly given their current readiness which could, in turn, have a significant impact on SME start-up and growth and job creation. Limitations in these areas constrain the potential in areas where Lebanon does much better such as

¹⁴ The 2016 LPI score for customs performance was 2.73 for Lebanon, compared to 3.84 for the United Arab Emirates.

in business sophistication and innovation. This becomes all the more significant with the expected stronger private sector led growth suggested by the CIP. Toward that end, the following reforms are suggested:

REFORM 8:

Parliament to pass the Credit Infrastructure Legislative package (insolvency, insolvency practitioners, secured lending, judiciary mediation). This legislative package will increase access to finance for the private sector in Lebanon, especially SMEs, start-ups and women by

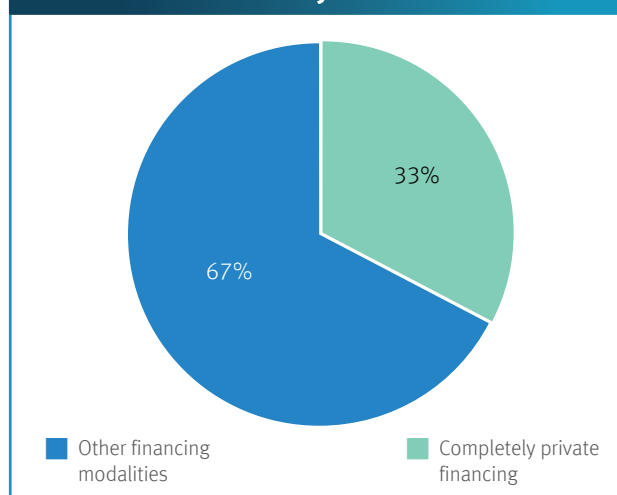
- Modernizing the overall insolvency regime to facilitate sound loan recovery and restructuring of viable yet distressed firms, and allowing efficient and effective exiting of unviable firms;
- Strengthening lenders' rights in movable assets; and
- Institutionalizing commercial mediation for fast and cost-effective commercial dispute resolution to free up much needed assets and working capital, and reduce heavy case backlogs in Courts.

The role of the central bank, Banque du Liban (BdL), in the banking sector is vital, both as a regulator and credit enabler, and to prevent unintended negative implications on macroeconomic risks, the central bank has to be a full partner when it comes to credit policy. It is thus imperative to keep the collateral registry (that is associated with the secured lending law) with BdL, since BdL's information set on credit conditions and on macro and micro prudential risks cannot be matched by any other institution.

PUBLIC PRIVATE PARTNERSHIPS

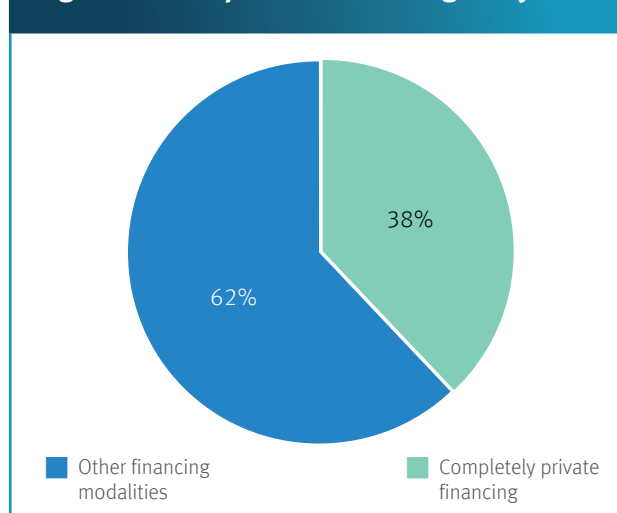
47. **There should be a transparent, predictable and accountable enabling environment to attract private financing of priority public investments.** CIP needs far exceed government fiscal capacity and to be realized will require a crowding in of different funding sources, including, most critically, private financing. To create the enabling environment to attract significant flows of private investment, reform actions will be required across a number of the key infrastructure sectors.

Figure 7: CIP private financing in all CIP Cycles.



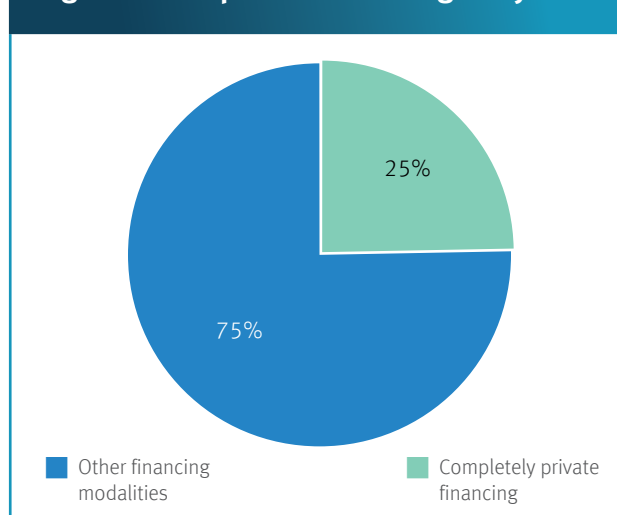
Source: WB staff assessment.

Figure 8: CIP private financing in Cycle 1.



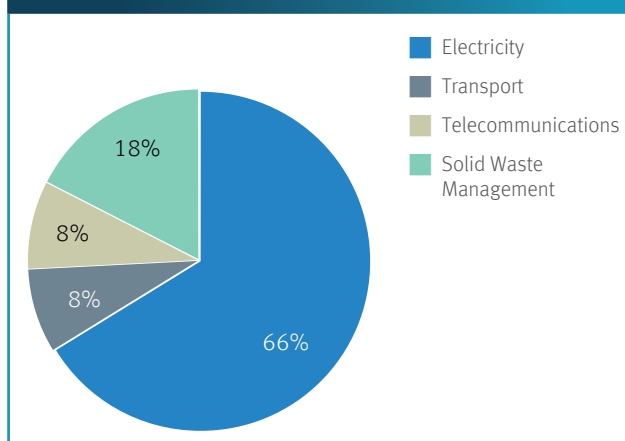
Source: WB staff assessment.

Figure 9: CIP private financing in Cycle 2.



Source: WB staff assessment.

Figure 10: Sector share of projects financed completely by the private sector in all CIP Cycles.



Source: WB staff assessment.

It will also require that the government organize itself differently to manage a more strategic investment engagement with the private sector. The first step in this direction has been taken with the passage of the PPP law in September 2017. This establishes the broad governance and institutional arrangements that can signal to the private sector that effective and transparent processes for the identification, development, negotiation, procurement, implementation and monitoring of Public Private Partnership (PPP) projects is in place.

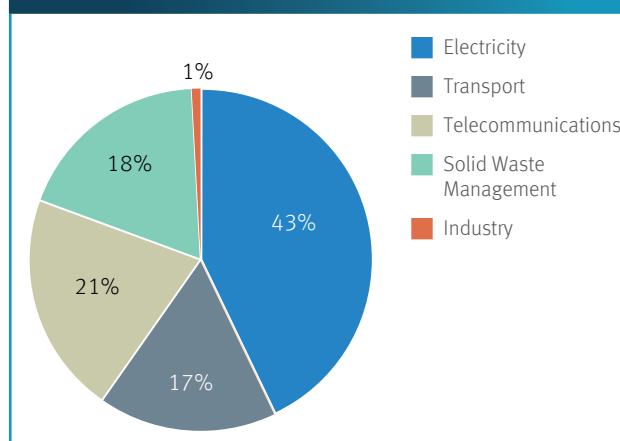
REFORM 9:

CoM to effect the newly enacted PPP law by enhancing the operational capacity and by approving regulations pertaining to the organizational and staffing structure, financing arrangements and functionality of the High Council of Privatization and PPPs (HCP). These regulations will ensure that the HCP is fully enabled to fulfill the mandate set out for it in the 2017 PPP law.

REFORM 10:

Government of Lebanon—through the Ministry of Finance—to put in place a strategic plan for the management of the fiscal commitments and contingent liabilities (FCCL). FCCL obligations are a common feature of long term PPP contracts entailing different project risk allocations between public and private sectors. Not only can these FCCL obligations have significant fiscal consequences, but

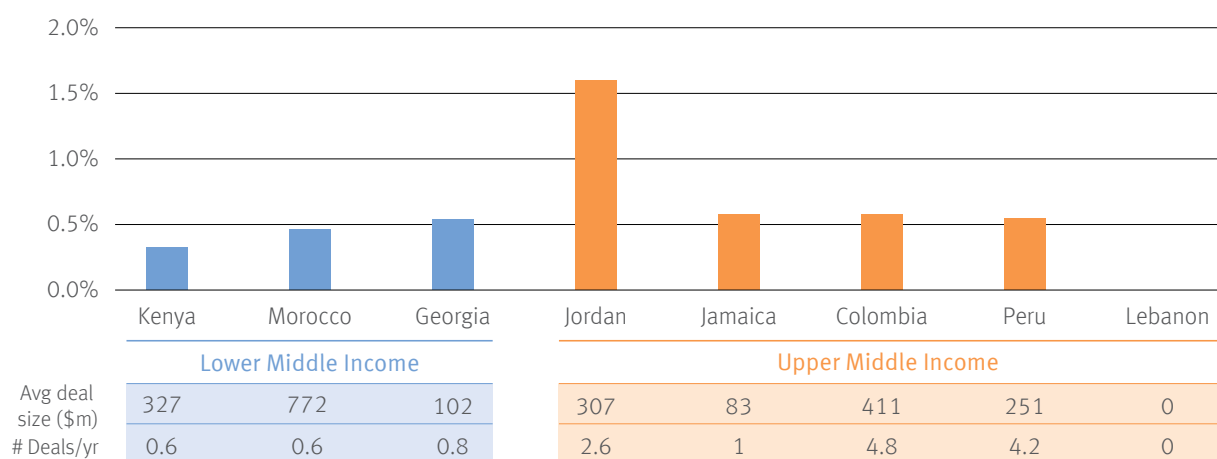
Figure 11: Sector share of projects financed completely by the private sector in Cycle 1.



Source: WB staff assessment.

the Government credibility as a reliable PPP partner can be seriously impaired where FCCL obligations are not effectively managed. This strategy should detail the institutional arrangements, resource requirements and processes that will be required to ensure the government's fiscal capacity to meet any such obligations that fall due during the life of a PPP contract.

Figure 12: Infrastructure project finance volume in selected countries



Source: WB staff assessment.

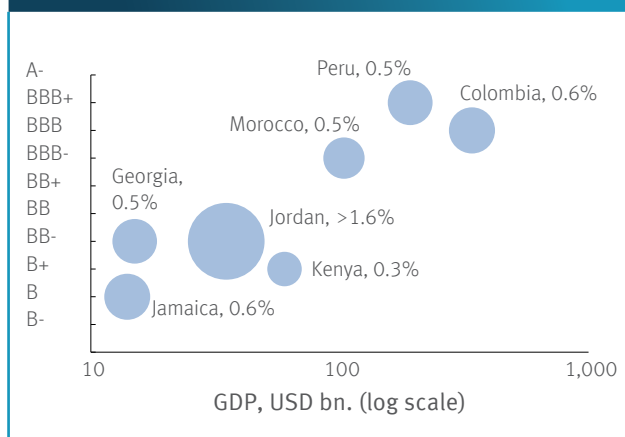
F. Maximizing Finance for Lebanon's CIP

48. In value, around 33 percent (US\$ 7,462 million) of the CIP project costs (Cycle 1, 2 and 3) are assessed as could be completely financed by the private sector; in Cycle 1 this percentage would be 38 (US\$ 2,967) (Figure 7, Figure 8). It would be advantageous for Lebanon, with a non-existent fiscal space to frontload bankable projects. In Cycle 2, public concessional financing is likely to dominate (Figure 9).
49. **Electricity projects are assessed as the most appealing to the private sector.** In value, electricity sector's share of projects financed completely by the private sector is 66 percent (43 percent) for the whole CIP (Cycle 1), followed by solid waste at 18 percent (18 percent), then telecommunications at 8 percent (21 percent) and transport also at 8 percent (17 percent) (Figure 10, Figure 11).
50. **It is important to keep in mind that the assessment on financing was done on a project by project basis and "in principle".** As such, it should be considered as a target to approach. A cross-comparator country analysis on infrastructure private debt finance indicates volumes of between 0.5 to 1.5 percent of GDP (Figure 12, Figure 13). This translates to between US\$ 250 million to US\$ 750 million annually for Lebanon. For total private financing of projects an average of 25 percent equity is added,

to arrive at US\$ 333 million to US\$ 1,000 million per year of private infrastructure financing.

51. **In regard to public financing, the Global Concessional Financing Facility, the GCFF, can be a source of financing for the CIP.** Among all financing sources, official development assistance ("ODA") from concessional multilateral and bilateral development institutions offer the most favorable terms (longest maturities, lowest interest rates, simpler documentation). The GCFF is an established concessional financing facility, which can effectively implement programs that address Lebanon's long-standing development needs, while at the same time, help mitigate the impact on the refugees.
52. **Given Lebanon's limited sovereign borrowing headroom due to high indebtedness and large debt service obligations relative to GDP (and relative to government revenues), the Lebanese authorities may wish to maximize the volume of commercial investment and finance in infrastructure.** In such projects, equity return and debt service are underpinned by commercial revenues (stemming from ratepayers) rather than the national budget (ultimately funded by taxpayers). These projects can also provide "value for money" through their efficient allocation of incentives and risks between the public and private parties. This helps reduce the life-cycle cost of projects, and improve the quality of service. CIP needs

Figure 13: Infrastructure project finance debt volume, average 2013-2017, (% of GDP)



Source: WB staff assessment.

far exceed current fiscal capacity and to be realized will require a crowding in of private financing. The banking system has limited capacity mainly due to prudential regulation: their capital adequacy ratios are high and NPLs are on the rise. Despite Lebanese banks' willingness to finance the CIP, these constraints will certainly be binding moving forward. While capital markets are too nascent to play a role in the short to medium term in the financing of the CIP, the potential on longer horizons is strong and progress on that front would send a good signal to international investors.

53. **Priority projects with high rates of social and economic return but low financial rates of return may need financial support from the state to make them commercially viable and attractive to private sector investors.** Although commercial infrastructure includes projects fully in the private sector, in practice most private sector investments in infrastructure involve some form of public-private partnership (PPP) arrangement. At one end of the PPP spectrum, many investments in telecom, airports and power generation can be fully financed by the private sector, although some (independent power producers and internet services) may give rise to significant contingent liabilities for the state. In other infrastructure projects (particularly in water supply and urban transport), user fees often fall far short of capital cost. For the latter group with high rates of social and economic

return, this often involves large amounts, long investment horizons, relatively low financial returns and complex structuring involved. As a result, there is a need for state involvement to attract commercial investment and finance in infrastructure, such that countries often find it necessary to implement specific facilitation schemes in parallel with broader sector-level and cross-sector enabling policies.

54. **For this reason, national authorities could consider establishing a Lebanon Infrastructure Financing Facility (LIFF), with the support of international donors.** Detailed assessments would need to be conducted by the government's transaction advisors to define more precisely amounts required to support the financing of commercial CIP projects, and the multiplier impact of these facilities. As an order of magnitude, the average multiplier effect of donor funding on commercial investment and finance might be in the range of 4 to 5 times; meaning that each dollar of donor or public funds invested in such a scheme could facilitate 4 or 5 dollars of commercial investments in infrastructure.

G. A Growth Dividend

55. **If well implemented, the Capital Investment Plan will bring about significant infrastructure spending with expected growth dividend.**¹⁵ The former will increase the burden on Lebanon's fiscal position, while the latter will mitigate it. This section quantifies the growth dividend on the real GDP that is needed to neutralize the impact of increased public spending on the debt-to-GDP ratio over a 10-year period from 2018 to 2027. It is assumed that the CIP will be well implemented and that 2019 would be the first year of CIP investment.
56. **The public finance portion of the CIP is estimated to be US\$ 1,555 million, US\$ 1,374 million and US\$ 337 million, annually, over Cycle 1, 2 and 3, respectively, financed by concessionary borrowing.** As indicated by Figure 3, the CIP is estimated to cost US\$ 7,818 million, US\$ 8,296

15 For a discussion on the growth impact of infrastructure spending, refer to Infrastructure and Growth, Luis Servén, World Bank Research Brief, June 2010.

million and US\$ 6,686 million in Cycles 1, 2 and 3, respectively. This translates to US\$ 1,955 million, US\$ 2,074 million and US\$ 1,337 million annually over the respective three cycles. Based on comparator-country analysis in paragraph 50 above, it is noted that total private financing of projects can range between US\$ 333 million to US\$ 1,000 million per year for Lebanon. The following reasonable assumption is adopted: Lebanon will be slow to attract private financing at the beginning—due to lack of capacity and confidence—but would be increasingly successful at doing so as experience is gained and a pipeline of bankable projects is established. It is thus postulated that private finance would be at the lower end of the above-identified range in Cycle 1—US\$ 400 million annually—increasing to US\$ 700 million annually in Cycle 2, reaching the upper end of US\$ 1,000 million annually in Cycle 3. Based on that, the public finance portion of the CIP, and that which would be added to the country's fiscal position, amounts to US\$ 1,555 million, US\$ 1,374 million and US\$ 337 million, annually, over Cycle 1, 2 and 3, respectively.¹⁶ Furthermore, it is assumed that this would be financed by concessionary borrowing.¹⁷

57. Using the World Bank's Medium-Term Debt Strategy (MTDS) framework, different debt profiles are generated for varying scenarios of real GDP growth. Specifically, the following scenarios are considered:

- a. *Baseline scenario:* The CIP is not implemented and real GDP growth is projected to continue to hover around 2 percent annually from 2018 to 2027.
- b. *CIP without a growth dividend:* Specifically, this scenario adds CIP public expenditures to total expenditures, while retaining growth in real GDP at 2 percent annually from 2018 to 2027, and as a consequence,

assuming no increases in government revenues compared to the baseline scenario.

- c. *CIP with a growth dividend of 0.5 pp:* This scenario adds CIP public expenditures to total expenditures and assumes growth in real GDP to be 2.5 percent annually from 2018 to 2027, with commensurate increases in the value of government revenues.
- d. *CIP with a growth dividend of 0.75 pp:* This scenario adds CIP public expenditures to total expenditures and assumes growth in real GDP to be 2.75 percent annually from 2018 to 2027, with commensurate increases in the value of government revenues.¹⁸
- e. *CIP with a growth dividend of 1 pp:* This scenario adds CIP public expenditures to total expenditures and assumes growth in real GDP to be 3 percent annually from 2018 to 2027, with commensurate increases in the value of government revenues.

58. The CIP needs to generate between 0.75 and 1 pp in additional growth to the real GDP in order to offset the impact of increased public spending on the debt-to-GDP ratio after 10 years. Results of the simulations are illustrated in Figure 14. In none of the tested scenarios does the debt-to-GDP ratio stabilize, but instead it continues to rise through 2027. This is a strong indication of public debt unsustainability in Lebanon, even at these higher growth rates, suggesting that debt sustainability will still require fiscal and structural reforms of the type suggested in this document.

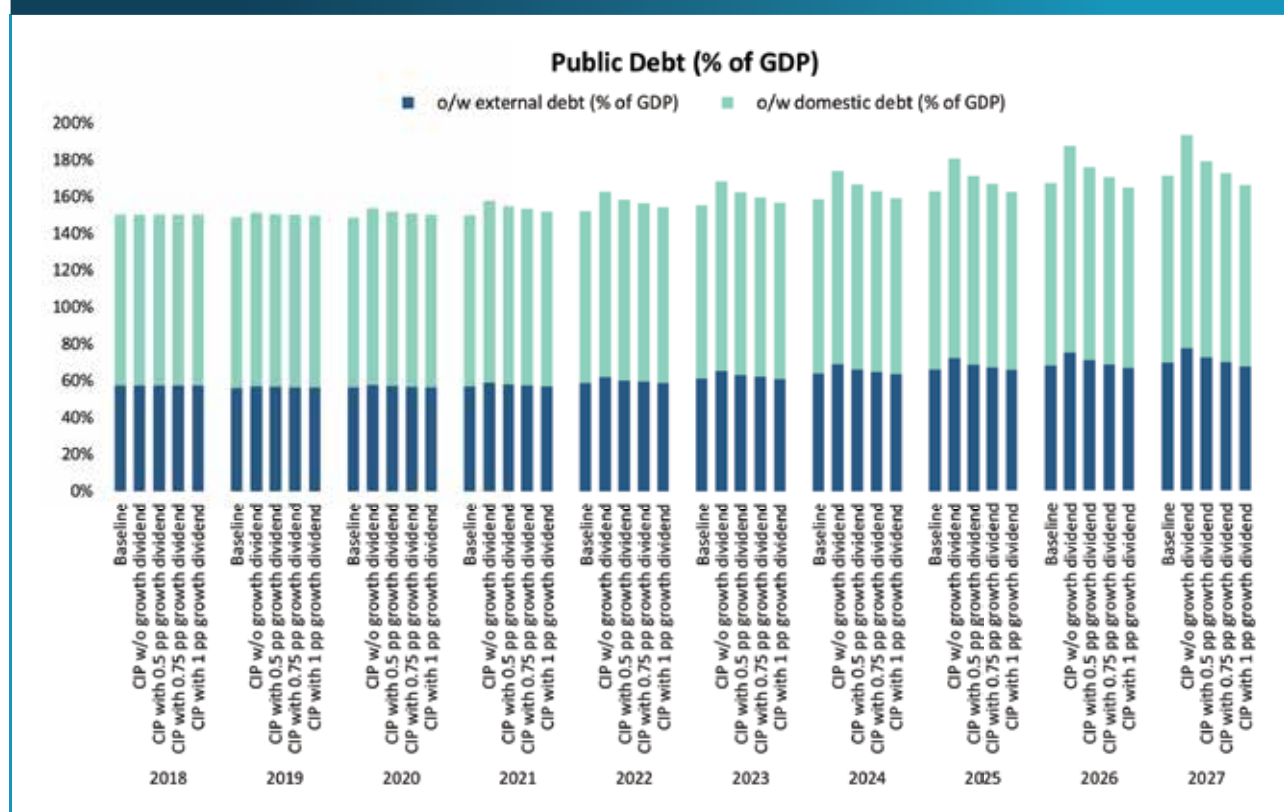
59. Optimally, the CIP would be part of a program of fiscal and structural reforms, a scenario which can generate much needed growth that can more than offset the impact of increased public spending on the debt-to-GDP ratio. In the medium to the long term, a well implemented CIP can help boost the economy's competitiveness and potential growth, helping to generate employment opportunities for the Lebanese.

¹⁶ Since the first year of CIP investment would be in 2019, and since a 10-year period that commences in 2018 and ends in 2027 is being examined in this exercise, annual CIP public expenditures would be US\$ 1,555 million from 2019 to 2022, US\$ 1,374 million from 2023-2026 and US\$ 337 million in 2027.

¹⁷ For example, the Global Concessional Financing Facility is accessible to Jordan and Lebanon for the objective of aiding Syrian refugees and host communities.

¹⁸ Total revenues are assumed to remain constant as a percentage of GDP (at 22.5 percent) over the 10-year period, which means that the growth dividend will translate into increased revenues in value.

Figure 14: Debt profiles for varying scenarios of CIP growth dividend for real GDP



Source: WB staff assessment.

BOX 1: GENDER AND YOUTH IN THE CIP

The CIP can positively affect gender and youth conditions in Lebanon. Since construction labor is heavily dominated by low-skill males, the impact would be effected through the value-added generated by completed CIP projects, if well implemented. This can occur via two channels: employment opportunities and socio-economic spillovers.

Women labor force participation in Lebanon is very low, especially for those aged 35-45. Only 22 percent of working-age women are active, compared to 70 percent for men and 49.5 percent¹⁹ for women globally. Labor participation rates are bell-curved for both women and men, with low rates for youth. Young female participation rate is 20 percent, compared to 40 percent for men, increasing to 40 percent for women and nearly 90 percent for men amongst individuals aged 25-34. However, while labor force participation rate of women aged 35-45 decreases drastically back to 20 percent, that of their male peers remains very high at around 90 percent before declining to 47 percent for men above 45 years of age.

Globally, women are primarily responsible for managing water and hygiene at the household and community levels. Moreover, poor water quality poses adverse health consequences especially for pregnant and lactating women and young children. For Lebanon, the Syrian conflict resulted in a 30 percent increase in population over very few years. Overcrowding because of the continuing inflow of the displaced is putting unforeseen pressure on water infrastructure and supply, while also increasing the risk of waterborne diseases and infections. The problem of poor water quality is more severe in urban settings compared to rural areas, where bacteriological contamination can be as high as 90 percent. To the extent that the CIP helps improve these conditions, and a proper implementation of water projects can do so, benefits can disproportionately benefit women and children.

Transport is an important enabler for women's access to economic resources, education, health and other important elements for women's empowerment. Enhancing women's mobility leads to improving their access to economic opportunities and contributes to their economic empowerment. In Lebanon, women are constrained by the poor conditions of the road network, and do not have a reliable and safe alternative to private vehicles, given the safety and harassment concerns in existing public transport. Lower-income women currently depend on their husbands to meet their transportation needs (usually one car per household) or are forced to use existing unsafe public transportation. Safety is one of the major constraints highlighted by women through consultations. Women will benefit from the implementation of transport infrastructure projects through improved connectivity, lower transport costs and improved road safety. In addition, the implementation of a reliable, affordable and secure public transport system will allow women to move to access higher education levels, jobs and markets.

Women occupy a significant position in the tourism industry; the United Nations World Tourism Organization estimates that tourism has almost twice as many women-led businesses as any other sector. Moreover, 70 percent of tourism labor is women, with concentration in accommodation, catering and handicrafts. Knowledge and creative industries also nurture young talents, providing a necessary alternative to migration; studies done by the European Union show that 40 percent of employees in these industries are under 35 years old, compared to 35 percent of the wider economy.

¹⁹ Global labor statistics are sourced from International Labor Organization modeled estimates, 2017.



II. ELECTRICITY

The CIP contains 17 separately identified investment projects in the power sector for a total of US\$ 5,592 million, to be implemented over three cycles covering the period 2018-2030. Of these projects, the WBG assesses that 7 (at a cost of around US\$ 1,550 million) are important for the first Cycle of 2018-2021. These comprise projects: E1, E4, E5, E6, E8, E9 and FE5. The costing for these projects seems reasonable. These projects can be done in large part by the private sector, but important legal, regulatory and policy changes need to be made. To accommodate this increased capacity, there will also be a need for transmission investments to absorb the capacity and to ensure stability of the network. It is unclear to the WBG what associated plans are in place to also address requisite investments on the transmission and distribution levels.

A. General Comments

60. **Given the severe shortage of generation capacity in the country, there is an urgent, and ultimately strategic, need to increase this capacity quickly.** How much generation capacity fits in this urgent category would depend on (i) the analysis and determination of the amount of unserved demand, which was estimated in 2016 to be approximately 1,200 MW; and (ii) the generation reserve margin needed to maintain grid stability, which typically requires 15 to 20 percent more generation capacity than annual peak demand—assuming peak demand is 3,300 MW, this reserve margin should be 500-660 MW. In this respect, the proposed investments in E1 seem appropriate to meet this urgent need.
61. **To accommodate this increased capacity, there will also be a need for transmission investments to absorb it and to ensure stability of the network.** There will also be a need for investments on the distribution network, which suffers from significant technical and non-technical losses, as well as to ensure the added capacity reaches end-users. In this respect, along with any proposal for a generation expansion, one would expect to see proposals for associated transmission and distribution investments that would have to be approved at the same time (if they have not already been approved).
62. **At this stage, there is no clear reason why investments in generation capacity should be publicly funded.** Models based on privately-financed, owned and operated power plants that can supply the requisite additional capacity have been tested and used in many countries for decades. Investments in transmission and distribution networks, on the other hand, will almost certainly need to be publicly funded. Allocation of these public funds will be key to addressing the generation gap.
63. **The CIP does not provide for any non-hydro renewable energy projects.** Given that Lebanon is a net importer of primary energy, renewable energy will be key to diversify the country's generation mix to avoid exposure to external shocks generated by global energy markets. In addition, renewable energy is likely to help reduce the overall cost of generation.
64. **While Électricité du Liban (EdL) has developed with Électricité de France (EdF) a robust masterplan for expansion of the transmission network, this plan seems to be based on assumptions with respect to the amounts and locations of generation capacity increases.** It is unclear what analysis (both technical and economic) was done to ensure that generation expansion follows least-cost principles, and it is unclear what associated plans are put in place to also address requisite investments on the distribution level. This may have been done, but the Bank team is still not privy to this work.
65. **Tariff and subsidy reforms are a key aspect of electric system expansion.** Given the fact that current tariff policies do not compensate for the cost-of-service, there is a perverse condition where adding generation capacity on the system means increased fiscal pressure on Government finances. In other words, the more kilowatt hours are sold, the more the Ministry of Finance must pay to cover the gap between EdL's cost-of-service and the revenue it receives. There needs to be a clear plan for tariff reforms that dovetails with the pace of generation expansion. However, tariff increases should be set over time against the efficient costs of operating the sector to protect the interests of consumers in not having to pay for chronic inefficiencies

in EdL's operations. In this respect, tariff reforms will also have to be adopted in conjunction with a clear, time-bound plan for reforming and corporatizing EdL.

66. **Aside from investments in the transmission and distribution networks to accommodate planned generation expansion, there is an even more urgent need to address losses on both networks, which are estimated to be between 40-50 percent.** To put this more into perspective, assuming current available generation capacity in Lebanon is 2,000 MW, ultimately, only 1,000 MW to 1,200 MW actually result in revenue to EdL. If EdL increases its generation capacity by 500 MW, only 250 MW to 300 MW of this capacity will be revenue generating. Decreasing these losses is a high priority for the system, and related investments may, in certain instances, be far more productive financially than investments in increasing generation capacity.
67. **The proposed cost estimates for some of the generation plants in the CIP seem to be on the high side.** It is important to note, however, that costs of doing business in Lebanon seem to be higher than in other countries, which could explain the difference between these estimates and international benchmarks. There can also be site-specific costs that increase the total investments. The projects' feasibility studies will be key to determining the reasonableness of capital and other cost estimates.
68. **In terms of job creation, most proposed investments are likely to generate jobs during the construction periods of the related facilities.** However, once construction is completed, the number of staff needed to maintain the facilities during their economic life is typically not high. In this respect, the direct impact from the proposed investments on job creation is likely to be low. However, the indirect impact on job creation economy-wide from increasing generation capacity and improving electricity service is likely to be high.

B. Projects

69. E1 – Zahrani and Salaata

- The estimate projects' costs of US\$1.2 billion for 1000 MW of gas-fired, combined cycle generation seem to be reasonable;
- The International Financial Corporation (IFC) is in the process of signing a mandate with the GoL to lead an advisory on a PPP for both Zahrani and Salaata. IFC will start with a scoping process of these sites, leading to assessment of feasibility, technically, legally and financially.
- It is understood that the proposed Salaata site is an environmentally-sensitive area. Implementing the project in this area may have added environmental mitigation costs that would not be incurred in other sites. This could delay project implementation while an appropriate mitigation plan is developed, assuming of course that the identified impacts are of a nature that can be mitigated in a cost-effective manner;
- It is also understood that the site still needs to be acquired and new transmission infrastructure will be needed to connect the plant to the grid, both of which will take some time to complete;
- Given the urgent need for the additional generation capacity and likely time needed to develop the Salaata site, other more readily available sites should be developed with Zahrani to ensure that at least 1000 MW of new capacity comes online as soon as possible. There will still be a need for additional capacity to meet future demand, which the Salaata site can be used to satisfy as and when related environmental and land acquisition issues are resolved; and
- Generation investment will be associated with likely needed transmission and distribution investments to allow for delivery of the added capacity. In this respect, the proposed investment should also outline the likely public expenditures needed to accommodate related investments in the energy value chain.

70. E2 – Jieh Power Plant

- The estimate projects' costs of US\$ 500 million for 500 MW of (presumably) gas-fired, combined cycle generation seem to be reasonable, assuming the project will be implemented on a brownfield site; and
- See bullet No. 4 in paragraph 69.

71. E3 – Salaata 2 Power Plant

- The estimate projects' costs of US\$ 600 million for 500 MW of (presumably) gas-fired, combined cycle generation seem to be reasonable;
- It is important to note that development of this plant will, by necessity, follow development of Salaata 1 in E1; and
- See bullet No. 4 in paragraph 69.

72. E4 & FE3 – Hydro Power Plants

- The proposed hydro investments in E4 and FE3 are identical, but the proposal is to implement them in cycles over time. The highest priority should be rehabilitation and upgrades of existing hydro plants.
- There are two significant issues that need to be addressed with respect to these existing plants, part of which are public and the rest are under concessions with the private sector. Many of the private concessions, which deal with relatively old facilities, will expire within the next 10 years, but it is unclear what plans the ministry has for taking them over. However, without a clear vision as to what will happen to these concessions after their expiry, the private sector has no incentive or guidance to invest in maintenance and rehabilitation. Further, the tariff paid by EdL for hydropower appears inadequate to cover the maintenance costs, which affects availability of the facilities and long-term asset value.
- Further, the institutional setup dealing with hydropower is ad hoc and involves many stakeholders with little or no coordination among them. It is unclear how or why investments in new facilities should be made without resolving this critical issue first.
- Only pre-feasibility studies were done on the proposed sites for new hydropower facilities. Detailed feasibility studies

on each of the 25 proposed sites are still needed. Further, given the potential environmental and social impacts of hydro facilities, in general, it will be critical to undertake such an assessment before the full costs of each site can be fully determined.

73. E5 & FE5 – Geothermal Plants of 1 MW and 15 MW

- The proposed 1 MW plant in E5 is a pilot plant in Akkar to drill test geothermal wells to firm the analytical models of Lebanon's geothermal resources. The anticipated cost of electricity from this pilot plant is expected to be in the range of US\$46, though this cost depends on factors that will become more apparent as the wells are completed. While it remains unclear what the proposed US\$ 5 million cost in the CIP is for, it is assumed to be either for studies or transaction support to implement the pilot plant;
- The proposed plant in FE5 is an enhanced geothermal system (EGS) expected to be implemented in Akkar as well. The estimated cost per kWh of the electrical output of this plant is expected to be in the range of US\$28 based on the current analytical models of the geothermal resources. These models will need to be updated based on the findings of the pilot plant in E5, once completed. In other words, the investment in FE5 depends on (a) completion of the pilot plant in E5 and (b) realizing positive results on the available geothermal resource;
- While geothermal generation is an excellent source of clean energy, the resources in Lebanon are estimated to provide approximately 7 MW of electrical capacity. There is a bigger potential of thermal generation for heating equivalent to 71 MW; and
- The strategic question is the priority of investments in geothermal generation in comparison to investments in other forms of clean energy (e.g., solar and wind) that have far lower costs. Concentrated Solar Power technologies, for example, would likely provide far more electrical and thermal output at much lower prices than currently anticipated for the geothermal

resources. As such, the proposed investments in at least FE5 should probably not be a high priority.

74. E6, E7 and FE6 – Transmission Masterplan Projects

- At the outset, it is important to note that the estimated costs for the proposed investments do not appear to include the cost of land expropriation or compensation for the requisite rights-of-way for the anticipated projects. Estimating these land costs requires at least preliminary surveys of the routes for the different transmission lines and substations to identify the specific parcels of lands affected. As such, the costs in the CIP are likely to be an underestimate from what is actually needed to complete the work.
- EdL expects to upgrade its aging 150 kV transmission network to 220 kV to accommodate the planned generation investments. In other words, the proposed transmission investments are tied to progress on the proposed generation projects. Put another way, when a generation investment is approved, the approval for the transmission and distribution investments needed to deliver power from the new power plant needs to also be considered and approved at the same time.
- Before contemplating new investments in the 220 kV network, a solution to the long-outstanding problem of connecting the existing 220 kV loop at Mansourieh needs to be found.
- The proposed investment in E7 relates to ALL of the generation projects to accommodate the additional load from the proposed generation projects and better balance the load across substations. Most of proposed investments in E7 appear to relate to evacuation from new power plants at Zouk (the old ones are connected to 150 kV but the new one will be at 220 kV), Akkar wind farm, Jieh and Selaata, but also include relocation of Jeita substation to create a 220 kV loop from Zouk, equipped with underground cables to feed the coastal towns of Adma and Jounieh.

- The number of staff in EdL's department and their technical capacity to prepare projects seem inadequate to prepare and implement the proposed projects. There needs to be a clear and credible plan as to how EdL will bridge this gap to avoid problems during execution. There also seems to be a chronic problem in securing required permits for transmission projects from municipalities that don't seem to have the capacity to undertake the work necessary to grant the permits. This becomes a significant source of delay and potential for interference in the implementation process, which needs to be addressed at the broader policy level.

75. E8 – LV Network Upgrades

- The 66 kV network was built in the 1970s and long past its useful life. In this respect, it needs to be replaced urgently. Some of the proposed investments target this issue, but more is needed on a more systematic basis to ensure proper operation of the distribution network.

76. E9 – Distribution Service Providers (DSP)

- DSPs are private-sector companies hired to develop and implement investment plans to reduce distribution level losses. The country was divided into 3 regions that were awarded to 3 separate companies. The Government is responsible for funding the investment plans agreed with the DSPs in order for the DSPs to meet the contractually-mandated targets to improve performance of the distribution networks in their awarded region. Currently, only 1 of the 3 companies seems to have achieved positive results, and the contracts of all 3 were recently renewed for 4 years after the initial contract term of 5 years had expired;
- One of the key contractual conditions was for DSPs to install smart meters to begin addressing the significant bill collection and non-technical losses on the distribution level, which in turn would decrease the amount of subsidy EdL needs. Although other investments in at least 1 of the regions (north) moved forward, with very positive results in terms of reduced EdL losses

and increased revenue, installation of smart meters has not happened in the DSPs' initial 5-year term. The main impediment, based on the information provided, is political; and

- Investments in smart meters should be a high priority as they will increase EdL revenues and likely more than pay for themselves. The amount of the investments needed is determined by the DSPs, subject to review and approval by EdL.

77. E10 – Gas Pipeline

- Based on preliminary analysis undertaken by the Bank several years ago, building a north-to-south gas pipeline would be very costly, primarily because (a) a land-based pipeline must go through Beirut where land costs are very expensive and (b) the sea floor off the Lebanese coast is very deep, which would increase the cost of a marine pipeline. Additional studies are needed to further refine these conclusions and analyse alternatives, but it is unclear whether any of these studies have been completed;
- A north-to-south gas pipeline would make the current plan to install 3 FSRUs in Zahrani, Salaata and Bedawei unnecessary. It is far more economical to install one large FSRU at one of these sites and connect to this proposed gas pipeline to transport the gas where it is needed. In this respect, the proposed timeframe in the CIP for this gas pipeline seems inconsistent with the ongoing plans for the FSRUs;
- The proposed FSRUs include an obligation on the awarded private-sector company(ies) to construct a gas pipeline from the FSRUs to the power plants that they are expected to serve. In the south, this is likely to be Zahrani and Jieh (after its rehabilitation), and, in the north, it is likely to be Bedawei. The Bedawei gas pipeline could ostensibly be extended to reach Salaata (thus eliminating the need for a separate FSRU at that location) and Zouk (after its rehabilitation), which would likely increase the economies-of-scale at the Bedawei FSRU site (thus reduce the overall cost of gas supply) by using a larger gas importing facility. These

pipelines would be built, operated and maintained by the private sector, and paid for by the tariff for gas purchased over the life of a gas supply agreement between EdL (or MoEW) and the private company(ies); and

- These pipelines would not go through Beirut, but it would seem reasonable that they would form the basis for a north-to-south gas pipeline backbone for the country. In this respect, it is unclear what the rationale is for a separate, publicly-financed project towards that end.

78. FE1 and FE2 – New Power Plants at Zouk and undisclosed Locations

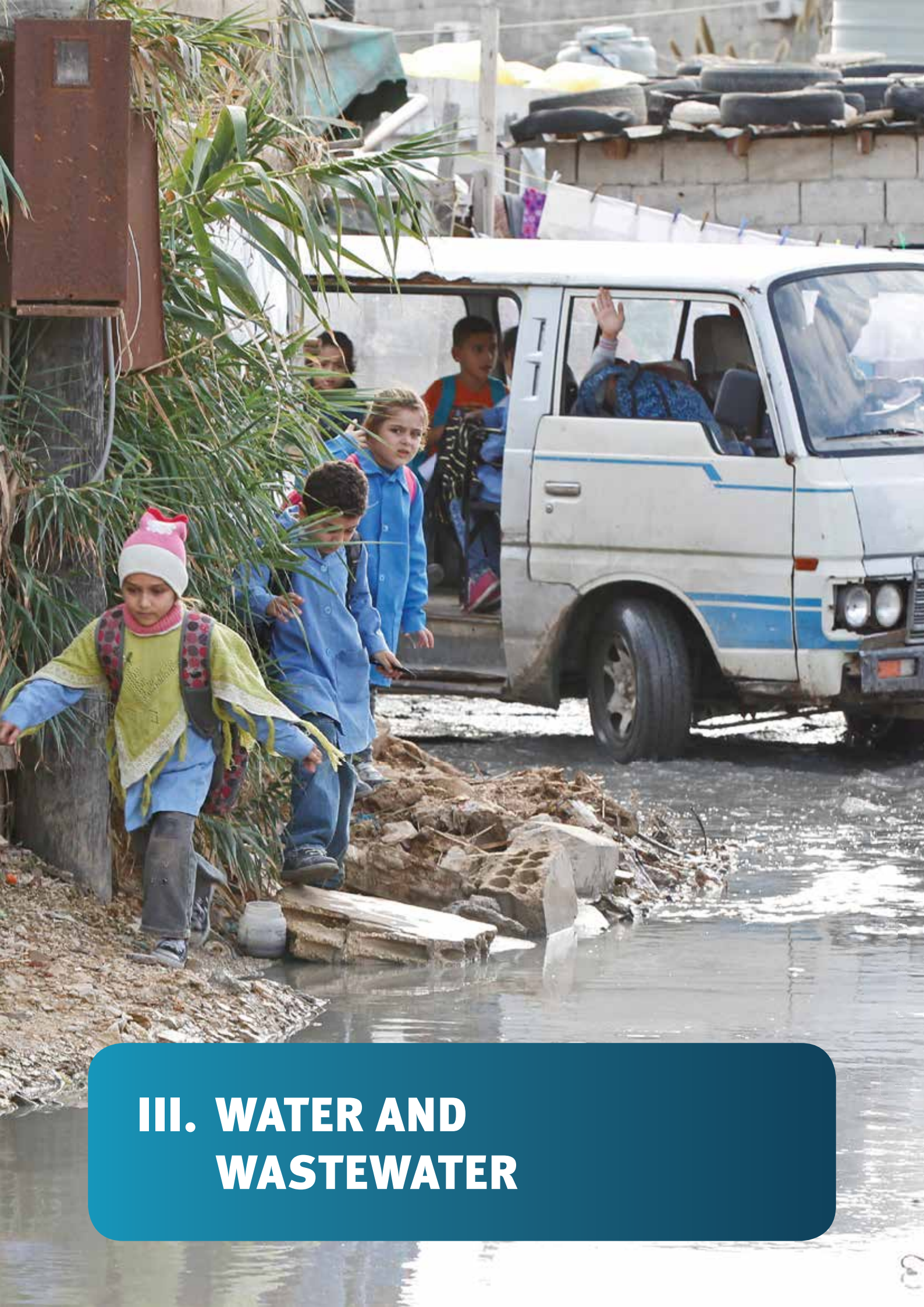
- These seem to be placeholders at this point. However, it is important to point out that the planned expansion of gas-fired capacity at Zouk and elsewhere needs to be coordinated with the plans for overall gas supply (and gas pipelines) in the country. For example, if the intention is to install these 1,500 MW of new capacity gas-fired, this could impact the design of any contemplated gas pipelines in E11 (or alternatives) and transmission/distribution network expansions. It could also have an impact on the design of the FSRUs, if the intention is to bring this capacity online in the next 10 years.

C. Reform Needs

79. **CoM to approve and implement a multi-year electricity tariff cost-recovery plan for EdL over a 3-year transition period.** EdL's tariff has not been revised since 1996 and is thus far below cost-recovery levels, exacerbating the fiscal burden on government which covers the utility's revenue gap. Any tariff increases, however, need to be phased in to coincide with increases in hours of electricity supplied by EdL to show its customers tangible results commensurate with the larger bill. Importantly, tariff increases should also include an effective lifeline block helping to protect low income consumers and/or cash transfers. Taken together, this would improve sector financial conditions without increasing the fiscal burden on public finances, while also generating public support or at least minimizing public resentment.
80. **The Ministry of Energy to complete implementation of approved development plan for natural gas supply by developing new LNG supply and infrastructure facilities, liquefied natural gas importing infrastructure and plan to explore and exploit off-shore domestic gas resources.**
81. **The Government to aim towards meeting and expanding the target in the 2010 energy plan for renewable energies and green growth.** Evidence suggests that Lebanon is especially exposed to large vulnerabilities from climate change with the poor disproportionately affected. The estimated impact of climate change on Lebanon is encompassing and costly (estimated at US\$ 1.9 billion by 2020 in a first of its kind analysis for Lebanon released this year by Ministry of Environment/UNDP). A green growth and low carbon emissions development strategy for Lebanon could also be an opportunity for job creation.

Table 5. Electricity Projects.

Ref	Project	Estimated Cost (MU\$)	Land Exprop. (MU\$)
E1.1	GENER (1) New power plants on Medium (2) Term - IPP - 500MW – Zahrani	600.0	N/A
E1.2	GENER (1) New power plants on Medium (2) Term - IPP - 500MW – Salaata	600.0	N/A
E2	GENER Jiye Power plant-500MW	500.0	0.0
E3	GENER Salaata 2 Plant on Longer Term - 500MW	600.0	0.0
E4	GENER Hydro power plants (331.5 MW)	264.1	N/A
E5	GENER Geothermal Plant of 1.3 MW	5.0	N/A
E6	Transmission Master Plan Project (High Importance)	223.6	0.0
E7	Transmission Master Plan Project including Infrastructure at KSARA Substation (Mid Importance)	253.7	0.0
E8	Transmission LV Network Upgrade		
E8.1	<i>Transmission LV Network Upgrade</i>	20.0	0.0
E8.2	<i>Transmission LV Network Upgrade</i>	6.0	0.0
E8.3	<i>Transmission LV Network Upgrade</i>	6.0	0.0
E8.4	<i>Transmission LV Network Upgrade</i>	6.0	0.0
E8.5	<i>Transmission LV Network Upgrade</i>	6.0	0.0
E8.6	<i>Transmission LV Network Upgrade</i>	6.0	0.0
E8.7	<i>Transmission LV Network Upgrade</i>	6.0	0.0
E9.1	Distribution DSP	262.5	N/A
E9.2	Distribution DSP	87.5	N/A
E10	Fuel Sourcing Gas Pipeline	140.0	N/A
FE1	GENER Zouk Power plant - 500MW	500.0	Existing Land Dedicated for the power plant
FE2	GENER New Power plants on Longer Term - 1000 MW	1,200.0	New Location
FE3	GENER Hydro power plants (141.5 MW)	112.7	N/A
FE5	GENER Geothermal Plant of 15MW	52.7	N/A
FE6	Transmission Master Plant Project (Low Importance)	134.6	N/A



III. WATER AND WASTEWATER

The CIP (Capital Investment Plan) contains 206 separately identified investment projects in the water and wastewater sectors for a total of US\$ 7,527 million, to be implemented over three cycles covering the period 2018-2030. For the purpose of the assessment, the water sector projects in the CIP were grouped into two groups—networks and dams—while the wastewater projects were grouped into three groups—networks, wastewater treatment plants and new system (WWTP+ networks). In regard to the water sector, the WBG assesses that networks and dams at a cost of around US\$ 1,224 million plus US\$ 103 million for land expropriation, are important for the first Cycle (2018-2021). While water networks can potentially be completed and managed by the private sector, provided that important legal, regulatory and policy measures are introduced, dams need a stronger public sector role. As for wastewater projects, WBG assesses US\$ 1,334 million plus US\$ 35 million for land expropriation, are important for the first Cycle (2018-2021). When considering project cost, it is essential to confirm that the amounts provided in the CIP include the cost of expropriation and environmental mitigation.

A. General Comments

82. In Lebanon, citizens' need for additional water sources and sanitation has increased due to population growth, economic development, urban expansion, supply shortages and the inability of public water entities to deliver required volumes and quality of service in water supply and sanitation.
83. The objective on water supply is to reach 24/7, which contributes to restoring or maintaining the social contract on water service. During water shortages, people resort to expensive alternative options such as tankers and bottled water. The continuous service would allow for the reduction of the cost to the most vulnerable, along with health benefits from improved water quality.
84. On sanitation, expanding services with improved technology throughout Lebanon, will contribute to reinforcing the social contract, generating environmental and health benefits to the citizens. Now that the country is progressing well on water supply, sanitation becomes necessary. In addition,

with growing water needs, options of new water, such as reuse and storm-water management, can be explored to fill the gap on water availability and adapt to the climate change impact. Usually the most vulnerable are the ones who don't have access to reliable services and are forced to seek expensive alternatives or are usually dependent on "unhygienic alternatives", which also generate environmental concerns, such as pollution of groundwater. Hence, the sanitation components would tackle public health, water supply safety, and environmental issues. In addition, better planning is required to connect wastewater networks to wastewater treatment plants.

85. **For each of water supply and sanitation sectors, due to the limited human resources at the water establishments, performance-based contracts to operate and manage infrastructure is an option to pursue.** It would offer two advantages: (i) improve the accountability and the performance by way of a larger private sector role; and (ii) create jobs for national operators (develop small and medium enterprises in the water supply and sanitation sectors).
86. **The water supply and the wastewater plans under the Capital Investment Plan (CIP) are critical as they cover the investments needed in the sector for Lebanon.** Based on the World Bank current engagement in Greater Beirut Water Supply Project (GBWSP-known as Awali project) and the Water Augmentation Water Supply (WSAP-known as Bisri dam), the following thoughts are shared.

WATER SUPPLY

87. **On the network rehabilitation, the World Bank has provided technical support to the Beirut and Mount Lebanon Water Establishment (BMLWE) on reducing water leakages.** To ensure a continuous water-supply, leakages need to be reduced, and for that, training of staff in pressure control and leak detection is essential. Improving the water service is an opportunity to update tariff structure and put in place volumetric tariff. The reduction of leakages, if well designed, can be an opportunity

to improve private sector participation initially through performance-based contracts. More detailed discussions are needed to see how to scale up the current technical assistance to the other water establishments. The North Lebanon Water Establishment has experience in providing continuous water supply, and it can also provide useful lessons.

88. **On water supply storage, the Bisri dam has been an opportunity to learn multiple lessons that could be used in future programs.** First, in the budget provided for dams' projects in the CIP, it is critical to assess if the cost of expropriation and environmental mitigation is accounted for to ensure that the project is cost-effective. Second, the alternative analysis study conducted for the Bisri dam was essential to ensure that the dam is a best option in an overall national program of infrastructure, and non-structural measure to achieve water security. Third, the high quality of Environmental and Social Impact Assessment done for Bisri dam confirmed that the dam is the best alternative. The mitigation plan/financing for the identified environmental and social impacts as well as the communication with stakeholders emphasized the need to establish benefit-sharing programs for the local people in the surrounding communities.

SANITATION

89. **The inclusion of wastewater as an area of engagement in the CIP is applauded.** Augmenting the water supply will induce increasing wastewater volume in the different areas in Lebanon. However, sanitation goes beyond wastewater infrastructure and looks at the management level to ensure sustainability of sanitation service delivery. This would require an adequate tariff for wastewater services based on volume of water consumed. Also significant, is the closing of the loop through options of reuse of treated wastewater such as agricultural irrigation, industry, aquifer-recharge, etc., when feasible. Hence, it is important to emphasize that sanitation is a critical topic in Lebanon. It is recommended to (i) start engaging on inclusive sanitation, including looking at

appropriate technologies (wastewater/network is not the only option in some cases septage treatment plants are an option too); (ii) understand the financing needs of the sector (including if the numbers include the expropriation costs); and (iii) evaluate the CAPEX and OPEX associated with various technological options. A discussion on the Operation and Maintenance including management of the sludge is also needed. The Bank water team stands ready to provide technical support in the sanitation.

B. Assessment of Water Establishments

90. **In 2000, Water Sector Law 221 was enacted with the objective of: (i) clarifying the respective obligations and rights of public agencies for the delivery of water services; (ii) empowering the newly created Regional Water Establishments (RWEs) to increase service and improve sustainability; and (iii) creating reciprocal accountability between customers and the RWEs.** The full implementation of Law 221 was however impeded by fragmentation of investment, planning and execution responsibilities, inadequate tariffs and tariff structure, poor inter-Government coordination and significant delays in infrastructure investment.
91. **The four water establishments are the following: North Lebanon Water Establishment (NLWE), Beirut and Mount Lebanon Water Establishment (BMLWE); Beqaa Water Establishment (BWE); and South Lebanon Water Establishment (SLWE).** A summary of the CIP projects according to water establishment is as per the table below:

Table 6: Summary of CIP projects per water authority.

Water Establishment	Water Supply		Sanitation	
	# projects	estimated costs (US\$ M)	# projects	estimated costs (US\$ M)
NLWE	41	1,251	19	468.8
BMLWE	12	891	38	1,234.3
SLWE	27	1,751.5	14	365.7
BWE	44	951	9	333.6
Grand Total	124	4,844.5	80	2,402.5

- For sanitation projects, the CIP shows that there is a need of:
 - » small scale municipal projects to be handled by water establishments and/or municipality depending on the location for a cost US\$ 250 million which are excluded from the table above.
 - » Ghadir flood protection against the flooding of major highways is considered as national needs for a cost of US\$ 30 million.
- **NLWE:** priority in the CIP is given to projects in water supply. It makes sense as the establishment wants to expand the water supply network while keeping the 24/7 for the existing areas with continuous water supply. This is the only water establishment that is delivering continuous water supply and it is important to maintain this social contract with the customers. The projects under sanitation are pragmatic, helping to protect water sources. Priority should have maximal use of the current wastewater treatment plant capacity by connecting the wastewater network.
- **BMLWE:** priority in the CIP is given to projects in sanitation which is in line with WB team assessment. Indeed, a lot of work has been done for water supply, while the focus on sanitation is pragmatic and recommended as future next steps. With World Bank technical assistance and its own funding, the BMLWE launched a contract to establish DMAs in South Beirut by end of November 2017. The establishment is now finalizing the preparation of the first performance-based water loss reduction and management contract in Achrafieh, funded by the WB, for further enabling the environment of the performance contracts in the future.
- **SLWE:** priority in the CIP is given to projects in water supply and the reduction of the losses. Similar to the NLWE, the projects on sanitation are pragmatic, helping to protect water sources.
- **BWE:** there is a need for water supply for the areas that are not connected. The water quality is of a major concern where there is a need to reduce pollution in lake Qaraoun. The WB is contributing US\$ 55 million to reduce the quantity of untreated municipal sewage discharged into the Litani River and to improve pollution management around Qaraoun Lake. Sanitation projects are a top priority for BWE.

C. Reform Needs

OVERVIEW OF THE CIP

92. **The Capital Investment Plan (CIP) includes 124 water supply projects and 82 wastewater projects, covering the whole of Lebanon: North, Beirut and Mount Lebanon, South and the Bekaa areas.** It is essential to confirm that the amounts provided in the CIP include the cost of expropriation and environmental mitigation. Since project specific information is not sufficiently available, the team assessed groups of projects for the water supply and sanitation sectors. There

are no irrigation sector activities except for the following dams to be used for irrigation located in the Bekaa area, namely (i) Massa Dam; (ii) Younine Dam and (iii) Litani - Conveyor 800 Phase 2.

93. To help improve level of service in water supply and sanitation, the three top priority reforms are the following:

- a. **Ratification of the water code (at parliament level)** to increase the options of private sector involvement to operate and maintain water infrastructure for the medium to long terms;
- b. **Improvements of by-laws for the Law 221 for autonomy status of the Water Establishments** to transfer function to the Water Establishments;
- c. **Recruitment of staff** to support operation and maintenance of water facilities;
- d. **New tariff structure** for water supply and wastewater services to cover at least operation and maintenance cost; and
- e. **Improve coordination between planning and construction and operation and maintenance functions in the water sector.**

94. For the purpose of the assessment, the water sector projects in the CIP were grouped into two groups—networks and dams—while the wastewater projects were grouped into three groups—networks, wastewater treatment plants and new system (WWTP+ networks). All the projects were distributed as per the geographical location per water establishment.

95. Enabling conditions to make the water sector more attractive for private sector involvement (including private funding):

- a. Secure real autonomy for the water establishments (financially and authority);
- b. Introduce adequate tariff structure to gradually cover operation and maintenance cost for drinking water and waste water services plus capital cost (depreciation and debt service). The Ministry of Energy and Water could develop national guidelines for water

tariffs based on a progressive block system that allows to consider social and economic conditions;

- c. Improve coordination mechanism between the planning/construction function and the operation and maintenance function by enhancing the role of the operation and maintenance functions in project preparation;
- d. Raising awareness of the customers of the cost of water services. While water is free, it is a scarce commodity and cost of the services need to be covered. Covering full cost by tariffs will raise awareness.

D. Projects Ratings and Recommendations

96. The ranking of the projects as proposed is acceptable. First, there is a need to define overall project objective, second, to derive specific project objectives, and third, thereupon develop the prioritization criteria being applied to define 3 project stages/cycles. Hence, additional criteria for prioritizing any project should consider, but is not limited to:

- a. Prioritization of projects with lowest ratio of CAPEX per benefitting population.
- b. Prioritization of areas with high prevalence of waterborne diseases.
- c. Prioritization of areas with highest water pollution incidents/risks.
- d. Prioritization of areas with highest industrial/economic relevance.
- e. Prioritization of areas where quantity and quality of water supply is worst.

97. “Soft” Components: The CIP only mentions projects with works/installations. A comprehensive program may also include institutional, financial and technical assistance to the 4 Water Establishments (WEs) and relevant Ministries. Such a soft component could include, but is not limited to, the following:

- a. Optimization of actual institutional set-up and staffing structure of WEs.

- b. Optimization of financial management and sustainability, by looking into the whole cycle of financial aspects, such as: Who defines water/wastewater tariffs? Who is in charge of collecting fees? Who is receiving the tariff fees? Who has responsibility to use the collected money? Who has responsibility for infrastructure planning and implementation? Who has ownership of assets? Need for public subsidies (if yes, what are prevailing conditions?) etc.
- c. Procurement training – particularly for Design-Build (DB) and Design-Build-Operate (DBO) contracts, to better utilize market know-how.
- d. WWTP operator training.
- e. Workshops on supposedly not so well-known technical and environmental issues such as pipe rehabilitation, sewage/septage treatment technologies, biogas production and utilization, treated water and sludge reuse, GHG emissions, olive oil residue management, optimized fertilizer and pesticide application in agriculture.
- f. Analysis of appropriateness of applied treatment standards for municipal WWTPs, including creation of awareness for cost implications of different standards.
- g. Effluents from industries: promotion of cleaner technologies, pre-treatment of effluents to sewer systems and to water bodies.
- h. Development of a strategic plan for treated water reuse in agriculture, groundwater recharge, industries, or other.
- i. Strategic planning of minimum monitoring needs by utilities.
- j. Define key operation indicators, and develop Lebanese water and sanitation benchmarking based on those indicators.
- k. Public outreach campaigns on water/sanitation issues.

Table 7: Water Supply Networks Projects

Ref	Project	Estimated Cost (MU\$)	Land Exprop. (MU\$)
W8A	Expropriations for Beirut Storage Tanks	0	35
W7	Water Supply system rehabilitation in Beirut area	100	0
W3A	Transmission line from Janneh Dam to Greater Beirut	60.0	0.0
W4	Water treatment plant and water supply system for Beqaata Dam	35.0	2.0
W6A	Water supply system for Chabrouh Dam	40.0	2.0
W8	Water Supply Project for Mount Lebanon	100.0	0.0
W9	Qobayat Water Supply Systems, Phase 1	51.0	0.5
W10	Halba Water Supply Systems, Phase 1	92.0	0.5
W1	Water supply system for Mseilha Dam	14.5	5.0
W2	Water supply system for Balaa Lake	10.5	3.0
W11	Danniyeh Water Supply Systems, Phase 1	27.0	0.5
W12	Minieh Water Supply Systems, Phase 1	12.0	0.5
W13	Tripoli Water Supply Systems, Phase 1	25.0	0.5
W14	Zgharta Water Supply Systems, Phase 1	24.0	1.0
W15	Bcharre Water Supply Systems, Phase 1	10.0	0.0
W16	Koura Water Supply Systems, Phase 1	55.0	0.5
W17	Batroun Water Supply Systems, Phase 1	25.0	0.5
W24	Yahfoufa Water Supply System	12.0	0.5
W25	Qaa El Rim System	28.0	0.5
W26	Qab Eilas, Jdita and Zebdol Water Supply systems	9.0	0.5
W27	Aanjar Water Supply System	24.0	0.5
W28	Chamsine Water Supply System	6.0	0.5
W29	Ain El Zarqa Part 1 Water Supply System	16.0	0.5
W30	Ain El Zarqa Part 2 Water Supply System	6.0	0.5
W18	Ain El Hawr -Ras El Meil Systems	18.0	1.0
W19	Ein El Zarqa	8.0	1.0
W20	Laboue Water Supply System	17.0	0.5
W21	Ouyoun Orghosh Water Supply System	9.0	0.5
W22	Younine, Maqne and Nahle water supply systems	5.0	0.5
W23	Yamoune Water Supply Systems	50.0	0.5
W35	Nabatiye Water Supply System	26.0	0.5
W36	Bint-Jbeil Water Supply System	63.0	0.5
W37	Marjaayoun & Hasbaya Water Supply Systems	24.0	0.5
W31	Saida Water Supply Systems	25.0	1.0
W32	Zahrani Water Supply System	39.0	0.5
W33	Jezzine Water Supply System	6.0	0.5
W34	Sour Water Supply System	42.0	0.5

Table 8: Water Supply Dams Projects

Ref	Project	Estimated Cost (MU\$)	Land Exprop. (MU\$)
W41A	Remaining Expropriations for Besri Dam	0.0	15.0
W41B	Remaining Expropriations for Chabrouh Dam	0.0	20.0
W50	Damour Dam	150.0	30.0
W39	Ain Dara -Azounieh Dam	110.0	5.0
W40	Maaser Chouf Dam	85.0	2.0
W38	El Bared Dam	300.0	0.0
W45	Noura el Tahta Dam	80.0	10.0
W46	Atolbe Dam	18.0	2.0
W55	Qarqaf Dam	81.0	#N/A
W38A	Additional funds for Mseilha Dam	15.0	0.0
W38B	Additional funds for Balaa Dam	7.0	0.0
W38C	Repairing works for Brissa Dam	15.0	#N/A
W47	Dar Baachtar Dam	75.0	10.0
W48	IaaL Dam	70.0	10.0
W49	Rahwe Dam	25.0	10.0
W53	Wadi Chich Dam	20.0	0.0
W43	Barhashah Dam	40.0	1.0
W41	Assi Phase 1 Dam	65.0	0.0
W42	Assi Phase 2 Dam	300.0	40.0
W44	Ibl es Saqi Dam	200.0	100.0
W51	Khardali Dam	435.0	200.0
W52	Kfarsir Dam	45.0	15.0
W56	Choumariye Dam	60.0	20.0
W3	Hydropower plant for Janneh Dam	100.0	0.0
W53	Irrigation - Massa Dam	60.0	4.0
W54	Irrigation - Younine Dam	65.0	10.0
W5	Irrigation - Litani - Conveyor 800 Phase 2 -Irrigation and Water Networks	300.0	0.0

Table 9: Sanitation Networks Projects

Ref	Project	Estimated Cost (MU\$)	Land Exprop. (MU\$)
WW1	Completion of missing networks and collectors within Tripoli WWTP Service Area	#N/A	#N/A
WW10	Beirut wastewater systems	50.0	0.0
WW13	Extension and upgrading of collection networks within Ghadir wastewater treatment plant drainage basin	108.0	0.0
WW01a	1-km Link of the main collector Bohsas - Maarad	5.0	0.0
WW01b	Qalamoun villages WW networks	5.0	0.0
WW01c	Wastewater networks in the coastal and central villages and towns of Koura - Phase 2	20.0	3.0
WW01d	Zgharta Wastewater networks	30.0	0.0
WW01e	Wastewater networks for coastal part of Minie - Danniye District	19.0	0.0
WW76	Expansion of Wastewater collection networks of West Bekaa, Phase 2	27.0	0.0
WW61	Jbaa Wastewater System	7.5	0.0
WW16	Completion of wastewater networks in Saida	25.0	0.0
WW17	Sour Phase 3	50.0	0.0
WW07	Completion of wastewater networks within Jbeil WWTP Service Area	40.0	0.0
WW08	Networks for Halat and Nahr Ibrahim	9.1	0.0
WW14	Expansion of sewer networks for coastal Chouf	40.0	0.0
WW04	Completion of wastewater networks within El Aabde WWTP Service Area	60.0	1.0
WW01f	Wastewater networks for villages in the center of Danniye	20.0	0.0
WW79	Madfoun System	20.0	0.0
WW73	Timnine Part 2 Wastewater System	66.0	5.0
WW63	Nabatiye Part 2 (East Nabatiye) Wastewater System	50.0	0.0
WW58	Halloussieh Wastewater System	6.0	1.5
WW59	Srifa Wastewater System	8.0	0.0

Table 10: Waste Water Treatment Plants Projects

Ref	Project	Estimated Cost (MUS\$)	Land Exprop. (MUS\$)
WW78	Small Scale Municipal Projects	250.0	0.0
WW11	Ghadir Flood Protection	30.0	0.0
WW12	Upgrade of Ghadir wastewater treatment plant	200.0	0.0
WW18c	Jbeil WWTP Extension	20.0	0.0
WW18d	Nabi Younes - WWTP Expansion	20.0	0.0
WW18a	Chekka WWTP Expansion	20.0	0.0
WW18b	Batroun WWTP Expansion	20.0	0.0
WW09	Upgrade of Daoura wastewater treatment plant	300.0	0.0
WW64	Expansion of Nabatiye Wastewater Treatment Plant	20.0	0.0
WW15	Upgrade of Saida wastewater treatment plant	55.0	0.0

Table 11: Sanitation System Projects

Ref	Project	Estimated Cost (MUS\$)	Land Exprop. (MUS\$)
WW22	Qartaba, Aqoura and Afqa wastewater systems	20.0	5.0
WW31	Additional Funds for Hrajel Wastewater System	20.0	2.0
WW34	Additional funds for Jeita system	15.0	0.0
WW40	Sfailah and Qortada (Zandouqa) Wastewater system	67.6	6.6
WW41	Bmaryam - Btibat Wastewater system	28.1	4.9
WW35	Kfartai Wastewater system	6.5	0.0
WW32	Aachqout WWTP	20.5	0.0
WW23	Bchille system	5.0	0.0
WW24	Aabaydat system	11.0	0.0
WW25	Tartij Small Local Station	1.5	0.0
WW26	Aalmaat system	12.0	0.0
WW27	Jaj WWTP	6.6	0.0
WW28	Lehfed Hagel Small Stations	2.2	0.0
WW29	Behdaydat WWTP	3.5	0.0
WW30	Yahchouch WWTP	8.3	0.0
WW33	Bqaatouta WWTP	0.8	0.0
WW36	Abou Mizane WWTP	3.3	0.0
WW37	Zabbougha WWTP	0.8	0.0
WW38	Es Souane WWTP	20.7	0.0
WW39	Mtein WWTP	6.3	0.0
WW42	Hlaliye Wastewater System	44.9	3.2
WW43	Shwhite Wastewater System	12.8	2.0
WW44	Qtale Wastewater System	12.6	2.5
WW45	Arsoun Wastewater System	8.6	1.3
WW47	Rouayssat En Naamane Small Local Station Wastewater System	66.0	3.2
WW48	El Knaisse Wastewater System	83.0	3.5
WW53	WWTP1 Wastewater System	0.2	0.0
WW54	WWTP2 Wastewater System	8.0	0.0
WW57	Kfar Matta Small Local Station Wastewater System	0.5	0.0
WW19	Additional Funds for Meshmesh (Fnaydeq) Wastewater System	8.0	1.0
WW03	Qabaait system and remaining small systems in Minie - Danniye	62.0	0.0
WW06	Construction of small scale Wastewater Systems in Akkar Wetlands	25.0	5.0
WW05	Construction of wastewater systems for Akkar El Atika, Qobaiyat and surrounding villages	25.0	0.0
WW20b	Kfar Hay system	25.0	0.0
WW20c	Chebtine system	15.0	0.0
WW02	Bakhoun WWTP and networks	25.0	0.0
WW20a	Ajed Ebrine system	4.5	0.0
WW21	Small systems to protect Qadisha Valley	50.3	0.0
WW74	Eastern Zahle Wastewater System	45.0	5.0

WW75	Wastewater Systems for Sohmor, Yohmor, Zilaya and surrounding villages	17.6	0.1
WW77	Wastewater System for Rachaiya villages	64.0	0.6
WW69	Additional funds for Hermel WWTP and Networks	27.0	0.0
WW72	Upgrade of Iaat (Baalbek) WWTP and additional networks for Baalbek city and surrounding villages	11.0	0.0
WW71	Qaa and Jdaide Wastewater System	25.7	0.0
WW70	Bajjaje Wastewater System	39.5	0.0
WW65	Additional funds for Hasbaiya System	27.7	0.5
WW68	Bint Jbeil Wastewater System	32.0	0.0
WW62	Braiqaa Wastewater System	26.0	0.0
WW66	Ouadi Slouqi Wastewater System	33.0	0.0
WW60	Nabaa el Tasseh Wastewater System	18.0	0.0
WW67	Deir Mimas Wastewater System	5.5	0.0



IV. TRANSPORT

The CIP contains 24 separately identified investment projects in the transport sector for a total of US\$ 7,381 million, implemented over three cycles covering the period 2018-2030. Of these projects, the WBG assesses that 7 (at a cost of around US\$ 1,832 million, plus US\$ 173 million for land expropriation) are important for the first Cycle of 2018-2021. These comprise projects: TP5, TP6, TP8/a, TP10, TP16, TP18, and TP19. The estimated costs are generally reasonable, although they appear on the low side—in most cases, the actual cost of projects is higher than initially predicted, and this is particularly the case in Lebanon given long implementation period. While most CIP transport projects can have a PPP dimension, especially during the operations and maintenance phase, they require substantial concessional public financing especially upfront. WBG also notes institutional constraints and low capacity for implementing agencies to absorb and execute the large investments under the CIP.

While the CIP includes strategic investments, some important parts remain missing. Improvement of traffic conditions in secondary cities, such as Tripoli and Saida, is not included, and neither is future developments/expansions of ports capacity and/or future railway lines.

A. General Comments

98. The transport projects included in the CIP generally represent important parts to complete Lebanon's strategic transport network. Most projects are strategic and on the list of government programs/priorities for years. While there is no official strategy for the Ministry of Public Works and Transport (MPWT), there is a strategic document by the Council of Development and Reconstruction (CDR) which was prepared in 2005 and which identified most of these large transport infrastructure projects (SDATEL), in addition to priorities in several other sectors. Some of the projects have been on the government priorities for many decades and have not been implemented due to complexity and high cost.

99. The bulk of the transport investments are to complete Lebanon's Highways. About US\$ 5 billion are earmarked to complete Lebanon's highway network. Despite Lebanon having a small highway network consisting mainly of two axes—a North-

South Coastal Corridor (roughly about 250 km) where about 80 percent of Lebanon's population is concentrated, and an East-West (roughly about 50 km) Corridor linking Beirut to Damascus. The construction of the highway system started in the 1960s, yet important links such as the Beirut Peripherique, the extension of the Highway from Tripoli to the Syrian border in the North, and the extension of the Highway to Tyre and the southern border are still not completed after over 50 years of planning.

100. Beyond Highways, the remaining investments are also focused on the development of strategic assets. This includes the expansion of Tripoli Port to become an important gateway to Syria and Iraq, the construction of the first modern railway linking Tripoli port to Syria, the introduction of a reliable public transport network and BRT lines, and the expansion of Beirut airport. Regional and smaller investments represent a much smaller share and are primarily focused on the rehabilitation of the road network, with about US\$ 500 million earmarked for that purpose.

101. While the CIP includes the most strategic investments, some important parts remain missing. Specifically, the improvement of traffic conditions in secondary cities, such as Tripoli and Saida is not included, neither are future developments/expansions of ports capacity and future railway lines.

102. The overall phasing of the projects is logical, however it is presented primarily from a "readiness" lens and capacity to implement. The CIP calls on starting all major transport infrastructure in parts, such as executing the Beirut Peripherique in 3 phases, the Jounieh Bypass in 3 phases, the public transport plan in 3 phases and so on. While this is appropriate and shows realism in terms of implementation sequences, the phases usually make economic sense as "stand-alone" projects, yet there are important economic multipliers when the full infrastructure is executed such as completing the full Peripherique. The CIP however does not provide a sense of prioritization between these various large infrastructures. For instance, the CIP does not answer whether the Beirut Peripherique is a priority over the Jounieh Bypass, or whether, in a resource

constrained environment, the government should opt to complete the Peripherique, or do 2 phases of the Peripherique and 2 phases of the Jounieh bypass, and so on. An economic and financial prioritization might be helpful. Moreover, the phasing of the two main highways in the CIP (A2 and Peripherique) need more in-depth analysis and is further discussed in Paragraph 117.

B. The Impact on the Socio-Economy

103. Given the strategic nature of transport in the CIP projects, the expected economic and social benefits are generally very high. CIP transport projects will have large positive impacts on growth by increasing trade, investments, and employment and removing economic externalities and bottlenecks.

IMPACT ON TRADE AND COMPETITIVENESS

104. Investments in economic corridors in Lebanon as planned in the CIP—such as in ports, highways, railways and airports—will allow Lebanon to play a major role as a trade and transport hub in the region, a role it had successfully played in the past. Lebanon represents an important gateway to the Mediterranean, Europe and beyond, especially given the constrained maritime access to many countries in the region particularly Syria (only 2 ports with limited capacity) and Iraq, and possibly beyond to include Iran and the GCC. However, the current poor infrastructure makes the cost of exporting goods from/through Lebanon

expensive, particularly due to bad land transport infrastructure and inefficient logistics and customs procedures (Table 12).

105. Investments in transport infrastructure and services will also create an important economic stimulus—and is often a typical economic stimulus instrument globally—which is much needed for the Lebanese economy. This is primarily due to the large local economic multiplier effects of transport infrastructure and services (local engineering and contractors, local suppliers of materials, local truckers and shippers, local public transport operator etc.). In addition, such public investments in strategic assets are likely to include additional private investments in operations and maintenance, equipment purchase and in management. Improving transport connectivity and reducing transport costs will also largely contribute to reviving Lebanon's important tourism sector, be it in reducing connectivity between Lebanon and neighboring country, or as internal connectivity allowing tourists to visit multiple sites outside Beirut.

106. Initiating large infrastructure investments in Lebanon, will increase the competitiveness of Lebanese firms and their readiness for similar works in Syria and Iraq. This will further encourage international firms to use Lebanon as a hub for Syria's reconstruction. The investment in Transport Economic Corridors as emphasized in the CIP (highways, ports, railways, etc.) will therefore clearly enhance Lebanon's trade and competitiveness. However, to increase such benefits, Lebanon needs to also look at parallel soft measures (such as procedures, customs, border crossings) as well as better linkages between these transport corridors and other ancillary economic activities

Table 12. Export/Import Costs (US\$/ per container)

	Lebanon	Middle East & North Africa	Upper middle income
Export cost - port or airport supply chain	500	837	1285
Export cost - land supply chain	3000	1886	1607
Import cost - port or airport supply chain	3000	1688	1384
Import cost - land supply chain	N/A	1131	1488

Source: World Bank Logistics Performance.

to create actual economic corridors, as is being planned for the Northern Lebanon Economic Corridor Project.

The planned highways, roads and public transport under the CIP will all contribute to reducing such economic distances.

IMPACT ON REDUCING ECONOMIC EXTERNALITIES

107. Poor transport connectivity and high transport costs represent a large drag on the Lebanese economy. Various studies put the economic cost of traffic congestion in Lebanon around 5 to 10 percent of GDP annually. In addition, Lebanon has one of the worst road safety records with the economic cost of road crashes estimated in the 3 to 5 percent range. There are also additional transport costs such as vehicle operating costs due to poor road conditions (Lebanon's roads rank 120 in term of quality globally, one of the worst). While the CIP projects can't totally eradicate such costs, they nevertheless will substantially contribute to reducing such externalities, or at least curb their further growth (especially public transport, road rehabilitation, highways, etc.).

IMPACT ON SPATIAL DEVELOPMENT, LAGGING REGIONS AND LOCAL ECONOMIC MARKETS

108. Given Lebanon's small geography, Lebanon's economy could operate as one inter-connected market from a spatial development point of view. Travel distances are generally small in Lebanon with most of the country's population being within a 100 km radius from Beirut, a typical 1 hour trip in normal conditions, which would have allowed goods and people to move easily across the country and for firms and businesses to flourish in all its parts. Yet, and due to poor transport connectivity, economic distances have been growing substantially as it sometimes takes more than 1 hr to travel only 20 km to Beirut. This has put the entire regions of the North, Bekaa, and the South at large disadvantages as generally poorer and lagging regions.

IMPACT ON EMPLOYMENT

109. The Transport sector is one of the main employment generators in Lebanon. Currently, about 7 percent of Lebanon's labor force is employed in transport services (truckers, taxis, port and airport). In addition, a significant part of workers in the construction sector are actually working in the construction of transport infrastructure. This puts the total employment in transport infrastructure and services at at least 10 percent of total employment making the transport sector one of the largest employers in Lebanon especially for the poor, low skilled (construction workers, truck drivers, taxi drivers, etc.) and Syrian refugees (mainly in construction, less in services). Various studies show that transport infrastructure generates most employment among all infrastructure investments as a significant share of such investments (between 15 to 30 percent depending on type of works/projects) is spent on labor. In addition, significant local supply chain activities are also generated creating further employment opportunities. It is very important to note that the narrative of the CIP about infrastructure and job creation, in addition to the general/rough methodology applied to produce such employment estimates, has been very much influenced by the Bank work/narrative on the Roads and Employment Project.

IMPACT ON SOCIAL INCLUSION

110. The CIP transport investments will benefit a large number of vulnerable groups. As highlighted above, CIP transport investments will have significant impact on the lagging regions, improving transport connectivity between such regions and the center through highways as well as within these regions through road rehabilitation. Transport externalities such as traffic accidents or health ailments from air pollution disproportionately affect the poor

due to high hospitalization costs and the loss of important income providers. In addition, public transport programs will reduce the economic and financial transport costs, particularly for the urban poor, as it is important to note that transport represent about 10 to 15 percent of households' expenditures. Improved transport connectivity and reliable public transportation will also benefit several other vulnerable groups such as women (independence of travel using public transport with less harassment), the youth and persons with disabilities.

- 111. The economic and social benefits of the CIP investments will be large yet they will materialize only gradually over a few years.** Generally, the development and execution of large infrastructure requires some years. This is particularly the case for Lebanon where delays are common. Some projects however, such as roads rehabilitation, can be executed within a relatively shorter timeframe.

C. Feasibility Assessment and Readiness

- 112. The CIP transport projects have high technical and economic feasibility.** As discussed above, the social and economic benefits of the CIP transport projects are very high. Meanwhile, all these projects are technically feasible, yet they require thorough study and preparation given their large scope and technical complexity, including some being implemented for the first time in Lebanon (BRT, railways, large tunnels for Jounieh Bypass etc.). Unfortunately, technical studies on most of these projects are not very far advanced given the practice in Lebanon to wait for the confirmation of the financing of such projects before undertaking detailed and costly technical studies. This is understandable given that some projects have been on the shelves for 50 years, yet this represents a major hindrance in that project execution is largely delayed as many important planning and execution studies are generally deferred until financing is secured. Nevertheless, the CIP transport projects are presented in a logical manner

where complex projects have been broken down into smaller projects, which make sense economically, and which can be executed sequentially therefore improving technical feasibility.

- 113. The estimated costs are generally reasonable, although they appear on the low side.** Cost estimates derive from very preliminary studies including pre-feasibility and feasibility studies. In such studies, only high level cost items can be roughly estimated. The real project costs are more certain with detailed designs, especially for large infrastructure requiring soil investigation and other detailed assessments. In most cases, the actual cost of these projects are higher than initially predicted, and this is particularly the case in Lebanon given generally poor governance and long implementation period of projects. Meanwhile, and on the benefits/revenue side, many studies overestimate benefits for project justification. While this is fine to encourage the government to go ahead with such projects given that they all seem of high strategic value, the feasibility figures should be treated with caution when used for planning the sources of financing, especially private sector/PPPs.
- 114. Most CIP transport projects require substantial concessional public financing.** A major constraint to the development of Lebanon's transport infrastructure is the high cost of land and the inability of the government to finance large land expropriations. The cost of land expropriation for transport related projects in the CIP is in the US\$ 2 to 3 billion range, a major expenditure. While part of this can be financed by donors, it is usually up for governments to finance land while donors (and private sector) finance infrastructure. Another limitation to having donor financing of land acquisition for highways and roads, is the different interpretation between Lebanese laws and donors' requirements for compensation of land acquired for highway projects. In addition, most transport projects require public sector financing for the infrastructure while the private sector intervene during the operations and management (O&M) phase as further discussed below.

- 115. Most CIP transport projects can have a PPP dimension, especially for covering operations and maintenance.** The airport terminal and Jounieh touristic port can be financed fully, or close to 100 percent, by the private sector. The other transport projects are unlikely to be 100 percent feasible by the private sector yet most of the projects can have some private financing, especially at later stages (equipment purchase, operations and maintenance). Port, railways and public transport development generally require that the public sector pays for the infrastructure while the private sector contributes to equipment finance (buses, trains, port equipment) and O&M. Highways generally require that the land is financed by the public sector, with some highway sections implemented as BOT by the private sector (through tolls, if traffic allows it), while for others the private sector can only finance the maintenance of infrastructure. Poverty and equity issues need to be also considered when introducing PPPs, especially for highway links in Akkar (poorest region of Lebanon) or in the South.
- 116. Across all sectors, Lebanon has currently major institutional constraints and low implementing agencies' capacity to absorb and execute the large investments under the CIP.** Major CIP investments are in 3 sectors, namely Transport, Water and Energy. The relevant institutions in these sectors are primarily 3: the Ministry of Public Works and Transport and some dependent agencies (weak capacity), the Ministry of Energy and Water and smaller water utilities (weak to moderate capacity) and CDR (moderate to strong capacity, however already overstretched). The Lebanese government, with support from donors, need to have a strategy on how to address implementation challenges especially with select key implementing agencies, particularly CDR, on how to ramp up quickly and efficiently their implementation capacity. Some "outside the box" thinking is required to accelerate the implementation of the CIP given that even simple projects in Lebanon take many years to execute.
- 117. The phasing and implementation of large projects with significant land expropriation requires particular attention.**

This is particularly relevant for the A2 and Peripherique projects where land expropriation requirements are over US\$ 1 billion. Given GoL's difficulty in funding much smaller expropriations over the past decade, it remains uncertain if GoL will be able to acquire the required land for these highways in the short term to allow the start of infrastructure construction. Moreover, GoL is still studying the modalities to execute such projects (public procurement, BOT, in sections or together...) which will also take some time to produce reliable studies to inform such decisions. It is reiterated that these projects are of very strategic importance to the sector and the economy, the discussion below is primarily on the timing/phasing of these investments and potential modalities for their execution. Below three different scenarios for the execution of these highways are provided:

- a. **Scenario 1:** *Government immediately starts acquiring land and proceeds with construction in phases/sections.* For instance, the government immediately, issues required laws/decrees and financing mechanisms (compensations, coupons or zoning, etc.) while acquiring the land gradually over a period of time (such as over 10 years). Under this scenario the proposed phasing by GoL seems reasonable (conditional on the laws/decrees issued within a year time or so and financing made available for land expropriation). This scenario assumes the government will proceed with the construction of this highway in segments under a public procurement scheme (this scenario assumes private investors are less interested in individual segments) Under this scenario, the private sector can be brought in later under a different PPP scheme (not BOT), such as a concession for O&M of the highway after its construction. This scenario would imply, however, less mobilization of private capital investment and heavier costs for the government;
- b. **Scenario 2:** *Government immediately starts acquiring land and decides to execute project/construction as a BOT.* Under this scenario, it is less likely that the private sector would invest in smaller sections before the full land

is acquired (as financial returns and traffic volumes will become much more interesting when the full project is completed), which means construction is not likely to start before a few years and hence the project can be executed in Cycles 2 and 3 under this scenario. Alternatively, the private sector could be offered some individual sections that might be profitable as BOTs, which would advance some of the construction works to Cycle 1, however such alternative seems unlikely and should be subject to further study. While this scenario (BOT) is likely to result in delays in the project execution, its advantage is that it would reduce the government contribution to the infrastructure CAPEX as the private sector could bring in some capital.

- c. **Scenario 3:** *Government gets delayed in acquiring the required land (unavailability of funds, political and administrative challenges, objections from land/house owners, etc.).* Given Lebanon's track record in facing difficulties with land expropriations for even smaller projects, the large financial resources required, and the difficulty to remove some encroachers along the right of way, this scenario appears more likely. Under this scenario, it is not expected that any construction can start before 4 to 5 years or so which means the initiation of these projects is likely to be in Cycles 2 and 3 at best.

118. **Given the above discussion, and in the absence of a clear GoL vision and decision of i) ways and mechanisms to finance the required land expropriation and ii) the modality of execution (eg. BOT for full highway, sections in phases as public sector financed or BOT for separate sections), it is less likely that parts of these highways will be executed under Cycle 1 of this program, but rather under Cycles 2 and 3.**

D. Reform Needs

119. **The execution of the CIP transport priorities should go hand-in-hand with some important reforms in the sector.** The

CIP can be executed within the existing institutional and policy framework given that it addresses major, long lasting and strategic capacity constraints in the sector. Yet, reforms can be advanced in parallel in order to accelerate such programs and ensure the sustainability and efficiency of the sector. Important reform areas for the sector, in relation to the CIP, are highlighted below:

- a. **Strategic Planning:** The development of a national Transport Strategy and Action Plan that:
 - » covers all modes of transport (Ports, Airports, Roads, Railways, Public Transport);
 - » prioritize investments within the sector as well as key policy actions; and
 - » becomes the roadmap for consecutive ministers to implement in contrast to current interests by ministers in only short term projects such as road rehabilitation.
- b. **Sector Governance:** The reform and strengthening of sector institutions. This could include:
 - » The creation of a national public transport authority with a clear mandate to plan and execute all public transport activities. This will allow the consolidation of various important public transport activities from various existing entities (Ministry of Transport, Ministry of Interior, municipalities, etc.) under one entity;
 - » The reform of the governance structure of the major ports, namely Beirut and Tripoli. The governance structure of Beirut Port is a bit unique and follows a very old model, while the Tripoli Port does not have an active Board of Directors;
 - » The strengthening of the planning for road rehabilitation and maintenance and the creation of a proper and transparent road asset management system;
 - » The review of the governance structure of the Civil Aviation sector to promote further investments in airports, including setting up of

a regulatory body, and to further liberalize the civil aviation market in Lebanon; and

- » The strengthening of the implementation capacity of sector institutions, namely the MPWT, CDR, Higher Council of Privatization, the Railways and Public Transport Authority and other sector agencies.

c. Implementation Capacity:

- » The build-up of CDR and Ministries' capacity and staffing;
- » The review of CDR internal processes, as well as relevant ministries, to accelerate and streamline execution;
- » The follow up by senior decision makers on the progress in project execution to drive forward the projects and remove possible political and administrative bottlenecks;
- » The review and discussion regarding CDR priority projects to achieve more balance between the roles of CDR and Ministries, giving CDR fewer yet more strategic, large, and complex projects and less of the small projects (such as small municipal projects, small and scattered infrastructure, etc.);
- » The allocation of funding to undertake detailed studies, from day one, for all the strategic projects approved in the CIP without waiting for actually securing the financing of such projects. This will allow execution to proceed quickly as soon as financing is available. The inclusion in the CIP of TP19, Feasibility Studies of Major Projects, is welcomed.

d. CIP, Sector Financing and Sustainability

- » *Fiscal/budget:* There should be more transparency between transport sector fiscal revenues and its allocated expenditures: the sector contributes to about 15 percent of fiscal/budget revenues, yet it is not visible given multiple sources (fuel excise, port dues, airport dues, vehicle registration, licenses...). There should be better established linkages between taxes and the way expenditures are planned, especially in transport where there are no/little operational revenues (unlike telecom, water and electricity where users pay direct charges). In most countries, a share of the fuel excise is used for the financing of Roads and Highways. This could be either in the form of a dedicated tax, or through proper budgeting processes.
- » *Pricing and user charges.* This includes the possibility of introducing and increasing direct transport user charges, such as increasing parking revenues in Beirut, increasing public transport fares or charges, and introducing tolls on select highways.
- » *PPPs.* Most of the planned investment could have a PPP dimension and such potential should be assessed, be it in the CAPEX of the projects where possible or for operations and maintenance to ensure financial sustainability.
- » *Real estate valuation* and the use of real estate revenues/taxes to finance the sector, particularly land acquisition. The government needs a clear strategy for how to finance land acquisition in the transport sector. An important instrument being discussed is the use of real estate taxes and/or rights to finance such infrastructure (such as giving higher zoning options for people close to highways or impacted by expropriations). Real estate financing mechanisms could include taxes, zoning "coupons", shares in Special Purpose Vehicle

(if a PPP), provision of alternatives in kind (such as housing in other areas if available), change of zoning allowances along corridors, and/or cash payments. Without a structured approach for land acquisition for highways, it will be difficult to advance this highly important economic sector.

Table 13: Transportation Projects

Ref	Project	Estimated Cost (MU\$)	Land Exprop. (MU\$)
TP1	Dbaye-Nahr Ibrahim Motorway (A2) - Phase 1	247.0	125.0
TP1	Dbaye-Nahr Ibrahim Motorway (A2) - Phase 2	330.0	166.0
TP1	Dbaye-Nahr Ibrahim Motorway (A2) - Phase 3	247.0	125.0
TP2	Beirut Peripheric - Phase 1	232.0	254.0
TP2	Beirut Peripheric - Phase 2	310.0	338.0
TP2	Beirut Peripheric - Phase 3	232.0	254.0
TP10	Bus Rapid Transit System - Greater Beirut Public Transport Project	500.0	N/A
TP16	Rehabilitation and development of Beirut Rafic Hariri Airport - Phase 1	500.0	N/A
TP5	Pan Arab Highway - Akkar	150.0	50.0
TP7	Beirut-Damascus Highway Completion	400.0	100.0
TP11	Tripoli-Syrian Boarder Railway	90.0	0.0
TP4	Northern Coastal Highway - Beirut Entrance	180.0	N/A
TP18	Service road for Coastal Highway, Phase 2	112.0	202.0
TP18	Service road for Coastal Highway, Phase 1	38.0	68.0
TP6	Touliqiyeh - Ras Baalbak - Syrian Boarder Highway	110.0	55.0
TP9	Upgrading of Road Network in Greater Beirut	380.0	50.0
TP8/a	Rehabilitation of Roads in Mount Lebanon - Classified and Unclassified (Municipal) Roads	509.0	N/A
TP12	Touristic Port in Jounieh	62.0	N/A
TP16/a	Rehabilitation and Development of Rene Mouawad Airport in Akkar	100.0	N/A
TP3	Southern Coastal Highway (Saida Bypass and Sour Link)	450.0	150.0
TP14	Expansion of Saida Port	60.0	N/A
TP15	Touristic Port in Sour	30.0	N/A
TP19	Feasibility Studies for Major Projects	25.0	0.0
TP20	Tripoli Port, Phase 2	150.0	0.0



V. SOLID WASTE MANAGEMENT

The CIP contains one entry for a single Cycle 1 (2018-2021) investment program in the solid waste sector: “Solid Waste Management to cover all Lebanon including collection, sorting, treatment and landfill sites” for a total of US\$ 1,400 million. Further discussions gave more insight into the investment program, which foresees investments in centralized waste treatment for five regional waste ‘sheds’: (i) three Waste to Energy (WtE) facilities in the urbanized coastal regions (Beirut, the North around Tripoli and South Lebanon around Saida/Zahrani), and (ii) more traditional schemes based on composting and sanitary landfilling for the more rural parts of Lebanon in the north Akkar area and for the Bekaa valley. The WtE schemes would require three times US\$ 375 million and the two rural schemes together around US\$ 175 million. In addition, roughly US\$ 100 million would be required to cleanup the 962 illegal dumpsites of Lebanon and for some the rehabilitation into sanitary landfills. This amounts to a total of US\$ 1,400 million. Of these projects, the WBG assesses that 4 (at a cost of around US\$ 650 million) are important for the first Cycle of 2018-2021. These comprise projects: SW1.1, SW2, SW3.1 and SW3.2. The costing for these projects seems reasonable. These projects can be done in large part by the private sector.

A. General Comments

- 120. Solid waste disposal is a persistent and critical issue in Lebanon.** Before the Syrian crisis, only 53 percent of municipal solid waste was disposed of in the country’s only two sanitary landfills: Naameh and Zahlé. The remaining was disposed of in unsanitary landfills and hundreds of open dumps, which is a main source of pollution to air, watersheds and coastal zones. The closure of the over-extended Naameh landfill in July 2015 resulted in the worst environmental crisis in Lebanon’s recent history.
- 121. In the summer of 2015, a visually powerful garbage crisis that left piles of it uncollected on the streets of Lebanon galvanized sizable popular demonstrations.** Garbage began piling up since July 17, 2015 when the Naameh landfill, which served as the primary landfill for the country, was closed without an alternate site being designated due to opposition from local communities. A nontransparent

tendering process was organized by the government for new waste management contracts across the country. On August 24, 2015, the Ministry of Environment announced the winners of the bids, most of whom were seen as having close ties to the political elite. The perceived incessant corruption at the expense of quality of services triggered a series of protests and civil disobedience measures targeting the ruling political class with emphasis on corruption and incompetence.

LEBANON’S INTEGRATED SOLID WASTE MANAGEMENT

- 122. In April 2012, the Council of Ministers approved Decree 8003 on Integrated Municipal Solid Waste Management, which has been awaiting parliamentary approval since.** The Draft Law promotes an integrated and proper management of municipal waste by encouraging waste minimization, source separation, recycling, energy recovery, effective treatment facilities, etc.
- 123. On January 11, 2018, the Lebanese cabinet endorsed the Policy Summary on Integrated Solid Waste Management.** The policy summary calls for the Ministry of Environment (MoE) to survey the financial and administrative capacities of every municipality in Lebanon and assess their ability to manage their waste without government intervention. If municipalities are incapable or unwilling to treat their waste, they would be linked to the centralized solution, from which the CIP solid waste projects are derived. In addition, the decision also includes a number of short-term measures to improve conditions and expand the capacity of some existing disposal facilities; and increase composting and waste sorting capacity to reduce waste for disposal. The decision puts implementation of these measures in the hands of CDR.
- 124. The CIP contains one entry for a single Cycle 1 (2018-2021) investment program in the solid waste sector: “Solid Waste Management to cover all Lebanon including collection, sorting, treatment and landfill sites” for a total of US\$ 1,400 million.** Further discussions gave more insight

into the investment program, which has the nature of a national sector roadmap, based on feasibility studies and a basic investment program that will need further work for the development of the regional investment schemes. Roughly, the program foresees investments in centralized waste treatment for five regional waste ‘sheds’: (i) three waste sheds in the urbanized coastal regions (Beirut, the North around Tripoli and South Lebanon around Saida/Zahrani area) each managing around 1,200 t/d of municipal waste, with a WtE facility at the heart of the system, with the Beirut WtE being developed through long-term concessions to the private sector, and the other two under deliberation; and (ii) more traditional schemes based on composting and sanitary landfilling for two waste sheds for the more rural parts of Lebanon in the North and for the Bekaa valley.

- 125. The proposed cost estimates for investments seem adequate.** Details have not been provided, but the rough estimates for investments as indicated are in line with international benchmarks. The WtE schemes would require three times US\$ 375 million and the two rural schemes together around US\$ 175 million. In addition, roughly US\$ 100 million would be required to cleanup the 962 illegal dumpsites of Lebanon and rehabilitation of sanitary landfills. These amounts give a total of US\$ 1,400 million. The development of the five regional schemes is expected to take four years. Given their obligations, (local government) LGs will remain responsible for waste collection (as in the current situation, largely contracted to private operators) and have the option to opt out of these regional schemes that will be developed and operated under the direct control of the central government. It is expected that most LGs will choose to bring their waste to the regional facilities. Subject to participating LGs, the total program would cover around 90 percent of waste generated in Lebanon.

ASSESSING CIP WASTE TREATMENT PROJECTS

- 126. There is a strong rationale to organize solid waste management in Lebanon with regional schemes, initiated by the Council of Development and Reconstruction (CDR) and managed by private operators.** Lebanon has a history of high cost waste services and engagement with the private sector in waste management operations, mainly waste collection and disposal. These are conditions that support the proposed private sector financing and operations of these facilities. Given the challenges, particularly land issues, to develop local outlets for waste disposal and scale benefits, it makes good sense to develop regional schemes and for the central government through CDR to lead this program.
- 127. The choice of costly waste-to-energy facilities is driven by challenges in Lebanon to develop sanitary landfills, which in general (internationally) are lower costs options.** Waste-to-energy schemes normally are substantially more expensive than sanitary landfilling, with the latter being the preferred option for most countries that have similar GDP/capita levels. It is recognized, however, that landfilling in Lebanon is challenging due to a lack of land. Also related to these challenges, a large part of waste in the country, particularly in the Beirut area, already faces cost levels of US\$ 100/ton and more, which are comparable to costs of waste incineration.
- 128. Regional waste schemes, and particularly waste-to-energy investments, take time to develop; current initiatives are at the early planning stage.** The proposed program envisages a period of four years to develop the regional schemes. This seems achievable, though on the optimistic side, assuming there are no setbacks due to land issues (not in my backyard, NIMBY) and options to mobilize public finance for investments if needed. For the WtE schemes, international experience suggests that even without major setbacks in financing and planning, a period of 5-6 years is more realistic.

- 129. Contingency planning.** The development of WtE is complex and at the current development stage, without a solid market test, it is difficult to foresee what challenges lie ahead in contractual and financing arrangements with investors, in planning (ESIA, public consultation) and in operational and financial arrangements to be made with the participating LGs. It is important to plan for waste management in the period up to the operationalization of the five regional facilities and include provisions for set-backs.
- 130. Lebanon is locking in into waste incineration and treatment, with limited focus on waste recycling and waste reduction.** In high income countries, incineration has been a key element in waste systems to reduce waste for disposal. However, it is regarded as a lower level solution in the waste management hierarchy and recent developments ('circular economy') see a substantial shift from waste incineration to waste recycling and reduction. With the proposed program, Lebanon is locking in into waste incineration for decades. The adopted strategy is that increases in waste generation due to economic development and demographic trends would be managed through waste recycling and reduction in the future.
- 131. Financial sustainability, tariff system and financial arrangements with LGs.** In addition to the US\$ 1.4 billion investments, the schemes will need roughly US\$ 150-200 million per year to operate. At present, there are no development arrangements to have these costs covered by waste generators (households) or the LGs. There is thinking of putting a tariff system in place based on electricity consumption, and possibly linking billing to electricity billing. Tariffs systems take time to develop and have social implications. It is critical for the success of the regional investments that improvement in services go hand in hand with cost recovery. In the next two years, policies are needed to address financial and operational arrangements with LGs (put-or-pay, bring the waste at a fee, or otherwise pay engagement charges) and the establishment of consumer waste fees.
- 132. Feed-in tariffs.** For waste incineration, electricity feed-in tariffs (FIT) are critical and may even generate more revenues than gate fees for waste delivery at the facility. The program assumes a FIT of US\$ 0.1075/kWh to be paid by EdL. The tariff looks reasonable, but it is not clear whether it is underpinned by an assessment of economic benefits (premiums for renewable energy) in comparison to current costs of power generation. It also needs to be confirmed that long-term arrangements can be made for FITs.
- 133. In terms of job creation, the proposed investments will generate jobs during the construction periods and for operation of the related facilities.** On average, it can be expected that several hundreds of jobs are created at each of the five regional facilities.

B. Projects

134. SW1.1 – Beirut Waste to Energy Facility

- The scheme to process 1,200 ton/day municipal solid waste has an estimated cost of US\$ 375 million, which seems reasonable.
- According to government, a site has been identified, a prequalification tender has resulted in a shortlist of potential bidders and it is suggested that arrangement for feed-in tariffs can be made. Some key transaction elements still need to be developed and it appears that the prequalification has not yet performed a substantial market test for the scheme based on a 25 years concession.
- Based on government information, this regional facility is most advanced and should be made ready for tender in the coming 6-12 months.

135. SW1.2, 1.3 – Tripoli Area WtE Facility, South Lebanon Coastal Area WtE Facility

- Each of the two schemes is expected to process 1,200 ton/day municipal solid waste, with an estimated cost of US\$ 375 million per facility, which seems reasonable.
- These schemes appear less developed than the Beirut scheme and to gain experience it is recommended to have at least one to two years delay in tendering

these facilities after the Beirut tender has been concluded with financial closure.

136. SW2 – National cleanup program for closure and rehabilitation of waste dump sites

- This project is expected to cleanup more than 950 sites at an estimated cost of US\$ 100 million. The cost estimate is very rough but as such seems reasonable.
- It's unlikely that this work can be financed from private funding, unless, perhaps for a number of sites, it can be linked to the other 5 projects.
- Works can start rapidly for a number of sites, but it is likely that for a large number of sites, they can only be closed when alternative capacity for treatment of disposal has been put in place. Hence, a phased approach is recommended.

137. SW3.1, 3.2 – Akkar Valley Regional Facility and Bekaa Valley Regional Facility

- These two schemes are expected to process 920 and 280 ton/day municipal solid waste, respectively. The total estimated cost is US\$ 175 million for both facilities which seems reasonable.
- Technology for these two regional schemes is mainly sorting and composting to reduce waste to disposal and the development and operation of sanitary landfills. The various investments of these two schemes should be as much as possible combined in two integrated contracts

and it seems feasible to find private investors to finance, develop and operate the facilities.

- The schemes still need substantial planning and preparation but are less complicated than the WtE deals. Therefore tendering within the next two years should be possible but a comprehensive market test is recommended and a sound financing basis for operating costs needs to be developed, which could be more challenging in these regions than in the urbanized areas with WtE concessions.

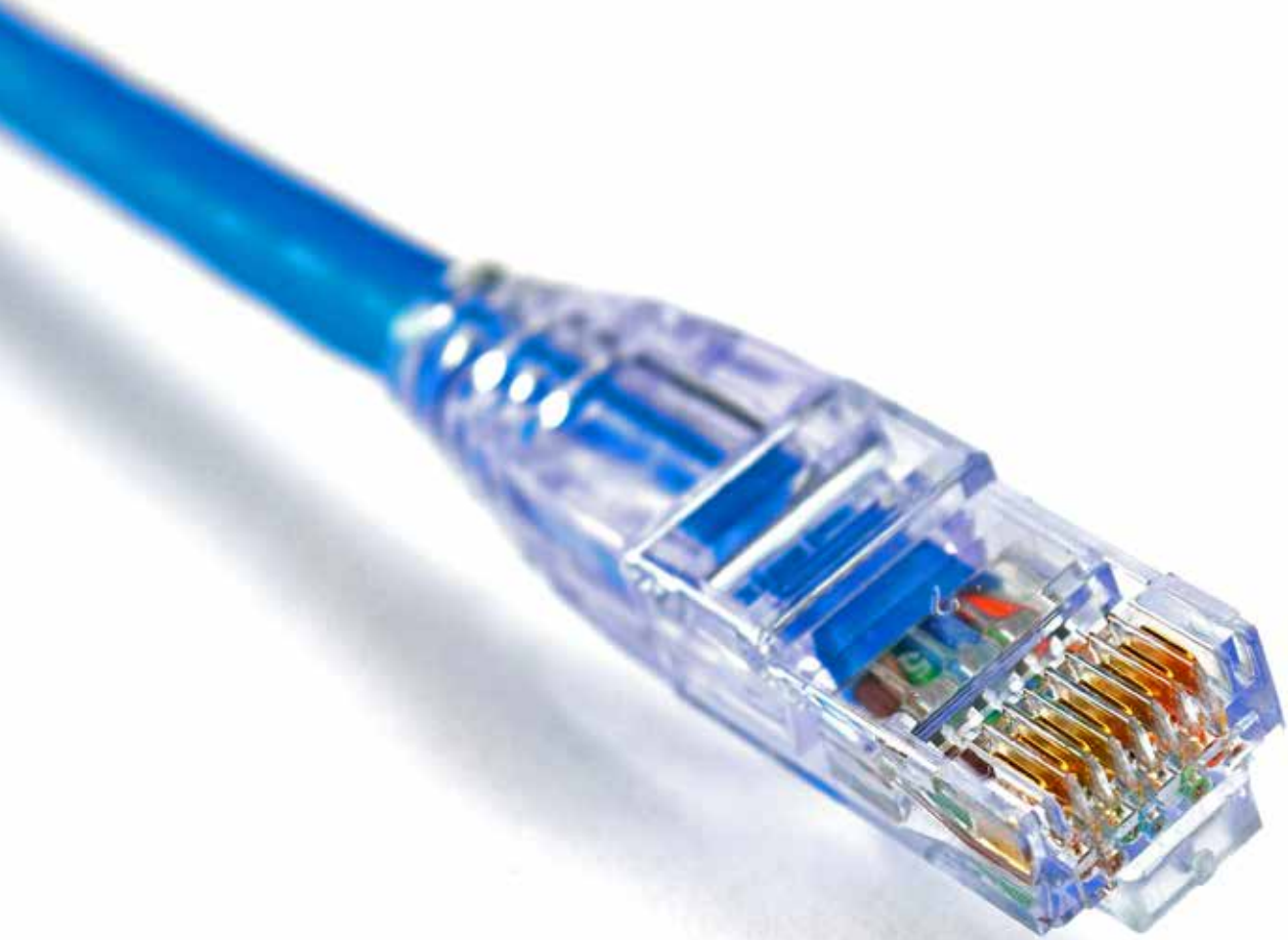
C. Reform Needs

138. Most prominent reform needs are:

- a. Development of a tariff system for waste generators (households);
- b. Policies to support capacity development with local governments for sector planning and operations;
- c. Defining feed-in tariffs for electricity from waste processing facilities based on long-term economic benefits.

Table 14: Solid Waste Management Projects

Ref	Project	Estimated Cost (MU\$)	Land Exprop. (MU\$)
SW1.1	Waste to energy facility	375.0	None
SW1.2	Waste to energy facility	375.0	None
SW1.3	Waste to energy facility	375.0	None
SW2	Rehabilitation of dumpsites throughout Lebanon	100.0	None
SW3.1	Rural sorting, composting, and sanitary landfills	87.5	None
SW3.2	Rural sorting, composting, and sanitary landfills	87.5	None



VI. TELECOMMUNICATIONS

The CIP contains 8 separately identified investment projects in the telecoms sector for a total of US\$ 700 million, that can be implemented over the first Cycle covering the period 2018-2021. Of these projects, the WBG assesses that 5 are of strategic importance to the sector. These comprise projects: TL1, TL2, TL3, TL5 and TL8 (at a cost of around US\$ 410 million). Of these, TL1 (Fiber to the Office and Fiber to the Home) can be done in large part by the private sector, but important legal, regulatory and policy changes need to be made. The estimated costs are generally reasonable, although more information is needed on some projects. The telecoms sector in Lebanon is the second biggest income earner for the government, making it a vital source of financing for a country with the third highest debt-to-GDP ratio in the world. Telecom reforms should proceed with caution as the potential contingent liabilities for the public sector are appreciable.

A. General Comments

- 139. Most investments go in the right direction: Modernize Lebanon's broadband and digital platform infrastructure, providing faster internet and cloud based services to government, businesses and consumers in Lebanon.** The following assessment is a "static" analysis and the WBG stresses on the importance of considering broader policy reform in the sector.
- 140. The plan also includes investments to enhance MoT's core corporate functions, such as service delivery and billing (TL2), or to improve the ability of the State to regulate and monitor the market, such as in areas like surveillance and spectrum management (TL4 and TL5).** Complementary interventions in capacity building and institutional and regulatory reforms are needed to fully realize the impact of this investment plan.
- 141. The telecoms sector in Lebanon is the second biggest income earner for the government making it a vital source of financing for a country with the third**

highest debt-to-GDP.²⁰ Telecom transfers to the government averaged 3.4 percent of GDP annually over the past decade. It is also a rare source of hard currency, noting that the foreign currency-denominated portion of public debt is equivalent to about 56 percent of GDP. Telecom reforms should proceed with caution as the potential contingent liabilities for the public sector are appreciable.

B. Comments on projects 1-8

142. TL1 – Phase 2 - Fiber to the Office and Fiber to the Home (US\$ 100 million):

- In most countries where broadband access is open to competition, fiber to the home or the office services and infrastructure in economically active areas is carried out by the private sector. Public funding or different forms of interventions come at a later stage when the private sector is not willing to invest further in less lucrative segments of the market. On the other hand, in CIP TL1 the planned network investment (Fiber to the Home and Fiber to the Office), reaches the final user.
- The investment estimate is reasonable, and consistent with a similar analysis done by the task team that would result in an investment of US\$ 120 mln to US\$ 150 mln to build infrastructure in economically viable, densely populated areas.

143. TL2 – Phase 2 – Core Network and IMS (IP multimedia subsystem) (US\$ 90 million):

- This investment is planned as part of MoT's upgraded infrastructure and is one of the key investments to alleviate demand for DSL services in the short and medium term and to improve quality of domestic internet network.

²⁰ Gross public debt is estimate at 153 percent of GDP, end-2017, with only Japan and Greece higher globally. Debt service for the government reaches about 10 percent of GDP annually, consuming about half of domestic revenues. As a result, the government suffers from a long term and sizable fiscal deficit, which in 2016 registered 9.6 percent of GDP.

- This type of investment should be carried out by the private sector. However, in the case of Lebanon, awaiting reforms that allow competition, this investment can be made by the public sector, as it is essential to increase overall internet speed and quality in Lebanon.
- The investment estimate appears reasonable.

144. TL3 – Expansion of international capacity (US\$ 50 million)

- Currently, all international backbone communication is handled by MoT. More information is needed to assess whether this capacity has reached its limits and what are the options to increase the international capacity available for Lebanon.
- Since the government owns and operates the international gateways in Lebanon, it is important to consider partnership with the private sector at the investment and operational level. It is important to induce competition in this segment, to have a greater impact on the market, in terms of available bandwidth and price of capacity. Prices were reduced but are still high compared with fully open markets.
- It is important to notice, however, that even if the potential for competition in this market segment is considerable, the adverse impact in terms of fiscal flows is also the highest in this segment. If competition were to be introduced, the private sector would quickly gain market shares, prices would drop dramatically, but demand elasticity would not be sufficient to compensate for the price drop. The combined impact of revenues realized by private sector operators and lower margins arising from competition, would mean a sharp reduction of fiscal revenues from this specific segment.
- The investment estimate appears reasonable but more information is needed to determine the cost of the backbone upgrade capacity.

145. TL4 – Phase 2 – Security System (US\$ 60 million):

- Investment in cybersecurity, including Deep Packet Inspection, allows authorities to intercept and decode communications, intercept illegal activities and ensure the safety of user information.
- The implementation of these systems requires coordination and cooperation between different institutions. More information is needed on this subject to assess the project implementation plan, scope, cost and readiness.
- Further information is needed to assess the investment estimate.

146. TL5 – Phase 2 – Spectrum Monitoring (US\$ 20 million):

- More information is needed to understand what are the existing spectrum monitoring tools available to the Ministry and to the regulator in order to better assess this project.
- Spectrum monitoring is commonly carried out by independent regulatory agencies, and therefore it is recommended that this investment is made to reinforce the capacities of the TRA. This is particularly important in Lebanon where the government and MoT are also users of spectrum and therefore an independent institution is better placed to monitor and regulate the use of spectrum.
- The estimate seems on the high side.

147. TL6 – National Cloud Platform (US\$ 200 million):

- This is an important investment that is usually undertaken as a Public-Private Partnership (PPP) to provide a common cloud based infrastructure to the government, with data center and disaster recovery capabilities. It is important to: i) help government explore PPP options, as not all of the investment needed should come from the budget and ii) prepare an adequate institutional environment to implement the reform. Change in management is more important than hardware in the implementation of cloud based solutions.

- A high-level comparison with other countries shows that the investment needed for this project is over-estimated, however, more information on the scope of the project is required to corroborate this finding.
- The cost for this component is very high; it is unclear what scope of investment would justify this cost estimate and whether least cost options were considered.

148. TL7 – Phase 2 – IOT, Lora and WiFi Network (US\$ 30 million):

- Additional information is needed on the objectives, design and implementation of this project. This is particularly the case for the IoT and Lora part of the components. The investment, the sources of funding and the reforms needed will therefore depend on the scope and objectives of this project.
- Investment in public WiFi networks is important to extend connectivity in areas with poor access to internet. Similarly, public WiFi networks can provide access to segments of the society that cannot afford personal or residential internet subscriptions. In these cases, public intervention is warranted since private investment may not be profitable. The deployment of public WiFi spots should therefore be strategic and targeted to the areas where residents have limited access and to important institutions such as schools, universities, parks, etc.
- Additional information is needed to determine whether this investment estimate is reasonable.

149. TL8 – GSM network (US\$ 150 million):

- This is an investment to upgrade the capabilities of MoT mobile infrastructure for both networks.
- Ideally, this type of investment should be carried out by the private sector. However, in the case of Lebanon, while awaiting reforms that allow competition, this investment can be made by the public sector.
- More information on the scope of this project is needed to assess the relevance of this investment and how reasonable it is. It is unclear why an expansion of

the GSM network is needed at a time when the industry is clearly moving to 4G and 5G solutions.

C. Complementary Policy Interventions

150. Lebanon has a unique opportunity to develop a new comprehensive policy to address the various bottlenecks affecting the growth and development of broadband infrastructure and services. The main opportunity is to leverage on Lebanon's education and skill level of population, by providing modern broadband infrastructure and ICT applications. This would boost the competitiveness of the service sector, and create jobs and income opportunities for the skilled workers.

151. In embracing this much-needed reform, Lebanon will need to pay attention to three important factors:

- account for the fiscal implications;
- manage risks and opportunities to make sure that the benefits of broadband reach to different regions and income and social groups; and
- avoid the emergence of oligopolies in the sector.

152. There should be a unified vision for the ICT sector and a clear consensus on policy, without which sustainable development for the sector cannot be realized. In particular, sector policy should include:

- the identification of specific targets for broadband (high speed Internet) deployment for the overall population of Lebanon;
- options to proceed toward sector reform, including the introduction of competition and private sector involvement in the sector and a clear strategy to address poor and undeserved areas and disadvantaged households;
- the development of an institutional reform plan, with clear roles and attributions for the different sector actors;
- the assessment of the fiscal and growth impact of different reform scenarios.

SOME REFORM NEEDS:

153. At present, the government has authorized two DSPs to build fiber using MoT's passive infrastructure. In addition, other DSPs have also expressed their interest to invest. For this reason, the government is preparing a standardized license, to bring all operators on the same level playing field. This is a good step, and needs to be established quickly, before one DSP gets an important first mover advantage on a specific CO. The terms of the license are particularly straightforward and the text can be quickly introduced. The harmonized license framework can be used as a chance to strengthen the conditions of the DSP licenses while creating a level playing field.

154. Subject to Shura Council review and confirmation (presently in progress), government to establish a harmonized license framework for internet operators that should include:

- No limits on the number of DSPs authorized to lay down fiber (all DSPs meeting certain conditions are authorized, as in the class license regime);
- No minimum investment obligation: the successful examples of Eastern Europe show that small and micro operators can be a formidable force behind the development of broadband; it should be the market, and not the government,

to determine the number of players, through competition and consolidation;

- A uniform revenue sharing agreement: different DSPs have different revenue sharing agreements with the government (ranging from 20 to 40 percent of the revenues); a revenue sharing agreement impacts the business plan of an operator, that will either limit investment or increase the final price for the customer, or a combination of both; this is not desirable.

Table 15: Telecommunications Projects

Ref	Project	Estimated Cost (MU\$)	Land Exprop. (MU\$)
TL1	Phase 2 FTT(X) - FTTO: Fiber -To-The-Office - FTTH: Fiber-To-The-Home Phase 7 FTT (X) infrastructure	100	None
TL2	Phase 2 - Core Network and IMS (IP Multimedia Subsystem)	90	None
TL3	Expansion of international connectivity	50	None
TL4	Phase 2 Security System	60	None
TL5	Phase 2 Spectrum Monitoring	20	None
TL6	National Cloud Platform	200	None
TL7	Phase 2 IOT, Lora and WiFi Network	30	None
TL8	GSM network	150	None



VII. TOURISM & HERITAGE, CREATIVITY & KNOWLEDGE

The CIP contains 11 separately identified investment projects in the sector for a total of US\$ 264 million, to be implemented over the Cycles 1 and 2, covering the period 2018-2026. Of these projects, the WBG assesses that 7 projects are of high priority, with implementation starting in Cycle 1, 2018-2021 (at a total cost of around US\$ 191 million). These high priority projects comprise: CH2 (Cinema Industry), CH3 (Theater), CH5 (Scientific and Educational Centers), CH7 (Arts General), CH9 (Historic Cities), CH10 (Heritage, Archeological Sites, and Surroundings) and CH11 (Museums). These projects can be implemented with the involvement of the private sector and some can be set up as PPPs, with adjustments to the current legal, regulatory and policy framework. The cost estimates are reasonable, country capacity in these areas is sound, and the projects build on previous results the country has achieved.

A. Introduction

155. The 11 projects proposed in the CIP could play a pivotal role in spurring local economic development, in particular in lagging regions. The World Bank Group team that reviewed the CIP found that the 11 projects prioritized by the Government of Lebanon are beneficial to high-value added services that constitute the backbone of the Lebanese economy. They are related to a larger economic sector that can be defined as High-Value Added Services, which includes Tourism & Heritage and Creativity & Knowledge. Experience to date in Lebanon has shown that supporting knowledge and leveraging heritage assets in cities improves local economic development and job creation, especially in secondary and tertiary cities in lagging regions, enhances the livability for local communities in an inclusive manner, and attracts significant private sector investment. Supplementing conventional models of knowledge and heritage-based activities with new forms of activities based on intangible culture and contemporary creativity can have significant contribution to economic growth and job generation.

156. The 11 projects identified by the Government are aligned with existing sector strategies, for which the Government has shown commitment and capacity to achieve results. The 11 projects

require a total investment of US\$ 264 million and are planned to be implemented over Cycles 1 and 2. They are components of larger strategies that could unlock employment in fast growing sectors of the Lebanese economy. These projects are the result of a screening exercise carried out by the Government of Lebanon in close consultations with public and private stakeholders. The 11 projects have been identified based on their potential to have a high catalytic potential to unlock further private sector investment. While certain projects in high-value added services can be implemented by the private sector alone, the 11 projects included in the CIP would require upfront concessional public financing. These projects can contribute to the removal of bottlenecks and strengthen the enabling environment for the private sector to thrive, in economic sectors where the country demonstrated capacity to achieve results. Some of the 11 projects may benefit from the application of the new PPP law passed by the Parliament of Lebanon in August 2017, provided that some legal, regulatory and policy measures are introduced to adjust the regulatory framework to the specific nature of these projects. In general, the proposed 11 projects seem to be reasonably costed and they have a generally high level of readiness.

B. Economic Relevance

157. Tourism based on heritage assets is a traditionally strong pillar of the Lebanese economy. Lebanon turned its diversity into an asset: Lebanese cities are among the oldest continuously inhabited areas in the world. The richness of the melting pot of communities in Lebanon is one of the most representative tracts of the country and has historically been a driver of innovation. Lebanon, not accidentally, is the country where the first alphabet of the humankind was invented. Before the Lebanese Civil War, Beirut was widely regarded as “The Paris of the Middle East” or also “The Pearl of the Middle East,” cited as the Capital of Levantine Mediterranean culture. Consequently, tourism in Lebanon has always been a major contributor to the economy. From Stone Age settlements

to Phoenician city-states, from Roman temples to rock-cut hermitages, from Crusader Castles to Mamluk mosques and Ottoman hammams, heritage sites of global significance are displayed all across the country reflecting ancient and modern world history. This has been widely recognized by the international community: with 5 UNESCO World Heritage Sites, the country has the highest density of these sites globally compared to its population.

158. Contribution of tourism to the country GDP is estimated at 25 percent, which is by far above the world average of 14 percent, above any other country in the Middle East and twice as much a prime tourism destination like Italy (10 percent).

Despite elements of fragility due to the regional context, and fluctuations in the sector, tourism remained a strong employment generating sector, especially for low-skilled workers, a factor that turns the sector into a robust poverty reduction mechanism. The sector accounts for 24 percent of total employment in Lebanon. Before the impact of the Syrian crisis, the number of visitors reached 2.5 million per year (2010). Soon afterwards, numbers declined, and lately, due to enhanced efforts for the stability of the country, the trend reversed back into the positive.

159. Further growth in heritage and tourism can distribute benefits to lagging regions.

With the right interventions of the public sector, private investment in tourism has been traditionally high. As an example, in 2012 Foreign Direct Investments in tourism reached a total of US\$ 1.3 billion. However, the majority of tourism related initiatives targeted coastal areas in and close to Greater Beirut, due to better accessibility and infrastructure. The Government of Lebanon recently completed a major project (Cultural Heritage and Urban Development Projects, US\$ 120 million), started after the conclusion of the Civil War, which focused on 5 cities: Baalbek, Tripoli, Byblos, Saida, and Tyre. The project supported targeted interventions that removed bottlenecks for private sector growth with a very pragmatic approach. Project results have been remarkable, with some of these cities attracting US\$ 7 dollars of private sector investment for every US\$ 1 dollar invested in public infrastructure.

160. The challenge for the future is about enhancing tourism-related benefits for the overall country, contributing to developing new destinations, starting from secondary and tertiary cities inland, which all possess unique attractions (e.g. Anjar, Baalbek, Zahle, Rashaya, to name a few). This would have the positive effects of bringing tourism spending outside the capital, in regions that have been so far lagging behind, and serve as a driver to enhance service delivery, in communities that so far have been relatively more isolated and excluded. As a service industry, tourism is labor intensive and does not require high skills: with 1 job created for every new 12 tourists. Investment in the livability of secondary and tertiary cities would also serve an effective measure to enhance service delivery for local communities as well as open them up to visitors, with the dual benefit of improving living conditions for local communities and making these places more attractive destinations for visitors, while supporting local economic development in the whole value chain.

161. Creativity and knowledge have a growing relevance for the Lebanese economy.

Owing to its liberal political system, drive for freedom, diverse community and cultural background, and its entrepreneurial young population, Lebanon has been home to successful experiences in Creativity & Knowledge, with the highest growth potential among Middle Eastern countries. These experiences include television broadcasting, advertising services, cinema production and post-production, publishing, music production and new emerging and fast-growing markets such as digital media. From an economic stand point, the sector in Lebanon has a turnover of US\$ 1 billion, with about 400 active businesses, employing 4.5 percent of the Lebanese labor force, particularly skilled youth. With a contribution of 4.8 percent to the country's GDP and an added value generated of around 55 percent, the sector places Lebanon at the top of Middle Eastern countries, with a clear potential to grow. Workers have average wages usually 50-60 percent lower than in GCC countries, making the Lebanese workforce very cost efficient in this sector.

162. Further growth in creativity and knowledge is constrained by gaps in specialized infrastructure. Businesses in creativity and knowledge have so far shown a high potential to strengthen shared prosperity and renew the social contract in Lebanon. They developed to the current level despite infrastructure shortcomings, thanks to a general environment that is favorable to private-sector led growth. Further growth is hampered by the absence of some specific foundational and specialized infrastructure that would allow businesses to benefit from adequate platforms to anchor their innovative approaches to further leverage creativity and knowledge. To address shortcomings, dedicated investments have been identified by the Government with sector strategies. These strategies highlighted the need of specialized libraries, a national theater, new branches for the music academy, scientific and educational centers, and dedicated infrastructure for the movie industry.

dynamic sectors of the Lebanese economy to grow, yielding significant results in terms of employment, especially for educated youth in Creativity and Knowledge. This in turn will help reduce further migration of skilled Lebanese abroad and pave the way for a more shared prosperity of the country's. In addition, Heritage and Tourism, being labor intensive, generates job opportunities for low-skilled workers in lagging regions. The list includes a total of 11 projects for US\$ 264 million. There are particularly interesting initiatives that offer strategic support for Creativity and Knowledge infrastructure; these are CH1 National and Public Libraries, CH2 Cinema Industry, CH3 Theater, CH4 Music Industry, and CH5 Scientific and Educational Centers (the total investment for projects CH1 to CH5 is US\$ 62 million). The CIP list also includes very specific and high potential infrastructure for Heritage and Tourism, particularly projects CH6 Arts Museum; CH7 Arts General; and CH8 Warehouse (the total investment for projects CH6 to CH11 is US\$ 203 million).

C. Government Response in the CIP

163. The list of 11 projects in the CIP has been built on wide consensus. The CIP elaborated by the Government and has been developed with broad consultations with the public and private sector and it represents an adequate selection of a priority projects. Some of these projects could be realized in partnership with the private sector, with support from the public sector with concessional financing for strategic investments (the amount of public financing is what the Government highlighted in the costing of the 11 projects), unlocking a virtuous circle of investments. Their implementability does not pose significant economic risks, given solid demand, and does not have notable challenges, given local technical and managerial capacity, limited land acquisition issues, and coherence with social and environmental policies.

164. The World Bank team that assessed the CIP agrees that all 11 projects have relevance. The 11 projects selected by the Government can support one of the most

165. The list of 11 projects builds on tested good practices and adequate experience. High priority that may be given to CH2, CH3, and CH5 for Creativity & Knowledge; CH9, CH10, and CH11 for Tourism & Heritage, with their implementation starting in Cycle 1.

166. With reference to Creativity & Knowledge, priority in Cycle 1 may be given to projects CH2 (Cinema Industry), CH3 (Theater), and CH5 (Scientific and Educational Centers). The high priority of the project CH2 Cinema industry is due to the growth potential of the sector in the country and its relevance for job generation, particularly for the youth, and for fostering freedom and social cohesion, in a sector that has brought Lebanon to global visibility (e.g. recent Oscar nomination for the movie The Insult). The project CH3 Theater is of high priority as well and it can be implemented with an innovative value-capture scheme that would represent a potential application of the new PPP law to urban development at a scale of significance. The project CH5 Scientific and Educational Centers is of high priority as well, due to the relevance of establishing a network of secondary and specialized research centers throughout the country to support innovation,

particularly in agriculture and niche products (e.g. ICT, wine industry, food processing), which have been growing fast and represent areas with high employment generation potential. These priority projects in Creativity & Knowledge can be implemented in partnership with the private sector, experimenting new areas for PPPs in the country. The table developed by the Government, for these projects includes the amount of concessional financing needed to address the infrastructural gap and unlock private initiatives.

- 167. Concerning Tourism & Heritage, priority in Cycle 1 can be given to CH9 (Historic Cities), CH10 (Heritage, Archeological Sites, and Surroundings), and CH11 (Museums).** These second set of projects would scale up and build on the recent and sound success of large operations already implemented by the Government of Lebanon to support Heritage and Tourism. These projects are CH9 Historical cities and buildings, CH10 Archeological sites and surroundings, and CH11 Museums. These high priority projects would help replicate success stories in secondary and tertiary cities inland, in lagging regions, opening up new destinations. They would expand the benefits of tourism, bringing spending to less developed areas within the country and enhancing the level of service delivery to local communities in secondary cities in the internal part of the country, addressing regional disparities compared to the more developed coastal areas. These projects would finance strategic infrastructure that can attract relevant private sector investment, based on tested approaches. The table developed by the Government, for these projects includes the amount of concessional financing needed. It is relevant to highlight that projects identified in this sector have close linkages and synergies with projects identified in other sectors of the CIP, particularly those on ports expansion, as these initiatives could enhance tourism access to cities and their inland, namely TP12 (Tourism port in Jounieh, US\$ 62 million); TP14 (Expansion of the Saida port, US\$ 60 million); TP15 (Tourism port in Sour, Tyre, US\$ 30 million); and TP20 (Expansion of the Tripoli port, US\$ 150 million).

- 168. The cost of the 7 high priority projects amounts to US\$ 84 mln to be invested in Cycle 1.** Given their nature, these high priority projects would continue implementation in Cycle 2 as well. The cost of the remaining projects that could start implementation in Cycle 2 is US\$ 180 million.

D. Sector Reforms

- 169. The Government of Lebanon has pursued sustained efforts to ensure dynamism and further growth in Heritage & Tourism and Creativity & Knowledge, given their relevance to the country's economy.** These efforts have included ensuring freedom of media with a solid and dedicated legislation, playing an active role in enforcing intellectual property rights and regulations. Sector regulations have also ensured an adequate framework for conservation and management of heritage assets and then involvement of the private sector, especially at the local level, to which Lebanon has systematically honored its commitments by ratifying relevant international conventions and reflecting them in its country system.
- 170. Additionally, the Government set up a dedicated system of incentives to support the sector, which can bridge public and private investments.** In 2001, the Lebanese Parliament passed the Investment Law 360, establishing a framework that provides financial and non-financial incentives for investment, with the sector considered a priority, given its high potential for employment. Under the current regulatory framework, incentives are designed based on a geographical distinction of the country into 3 macro-areas, with higher incentives targeting lagging regions of the country. Incentives include exemptions from corporate income tax, and taxes on project dividends, reduction of work permit fees for various categories, reduction on construction permit fees, exemption from land registration fees and other measures to ease investment.
- 171. The projects can be made more effective by having their implementation coupled with a fine tuning of the system of incentives in place, to enhance overall sector**

governance, based on an update of the nexus demand-supply. Such fine-tuning could be coupled with targeted measures to enhance urban governance as well and ease of doing business at the local level, with the objective of effectively capturing the benefits and sustainability that these projects can bring, linking existing incentives with more efficient measures to unlock growth at the local level.

Table 16: Cultural Heritage/ Tourism Projects

Ref.	Project	Estimated Cost (MU\$)
CH1	National and Public Libraries	15
CH2	Cinema Industry	7
CH3	Theater	7
CH4	Music Industry	15
CH5	Scientific and Educational Centers	18
CH6	Arts Museum	7
CH7	Arts in General	10
CH8	Museums Deposits (Warehouses)	36
CH9	Historic Cities	50
CH10	Heritage, Archaeological Sites, and Surroundings	70
CH11	Museums	30



VIII. INDUSTRY

The CIP contains 2 separately identified investment projects in the industry sector, the 3 industrial parks in Alkaa, Baalbek and Terbol and the Tripoli Special Economic Zone (TSEZ), for a total of US\$ 75 million. The WBG assesses that the TSEZ project in Cycle 1 (2018-2021), with the costing on the low side. Meanwhile, the industrial parks project in the CIP constitute phase 2 of an ongoing project and as such is intended to be implemented over the second Cycle covering the period 2022-2026. The estimated cost is seemingly high for the industrial parks phase 2.

A. General Comments

172. Lebanon's industrial sector has lagged, both on regional and global comparative basis (WB, 2016).²¹ The country's macro-economic structure, being heavily dependent on tourism and real estate at the expense of industry and agriculture, renders the economy vulnerable to political and economic shocks. In this context, Lebanon needs to focus on its industrial potential and provide solutions to the numerous constraints hindering its industrial establishments from functioning at their full capacity.

173. As it stands, the structural composition of the Lebanese economy is not conducive for job creation, even during robust growth periods. While real estate and construction exert a sizable influence on the aggregate economy, combining to account for an average of 17.1 percent of real GDP between 2004 and 2011, they employed an average of only 7.8 percent of the Lebanese workforce between 2004 and 2009 (WB, 2016). The real estate sector, in particular, has accounted for anywhere between 50 and 70 percent of total gross fixed capital formation since 1997. The disconnect between robust activity in real estate and job creation also holds true for the region at large; a World Bank study²² showed that while the real estate sector accounted for around 33 percent of Foreign Direct Investment (FDI) inflows to the Middle East and North Africa (MENA) region, it contributed to only 5 percent of job creation

between 2003 and 2011. In comparison and over the same period, manufacturing accounted for a much lesser 20 percent of FDI inflows to MENA but generated 55 percent of the employment.

174. One possibility to strengthen the industrial sector is via spatial industrial policies, most notably, industrial parks and special economic zones (SEZs), which support increased investment and competitiveness in the industrial sector. In theory, these would offer the potential to address both growth and macroeconomic vulnerability issues linked to weak industrial sector performance. To the degree that they attract new investments—particularly from foreign enterprises—that introduce new technologies to the domestic economy, industrial parks and SEZs support growth both through an accumulation of physical capital as well as an increase in total factor productivity (TFP) (Wang, 2013).²³ An indicator of productivity is the share of medium- to high-technology in manufacturing; currently, for Lebanon this share is about half of the OECD average, and ranks about half-way in the region (WB, 2016). Moreover, the shift in economic activity toward the more resilient industrial sector, will help establish a more diversified economy, enabling Lebanon to better absorb the shocks to which the country is frequently exposed. This can be maximized by focusing on Lebanon's comparative advantages in high value-added sectors (a knowledge economy).

175. Industrial parks and SEZs may also offer a strategy to mitigate macroeconomic vulnerabilities via a number of channels. As with the potential productivity gains noted above, exploiting these gains depends on the degree to which these instruments facilitate competitiveness and (especially) attract Foreign Direct Investment (FDI).

- In raising net exports, the current account deficit can be lowered.
- An increase in FDI will strengthen the balance of payments, providing exchange rate support.

21 World Bank (2016), Lebanon Economic Monitor: A GeoEconomy of Risks and Rewards, Spring 2016.

22 World Bank (2011), Investing for Growth and Jobs, Middle East and North Africa region, pages 30-34.

23 Jin Wang, (2013), The economic impact of Special Economic Zones: Evidence from Chinese municipalities, Journal of development economics, v. 101, March 2013, p. 133-147.

- c. In decreasing dependence on short-term inflows, FDI helps lower the risk of a sudden stop.

176. Special care should be allotted when fiscal incentives are offered, which evidence suggest are ineffective as a source of differentiation, with the end result merely an increasing ‘race to the bottom’ and transfer of rents from governments to private investors. In general, fiscal incentives should not be excessive and should be well targeted and consistent with the national economic/industrial strategy that the government is pursuing. This is so as to not cause distortions whereby the incentives lead to relocation of existing businesses to the zones rather than the establishment of new business. Moreover, these fiscal incentives are bound to cause additional transfer of resources from the more taxed, less privileged majority to the less-taxed elite.

B. Ensuring Success

177. Industrial parks and SEZs should be seen within the context of spatial industrial policy—i.e. as instruments that aim to improve the environment for investment and productivity in specific locations. What all these zone types feature in common is the spatial concentration of firms and infrastructure. As further features are added to this core infrastructure, usually to overcome constraints to the operating environment for businesses, the nature of the offering widens (Table 17). The features include the following:

- **Concentration of infrastructure:** The foundation of all zones is the provision of industrial infrastructure that is targeted to a defined spatial area. The rationale is three-fold. First, the spatial targeting allows governments to concentrate scarce resources where they can have the biggest impact. Second, it allows for more effective planning of industrial development, reducing negative externalities of congestion and environmental damage that may result from less planning development. Finally, they offer the potential for exploiting positive spillovers that results from co-location

of firms, particularly within related and supporting industries (i.e. clusters), including the development of deep, specialized markets for labor and suppliers, as well as information spillovers and coordination potential.

- **Specialized infrastructure and services:** Industrial parks often offer specialized services to firms operating in the facilities, particularly where zones are designed to support specific clusters. Such services typically involve access to public or ‘club goods’ which benefit all firms but which no individual firm (particularly Small and Medium Enterprises) would invest in alone. These may include common effluent treatment facilities, common processing facilities, design and testing facilities, etc. More generalized services like engineering, human resources (labor recruiting and training) and financial services, may also be offered particularly in zones catering to foreign investors and/or where such services are unavailable from local markets surrounding the zones.
- **Regulatory facilitation:** While many basic industrial parks stop at the provision of infrastructure, many zones aim to facilitate the process of legal and regulatory compliance of tenants, including business registration and licensing, obtaining construction and operating permits, and any required permits related to labor (e.g. visas and work permits). Such facilitation is most common in SEZ arrangements, where the target tenant is most often a foreign investor with less experience in managing the domestic regulatory environment.
- **Regulatory regime simplification:** Beyond facilitation, many zones seek to simplify and liberalize regulatory requirements for investors to reduce the regulatory burden of business establishment and operation. Simplification usually involves establishing a separate set of rules—a separate regulatory regime—for the zone, and thus, is almost never part of a standard industrial park arrangement.
- **Specialized customs, trade and financial regimes:** In order to facilitate trade, particularly in zones targeting

Table 17: Summary of feature for Industrial Parks and SEZs' infrastructure.

	Industrial Parks	SEZs
Basic infrastructure	✓	✓
Specialized infrastr. and services	✓	✓
Regulatory facilitation	✓	✓
Regulatory simplification		✓
Specialized trade regime		✓
Multi-user (indust./commer./resid.)		✓
Independent governance		✓

Note: dark gray shading indicates standard feature; light gray indicates a feature that exists in some cases

export-oriented industry, it is common for zone programs to establish a specialized customs regime. Such a regime typically involves an environment allowing for duty-free imports of inputs to the production process and no restrictions (quotas, duties, etc) on exports. It may also allow firms to operate outside normal rules with regard to operating with foreign currency, currency convertibility and repatriation of funds if these are unduly restrictive. Note that some aspects of the customs regime can be implemented in a basic industrial park environment if the country has a customs law that allows, for example, for the operation of bonded warehouses and duty-drawback mechanisms.

- **Specialized fiscal and labor regimes:** Common to almost all SEZs but not typically part of a basic industrial park program is a fiscal regime that provides a number of incentives designed to attract investment. This may include reduction or elimination of corporate taxes, VAT, and other taxes (e.g. local taxes); it may also reduce or eliminate labor contributions like pensions and social security and provide subsidies for training and capital investment. Such a specialized fiscal regime is not typically part of a basic industrial park program, although investors in an industrial park may qualify for many of the incentives if they are available more broadly through the national investment regime. Finally, SEZs are sometimes established with a specialized regime for labor, allowing investors to benefit from access from

reduced regulatory protections²⁴ and/or greater flexibility in bringing in foreign workers.

- 178. The popularity of such regimes over recent decades stems from the catalytic role they have in supporting the growth of manufacturing exports in a number of places.** Most notably, the success of China, and before that East Asia neighbors Taiwan, Korea, and Japan, was based in part on using industrial parks to support the development of export-oriented manufacturing. In Latin America, the Dominican Republic, El Salvador, and Honduras, among others, used *zonas francas* ("free zones", generally using the Economic Processing Zone model) to take advantage of preferential access to the U.S. market. Their zones generated large-scale manufacturing sectors in economies previously reliant on agricultural commodities. In the Middle East and North Africa, Economic Processing Zone (EPZ) and SEZ regimes played an important role in catalyzing export-oriented diversification in countries like the Arab Republic of Egypt, Morocco, and the United Arab Emirates.
- 179. Despite these successes, however, it is important to keep in mind that these spatial arrangements, at least those involving specialized regimes like EPZs and SEZs, have had a mixed record**

²⁴ While specialized labor regimes were common in traditional EPZs of the 1970s-1990s they are increasingly less common today, where zones are expected to adopt not just ILO-compliant labor regimes but to ensure that the regimes in the EPZs and SEZs do not differ substantively from those in the domestic economy.

overall. Many programs have suffered from controversial land acquisition and allocation practices, delayed investment and failure to attract sufficient investments, resulting in many zones being considered ‘white elephants’ (WB, 2016). Moreover, given the large investments in taxpayer money going into these programs, the payoff in terms of investment, job creation and exports has too often failed to materialize.

180. The following are lessons learnt from international experiences with industrial parks and SEZs:

- a. **Comparative advantage:** Successful industrial parks often cater to specific industrial clusters. Where zone initiatives have been successful is where the emphasis has been on: i) industrial clusters that are in line with national or regional comparative advantage; and ii) where they are clearly linked to a wider national industrial strategy. Examples include Bangladesh and many of the EPZs in Central America, which built infrastructure to support a specific global positioning in the apparel sector. By contrast, less successful zone initiatives in many parts of Africa have ended up catering to a diverse set of capital intensive sectors that mainly served to facilitate imports.
- b. **Strategic locations:** Industrial parks and SEZs are most successful when they take advantage of strategic locations. This typically includes metropolitan regions and key trade-related infrastructure, but can also include locations with good access to immobile, strategic (typically, natural) resources. By contrast, many countries that have launched programs have attempted to use part of the program as a regional development tool, to attract investment into ‘lagging’ or peripheral regions. Many countries, including Turkey, Thailand, Russia, South Africa and Bangladesh among others, have found that while industrial parks flourished in favorable locations, they languished in less favorable ones, even when additional fiscal incentives were on offer.
- c. **Critical infrastructure:** While most zones offer infrastructure that is of higher quality than is typically available in the country, in some cases (for example in some zones in Nigeria, Ghana, and Senegal) infrastructure inside the zones is a mirror of the worst experiences in the country more widely, including water shortages, electricity failures, and health, safety and environmental shortfalls. Thus, zone development must prioritize critical supporting infrastructure—both inside and outside the industrial park—along with or even ahead of the development of land and factory shells. This is what is referred to in China’s industrial parks as “five connections and a levelling”—power, water, telecommunications, roads, and ports, along with basic land preparation—as the fundamental infrastructural responsibility of governments in industrial zone development.
- d. **Regulatory simplification:** Successful industrial parks not only offer facilitation through ‘one-stop’ investor services but actually simplify the requirements and procedures involved in business start-up, construction and operations. This can be done through legal mechanisms that actually change the regulatory requirements of firms operating within zones, as is the case in many SEZ programs. But it can also be achieved through concerted efforts to improve procedures within each relevant agency. In this regard, one can look to reforms in Chinese industrial parks to see an example of successfully married process reengineering and automation of business compliance burdens, resulting in significant reductions in administrative processing times—see, for example, the ‘Digital Beijing Initiative’ of the Zhongguancun e-Park in Beijing.
- e. **Role of the private sector:** While many successful industrial zone programs have been led by government, commercial orientation and private sector participation in development and operation of successful zones is often critical to ensure speed

of implementation, financial risk-sharing, technical expertise and appropriate market signals. Fiscal, customs, and other incentives must be designed to attract the right kind of productivity-enhancing investments rather than short-term or rent-seeking investments.

- f. **Regulatory autonomy and coordination:** While a number of regulatory models exist for overseeing industrial parks, the most effective approach tends to be establishing a single national regulatory authority (rather than individual zone authorities) that is independent from an individual ministry. This provides autonomy and minimizes political interference. Examples here include the industrial zone and free zone regimes in Thailand, Costa Rica, Dominican Republic, Jordan, Philippines and Korea. It is also critical, in cases where more than one zone program exists, to ensure a formal mechanism exists to facilitate coordination.
- g. **Local economy linkages:** Particularly in SEZs and industrial zone initiatives targeting foreign investors, active efforts should be made to promote linkages between zone-based firms and the domestic economy, including suppliers and labor markets. Initiatives may include local supplier development, job training, and technology transfer programs. Regulatory improvements in the local economy outside the zones can also be critical to enable local firms to respond to the new opportunities offered by zone investments.

The Ministry of Industry was granted the right to establish industrial zones in 2005 through Decree #14283. Specifically, this decree grants the right for Ministry of Industry (MoI) to establish and operate public “industrial centers” throughout Lebanon.

182. **According to data from the Ministry of Industry, 131 industrial zones have been established either by decree or a decision from a Higher Council.** Nearly half are in Beirut and Mount Lebanon, close to one-quarter are in North Lebanon, and the remainder are split between Bekaa and South Lebanon & Nabatiyeh. The existing zones are largely linked to location requirements defined around environment impacts of industries. Industries in Lebanon are split into five categories, in decreasing order of environment impact. Factories in the first 3 categories can only operate in industrial zones while those in the fourth and fifth categories can operate in industrial zones only if the zones pertain to their relative industry.
183. **Apart from suitable industrial classifications, MoI and Central Government do not provide industrial zones with infrastructure, connections to grid or any further benefits beyond those mentioned in the decrees.** However, local municipalities might contribute to this regard based on availability of financial resources and healthy relationships with operating industrialists. As a result, while some industrial zones are endowed with quality facilities, many of the existing zones lack basic infrastructure, including environmental infrastructure (e.g. water and wastewater) to support industrial development. Moreover, most industrial development continues to take place outside of the zones.

184. **Beyond these industrial zones, four private industrial zones have been established²⁵:**
 - Shakadif Industrial City – located in the South near Jezzine
 - Tebna Industrial City – located in the South near Sidon, Tyre and Nabatieh.
 - Dmoul Industrial Park – located in the South in Ansar
 - Terbol Industrial City – located in Bekaa in Terbol

C. Industrial Parks and SEZs in Lebanon

181. **Lebanon has had a program of industrial zones for several decades.** An industrial zone strategy was developed by Investment Development Authority of Lebanon (IDAL) in 1995, which aimed to support industrial development and a more balanced geographical distribution of industrial investment through the provision of specific infrastructure and financial incentives.

25 IDAL 2014, Lebanon’s Private Industrial Zones.

185. In addition to industrial parks, Lebanon has also established special economic zones, or ‘free economic zones’, which operate under the office of the Prime Minister. The first of these, the Logistics Free Zone, is based in Beirut and operated by the Port of Beirut. This zone, established by law in 1995 but launched only in 2007, is designed under a ‘freezone’ model, which aims to attract foreign and domestic investment in trade-related activities, including transport, transit, and logistics. It offers 100 percent foreign ownership and customs exemptions.

D. CIP Industrial Parks and TSEZ

186. The Ministry of Industry, in partnership with the United Nations Industrial Development Organization (UNIDO), has launched an initiative to establish industrial parks in three locations, all in the Bekaa Valley: Alkaa, Baalbek and Terbol. IN1 of the CIP constitutes the second phase of the project. The ministry’s objective is to help improve the competitiveness of Lebanon’s industries via a number of mechanisms. To begin with, Mol will provide the necessary infrastructure (waste treatment, road linkages, power generation etc.) that has so far been lacking in its classifications of industrial zones. The environmental setting is particularly disposed to benefit, considering current operating conditions for industry. Additionally, in recognition that land prices are a principal impediment to competitiveness of industry in Lebanon, this initiative aims to offer long-term leasing of municipal lands at very low prices to industries that relocate to the zones. Aforementioned space and scale externalities will also be in effect.

187. Only a cabinet decree adopting the masterplan is needed as the project was designed to be implementable within the present legal and instructional framework. The Council for Development and Reconstruction is the implementing agency. It is yet unclear whether there will be a single entity overseeing all industrial parks, or each park will have its own entity. In any case, the governing entity(ies) is

(are) expected to include a private operator, the Ministry of Industry and the local municipality(ies). At US\$ 50 million, the second phase of the project, the complete cost of which is estimated to be US\$ 120 million, seems overpriced.

188. For exports to be a real opportunity for the industrial parks, vital conditions include Syria peace and reconstruction, or at the very least, a secured access through Syria to other countries in the region (i.e. Jordan, Iraq). Relative to Lebanon’s geography, Alkaa, Baalbek and Terbol are remote, distant from the coast and close to the Syrian border. They are, however, connected via a main highway that links to Beirut, allowing them access to the focal domestic market.

189. Terbol has a well-established private agribusiness that is interested in expanding into the proposed industrial zone. It is not clear if the same is true of Baalbek and Alkaa. While some relocation of businesses is reasonable, a main objective should be new businesses and investment. For that, private sector interest and participation are key.

190. In 2008, the government passed a law for the establishment of the Tripoli Special Economic Zone (TSEZ), to be established on a 50-hectare site adjacent to the Port of Tripoli in the North of the country. The TSEZ Law also includes the establishment of Tripoli Special Economic Zone Authority as a distinct, autonomous legal entity (reporting to the Prime Minister’s office) for oversight of the TSEZ program. The TSEZ is expected to go beyond the trading and logistics role of the Logistics Free Zone in Beirut and develop an industrial park to attract foreign and domestic investments on manufacturing and related activities. A thorough market demand and financial/economic feasibility study has been completed indicating potential job creation, tenant demand and PPP investor interest. Overall cost of fully developed TSEZ is US\$ 250-270 million. It is estimated that circa US\$ 210-240 million of this can be mobilized from the private sector with the government providing an initial investment of circa US\$ 30-40 million in the construction of onsite infrastructure.

191. The TSEZ includes an extremely generous set of fiscal incentives²⁶ in addition to labor regulatory incentives. Indeed, the provision of a 100 percent corporate tax exemption without time limits and a 100 percent exemption of withheld taxes and social security contributions for employees are almost unheard of these days, even within the SEZ environment. As such, the potential exists that TSEZ businesses will gain a significant competitive edge over non-TSEZ businesses, to the extent that the former enters an existing market. As a result, the incentive for businesses would be in favor of relocation to the zone at the expense of expansion. It is thus imperative for access to the zone to be awarded to expanding businesses. Specifically, due to the location, the export market should be a key target, and sufficient measures/conditions can be undertaken by the authorities to ensure that access is offered to exporting businesses.

192. Other reform measures include:

- Passage of Regulatory and Licensing Regime;
- Approval of TSEZ Masterplan and PPP Business Plan; and
- Recruitment of Private Sector Developer/Operator.

Table 18: Special Economic Zones Projects

Ref	Project	Estimated Cost (MUS\$)	Land Expropr. (MUS\$)
IN1	Infrastructure for industrial cities, Alkaa, Baalbek, and Terbol – Phase 2	50	None
IN2	Infrastructure for the Tripoli Special Economic Zone	25	None

26 This includes (i) 100 percent customs exemption on imported raw material; (ii) duty free export of finished goods; (iii) duty free import of construction material, equipment, office machinery and spare parts; (iv) 100 percent exemption on VAT and excise tax for goods and services destined for exports; (v) 100 percent exemption on corporate profit tax (provided that not less than 50 percent of the workforce is Lebanese and the value of fixed assets or capital is greater than USD 300,000); (vi) 100 percent exemption on withheld tax on salaries for employees of tenants and on social security contributions; (vii) 10 percent exemption on building permit fees and built property tax; and (viii) 100 percent exemptions on shares and bonds issued by companies within TSEZ.

Annex A

Guidance Note for the CIP Assessment Framework

Strategic Assessment

	Score
1- In Your View, Is the Project a Strategic Priority for the Sector?	<input type="text"/>
Resounding yes	Y
"Good to have" but not a priority	E
No	N
I don't know/don't have enough information	D

	Score
1e- How Likely is it that The Project Will Contribute to Increasing Exports	<input type="text"/>
Very likely	Y
Not likely	N
I don't know/don't have enough information	D

	Score
1b- How Likely is it that the Project Will Alleviate Significant Supply	<input type="text"/>
Very likely	Y
Not likely	N
Not relevant	L
I don't know/don't have enough information	D

	Score
2- Does the Project Belong to an Official Sector Strategy/Plan?	<input type="text"/>
Yes	Y
No	N
I don't know/don't have enough information	D

	Score
1c- How Likely is it that The Project Will Help Reduce The Cost Structure	<input type="text"/>
Very likely	Y
Not likely	N
Not relevant	L
I don't know/don't have enough information	D

	Score
3- Is the Project an Appropriate Technical Solution to the Challenge Identified?	<input type="text"/>
Yes	Y
No	N
I don't know/don't have enough information	D

	Score
1d- How Likely is it that The Project Will Help Attract a Significant	<input type="text"/>
Very likely	Y
Not likely	N
I don't know/don't have enough information	D

	Score
4- The Project Can and Should be 100% Financed by the Private Sector	<input type="text"/>
Yes, the institutional and policy environment are supportive	Y
Yes, "in principle" but the institutional/policy environment needs changes first	E
No, for any reason	N
I don't know/don't have enough information	D

Assessment for Growth, Employment and Inclusion

5- Timing of Potential Growth Impact of Completed Project	Score
Less than 12 months from initiation	3
In 13 to 36 months from initiation	2
In more than 36 months from initiation	1
I don't know/don't have enough information	D

6- Sustainability of Growth Impact of Completed Project	Score
Highly sustainable	3
Moderately sustainable	2
Not likely to be sustainable or will require significant public resources	1
I don't know/don't have enough information	D

7- Inclusivity of Growth of Completed Project	Score
Project targets poor women	3
Project targets the poor in general	2
None of the above	1
I don't know/don't have enough information	D

8- "Good Job" Potential of Completed Project	Score
Contributes <u>significantly</u> to creating high productivity (or high skill) jobs	3
Contributes <u>moderately</u> to creating high productivity (or high skill) jobs	2
Contributes <u>marginally</u> to creating high productivity (or high skill) jobs	1
I don't know/don't have enough information	D

9- Employment Creation of Completed Project	Score
Generates a large number of jobs	3
Generates a moderate number of jobs	2
Generates a low number of jobs	1
I don't know/don't have enough information	D

10- In Your Judgement, Is Government's Estimation of Labor-Hours Generated by Project:	Score
CIP under-estimates labor hours generated, i.e. CIP number is too low?	3
CIP reasonably estimates labor hours generated, i.e. CIP number is about right?	2
CIP over-estimates labor hours generated, i.e. CIP number is too high?	1
I don't know/don't have enough information	D

Feasibility Assessment

11- Affordability of Project		Score
Private financing with guarantees/ contingent liabilities	3	<input type="text"/>
Public concessional financing - some concessional financing required	2	
Public, market based financing	1	
I don't know/don't have enough information	D	

13- In Your Judgment, The Project Belongs to Which Implementing Period?		Score
2018 - 2021	1	<input type="text"/>
2022 – 2025	2	
2026 - 2030	3	
I don't know/don't have enough information	D	

12- In Your Judgment, Readiness to Implement (is Project Shovel Ready?)		Score
0-6 months for shovel readiness	3	<input type="text"/>
6-18 months for shovel readiness	2	
18+ months for shovel readiness	1	
I don't know/don't have enough information	D	

14- Does the Potential Implementing Agency have the Necessary Capacity		Score
Yes	Y	<input type="text"/>
No	N	
I don't know/don't have enough information	D	

Reform Needs Assessment

15- Reform Complement		Score
No reforms needed	3	<input type="text"/>
Only cabinet decrees needed	2	
Parliamentary legislation needed	1	
I don't know/don't have enough information	D	

17- Please Specify Top 3 Reform Priorities Needed in Order for the Project to be Successful	
1-	
2-	
3-	

16- Reform Timeline		Score
Reforms to be front ended		<input type="text"/>
Reforms to proceed with implementation	2	
Reforms to be post- implementation	1	
I don't know/don't have enough information	D	

STRATEGIC ASSESSMENT

1. In Your View, Is the Project a Strategic Priority for the Sector?

- *Guiding question:* based on your experience of the information provided, does the proposed project address a priority deficiency in infrastructure or public service delivery for the sector?
- **If Resounding Yes**, please *rate Y*.
- **If “good to have, but not a high priority”**, please *rate E*
- **If No**, please *rate N*.
- **If you don’t know**, then please *rate D*.

1b. How Likely is it that the Project Will Alleviate Bottlenecks Significantly in the Sector or Industry?

- *Guiding question:* Supply bottlenecks are considered as the absence of infrastructure (hard or soft) that prevent production from taking place or scaling up. Supply bottlenecks could be absence of electricity, of road connections, of irrigation services, of small or substandard certification services (for exports), etc.
- **If Very likely**, please *rate Y*.
- **If Not likely**, please *rate N*
- **If Not relevant**, please *rate L*.
- **If you don’t know**, then please *rate D*.

1c. How Likely is it that the Project Will Help Reduce the Cost Structure Significantly in the Sector or Industry?

- a. *Guiding question:* For the reduction in cost structure, please look at the reduction of inefficiencies; perhaps a road will help reduce transportation costs or travel time; or new irrigation system will reduce water losses; private generator charges will be reduced; private tuition feed will be reduced, etc.
- **If Very likely**, please *rate Y*.
- **If Not likely**, please *rate N*
- **If Not relevant**, please *rate L*.
- **If you don’t know**, then please *rate D*.

1d. How Likely is it that The Project Will Help Attract a Significant Amount of FDI in the Sector Concerned or in Upstream or Downstream Sectors?

- **If Very likely**, please *rate Y*.
- **If Not likely**, please *rate N*
- **If you don’t know**, then please *rate D*.

1e. How Likely is it that the Project Contribute to Increasing Exports?

- **If Very likely**, please *rate Y*.
- **If Not likely**, please *rate N*
- **If you don’t know**, then please *rate D*.

2. Does the Project Belong to an Official Sector Strategy/Plan?

- *Guiding question:* Is the project part of a strategy/pan for the sector which has received official national (i.e. governmental, parliamentary, *but not just ministerial*) or subnational (municipal) endorsement?
- **If Yes**, please *rate Y*.
- **If No**, then please *rate N*.
- **If I don’t know**, then please *rate D*.

3. Is the Project an Appropriate Technical Solution to the Challenge Identified?

- *Guiding question:* Is the proposed technical solution appropriate to the problem identified given the challenge, capacities of agencies, and indebtedness of Lebanon, i.e., the envisaged technology or approach is neither too advanced, too complicated, nor over-specified, or is the selected option too expensive?

- » For example, while a metro system does address a priority deficiency (traffic congestion), it might not be the most appropriate technical solution, considering Lebanon's resources.
 - **If Yes**, please *rate Y*.
 - **If No**, please *rate N*.
 - **If I don't know**, then please *rate D*.
4. The Project Can and/or Should be 100% Financed by the Private Sector.
- **If Yes given today's policy and institutional environment**, please *rate Y*.
 - **If Yes "in principle", but changes to today's policy and institutional environment are necessary**, please *rate E*.
 - **If No for any reason**, then please *rate N*.
 - **If I don't know**, then please *rate D*.

ASSESSMENT FOR GROWTH, EMPLOYMENT AND INCLUSION

5. Timing of Potential Growth Impact, After Completion of the Project
- Please estimate time horizon for potential growth impact.
 - **If In less than 12 months from project initiation** (short-term impact on growth), then please *rate 3*.
 - » For example, potential benefits from an SME subsidy scheme may kick in during implementation or shortly thereafter.
 - **If In 13 to 36 months from project initiation** (medium-term impact on growth), then please *rate 2*.
 - » For example, if you are convinced that this would constitute a financially profitable investment (ie a demand driven expansion in port).
 - **If In more than 36 months from project initiation** (long-term impact on growth), then please *rate 1*.
 - » For example, if you think this is an investment that would help increase Lebanon's competitiveness/growth potential in the years to come (such as a tertiary education project)
 - **If you don't know**, then please *rate D*.
6. Sustainability of Growth Impact, After Completion of the Project
- **If highly sustainable**, then please *rate 3*.
 - » If you are convinced that this would constitute an investment with long-term economic and social returns.
 - **If moderately sustainable**, then please *rate 2*.
 - » If you are convinced that this would constitute an investment with only short- to medium-term economic and social returns.
 - **If not likely to be sustainable or will require significant public resources**, then please *rate 1*.
 - » For example, if you think that this investment will not generate economic and social returns beyond the short-term and requires significant public resources.
 - **If you don't know**, then please *rate D*.
7. Inclusivity of Growth Impact, of the Completed Project
- **If Project targets poor women**, then please *rate 3*.
 - **If Project targets the poor in general**, then please *rate 2*.
 - **If None of the above**, then please *rate 1*.
 - **If You don't know**, then please *rate D*.
8. "Good Job" Potential, of the Completed Project
- *Guidance*: Kindly focus on the quality of jobs generated (there is a separate question regarding the quantity of jobs created further down).

- If Project contributes **significantly** to creating high productivity (or high skill) jobs, then please *rate 3*.
- If Project contributes **moderately** to creating high productivity (or high skill) jobs, then please *rate 2*.
- If Project contributes **marginally** to creating high productivity (or high skill) jobs, then please *rate 1*.
- If You don't know, then please *rate D*.

9. Employment Creation by Completed Project

- Guidance: This question is not about the number of jobs created during implementation. Rather, like the previous question, it asks about the quantity of jobs that may be created after the project is implemented. Clearly, the question is quite subjective.
- If Project generates a large number of jobs, then please *rate 3*.
- If Project generates a moderate number of jobs, then please *rate 2*.
- If Project generates a low number of jobs, then please *rate 1*.
- If You don't know, then please *rate D*.

10. In Your Judgement, Is Government's Estimation of Labor-Hours Generated by Project:

- If the estimated employment generated during implementation are **UNDER ESTIMATED** by the project file (column entitled Generated Employment – Millions of labor-Days) please *rate 3*.
- If the estimated employment generated during implementation are **REASONABLY ESTIMATED** by the project file (column entitled Generated Employment – Millions of labor-Days) please *rate 2*.
- If the estimated employment generated during implementation are **OVER ESTIMATED** by the project file (column entitled Generated Employment – Millions of labor-Days) please *rate 1*.
- If you don't know, then please *rate D*.

FEASIBILITY ASSESSMENT

11. Affordability of Project

- If **Private financing with guarantees/ contingent liabilities**, then please *rate 3*.
 - » If project can realistically be privately financed with implicit or explicit state guarantees. Implicit state guarantees imply contingent liabilities.
- If **Public concessional financing**, then please *rate 2*.
 - » If project cannot be privately financed and needs public financing, but it is realistic to expect concessional financing. For example, a project that benefits both host and refugees communities can qualify for the Global Concessional Financing Facility (GCFF).
- If **Public, market based financing**, then please *rate 1*.
 - » If project cannot be privately financed and needs public financing, but it is not likely to be concessional financing.
 - » If I don't know, then please *rate D*.

12. In your Judgement, Readiness to Implement (Is Project Shovel Ready?)

- If **0-6 months for shovel (i.e. short term implementation period)**, then please *rate 3*.
- If **6-18 months for shovel (i.e. medium term implementation period)**, then please *rate 2*.
- If **18+ months for shovel (i.e. long term implementation period)**, then please *rate 1*.
- If I don't know, then please *rate D*.

13. In your Judgment, the Project Belongs to Which Implementing Period?

- If **2018 - 2021**, then please *rate 1*.
- If **2022 - 2025**, then please *rate 2*.
- If **2026 - 2030**, then please *rate 3*.
- If I don't know, then please *rate D*.

14. Does the Potential Implementing Agency have the Necessary Capacity (Staffing, Skills and Institutional Structure)?
- **If Yes**, then please *rate Y*.
 - **If No**, then please *rate N*.
 - **If I don't know**, then please *rate D*.

REFORM NEEDS ASSESSMENT

15. Reform Complement
- **If No reforms needed**, then please *rate 3*.
 - **If Only cabinet decrees needed**, then please *rate 2*.
 - **If Parliamentary legislation needed**, then please *rate 1*.
 - **If I don't know**, then please *rate D*.
16. Reform Timeline
- **If Reforms to be front ended**, then please *rate 3*.
 - **If Reforms to proceed with implementation**, then please *rate 2*.
 - **If Reforms to be post-implementation**, then please *rate 1*.
 - **If I don't know**, then please *rate D*.
17. Please Specify the Top Three Reforms Needed for the Project to be Successful:
- 1.
 - 2.
 - 3.

Annex B

WBG – GoL Comparator Tables of the Implementation Cycles for Projects

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Electricity

Electricity Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
GENER (1) New power plants on Medium (2) Term - IPP - 500MW - Zahrani	E1.1	1	1	600	0
GENER (1) New power plants on Medium (2) Term - IPP - 500MW - Salaata	E1.2	1	2	600	0
GENER Jiye Power plant-500MW	E2	2	2	500	0
GENER Salaata 2 Plant on Longer Term- 500MW	E3	2	3	600	0
GENER Hydro power plants (331.5 MW)	E4	1	1	264	0
GENER Geothermal Plant of 1.3 MW	E5	1	1	5	0
Transmission Master Plan Project (High Importance)	E6	1	1	224	0
Transmission Master Plan Project including Infrastructure at KSARA Substation (Mid	E7	2	2	254	0
Transmission LV Network Upgrade	E8	1	1	0	0
Transmission LV Network Upgrade	E8.1	1	1	20	0
Transmission LV Network Upgrade	E8.2	1	1	6	0
Transmission LV Network Upgrade	E8.3	1	1	6	0
Transmission LV Network Upgrade	E8.4	1	1	6	0
Transmission LV Network Upgrade	E8.5	1	1	6	0
Transmission LV Network Upgrade	E8.6	1	1	6	0
Transmission LV Network Upgrade	E8.7	1	1	6	0
Distribution DSP	E9.1	1	1	263	0
Distribution DSP	E9.2	2	1	88	0
Fuel Sourcing Gas Pipeline	E10	1	D	140	0
GENER Zouk Power plant - 500MW	FE1	3	3	500	0
GENER New Power plants on Longer Term - 1000 MW	FE2	3	3	1200	0
GENER Hydro power plants (141.5 MW)	FE3	3	2	113	0
GENER Geothermal Plant of 15MW	FE5	3	1	53	0
Transmission Master Plant Project (Low Importance)	FE6	3	3	135	0

Electricity Sector Cost	Invest. Cost		Land Exp.		Total	
	GoL	WB *	GoL	WB	GoL	WB
Total	5592		0		5592	
Cycle 1	2151	1551	0	0	2151	1551
Cycle 2	1441	1466	0	0	1441	1466
Cycle 3	2000	2435	0	0	2000	2435

* WB cost across the 3 cycles is US\$ 5452 mil, different by US\$ 140 mil, due to the unknown phase assigned to project E10

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Water (1/4)

Water Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
Transmission line from Janneh Dam to Greater Beirut	W3A	1	1	60	0
Water Supply system rehabilitation in Beirut area	W7	1	1	100	0
Expropriations for Beirut Storage Tanks	W8A	1	1	0	35
Water treatment plant and water supply system for Beqaata Dam	W4	1	1	35	2
Water supply system for Chabrouh Dam	W6A	1	1	40	2
Water Supply Project for Mount Lebanon	W8	1	1	100	0
Qobayat Water Supply Systems - Phase 1	W9	1	1	51	1
Halba Water Supply Systems - Phase 1	W10	1	1	92	1
Water supply system for El Bared Dam DAM	W6	2	2	20	1
Qobayat Water Supply Systems - Phase 2	W9-1	2	2	5	1
Halba Water Supply Systems - Phase 2	W10-1	2	2	7	1
Qobayat Water Supply Systems - Phase 3	W9-2	3	3	9	0
Halba Water Supply Systems - Phase 3	W10-2	3	3	13	0
Water supply system for Mseilha Dam	W1	1	1	15	5
Water supply system for Balaa Lake	W2	1	1	11	3
Danniyeh Water Supply Systems - Phase 1	W11	1	1	27	1
Minieh Water Supply Systems - Phase 1	W12	1	1	12	1
Tripoli Water Supply Systems - Phase 1	W13	1	1	25	1
Zgharta Water Supply Systems - Phase 1	W14	1	1	24	1
Bcharre Water Supply Systems - Phase 1	W15	1	1	10	0
Koura Water Supply Systems - Phase 1	W16	1	1	55	1
Batroun Water Supply Systems - Phase 1	W17	1	1	25	1
Danniyeh Water Supply Systems - Phase 2	W11-1	2	2	7	1
Minieh Water Supply Systems - Phase 2	W12-1	2	2	1	0
Tripoli Water Supply Systems - Phase 2	W13-1	2	2	6	1
Zgharta Water Supply Systems - Phase 2	W14-1	2	2	9	1
Bcharre Water Supply Systems - Phase 2	W15-1	2	2	4	1
Koura Water Supply Systems - Phase 2	W16-1	2	2	10	1
Batroun Water Supply Systems - Phase 2	W17-1	2	2	3	1
Danniyeh Water Supply Systems - Phase 3	W11-2	3	3	3	1
Minieh Water Supply Systems - Phase 3	W12-2	3	3	2	1
Tripoli Water Supply Systems - Phase 3	W13-2	3	3	12	1
Zgharta Water Supply Systems - Phase 3	W14-2	3	3	7	1
Bcharre Water Supply Systems - Phase 3	W15-2	3	3	3	0
Koura Water Supply Systems - Phase 3	W16-2	3	3	12	1
Batroun Water Supply Systems - Phase 3	W17-2	3	3	3	1
Yahfoufa Water Supply System	W24	1	1	12	1
Qaa El Rim System	W25	1	1	28	1
Qab Eilas, Jdita and Zebdol Water Supply systems	W26	1	1	9	1
Aanjar Water Supply System	W27	1	1	24	1

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Water (2/4)

Water Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
Chamsine Water Supply System	W28	1	1	6	1
Ain El Zarqa Part 1 Water Supply System	W29	1	1	16	1
Ain El Zarqa Part 2 Water Supply System	W30	1	1	6	1
Yahfoufa Water Supply System	W24-1	2	2	10	1
Qaa El Rim System	W25-1	2	2	4	1
Qab Eilas, Jdita and Zebdol Water Supply systems	W26-1	2	2	6	1
Aanjar Water Supply System	W27-1	2	2	5	1
Chamsine Water Supply System	W28-1	2	2	3	1
Ain El Zarqa Part 1 Water Supply System	W29-1	2	2	7	1
Ain El Zarqa Part 2 Water Supply System	W30-1	2	2	2	0
Yahfoufa Water Supply System	W24-2	3	3	2	1
Qaa El Rim System	W25-2	3	3	4	0
Qab Elias, Jdita and Zebdol Water Supply Systems	W26-2	3	3	1	0
Aanjar Water Supply System	W27-2	3	3	2	0
Chamsine Water Supply System	W28-2	3	3	2	0
Ain El Zarqa Part 1 Water Supply System	W29-2	3	3	2	0
Ain El Zarqa Part 2 Water Supply System	W30-2	3	3	2	0
Ain El Hawr -Ras El Meil Systems	W18	1	1	18	1
Ein El Zarqa	W19	1	1	8	1
Laboue Water Supply System	W20	1	1	17	1
Ouyoun Orghosh Water Supply System	W21	1	1	9	1
Younine, Maqne and Nahle water supply systems	W22	1	1	5	1
Yamoune Water Supply Systems	W23	1	1	50	1
Ain El Hawr - Ras El Meil Systems	W18-1	2	2	16	1
Ein El Zarqa	W19-1	2	2	6	1
Laboue Water Supply System	W20-1	2	2	15	1
Ouyoun Orghosh Water Supply System	W21-1	2	2	9	1
Younine, Maqne and Nahle water supply systems	W22-1	2	2	4	1
Yamoune Water Supply System	W23-1	2	2	25	1
Ain El Hawr -Ras El Meil Systems	W18-2	3	3	2	1
Ein El Zarqa	W19-2	3	3	1	1
Laboue Water Supply System	W20-2	3	3	1	1
Ouyoun Orghosh Water Supply System	W21-2	3	3	3	1
Younine, Maqne and Nahle water supply systems	W22-2	3	3	1	1
Yamoune Water Supply System	W23-2	3	3	7	1
Nabatiye Water Supply System	W35	1	1	26	1
Bint-Jbeil Water Supply System	W36	1	1	63	1
Marjaayoun & Hasbaya Water Supply Systems	W37	1	1	24	1
Nabatiye Water Supply System	W35-1	2	2	20	1
Bint-Jbeil Water Supply System	W36-1	2	2	1	0

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Water (3/4)

Water Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
Marjaayoun and Hasbaya Water Supply Systems	W37-1	2	2	1	0
Water Supply System for Choumariye Dam	W6B	3	3	70	0
Nabatiye Water Supply System	W35-2	3	3	15	1
Bint-Jbeil Water Supply System	W36-2	3	3	1	1
Marjaayoun&Hasbaya Water Supply Systems	W37-2	3	3	1	1
Saida Water Supply Systems	W31	1	1	25	1
Zahrani Water Supply System	W32	1	1	39	1
Jezzine Water Supply System	W33	1	1	6	1
Sour Water Supply System	W34	1	1	42	1
Saida Water Supply Systems	W31-1	2	2	8	1
Zahrani Water Supply System	W32-1	2	2	1	1
Jezzine Water Supply System	W33-1	2	2	5	1
Sour Water Supply System	W34-1	2	2	2	0
Saida Water Supply Systems	W31-2	3	3	8	1
Zahrani Water Supply System	W32-2	3	3	1	1
Jezzine Water Supply System	W33-2	3	3	4	1
Sour Water Supply System	W34-2	3	3	2	1
Remaining Expropriations for Besri Dam	W41A	1	1	0	15
Remaining Expropriations for Chabrouh Dam	W41B	1	1	0	20
Damour Dam	W50	3	3	150	30
Ain Dara -Azounieh Dam	W39	1	1	110	5
Maaser Chouf Dam	W40	1	2	85	2
El Bared Dam	W38	1	2	300	0
Noura el Tahta Dam	W45	3	3	80	10
Atolbe Dam	W46	3	3	18	2
Qarqaf Dam	W55	3	3	81	0
Additional funds for Mseilha Dam	W38A	1	2	15	0
Additional funds for Balaa Dam	W38B	1	2	7	0
Repairing works for Brissa Dam	W38C	1	2	15	0
Dar Baachtar Dam	W47	3	3	75	10
IaaL Dam	W48	3	3	70	10
Rahwe Dam	W49	3	3	25	10
Wadi Chich Dam	W53	3	3	20	0
Barhashah Dam	W43	1	2	40	1
Assi Phase 1 Dam	W41	1	2	65	0
Assi Phase 2 Dam	W42	2	3	300	40
Ibl es Saqi Dam	W44	2	3	200	100
Khardali Dam	W51	3	3	435	200
Kfarsir Dam	W52	3	3	45	15
Choumariye Dam	W56	3	3	60	20

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Water (4/4)

Water Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
Hydropower plant for Janneh Dam	W3	1	2	100	0
Massa Dam-IRRIGATION	W53	3	3	60	4
IRRIGATION - Younine Dam	W54	3	3	65	10
IRRIGATION - Litani - Conveyor 800 Phase 2 -Irrigation and Water Networks	W5	1	2	300	0

Water Sector Cost	Invest. Cost		Land Exp.		Total	
	GoL	WB	GoL	WB	GoL	WB
Total	4250		595		4845	
Cycle 1	2151	1224	106	103	2257	1327
Cycle 2	722	1149	156	19	878	1168
Cycle 3	1377	1877	333	473	1710	2350

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Waste Water (1/3)

Waste Water Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
Beirut wastewater systems	WW10	1	1	50	0
Extension and upgrading of collection networks within Ghadir wastewater treatment plant	WW13	2	1	25	0
Completion of wastewater networks within Jbeil WWTP Service Area	WW07	2	2	40	0
Networks for Halat and Nahr Ibrahim	WW08	2	2	9	0
Expansion of sewer networks for coastal Chouf	WW14	2	2	40	0
Completion of wastewater networks within El Aabde WWTP Service Area	WW04	2	2	60	1
Completion of missing networks and collectors within Tripoli WWTP Service Area	WW1	1	N/A	0	0
1-km Link of the main collector Bohsas - Maarad	WW01a	1	1	5	0
Qalamoun villages WW networks	WW01b	1	1	5	0
Wastewater networks in the coastal and central villages and towns of Koura - Phase II	WW01c	1	1	20	3
Zgharta Wastewater networks	WW01d	1	1	30	0
Wastewater networks for coastal part of Minie - Danniye District	WW01e	1	1	19	0
Wastewater networks for villages in the center of Danniye	WW01f	2	2	20	0
Madfoun System	WW79	3	3	20	0
Expansion of Wastewater collection networks of West Bekaa - Phase 2	WW76	1	1	27	0
Timnine Part II Wastewater System	WW73	2	2	66	5
Jbaa Wastewater System	WW61	1	1	8	0
Nabatiye Part II (East Nabatiye) Wastewater System	WW63	2	2	50	0
Completion of wastewater networks in Saida	WW16	1	1	25	0
Sour Phase III	WW17	1	1	50	0
Halloussieh Wastewater System	WW58	2	2	6	2
Srifa Wastewater System	WW59	2	2	8	0
Small Scale Municipal Projects	WW78	1	1	250	0
Ghadir Flood Protection	WW11	1	1	30	0
Upgrade of Daoura wastewater treatment plant	WW09	1	1	300	0
Upgrade of Ghadir wastewater treatment plant	WW12	2	2	200	0
Jbeil WWTP Extension	WW18c	2	2	20	0
Nabi Younes - WWTP Expansion	WW18d	2	2	20	0
Chekka WWTP Expansion	WW18a	2	2	20	0
Batroun WWTP Expansion	WW18b	2	2	20	0
Expansion of Nabatiye Wastewater Treatment Plant	WW64	2	3	20	0
Upgrade of Saida wastewater treatment plant	WW15	2	3	55	0
Qartaba, Aqoura and Afqa wastewater systems	WW22	1	1	20	5
Additional Funds for Hrajel Wastewater System	WW31	1	1	20	2
Additional funds for Jeita system	WW34	1	1	15	0
Sfailah and Qortada (Zandouqa) Wastewater system	WW40	1	1	68	7
Bmaryam - Btibyat Wastewater system	WW41	1	1	28	5
Kfartai Wastewater system	WW35	2	2	7	0
Aachqout WWTP	WW32	2	2	21	0
Bchille system	WW23	3	3	5	0

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Waste Water (2/3)

Waste Water Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
Aabaydat system	WW24	3	3	11	0
Tartij Small Local Station	WW25	3	3	2	0
Aalmaat system	WW26	3	3	12	0
Jaj WWTP	WW27	3	3	7	0
Lehfed Haqel Small Stations	WW28	3	3	2	0
Behdaydat WWTP	WW29	3	3	4	0
Yahchouch WWTP	WW30	3	3	8	0
Bqaatouta WWTP	WW33	3	3	1	0
Abou Mizane WWTP	WW36	3	3	3	0
Zabbougha WWTP	WW37	3	3	1	0
Es Souane WWTP	WW38	3	3	21	0
Mtein WWTP	WW39	3	3	6	0
Hlaliye Wastewater System	WW42	3	3	45	3
Shwite Wastewater System	WW43	3	3	13	2
Qtale Wastewater System	WW44	3	3	13	3
Arsoun Wastewater System	WW45	3	3	9	1
Aley Zone 7	WW47	1	1	66	3
Aley Zone 8 (Rechmaiya) and Zone 9 (Fouara/ Ouadi Es Sitt) Systems	WW48	1	1	83	4
WWTP1 Wastewater System	WW53	3	3	0	0
WWTP2 Wastewater System	WW54	3	3	8	0
Kfar Matta Small Local Station Wastewater System	WW57	3	3	1	0
Additional Funds for Meshmesh (Fnaydeq) Wastewater System	WW19	1	1	8	1
Qabaaait system and remaining small systems in Minie - Danniye	WW03	2	2	62	0
Construction of small scale Wastewater Systems in Akkar Wetlands	WW06	2	2	25	5
Construction of wastewater systems for Akkar El Atika, Qobaiyat and surrounding villages	WW05	3	3	25	0
Kfar Hay system	WW20b	1	1	25	0
Chebtine system	WW20c	1	1	15	0
Bakhoun WWTP and networks	WW02	2	2	25	0
Ajed Ebrine system	WW20a	3	3	5	0
Small systems to protect Qadisha Valley	WW21	3	3	50	0
Eastern Zahle Wastewater System	WW74	1	1	45	5
Wastewater Systems for Sohmar, Yohmor, Zilaya and surrounding villages	WW75	2	2	18	0
Wastewater System for Rachaiya villages	WW77	2	2	64	1
Additional funds for Hermel WWTP and Networks	WW69	1	1	27	0
Upgrade of laa (Baalbek) WWTP and additional networks for Baalbek city and surrounding areas	WW72	1	1	11	0
Qaa and Jdaide Wastewater System	WW71	2	2	26	0
Bajjaje Wastewater System	WW70	2	2	40	0
Additional funds for Hasbaiya System	WW65	1	1	28	0
Bint Jbeil Wastewater System	WW68	1	1	32	0
Braiqa Wastewater System	WW62	2	2	26	0

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Waste Water (3/3)

Waste Water Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
Ouadi Slouqi Wastewater System	WW66	2	2	33	0
Nabaa el Tasseh Wastewater System	WW60	2	2	18	0
Deir Mimas Wastewater System	WW67	2	2	6	0

Waste water Sector Cost	Invest. Cost		Land Exp.		Total	
	GoL	WB	GoL	WB	GoL	WB
Total	2626		57		2682	
Cycle 1	1309	1334	35	35	1344	1369
Cycle 2	1047	947	13	13	1061	961
Cycle 3	269	344	9	9	278	353

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Transportation

Transportation Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
Dbaye-Nahr Ibrahim Motorway (A2) - Phase 1	TP1	1	2	247	125
Dbaye-Nahr Ibrahim Motorway (A2) - Phase 2	TP1	2	2	330	166
Dbaye-Nahr Ibrahim Motorway (A2) - Phase 3	TP1	3	3	247	125
Beirut Peripheric - Phase 1	TP2	1	2	232	254
Beirut Peripheric - Phase 2	TP2	2	2	310	338
Beirut Peripheric - Phase 3	TP2	3	3	232	254
Bus Rapid Transit System - Greater Beirut Public Transport Project	TP10	1	1	500	0
Rehabilitation and development of Beirut Rafic Hariri Airport - Phase 1	TP16	1	1	500	0
Pan Arab Highway - Akkar	TP5	1	1	150	50
Beirut-Damascus Highway Completion	TP7	2	2	400	100
Tripoli-Syrian Boarder Railway	TP11	2	2	90	0
Northern Coastal Highway - Beirut Entrance	TP4	2	2	180	0
Service road for Coastal Highway - Phase 2	TP18	2	2	112	202
Service road for Coastal Highway - Phase 1	TP18	1	1	38	68
Touliqiyeh - Ras Baalbak - Syrian Boarder Highway	TP6	1	1	110	55
Upgrading of Road Network in Greater Beirut	TP9	2	2	380	50
Rehabilitation of Roads in Mount Lebanon - Classified and Unclassified (Municipal) Roads	TP8/a	1	1	509	0
Touristic Port in Jounieh	TP12	2	2	62	0
Rehabilitation and Development of Rene Mouawad Airport in Akkar	TP16/a	2	2	100	0
Southern Coastal Highway (Saida Bypass and Sour Link)	TP3	3	3	450	150
Expansion of Saida Port	TP14	3	3	60	0
Touristic Port in Sour	TP15	3	3	30	0
Feasibility Studies for Major Projects	TP19	1	1	25	0
Tripoli Port, Phase 2	TP20	3	2	150	0

Transportation Sector Cost	Invest. Cost		Land Exp.		Total	
	GoL	WB	GoL	WB	GoL	WB
Total	5444		1937		7381	
Cycle 1	2311	1832	552	173	2863	2005
Cycle 2	1964	2593	856	1235	2820	3828
Cycle 3	1169	1019	529	529	1698	1548

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Solid Waste Management

Solid Waste Management Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
Waste to energy facility	SW1.1	1	1	375	0
Waste to energy facility	SW1.2	1	2	375	0
Waste to energy facility	SW1.3	1	2	375	0
Rehabilitation of dumpsites throughout Lebanon	SW2	1	1	100	0
Rural sorting, composting, and sanitary landfills	SW3.1	1	1	88	0
Rural sorting, composting, and sanitary landfills	SW3.2	1	1	88	0

Solid Waste Manag. Sector Cost	Invest. Cost		Lan Exp.		Total	
	GoL	WB	GoL	WB	GoL	WB
Total	1400		0		1400	
Cycle 1	1400	650	0	0	1400	650
Cycle 2	0	750	0	0	0	750
Cycle 3	0	0	0	0	0	0

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Telecommunications

Solid Waste Management Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
(1) Phase 2 - FTT(X) ; (1.a) FTTO: Fiber-To-The Office ; (1.b) FTTH: Fiber-To-The -Home(2) Phase 7 FT	TL1	1	1	100	0
Phase 2 - Core Network and IMS (IP Multimedia Subsystem)	TL2	1	1	90	0
Expansion of international connectivity	TL3	1	1	50	0
Phase 2 Security System	TL4	1	1	60	0
Phase 2 Spectrum Monitoring	TL5	1	1	20	0
National Cloud Platform	TL6	1	1	200	0
Phase 2 IOT, Lora and WiFi Network	TL7	1	1	30	0
GSM Network	TL8	1	1	150	0

Telecommunications Sector Cost	Invest. Cost		Land Exp.		Total	
	GoL	WB	GoL	WB	GoL	WB
Total	700		0		700	
Cycle 1	700	700	0	0	700	700
Cycle 2	0	0	0	0	0	0
Cycle 3	0	0	0	0	0	0

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Culture & Tourism

Culture & Tourism Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
National and Public Libraries	CH1	1&2	2	15	0
Movies (Cinematic and documentaries)	Ch2	1&2	1	7	0
Theater	Ch3	1&2	1	7	0
Music (new branches for the Conservatoire)	Ch4	1&2	2	15	0
Scientific and Educational Centers	Ch5	1&2	1	18	0
Arts Museum	Ch6	1&2	2	7	0
Arts General	Ch7	1&2	1	10	0
Warehouse	Ch8	1&2	2	36	0
Historical cities and buildings	Ch9	1&2	1	50	0
Archaeological sites and surroundings	Ch10	1&2	1	70	0
Museums	Ch11	1&2	1	30	0

Culture & Tourism Sector Cost	Invest. Cost		Lan Exp.		Total	
	GoL	WB	GoL	WB	GoL	WB
Total	264		0		264	
Cycle 1	84	191	0	0	84	191
Cycle 2	180	73	0	0	180	73
Cycle 3	0	0	0	0	0	0

Table 19: WB Assessment of Implementation Cycle in Comparison to GoL - Industry

Industry Projects	CIP code	Cycle		Cost (MUS\$)	
		GoL	WB	Invest.	Land Exp
Infrastructure for 3 industrial cities, Alkaa, Baalbek, and Terbol - Phase 2	IN1	2	2	50	0
Infrastructure for the Tripoli Special Economic Zone	IN2	2	1	25	0

Industry Sector Cost	Invest. Cost		Lan Exp.		Total	
	GoL	WB	GoL	WB	GoL	WB
Total	0		0		0	
Cycle 1	0	25	0	0	0	25
Cycle 2	75	50	0	0	75	50
Cycle 3	0	0	0	0	0	0

الإطار 1: المساواة بين الجنسين وإشراك الشباب في برنامج الاستثمار الرأسمالي

يمكن لبرنامج الاستثمار الرأسمالي أن يؤثر تأثيراً إيجابياً على أوضاع المساواة بين الجنسين وإشراك الشباب في لبنان. وفي ضوء هيمنة الذكور أصحاب المهارات المتدنية على فرص العمل في قطاع الإنشاء، فإن الأثر سيتحقق من خلال القيمة المضافة الناتجة عن مشاريع برنامج الاستثمار الرأسمالي المنجزة، إذا نُفذت بشكل جيد. ويمكن أن يحدث هذا عبر قناتين هما فرص العمل والآثار الاجتماعية والإقتصادية غير المباشرة.

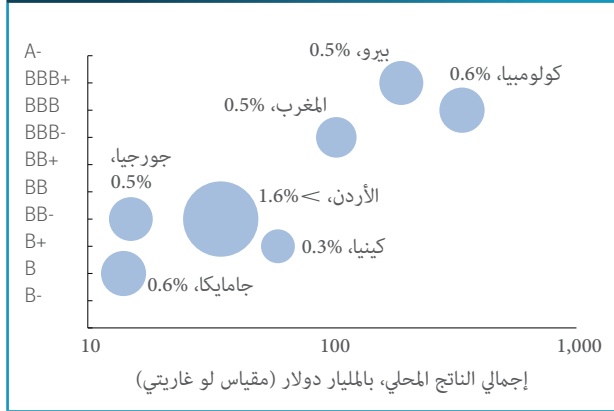
تعد مشاركة المرأة في الأيدي العاملة في لبنان منخفضة جداً، ولاسيما بين النساء في الفئة العمرية 35-45 عاماً. فلا يعمل سوى 22% من النساء اللواتي هن في سن العمل، مقابل 70% للرجال و49.5%¹⁵ للنساء عالمياً. وتتخذ معدلات المشاركة في الأيدي العاملة شكل منحى الجرس (bell-curved) بالنسبة للنساء والرجال على السواء، مع انخفاض المعدلات بالنسبة للشباب. ويبلغ معدل مشاركة الشابات 20%، مقابل 40% للرجال، ويزداد هذا المعدل إلى 40% بالنسبة للنساء، ونحو 90% بالنسبة للرجال بين الأفراد في الفئة العمرية 25-34 عاماً. ومع ذلك، فبينما يتراجع معدل المشاركة في الأيدي العاملة بالنسبة للنساء في الفئة العمرية 35-45 عاماً بشدة عائداً إلى 20%، يظل معدل مشاركة أقرانهن الذكور مرتفعاً جداً عند حوالي 90% قبل أن يتراجع إلى 47% بالنسبة للرجال فوق 45 سنة.

وعلى الصعيد العالمي، تتولى المرأة بشكل رئيسي مسؤولية إدارة المياه والنظافة الصحية على مستوى الأسر والمجتمعات المحلية. علاوة على ذلك، فإن تدني جودة المياه يشكل عواقب صحية سلبية لاسيما بالنسبة للحوامل والمرضعات والأطفال الصغار. وبالنسبة للبنان، أسفر الصراع السوري عن زيادة بنسبة 30% في عدد السكان على مدى سنوات قليلة جداً. وبشكل الإكتظاظ الناتج عن التدفق المستمر للنازحين واللاجئين ضغطاً غير متوقع على البنية التحتية والإمدادات في قطاع المياه، ويزيد في الوقت نفسه خطر الأمراض المنقولة بالمياه وانتشار العدوى. وتعد مشكلة تدني جودة المياه أشد وطأة في المناطق الحضرية منها في المناطق الريفية، حيث يمكن أن يصل التلوث بالبكتيريا إلى 90%. وبقدر ما يساعد برنامج الاستثمار الرأسمالي على تحسين هذه الأوضاع، وبإمكان التنفيذ السليم لمشاريع المياه أن يحقق ذلك، يمكن أن تعود المنافع بالفائدة بشكل غير متناسب على النساء والأطفال.

يعد النقل عاملاً مهماً يساعد المرأة على الحصول على الموارد الإقتصادية والتعليم والصحة وغيرها من العناصر المهمة لتمكين المرأة. ويؤدي تعزيز قدرة المرأة على التنقل إلى تحسين فرص وصولها إلى الفرص الإقتصادية ويسهم في تمكينها اقتصادياً. وتتعرض المرأة لقيود في لبنان بسبب سوء أوضاع شبكة الطرق، ولا تملك بديلاً موثقاً ومأموناً للمركبات الخاصة بسبب الشواغل المتصلة بالسلامة والمضايقات في وسائل النقل العام الحالية. وتعتمد النساء الأقل دخلاً حالياً على أزواجهن لتلبية احتياجاتهن إلى النقل (سيارة واحدة لكل أسرة معيشية في العادة) أو يضطرن إلى استخدام وسائل النقل العام الحالية غير الآمنة. وتعد السلامة من القيود الرئيسية التي سلطت النساء عليها الضوء خلال المشاورات، وستستفيد النساء من تنفيذ مشاريع البنية التحتية في قطاع النقل من خلال تحسين الربط وخفض تكاليف المواصلات والنهوض بالسلامة على الطرق. أضف إلى ذلك أن إنشاء نظام نقل عام موثوق وميسور التكلفة و آمن سيمكّن المرأة من التنقل للحصول على مستويات أعلى من التعليم والوظائف والأسواق.

تتبوأ المرأة مكانة مهمة في قطاع السياحة، حيث تشير تقديرات منظمة السياحة العالمية التابعة للأمم المتحدة إلى أن الشركات التي تقودها النساء في قطاع السياحة تكاد تبلغ ضعف مثيلاتها في أي قطاع آخر. علاوة على ذلك، فإن النساء يشكلن 70% من الأيدي العاملة في قطاع السياحة، ويتركز في مجالات الإقامة والمطاعم والحرف اليدوية. كما ترعى الصناعات المعرفية والإبداعية أيضاً المواهب الشابة، حيث توفر بديلاً ضرورياً للهجرة؛ وتُظهر الدراسات التي أجراها الاتحاد الأوروبي أن 40% من العاملين في هذه الصناعات تقل أعمارهم عن 35 سنة، مقارنة بما نسبته 35% بالنسبة للإقتصاد إجمالاً.

الشكل 13: حجم ديون تمويل مشاريع البنية التحتية، المتوسط 2013-2017 (% من إجمالي الناتج المحلي)

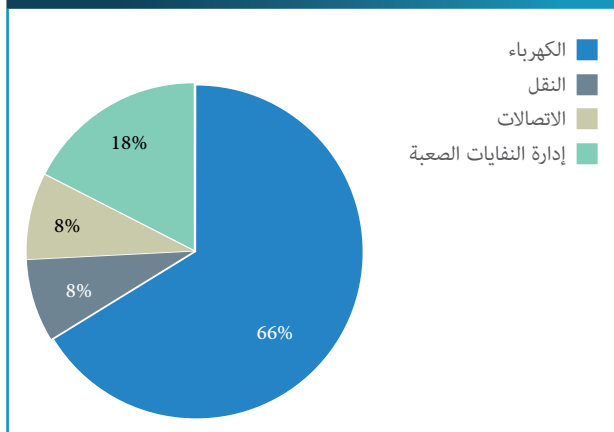


المصدر: تقييم خبراء البنك الدولي.

مشاركة الدولة لاجتذاب الإستثمار والتمويل التجاريين في البنية التحتية، حيث تجد البلدان في كثير من الأحيان ضرورة لتنفيذ برامج تيسير محددة بالتوازي مع سياسات مؤاتية أوسع نطاقاً على مستوى القطاع ومشاركة بين القطاعات.

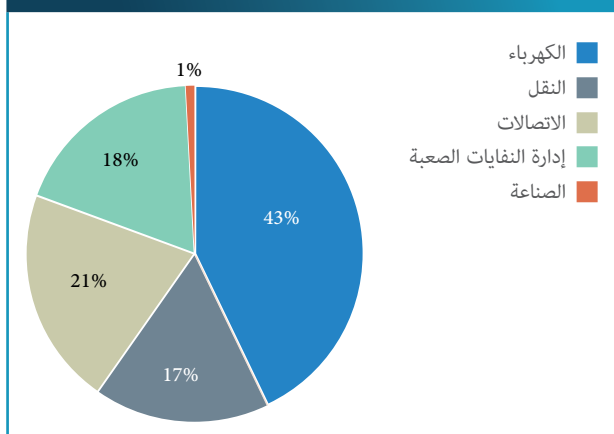
54. لهذا السبب، يمكن أن تنظر السلطات الوطنية في إنشاء صندوق لتمويل مشاريع البنية التحتية في لبنان بدعم من المانحين الدوليين. وسيلزم إجراء تقييمات مفصلة من جانب مستشاري الحكومة للمعاملات لتحديد المبالغ المطلوبة بشكل أدق لدعم تمويل مشاريع برنامج الإستثمار الرأسمالي التجارية، والأثر المضاعف لهذه المرافق. ومن حيث الحجم، فإن متوسط الأثر المضاعف للتمويل المقدم من المانحين على الإستثمار التجاري والتمويل قد يتراوح بين 4 و5 مرات، مما يعني أن كل دولار يُستثمر في مثل هذا البرنامج من أموال المانحين أو الأموال العامة يمكن أن يستقطب 4 أو 5 دولارات من الإستثمارات التجارية في البنية التحتية.

الشكل 10: حصص القطاعات من المشاريع التي يمولها القطاع الخاص بشكل كامل في جميع دورات برنامج الاستثمار الرأسمالي.



المصدر: تقييم خبراء البنك الدولي.

الشكل 11: حصص القطاعات من المشاريع التي يمولها القطاع الخاص بشكل كامل في الدورة 1.

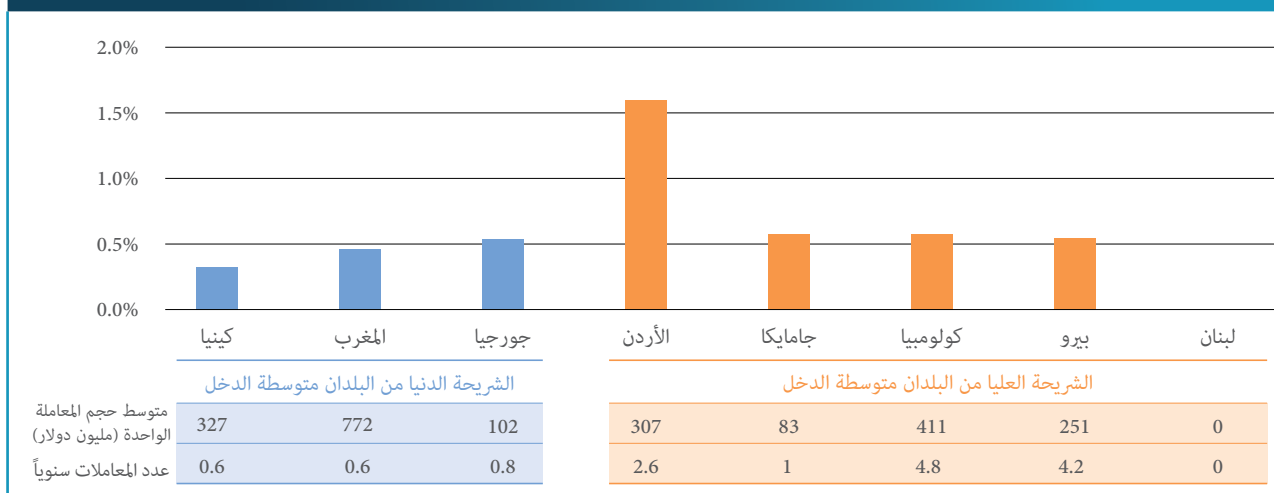


المصدر: تقييم خبراء البنك الدولي.

المتعثرة. وعلى الرغم من استعداد البنوك اللبنانية لتمويل برنامج الاستثمار الرأسمالي، لا شك أن هذه القيود ستقف حجر عثرة مستقبلاً. ومع أن أسواق رأس المال تعد حديثة النشأة على نحو لا يمكنها في الأجلين القصير والمتوسط من القيام بدور في تمويل البرنامج، فإن إمكاناتها على المدى الأبعد قوية ومن شأن إحراز تقدم على هذه الجبهة أن يبعث بإشارة إيجابية إلى المستثمرين الدوليين.

53. قد تحتاج المشاريع ذات الأولوية التي ترتفع معدلات عائدها الاجتماعي والاقتصادي لكن تنخفض معدلات عائدها المالي إلى دعم مالي من الدولة لجعلها مجدية من الناحية التجارية وجذابة لمستثمري القطاع الخاص. وعلى الرغم من أن البنية التحتية التجارية تشمل مشاريع تنتمي بالكامل إلى القطاع الخاص، نجد على أرض الواقع أن معظم استثمارات القطاع الخاص في البنية التحتية تنطوي على شكل أو آخر من أشكال ترتيبات الشراكة بين القطاعين العام والخاص. فمن ناحية، يمكن تمويل الاستثمارات في قطاعات الاتصالات والمطارات وتوليد الكهرباء بالكامل من القطاع الخاص على الرغم من أن بعضها (منتجو الكهرباء المستقلون وخدمات الإنترنت) قد تنشأ عنه التزامات محتملة كبيرة على الدولة. ومن ناحية أخرى، نجد أنه في مشاريع البنى التحتية الأخرى (لا سيما في قطاعي مياه الشرب والنقل الحضري)، كثيراً ما تكون رسوم المستخدمين أقل بكثير من تكلفة رأس المال. وبالنسبة لهذه الفئة الأخيرة ذات المعدلات العالية من العائد الاجتماعي والاقتصادي، كثيراً ما ينطوي الأمر على مبالغ كبيرة وآفاق استثمار طويلة وعائدات مالية منخفضة نسبياً وهيكلية معقدة. نتيجة لذلك، فلابد من

الشكل 12: حجم تمويل مشاريع البنية التحتية في بلدان مختارة



المصدر: تقييم خبراء البنك الدولي.

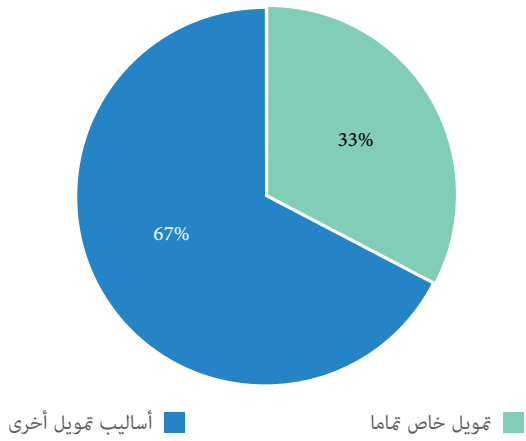
بنسبة 18% (18%)، ثم الاتصالات بنسبة 8% (21%) وأيضاً النقل بنسبة 8% (17%) (الشكل 10، الشكل 11).

50. من المهم أن نضع في الاعتبار أن التقييم الخاص بالتمويل تم على أساس كل مشروع على حدة و «من حيث المبدأ». وعلى هذا النحو، ينبغي اعتباره هدفاً يُسعى إلى تحقيقه. ويشير تحليل مقارن في ما بين البلدان بشأن تمويل البنية التحتية بالدين الخاص إلى أحجام تتراوح بين 0.5 و1.5% من إجمالي الناتج المحلي (الشكل 12، الشكل 13). ويُترجم هذا إلى ما بين 250 مليون دولار و750 مليون دولار سنوياً بالنسبة للبنان. وللتعرف على إجمالي التمويل الخاص للمشاريع، نضيف ما متوسطه 25% من حقوق الملكية، لنصل إلى ما بين 333 مليون دولار و1000 مليون دولار في السنة كتمويل خاص للبنية التحتية.

51. وفيما يتعلق بالتمويل العام، يمكن أن يكون البرنامج العالمي لتسهيلات التمويل الميسر مصدراً لتمويل برنامج الاستثمار الرأسمالي. ومن بين جميع مصادر التمويل، تتيح المساعدة الإنمائية الرسمية المقدمة من المؤسسات الإنمائية الثنائية والمتعددة الأطراف الميسرة الشروط الأكثر ملاءمة (أطول آجال استحقاق، أدنى أسعار فائدة، وشروط أبسط). ويعد البرنامج العالمي لتسهيلات التمويل الميسر مرفقاً راسخاً للتمويل الميسر، ويمكنه أن ينفذ بفعالية برامج تلبي احتياجات لبنان الإنمائية طويلة الأمد، وأن يساعد في الوقت نفسه على تخفيف الأثر الواقع على اللاجئين.

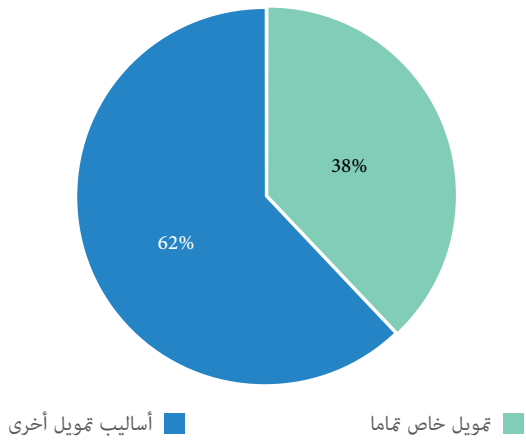
52. ونظراً لمحدودية المساحة أمام لبنان في الحصول على قروض سيادية بسبب ارتفاع المديونية والتزامات خدمة الدين الكبيرة قياساً على إجمالي الناتج المحلي (وقياساً على الإيرادات الحكومية)، فقد ترغب السلطات اللبنانية في تعظيم حجم الاستثمار والتمويل التجاريين في مجال البنية التحتية. ففي مثل هذه المشاريع، تستند عائدات رأس المال وخدمة الدين إلى الإيرادات التجارية (المتحصل عليها من العملاء) بدلاً من الميزانية الوطنية (التي يمولها دافعو الضرائب في نهاية المطاف). ويمكن أن تحقق هذه المشاريع أيضاً «أعلى قيمة بأقل تكلفة value for money» من خلال كفاءة توزيعها للحوافز والمخاطر بين أطراف القطاعين العام والخاص. ويساعد هذا على خفض تكلفة دورة حياة المشاريع وتحسين جودة الخدمة. وتتجاوز احتياجات برنامج الاستثمار الرأسمالي القدرات المالية الحالية بكثير، وسيطلب تحقيقها حشد التمويل الخاص. ويملك الجهاز المصرفي قدرة محدودة تُعزى بالأساس إلى التنظيم التحوطي، حيث ترتفع نسب كفاية رأس المال وتزايد القروض

الشكل 7: التمويل الخاص في برنامج الاستثمار الرأسمالي في جميع دوراته



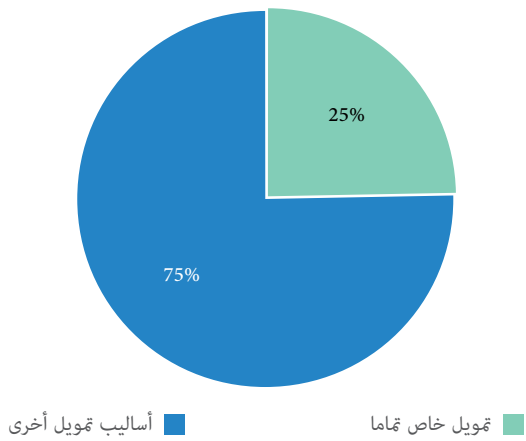
المصدر: تقييم خبراء البنك الدولي.

الشكل 8: التمويل الخاص في برنامج الاستثمار الرأسمالي في الدورة 1.



المصدر: تقييم خبراء البنك الدولي.

الشكل 9: التمويل الخاص لبرنامج الاستثمار الرأسمالي في الدورة 2.



المصدر: تقييم خبراء البنك الدولي.

• وإضفاء الطابع المؤسسي على الوساطة التجارية بغية تسوية النزاعات التجارية بشكل سريع وفعال من حيث التكلفة من أجل تحرير الموجودات ورأس المال العامل للذين تمس الحاجة إليهما، والحد من أعباء القضايا المتراكمة في المحاكم.

يلعب مصرف لبنان المركزي دوراً حيوياً في القطاع المصرفي، سواء كجهة ناظمة أو كمحفز ائتماني؛ ولمنع الآثار السلبية غير المقصودة على مخاطر الإقتصاد الكلي، يجب أن يكون مصرف لبنان شريكاً كاملاً في ما يتعلق بسياسة الائتمان. وبالتالي، لا بد من الإحتفاظ بسجل الضمانات (المرتبط بقانون الإقراض المضمون) لدى مصرف لبنان؛ لأن معلومات مصرف لبنان بشأن الشروط الائتمانية والمخاطر التحوطية الكلية والجزئية لا يمكن أن تظاهيها أية مؤسسة أخرى.

الشراكات بين القطاعين العام والخاص

47. لا بد من وجود بيئة مؤاتية شفافة ويمكن التنبؤ بها وخاضعة للمساءلة بغية جذب التمويل الخاص للإستثمارات العامة ذات الأولوية. وتتجاوز احتياجات برنامج الإستثمار الرأسمالي قدرة الحكومة المالية إلى حد بعيد، وسيطلب ذلك حشد مختلف مصادر التمويل، بما فيها، بل على رأسها، التمويل الخاص. ولتهيئة البيئة المؤاتية لاجتذاب تدفقات كبيرة من الإستثمارات الخاصة، سيلزم القيام بإصلاحات في عدد من قطاعات البنية التحتية الرئيسية. كما سيتطلب هذا أيضاً من الحكومة تنظيم نفسها بشكل مختلف لإدارة عمليات استثمار ذات طابع إستراتيجي أكبر مع القطاع الخاص. وقد اتخذت الخطوة الأولى في هذا الإتجاه بإقرار قانون تنظيم الشراكة بين القطاعين العام والخاص في سبتمبر/أيلول 2017. ويقرر هذا القانون ترتيبات الحوكمة والترتيبات المؤسسية العامة التي من شأنها أن تبعث بإشارة إلى القطاع الخاص مفادها وجود إجراءات فعالة وشفافة لتحديد مشاريع الشراكة بين القطاعين العام والخاص وتطويرها والتفاوض عليها وشراؤها وتنفيذها ورصدها.

الإصلاح 9:

أن يقوم مجلس الوزراء بإنفاذ قانون تنظيم الشراكة بين القطاعين العام والخاص الجديد من خلال تعزيز القدرة التشغيلية وبالموافقة على اللوائح التنظيمية المتعلقة بالهيكل التنظيمي وهيكل التوظيف، وترتيبات التمويل،

وظائف المجلس الأعلى للخصخصة والشراكة (HCP). وستكفل هذه اللوائح تمكين المجلس الأعلى للخصخصة والشراكة من الوفاء الكامل بالولاية التي أناطها به قانون تنظيم الشراكة بين القطاعين العام والخاص لسنة 2017.

الإصلاح 10:

أن تضع الحكومة اللبنانية - من خلال وزارة المالية - برنامج إستراتيجي لإدارة الإلتزامات المالية العامة والإلتزامات المحتملة. تعد الإلتزامات المالية العامة والإلتزامات الطارئة سمة مشتركة لعقود الشراكة بين القطاعين العام والخاص طويلة الأجل التي تنطوي على توزيع المخاطر في مختلف المشاريع بين القطاعين العام والخاص. ولا يمكن أن تترتب على الإلتزامات المالية العامة والإلتزامات الطارئة هذه آثار مالية كبيرة فحسب، لكن مصداقية الحكومة بوصفها شريكاً يعول عليه في الشراكة بين القطاعين العام والخاص يمكن أن تتقوض بشدة في الأحوال التي لا تدار فيها هذه الإلتزامات بفعالية. وينبغي أن تتضمن هذه الإستراتيجية تفاصيل ما يلزم من ترتيبات مؤسسية ومتطلبات موارد وعمليات لضمان قدرة الحكومة المالية على الوفاء بأي التزامات من هذا القبيل تُستحق خلال فترة عقد الشراكة بين القطاعين العام والخاص.

و. تعظيم التمويل لبرنامج الإستثمار الرأسمالي اللبناني

48. من حيث القيمة، أشار التقييم إلى إمكانية تمويل القطاع الخاص بشكل كامل لحوالي 33% (7462 مليون دولار) من تكاليف مشاريع برنامج الإستثمار الرأسمالي (الدورات 1 و 2 و 3)، وستكون هذه النسبة 38 (2967 مليون دولار) في الدورة 1 (الشكل 7، الشكل 8). سيكون هذا مفيداً للبنان، وذلك في ظل عدم وجود مساحة للإنفاق من المالية العامة لضخ الإستثمارات في مشاريع قابلة للتمويل. ومن المرجح أن تكون الغلبة للتمويل الحكومي الميسر في الدورة 2 (الشكل 9).

49. أشار التقييم إلى مشاريع الكهرباء باعتبارها الأكثر جاذبية للقطاع الخاص. ومن حيث القيمة، تبلغ حصة قطاع الكهرباء من المشاريع التي يمولها القطاع الخاص بشكل كامل 66% (43%) بالنسبة لبرنامج الإستثمار الرأسمالي ككل (الدورة 1)، يليه قطاع النفايات الصلبة

الإصلاح 6:

أن يصادق البرلمان على أحدث قانون منقح للمشتريات العامة. فقانون سنة 1963، الذي يشكل الأساس القانوني للإطار المؤسسي الحالي للمشتريات في لبنان، عفا عليه الزمن، ويتسم بالمركزية المفرطة وعدم الملاءمة مما يؤدي إلى تأخيرات في المشتريات والتنفيذ. ولم يُدرج القانون المنقح للمشتريات، الذي صيغ أصلاً في عام 1990، وقُدِّم في صيغته الأخيرة إلى البرلمان في 12 ديسمبر/كانون الأول 2012، على جدول أعمال «اللجان المشتركة» لمناقشته إلا في 24 فبراير/شباط 2015. غير أنه نظراً لضيق الوقت، لم يشمل الاستعراض إلا جزءاً صغيراً من القانون، وبالتالي لم يصادق بعد.

التجارة

45. لبنان اقتصاد صغير منفتح يتمتع بقطاع تجاري كبير، وسيكون لبيئته التجارية المواتية أثر مباشر وإيجابي على تنافسية الشركات وإيجاد فرص العمل. وبلغ متوسط صادرات لبنان و وارداته من السلع والخدمات 124% من إجمالي الناتج المحلي خلال العقد الماضي. وفي الوقت نفسه، نجد أن الإجراءات الجمركية معروفة بافتقارها إلى الكفاءة، مما يفرض تكاليف إضافية على الشركات. والحقيقة أن مؤشر أداء الخدمات اللوجستية للبنك الدولي لعام 2016 يشير إلى تأخر أداء الجمارك اللبنانية¹⁴ ومن المبادرات الرئيسية على صعيد السياسة دعماً لقطاع التجارة تحديث الإجراءات الجمركية من خلال وضع وتنفيذ الإستراتيجية الجمركية الجديدة. وفي هذا الصدد نقترح ما يلي:

الإصلاح 7:

أن يصادق مجلس الوزراء على الإستراتيجية الجمركية الجديدة التي يجري حالياً وضع صيغتها النهائية والتي ستضمن السمات الرئيسية التالية:

- تبسيط الإجراءات؛
- تحسين إدخال البيانات إلكترونياً؛
- تحديث النظام الحالي القائم على نظام أسيكودا (ASYCUDA) لدعم المدفوعات الإلكترونية؛

- تطوير وحدة تسجيل إلكتروني بحيث تشمل تطوير نافذة إلكترونية موحدة مع التركيز على التنسيق في ما بين جميع الهيئات الحدودية (كوزارة الزراعة ووزارة الصحة ووزارة الدفاع ووزارة الاقتصاد والتجارة ووزارة الصناعة وأي هيئة أخرى معنية)؛
- تدعيم نظام إدارة المخاطر؛
- تطبيق برنامج كامل للمشغلين الإقتصاديين المعتمدين، مما سيسرّع العملية للتجار ذوي المخاطر المنخفضة؛

ممارسة أنشطة الأعمال

46. على الرغم من عدم حدوث إصلاحات كبيرة في أي من المكونات الأساسية التي يتألف منها مجموع نقاط مؤشر ممارسة أنشطة الأعمال منذ عام 2007، هناك مبادرات إصلاحية قيد الإعداد في مجالات رئيسية كتبسيط تنظيم ممارسة أنشطة الأعمال، وتقديم الائتمان للمشاريع الصغيرة والمتوسطة، وتسوية حالات الإعسار. وهذه إصلاحات يمكن تنفيذها عاجلاً بالنظر إلى جاهزيتها حالياً، وهذا بدوره يمكن أن يكون له تأثير كبير على إنشاء مؤسسات الأعمال الصغيرة والمتوسطة والنمو وخلق فرص العمل. فالقيود في هذه المجالات تحد من الإمكانات في مجالات أخرى يحقق فيها لبنان أداء أفضل بكثير كتطور الأعمال والابتكار. ويكتسب هذا أهمية شديدة في ظل توقع مستوى نمو أقوى مدفوعاً من القطاع الخاص كما يقترح برنامج الاستثمار الرأسمالي. وتحقيقاً لهذه الغاية، نقترح الإصلاحات التالية:

الإصلاح 8:

أن يسنّ البرلمان حزمة تشريعات البنية التحتية الائتمانية (الإعسار، مدراء الإعسار، الإقراض المضمون، الوساطة القضائية). وستزيد هذه الحزمة فرص حصول القطاع الخاص في لبنان على التمويل، ولا سيما المشاريع الصغيرة والمتوسطة، والمشاريع الناشئة، والنساء، وذلك من خلال:

- تحديث النظام العام للإعسار لتيسير استعادة القروض السليمة وإعادة هيكلة الشركات التي تتوفر لها مقومات الإستمرار رغم تعثرها، والسماح للشركات التي لا تتوفر لها مقومات الإستمرار البقاء بالخروج بكفاءة وفعالية؛
- وتدعيم حقوق المقرضين في الموجودات المنقولة؛

الساعة. وستظل تكلفة الكهرباء التي توفرها مؤسسة كهرباء لبنان أقل بكثير من تكلفة الكهرباء التي توفرها مولدات القطاع الخاص.

الحوكمة والمؤسسات

42. سئم المستثمرون، شأنهم شأن غيرهم، بدرجة كبيرة من سوء الإدارة وضعف المؤسسات في لبنان، مما يشوه حساباتهم بشأن المخاطر والعائد، فيزيد العائد المتوقع ويقصر آجال الإستحقاق اللازمة للإستثمارات. فالمؤسسات ضعيفة للغاية، ويشوبها عدم الكفاءة والفساد على حد سواء. ويعاني لبنان من شرك حوكمة (governance trap) يتم في إطاره الحفاظ على الإستقرار السياسي من خلال إخضاع الحقوق الوطنية لتوافق الآراء في ما بين زعماء الطوائف المختلفة، وذلك على حساب مؤسسات قوية تركز على المصلحة العامة. ونتيجة لذلك، يحرز لبنان نتائج ضعيفة في العديد من مؤشرات الحوكمة المجمعة. على سبيل المثال يحتل لبنان المرتبة 121 بين 137 بلداً في المدفوعات غير النظامية والرشاوى، والمرتبة 128 في ثقة الجمهور في السياسيين، والمرتبة 130 في كفاءة الإنفاق الحكومي.¹³ بالإضافة إلى ذلك، صنف مؤشر مؤسسة الشفافية الدولية الخاص بمدرجات الفساد لبنان في المرتبة 136 من بين 176 بلداً على مستوى العالم في عام 2016، مما جعل لبنان بين البلدان الخمسين الأكثر فساداً في العالم. ويتطلع مواطنو لبنان إلى حكومتهم لاتخاذ تدابير ملموسة في مكافحة الفساد. وهنا نقترح إجراءين مهمين:

الإصلاح 3:

أن يصدّق مجلس الوزراء على الإستراتيجية الوطنية لمكافحة الفساد التي يعمل مكتب وزير الدولة لشؤون التنمية الإدارية على وضعها حالياً.

الإصلاح 4:

أن تعجّل الحكومة بالإصلاحات لتمكين الانتقال إلى حساب الخزانة الموحد، مما ييسّر كفاءة إدارة ومراقبة الموارد النقدية الحكومية. لإنشاء هيكل موحد للترتيبات المصرفية من خلال حساب خزانة موحد هو من الممارسات الجيدة. وفي إطار هذا الهيكل، يتم تجميع

جميع الأموال الحكومية في حساب واحد، مما يقلل تكاليف الاقتراض ومنح الائتمان ويحسن السياسة المالية للحكومة ويساعد على الحد من فرص الفساد. ولكي يكون حساب الخزانة الموحد فاعلاً، يلزم إرساء أساس قانوني سليم لضمان متانته واستقراره. وستؤدي سياسة حساب الخزانة الموحد إلى الحد من انتشار الحسابات المصرفية التي تديرها الوزارات والإدارات والهيئات. وهذا بدوره سيُشجع على زيادة المساءلة المالية على مستوى القطاع العام.

43. يحتاج لبنان إلى نظم لإدارة الإستثمارات العامة تؤدي وظائفها بشكل جيد على الرغم من القيود العامة على القدرات وتسعى إلى إيجاد مشاريع ملائمة (بدلاً من اتباع «أفضل الممارسات») تستنير بالأولويات الإنمائية في البلاد. وتكتسب الكفاءة في الإنفاق الرأسمالي أهمية متزايدة في مواجهة قيود التمويل العام في لبنان. ويدعو كثيرون إلى تهيئة مساحة للإنفاق من المالية العامة تُعنى صراحة بالحاجة إلى تحسين إدارة الموارد الشحيحة وتعزيز الإستثمار العام في الموجودات المادية، كالبنية التحتية العامة و/أو في مرافق القطاع الاجتماعي (أي الصحة والتعليم وما إلى ذلك) التي تسهم في تحسين رأس المال البشري. غير أنه إذا أريد تنفيذ برنامج الإستثمار الرأسمالي بفعالية، يجب التصدي للتحديات في الوظائف الأساسية بغية المساعدة على الحد من مخاطر تنفيذ المشاريع السيئة أو غير الملائمة، والتجاوزات المتكررة في التكاليف، والتأخيرات في التنفيذ، وضعف نواتج الإستثمار. ومن ثم فاستباقاً لازدياد النفقات الرأسمالية، نوصي بما يلي:

الإصلاح 5:

أن تشرع الحكومة في إصلاحات لنظم إدارة الإستثمارات العامة في لبنان، وذلك بغرض تحسين كفاءة النفقات الرأسمالية.

44. إن تدعيم إجراءات الشراء عنصر أساسي بالنسبة للبنان في إدارة مشاريعه الكبيرة في برنامج الإستثمار الرأسمالي. وقد حظيت المشتريات العامة في لبنان باهتمام كبير مؤخراً، مما أثار جدلاً يتعلق بالشفافية. وعلاوة على ذلك، ما زال ضعف الرقابة على المشتريات العامة يسهم في تشويه العدالة والمنافسة، مما يؤدي إلى إثارة النخبة في اقتناص الفرص الرئيسية في الأسواق.

تدفقات الودائع الواردة إلى القطاع المصرفي. وللتصدي لهذا التخوف، نقترح المبادرة التالية:

الإصلاح 1:

أن تعتمد الحكومة اللبنانية إطاراً مالياً يلتزم بتحقيق ميزان مالي أولي إيجابي على المدى المتوسط كجزء من إستراتيجية لإدارة الدين تهدف إلى خفض نسبة الدين العام إلى إجمالي الناتج المحلي بحيث تكون على مسار أكثر استدامة.

41. في ظل السياسات الحالية، يتفاقم مسار الدين في لبنان مباشرة مع زيادة توليد الكهرباء. ويترتب عن مؤسسة كهرباء لبنان عبئاً هائلاً على المالية العامة للدولة. فقبل اندلاع الصراع السوري، بلغ متوسط التحويلات الحكومية إلى مؤسسة كهرباء لبنان 55% من العجز المالي في لبنان. وبلغت التحويلات ذروتها في عامي 2012 و2013، حيث حولت الحكومة نحو ملياري دولار سنوياً إلى مؤسسة كهرباء لبنان. وبما أن ميزان المالية العامة الكلي يعاني من عجز منذ عام 1992، تكون التحويلات إلى مؤسسة كهرباء لبنان قد مؤلت فعلياً عن طريق الإقتراض. واستناداً إلى وثائق الميزانية السنوية، يقدر خبراء البنك الدولي أن التحويلات الحكومية التراكمية إلى مؤسسة كهرباء لبنان بين عامي 1992 و2013 شكلت نسبة هائلة قدرها 55.4% من إجمالي الناتج المحلي لعام 2013، ونحو 40% من إجمالي الدين العام في لبنان. وهذا يعني أن نسبة الدين إلى إجمالي الناتج المحلي في لبنان كانت لتكون 83% بدلاً من 138% (في عام 2013) لو لم تكن مؤسسة كهرباء لبنان تتكبد خسائر. واستجابة لذلك، نوصي بأن تضع الحكومة سقفا لتحويلاتها إلى مؤسسة كهرباء لبنان.

الإصلاح 2:

أن يصدر مجلس الوزراء مرسوماً ينص على أن أي زيادة في الإمداد بالكهرباء من السعة التوليدية الجديد ستقابلها زيادة متناسبة في متوسط التعرفة بما يكفي للإبقاء على التحويلات الحكومية إلى مؤسسة كهرباء لبنان دون تأثر بالزيادة في سعة التوليد. المهم أن هذا سيرسي أيضاً مبدأ ربط الزيادات في التعرفة بتحسينات الخدمات. فقد ذكر أكثر من نصف المشاركين في الدراسة الإستقصائية لتقييم الأثر الاجتماعي التي أجراها البنك الدولي أنهم سيكونون على استعداد لدفع ضعف ميزانيتهم التي ينفقونها حالياً على الكهرباء التي توفرها مؤسسة كهرباء لبنان مقابل تمتعهم بالكهرباء على مدار

المحلى سوى 1.3 نقطة مئوية خلال الفترة ذاتها، وهي انخفضت بشكل حاد إلى 0.1 منذ عام 2011.¹¹

39. يحتل لبنان المرتبة الثانية عالمياً من حيث نسبة الدين إلى إجمالي الناتج المحلي، مما يفرض احتياجات تمويلية كبيرة على الإقتصاد اللبناني. وتشير التقديرات إلى أن إجمالي الدين العام قد وصل إلى نحو 153% من إجمالي الناتج المحلي بحلول نهاية عام 2017، وهي نسبة لا تفوقها عالمياً إلا اليابان واليونان. وتبلغ خدمة الدين التي تتحملها الحكومة نحو 10% من إجمالي الناتج المحلي سنوياً، مستهلكةً بذلك حوالي نصف الإيرادات المحلية. ونتيجة لذلك، تعاني الحكومة من عجز مزمن وكبير في الموازنة، حيث سجل 9.6% من إجمالي الناتج المحلي في عام 2016. وعلى الصعيد الخارجي، يعاني لبنان من عجز كبير في الميزان التجاري يتسبب في عجز هيكلي كبير في الحساب الجاري، قارب في المتوسط 20% من إجمالي الناتج المحلي منذ عام 2011. وفي عام 2016، بلغ إجمالي الاحتياجات التمويلية للقطاع العام 30% من إجمالي الناتج المحلي، وأما في ما يخص القطاع الخارجي (إجمالي الاحتياجات التمويلية الخارجية) فكانت النسبة 171% من إجمالي الناتج المحلي (صندوق النقد الدولي، 2017).¹² ويأتي هذا كله في سياق يسوده نظام سعر صرف ثابت معمول به منذ عشرين عاماً والذي صار ركيزة أساسية من ركائز الإقتصاد اللبناني. ويستند هذا النظام، إلى حد كبير، على تدفقات العملات الأجنبية الواردة، في الغالب على هيئة ودائع في المصارف التجارية. وتعد أسعار الفائدة المرتفعة انعكاساً لعلاوة المخاطر التي يتعين دفعها في مثل هذا السياق للحفاظ على جاذبية الموجودات اللبنانية. ومع ذلك، فقد تباطأت تدفقات الودائع هذه بشكل حاد منذ عام 2011، مما زاد من عدم اليقين بشأن قدرة الإقتصاد على تلبية احتياجاته التمويلية.

40. من المهم أن يعتمد لبنان إصلاحات مالية كبيرة تُحدث صدمة إيجابية للأسواق والمواطنين وتدل على أن الحكومة اللبنانية في طريقها إلى وضع نسبة الدين إلى إجمالي الناتج المحلي على مسار مستدام. ويمكن أن يتزامن هذا مع زيادة النفقات الرأسمالية المرتبطة ببرنامج الإستثمار الرأسمالي للتعويض عن الآثار الإنكماشية لبرنامج تصحيح أوضاع المالية العامة. في ظل الوضع الراهن، هناك تخوف واسع النطاق بشأن قدرة الحكومة على تلبية احتياجاتها التمويلية في ضوء تباطؤ

11 بلغ متوسط نمو إجمالي الناتج المحلي الحقيقي 1.8% خلال الفترة 2015-2011.

12 صندوق النقد الدولي، المادة الرابعة، يناير/كانون الثاني 2017.

الجدول 4: قائمة موجزة بالإصلاحات الهيكلية المقترحة لبرنامج الاستثمار الرأسمالي

الإصلاحات القطاعية	الإصلاحات الأفقية
<p>الكهرباء</p> <p>1. خطة متعددة السنوات لمؤسسة كهرباء لبنان لتحديد تعرفه استهلاك الكهرباء عند مستوى استرداد التكلفة على مدى فترة انتقالية بالتزامن مع زيادات في السعة التوليدية</p> <p>2. تنفيذ الخطة الإنمائية المعتمدة للإمداد بالغاز الطبيعي</p> <p>المياه والصرف الصحي</p> <p>1. مصادقة البرلمان على قانون المياه</p> <p>2. اللائحة التنفيذية للقانون رقم 221 المتعلقة بوضع الاستقلال الذاتي لمؤسسات المياه</p> <p>3. تعيين الموظفين لتشغيل وصيانة مرافق المياه</p> <p>النقل</p> <p>1. اعتماد إستراتيجية النقل الوطنية</p> <p>2. مراجعة هيكل حوكمة قطاع الطيران المدني</p> <p>3. تحديد الإيرادات والنفقات للقطاع</p> <p>إدارة النفايات الصلبة</p> <p>1. وضع نظام تعرفه لمنتجات النفايات (الأسر المعيشية)</p> <p>2. سياسات لمساندة تنمية القدرات مع الحكومات المحلية من أجل التخطيط والعمليات القطاعية</p> <p>3. تحديد تعرفه إمدادات الطاقة المتجددة (feed-in tariffs) للكهرباء المولدة من مرافق معالجة النفايات على أساس المنافع الاقتصادية طويلة الأمد</p> <p>الاتصالات</p> <p>1. اعتماد رؤية موحدة</p> <p>2. نظام موحد لإصدار التراخيص لمقدمي خدمات البيانات</p> <p>3. إعادة هيكلة قطاعات الاتصالات</p> <p>المناطق الصناعية</p> <p>1. نظام تنظيم وترخيص المنطقة الاقتصادية الخاصة في طرابلس</p>	<p>إطار مالي يلتزم بتحقيق ميزان مالي أولي إيجابي على المدى المتوسط</p> <p>في إطار إستراتيجية لإدارة الديون تهدف إلى خفض نسبة الدين العام إلى إجمالي الناتج المحلي بحيث تكون على مسار أكثر استدامة</p> <p>تعديل تعرفه الكهرباء في ما يخص القدرات التوليدية الجديدة</p> <p>قانون مكافحة الفساد</p> <p>التعجيل بالانتقال إلى حساب الخزينة الموحد</p> <p>إصلاح نظم إدارة الإستثمارات العامة</p> <p>المصادقة على قانون المشتريات العامة</p> <p>إقرار إستراتيجية جمركية جديدة</p> <p>سن حزمة تشريعات للبنية التحتية الإئتمانية</p> <p>اللوائح التنظيمية المتعلقة بالهيكل التنظيمي وهيكل الموظفين، وترتيبات التمويل ووظائف المجلس الأعلى للخصخصة والشراكة</p> <p>خطة إستراتيجية لإدارة الإلتزامات المالية والإلتزامات المحتملة</p>

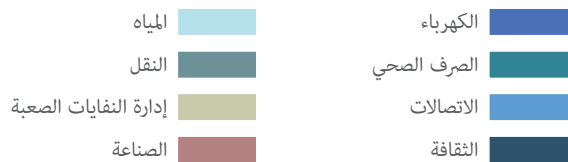
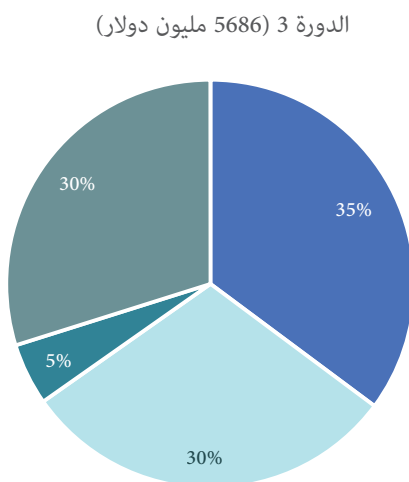
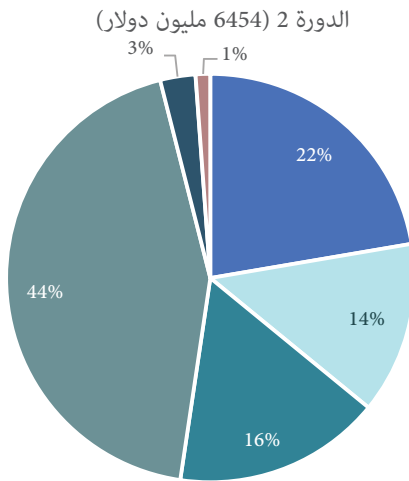
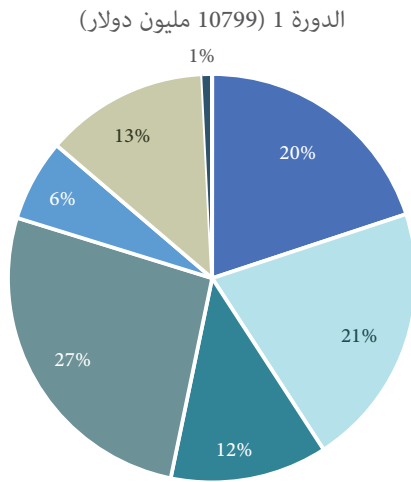
المنتدى الإقتصادي العالمي يصنف بيئة الإقتصاد الكلي في لبنان في المرتبة 133 من أصل 137 بلداً، مع تصنيف الدين الحكومي في المرتبة 135. وقد أدى هذا إلى ضعف الاستثمار، وتسبب في تراجع النمو اللبناني. وبدلاً من ذلك، كان المحرك الرئيسي هو الإستهلاك، حيث ساهم بما معدله 4 نقاط مئوية في نمو إجمالي الناتج المحلي الحقيقي في المتوسط، يعزى 3.3% منها إلى الإستهلاك الخاص، في الفترة 2005-2015.¹⁰ وفي الوقت نفسه، لم تبلغ مساهمة الاستثمار في نمو إجمالي الناتج

10 بلغ متوسط نمو إجمالي الناتج المحلي الحقيقي 4.6% خلال الفترة 2005-2015.

احتواء الضغوط الناتجة عن الدين العام

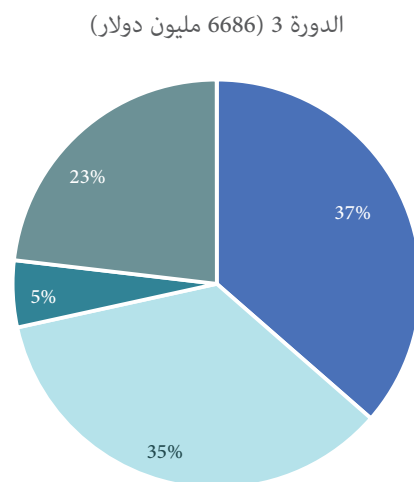
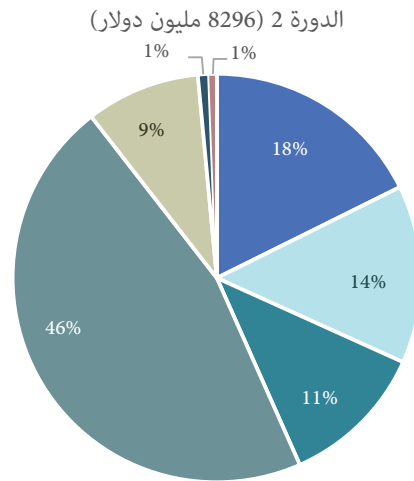
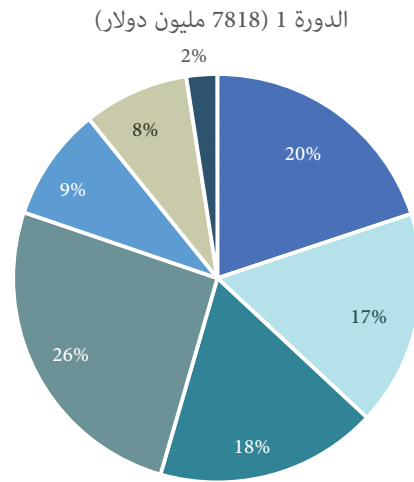
38. أدت الإختلالات الكبيرة في الإقتصاد الكلي في لبنان إلى ارتفاع تكاليف اقتراض الشركات، مما زاد تكلفة رأس المال، وحدّ من القدرة التنافسية، وعرقل الإستثمار. ومنذ عام 2004، بلغ متوسط سعر الفائدة 8.8% على القروض بالليرة اللبنانية و7.5% على القروض بالدولار. ويعد ارتفاع أسعار الفائدة شيئاً حتمياً بالنسبة لاقتصاد يعتمد على التدفقات الرأسمالية الواردة لتمويل العجز الكبير والمستمر في المالية العامة والحساب الجاري. والواقع أن مؤشر التنافسية العالمية 2017-2018 الذي أصدره

الشكل 6: توزيع التكاليف في برنامج الاستثمار
الرأسمالي حسب القطاعات في مختلف
الدورات - الحكومة اللبنانية



المصدر: تقييم خبراء البنك الدولي.

الشكل 5: توزيع التكاليف في برنامج الاستثمار
الرأسمالي حسب القطاعات في مختلف
الدورات - مجموعة البنك الدولي



المصدر: تقييم خبراء البنك الدولي.

ه. العوامل المساعدة لبرنامج الإستثمار الرأسمالي

36. عقب انتخاب رئيس للبلاد في عام 2016 وما تلاه من تشكيل حكومة وحدة أنهت الجمود السياسي الذي طال أمده، أحرز القادة السياسيون تقدماً كبيراً في عام 2017 بالاتفاق على تدابير إصلاح طال انتظارها. والأهم من ذلك أن البرلمان اللبناني أقر في 19 أكتوبر/تشرين الأول ميزانية 2017، لتكون بذلك أول ميزانية رسمية للبنان منذ 12 سنة. ومن الإنجازات الأخرى سن قانون للانتخابات البرلمانية، ممهداً بذلك الطريق أمام الانتخابات البرلمانية في مايو/أيار 2018، وهي الأولى منذ عام 2009، وتعديل سلم رواتب موظفي الخدمة المدنية، وقانون تنظيم الشراكة بين القطاعين العام والخاص. وتبرهن هذه الإنجازات على إمكانية قيام السلطات اللبنانية بمبادرات إصلاحية مهمة عن طريق بناء توافق وطني على الصعيد السياسي.

37. لكن يظل أمراً واقعاً أن من المكونات الرئيسية في أي برنامج استثمار رأسمالي فعال هو اعتماد وتنفيذ برنامج إصلاحات هيكليّة. ويقترح هذا القسم من التقرير قائمة تمثل هذه الإصلاحات التي من شأنها أن تساعد على

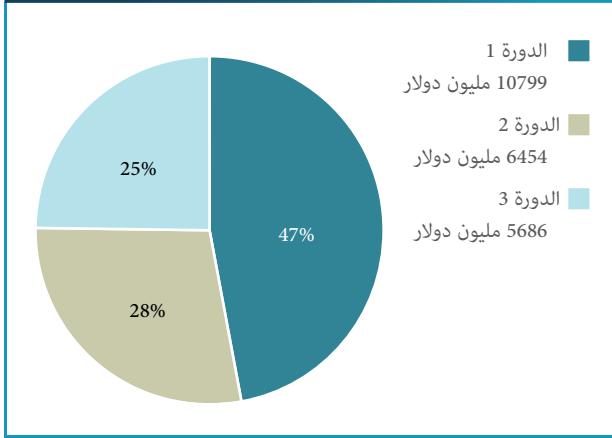
الجدول 3. النسبة المئوية لمشاريع القطاع التي تستوفي معايير الجدوى.

تقييم الجدوى	
المشروع جاهز للإنطلاق في غضون 18-0 شهراً	الجهة المسؤولة عن إدارة التنفيذ تملك القدرات اللازمة
الكهرباء	48*
المياه	I
الصرف الصحي	I
النقل	25
الاتصالات	50**
النفائات الصلبة	50
الثقافة	91
الصناعة	50
	9
	I
	I
	96
	63***
	100
	100
	100

I تعني «غير حاسم»؛ إذ يلزم المزيد من المعلومات لتقييم البيان.
 * 26% من المشاريع تتطلب مزيداً من المعلومات لتقييم البيان.
 ** 13% من المشاريع تتطلب مزيداً من المعلومات لتقييم البيان.
 *** 38% من المشاريع تتطلب مزيداً من المعلومات لتقييم البيان.

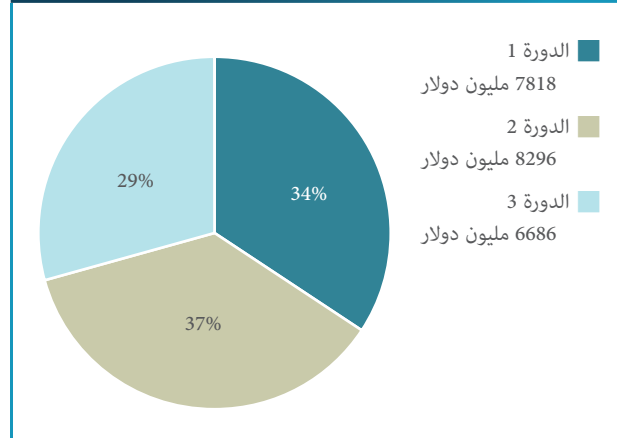
تمكين الدولة من تقديم الخدمات الأساسية وتعزيز بنيتها التحتية بطريقة مستدامة. ونورد على وجه التحديد قائمة بالإصلاحات المشتركة بين القطاعات والتي من شأنها أن: (أ) تساعد على إرساء أسس متينة للإستثمارات السليمة، (ب) تعطي إشارات إيجابية كبيرة وتنبئ عن حسن النية للمستثمرين والمانحين، (ج) يمكن إنجازها في فترة زمنية قصيرة نسبياً شريطة توفر الإرادة السياسية. كما نقترح أيضاً إصلاحات خاصة بقطاعات محددة لا بد منها من أجل النهوض بالقطاعات وإضفاء مزيد من الكفاءة وضمان استدامتها. ونشرح المجموعة الأخيرة من الإصلاحات بمزيد من التفصيل في الأقسام التالية ضمن القطاع ذي الصلة. ويقدم الجدول 4 أدناه قائمة موجزة بالإصلاحات المقترحة.

الشكل 4: توزيع الدورات في برنامج الاستثمار الرأسمالي - الحكومة اللبنانية



المصدر: تقييم خبراء البنك الدولي.

الشكل 3: توزيع الدورات في برنامج الاستثمار الرأسمالي - مجموعة البنك الدولي



المصدر: تقييم خبراء البنك الدولي.

الحاجة الملحة إلى سعة التوليد الإضافية والوقت اللازم على الأرجح لتطوير موقع سلعنا، ينبغي تطوير مواقع أخرى متوفرة بشكل أيسر لضمان إضافة ما لا يقل عن 1000 ميغاواط من السعة التوليدية الجديدة إلى الشبكة في أقرب وقت ممكن. ويقدم المرفق ج مقارنة بين مجموعة البنك الدولي والحكومة اللبنانية لدورات التنفيذ لكل من المشاريع.

35. **التوزيع القطاعي لبرنامج الاستثمار الرأسمالي لكل دورة متماثل بوجه عام عند مقارنة تقييم مجموعة البنك الدولي بتقديرات الحكومة اللبنانية (الشكل 5، الشكل 6).** يبلغ تقييم مجموعة البنك الدولي 7818 مليون دولار لمشاريع الدورة 1، منها 26% لقطاع النقل، يليه قطاع الكهرباء (20%) والصرف الصحي (18%) والمياه (17%) والاتصالات (9%) والنفائات الصلبة (8%). وتبلغ قيمة الدورة 2 لبرنامج الاستثمار الرأسمالي 8296 مليون دولار، منها 46% عبارة عن مشاريع بنية تحتية في قطاع النقل.⁹

34. وفقاً لتقييم مجموعة البنك الدولي، تشتمل الدورة 1 على حوالي ثلث التكلفة الإجمالية لبرنامج الاستثمار الرأسمالي (7818 مليون دولار)، والدورة 2 على حوالي 37% (8296 مليون دولار)⁵ (الشكل 3). وهذا مقارنة بتقدير الحكومة اللبنانية البالغ 47% (10799 مليون دولار) و28% (6454 مليون دولار) من برنامج الاستثمار الرأسمالي للدورتين 1 و2 على الترتيب⁶ (الشكل 4). ومن المهم أن ننوه إلى أن هذا تقييم ثابت من جانب مجموعة البنك الدولي في ما يخص البدء بتنفيذ المشاريع وفي ظل الظروف الحالية واستناداً إلى التجارب السابقة. وبناءً عليه تظهر التباينات الرئيسية بين الحكومة اللبنانية ومجموعة البنك الدولي في الدورة 1⁷ من (1) سدود المياه، حيث يقل تقييم مجموعة البنك الدولي للمشاريع في الدورة 1 عن تقييم الحكومة اللبنانية بمبلغ 930 مليون دولار؛ (2) منشآت تحويل النفائات إلى طاقة (750 مليون دولار) في قطاع النفائات الصلبة، اللتين تندرجان في الدورة 2 وفقاً لتقييم مجموعة البنك الدولي مقابل الدورة 1 وفقاً للحكومة اللبنانية؛ (3) محطة سلعنا لتوليد الكهرباء بقدرة 1000 ميغاواط (600 مليون دولار)، التي تندرج أيضاً ضمن الدورة 2 وفقاً لتقييم مجموعة البنك الدولي، فيما تندرج في الدورة 1 وفقاً لتقييم الحكومة اللبنانية.⁸ وفي ما يتعلق بالتباين الأخير، وبالنظر إلى

5 تشمل هذه الأرقام تكاليف استملاك الأراضي بمبلغ 311 مليون دولار و1267 مليون دولار في الدورتين 1 و2 على التوالي.

6 تشمل هذه الأرقام تكاليف استملاك الأراضي بمبلغ 693 مليون دولار و1025 مليون دولار في الدورتين 1 و2 على التوالي.

7 يعكس هذا أيضاً التباينات في الدورة 2.

8 أسفر تقييم مجموعة البنك الدولي عن إدراج بعض المشاريع ضمن الدورة 2 وقد أدرجتها الحكومة اللبنانية ضمن الدورة 1.

9 يضم برنامج الاستثمار الرأسمالي مشاريع بقيمة 140 مليون دولار قدمتها الحكومة اللبنانية ولم يتم تقييمها ضمن أي دورة بسبب نقص المعلومات.

ويبرز قطاع الاتصالات بوصفه الوحيد الذي يفتقر إلى إستراتيجية قطاعية رسمية.

31. من المتوقع أن تؤدي الغالبية العظمى من مشاريع برنامج الإستثمار الرأسمالي إلى خفض التكاليف في قطاعاتها، وبإمكان عدد لا بأس به منها اجتذاب استثمارات أجنبية مباشرة. ويُتوقع أن تؤدي هذه المشاريع إلى خفض هيكل التكاليف إلى حد كبير في قطاعاتها ذات الصلة. وينطبق هذا بصفة خاصة على جميع مشاريع قطاعات الكهرباء والمياه والصرف الصحي والصناعة، فضلاً عن الغالبية العظمى من مشاريع قطاعي النقل والثقافة. علاوة على ذلك فإن الغالبية العظمى من مشاريع قطاع الكهرباء (83%) والنفايات الصلبة (83%) وقطاع الثقافة (73%) قادرة على اجتذاب استثمارات أجنبية مباشرة.

32. يتبين من تقييم مشاريع برنامج الإستثمار الرأسمالي من حيث النمو والتوظيف واحتواء كافة فئات المجتمع أن معظم المقترح منها في قطاعات الكهرباء والنقل والثقافة والصناعة ذو تأثير عالي الإستدامة على النمو (الجدول 2). بالإضافة إلى ذلك، يُتوقع أن تؤدي معظم المشاريع المنجزة في قطاعات الصناعة والثقافة والنقل والنفايات الصلبة والكهرباء إلى خلق عدد كبير أو متوسط من فرص العمل.

33. يتبين من تقييم جدوى مشاريع برنامج الإستثمار الرأسمالي أن معظم مشاريع قطاع الثقافة وحوالي نصف مشاريع قطاعات الصناعة والاتصالات والنفايات الصلبة والكهرباء جاهزة للتنفيذ خلال 18 شهراً (الجدول 3). علاوة على ذلك، تتمتع الجهة المسؤولة عن إدارة التنفيذ بالقدرة اللازمة لجميع المشاريع في قطاعات النفايات الصلبة والثقافة والصناعة ومعظم المشاريع في قطاع النقل (96%) وقطاع الاتصالات (63%).

الجدول 2. النسبة المئوية لمشاريع القطاع التي تستوفي معايير النمو والتوظيف واحتواء كافة فئات المجتمع.

تقييم من حيث النمو والتوظيف واحتواء كافة فئات المجتمع			
المشروع المنجز تأثير عالي الاستدامة على النمو	المشروع المنجز يسهم إسهاماً كبيراً في توفير فرص العمل عالية الإنتاجية	المشروع يخلق عدداً كبيراً أو متوسطاً من الوظائف	
78*	I	74	الكهرباء
I	I	I	المياه
I	I	I	الصرف الصحي
58	0	96	النقل
13**	25***	38**	الاتصالات
0	0	83	النفايات الصلبة
82	55	100	الثقافة
100	100	100	الصناعة

I تعني «غير حاسم»، إذ يلزم المزيد من المعلومات لتقييم البيان.

* 22% من المشاريع تتطلب مزيداً من المعلومات لتقييم البيان.

** 13% من المشاريع تتطلب مزيداً من المعلومات لتقييم البيان.

*** 25% من المشاريع تتطلب مزيداً من المعلومات لتقييم البيان.

المصدر: تقييم خبراء البنك الدولي.

الأجنبية من الدين العام يعادل نحو 56% من إجمالي الناتج المحلي (نهاية أكتوبر/تشرين الأول 2017).

د. النتائج المجمعة

30. يكشف التقييم الإستراتيجي لمشاريع برنامج الاستثمار الرأسمالي أن الغالبية العظمى من المشاريع تعد ذات أولوية إستراتيجية بالنسبة لقطاعها، وهي جزء من إستراتيجية قطاعية رسمية (الجدول 1). وتشكل جميع المشاريع في قطاعات المياه والصرف الصحي والنفائات الصلبة والاتصالات والثقافة والصناعة أولويات إستراتيجية في قطاعاتها ذات الصلة، فيما تعد معظم المشاريع في قطاعي النقل (92%) والكهرباء (83%) ذات أولوية إستراتيجية. وفي ما يتعلق بالتكامل الإستراتيجي، تشكل جميع المشاريع في قطاعات المياه والصرف الصحي والنفائات الصلبة والثقافة والصناعة جزءاً من إستراتيجية قطاعية رسمية. وتندرج 87% من مشاريع قطاع الكهرباء في إستراتيجية قطاعية وطنية أوسع نطاقاً، فيما تندرج 54% من مشاريع قطاع النقل في إستراتيجية قطاعية.

فرصاً للمشاركة في الإستثمارات الحيوية ذات الأولوية الوطنية التي تستحوذ على اهتمام دولي كبير وربما تحظى بتمويل مشترك. غير أنه لكي تتسنى ترجمة هذه الفرص إلى خدمات عامة أفضل (ومربحة)، هناك حاجة لوضع أطر قانونية وتنظيمية محدثة ومستقرة.

29. تولى صندوق النقد الدولي قيادة تحليل أوضاع الإقتصاد الكلي والمالية العامة لبرنامج الاستثمار الرأسمالي، وهو من المدخلات الضرورية لتحديد الحيز المتاح في المالية العامة، وقد تم تقديمه في مؤتمر سيدر «CEDRE» في باريس. ولا يستطيع لبنان تجاهل قيود المالية العامة، وينبغي على الحكومة اللبنانية أن تهدف إلى إدراجها وأخذها في الاعتبار في البرنامج النهائي. ولا ينطبق هذا على النفقات الحكومية فحسب، بل أيضاً على الإيرادات. وفي ما يخص النفقات الحكومية، تشكل الشراكات بين القطاعين العام والخاص إستراتيجية مهمة، ويمكن أن يكون قانون تنظيم الشراكة بين القطاعين العام والخاص الذي صدر مؤخراً وسيلة فاعلة. وعلى جانب الإيرادات، لا تعد إيرادات قطاع الاتصالات من أعلى مصادر دخل الحكومة المثقلة بالديون فحسب، بل أيضاً مصدراً نادراً للعملة الصعبة، مع ملاحظة أن الجزء المقوّم بالعملات

الجدول 1. النسبة المئوية لمشاريع القطاع التي تستوفي المعايير الإستراتيجية.

التقييم الإستراتيجي			
المشروع يمثل أولوية إستراتيجية لهذا القطاع	المشروع سيساعد على خفض هيكل تكاليف القطاع بدرجة كبيرة	المشروع سيساعد على اجتذاب استثمارات أجنبية مباشرة في القطاع	المشروع ينتمي إلى إستراتيجية قطاعية رسمية
الكهرباء	83*	100	87**
المياه	100	100	100
الصرف الصحي	100	100	100
النقل	92	67	54
الإتصالات	100	25**	38**
النفائات الصلبة	100	L	83
الثقافة	100	82**	73***
الصناعة	100	100	50****

* أقل من 10% من المشاريع يتطلب مزيداً من المعلومات لتقييم البيان.

** 13% من المشاريع يتطلب مزيداً من المعلومات لتقييم البيان.

*** 18% من المشاريع يتطلب مزيداً من المعلومات لتقييم البيان.

**** مشروع واحد من المشروعين يتطلب مزيداً من المعلومات لتقييم البيان.

L غير متصل

المصدر: تقييم خبراء البنك الدولي.

القانون. فمن المحتمل أن تكتسب الشركات العاملة في المنطقة الاقتصادية الخاصة في طرابلس ميزة تنافسية كبيرة على الشركات الأخرى البعيدة عن المنطقة ما دامت هذه الفئة الأولى تدخل سوقاً قائمة. ونتيجة لذلك، ستجد الشركات حافزاً للانتقال إلى المنطقة على حساب التوسع. بالتالي يصبح حتماً منح إمكانية دخول هذه المنطقة للشركات التي توسع أعمالها. وعلى وجه التحديد، ينبغي أن تكون سوق التصدير هدفاً رئيسياً بفضل موقع المنطقة، وبإمكان السلطات وضع تدابير/ شروط كافية لضمان إتاحة الوصول للشركات المصدرة.

الإرث الثقافي

23. شكلت السياحة القائمة على التراث الثقافي والحضري تقليدياً ركيزة قوية من ركائز الإقتصاد اللبناني. فالمدن اللبنانية من أقدم المناطق المأهولة باستمرار في العالم. ويعد هذا الثراء مكوناً أساسياً لانصهار المجتمعات المحلية في لبنان، كما كان تاريخياً أحد محركات الابتكار. فليس من قبيل المصادفة أن لبنان هو البلد الذي انطلقت منه الأبجدية. وبالتالي كانت السياحة في لبنان دائماً مساهماً رئيسياً في الإقتصاد. فمن مستوطنات العصر الحجري إلى المدن الفينيقية، ومن المعابد الرومانية إلى صوامع النسك المنحوتة في الصخر، ومن القلاع الصليبية إلى المساجد المملوكية والحمامات العثمانية، تبرز مواقع تراثية ذات أهمية عالمية في كل أنحاء لبنان على نحو يعكس تاريخ العالم القديم والحديث. وحظي هذا باعتراف واسع من المجتمع الدولي؛ ومع وجود 5 مواقع على قائمة اليونسكو للتراث العالمي في لبنان، فإن لديه أعلى كثافة في هذه المواقع على الصعيد العالمي مقارنة بعدد سكانه.

24. تقدر مساهمة السياحة في إجمالي الناتج المحلي اللبناني بنسبة 25%، وهي أعلى بكثير من المتوسط العالمي البالغ 14%، وبهذا يتفوق على أي بلد آخر في الشرق الأوسط. ويزيد مرتين على وجه سياحية رئيسية كإيطاليا (10%). وعلى الرغم من عناصر الهشاشة بسبب الأوضاع الإقليمية والتقلبات التي يشهدها هذا القطاع، ظلت السياحة قطاعاً قوياً لتوفير فرص العمل، ولا سيما العمال ذوي المهارات المتدنية، ويعمل بهذا القطاع نحو 24% من الأيدي العاملة في لبنان. وقبل تأثير الأزمة السورية، بلغ عدد زوار لبنان 2.5 مليون زائر في السنة (2010). لكن سرعان ما انخفضت الأرقام بعد ذلك، وأما في الآونة الأخيرة وبفضل تعزيز الجهود من أجل استقرار لبنان، فقد اتخذ هذا الاتجاه مساراً إيجابياً.

25. يضم برنامج الإستثمار الرأسمالي 11 مشروعاً محدداً بشكل منفصل في القطاع بقيمة إجمالية قدرها 264 مليون دولار، تنفذ على دورتين 1 و2، وتغطي الفترة 2018-2025. وترتبط هذه المشاريع بقطاع اقتصادي أكبر يمكن تعريفه بأنه الخدمات المضافة عالية القيمة، وتشمل السياحة والتراث، والإبداع والمعرفة. وقد أثبتت التجربة حتى الآن في لبنان أن دعم التوعية والإستفادة من الموجودات التراثية في المدن يؤدي إلى تحسين التنمية الاقتصادية المحلية وإيجاد فرص العمل، ولا سيما في المدن المتوسطة والصغيرة الحجم في المناطق التي لم تأخذ نصيبها من التطور. كما أنه يعزز قدرة المجتمعات المحلية على العيش بطريقة شاملة للجميع، ويجتذب استثمارات كبيرة من القطاع الخاص.

ج. منهجية التقييم

26. طلبت الحكومة اللبنانية من مجموعة البنك الدولي إجراء تقييم لبرنامج الإستثمار الرأسمالي، الذي يضم قائمة بأكثر من 280 مشروعاً، كبيراً وصغيراً، بنطاقات جغرافية مختلفة. وفي ضوء العجز المادي المشار إليه آنفاً، يمكن أن يكون برنامج الإستثمار الرأسمالي أداة فعالة للمساعدة على تعزيز البنية التحتية المتداعية في لبنان، مما يساهم في دفع عجلة النمو الإقتصادي. ويتيح تاريخ البنك الدولي طويل الأمد من العمل مع لبنان لخبرائه نظرة متعمقة على الوضع السائد في البلاد ورؤية قطاعية ثاقبة، بالإضافة إلى المعرفة التقنية، لتقييم قائمة مشاريع برنامج الإستثمار الرأسمالي.

27. يركز تصميم إطار التقييم على أربع فئات رئيسية، وهي: (أ) التقييم الإستراتيجي، (ب) تقييم معدلات النمو والتوظيف واحتواء كافة فئات المجتمع، (ج) تقييم الجدوى، (د) تقييم احتياجات الإصلاح. ويورد المرفق ب «المذكرة التوجيهية لإطار تقييم برنامج الإستثمار الرأسمالي»، التي تحدد المعايير المعينة المستخدمة، وتتضمن إرشادات حول كيفية إجراء التقييم.

28. يتيح التقييم فرصة لاستعراض فرص الإستثمارات الخاصة في لبنان. فلم تعد مشاريع الإستثمار الرأسمالي اختصاصاً حصرياً لهيئات الإستثمار الحكومية. وقد وجد العديد من البلدان أن القطاع الخاص يوفر استثمارات جيدة النوعية تحقق أعلى جودة بأقل تكلفة (money for value) في مجالات البنية التحتية الحيوية، كالطاقة والاتصالات والنقل وما إلى ذلك. وفي الوقت نفسه يرى المستثمرون في المشاريع الرأسمالية

تشكل مصدراً رئيسياً لتلوث الهواء ومستجمعات المياه والمناطق الساحلية. وفي صيف عام 2015، أثارت تلال القمامة المتراكمة في شوارع لبنان أزمة أسفرت عن مظاهرات شعبية واسعة.

16. يضم برنامج الإستثمار الرأسمالي بنداً واحداً يتعلق بتنفيذ برنامج استثماري ينفذ خلال دورة واحدة في قطاع النفايات الصلبة: «إدارة النفايات الصلبة لتشمل جميع اللبنانيين، بما في ذلك الجمع والفرز والمعالجة ومواقع المطامر» بإجمالي 1400 مليون دولار. وحددت المناقشات الإضافية التي جرت استثمارات معالجة النفايات المركزية التالية: (أ) ثلاثة مرافق لتحويل النفايات إلى طاقة في المناطق الساحلية الحضرية (بيروت، والشمال في محيط مدينة طرابلس، وجنوب لبنان بالقرب من صيدا/الزهراني)، و(ب) برامج تقليدية قائمة على تصنيع السماد العضوي والطمر الصحي للمناطق الريفية في لبنان في منطقة عكار الشمالية وسهل البقاع. وستتطلب برامج تحويل النفايات إلى طاقة 375 مليون دولار مضروبة في ثلاثة، فيما سيتطلب البرنامج في المناطق الريفية معاً نحو 175 مليون دولار. وبالإضافة إلى ذلك، سيلزم نحو 100 مليون دولار لتطهير المئات من مكبات النفايات غير القانونية في لبنان، وإعادة تأهيل بعضها إلى مطامر نفايات صحية.

الإتصالات

17. يتمتع لبنان بفرصة فريدة لوضع سياسة شاملة جديدة لمعالجة مختلف الاختلالات التي تؤثر على نمو وتطوير البنية التحتية والخدمات في مجمل القطاعات. تتمثل الفرصة الرئيسية في الاستفادة من مستوى التعليم والمهارات في لبنان، وذلك بتوفير بنية تحتية حديثة في نطاقها العريض وتطبيقات تكنولوجيا المعلومات والاتصالات. وهذا من شأنه تعزيز تنافسية قطاع الخدمات، وخلق فرص عمل ومداخل للعمال الماهرة.

18. يضم برنامج الإستثمار الرأسمالي 8 مشاريع استثمارية محددة بشكل منفصل في قطاع الاتصالات بقيمة إجمالية قدرها 700 مليون دولار، وتنفذ خلال الدورة الأولى التي تغطي الفترة 2018-2021. يتمثل الهدف في تحديث البنية التحتية للنطاق العريض والمنصة الرقمية في لبنان، وتوفير خدمات إنترنت وخدمات سحابية أسرع للحكومة والشركات والمستهلكين في لبنان.

19. وباعتماد هذا الإصلاح الذي تمس الحاجة إليه، سيتعين على لبنان أن يولي عنايته إلى العوامل المهمة، ومن ضمنها الآتي:

- مراعاة الآثار على المالية العامة.
- إدارة المخاطر والفرص للتأكد من وصول منافع النطاق العريض إلى مختلف المناطق وفئات الدخل والفئات الاجتماعية.
- وتجنب ظهور احتكار القلة في القطاع.

الصناعة

20. لقد تراجع أداء قطاع الصناعة في لبنان مقارنة بالمعايير الإقليمية و العالمية خلال السنوات الماضية (البنك الدولي، 2016).⁴ ومن آثار ذلك عدم توفير فرص عمل كافية للعمال الماهرة وتفاقم اختلالات الإقتصاد الكلي والمالية العامة. وثمة إمكانية لتقوية القطاع الصناعي من خلال السياسات الصناعية المكانية، ولا سيما المدن الصناعية والمناطق الإقتصادية الخاصة، التي تدعم زيادة الإستثمار والتنافسية في القطاع الصناعي. ويقدم برنامج الإستثمار الرأسمالي مشروعين من هذا القبيل. يشمل الأول، وتقوده وزارة الصناعة، تنفيذ المرحلة الثانية من ثلاث مدن صناعية في القاع وبعبك وتربل، وأما الثاني فهو المنطقة الإقتصادية الخاصة في طرابلس.

21. تهدف المدن الصناعية المقترحة إلى تحسين تنافسية الصناعات اللبنانية عن طريق (أ) توفير البنية التحتية الحيوية، و(ب) تأجير الأراضي البلدية على المدى الطويل بأسعار منخفضة جداً للصناعات في المنطقة نظراً لما تشكله أسعار الأراضي من عقبة رئيسية أمام تنافسية الصناعة في لبنان. ومع ذلك تستطيع السلطات المساعدة على ضمان النجاح من خلال تعزيز دور القطاع الخاص لضمان اجتذاب هذه المواقع لشركات واستثمارات جديدة.

22. تقع المنطقة الإقتصادية الخاصة في طرابلس بجوار ميناء طرابلس، مما يعطيها ميزة بالغة الأهمية. والحقيقة أنه يُتوقع أن تتجاوز دور التجارة والخدمات اللوجيستية لتطوير مدينة صناعية لاجتذاب الإستثمارات الأجنبية والمحلية في أنشطة التصنيع وغيرها من الأنشطة ذات الصلة. وهناك محاذير محورية في ما يتعلق بالحوافز المالية التي ستستفيد منها الشركات العاملة في المنطقة الإقتصادية الخاصة في طرابلس، والتي ينص عليها

4 البنك الدولي (2016)، مرصد الاقتصاد اللبناني: اقتصاد جغرافي للمخاطر والمكافآت، ربيع 2016.

المتعلق بخدمات المياه أو الحفاظ عليه. فقد ازدادت على مر السنين حاجة المواطنين إلى مصادر مياه وخدمات صرف صحي إضافية بسبب النمو السكاني، والتباطؤ الاقتصادي، والتوسع الحضري، ونقص الإمدادات، وعدم قدرة مؤسسات المياه على تلبية الأحجام المطلوبة وجودة الخدمة في قطاعي مياه الشرب والصرف الصحي.

النقل

13. تشير التقديرات إلى أن مشكلة الإزدحام المروري المزمنة في لبنان تكلف الإقتصاد بين 5 و10% من إجمالي الناتج المحلي سنوياً. ويعد النقل البري أكثر أشكال النقل شيوعاً في لبنان في ما يخص الركاب والشحن والتجارة، حيث يبلغ عدد المركبات حوالي 1.2 مليون في بلد لا يزيد عدد سكانه على 4.5 مليون نسمة. ويسفر عن ازدحام المرور وارتفاع تكاليف النقل آثار هائلة تضر بتنمية المناطق النائية، مما يحثم على السكان الانتقال للسكن قريباً من فرص العمل والخدمات في بيروت. ولهذه الدينامية تأثير مزدوج على تفاقم الإزدحام في بيروت وزيادة الفقر في المحافظات.

14. يضم برنامج الاستثمار الرأسمالي 24 مشروعاً استثمارياً محدداً بشكل منفصل في قطاع النقل بقيمة إجمالية قدرها 7381 مليون دولار، وتنفذ على ثلاث دورات تغطي الفترة 2018-2030. يكمن الجزء الأكبر من استثمارات النقل في استكمال الطرق السريعة في لبنان، فيما تركز الاستثمارات المتبقية على تطوير الموجودات الإستراتيجية. ومن هذه الإستثمارات الأخيرة توسيع ميناء طرابلس ليصبح بوابة مهمة إلى سوريا والعراق، وإقامة خط سكك حديدية حديث يربط ميناء طرابلس بسوريا، وإنشاء شبكة نقل عام يعول عليها وخطوط للنقل السريع بالحافلات، وتوسيع مطار بيروت. وتمثل الإستثمارات المناطقية والأصغر حجماً حصة أقل بكثير، تتركز غالبيتها على إصلاح شبكة الطرق.

إدارة النفايات الصلبة

15. إن التخلص من النفايات الصلبة مشكلة مستمرة وحرجة في لبنان. فقبل الأزمة السورية، لم تزد نسبة التخلص من النفايات الصلبة البلدية في مطمري النفايات الصحيين الوحيدين في البلد، وهما الناعمة وزحلة، على 53%. وكان يتم التخلص من النفايات المتبقية في مطامر قمامة غير صحية ومئات المكبات المكشوفة، التي

القدرة التوليدية وحدها لا تكفي؛ ومن دون تعديلات أخرى، سيؤدي التوسع في إمدادات الكهرباء إلى زيادة في الدعم الحكومي لمؤسسة كهرباء لبنان، مما يؤدي إلى اتساع هوة عجز المالية العامة. وعلى هذا النحو، فلا بد من وضع خطة متعددة السنوات لمؤسسة كهرباء لبنان لتحديد تعرفه استهلاك الكهرباء عند مستوى استرداد التكلفة على مدى فترة انتقالية متوسطة الأجل.

10. الأهم من ذلك، يجب أن تعالج الإصلاحات أيضاً تكلفة توليد الكهرباء المرتفعة في لبنان، والتي يرتبط معظمها باستخدام زيت الوقود باعتباره أحد ركائز الإنتاج. فبدلاً من ذلك، يمكن أن تعمل معامل توليد الكهرباء في لبنان بالغاز الطبيعي، وهو أقل تكلفة وأكثر كفاءة وأقل تلويثاً للبيئة. غير أن هذا يتطلب تطوير مرافق بنية تحتية جديدة لاستيراد وإمداد الغاز الطبيعي المسال، وهو ما ينبغي أن يكون متسقاً مع الخطط الرامية إلى استكشاف واستغلال موارد الغاز المحلية البحرية.

مياه الشرب والصرف الصحي

11. على الرغم من ارتفاع نصيب الفرد من المياه نسبياً في لبنان، فإن سوء إدارة القطاع والاستثمار فيه يؤدي إلى نقص مزمن في الإمدادات. وهناك تفاوت موسمي بين إمدادات المياه (تبلغ ذروتها في موسم الشتاء الممطر) والطلب عليها (يبلغ ذروته في أشهر الصيف الحارة والجافة). ومن العوامل الرئيسية التي تؤدي إلى تفاقم هذا الاختلال الموسمي في المياه تدني قدرات تخزين المياه (6% من إجمالي الموارد، مقارنة بمتوسط منطقة الشرق الأوسط وشمال أفريقيا البالغ 85%). ونتيجة لذلك، تقل خدمات إمداد المياه عن المستويات المتوقعة في بلد متوسط الدخل. وإذا لم يُتخذ أي إجراء إصلاحي في مجال حوكمة المياه لتحسين الكفاءة وإدارة الطلب، سيواصل لبنان على المدى الطويل اعتماده على استخراج المياه الجوفية. وينبغي توسيع قدرة تخزين المياه بغية تعزيز القدرة على تحمل الصدمات الطبيعية (أي الجفاف) والصدمات التي من صنع الإنسان (أي النازحين).

12. يضم برنامج الاستثمار الرأسمالي 124 مشروعاً في قطاع المياه و82 مشروعاً في قطاع الصرف الصحي تغطي لبنان بأكمله: مناطق الشمال، وبيروت الكبرى، وجبل لبنان، والجنوب، والبقاع. وفي هذا الصدد، يتمثل الهدف في توفير إمدادات المياه على مدار الساعة وطوال أيام الأسبوع، مما يساهم في استعادة العقد الاجتماعي

الكهرباء

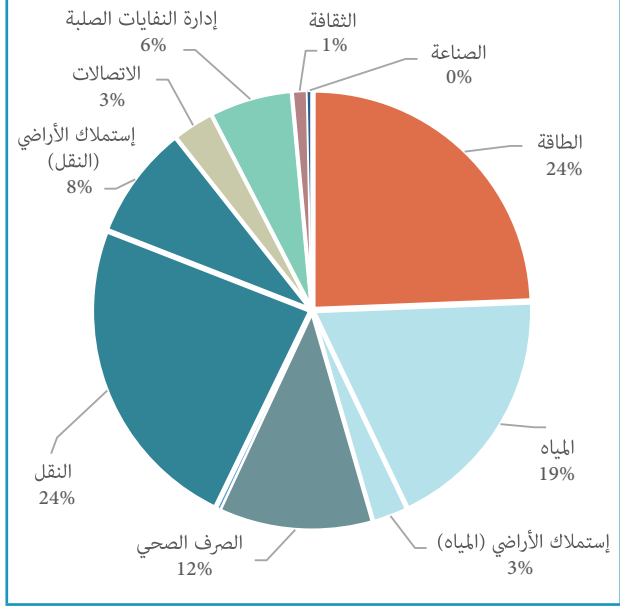
6. يحصل 92% من الأسر المعيشية على إمدادات كهرباء غير مستقرة ويحتاجون إلى ربط منازلهم بمولدات خاصة. وعلى الرغم من الميزانية الكبيرة والمدعومة التي تتمتع بها مؤسسة كهرباء لبنان، فإن هذه الإمدادات تعد غير كافية وتفتقر إلى الكفاءة والفعالية، إذ أنتجت 2066 ميغاواط في المتوسط في عام 2017، مقارنة بذروة الطلب البالغة 3400 ميغاواط.³ ويؤدي هذا إلى انقطاع التيار الكهربائي يومياً بوتيرة منتظمة وطويلة، مما يسفر عن استخدام مكثف للمولدات الخاصة الاحتياطية بتكلفة تبلغ ثلاثة أضعاف مستوى تعرفه المؤسسة. ومع ذلك، وعلى الرغم من عدم إمكانية استرداد سوى نصف إجمالي تكاليف إنتاج الكهرباء، بقيت التعرفة دون تعديل منذ عام 1996 (عندما كان سعر النفط 23 دولاراً للبرميل).

7. كما أشارت الدراسات الإستقصائية التي أجراها البنك الدولي مؤخراً أيضاً إلى أن عدم توفر إمدادات الكهرباء يشكل ثاني أكبر عقبة أمام نمو القطاع الخاص يلي عدم الاستقرار السياسي. ولهذا أهمية خاصة نظراً لأن هناك حاجة إلى استثمارات كبيرة، غالبيتها من القطاع الخاص في كل مراحل إنتاج الطاقة، بداية من الإمداد بالوقود في المراحل الأولى للإنتاج ومروراً بالمرحل الوسطى من توليد التيار ونقله أخيراً إلى شبكات التوزيع لمواجهة التحديات التاريخية في هذا القطاع.

8. يضم برنامج الاستثمار الرأسمالي 17 مشروعاً استثمارياً محدداً بشكل منفصل في قطاع الكهرباء بقيمة إجمالية قدرها 5592 مليون دولار، من المقرر تنفيذها على ثلاث دورات في الفترة الزمنية الممتدة بين 2018-2030. ولاستيعاب زيادة السعة التوليدية، ستدعو الحاجة أيضاً إلى استثمارات في نقل الكهرباء لاستيعاب هذه الزيادة وضمان استقرار الشبكة.

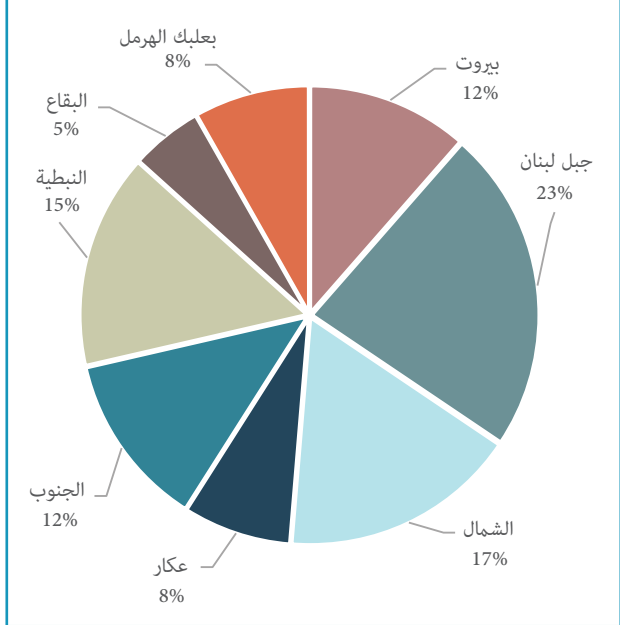
9. تهدف استثمارات قطاع الكهرباء إلى زيادة إمدادات الكهرباء بحيث تتوفر على مدار الساعة وطوال أيام الأسبوع على المدى المتوسط. وتحقيقاً لهذا الهدف، يجب أن يأتي إصلاح قطاع الكهرباء على رأس الأولويات. وهذا يتضمن مشاركة القطاع الخاص في كل من التوليد والتوزيع، وهو ما يفرضه غياب مساحة للإنفاق من المالية العامة، فضلاً عن اللجوء إلى مصادر الطاقة المتجددة. وما لم يُحل هذا القصور، فإن السعة التوليدية الإضافية ستتعرض للإهدار في ظل التسربات خلال عملية النقل التي تقدر بما يتراوح بين 40 و50%. ومع ذلك، فزيادة

الشكل 1: توزيع التكاليف في برنامج الاستثمار الرأسمالي حسب القطاعات



المصدر: تقييم خبراء البنك الدولي.

الشكل 2: حصة تكلفة استثمارات برنامج الاستثمار الرأسمالي على المستوى المحلي حسب المحافظات



المصدر: تقييم خبراء البنك الدولي.

أ. العجز في البنية التحتية

1. يعد تقديم الخدمات العامة الأساسية من الركائز المحورية في العقد الاجتماعي بين المواطن والدولة. يعاني لبنان من قصور حاد في الخدمات الأساسية الرئيسية، بما في ذلك الكهرباء ومياه الشفة والصرف الصحي والنقل وإدارة النفايات والاتصالات وغيرها. ولا تعد هذه الخدمات عنصراً أساسياً لنمو الإنتاجية والدخل فحسب، بل أيضاً لضمان توفر قدر أساسي من مستوى المعيشة للسكان. وعندما يتم توفيرها بفاعلية، فيمكن أن يكون لها أثر إيجابي على المساواة في الدخل، مما يسمح للفئات المنخفضة الدخل بالحصول على فرص عمل أفضل وأكثر إنتاجية. كما أن توفيرها يعزز أيضاً النواتج الصحية والتربوية، مما يؤدي بالتالي إلى دعم رأس المال البشري، الذي يشكل محركاً بالغ الأهمية للنمو في الشريحة العليا من البلدان المتوسطة الدخل كـلبنان. وبدلاً من ذلك، يلجأ اللبنانيون عادة إلى جهات وآليات تقديم خدمات غير رسمية، وأحياناً تشوبها شوائب انعدام القانونية، بغية تعويض أوجه القصور هذه.

2. أدى عدم توفر مساحة للإنفاق من المالية العامة، مقروناً بغياب ميزانيات عامة للدولة من عام 2005 إلى عام 2017، إلى انخفاض حاد في الإنفاق العام على مشاريع البنية التحتية. وتشير التقديرات إلى أن إجمالي الدين العام بلغ نحو 153% من إجمالي الناتج المحلي بحلول نهاية عام 2017، وهي نسبة مرتفعة عالمياً لا تفوقها إلا اليابان واليونان. وتبلغ خدمة الدين التي تتحملها الحكومة نحو 10% من إجمالي الناتج المحلي سنوياً، مستهلكة بذلك حوالي نصف الإيرادات المحلية. ونتيجة لذلك، تعاني الحكومة من عجز مالي هائل وطويل الأمد بلغت نسبته 9.6% من إجمالي الناتج المحلي في 2016 (أحدث بيانات فعلية عن سنة كاملة). وقد تُرجم غياب حيز في المالية العامة إلى تراجع في النفقات الرأسمالية الحكومية، التي، وقد بقيت عند مستوى يبلغ حوالي 1.5% في المتوسط من إجمالي الناتج المحلي منذ بداية الألفية، وهي أدنى بكثير عن البلدان المتخذة أساساً للمقارنة.

3. نتيجة لذلك، تدهورت شبكة البنية التحتية في البلاد ونوعيتها، ولا سيما الكهرباء ومياه الشفة وإدارة النفايات والنقل، وهي خدمات أساسية لرفاهية السكان. والواقع أن لبنان، بين 137 بلداً، يأتي في المرتبة 130 من حيث جودة البنى التحتية، مع حلول جودة إمدادات الكهرباء في المرتبة 134، وجودة الطرق في المرتبة 120، وجودة

اشتراكات الهواتف الخلوية في المرتبة 104². علاوة على ذلك، أدى تدني الإستثمار العام في هذه القطاعات إلى قصور القدرات عن تلبية الطلب، مما أدى إلى انخفاض في النمو الإقتصادي الممكن وتدهور عام في الأوضاع المعيشية.

ب. برنامج الإستثمار الرأسمالي للبنان والتحديات القطاعية

4. يضم برنامج الإستثمار الرأسمالي أكثر من 280 مشروعاً للبنية التحتية موزعة على قطاعات الطاقة والنقل ومياه الشفة والصرف الصحي ومعالجة النفايات الصلبة والاتصالات والمناطق الإقتصادية الخاصة والثقافة والسياحة. من الناحية الجغرافية، يغطي البرنامج الأراضي اللبنانية بأكملها، حيث صُنفت بعض المشاريع على أنها مشاريع وطنية وصُنفت أخرى على أنها مشاريع محلية، وذلك في مناطق الشمال وبيروت وجبل لبنان والجنوب والبقاع. على المستوى القطاعي، يستحوذ قطاع النقل على أكبر نصيب من الإستثمارات يصل إلى 32% من إجمالي برنامج الإستثمار الرأسمالي، منها 8% مخصصة لإستثمارات الأراضي (الشكل 1). ويخصص حوالي ربع الإستثمارات لقطاع الطاقة، فيما يستأثر قطاعا المياه والصرف الصحي على 22% و 12% بحسب الترتيب.

5. يُخصص حوالي نصف إجمالي الإستثمارات للمشاريع «الوطنية»، مع تخصيص الباقي لمشاريع محلية. وتهدف المشاريع الوطنية إلى العودة بالنفع على جميع السكان، كمعظم الإستثمارات في قطاعي الطاقة والنقل، فضلاً عن قطاعي الاتصالات أو الثقافة. لذا، فإن هذه المشاريع، التي تبلغ قيمتها إجمالاً 10306 ملايين دولار، لا تُخصص لمحافظة محددة. ومن بين الإستثمارات المخصصة محلياً في برنامج الإستثمار الرأسمالي، رصد 23% في جبل لبنان، ثم محافظة الشمال (17%) والنبطية (15%) (الشكل 2).

١. مقدمة وموجز للتقييم

إن البنية التحتية في لبنان من بين الأقل جودة وفعالية على الصعيدين الإقليمي والعالمي. فمن بين 137 بلداً، يأتي لبنان في المرتبة 130 من حيث جودة البنية التحتية إجمالاً¹، وهذا ناتج عن تدني الإنفاق العام على البنية التحتية نتيجة لأعباء الدين العام في البلاد، فضلاً عن غياب الموازنة العامة للدولة لفترة طويلة. ويمكن لبرنامج الاستثمار الرأسمالي أن يكون أداة فعّالة تساعد على تعزيز البنية التحتية المتهاكلة في لبنان، مما يعطي دفعاً لعجلة النمو الإقتصادي. وقد طلبت الحكومة اللبنانية من مجموعة البنك الدولي إجراء تقييم لبرنامج الاستثمار الرأسمالي.

تعرض هذه الوثيقة تقييماً أجرته مجموعة البنك الدولي، التي لها تاريخ طويل من الشراكة مع لبنان في قطاعات منفردة أو في عدة قطاعات مدرجة في برنامج الاستثمار الرأسمالي. أُجري هذا التقييم على أساس القائمة الواردة في المرفق أ، والمعلومات الواردة في وثيقة برنامج الاستثمار الرأسمالي الخاص بالحكومة، فضلاً عن معلومات أخرى تتعلق باقتراحات لمعالجة تضخم الدين العام وخدمته. ويتطلب كل مشروع من مشاريع البرنامج تقييماً مسبقاً مستقلاً وفق أعلى المعايير. بالإضافة إلى ذلك، يشكّل وجود إطار اقتصادي كلي ومالي مستدام وإستراتيجية لخفض الدين عنصراً أساسياً لنجاح تنفيذ برنامج الاستثمار الرأسمالي. ويقوم صندوق النقد الدولي بدور رائد في تقييم الإقتصاد الكلي والمالية العامة لبرنامج الاستثمار الرأسمالي، وقد قدم هذا التقييم في مؤتمر سيدر (CEDRE) في باريس.

ويخلص التقييم بصفة عامة إلى أن اختيار القطاعات يتناسب مع برنامج الاستثمار الرأسمالي للبنان، وأن الكثير من المشاريع المدرجة في القائمة وثيقة الصلة بالأوضاع، والواقع أن لبعضها أهمية كبيرة للمساعدة على تخفيف حدة العراقيل الحالية في البنية التحتية. ومع ذلك، فلا غنى عن الإصلاحات الأفقية والعامودية في ما يخص القطاعات الأساسية، بما في ذلك الحد من الأثر على المالية العامة، لتمكين برنامج الاستثمار الرأسمالي وجعل المشاريع مستدامة وجذابة للمستثمرين. وتقتترح هذه الوثيقة قائمة بالإصلاحات الإرشادية، غير أنها لا تتناول المعوقات التي تقف في طريق تنفيذ مشاريع البنية التحتية، والتي أدت إلى تأخيرات طويلة وتكاليف إضافية كبيرة.

شكر وتقدير

أعد هذه الوثيقة فريق من خبراء مجموعة البنك الدولي يقوده وسام حركه (خبير اقتصادي متقدم، البنك الدولي للإنشاء والتعمير) وخريستوس كوستوبولوس (كبير خبراء اقتصاديين، البنك الدولي للإنشاء والتعمير) ويتألف من الزملاء التالية أسماؤهم:

القطاع/ مجالات الحلول المشتركة/ الوحدة	أعضاء الفريق
الطاقة	سامح مبارك
البيئة والموارد الطبيعية	فرانك فان ووردن
التمويل والقدرة على المنافسة والابتكار	أرنو دورنيل، هاسونج رين
الحكومة	بول ويلتون، سيفير فتوفات
الاقتصاد الكلي والتجارة والاستثمار	وسام حركه، خريستوس كوستوبولوس، ناجي أبو حمدة
النقل	زياد النكت
الخزانة	كونسيبيسيون أيسا، جونج وو نام
تكنولوجيا المعلومات والاتصالات	كارلو روسوتو، مارولا حداد
التنمية الحضرية والريفية والاجتماعية	غويدو ليساردي، ساطع شفيق الأرنأوط
المياه والصرف الصحي	أمل طالبي، سالي زغيب

وقد عمل فريق إعداد التقرير بشكل وثيق مع قادة البرامج (إبراهيم دجاني، وبيتر موسلي، وحنين سيد)، ومنى زيادة (مسؤولة التواصل والعلاقات الخارجية)، (البنك الدولي للإنشاء والتعمير)، ومنى كوزي (مسؤولة البرامج في لبنان)، وسعد صبرا (ممثل مؤسسة التمويل الدولية)، وليالي عابدين (خبيرة أولى في التغطية الائتمانية، الوكالة الدولية لضمان الإستثمار). واعتمد الفريق اعتماداً كبيراً على الخبرات الفنية الخاصة بقطاعات محددة من جميع وحدات مجموعة البنك الدولي ومجالات الحلول المشتركة.

كما يعرب الفريق عن شكره وامتنانه للزملاء فرحات إيسين (أخصائي أول شؤون الطاقة)، وبليدي سيليكو (خبير اقتصادي، قطاع الممارسات العالمية للاقتصاد الكلي والتجارة والاستثمار)، على ما قدماه من تعليقات ثاقبة وبناءة خلال استعراض الوثيقة.

تم الإضطلاع بهذا العمل تحت إشراف ساروج كومار جاه (المدير الإقليمي لدائرة الشرق الأوسط) وكيفين كاري (مدير قطاع الاقتصاد الكلي في دائرة الشرق الأوسط)، ونعرب لهما عن خالص الشكر على ما قدّماه طوال إعداد التقرير من مشورة ودعم وملاحظات بناءة. كما استفاد معدّو التقرير من التعاون الوثيق والمشورة البناءة والمشاركة القوية من جانب الحكومة اللبنانية، إذ تلقى فريق عمل مجموعة البنك الدولي ملاحظات قيمة من ممثلي مكتب دولة رئيس الوزراء، ومجلس الإنماء والإعمار، والمجلس الأعلى للخصخصة والشراكة، وأوجيرو، ووزارة الطاقة والمياه، ودار الهندسة.

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تقييم إستراتيجي

لبرنامج الإستثمار الرأسمالي:

فرص الإستثمار والإصلاح في لبنان



وثيقة لمجموعة البنك الدولي

6 أبريل/نيسان 2018



تقييم إستراتيجي لبرنامج الإستثمار الرأسمالي:

فرص الإستثمار والإصلاح في لبنان